Sound Choices

Enhancing Capacity for Evidence-Informed Health Policy

Alliance
for Health Policy
and Systems Research

World Health
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Sound Choices

Enhancing Capacity for Evidence-Informed Health Policy

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Contents

Chapter 1

Chapter 2

Chapter 3

Contents

Chapter 4

Chapter 5

Contents

Chapter 6

Chapter 7

Chapter 8

Contents

References

Appendix

Contents

List of boxes

Contents

List of figures

List of tables

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Preface

One of the greatest challenges facing the World Health Organization, member states and the global health community is how to ensure access to safe and effective health services for those most in need. Increasingly, we all recognize that strengthening health systems is a core part of this challenge. Without stronger health systems, new technological developments and innovations, as well as many of those we already have, are likely to remain inaccessible to poorer people.

However, more evidence is needed about what works in terms of health system strengthening, and under what conditions. Sadly, health policy and systems research (HPSR) has been relatively neglected for many years, and while there are some areas, such as health financing, that are now much better understood than they were 20 years ago, other issues, such as how to retain and motivate the health workforce or what service delivery models work best in resource-constrained environments, are still poorly understood.

Unlike some types of health research, health policy and systems research needs to be rooted in and responsive to national needs. Health systems and social, economic and political contexts vary so widely that there is no 'one size fits all' solution for health system strengthening. Instead, each and every country needs capacity to analyse its own health system and, drawing on international literature, develop and evaluate its own health system-strengthening strategies.

Developing national capacity for health policy and systems research is thus critical – but may in and of itself be of little value. We also need to enhance capacity to ensure that research is responsive to national needs, that it gets synthesized, summarized and packaged in ways that policy-makers and civil society representatives can use, and that policy-makers have sufficient capacity to access and apply research findings. As societies become increasingly democratic, it is even more important that research evidence is widely accessible and can be used by multiple stakeholders, both government and non-government, to inform their policy positions.

This report by the Alliance for HPSR covers new ground in terms of looking at capacity both to generate and apply research evidence. The report not only describes the capacity development challenges for health systems research but also outlines concrete actions that should be pursued to enhance capacity. Action is needed at multiple levels (global, national and sub-national) and by multiple stakeholders (national health leaders, researchers, international funding and development agencies, as well as civil society stakeholders) to achieve the goal of enhanced capacity for HPSR. While achievement of this goal requires considered and coordinated action, the stakes are high: enhanced access, particularly for the poor, to safe and effective health services, depends on it.

M. Chan

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October 2007

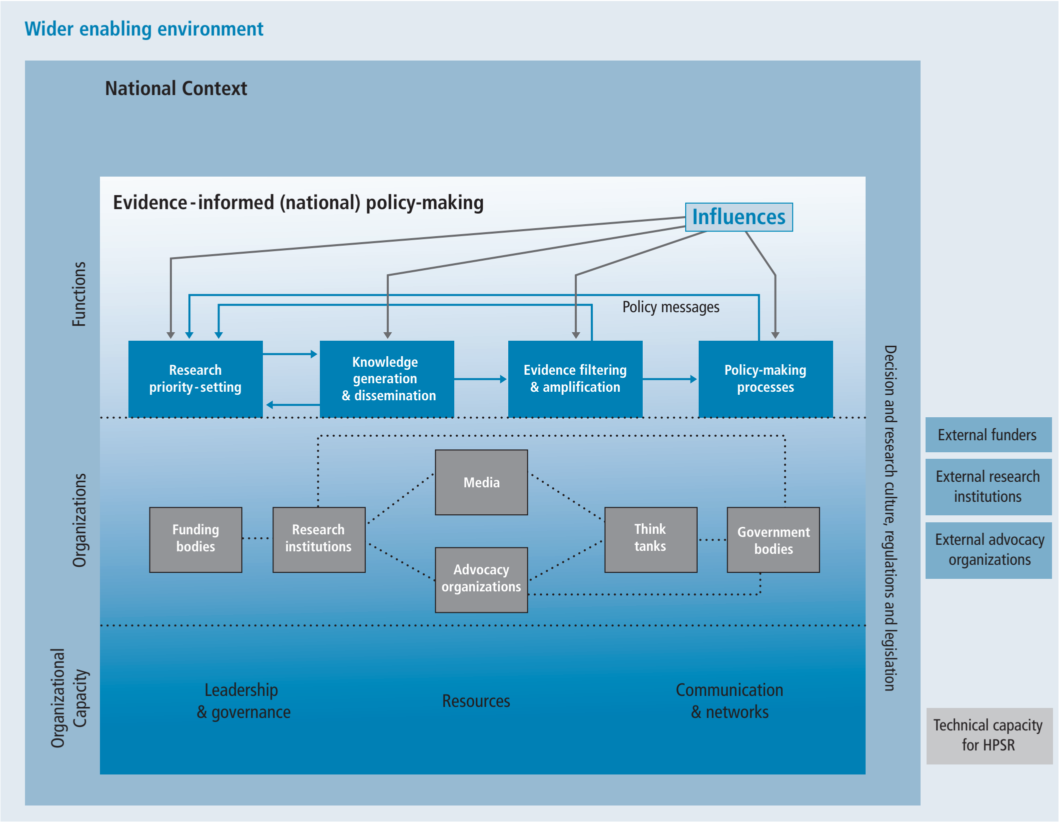
Executive summary

Introduction

This Review addresses a mismatch between what is known about how to respond to particular health problems in poor economies and what is actually done about them. It focuses on one cause of the problems that ensue from the mismatch – capacity constraints. Weak capacity at a number of levels in the institutions and interfaces between knowledge generation and use in policy-making has been identified by the Alliance for Health Policy and Systems Research (HPSR) as a key strategic issue in addressing health care in low-income countries.

Capacity is a widely but often superficially used term. This Review explores capacity issues underlying different aspects of the relationship between two key groups – policy-makers and researchers – using a new conceptual framework (see Figure 1). Accordingly, the analysis focuses on capacity constraints in research priority-setting; generation and dissemination of knowledge; filtering and amplification of evidence; and policy processes. The framework could be applied to analyse critical areas for capacity development in-country.

Figure 1 Framework for evidence-informed policy-making



Current capacity needs

The ability of policy-makers to draw on appropriate evidence is often restricted by its availability. Priority-setting processes for research are largely internationally driven, with limited responsiveness to national research agendas. International processes must become more locally responsive and help to build capacity for priority-setting at the national level.

Generating appropriate, trustworthy evidence depends on the existence of good research organizations. At present, the capacity of such organizations in low- and middle-income countries is variable. Funders' attention has historically focused on developing the skills of individual researchers. Capacity-strengthening strategies, in contrast, need to focus on the comprehensive needs of institutions, including overall skills and career development, development of leadership, governance and administrative systems, and strengthening networks among the research community, both nationally and internationally. There is also a need to develop stronger methodologies for conducting HPSR.

The third function relating to the often complex processes that mediate between knowledge generation and policy-making is the least understood. Filtering and amplification refers to selecting particular pieces of evidence for transmission to policy-makers and packaging that information. This function is carried out by a spectrum of organizations from knowledge brokers through to advocacy organizations. Each is likely to have different capacity needs; none appear to have been systematically addressed by capacity development initiatives.

The policy-making function is the crucial end-point. For policy-makers, evidence generated from research findings is one consideration among others. Policy-makers need help overcoming the disincentives to rely on evidence in their deliberations. Capacity-development needs may include skills in commissioning and interpreting evidence, stronger relationships with researchers, and tools to assess the legitimacy of the filtering and amplification function of diverse organizations.

Policy-makers have a responsibility as health system stewards. They need to be able to assess the capacity of each function and support initiatives either related to individual elements or the interface between them. Such a comprehensive view of all the elements of an evidence-informed health policy-making process is rare, yet it is critical.

Capacity strategies

We suggest four strategies aimed at national health, research and international agency leaders to respond to these needs.

Enhancing evidence on capacity development in the HPSR field

Evidence is needed in two related areas. First, there is a need for more and better evaluations of international capacity development initiatives in order to enhance future investments in capacity strengthening. Second, nationally-owned initiatives to map capacity needs related to the interface between HPSR and policy processes are needed. Such initiatives will require the development of specific assessment tools and financial support for their implementation and the subsequent development of capacity-enhancing strategies.

Strengthening architecture for health systems research funding

International and national bodies need to develop mechanisms for funding HPSR that reduce existing fragmented approaches and enhance national ownership of priorities. International agencies should devolve some decision-making powers to the national level; national stakeholders must ensure appropriate priority-setting bodies. International funders need to examine current funding processes to make certain there is adequate, appropriate low- and middle-income representation on the bodies that set priorities and that their decisions support rather than constrain the capacity of HPSR institutions.

Responding to the needs of HPSR

HPSR institutions need support in assessing their needs and developing capacity-building strategies. This may include for example, help in developing leadership programmes or assistance in creating partnerships among institutions and developing networks. In some small and particularly poorly resourced health systems, where no HPSR capacity exists at all, a strategy may be needed both to build capacity and to find interim arrangements, perhaps with neighbouring countries, for support. Investment is also needed to strengthen HPSR methods.

Enhancing investment in evidence synthesis and knowledge translation and use

Investment in better understanding the needs of policy-makers and developing more appropriate responses is needed. The form such investment takes will vary between countries, with different sets of civil society organizations, knowledge brokers, research institutions and government bodies having a potential role. Each will have differing capacity needs, and an assessment on a country-by-country basis may be appropriate. At the international level, support is needed in developing methods for synthesizing evidence to provide easily accessible and digestible information to policy-makers.

Chapter 1

Introduction

Chapter 1

This Review is a response to a major frustration facing those interested in health in poor economies. This lies in the gap between what is already known about how to respond to particular health problems and what is actually done in practice. We have a variety of interventions for major health threats that are proven as effective but are not accessible to communities in significant parts of the world. For example, the knowledge exists to avoid many of the problems of maternal and child ill-health, but the right policies are often not implemented (Victora et al. 2005) leading to unacceptable and avoidable levels of mortality.

Why is this? There are various reasons, of which shortages of resources and imbalances in distribution are clearly critical. Beyond resource constraints, however, policy-makers at all levels, from global to local, often fail to understand how to apply proven technologies effectively and without damaging other parts of the health system. Some of this can be put down to a failure of policy processes as well as policy-makers themselves – their skills, or indeed motivation, may be lacking. Some of it may also be due to the research processes – are we producing enough appropriate evidence about how to scale-up the health system to use known technologies, recognizing that each health system will have different answers due to their own different contexts and needs. What is appropriate in India may not work in Brazil. It is also possible that evidence exists about appropriate system responses to particular health problems, but is not reaching policy-makers in the right format or at the right time for them to be able to use. Underlying these failures lie, we believe, a series of capacity constraints and these are the subject of this Review.

This is, of course, not a problem specific to the health system. We are living in what are increasingly referred to as ‘knowledge societies’. These are societies which are able to harness the huge amount of information that modern technology such as computers and the Internet allow us to manipulate, store, transmit and share (UNESCO 2005; WHO 2006). The skill, however, lies in turning all this information into knowledge. And the great challenge is to then use that knowledge – to put it into practice. Knowledge societies aim to ground policy-making in evidence – of what works and what does not – an aim which is essentially optimistic about the potential "to achieve social progress through the application of research" (Sanderson 2002). However there are huge differences between countries, societies and population groups in both access to, and capacity to use, new technologies and to transform available information into practical knowledge.

Over recent years there has been a proliferation of literature focusing on knowledge and how to get it into health policy and practice (Court et al. 2005; Stone & Maxwell 2005). For example, in the 1990s the ‘evidence-based medicine’ movement advocated the greater and more direct use of research evidence in the making of clinical decisions, and this was later broadened into a call for more evidence-based policy as opposed to policies determined through conviction or politics. Part of this interest arose from a perception that even when research provides solutions, these are not necessarily translated into policy and practice.

This Review focuses on a particular constraint that weakens the interface between the production of knowledge by researchers and its use by policy-makers – the *capacity* of these two groups of actors and their institutions. Weak capacity, at a number of levels, in the institutions and interfaces between knowledge generation and use in policy-making has been identified by the Alliance for Health Policy and Systems Research (HPSR) as a key strategic issue, but one about which there is still inadequate understanding. The Alliance focuses on health policy and systems research as an area which is increasingly recognized as key to strengthening the ability of national health systems to achieve the United Nations Millennium Development Goals (MDGs) yet which remains relatively neglected alongside its better established and resourced counterpart, biomedical research. HPSR is a key source of understanding about the nature both of how health systems operate and the content of policy-making (Box 1.1). Policy-makers increasingly recognize both the importance of health systems in providing the infrastructure for the delivery of proven service interventions and the obstacles a poorly functioning health system can put in the way of delivery of such services. As such there is growing recognition of the importance of generating knowledge in this field. However paradoxically there is also recognition that even in areas where robust knowledge about the health system exists, it may not be taken into account by policy-makers for a variety of reasons.

BOX 1.1 HEALTH POLICY AND SYSTEMS RESEARCH

Health Policy and Systems Research has been defined as "…the production of new knowledge to improve how societies organize themselves to achieve health goals" (Alliance HPSR 2007).

HPSR aims to produce reliable and rigorous evidence which helps to inform the many and varied critical decisions that must be made by ministers of health, senior policy-makers and health service managers about how to organize the health system and effect changes (Alliance HPSR 2007).

HPSR focuses primarily upon the more downstream aspects of health: it focuses on policies, organizations and programmes, but does not address clinical management of patients or basic scientific research (e.g. into cell or molecular structures).

HPSR can address any or all of the 6 'building blocks' of health systems identified in the World Health Organization's Framework for Action on health systems (WHO 2007):

- **Service delivery** – addressing how services are organized and managed, to ensure access, quality, safety and continuity of care across health conditions, across health facilities and over time.
- **Information and evidence** – the generation and strategic use of information, evidence and research on health and health systems in order to strengthen management, leadership and governance.
- **Medical products and technologies** – ensuring equitable access to essential medical products and technologies of assured quality, safety, efficacy and cost-effectiveness, and their scientifically sound and cost-effective use.
- **Health workforce** – managing dynamic labour markets, to address entry into and exits from the health workforce and improve the distribution and performance of existing health workers.
- **Health financing** – raising adequate funds for health in ways that ensure people can use needed services and are protected from financial catastrophe or impoverishment associated with having to pay for them.
- **Leadership and governance** – ensuring that strategic policy frameworks exist and are combined with effective oversight, coalition-building, regulation, attention to health-system design issues and promotion of accountability in order to protect the public interest in health.

Source: Alliance HPSR 2007, WHO 2007b.

The Alliance's interest in the subject of this Review stems therefore from two sources. First, it recognizes that the continued inability of HPSR to achieve its full potential comes, in part, from a number of capacity constraints. These exist in, for example, the priority-setting processes which continue to give inadequate attention to HPSR, and to underinvestment in the research institutions that carry out HPSR. Secondly, HPSR's very interest in understanding how policy is developed and implemented suggests a need to understand how evidence, of any type including both HPSR and biomedical, is used (or not) by policy-makers. The topic is therefore a key plank in the Alliance's recently developed strategy.

This Review specifically focuses on capacity. Capacity is a term that is widely used, but often superficially. There have been few studies of the nature of capacity itself and even less in the area of the capacity of researchers and policy-makers.[1] This Review explores the capacity issues underlying different aspects of the relationship between the two key groups – policy-makers and researchers – through the development of a conceptual framework which both underpins the Review itself and will, we hope, prove a useful way of analysing these relationships particularly at the country level.

Given that the goal of this Review is to seek ways in which to improve policy processes, it starts with an overview in Chapter 2 of the nature of policy processes and how the key actors in these processes use (or not) evidence alongside other considerations in the development and implementation of policy. This is followed in Chapter 3 with the development of the framework that provides the foundations for the rest of the book. This framework presents a way of analysing the four key functions that are integral in the interface between knowledge generation and policy processes – priority-setting for research, the generation of evidence, the filtering and amplification of research outputs and the policy processes themselves. Given our emphasis on capacity, the chapter also explores the different understandings of this loose term, and identifies key dimensions which the Review will focus on in subsequent chapters. The chapter ends by a brief review of previous and ongoing international initiatives to develop capacity.

The subsequent chapters focus in turn on the four different functions identified in the framework. Chapter 4 examines the priority-setting processes at both the international and national level and explores both the degree to which these currently reflect the needs of national health systems and the capacity weaknesses in the priority-setting institutions that contribute to this. This is followed in Chapter 5 by an exploration of the capacity gaps and concerns that face health policy and systems research institutions. The next chapter focuses on what we have called the Filtration and Amplification function. This function is perhaps the least well understood of the four. It refers to the processes that determine which research outputs are selected as important and, through different means, brought (more or less successfully) to the attention of policy-makers. This, we believe is an area in which more research itself is needed, both because it is little understood, and because it is likely, we suggest, to grow in importance through the activities of advocacy organizations – which may or may not be regarded as having a legitimate role in policy formation. Chapter 7 brings us back to the policy-making function, the critical endpoint of the framework, and again we identify a number of capacity weaknesses that deserve attention, in the institutions responsible for policy.

One of the major challenges a publication such as this faces, and one that health policy and systems researchers will be particularly familiar with, is the differences in context between different national health systems. The Review focuses on health systems in low- and middle-income countries; however this still spans a huge range of diversity in terms of various critical factors including

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[1] Nuyens (2007) provides a review of some key resources for research capacity strengthening.

resources, research traditions and policy and political processes. We have tried to make clear where we see such differences, but ask readers to tolerate, in the interests of making the publication manageably brief, occasional over-generalizations, and provide their own contextualized interpretations.

A second challenge we have faced is the, occasionally surprising, lack of published evidence about the topic. Given the basic premise of this Review, we have tried to be very careful in only drawing conclusions which are evidence-informed. The unevenness of evidence about the different functions means that our ability to get down to the level of detail of the capacity dimensions of organizations involved varies greatly. One output of this however is that it is clear that there are significant gaps in the knowledge base in this area and hopefully this Review will help readers identify new areas for research concerning the research/policy interface and its capacity needs.

Though we hope the analysis in the Review will itself be of interest to readers, we see its real importance as leading to action derived from the analysis. As such each chapter identifies a number of key messages and these are brought together in the final chapter in the form of recommendations aimed at particular actors. Given the focus of the Review is on HPSR, these key messages relate to this; inevitably, however some of the capacity issues are common to all forms of research.

The Review is aimed at various audiences and we expect different readers to pay particular attention to different chapters as a result of their different backgrounds and roles. First we hope that national and international policy-makers will recognize the critical importance of the subject. Though, as health policy-makers, they may be tempted to focus primarily on Chapters 2 and 7, we would urge them to recognize their critical roles as stewards for the whole health research system and as such pay similar attention to the other chapters and their attendant recommendations. We also see a key readership in HPSR leaders who have a responsibility to enhance the capacity not only of their own institutions but of the wider research communities. The third audience comprises international organizations that have a particular interest in improving research and policy processes. As Chapter 4 points out, there have been a number of different approaches to building capacity by international organizations but there is a widespread recognition that more resources, and perhaps different approaches, are needed. We have seen in recent years greater recognition of the importance of aid harmonization (through for example the Paris Declaration on Aid Effectiveness (OECD DAC 2005)). We would argue that a parallel more cohesive approach by international donors in the area of research and capacity development for research is also necessary and hope that this Review will contribute to greater alignment.

Beyond these prime targets for the Review, we anticipate a wider group of readers who will find it of interest. For example, given the increasing interest in the interface between evidence and policy we hope that those from, or interested in, civil society organizations that have an interest in improving the general policy processes will find Chapter 6 of particular interest.

The Review has been written by a group of authors with different sets of expertise and interest. It has also emerged from a long and rigorous process of development and review with a number of author and reviewer meetings and peer review of the chapters. In the best traditions of HPSR the individuals involved in both the writing and the reviewing come from different disciplines; we have also tried to ensure a range of regional inputs in recognition of the critical contextual differences between countries and regions.

Chapter 2

Building evidence-informed policy environments

Key messages

- Policy processes are messy and influenced by a variety of factors and actors.
- Networks are increasingly recognized as important influences, alongside individuals
- Evidence is often contested, and even our understanding of what it is differs; it will be used differently by different actors at different stages in policy development
- Knowledge of policy processes and environments can be used by those interested in enhancing the degree to which policy is influenced by evidence – by strategically managing research findings, for example.

Introduction

If health policy and systems research (HPSR) is to influence policy to produce better health, it is essential to understand the context in which policy is made, formulated and implemented, and how it is influenced. This is critical for analysing past policies, to derive lessons from the role research did or did not play, but also for planning. Policy is understood to be formal and informal, explicit and implicit, represented by legislation or written documents, as well as reported intentions, promises and practices (see Box 7.1 for examples). Health policies may be ideologically-driven (e.g. promoting neo-liberal market reforms or in contrast, oriented towards equity) or they may be technical – cast in a scientific frame and not apparently influenced directly by ideology (Keeley & Scoones 1999). Such policies might be cost-effective interventions or acknowledged good practices.

The chapter focuses on policy-making processes, looking briefly at how contextual factors impinge on and shape the policy environment, exploring some of the many different influences on the policy-making process, both internal and external, and ending with a strategic message that emphasizes the need to understand and research the policy-making arena in order to make it more open to influence by evidence.

Understanding policy contexts

Policy-making does not take place in a vacuum: political, economic and social factors all affect how policies are made, and who makes them, at all levels: global, national and local. Heightened awareness of global trends has increased recognition of the extent to which countries are inter-dependent, with the most obvious example being the potential worldwide impact of infectious diseases such as Severe Acute Respiratory Syndrome (SARS), Avian Influenza, HIV/AIDS, tuberculosis and malaria. Acknowledgement of increasing inter-dependence has been reflected in the establishment of partnerships of countries and organizations to address global problems. Political and economic changes and upheavals, conflict, and low-intensity war, bring about shifts in balance of power between nations, which also impacts on global and national policy environments. Countries in conflict or with very scarce resources may be more open to external influence. All these factors affect the policy environment at the global level, and have an impact on which problems get attention, what resources are made available, and where they are spent.

At the country level, the policy environment is affected by changes at the global as well as national level. Partly because of the growth in partnerships, partly because of some disillusion about the role of the state, recent years have seen greater attention paid to democratic processes and governance issues, and some scholars have promoted the notion of 'good policy environments' (Burnside & Dollar 1997). Democratic societies which allow or encourage policy debate and consultation are perceived to be more likely than closed, corrupt or authoritarian societies to facilitate discussion, utilization and dissemination of research findings or to commission research where evidence is not available. Similarly, strong governance systems (with legal or mandatory rules or inspection bodies) strengthen policy-makers' ability to facilitate the implementation of uniform, universal policies (about the sale of safe medicines, for example). In the early 2000s a number of different measures were introduced, largely by donors and the World Bank, which purport to measure the robustness of the policy environment.[1]

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[1] For example, the Millennium Challenge Corporation, a United States of America government mechanism, provides development funds to countries which demonstrate a commitment to policies that promote political and economic freedom, investments in education and health, control of corruption, and respect for civil liberties and the rule of law. Commitment is assessed by performing well on 16 different policy indicators. See http://www.mcc.gov/selection/index.php (last accessed 25 February 2007).

The policy environment is also affected by political traditions, and economic and social conditions within the country. For example, one study (Navarro et al. 2006) suggested that political parties with egalitarian ideologies implemented redistributive policies. However, even countries with strong democratic traditions may ignore or even falsify evidence in order to follow strongly held beliefs. For example, the current United States of America President's Emergency Plan for AIDS Relief (Pepfar) ABC (abstinence, faithfulness and condom use) policy to fight HIV/AIDS is derived more from the beliefs of the 'moral majority' in the United States of America who have provided support to the President of the United States, rather than any evidence that ABC policies will change behaviour.

Insufficient financial resources may leave policy-makers dependent on external donors, possibly reducing local control over policy implementation (where funds are tied to particular programmes or products for example, or pledges on resources do not flow smoothly). Social differences, both class and ethnic, and beliefs and values may affect who becomes a policy-maker and which policies they pursue. For example, elite families may seek to retain power to influence policy by nominating family members to stand for government; policy-makers from particular ethnic groups may promote policies that favour their own group; or members of a government may be unwilling to introduce legislation around divorce, family planning and abortion because of the strong religious views of national elite. Where educational opportunities are limited and private and public sectors compete for scarce professional or graduate staff, research may be under-funded and under-valued, which again, will affect the extent to which policy-makers are open to evidence informing policy.

In summary, while all policy environments are influenced by global political, economic and social factors to a greater or lesser extent, they are also affected by their own unique political, economic and social factors. How far those working in these environments are able and open to learn from, or resist, external ideas and pressures will be determined in part by these particular characteristics.

The role of interests, ideology and values

Interests are usually expressed through individuals or groups of actors. 'Actors' refer to individuals, public and private organizations, governments or government departments. There has been a major expansion of the numbers and types of actors involved in policy-making processes. Twenty years ago, it was conventional wisdom to focus on policy-making in the public sector, to describe policy-makers as policy elites, made up of top government bureaucrats and politicians at the national level. There was little understanding or interest in local level policy-making (partly because it was assumed that at this level implementation was the norm rather than policy formulation), or in policy-making in the private sector. Most analysis was of high-income countries, although some argued that similar generalizations could be applied to middle- and low-income countries. Acknowledgement was paid to the existence of interest groups, representing specific groups or promoting particular issues, but these were seen as being active at particular points in the policy process, and largely absent in low-income countries. Such groups might be perceived as 'insiders', and were consulted by government policy-makers; others were 'outsiders' considered by policy elites to have less legitimacy.

Over recent years focus on the policy-making environment has broadened to include a much larger set of actors and the boundaries between public and private sectors have blurred. This has been characterized, for example, by the growth of public-private partnerships. At the global level, such partnerships may include corporations such as Coca Cola, international organizations such as the World Health Organization, bilateral agencies such as the Swedish International Development Cooperation Agency (Sida) or the United States Agency for International Development (USAID) as well as a large variety of international nongovernmental organizations (NGOs) such as Médecins Sans Frontières or the Bill & Melinda Gates Foundation. These partnerships are described as transnational networks, and are perceived to be less hierarchical and less vertical than more traditional international organizations: partners are assumed to have equal voice and opportunities for participation in policy processes even acknowledging differences in power, although this assumption has been contested (Buse & Walt 2000).

At the national level policy-making is no longer concentrated in the relationship between bureaucrats and politicians. The conventional wisdom that politicians or ministers made policy, and civil servants merely carried it out, is being questioned. However, just as the policy-making arena has expanded to include more global actors, so has this occurred at the national level. Policy-makers in both the public sector (government) and private sector are increasingly aware of the power of strategic consultation in the policy process. One senior policy-maker in Thailand describes his tactics in building support for the policy of universal health care. Besides compiling comparative information from other countries to strengthen Thailand's bid to implement a universal health care programme, he decided to "share these findings with peoples' organisations across the country … We organised public forums, study tours and public support. We had extensive discussions with civic groups to ensure their views on health security were addressed by the bill … We approached NGOs …" (Nitayarumphong S (2006) p. 71).

Where policy-making was once largely focused on public policy – the remit of government – policy-making is today more 'deliberative' (Hajer & Wagenaar 2003), and may include a diversity of actors from the private sector. Governments increasingly include advisors on policy from industry or the private sector. In Botswana, for example, the pharmaceutical company Merck, through its Foundation, has played a major role in advising (and funding) the country's HIV/AIDS programme. Also, many policy-makers recognize that, in order to coordinate and collaborate in a complex policy environment, they need to have close links with a large number of other actors both within and outside government. For instance, in the United Kingdom there has been an attempt to have 'joined-up' government by improving coordination between different government departments responsible for particular policies. Thus, in order to ban the smoking of tobacco in public places in England from July 2007, the Department of Health had to negotiate with central departments concerned with trade, regulation of the sale of alcohol and tobacco, and the police, as well as local governments concerned with licensing laws, and civil society organizations (including industry) opposing or supporting a change in policy. Once the government had agreed the policy, strategies to ensure smooth implementation had to include a diversity of public and private actors to justify and communicate the new law.

Coordination and policy exchange may occur across borders too. For example, facilitated by the ease of modern communications, transgovernmental actors – government policy-makers working across borders – often exchange information without the direct mandate of the state. So officials in the Department of Environment or Health in one country may be in regular contact with environmental or health officials in similar positions and with similar concerns in other countries. The resulting exchange of ideas and experience may well inform national policies but be formulated by technical advisers and civil servants rather than ministers.

One of the big changes in the research-policy interface is the shift from the 'two community' approach (Box 2.1) to what can be called the network approach.

BOX 2.1 THE 'TWO COMMUNITIES' MODEL OF RESEARCHERS AND POLICY-MAKERS

	University researchers	Government officials
Work	Discrete, planned research projects using explicit, scientific methods designed to produce unambiguous, generalizable results	Continuous flow of many different tasks involving compromise between interests and goals
Attitudes to research	Research justified by its contribution to knowledge base	Research only one of many inputs; justified by its relevance
Accountability	To scientific peers primarily, but also to research sponsors	To politicians primarily, but also the public, indirectly
Priorities	Expansion of research opportunities and influence of experts in the world	Maintaining a system of 'good governance'
Rewards	Built largely on publication in peer reviewed journals	Built on successful management of complex political processes
Training and knowledge base	High level of training, usually specialized within a single discipline	Often, though not always, generalists; expected to be flexible
Organizational constraints	Relatively few (except resources); high level of discretion e.g. in choice of research focus	Embedded in large, inter-dependent bureaucracies and working within political limits
Values	Independence of thought and action highly valued; belief in unbiased search for generalizable knowledge	Oriented to providing high quality advice, but attuned to a particular context

In the former approach, two communities of researchers and policy-makers are motivated by different interests (Buse et al. 2005) and 'knowledge brokers' are needed to bridge these worlds (Lomas 2007). In the latter, observers are less likely to see these actors as separate, but rather as members of policy networks, with informal and formal relationships. Networks have different levels of power, derived from having resources such as finances or knowledge, contacts and relationships, skills and authority or the ability to mobilize others. This is the 'agency' which provides the leverage to both individuals and organizations, national or cross-border networks to promote or implement change in particular situations. Policy networks are sometimes referred to as policy communities or issue networks. The first is a relatively enduring network with restricted membership, often bound by similar professional beliefs and values. Policy communities can sometimes determine what specific policies or interventions should be considered or changed. They are contrasted with issue networks, which are looser, made up of different groups who come together on a specific issue, often to try to influence policy agendas, and which

BOX 2.2 POLICY COMMUNITIES AND NETWORKS

The following excerpts from a study (Walt et al. 2004) which compared the global to national dissemination of the policy of DOTS (Directly Observed Treatment, Short-course) for tuberculosis control and syndromic management for sexually transmitted infections provides a description of the difference between a policy community and an issue network.

Policy communities; sharing 'deep core' beliefs

"…There was a network of actors which functioned as a tight epistemic community made up of dedicated scientists and public health physicians working in unglamorous and under funded research areas. In medicine, such networks tend to share information voluntarily and efficiently through academic journals, conferences, and peer discussion. Key teachers from reputable public health institutions stimulated students to undertake a wide range of studies in a particular field … ideas were generated and tested in developing countries, with individuals from those countries playing an important role in knowledge generation [and were] promoted by international links between researchers at schools of public health and technical staff of international agencies…"

Issue networks: making things happen

"… a specially formed issue network projected a powerful lobby pushing for a new approach to tuberculosis treatment, through advocacy, standardization, and simplification, even at the cost of local flexibility. Dissenters (both scientists and public health professionals) were sidelined while the advocacy drive for DOTS took place. This ultimately led to approaches to program introduction at country level which were sometimes perceived as coercive. Power was derived from the alliance between two authoritative international organisations: the World Bank and WHO, and groups within them that had the ability to make things happen."

Source: Adapted from Buse et al. (2005) p. 163.

may disband or adapt to work on other issues. (See Box 2.2). Both types of networks have strong interconnections between actors within the networks.

Members of such networks vary, but often include government officials, in their roles as professionals, advisers or technocrats. One researcher on river blindness in Uganda noted that his research role was complemented by his being a member of the senior management team in the Ministry of Health. "Programme managers are my colleagues … so when I sell them an idea in a meeting, with evidence, they buy it!" (Walgate 2007). Of course members of networks may be active or passive, accelerating the priority interests of the network or delaying them. Civil society organizations or NGOs may also be members of networks, especially promoting or lobbying for particular issues; but if they have particular expertise they may also be part of formulating policy options. NGOs sometimes act as brokers – presenting views or priorities that researchers or government officials feel sympathetic to, but which they cannot explicitly support without harming their independent or objective reputation. Networks or members of networks may play important roles in filtering evidence – shaping which research findings are most appropriate to consider or to present in relation to any particular policy being pursued.

Other powerful members of networks, who may exercise considerable influence in the way arguments are presented, are the media – television, radio, newspapers, public relations and lobbying firms. They may be members of issue networks, advocating for a change in policy, or of policy communities, in professional capacities as science or health correspondents. The group of media actors has also changed over the past decades: today they are often concentrated in large corporations with the ability to reach all over the world, with changing opportunities through the growth in the World Wide Web and open access. Not only may the media be members of networks, but they also interpret, translate and comment on the procedures, products and processes of such networks and the production of evidence from such networks. There are many examples of where the media have played an important role at some stage of the policy process – often at the agenda-setting stage – but also in evaluation of existing policies. (See Box 2.3).

One important characteristic of networks is that they provide opportunities for information exchange that includes not only findings from research and evaluation, but also narratives from a broad range of personal experiences and practices. Personal values and beliefs may be deeply held, and affect debates and arguments about how to interpret and understand information. Such exchanges may be entirely 'virtual' (through the Internet, conferences and meetings, journals or other written media) or they may be coordinated and facilitated by a central institution or a leading member organization.

Whatever their form, networks will be highly dependent on leadership within the network as to how effectively they influence policy. This highlights one of the peculiarities of the policy process: that while policy-making occurs through the actions of many different networks of actors at international, national and local levels, individuals make a major difference in these interactions. The charisma of a particular individual may be a major factor in the policy process (for example, Nelson Mandela leading his country through a peaceful transformation from apartheid). Individual personality, passion or commitment can be a powerful factor in facilitating or hindering change at various stages of the policy process, and at all levels – from global to local. Implementation, for example, may be successful largely because of the excellent organizational and communication skills of a district level manager – or fail because managers are mired in bureaucratic inertia, unable to see ways to change old practices.

In summary, there is a great variety of actors who might be involved at various stages in the policy process, in advocating change, designing policies, or putting policies into effect. They may be active as individuals or as members of groups or organizations, and often form part of relatively loose, fluctuating, issue networks that promote particular issues or try to raise consciousness about specific concerns; or they may be part of policy communities of professionals or experts, which are more integrated in their membership, persist over time and proffer policy options or evaluate policy execution. Policy-makers may be members of one or several networks, and access information from many different sources, only one of which is research. The more closely involved they are in networks which encourage and stimulate debate and discussion, the more likely they are to be motivated to be informed by, and use evidence in policy-making.

Policy-making processes

Recent years has seen a growing interest in how policy is formed and implemented. Indeed the development of our understanding of these processes has been a major contribution of HPSR, though there are still many questions to be answered. In this section we reflect on current understanding of the policy processes, starting with the policy cycle.

The policy cycle

An enduring application which illustrates the way the policy process works is the 'stages' heuristic (Sabatier & Jenkins-Smith 1993). This describes several phases of the policy process, from recognizing a problem or an issue, to formulation of policy to address it, to implementation of that policy and then its evaluation or assessment, and its outcomes. This approach to policy-making has survived two particular criticisms: first that it appears too linear – assuming that policy-making proceeds smoothly from recognition of a problem through to evaluation of its execution. And second that it mimics the rational model of decision-making, which suggests that policy-makers choose policies only after considering the costs and benefits of all alternatives, their potential consequences and then logically select the policy that provides the optimal solution. Many have pointed out that the stages heuristic is not necessarily linear – and suggest policy-making is a cyclical process. It is often at the implementation stage that problem recognition occurs. Or policies may be formulated, but never put into practice. Others have pointed out that although policy-makers may intend to be rational, many factors intervene to undermine a perfectly rational policy process, including the active opposition by different interests.

The degree to which research or evidence feeds into policy may differ at any stage of the policy process, and may be initiated by different networks or groups. Box 2.3 sets out the different stages of the policy process, and shows how networks may exert influence at the various phases. Issues may only get on the public policy agenda when they are perceived by government policy-makers as legitimate ('this is something we should act on'), feasible ('we have the resources to act') and have support ('there is likely to be public support for action'). Where any of those factors are weak, the problem may lie dormant. For example, if the research implies major challenges to the current budget, or may lead to a particular service being dropped, policy-makers may be disinclined to consider change, even if they acknowledge the relevance of the findings. Well disseminated research findings may act as the catalyst to persuade policy-makers to act on a particular problem, or may be used at a different stage of the policy process – during policy formulation for example – to inform policy-makers of the type of action to take.

At each stage of the process different members of networks may take the lead alone or together. Civil society groups and the media are most likely to be involved at the agenda-setting stage. The spectacular progress of those involved in the issue network to promote access to antiretroviral drugs during the late 1990s and early 2000s is a good example of how a network of actors, which included governments (e.g. Brazil), pharmaceutical companies (e.g. Cipla in India), many civil society organizations and researchers in low-, middle- and high-income countries, raised the issue and changed the policies of many different bodies, from pharmaceutical companies to health ministries.

However, civil society organizations may also get involved in the policy process at the stage of policy formulation: they may work alone or with academic or research institutions to negotiate around policy options and established values and cost-effectiveness debates, drawing on their own experience or research; again at implementation, civil society organizations may assist in outreach work, providing supplies or advice to their own communities, and acting as a bridge between policy-makers and local people. Precisely which members of the network get involved at each stage of the policy process will differ over time and with context.

Lavis and colleagues (2002) explored the extent to which research was actually cited in policy. They found

BOX 2.3 THE POLICY PROCESS AND HOW NETWORKS MAY AFFECT IT

Stage of the policy process	How networks may influence the policy process
Agenda setting	Draw attention to particular problems and issues by ■ collecting information, doing research ■ fostering links within and between networks ■ using membership of networks to disseminate findings ■ running advocacy/amplification campaigns
Policy formulation	Participate in policy strategies and design by ■ collaborating in discussion groups, committees and other debates (through the media for instance) ■ providing or seeking evidence on policy options ■ amplification strategies
Implementation	Facilitate the execution of agreed policies by ■ helping enhance policy communication at all levels ■ supporting the outreach actions of those contracted to undertake services
Evaluation	Provide feedback on implementation by ■ collecting evidence on problems as they arise ■ bridging gaps between policy-makers and clients/service users by facilitating links and feedback

Source: Adapted from Perkin & Court (2005).

that four of eight health services policies used citable research – which was accessed because government policy-makers had interacted with the researchers from research institutions – at different stages of the policy process. They noted that all policies and policy-makers referred to many types of information other than citable research as being influential in their policy-making. Some policy-makers may be highly sensitive to information in the media, and there are many examples of policies being strongly influenced at the problem-recognition stage where the media use information or research to try to influence the policy process, with both positive and negative consequences. Much will depend on the investigative culture and resources of the media; where they are weak, or under the control of the state, they may play little part in policy processes, other than to report formal policy statements or evaluations of policies. In low-income countries which are highly donor dependent, policies may well be influenced by external actors using evidence from other settings to persuade national policy-makers. In China (Van Kerkhoff et al. 2006), for example, one study suggested that participation in the policy process was opened to new groups by the Global Fund to Fight AIDS, Tuberculosis and Malaria, which insisted that as best practice, groups working with injecting drug users (usually excluded from Chinese policy fora) ought to be invited to participate in revisions to Harm Reduction policies. The Global Fund argued that if they were excluded, experience in other places suggested that the policy might fail, and the Chinese government conceded to the inclusion of this group in making decisions about harm reduction.

The impact of research on the policy process is dependent on how open policy-making is, and on the power of the different actors. Policy-makers may choose to ignore evidence for many reasons (e.g. lack of support from elites or strong opposition from powerful groups, lack of resources to implement systematically) but also because they are faced with a continuous flow of many different tasks and issues, and are under pressure to find solutions quickly. If research slows down this process, or contradicts the policy-makers' beliefs or existing policies, or is perceived to be irrelevant, it is likely to play a marginal role in policy-making. If it is not synthesized or presented in digestible forms it may also be ignored. However, policy-makers are more likely to use evidence in political systems that call them to account through strong networks and an active media. This is true for all countries, whether high, middle or low income.

How policy learning takes place: ideology and beliefs

An approach to understanding how evidence is used in the policy process is through what could be called the 'three E approach': engineering, enlightenment and elective affinity (Buse et al. 2005).

The engineering model holds that a problem is recognized, solutions are sought (through research), and then applied to the problem, thus resolving it. This is a strongly rational approach, and one which has been criticized for the same reasons: the connection between problems and solutions is complex, and many policies have been proposed on the basis of ideology or belief, rather than evidence (many of the health reforms introduced in the 1990s all over the world fell into this category). Studies suggest rather, that policies may be informed by research, but the relationship is not direct. Two analogies are often used: one is that research is like water falling on limestone (Thomas quoted in Bulmer 1986) – it filters through and comes out in unexpected places; the other is that research is like lichen, spreading across a rock face over many decades (Watts 2007).

This is the enlightenment view of knowledge informing policy – ideas and evidence take time to be discussed – and may take time to become accepted. However many have argued that governments or other groups of policy-makers will only use research that fits their existing policies or policy intentions. This is what the elective affinity approach emphasizes: that research is more likely to be accepted where values and political views of researchers and policy-makers coincide, where timing of results fits decision processes and there has been sufficient contact between researchers and policy-makers. Box 2.4 provides examples of the way the policy process explicitly incorporated values into specific health policies in Mexico and the United Kingdom. The elective affinity approach suggests that if research findings question conventional wisdom or introduce new thinking, they may be ignored or rejected. In such cases research may play an enlightenment role – that is, take much longer to be accepted and filtered into formal policy processes.

In summary, it is commonly agreed that policy-making is an iterative, messy and sometimes opaque process – one in which policy-makers 'muddle through' rather than follow rational, linear phases. Nevertheless, for analytical purposes, it is useful to break down the policy process into a series of phases, acknowledging this is

BOX 2.4 VALUES AFFECT POLICY

Mexico

A former Minister of Health in Mexico (previously a researcher) provides an example of how evidence demonstrated policy-makers' values were not being taken into account: "Some very technical work in national health accounting revealed that we were spending three times more per capita on people who were salaried workers in the formal sector of the economy, and who already had social insurance – than on unsalaried peasants and people in the informal sector of the economy. Three times more. No one had measured that before. And it was very serious technical work – no one could challenge it.

So we went to Congress. And we asked 'do you believe that the life of an urban salaried worker is worth three times more than that of a peasant?'. They said no – all human lives are worth the same. So then we said: but you are revealing, with your spending, a set of values that contradicts what you are telling us!" (Frenk J 2006 p.8-9)

United Kingdom

In 2007 the Chair of the United Kingdom's National Institute for Health and Clinical Excellence (NICE) acknowledged the place of values informing policy decisions (Anderson 2007). He said that some of the decisions NICE is asked to adjudicate cannot be simply decided by considering the resources available for health care and their cost-effectiveness, and gave as an example the issue about whether older people should have the same entitlement to treatment (e.g. expensive drugs) as children.

"We have to take into account the values of the society in which NICE operates. So what we have done is set up a citizen's council, a representative group of people from England and Wales… We pose them questions and provide them with witnesses, engaging both sides of an argument …Eventually they concluded that you should not take age into account: that there should be no difference whether a patient is aged five, 25 or 75…" (ibid p. 21)

a theoretical device, rather than a mirror of the real world. And while some scientists describe the engineering approach as an 'ideal model' for getting research into policy, most scholars are sceptical of it, because it negates the considerable evidence that suggests that the policy process is political and often involves contestation between actors whose beliefs, values, knowledge and interests do not necessarily coincide. Examination of policy processes suggests that each stage of the policy process may be influenced by a medley of different actors, who may form networks to promote a particular issue, or may represent more enduring sites of debate in say, epistemic communities, around policy options and implementation.

What counts as evidence? Whose evidence counts?

Evidence-based policy has rationalist assumptions – policies should be based on evidence from research, and they should be evaluated so that lessons can be learned in order to adapt, continue or halt implementation.

However, what counts as evidence, and whose evidence is acceptable, are both potent influences on the policy process. Use of the terms such as evidence, knowledge and research can often be very loose. Box 2.5 sets out some definitions.

However defined, evidence itself is also often contested. Contradictions among researchers may occur in all sorts of policies – whether about the relationship between certain foods and health, or between economic policies, poverty and health. One difficulty is that research findings are not necessarily self-evident or consensual. Box 2.6 illustrates this with the problems of changing anti-malarial drug policy in Kenya. Another difficulty for both research and policy is the gap between inputs and outcomes: for example, which particular policies to combat poverty result in improvements for the poor? Sumner and Tiwari (2005) describe how the conventional wisdom that economic growth is good for the poor has been disputed by many researchers who argue that economic growth often increases inequalities, at least in the short-term, and therefore does not benefit the poor. Where evidence is uncertain – or scientists do not agree among themselves – policy-makers are in a quandary. They may then judge the evidence by assessing where it has come from, or ignore it if there are no clear policy options.

Who provides the evidence will also influence policy-makers. They may trust institutions or research groups or civil society organizations they know, or have had contact with, or feel more persuaded by findings generated domestically than those from other countries. In the United Republic of Tanzania, an internationally-funded study which used local household disease surveys to demonstrate resources were not going to those most in need, persuaded district level policy-makers to reallocate expenditure which later contributed to a 40 per cent reduction in mortality (De Savigny et al. 2004). Chapter 6 discusses this further in terms of the legitimacy of advocacy organizations.

Policy-makers may be willing to learn from other countries, but much will depend on how the experience is presented (see, for example, Box 2.7).

On the other hand, policy-makers may accept the findings from research, institute formal policies, but have little effect in practice (Box 2.8).

In summary, there are many factors that influence the acceptance of evidence, and its execution into policy and practice. Where there is uncertainty about the evidence or where the findings come at the wrong time in the policy process, are perceived to be irrelevant or insufficiently operational, or question basic values or conventional wisdom, policy-makers may ignore such research or fall back on judgments about the quality of research. While they may be impressed with results from international studies, they are more likely to act where studies are based on, or combined with, local realities.

So what works?

Over the past decade much more attention has been paid to improving the ways in which evidence can inform policy including looking at imaginative ways of presenting findings tailored to different audiences and better dissemination strategies. There has also been a shift in focus towards ‘what matters is what works’ (Cabinet Office 1999 quoted in Sanderson 2002) learning from existing policies and their outcomes, through evaluations for example. But as the example of ORT shows, when sufficient attention is not given to execution of policy, it may fail.

Having looked briefly at some of the influences on the policy process, what can be concluded about the research-policy interface? From the analysis above, two points stand out:

- The interface between evidence and policy is complex and highly dependent on context and timing, as well as on global trends.

BOX 2.5 EVIDENCE – WHAT IS IT?

Definitions (Concise Oxford English Dictionary, accessed online, 9 July 2007):

Evidence	Information indicating whether a belief or proposition is true or valid.
Information	Facts or knowledge provided or learned.
Knowledge	Information and skills acquired through experience or education. The sum of what is known.
Data	Facts and statistics used for reference or analysis.
Research	The systematic investigation into and study of materials and sources in order to establish facts and reach new conclusions.
Fact	A thing that is indisputably the case. (Facts) information used as evidence or as part of a report

Despite the neat and concise definitions above, 'What is evidence' in any given situation is a question that needs to be answered and agreed on by the different actors (researchers, policy-makers, civil society) involved in that situation.

There are many different types of evidence, including:

- systematic reviews
- single research studies
- pilot studies and case studies
- experts' opinion
- information available on the Internet

While randomized controlled trials are widely considered to provide the most reliable form of scientific evidence in the clinical care context, the complexity of the health policy context demands different types of evidence. Observational studies, qualitative research and even 'experience', 'know-how', consensus and 'local knowledge' should also be taken into account (Pang 2007). It is often difficult to apply rigid hierarchies of evidence to health policy; research provides only one type of evidence. While research may be viewed as rigorous enquiry to advance knowledge and improve practices (White 2002), evidence resulting from research can rarely be regarded as 'fact', and indeed may be equivocal. Such evidence may be used to support or refute a variety of different beliefs or propositions. Evidence can always be understood in different ways to 'produce' entirely different policies (see Marmot 2004, in which the author discusses how a willingness to take action over alcohol influences the view of the evidence).

- There are many actors involved in both producing evidence and in policy processes, which offers opportunities as well as threats. Greater consultation with stakeholders may increase the likelihood of policies being acceptable and effective, but the process of consultation may take a great deal of time and resources, and become derailed or less relevant.

Changing the metaphor: towards evidence-informed policy environments

As we have seen, policy-making occurs in messy political environments where decisions often have to be made quickly, and negotiated between many competing interests. The extent to which such decisions will or will not be informed by evidence is dependent on many factors. Rather than focusing on the elusive relationship between policy and research, it may be more helpful to ask what factors encourage the policy environment to be influenced by evidence. Prewitt (2006) has called for a change in metaphor from evidence-based policy to *evidence-influenced politics*, which acknowledges the central role played by political factors. Even where resources are very limited (technical capacity thin, finances constrained) the policy environment may be open to using research findings.

Thus, evidence is more likely to be considered in contexts where policy-making is a relatively open process – where it is clear what the different stages of decision-making are, who are responsible at each point in that process, and when there are formal mechanisms for consultation and discussion. It is then possible to identify opportunities and constraints within the policy process for influencing agenda-setting, formulation of

BOX 2.6 EVIDENCE IS COMPLEX

A paper (Shretta et al. 2000) which reviewed the range and quality of evidence used to change drug policy in Kenya noted the difficulties in translating data with gross geographical, temporal and methodological variations into national treatment policies. "The process was complicated by limited options, unknown adverse effects of replacement therapies, cost, as well as limited guidance on factors pertinent to changing the drug policy for malaria. Although 50% of the studies showed parasitological failures by 1995, there was a general lack of consensus on the principles for assessing drug failures …" (p. 755)

BOX 2.7 THE IMPORTANCE OF THE PRESENTATION OF EVIDENCE

Research in Cambodia and Thailand that increased the use of condoms by sex workers and reduced the prevalence of sexually transmitted infections (STIs) was disseminated to a small policy community of local NGOs, an international NGO, plus public officials and programme managers in the Dominican Republic. The intervention reported in the research was adapted, leading to the establishment of workshops, follow-up meetings with sex workers and sex establishment managers, visible posters and information and access to free condoms as well as monitoring by government health officials (Haddock 2007). The results were repeated: condom use among sex workers and their clients increased, and the prevalence of STIs decreased.

BOX 2.8 EVIDENCE AND POLICY IMPLEMENTATION

A 2007 review (Forsberg et al.) of oral rehydration therapy (ORT), promoted as best practice in the management of diarrhoea in children from the 1980s, found that some twenty five years later, use rates were low, and large numbers of children continued to die from a preventable condition. They concluded that the reasons for policy failure lay at various points in the execution of policy – for example, a study of 14 referral hospitals in Kenya by the Medical Research Institute found that none of the hospitals had the WHO-recommended rehydration solution (Crisp 2007) – and that insufficient attention had been paid to the research-policy-implementation interface.

policy, implementation or even evaluation. Identifying decisive moments, or windows of opportunity – a new government coming to power for example – may facilitate the introduction of evidence which has been ignored before. The introduction of the 30-baht universal coverage scheme in Thailand was an example of researchers seizing the moment of a new government in search of a radical popular policy, and providing the evidence to demonstrate its viability (Tantivess 2006). We look at the implications of this for researchers in Chapter 5 and policy-makers in Chapter 7.

Where the policy cycle is opaque, where policy-makers are not open to challenge, where they are members of partisan groups (who may represent particular interests) researchers can draw on other resources – the media for example – to draw attention to constraints in the policy process, including partiality among policy-makers, which, over time, may lead to more open policy environments.

Conclusion

In this chapter we have provided an overview of the nature of policy-making – as a messy process, and one influenced by a variety of factors and actors. We have particularly examined the degree to which, and how, evidence is used within these processes and again recognized the complexity of this, and the importance of context. There are many factors that affect the research-policy interface. Knowledge of policy processes and environments can be used by those interested in enhancing the degree to which policy is influenced by evidence – by strategically managing research findings, for example.

Our understanding of these processes is still incomplete and indeed HPSR has an important role to play in heightening this understanding. This Review aims to improve the nature of such policy processes and to enhance the use of evidence within them. In the subsequent chapters we look in more detail at the particular roles of institutions involved in the determination of the type of research carried out, producing the evidence, and filtering and amplifying it to policy-makers and their specific capacity development needs. We turn first, however, to look at the nature of capacity and develop the framework around which these functional chapters are structured.

Chapter 3

A framework for evidence-informed health policy-making

Chapter 3

Key messages

- The evidence base concerning national capacity for evidence-informed policy processes is weak.
- The conceptual framework developed here proposes four main functions of evidence-informed policy-making: research priority-setting, knowledge generation and dissemination, filtering and amplification of evidence, and policy-making. This framework will help to develop and evaluate strategies for enhancing (or releasing) capacity.
- A systems approach to capacity and capacity strengthening is important. While existing capacity strengthening initiatives are increasingly recognizing the importance of institutional and systems approaches, these dimensions require even greater focus.
- Previous capacity development initiatives have also tended to focus largely on the production of evidence rather than on capacity to use evidence in policy processes; this latter dimension requires greater consideration.
- To-date there has been very limited evaluation of capacity development strategies and greater investment is needed in assessing whether the strategies employed are effective.
- There is a need for countries to analyse and understand the current status of national health policy-making systems and their use of evidence, and to develop and support strategies at the national and international level to strengthen capacity.

Background

Elaboration of a conceptual framework for evidence-informed national health policy-making was considered a crucial component to guide development of this Review.[1] The present chapter sets out the core principles of such a framework, incorporating the three aspects of knowledge generation, health policy processes and capacity factors. A visual depiction is developed incrementally to guide the thought process; this, in turn, is accompanied by explanatory narrative. The ultimate aim of the framework is to help guide the process of drawing pragmatic lessons about what government, civil society, research institutions, donors and multi-lateral organizations can do to promote capacity development, seeking to be as operational and practical as possible.

In developing this framework, there were a few key considerations that were borne in mind. First of all, a tension clearly exists between a naive representation of a simple linear relationship between evidence and policy, and an overly complex depiction with a multitude of variables suggesting no real opportunity for a rational process. The framework developed in this chapter tries to achieve a balance between reflecting the messiness of reality and the imposition of some form of rational order, so that the relationship between knowledge generation and policy processes can be better depicted.

Second, it is inevitable that conceptual frameworks are, at least to some extent, selective in what and how they choose to present factors. The framework described below seeks to help organize thinking about constraints on capacity, but is clearly only a construct.

Finally, this narrative is built up incrementally with the final framework appearing as Figure 3.8 at the end. To assist in explanation, intermediary figures are presented to accompany the text. Therefore, instead of 'unpacking' a complex diagram, the goal was to attempt to 'build it up' for the reader, with the aim of rendering it easier to understand.

Prior to developing the framework, however, this chapter devotes the following section to 'capacity' and 'capacity development', and what is meant by the terms. This discussion sets the scene for the conceptual framework.

Capacity

What do we mean by capacity?

The term 'capacity' is widely used within the development lexicon. Yet its use is often unspecific and without definition. Where it is defined within the literature, it is usually with a degree of vagueness. For example, in a recent report on the challenge of capacity development by the Organization of Economic Cooperation and Development, Development Assistance Committee (OECD/DAC 2006), 'capacity' is understood:

> "as the ability of people, organisations and society as a whole to manage their affairs successfully" (p. 8).

Their definition, they say, is deliberately simple, and seeks to avoid "any judgement on the objectives that people choose to pursue, or what should count as success in the management of their collective efforts" (ibid). Other definitions in the literature vary slightly, but

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[1] To inform development of the conceptual framework described in this chapter, a literature review was conducted in July–August 2006 (see Beith (2006) and Beith and Bennett (2007)). While a number of frameworks identified described various aspects of health policy and research interaction, for a variety of reasons, none satisfactorily met the needs of this Review (key reasons included: frameworks were not specific to health policy and systems research, frameworks focused on the issue solely from the point of view of the researcher, frameworks were overly simplistic and/or static, etc.). The conceptual framework presented in this chapter therefore evolved from key themes identified during the literature review and subsequent presentation, discussion and feedback at several international venues (versions of the framework were presented to the Alliance Scientific and Technical Advisory Committee, the WHO Eastern Mediterranean Region Advisory Committee on Health Research and a session at the Global Forum in Cairo, Egypt).

not significantly from this one, and tend to highlight a general ability to either perform functions or to carry out objectives. The United Nations Development Programme (UNDP) encompasses these elements in its definition of capacity as "the ability of individuals, institutions and societies to perform functions, solve problems, and set and achieve objectives in a sustainable manner" (UNDP 2006, p. 3).

When we come to assess the extent of 'capacity' (or lack of it) within any particular entity, these definitions have limited use. As Potter and Brough (2004) point out, it is as diagnostically useful to say 'there is a lack of capacity' as to say 'this patient is unwell'. While different stakeholders may agree that there is a lack of 'capacity', and that it should be addressed, they may have entirely different understandings of what is meant by the expression, about how lack of capacity manifests itself, or its impact.

In attempts to clarify the meaning of capacity, the first key dimension relates to *whose* capacity (or the capacity of what). Although terminology varies within the literature, there is general recognition that capacity (of a country, for instance) resides at three levels: the individual, the organizational, and the enabling environment. As UNDP states "the important point is to recognise that the levels, regardless of terminology, form a system in which they are interdependent" (2006, p. 5). UNDP explains that at the individual level, capacities are the skills and knowledge vested in people. Organizations provide a framework for individual capacities to connect and achieve collective goals. Capacity within larger systems, or the enabling environment, includes overall policies, rules and norms, values governing the mandates, priorities, modes of operation, civic engagement, etc., within and across the sectors. "These factors determine the 'rules of the game' for interaction between and among organisations" (p.5). Beyond the more immediate enabling environment are global trends and conditions which can either undercut/diminish or foster/strengthen capacity.[2]

The next key dimension lies in defining functional and structural components of capacity – that is, defining *what* capacity is important. By looking at the system as a whole, Potter and Brough (2004) have developed a hierarchy of capacity needs which relate broadly to the different 'levels' within the system (individual, organizational, enabling environment), but also to the interactions between them. The four broad areas of capacity need are: tools; skills; staff and infrastructure; and structures, systems and roles (see Figure 3.1).

Potter and Brough's capacity pyramid, a systemic approach to understanding capacity, demonstrates the interrelations between different elements of capacity. For instance, if a research institute has IT equipment, research software, money, and access to books and journals it has a certain amount of infrastructural capacity. But that performance capacity is of little use without personnel capacity in terms of staff sufficiently knowledgeable, skilled and confident to make effective use of the tools available. Furthermore, there needs to be enough staff, sufficiently skilled, to cope with the type and amount of work required. A health policy and systems research (HPSR) team, for instance, would need to include a varied range of skills and experiences in qualitative and quantitative research, and incorporate different disciplines such as economics, social science, medicine and epidemiology.

Assuming the team is optimal, in terms of personnel capacity and its 'fit' with both the type of work and the workload, there need to be clear processes whereby

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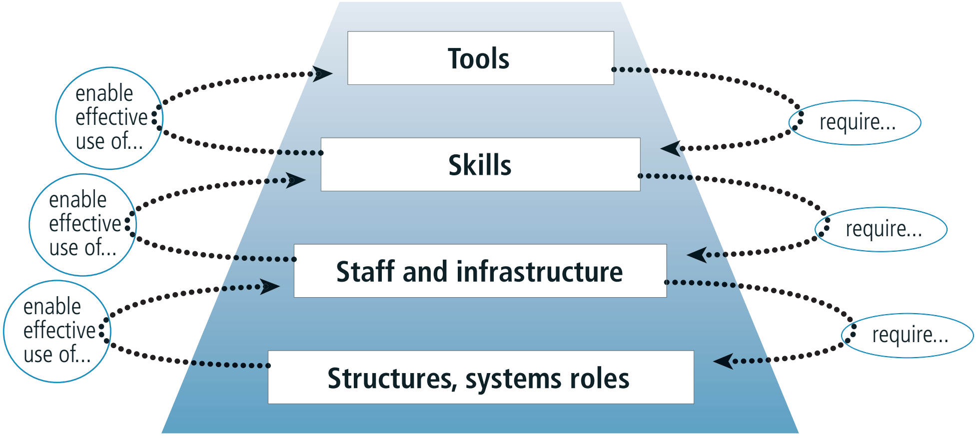
[2] For instance, UNDP cites the migration of the highly skilled, or the under-provision of global public goods (such as antiretroviral drugs) as an example of global trends that undercut capacity. Information and communication technologies (ICT) are an example of global trends that have potential to foster capacity (UNDP 2006).

Figure 3.1 Capacity pyramid



Source: Potter and Brough (2004).

the staff are supported, supervised and motivated, for the organization to make the most of the team's performance and personnel capacities. The size and make-up of the team(s) need to be suitable; they need adequate facilities, for instance in terms of office space; they need to be supported, by administrative support when needed, by professional technicians when their IT equipment malfunctions, by building services who can maintain their facilities, and by supply organizations to meet their needs for electricity, water, transport, stationary, and so on.

In order to make best use of the staff team, the facilities and these support services, appropriate structures, systems and processes are required. For instance, roles and functions need to be clearly defined and differentiated; lines of communication and accountability should be untangled; decision-making procedures should be transparent and functional; when decisions are made, resources need to flow in a timely and effective manner; and information needs to be managed effectively and efficiently.

The capacity pyramid shows that different elements of capacity relate to each other like links in a chain – a weak link can undermine the capacity as a whole. In our HPSR team, the weak link might be that certain team members lack skills, experience or confidence to do the work – despite the fact that the structures, systems and processes are supportive and functioning well. Or it might be that a highly experienced and skilled team are held back by inadequate management, or by a lack of motivation and incentives to do the work they are equipped to do. A 'weak link' that challenges any HPSR team or organization is the existing (global) 'technical capacity' to conduct health systems research. For instance, including a combination of a wide range of disciplines poses significant methodological challenges. The breaking of new methodological ground is important, yet poses risks to researchers.

Some elements of capacity – such as material resources and skills – are more measurable, easily grasped and worked with, than others. Organizational structures, systems and processes are more difficult to assess and quantify. Even more 'invisible' elements of organizational life include what Kaplan calls organizational 'attitude' (2000). This refers to the organization's sense of confidence to act in and on the world in a way that it believes can be effective. In a similar vein, Morgan refers to 'empowerment and identity' as one of five central characteristics of capacity that allow an organization (or system) to survive (particularly in times of extreme adversity), grow, diversify and become more complex (2006). These elements of capacity, like 'vision' and 'strategy' are ephemeral, not easily assessed, and largely invisible – observable only through the effects they have – to the organization itself as well as to those practitioners who would intervene to develop organizational capacity (Kaplan 2000).

Capacity development

With greater conceptual clarity of the term capacity, we turn to the idea of capacity development. In the field of development, this term is relatively new, emerging in the 1980s (Lusthaus et al. 1999). Despite its newness, its prominence is clear. Indeed, UNDP says that "Capacity development is vital to development effectiveness and the achievement of the Millennium Development Goals" (UNDP 2006, p. 4).

There are inevitably trends in ideas that dominate development thinking. Capacity development is complementary to other concepts which emerged over the past four decades, including institution building, institutional development, human resource development, development management or administration and institutional strengthening (Lusthaus et al. 1999). Morgan (1998) considers community development an umbrella concept that links previously isolated approaches. However, there is a danger that in taking on so many meanings, it has become jargon, being used as a slogan with little thought to its meaning.

There are many different definitions of capacity development. Differing perspectives emerge depending on which aspect of capacity (e.g. individual or organizational) is being prioritized (either consciously or subconsciously), as well as on ideology, or philosophical approach. For instance, more recent interpretations of capacity development reflect a shift towards a participatory-process approach through enhancement and strengthening of existing capacities (rather than previous 'institution building' approaches). Where an approach that focuses on individuals and skills might see 'capacity building' used as a synonym for training, a 'systems' approach sees capacity development as a dynamic process, involving intricate networks of actors, and requiring attention not only to skills, but also to organizational procedures and the enabling environment.

It is important that a systems approach to capacity development features in practice as well as in rhetoric. However, attempts to develop capacity in structures and systems are more difficult, and take longer, than attempts to develop skills or tools (Potter and Brough 2004). There are various reasons for this, including:

- Social structures and systems are abstract and elusive, while skills and tools are more tangible.
- In examining processes and explaining events, there is a tendency towards reductionism (and, often, a focus on the individual or the organizational) at the expense of more holistic analyses.
- Recognition of the importance of social-structural factors in constraining capacity can lead to a sense of powerlessness. Locating explanations for lack of capacity at individual or institutional failures, on the other hand, leads to more manageable action, if less effective, plans.

Experiences over the previous two decades reiterate the importance of a systems approach. Four 'lessons' drawn from a review of experiences by OECD/DAC (2006) are:

- Capacity development goes well beyond the technical cooperation and training approaches that have been associated with 'capacity building' in the past.
- Capacity building would be ineffective so long as it was not part of an endogenous process of change, getting its main impulse from within.
- The new emphasis on local ownership recognizes the importance of political leadership, and the prevailing political and governance system, in creating opportunities and setting limits for capacity development efforts.
- The factors favouring or blocking capacity development are related to the system – meaning that

attention needs to be focused on the relationships between the enabling environment and other levels.

Drawing on this, OECD/DAC defines capacity development as "the process whereby people, organisations and society as a whole unleash, strengthen, create, adapt and maintain capacity over time" (ibid, p. 9).

The OECD/DAC definition reflects four key trends in the interpretation of capacity development found within the literature. The first is a shift away from the phrase capacity building, since the 'building' metaphor suggests a process starting with a plain surface and involving the step-by-step erection of a new structure, based on a preconceived design. The second is that the present focus, both within and beyond the health sector, is on capacity development or strengthening of individuals, organizations, and the wider environment (or society) and not, as often occurred in the past, solely on individuals.

The third trend is an increasing distinction between *functional* capacity and *performance* capacity[3] and emphasis on the importance of taking the latter into account when developing strategies to improve capacity. Functional capacity refers to the capacity specific to undertaking particular tasks, while performance capacity, by contrast, refers to more generic capacities that need to be present within a given organization, in addition to an enabling environment, in order for it to be able to perform optimally.

The final trend is that capacity development is increasingly viewed as a *process* and not a one-off intervention.[4] As indicated in the OECD/DAC definition, capacity not only needs to be created, but also strengthened, adapted, maintained, and 'unleashed'. There is a range then, from capacity building on the one hand, to capacity releasing[5] (or unleashing) on the other, which sits alongside the range in perspectives from an individual/organizational focus to a context focus. The notion of 'releasing' or 'unleashing' capacity is rarely discussed in the literature, though is analogous to Sen's (1999) concept of 'development as freedom'. It implies both the reduction of organizational or sociostructural impediments to existing capacity, as well as the provision of incentives to allow capacity to flourish – "a country's ability to use skilled personnel to good effect depends on the incentives generated by organisations and the overall environment" (OECD/DAC 2006, p. 14).

The framework described in the rest of this chapter draws on the systems approach to capacity and capacity development described above.

Overview of the framework

The overall focus of the framework is on the process of evidence-informed national health policy-making. This includes the elements that make this up and on which capacity-strengthening strategies should focus. It is composed of three main levels (Figure 3.2).[6]

The interaction between health policy processes and research is broken down into different functional processes (of which there are four, described in the following section), which occur either explicitly or implicitly. The next level concerns the organizations (and their interrelationships) involved in carrying out these functions, and whose capacity is the prime focus of the framework. In order for these organizations to function

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[3] See, for example, Cohen 1993.

[4] See, for example: Sauerborn et al. 1999; Stone et al. 2001; and ODI 2004.

[5] We acknowledge the source of the idea for the concept of capacity releasing as Professor Jennie Popay.

[6] The majority of frameworks identified in the literature break down capacity into three levels (individual, organizational and system – or variations thereof) and which, in most cases provide little specific details on the dimensions of capacity required at different levels. The framework shown in Figure 3.2 emphasizes the functional processes carried out by a variety of organizations and the organizational attributes and resources that can hinder or facilitate capacity development and informed policy-making.

Figure 3.2 Elements and levels of the health policy-making framework

optimally they need certain organizational capacities, which compose the final level of the framework.

What follows is a step-by-step construction of the framework, using figure 3.2 as the basic 'skeleton'.

The functional level

Figure 3.3 portrays a simplified version of the interaction between research and health policy as we might have considered it a number of years ago.

This figure shows universities conducting research, which generates new knowledge, which is fed into health policy-making[7] processes led by ministries of health. Traditionally, academics saw their research outputs in the form of peer-reviewed journal articles and books, and paid little attention to whether this was an appropriate form of output for policy-making processes to draw on. Effectively, their responsibility was seen to end with the generation of evidence. This is, of course, a gross oversimplification of even the pattern twenty years ago, but can be argued to reflect the general assumptions and approaches of researchers.

However, this relationship between knowledge generation and policy-making has been the subject of increasing scrutiny, largely due to an improved understanding of the complexity of policy-making processes. A number of projects have sought to improve the use of research and evidence in policy and practice.[8] These projects draw on a range of theories and frameworks of policy processes (described in Chapter 2). The interaction between researchers and policy-makers is no longer conceived of as a one-way flow of information as researchers disseminate their findings, but rather as "an interactive process in which communication includes feedback and an understanding of the research needs of research users" (Stone et al. 2001, p. 17).

In view of this complexity, there is also a shift in understanding about the role of evidence in policy and practice. Evidence-based policy and practice is essentially about distilling and propagating 'what works'. But

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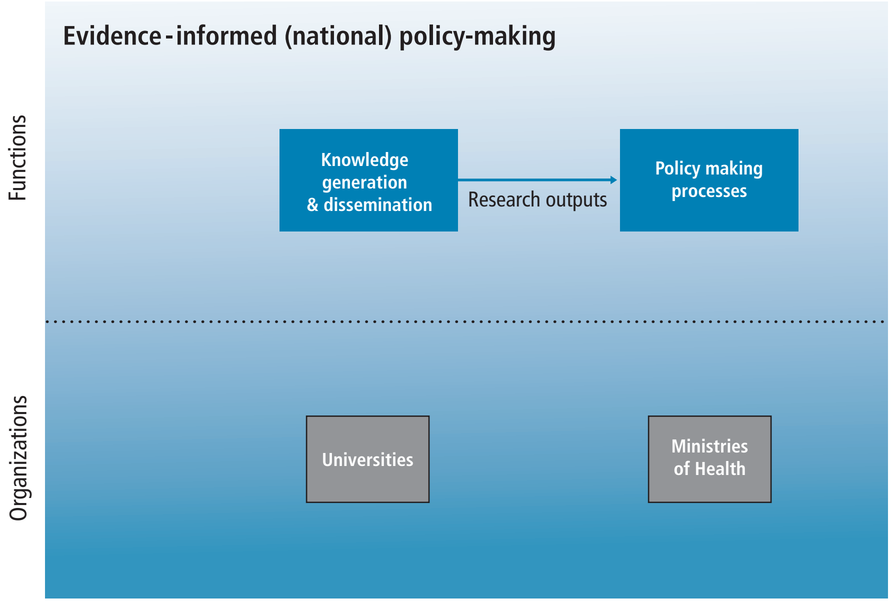
[7] Policy-making is seen here to include all the elements of the policy cycle from agenda setting through to policy implementation and evaluation.

[8] Initiatives include: GRIPP (getting research into policy and practice), a programme led by the Global Health Council which aimed to promote better understanding of evidence-based approaches to health care and facilitate dialogue between researchers, policy-makers and practitioners; the Joint Health Systems Research Project (see Varkevisser et al. 2001); the Canadian Health Services Research Foundation (see http://www.chsrf.ca/home_e.php); the WHO Health Evidence Network (http://www.euro.who.int/HEN), and ODI's RAPID programme (ODI 2004), among others.

Figure 3.3 The HPSR and health policy world as perceived 20 years ago

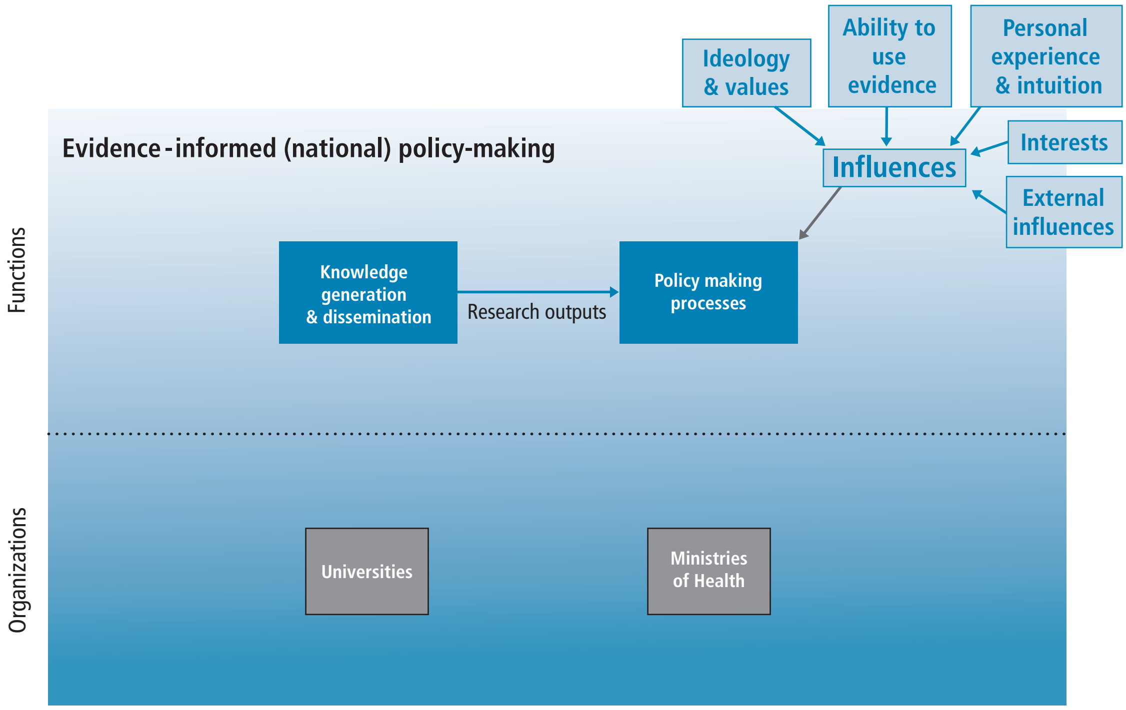


what works is not all that matters. What policy-makers and practitioners really need to know is what works for whom, and in what circumstances. To answer these questions requires research that is not only evaluative, but also descriptive, analytical, diagnostic, theoretical and prescriptive. Evidence, then, needs to influence all stages of the policy cycle – the shaping of agendas, the defining of issues, identification of options, the making of choices for action and the delivery of them, and the monitoring of their impact and outcomes (Solesbury 2001).

Also, in recognition of the fact that the policy-making context is highly political, and depends on a variety of factors and inputs (including personal histories and experiences), there has been a shift in terminology from evidence-*based* to evidence-*informed* (or evidence-*influenced*) policy and practice. As Levačić and Glatter (2001) point out, the shift also concerns the nature of professionalism and policy-making. Central to both is the exercise of judgement, which is necessary for the application of a knowledge base to particular circumstances.

Returning to the framework, Figure 3.4 introduces into the process a number of these other influences that affect the policy-making processes, alongside evidence. The ideology and values of policy-makers themselves are a critical, and entirely legitimate, input into policy formation. Such ideologies may be held either at the individual (policy-maker) level or expressed through particular organizations that exert influence. The interests of various groups (both within the country and externally) and individuals (often known as stakeholders) will also play a significant role. Frequently a decision, particularly a high-level one, will involve multiple policy-makers such as civil servants, legislatures, and/or the executive arm of government. Different policy-makers will be influenced by different forms of communication and different arguments. The quality and nature of interactions between the multiple stakeholders involved in generating and synthesizing knowledge, and applying it to policy-making and implementation is critical (Furman et al. 2002). Closely related are the personal experiences, habits, political judgement and intuition of policy-makers and the relative importance given to these alongside scientific evidence.

Figure 3.4 Influences on health policy processes

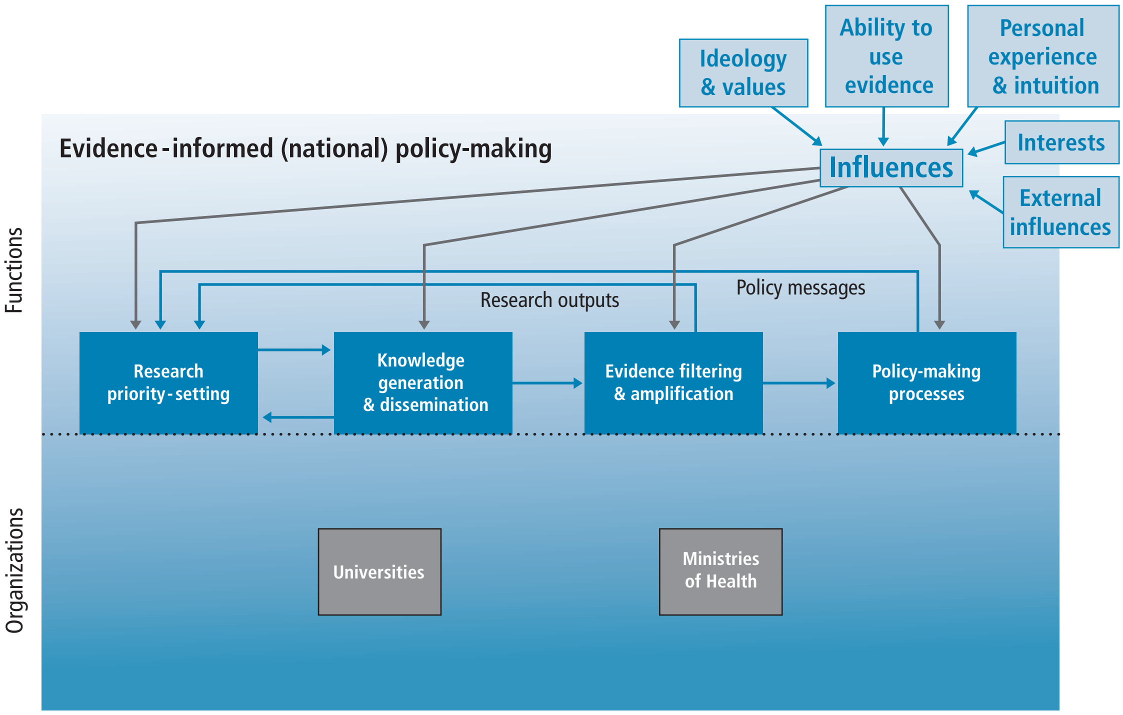


At a technical level, the influences of evidence on policy-making processes are also affected by the actual technical ability of policy-makers and their staff to interpret and use evidence. Additionally, scientific knowledge, especially with respect to HPSR is rarely absolute in nature but rather requires subtlety in interpretation and an understanding of how valid conclusions are under different circumstances. Even a study that has very strong conclusions will need to be interpreted in the light of existing formal and tacit knowledge, as well as social values.

Figure 3.5 introduces two other components of the functional level of HPSR and policy-making. Firstly, the framework recognizes an important activity, which is often implicit rather than explicit. This is the element of *priority-setting for research* – decisions as to the focus of research. Such decisions are made by various organizations including the research organizations themselves, funding bodies (both national and international) and potentially by policy-making bodies.

Recent changes in the global health architecture have both increased the availability of funds and the diversity of donors. But it is unclear how these developments have affected HPSR priority-setting. It could be argued that the increased involvement of foundations in a field dominated by governments and markets might increase the potential for innovation and institutional diversity. However, it is also arguable that the new models of aid architecture and the growth of global public-private partnerships brings with it questions of accountability to national health systems. Two challenges in priority-setting remain: the first, to shift the balance of investment towards relevant research that contributes significantly to easing the burden of ill-health in lower-income countries (still, at the moment, suffering from major gaps in investment) – including of course addressing the imbalance between biomedical research and HPSR; the second, to fund research in these areas that is more than simply evaluative, but is analytical, diagnostic, theoretical and prescriptive as well.

Figure 3.5 The critical functions for evidence-informed policy-making



The other new component we have called *evidence filtering and amplification*. This recognizes the fact that research outputs are increasingly used by a variety of organizations in an attempt to directly or indirectly influence policy-making. In this process, organizations (such as advocacy groups or knowledge brokers) can have a direct goal of influencing policy or instead (in the case of the media, for example) amplify research findings without having a specific policy end in mind. These organizations pick out or filter particular research outputs and translate them into policy messages, and in some cases amplify them to try and influence policy-makers. This function is one that has often been ignored and yet, in many societies and policy communities, is a critical reality. In the health policy and systems sphere, groups that play this filtering and amplification role frequently have much more direct and stronger links to policy-makers than researchers.[9]

It should be noted that the various influences discussed in relation to the policy-making processes can be seen to affect the other three functional processes as well. The arrows linking influences to the four functional processes remind us of the social and political nature of each of these processes. Also, the four functional processes are linked together, as indicated by the arrows in the framework. This reflects the interaction of experts, intermediaries and policy-makers within and between the processes of knowledge creation, dissemination, absorption and application in policy-making.

The organizational level

We turn now to the organizations involved in the carrying out of the above four functions. Figure 3.6 introduces this level.

A number of points need to be made. Firstly, the diagram deliberately does not draw any connections between particular organizations and specific functions

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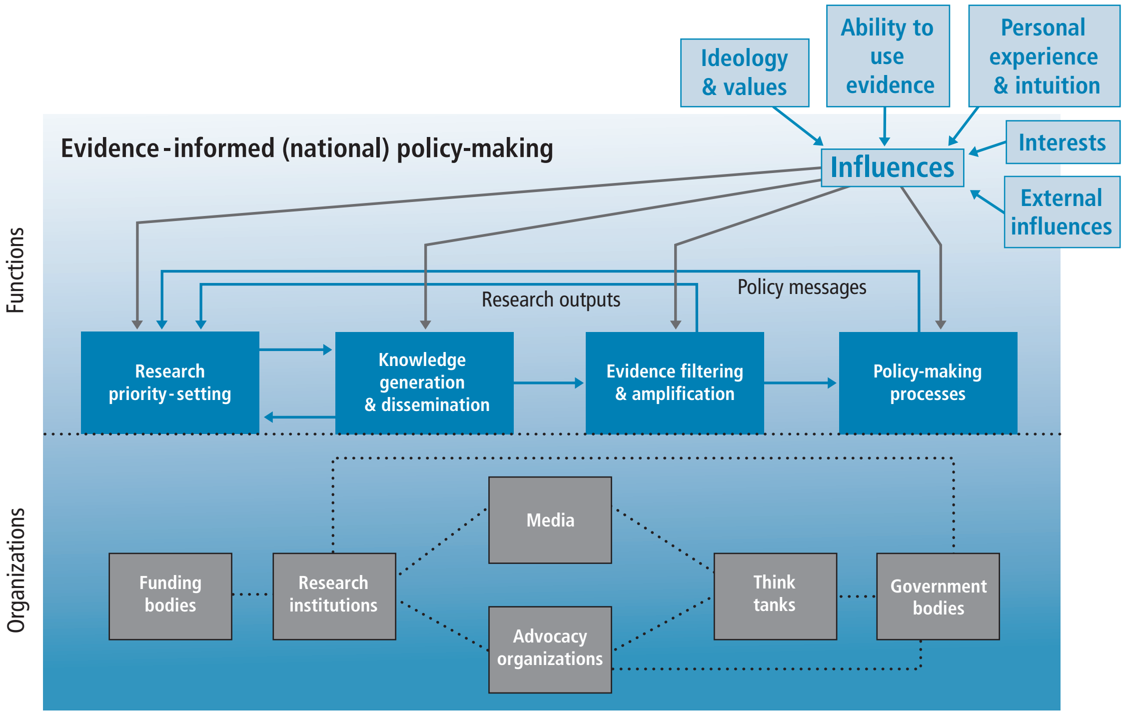
[9] For a specific example of the complexity of knowledge flows and the critical nature of amplifiers and filters in influencing decision-making see Sauerborn et al. (1999), which provides an analysis of communication channels between actors involved in the process of influencing tobacco legislation in Thailand.

Figure 3.6 Capacity for evidence-informed policy-making: The organizational level



as it recognizes that in practice organizations often carry out more than one function. However, organizations are placed underneath the function with which they are most obviously associated.

Secondly, it will be noted that the figure has widened from the earlier term of universities into a broader set of research institutions (including, of course, universities) in recognition that research is increasingly conducted by a variety of organizations – including policy bodies themselves. Similarly, the ministries of health, as organizations, have been replaced by the more generic term of 'government', in recognition of the important role of a variety of government bodies, such as cabinet, parliament, central ministries and decentralized bodies.

All these organizations work within a set of relationships and these are denoted by the dotted lines in the diagram, which link both similar and different types of organization. Taschereau and Bolger (2007) describe a continuum of 'formality' in relationships, from 'networking' (loose ties of information exchange and reciprocity, fuelled by trust), through informal networks (self-governing and self-regulating), through networks with some 'formal' elements (usually with a name and collective identity, but with a wide range of forms), through institutionalized networks (legally recognized entities with institutional legitimacy), to inter-organizational partnerships (with contractual relationships, agreements and accountabilities). Networks can be likened to "a kind of 'bank account' of relationships nurtured by trust that members can draw upon and that holds the potential for mobilizing assets collectively to achieve a common purpose, thus increasing their capacity" (Taschereau and Bolger 2007, p. 5).

While much enthusiasm for networks comes from a belief that the capacity of a network is somehow greater than the sum of its parts, capacity issues and networks are largely under-explored (Taschereau and Bolger 2007). However, there is a body of evidence suggesting that networks can improve policy processes through better information use – for instance, in helping to marshal evidence and increasing the influence of evidence in the policy process; in helping to foster the links between researchers and policy-makers; and in bringing resources and expertise to policy-making (Perkin and Court 2005; Mendizabal 2006). Some writers emphasize the socially-embedded nature of knowledge production and use. The knowledge value theory (Bozeman and Rogers 2002) talks about 'knowledge value collectives' which are networks of actors, and the capacity of such collectives is determined by the nature of interactions between the individual members, and their combined capacity to transform new information into new knowledge. The 'advocacy coalition framework' for examining the link between research and policy takes into account the importance of various coalitions between policy-makers, influential actors and pressure groups who share a similar perspective and forge relationships with each other. These coalitions, and the competition between them, will shape the policy environment and the health research system (Sabatier and Jenkins-Smith 1999).

In their working paper for the ODI, Perkin and Court review the literature to look at the ways in which networks can provide links among research, policy and practice, with a principal interest in lower-income countries. They conclude that, when working well, networks can be good at fulfilling some key functions (Perkin and Court 2005):

- communication – across both horizontal and vertical dimensions;
- creativity – owing to free and interactive communication among diverse actors; and
- consensus – like-minded actors identifying each other and rallying around a common issue.

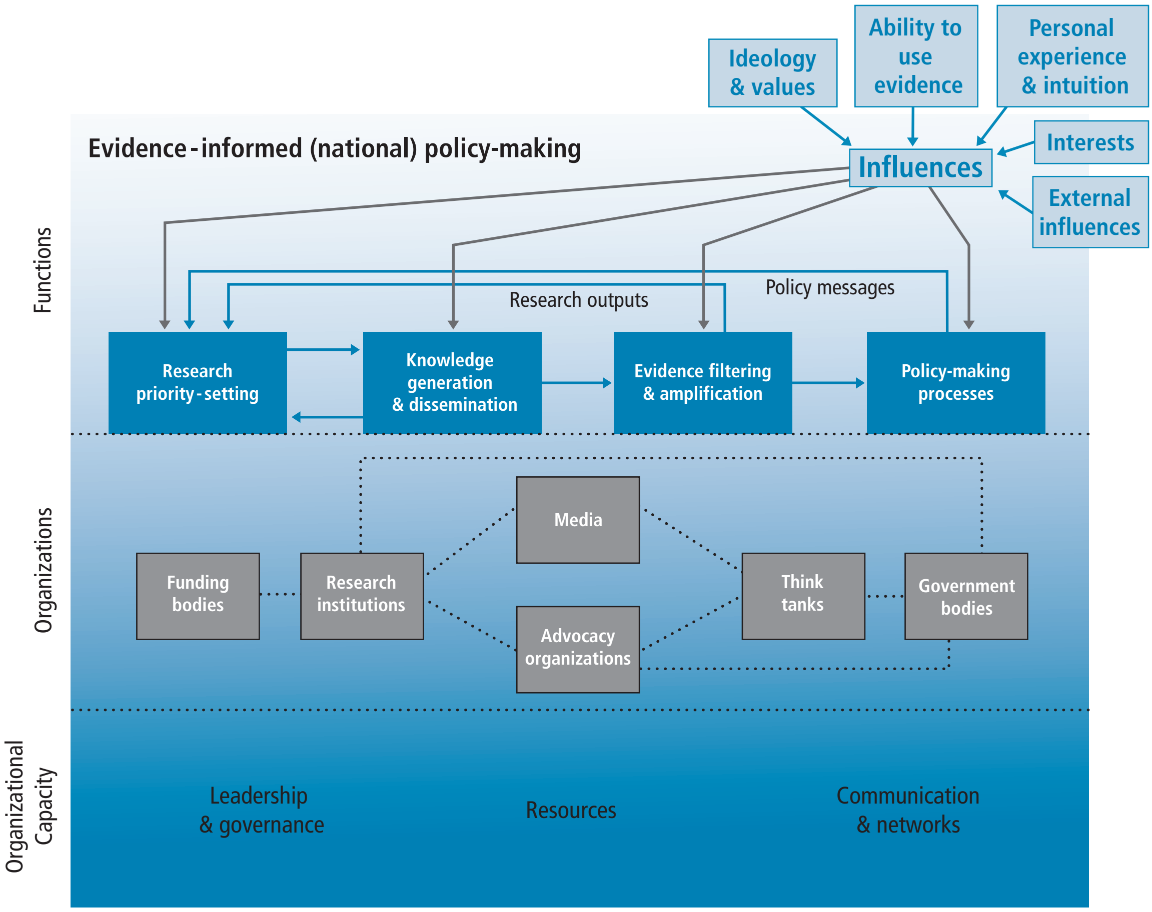
An important aspect of our framework is the recognition of the importance of such relationships – especially the more informal ones – within policy communities and networks.

Organizational capacity

The third level of the diagram refers to the particular requirements for each of the organizations involved in undertaking the four functions to perform optimally. Drawing on our theoretical understanding of capacity described at the start of this chapter, we suggest that there are three broad areas in capacity-strengthening that need to be considered for each of the organizations: governance and leadership; resources; and communication and networks. This is shown in Figure 3.7.

One important aspect of this framework is a desire to shift attention in capacity development away from what has been a focus in the past on training of individuals towards a more organizational concept of capacity. The importance of *leadership and governance* of organizations may have been previously insufficiently recognized. Governance broadly refers to the ways in which the organization is governed – in terms of both internal management systems (financing, personnel management, information management, etc.), as well as its management of external accountability through mechanisms such as boards. Both governance and leadership will influence the extent to which, and how, capacity within the organization is developed, maintained, or unleashed – but perhaps in different ways. For instance, good governance might ensure that structural capacity is developed through the existence of decision-making fora, or that role capacity is maintained through individuals, teams, etc., having the authority and responsibility to make decisions essential to effective performance. Leadership might help to unleash capacity through motivating and inspiring people, through empowering people, and through stimulating extra effort. There is an attempt within the framework to recognize the importance of less tangible elements of an organization's capacity – beyond what can be seen or counted. Capacity for leadership and governance within an organization, then, encompasses many elements of organizational life that were described at the beginning

Figure 3.7 Organizational capacity

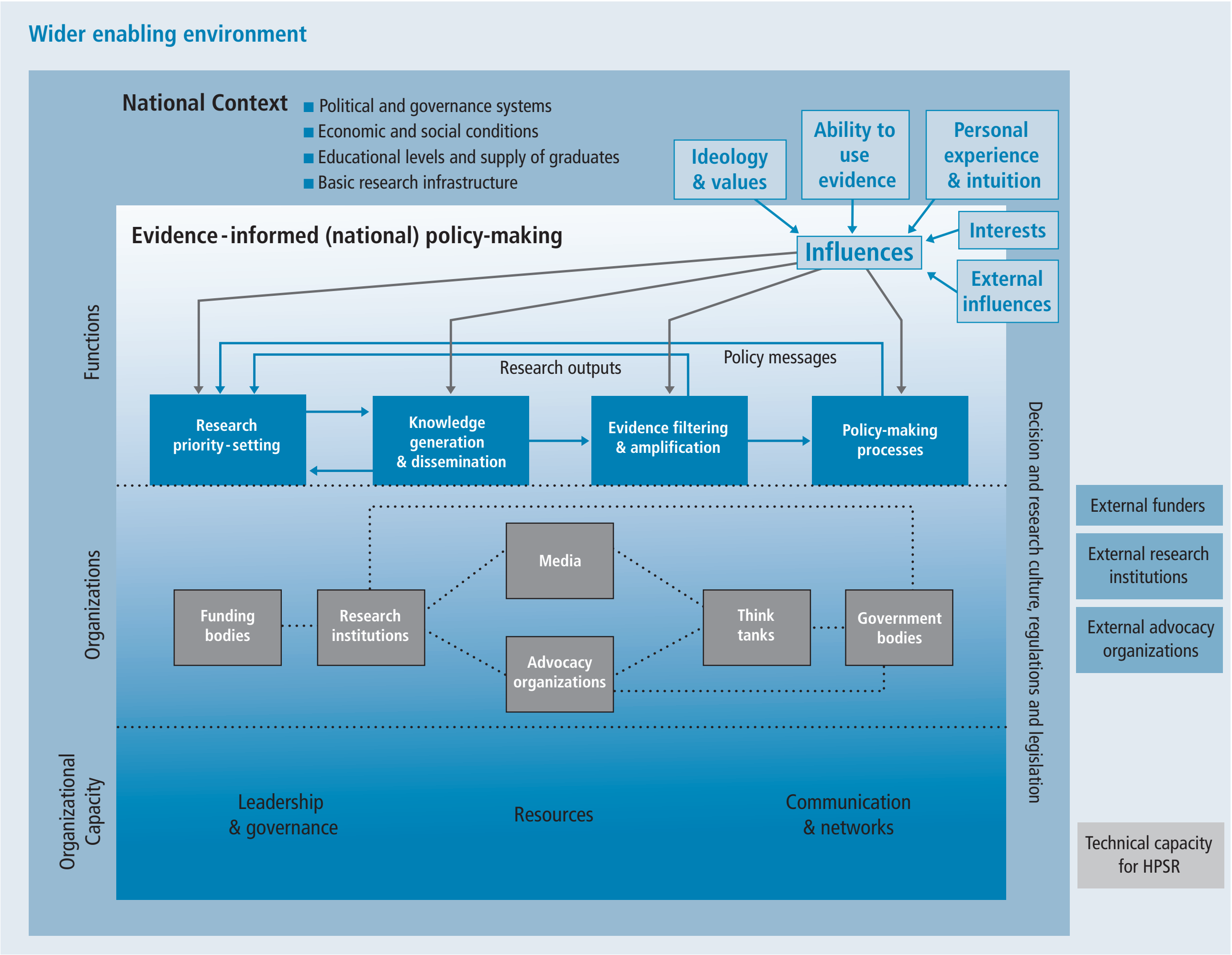


of this chapter as 'invisible', including a clear and shared vision, and an organizational 'attitude' and identity, which are important for the ways in which the organization sees itself, and how it is seen by others in the world.

The importance of adequate and sustainable resources within an organization cannot, of course, be ignored. Organizations need sufficient numbers of staff who are appropriately trained, motivated and supported – although it should be emphasized that this needs to be seen from the perspective of the particular organization rather than the needs of the individual. Organizations require financial resources that are available and reliable. And they need other resources, such as physical resources – including, for instance, not just buildings, computers and communication equipment, but also access to people who can fix them when they break. Within research and policy organizations, resources to access, manage and store information will be particularly important.

The third area given prominence in the framework is *communication and networks*. This includes the capacity of organizations to communicate the work that they do, and to develop and maintain appropriate relationships with other organizations. It also includes an organization's ability to work within and/or develop networks – including those that are physical or virtual, local or global.

Figure 3.8 Final conceptual framework of evidence-informed health policy-making



The national context and wider environment

All the above occurs in a wider context – both national and international. Within the framework (see Figure 3.8) a number of particular aspects of this context are of importance to HPSR and policy-making processes. First of all, there is within any system a culture related to how policies are made, and indeed the degree to which there is a culture about the production and use of research. There is also a framework of legislation and regulation which operates either to the benefit or to the detriment of this health policy and research interaction. There are a number of particular aspects to this national context:

- political and governance system
- economic and social conditions
- education levels and supply of graduates
- basic research infrastructure.

At the organizational level, this context is often manifested through particular external organizations and we draw attention to the roles and influences of external funders (e.g. the Global Fund to Fight AIDS, Tuberculosis and Malaria), external research institutions (e.g. universities in developed countries), and external advocacy organizations (such as nongovernmental organizations). These can have both negative and positive effects on the capacity of national organizations to carry out their functions.

Further, the framework recognizes that the successful performance of each function requires a certain level of technical capacity, which can be accessed by the relevant organizations. This is most easily understood in connection with the knowledge-generation function. For this function to occur well, appropriate research methods need to exist. Yet there is clearly potential for methodological development in policy and systems research. This is particularly the case when we recognize that for research to influence the entire policy process, it must include not just evaluative work, but also more analytical and theoretical work. In these areas, technical capacity tends to be particularly weak. Analogous strengthening of technical methods is therefore needed in all of the functions.

These elements complete the conceptual framework and are shown in Figure 3.8.

Capacity strengthening and releasing strategies

The following four chapters of this Review consider each of the four functions discussed above in turn, and consider the primary capacity constraints typically faced by low- and middle-income countries in each of these areas, and what might be done to address these. But what types of capacity strengthening and releasing strategies have previously been employed? And what is the evidence regarding their success? The final section of this chapter provides a brief review of approaches to capacity development for research and policy, particularly within global health research. This section draws primarily upon a background paper (Beith and Bennett 2007) that included a document review of key capacity development initiatives in global health research and in-depth interviews with representatives of selected initiatives.[10]

Common wisdom about capacity development suggests that to be successful a capacity development strategy must have strong local ownership and commitment. While this is likely to be the case, very few countries have developed explicit strategies for capacity development in health research, let alone health policy and systems research. Even in the cases of Mexico and Thailand, countries which are often seen to have been very successful in strengthening capacity for health research, there does not appear to have been a clearly articulated plan or strategy – although there was clear leadership commitment to creating such capacity (see Appendix). Consequently much of this section examines capacity development strategies which have been pursued by external, international organizations. This set of strategies is unlikely to coincide exactly with the type of strategies that an individual organization within a country, or a country government might pursue in order to promote capacity development.

Many agencies and initiatives have invested in capacity development for health research: for example, this has been a major focus of the work conducted by the Special Programme for Research and Training in Tropical Diseases (TDR), and by the Council on Health Research for Development (COHRED). Some bilateral agencies, such as the Swedish Agency for Research Cooperation with Developing Countries (Sida/SAREC) and the Canadian International Development and Research Centre (IDRC) have also made significant, long-term investments in capacity development. Relatively few of these initiatives have focused on the field of health policy and systems research, with the work of the International Health Policy Programme (IHPP), the Health Systems Research Project of WHO in Africa, and the work of the Alliance HPSR itself, being the notable exceptions. The various initiatives have differed not only in the focus of their capacity development efforts, but also in the range of capacity-strengthening strategies employed.

Over the years, capacity development strategies have evolved in-line both with practical experience of what

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[10] A fuller account of the methods used in the review can be found in Beith and Bennett (2007).

worked, and with thinking on best practice in capacity development. For example, the evolution in thinking at Sida/SAREC with regard to its broad portfolio of research capacity development activities (not just health) was described as:

> The first 10 years of the support are characterized by support to national research councils. An evaluation of this period showed that, in most cases, these bodies lacked the capability to prioritize research based on scientific criteria. A countermeasure during the next period was to strengthen research capacity through research training.... Over time, it became obvious that training of researchers had to be supplemented with investments in research infrastructures and scientific equipment.... Through these additions, the support gradually became more institutional than individual. In the beginning of the 1990s, a further shift was made to favour more comprehensive support with the aim of inculcating research cultures at national public universities. (Boeren et al. 2006, p.3)

TDR followed a somewhat similar path during its thirty-year history, focusing initially on individual-level capacity (through supporting the education of students at the graduate and post-graduate level), but over time placing increased emphasis on institutional-level capacity (through both financial support and development activities) and most recently working more at the environment-level (through training in critical disciplines, promoting journals, etc). As such, TDR now targets individuals, institutions and enabling environments as part of a continuum of capacity development activities.

Mapping capacity-development strategies

Table 3.1 illustrates the major capacity development strategies employed by initiatives in the health field. Some strategies have been particularly commonly deployed including:

- individual support (mainly through the provision of scholarships, or post-doctorate fellowships);
- support for institutional development (which varies widely, but has included, for example, long-term institutional development grants (as provided by Sida/SAREC and TDR), and support to financial management within institutions); and
- networking and partnerships.

All the initiatives have used networks and partnerships in one form or another to help develop capacity. Sometimes investment in this area represents support to the establishment of formal networks, on other occasions it represents support to less formal opportunities for networking. Partnership opportunities are typically among fewer players and less formal. Support to networking has usually been given between different research organizations, rather than between research organizations and policy-makers or civil society.

Relatively little of the investment in capacity development to-date has been in the higher level environment and system issues. While COHRED has always had a strong focus on helping establish health research systems within countries, and TDR is now investing in specific elements of the health research system (such as ethics review committees), this area has been relatively neglected. The conceptual framework identified three major elements of organizational capacity: governance and leadership; resources; and communication and networks (Figure 3.8). From this rapid review of the type of capacity development strategies commonly employed it seems that most of the focus to-date has been upon staffing and finances, with relatively less focus on the other elements of organizational capacity identified.

An alternative way of understanding the patterns of investment in capacity development is to look at the extent to which different capacity development initiatives have addressed different functions. Table 3.2 attempts to capture this, identifying whether a particular function in the health research/policy relationship is a major focus of the programme (1), a minor one (4), or something in between. Somewhat predictably, the primary focus in terms of capacity development appears to have been on knowledge generation, with virtually all the initiatives pursuing strategies in this area. Research priority-setting has also been subject to a number of externally supported, capacity development initiatives. Considerably less effort appears to have been targeted at developing capacity for the use of information in policy, or for enhancing capacity among civil society and the media to filter and amplify research evidence.

Lessons emerging from capacity-development initiatives

Unfortunately, very few of the initiatives reviewed here have been subject to rigorous evaluation of their effects. World Wide Web searches and interviews with representatives yielded just one independent, publicly available evaluation of a strategy or initiative for capacity development for global health research, although some agencies such as Sida/SAREC and IDRC have conducted broader evaluation of their research capacity development efforts. Hence it is difficult to know which of the strategies are effective and under what conditions. More evaluations of the effects of alternative approaches to capacity development are sorely needed. In the absence of such objective evaluations, evidence about what works can be based only upon the opinions of those who have been involved in the initiatives.

Experience from the review of initiatives reinforces some of the common wisdom: that local ownership of the initiative is critical and that longer-term initiatives are likely to be more successful than shorter-term ones, although one evaluation also noted that longer-term funding can occasionally contribute to a dependency upon the external funds (Boeren et al. 2006).

In terms of general trends it seems that most initiatives have recognized the inter-linked nature of individual, organizational and system levels of capacity and increasingly, when resources allow, work across these three different levels of capacity. Over time there appears to have been a broadening of capacity development strategies employed, with packages of different interventions being pursued. Some initiatives, such as IDRC, typically conduct an organizational assessment to determine what kind of capacity development support it should provide, and in particular whether they should look at core funding for the organization versus project-based funding. For example, IDRC capacity-development strategies aim to look holistically at what the organization needs to function – not just focusing on specific research capacities alone.

However while initiatives have expanded in terms of the levels of capacity they address, they remain relatively focused in terms of the functions: much greater investment is being made in developing capacity for priority-setting and knowledge generation than in working with policy-makers and civil society organizations to increase the use of research findings in policy-making. Moreover capacity development initiatives focusing on organizations have primarily addressed financial sustainability and developing staff skills, and done much less on enhancing communication capacity, leadership or governance.

Finally, while there are isolated attempts by initiatives to release capacities, through for example, advocacy efforts aimed at giving countries greater control over their own research priority-setting processes, only limited efforts have been made in this sphere. There is a need to understand better the extent to which capacity may grow organically if particular impediments were removed in the environment, versus there being a need for concerted capacity development efforts.

Table 3.1 Capacity development strategies pursued by major health initiatives

	Strategies targeted at Individuals					Strategies targeted at organizations						Environment level
Initiative	Individual support	Learning by doing	Curriculum Development	Conducting training courses	Mentoring	Group support	Institutional Development	Project management training	Networks/ networking	Formal Institutional twinning	Partnerships	System development
Alliance HPSR			■	■			■		■		■	
CGHRI	■					■					■	
COHRED		■							■		■	■
EU INCODEV	■						■		■		■	
GDN									■		■	
GFHR				■			■		■		■	
HSR Project				■			■		■		■	
IDRC							■		■		■	■
INDEPTH	■			■		■	■		■		■	
IHPP	■	■			■	■			■		■	
INCLEN	■		■	■	■		■		■			
SIDA/SAREC	■			■			■	■	■	■	■	
TDR	■			■		■	■	■	■	■	■	■

■ A square indicates that the initiative is active in capacity development for this function.

Acronyms:

Alliance HPSR	Alliance for Health Policy and Systems Research
CGHRI	Canadian Global Health Research Initiative
COHRED	Council on Health Research for Development
EU-INCODEV	European Union Programme for International Cooperation in Development
GDN	Global Development Network
GFHR	Global Forum for Health Research
HSR Project	Joint WHO/DGIS/KIT Health Systems Research Project
IDRC	International Development Research Centre
INDEPTH	International Network of Demographic Surveillance Sites
IHPP	International Health Policy Programme
INCLEN	International Clinical Epidemiology Network
SIDA/SAREC	Department for Research Cooperation, with the Swedish International Development Agency
TDR	Special Programme for Research and Training in Tropical Diseases.

Table 3.2 Foci of initiative according to function

Initiative	Research priority-setting	Knowledge generation	Evidence filtering and amplification	Policy-making
Alliance HPSR		1		1
COHRED	1	2	3	4
EU INCODEV	2	1		
GDN	3	1		2
GFHR	1	2		
HSR Project	1	2	4	3
IDRC	2	4		
IHPP	1	2	4	3
INCLEN		1		
INDEPTH	1	3	4	2
SIDA/SAREC	2	1		3
TDR	2	1		

Key: 1= highest focus, 4= Minor focus. A blank indicates that the initiative is not active in capacity development for this function.

Conclusions

This chapter has focused on two main areas. Firstly, it has introduced a new conceptual framework to help analyse the capacity dimensions for evidence-informed national health policy-making, based on four main functions: research priority-setting; knowledge generation and dissemination; filtering and amplification; and policy-making. Each of these functions will form the focus of the following four chapters. It is hoped however that the framework will have wider application than just structuring this Review. It could, we believe, be seen as a valuable tool to analyse and understand the current status both of national health policy-making systems and their use of evidence, and to inform strategies both at the national and international level to develop or release capacity. The second part of this chapter has given an overview of such strategies as pursued at the international level and drawn a number of conclusions about them. In particular it has suggested that while increasingly such strategies are recognizing the importance of institutional and systems (rather than, as previously, more individualistic) approaches there has been an imbalance in attention to some of the functions. Furthermore, there would appear to be a need for rigorous evaluations of capacity strategies.

In the following chapter we examine the first of the functions, research priority-setting.

Chapter 4

Enhancing capacity for prioritizing health policy and systems research agendas

Key messages

- In countries that depend most heavily on external health research funding, current processes for prioritizing research often fail to address national health policy and national health systems needs.
- The causes of success or failure in prioritizing HPSR need to be understood, yet little analysis is available. Nevertheless, strong national ownership seems to be a key ingredient in countries that succeed in placing HPSR high on their health research agendas.
- National authorities need to ensure that HPSR is in their funding frameworks and that appropriate funding mechanisms are in place.
- International funders in turn need to consider a more balanced portfolio that responds to stated national priorities.
- Capacity development for national HPSR priority-setting needs to operate in a wider, locally owned, enabling environment; there is much room for innovation in approaches.

Introduction

In any area of human endeavour, one of the most difficult and contested activities is determining how to use scare resources – that is, prioritizing. Essential determinants in setting priorities are both the criteria for making decisions and the people who make them. Deciding on research priorities in health is no less fraught than in any other field.

Many factors contribute to human health. Among these, health policies and health systems are the primary mechanisms that national governments use to maximize health and reduce health inequalities. Health authorities should therefore take the lead in setting national health policy and systems research (HPSR) priorities. However, research agendas are heavily influenced by actors and organizations that may have quite different concerns than the immediate stakeholders in national health systems. Often it is the policy-maker's voice that is the weakest in shaping research priorities.

This chapter provides an overview of the current state of health research priority-setting with a specific focus on the importance given to national HPSR. We examine the organizations that drive these research agendas and discuss how capacity for more grounded, effective and relevant priority-setting could be unleashed and enhanced. Particular emphasis is placed on low-income countries, where the challenge of local ownership of research agendas is greatest.

Capacity for prioritizing HPSR is emphasized in this Review for several reasons. First, at the global level, health research priorities (as shown by actual funding) have failed to match global health needs. In 1990, the Commission on Health Research for Development concluded that 90% of health research is conducted on 10% of the world's health problems, the so-called 10/90 gap (Commission on Health Research for Development 1990). The Council for Health Research for Development (COHRED), followed by the Ad Hoc Committee on Health Research Relating to Future Intervention Options (WHO & TDR 1996) and, subsequently, the Global Forum for Health Research have provided the main advocacy for redressing this imbalance, and progress is being made. Since 1998, through the Global Fund to Fight AIDS, Tuberculosis and Malaria and other global health initiatives, there have been substantial increases in financial resources for both health and health research dedicated to health problems of those who carry the main burden of disease in low- and middle-income countries (although the 10/90 gap persists).

Hence the second reason for stressing capacity for HPSR priority-setting: a substantial amount of new health research funding is being directed to 'discovery and innovation' for the development of novel drugs, vaccines, diagnostics and other tools to alleviate disease. The agenda for this effort is also set largely at the global level. Such discovery research was traditionally driven by the medical and pharmaceutical industries and market forces, but more recently it has been motivated by new global health initiatives and public-private partnerships, and their understanding of the global burden of disease. Global health initiatives are a manifestation of globalization but tend to be targeted to single diseases (Shiffman 2006). Forerunners of such initiatives launched between 1998 and 2000 are Roll Back Malaria, Stop TB, and the Global Alliance for Vaccines and Immunization (GAVI). Since 2000, over 100 disease-specific global health initiatives have arisen and secured significant funding for both research and implementation.

To date, most of the focus of such initiatives has been on public goods and commodities for control of communicable diseases of the poor. These goods, in turn, need to be incorporated into strategies and policies to ensure that those in need have effective and equitable access to them. Ultimately what is required is health policies and health systems to ensure the goods are delivered. Since national health systems are distinct from each other in so many ways, HPSR needs to be locally tailored. The potential positive impact from HPSR in this context is significant, yet there is massive underinvestment (Alliance for HPSR 2004).

A third reason for our focus on national capacity for HPSR agenda-setting is that most health systems in low-income countries are in development and fragile. Yet national health research needs go far beyond adapting interventions to fit local systems. HPSR must assist in actually building sustainable and effective health systems. This includes discovery and innovation for health systems, i.e. in stewardship, governance, financing, resource management and informatics, as well as service delivery. Again, capacities to make critical choices for limited HPSR resources must be a primary concern of countries. It is axiomatic that capacity to direct the focus of HPSR is pivotal to shaping evidence-informed national health policies and systems.

This chapter deals with the first functional step (that of research priority-setting) in the framework of the Alliance introduced in Chapter 3. We unpack this framework by considering the various entities that determine HPSR priorities and their respective approaches to the problem at the global and national levels in low- and middle-income countries. We also discuss what national organizations need to enhance their HPSR priority-setting capacity. The challenges here are twofold: first, these national organizations are not very well understood; second, by its nature, priority-setting involves diverse stakeholders and is not just the work of a single organization. This means that, for this function, we comment less on the organizational capacity dimension than in the other functions. Finally, we suggest that a systems approach to prioritization processes might enhance the relevance and performance of HPSR agendas.

Who sets priorities for HPSR? An overview

Ideally, national health policy-makers, working in concert with capable local health system managers, the health research community and the public should maintain (and secure funding for) a highly prioritized and policy-relevant HPSR agenda. But in many countries this is far from the norm. Many actors and forces, often external to the country, play a decisive role in shaping the health research agendas that ultimately receive funding. This section deals with the various actors and organizations, and the approaches commonly used in such health research priority-setting. We group them across the spectrum from global to local as set out in Box 4.1.

International funders and global health initiatives

"He who pays the piper calls the tune." Health research funders directly and indirectly have a huge bearing on health research priorities worldwide. This is especially so in low-income countries, where domestic resources for research are more highly constrained. In the closing decades of the last century conventional multilateral organizations such as the World Bank, bilateral institutions such as the US National Institutes of Health (NIH) and foundations such as the Rockefeller Foundation, among others, have been primary sources of applied health research funding in developing countries.[1] Their funding patterns are determined by a variety of enlightened, consultative (internal and external) approaches. While the conventional multilateral and bilateral research funders attempt to respond to initiatives determined by national health research systems, their support is often aligned to research that informs their own health development and investment initiatives for such countries.

In addition to conventional multilateral and bilateral funders, a new phenomenon is now under way which opens space for health research spending through the

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[1] An online database of links to global health science funders is provided by the US NIH Fogarty International Center at: http://www.fic.nih.gov/funding/globaldir06.html#toc (last accessed 20 August 2007).

BOX 4.1 MAIN ACTORS INFLUENCING NATIONAL HEALTH POLICY AND SYSTEMS RESEARCH AGENDAS

International funders and global health initiatives

International expert groups, think tanks and task forces

International and regional networks, trusts, fora and brokerages

National research councils and academia

National policy-makers, ministries and governments

Civil society organizations

organizational instruments of global health initiatives. These are often public-private ventures that benefit from novel sources of philanthropic funding (e.g. the Bill & Melinda Gates Foundation). Much of the recent increase in health research spending has been routed via these initiatives, and much of that has been devoted to more 'upstream' health research (basic science, biomedical research related to specific diseases and technical intervention development) for communicable disease control, with the aim of reducing the high disease burden among the poor (Wall & Ransom 2004). The private sector is increasingly attracted to this research arena, particularly for the development of new drugs and vaccines, which further changes the complexion of the research landscape.

The architecture for global public health is currently characterized by multiple, and sometimes competing, players and initiatives. Concerns have been voiced that there is no clear leadership among global health initiatives for coordination and strategic planning, a role that traditionally would have been assumed by the World Health Organization (WHO) (Brown, Cueto & Fee 2006). "The biggest problem at the global health level is that there is nobody in charge," according to George Schieber, World Bank (quoted in Global Forum on Health Research 2006). As a consequence, filtering and amplification of evidence is generally done by the global health initiatives themselves, albeit with WHO at the table. Recent restructuring within WHO is leading the organization to increase its role in research agenda-setting on the global stage.

At the same time, donor and global initiative funding for health development at the country level has likewise been largely devoted to commodity procurement (e.g. pharmaceuticals, vaccines and insecticide-treated bednets via the Global Fund to Fight AIDS, Tuberculosis and Malaria, and the United States President's Emergency Plan for AIDS Relief (PEPFAR)). Paradoxically, as health systems have tried to move away from vertical disease and intervention approaches towards greater programme integration, the push from global initiatives for 'quick wins' focused on selected diseases and interventions is driving them back towards verticalism. Not surprisingly, the initiatives are failing to see sufficiently rapid health impact of the scale-up in financial resources (Travis et al. 2004; Stenberg et al. 2007). There is now growing recognition that the main bottleneck is not commodity funding but weak health systems and human resources insufficiently capable of delivering interventions and services to those in need (Braine 2005; Draeger, Gedik & Dal Poz 2006; Lu et al. 2006; Schneider et al. 2006; Travis et al. 2004). The failure to support nationally-specific, 'downstream' HPSR (e.g. on intervention delivery and integration, health financing, health system performance and health policy) is even more evident.

Nevertheless, there are some signs of progress. The United Republic of Tanzania has shown how a judicious mix of health systems research and development spending can strengthen health systems and lead to affordable and significant national health impacts (de Savigny et al. 2004). Domestically funded health systems research is also important, both in quantity and in its contribution to policy-making in middle-income countries such as Brazil, Chile, Colombia, Cuba, Mexico and Thailand (Tangcharoensathien, Wibulpholprasert & Nitayaramphong 2004). On the side of global health initiatives, GAVI was among the first to recognize the critical importance of health systems and now devotes 50% of its investment to health systems development. The Global Fund to Fight AIDS, Tuberculosis and Malaria may also be moving in this direction. In 2006, WHO's Executive Board passed Resolution EB117.R13 on the importance and relevance of research priority-setting, in recognition of the growing consensus that setting priorities for health research is as important as conducting research itself (Nuyens 2007). If the tide is changing, there is all the more need to enhance capacity to get HPSR agendas soundly established.

Expert opinion

One of the main approaches used by international funders and global health initiatives to inform their health research agendas is through the agency of expert groups, think tanks, working groups and task forces. Typical examples are the WHO Advisory Committee on Health Research (ACHR), and Scientific and Technical Advisory Groups associated with special programmes such as the WHO Special Programme for Research and Training in Tropical Diseases (TDR), the WHO Human Reproduction Programme (HRP) as well as WHO's disease-specific programmes. Expert opinion on health research priorities is solicited from panels of eminent scientists (Daar et al. 2002) through ad hoc brainstorming during working group and committee meetings usually convened for other purposes. The ideological focus tends to be one of 'scientific autonomy' (Lansang et al. 2000), and the approach has the disadvantage that health systems research must go up against 'wish lists' advocated by the most vocal or respected researchers. Sometimes nominal group or Delphi processes can be employed to reach consensus (Bernal-Delgado, Peiro & Sotoca 2006). But given the mix and varied backgrounds of the people present, HPSR priorities usually do not surface. When they do, they often fail to rise high on the resulting agenda (Kroeger et al. 2002), which may in any event lack sufficient operational relevance and is frequently detached from public policy.

A more effective way of using the expert approach is to dedicate a task force specifically to setting an agenda for health systems research. This was recently done (Task Force on Health Systems Research 2004) for an international cooperative effort (Box 4.2). Still, three years later there has been little follow-up by the global health community and donors in response to the broad agenda produced, although there have been signs of progress from some bilateral agencies. For example, the Dutch overseas development agency (DGIS) is planning to make health systems research one of their priority areas,

BOX 4.2 HEALTH POLICY AND SYSTEMS RESEARCH TOPICS PROPOSED BY THE TASK FORCE ON HEALTH SYSTEMS RESEARCH IN 2004

Financial and human resources

- Community-based financing and national health insurance
- Human resources for health at the district level and below
- Human resource requirements at higher management levels

Organization and delivery of health services

- Community involvement
- Equitable, effective and efficient health care
- Approaches to the organization of health services
- Drug and diagnostic policies

Governance, stewardship and knowledge management

- Governance and accountability
- Health information systems
- Priority setting and evidence-informed policy-making
- Effective approaches for intersectoral engagement in health

Global influences

- Effects of global initiatives and policies (including trade, donors, international agencies) on health systems

Source: Task Force on Health Systems Research (2004).

and the United Kingdom Department for International Development (DFID) is doubling its research budget, including support for health systems research.

International health research funders, global health initiatives, and expert task forces described above typically influence global health research agendas but have weak connections to the national level. The actors presented below coordinate more closely with national research agendas and priorities.

Global and regional networks, trusts, fora and brokerages

International organizations and funders cannot easily (and often do not) consult with national health systems regarding their HPSR priorities. The voices of national researchers and, to an even lesser extent, voices of national policy-makers are not easily heard at the international level. Therefore regional and global networks – and the inclusion of national level actors

BOX 4.3 EXAMPLES OF GLOBAL AND REGIONAL NETWORKS

Global level

- The Alliance for Health Policy and Systems Research (AHPSR)
- Council for Health Research for Development (COHRED)
- Global Forum for Health Research
- Roll Back Malaria Partnership
- Health Metrics Network

Regional level

- International Clinical Epidemiology Network (INCLEN)
- International Network for Demographic and Population Health Surveillance (INDEPTH)
- EquiNet
- Health Systems and Services Research Network in the Southern Cone (of South America)
- Andean and Caribbean Health Systems and Services Research Network
- Latin American Social Medicine Association (ALAMES)
- Health Economics and Policy Network (HEPNet)

There are also, at the regional level, new approaches to brokering research agendas, such as Evidence-Informed Policy Networks (EVIPNet) in Asia and West/Central Africa and the Regional East African Community Health (REACH) Policy Initiative in East Africa.

in them – can play a key bridging role in support of national agenda-setting and consequently in influencing international and regional research funding priorities. Examples are provided in Box 4.3.

National researchers

Research always generates new questions and directions which lead to further research. Hence one of the most potent influences on research agendas is prior research. Research funding councils, from a demand perspective, and academia, from a supply perspective, are the institutions most in touch with past and ongoing research and therefore have immense influence. But the low critical mass and relatively negligible proportion of HPSR in the current mix, plus the lack of attractive career structures for health system researchers in low- and middle-income countries, means that this influence is not as powerful as it could be. Nevertheless, many countries, especially middle-income countries, are making progress in engaging researchers, communities and policy-makers in joint agenda-setting efforts as exemplified by the Essential National Health Research movement (COHRED 2000).

National authorities

Ministries of health, finance and local government are the usual custodians of health policies and health systems. Some health ministries have their own in-house health systems research units or parastatal health research institutes. Some countries have science and technology ministries. It is not unreasonable to expect that these authorities would play a major role in setting HPSR funding priorities. Their capacity to do so depends on a series of variables, however, including each country's gross domestic product (GDP), the percentage of that GDP devoted to research in general and health research in particular, whether they have a national science and technology policy and whether that policy includes health research. The health systems structure also has an impact on the capacity to determine HPSR priorities. Across middle- and low-income countries there is a diverse range of systems, from unified health services with a single provider and funder to public-private mixes of service providers and funders. These different structures suggest different needs and strengths and require different HPSR agendas.

It has been said that government health officials and bureaucrats often lack the ability to translate policy challenges into demands in the health research agenda (van Kammen, de Savigny & Sewankambo 2006). Communication between researchers and those who set research agendas is rare, and there are numerous contested interpretations of HPSR priorities. Policy questions are usually urgent, and policy-makers have no time to wait for the research machinery to deliver evidence. Without a pattern of continuing interchange, the ability of policy-makers and researchers to work together to anticipate future policy questions is limited. The independence of government in-house research in the face of pressures to defend certain policies or investments is also a challenge.

More practically, in low-income countries, government health programmes have many research needs at the operational level, specifically concerning implementation and problem-solving. For example, one major issue is how to translate and scale up interventions proven in randomized controlled trials. Once programmes are running, questions arise regarding how to remove bottlenecks and inequities in scaled-up services. Further, programme managers often have difficulty attracting the research community to work on these fronts unless there is international funding.

Some middle-income Latin American countries have led interesting processes in HPSR agenda-setting. Box 4.4 provides some examples of the priorities set. For this agenda to be meaningful, they have devoted specific percentages of their national research funding to it. A common characteristic of the processes is the participatory nature of agenda-setting typically involving multiple stakeholders. In terms of HPSR priority-setting neither researchers nor policy-makers can claim to be self-sufficient.

Civil society organizations

"Health research outside a context in which policy-makers, civil society and the media are engaged risks generating more knowledge but little action" (Labonte & Spiegel 2003).

Innovation in health systems is no longer limited to professional institutions. Original and effective solutions can emerge from 'bottom-up' civil society initiatives. Civil society must be recognized as a major resource for knowledge, innovation and expertise in health development. The role and influence of civil society organizations and the media in health research is escalating, and civil society actors are increasingly influential in health systems (see Chapter 6 for further discussion). Given their concerns with social transformation, equity and participation, civil society organizations can influence both health research priority-setting and the commissioning of research for the better. They can also become involved in the review process and in actual conduct of research through formal partnerships between communities and universities that link civil society organizations with academic researchers (Delisle et al. 2005; Doherty & Rispel 1995; Hyder 2002; Nuyens 2007; Sanders et al. 2004).

BOX 4.4 HPSR PRIORITY-SETTING EXAMPLES FROM LATIN AMERICA

Argentina

Six priority research areas were identified of which the first is research on health systems, policies and programmes with an emphasis on quality of services and medical care.

Brazil

The National Agenda of Research Priorities includes 24 prioritized sub-agendas, several of which fall within the domain of HPSR (though only one is listed as such).

Chile

Fondo Nacional de Investigación y Desarrollo en Salud (FONIS) funds projects on health technology assessment, health management, primary health care, environmental and occupational health, while a different structure funds basic research.

Mexico

The Sectoral Fund for Health Research and Social Security identified 10 priorities in 2006, including health systems, health economics and social security.

Caribbean

The Caribbean Health Research Council has identified 8 priorities of which one is health-systems strengthening.

Sources: Protis (2006); Ministry of Health, Brazil (2005); CONICYT (2007); Consejo Nacional de Ciencia y Tecnología (2007); Caribbean Health Research Council (2004).

Article 8 of the Statement by the Global Forum for Health Research at the conclusion of the Forum 8 at Mexico City, 16–20 November 2004, states, "Civil society, NGOs and communities must be involved in the governance, definition, generation and conduct of health research; in the application of the knowledge and technologies it provides; in monitoring progress and in maintaining the public debate about resources and priorities." This requires novel alliances and better cooperation among citizens, scientists and policy-makers (People's Health Movement 2005). Efforts have been made to expand the role of communities in national health systems research agenda-setting by pushing the levels of community involvement beyond traditional co-option and consultation through to co-learning and collective action (COHRED 2006a). The media have a natural filtering and amplification role and as such can have a profound effect on policy-making and implementation, and indirectly on the setting of research agendas. Many national health research organizations now routinely monitor the media for feedback on post-policy implementation.

Civil society and the media are fundamental in defining boundaries of policy acceptability. This is true with regard not only to difficult ethical issues such as stem cell research but also to the levels of inequity a society finds unacceptable. For instance, there is continuous feedback between researchers (who shed light on certain facts), civil society and policy-makers. Powerful examples of organized civil society participation include the Danish Consensus Development Conferences (Joss 1998) (a methodology that was also used successfully in Chile (Filho & Zurita 2004)) and the Brazilian National Science and Technology Conferences (Ministry of Health, Brazil 2005), which help define the national health research agenda.

Current approaches influencing national HPSR priorities

Having introduced the actors in the section "Who sets priorities for HPSR?" earlier in this chapter, we now review current mechanisms and main paradigms influencing how HPSR priorities are set. We consider the largely expert-driven models that operate at the global level and the more demand-driven models that predominate at the national level.

Global level: expert-driven models

For conventional funders and the global health initiatives, research agendas are usually framed periodically by consulting expert opinion convened in various ways. This is most frequently done to set global health research agendas and is rarely intended to be country-specific. This approach is predicated on the desire to produce knowledge as a global public good. However, this sort of agenda-setting has a profound effect on what does or does not happen at the country level. Increasingly global health players realize that their development investments are not bearing fruit owing to health system weaknesses and there are plans to increase investment in health systems strengthening. However, to ensure the effectiveness of such investment, it should be linked to country-driven implementation research.

Unfortunately the mechanisms used by global level actors sometimes unintentionally inhibit effective participation by country stakeholders. For example, many calls for proposals have lead times so short as to inhibit and retard real participation of country partners in shaping and directing the research (Block 2006). Low-income-country partners are frequently asked to join proposals at the last minute as grant application deadlines loom. Given the paucity of their research funding, they find it hard to say no, and they also find it difficult to better align the proposal to national needs. The Alliance for HPSR has noted that funding ear-marked for health systems research is often spent outside countries through contracts and consultancies with researchers from developed countries, or remains unspent due to the lack of explicit priorities or the low priority assigned to research by country decision-makers (Alliance for HPSR 2004).

Developed–developing country research partnerships continue to increase. However this can still result in echoes of a 'colonial model of partnership' where priorities, imperatives and partners of developed countries favour efficacy trials of new interventions rather than assisting developing countries to obtain support to improve health system delivery systems of proven interventions (Costello & Zumla 2000). Strong guidelines and principles are well articulated to mitigate the imbalance (Swiss Commission for Research Partnerships with Developing Countries 2001; OECD DAC Working Party on AID Effectiveness 2005; Van Damme et al. 2004). The evaluation of the European Commission's International Cooperation in Research suggests various lessons, particularly regarding the problems of establishing balanced 'North–South' research partnerships and maintaining local capacity once projects are over (European Commission 2004).

A growing phenomenon in earmarked funding in calls for partnership proposals is the establishment of large, well-funded international research consortia that tackle a programme of research rather than individual projects. This has the advantage of giving researchers a more predictable, longer-term and flexible funding horizon for their work. A disadvantage is that in order to be competitive in a consortium, the strongest institutions (often from developed countries) prevail, and it is hard for newcomers to enter the game. To date these approaches have mainly been dedicated to upstream research for testing the efficacy and effectiveness of new interventions to inform national policy choices, although they are slowly emerging for more downstream HPSR.

Large-scale global health initiatives (such as PEPFAR) can, in themselves, have large impacts on fragile health systems. They can dramatically strengthen them in certain dimensions, but may also weaken them in others. This is a concern and topic for national HPSR. But how does it get on the global health initiative funders' agenda? It needs to be recognized that there is a political dimension to setting such agendas.

The main paradigm for setting global health research priorities is that proposed by the Ad Hoc Committee on Health Research Relating to Future Intervention Options (WHO 1996), which takes a burden-of-disease approach as a starting point, and classifies it into four compartments:

1. not avertable with existing interventions;
2. avertable with existing but non-cost-effective interventions;
3. avertable with existing interventions if efficiency improved; and
4. avertable with existing interventions.

Compartments 1 and 2 call for biomedical research advances, while 3 and 4 require research on health systems and policies. As stated earlier, priorities, as expressed by funding, still fall predominantly into compartments 1 and 2, which poses a challenge for bringing this paradigm into effect.

The Ad Hoc Committee and the Global Forum for Health Research further articulated a 'five-step' process for priority-setting in health systems research:

- Step 1) *Magnitude*: calculate attributable costs and severity of specific health system constraints.
- Step 2) *Determinants*: identify reasons for persistence of the problem and research needed to resolve them.
- Step 3) *Knowledge*: assess current knowledge base for each problem
- Step 4) *Cost-effectiveness*: assess potential benefits of possible research and development efforts.
- Step 5) *Resources*: assess the current resource flows for these efforts.

This approach suits global level priority-setting, since while steps 1–3 can be done at the country level, 4 and 5 are more difficult. Hence the Global Forum for Health Research has developed the Combined Approach Matrix (CAM), a tool that is applicable at both the global and national levels (Ghaffar, de Francisco & Matlin 2004). The CAM, too, takes an efficiency approach aimed at assisting decision-makers with rational choices for the greatest reduction in burden of disease for a given investment. It draws on principles of iteration and incorporates multi-stakeholder transparency and multidisciplinarity. It takes the five steps above as one dimension of a matrix and combines it with a second axis of four domains:

- individuals, households and community
- health ministries and institutions
- sectors other than health
- macroeconomic policies.

This approach has been tried at the global level and in a few countries in specific applications (e.g. setting research council priorities in India[2]), but experience with CAM is still limited.

BOX 4.5 EXAMPLES OF PARTICIPATIVE APPROACHES TO SETTING PRIORITIES

Philippines

In 1999, the Department of Health and the Philippine Council for Health Research and Development began a comprehensive systems approach to health research priority setting. They formalized a memorandum of agreement between the main actors, created a general fund for health research, and appointed the Philippine Council for Health Research and Development (PCHRD) as the lead agent for the priority-setting process, which included five key steps:

1. Division of the country into six zones (to avoid dominance of participants from the National Capital Region over participants from other regions);
2. Designation of convenors by zone, to oversee the process at regional and zone levels;
3. Designation of region-based experts to facilitate writing of a situation analysis and conducting regional consultations to identify priorities;
4. Convening a zone assembly to validate the consolidated zone report and arrive at a consensus and ranking of priorities; and
5. Convening a task force to formulate a set of national priorities based on the results of the regional and zone-level consultations.

South Africa

The Department of Science and Technology conducted a Foresight exercise, using the Essential National Health Research priorities set in 1996 (achieved by following the five-step approach recommended by the Ad Hoc Committee on Health Research Relating to Future Intervention Options).

- The Foresight exercise assessed macro scenarios presenting multiple futures and the response of the Science and Technology sector. The process identified critical questions and used the Delphi method to involve a broad group of people in the process.
- Various implementation strategies were presented. The prioritization of responses to questions was done using a common set of criteria at all levels of the consultation.
- The outcome of this process led to the development of several ‘roadmaps’.

National level: demand-driven models

Relevant national HPSR priorities should originate at the country level, while the main role of the global level is to foster and facilitate the process and support the resulting agenda, even if it does not coincide with priorities established at the global level. Health systems research is inherently multidisciplinary. In many low-income countries, the research community in these disciplines is fragmented and not well connected to policy-makers or the public. In response, some countries have implement-

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[2] http://community.searo.who.int/research/index.php/archives/18 (last accessed 20 August 2007).

BOX 4.5 (CONTINUED) EXAMPLES OF PARTICIPATIVE APPROACHES TO SETTING PRIORITIES

Brazil

The Ministry of Health (MoH) initiated the priority-setting process in 2003.

- A group appointed by the National Health Council proposed 20 sub-agendas for health research.
- Research priorities for each sub-agenda were identified during national seminars, involving over 500 researchers and policy-makers.
- During the preparatory phase, 307 cities and 24 states organized local conferences involving some 15 000 people.
- Approximately 360 delegates from the health sector were appointed at local conferences to attend the national conference, where the national seminars took place.
- A national policy (for science, technology and innovation in health) was approved during the national conference, together with three sub-agendas. These guide investments from the MoH for research and development.

Source: COHRED (2006b).

ed the Essential National Health Research concept of establishing multi-stakeholder researchers–community members–policy-makers' triads to jointly establish local health research agendas. This approach enhances the potential for translating needs analysis into demands, and raising the focus on equity, social justice and the poor, as well as addressing social, economic, political, ethical and management dimensions important to the public and the system (COHRED 2000). In the Essential National Health Research process, researchers have an advantage in such a configuration of triads as they often have stronger skills in articulating research needs and arguing their priorities (Swingler et al. 2005). Specific disease control priorities can again dominate the resulting agendas at the expense of cross-cutting health system function issues such as financing, governance, informatics and service coverage. One way to counter this potential misalignment of research priorities involves embedding operational research in local programmes in order to 'get practice into research' (Walley et al. 2007).

COHRED's collaborative paper (2006a) gives examples of how some countries have gone about setting priorities for Essential National Health Research (see Box 4.5). Successful processes largely employ a bottom-up, inclusive approach, with measures to avoid dominance of any one particular group or region.

Because at present national health research in low-income countries depends so much on international funding to support salaries, maintain infrastructure and run research projects, it is not surprising that international health research programmes exert undue pressure on national agendas and capacity. This, coupled with the lack of clarity on national health research priorities mentioned above, sets up major challenges for getting national priorities right. These challenges include:

- governance and management capacity to determine country research systems;
- international project funding distorting the national research agenda;

- inflexible donor practices influencing national priorities;
- inequitable partnerships between developed and developing country collaborators, retarding countries' research capacity growth; and
- lack of effective information sharing and communications (Ali et al. 2006).

Such problems are less acute in middle-income countries because they are less dependent on external health research funding, and are better able to set their own priorities and to fund their own research agenda. Even so, middle-income countries have a different set of difficulties when it comes to including HPSR in the general research agenda, which is usually dominated by other research fields. Much depends on the role assigned to science and technology in the overall development policies of each country and on the structure of health services.

National priority-setting approaches require information systems. A comprehensive national health information system is a key subsystem of any health system. It is critical that stakeholders who set HPSR priorities have access to timely and relevant health system metrics as well as the latest relevant research. While WHO produces annual health statistics for all countries, for most low-income countries many key statistics are based largely on model estimates.[3] Ongoing efforts by the Health Metrics Network[4] to build capacity to produce information in such countries should assist priority setting processes. There is also a need to systematize and possibly synthesize local research evidence. The REACH-Policy Initiative in East Africa is attempting to do this (see Chapter 6).

Increasingly, countries with sector-wide approaches to health planning and financing require annual health sector reviews. These reviews have revealed the paucity of evidence of progress on programmes and investments, as well as of evidence on which to base plans. This has drawn attention to the need to increase investment in both health information systems and health research systems. Ministries and donors should work together using sector-wide approaches and medium-term expenditure frameworks to make sure these investments are made.

Towards unleashing capacity for a systems-integrated approach for HPSR prioritization

This section introduces potential strategies to enhance capacity of the major players in setting priorities at the global and national levels.

The review above concludes that national HPSR is still relatively neglected in overall health research efforts, both from the global funders' perspective and at the low-income country level. The continuing neglect points to a general breakdown in HPSR priority-setting processes and capacities, despite concerted efforts to recognize and address this issue over the past 15 years. However it is clear that there is a high degree of agreement on the underlying principles and values. The failure appears to be in application; hence increased attention to capacity building for priority-setting, in addition to tools and processes, would seem justified at this stage. What can be done?

Global HPSR priority-setting capacity

Globally, health research priority-setting is determined largely by industry (commercial interests of the pharmaceutical and medical equipment industries). Research for global public health, on the other hand, depends heavily

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[3] http://www.who.int/whosis/en/index.html (last accessed 20 August 2007).

[4] http://www.who.int/healthmetrics/en/ (last accessed 20 August 2007).

on international funders and global health initiatives and tends to be expert-driven. In recent years, as a consequence of global health initiatives, the focus has begun to swing towards a greater emphasis on interventions for the major disease burdens of the poor in low-income countries. In such an environment, applied health systems research, even in support of interventions for these same diseases, takes a back seat. Nevertheless, it is in the interest of global health to have a more balanced portfolio of 'blue skies' discovery and innovative research for solutions touted as global public goods, alongside research on how to rapidly integrate such developments through policy into health systems and actually deliver the intended health benefits to people.

Global health initiatives need to build a more sophisticated understanding of health system contexts and realities. This in turn implies a much stronger voice for low- and middle-income country HPSR expertise at the global priority-setting table. As HPSR capacity is often low and its voice little heard compared to other stakeholder groups, there is a strong argument that global health initiatives should earmark resources for HPSR rather than depending upon appropriate allocations for HPSR to be built into funding requests.

Global health research funders also need to move away from small project-based funding to longer-term programme and national consortium funding to be able to attract and build centres of excellence for HPSR. Global health initiatives often support developed–developing country research consortia. This often favours individual capacity strengthening over institutional capacity. Value could be added to consortium funding if explicit core financial and technical support was given to building local capacity for institutions in developing countries concerned with HPSR and HPSR priority-setting. This could include proposal-writing workshops and seed funding for locally defined projects with longer lead times. Global level initiatives can also play a role in assuring better access to global and regional databases to enhance national capacities for priority-setting.

Implicit in competitive calls for research proposals is the pressure for peer-reviewed output rather than less publishable policy-maker-oriented output. Research funders need to help adjust this culture in a way that rewards HPSR-oriented dissemination plans, products and career path support and maps to real outcomes and impacts on the health system. This has implications for the wider research community culture and expectations.

In summary, international funder behaviours need to evolve in several ways:

- increased attention to HPSR in general by ensuring balanced participation of national HPSR expertise in priority-setting processes;
- increased support for longer-term programmes as opposed to short-term projects; and
- increased support for research communications, data sharing and knowledge intermediaries in their programmes.

National HPSR priority-setting capacity

Countries must recognize the necessity and seize the opportunity to build enabling environments and capacity for HPSR, including the capacity to own, drive and fund their national agenda for strengthening health systems (OECD DAC Working Party on AID Effectiveness 2005). Ministries of health must take a strong lead since capacity needs to be built for all functions of the health system, including stewardship (leadership, governance and communications), financing, resource management, informatics, service delivery and research (Lansang & Dennis 2004). Indeed, all countries have ratified the recent World Health Assembly resolution 59.24 by which countries propose and set their own health research priorities. This is a prerequisite if alignment is to be a reasonable goal. COHRED has introduced a concept of 'responsible vertical programming', arguing that global health initiatives, with minor modifications to their approaches, can help optimize support for national health research systems with which they interface, without compromising their goals. In low-income countries with sector-wide approaches to health sector partnership funding, arguments can be made for a national HPSR funding allocation within national health budgets. Once such countries have clear national health research priorities and national health research systems that they themselves invest in, it is easier for global health initiatives to align with them (Ali et al. 2006; OECD DAC Working Party on AID Effectiveness 2005).

In a national health research system, countries could seek a focus on HPSR in its own right (Cassels & Janovsky 1996) as a broad area in a balanced portfolio, negotiated separately from two other main areas of national health research (disease control and household behaviour). Such is the case with some of the Latin American countries' initiatives described earlier. In line with this approach, it is increasingly recognized that health policy-makers need a facilitated process to help them translate their system and policy problems into research questions. This involves innovations such as 'safe harbour fora' (where researchers and policy-makers can discuss an issue privately and off the record), research brokerages, and a culture of continuous interaction among policy-makers, researchers and civil society (Lavis et al. 2006; Lomas et al. 2003; van Kammen, de Savigny & Sewankambo 2006).

National policy-makers can also strengthen this effort by legislating for a minimum percentage of national health spending devoted to health research. As far back as 1990, the Commission for Health Research for Development suggested that this minimum be 2% (Commission on Health Research for Development 1990). The most recent analysis by the Alliance suggests that only 0.017% of total health expenditure is devoted to HPSR projects (Alliance for Health Policy and Systems Research 2004). Although institutional funding to the organizations conducting this research would add to this amount, it is still a miniscule.

We suggest that widely applied priority-setting processes such as Essential National Health Research, which try to build a culture of engagement among civil society organizations, policy-makers and researchers, still constitute the obvious path forward. What seems to be lacking is the capacity to move quickly along this path. Identifying and developing appropriate mechanisms and organizational vehicles is an important starting point; we have provided some examples of mechanisms in use in different health systems and for some countries. Beyond this, innovation will be needed to build a stronger climate of trust among constituencies to achieve consensus on the difficult choices of setting priorities with inadequate resources.

Innovations in systematic health research priority-setting are emerging with regard to thematic research (CHNRI 2006) that could also be applied to HPSR priority-setting in general. The Child Health and Nutrition Research Initiative (CHNRI) proposes to move away from the current health research priority-setting criteria driven by interest groups, advocacy, expert biases and attractiveness of research results for publication in high-profile journals, towards criteria that systematically score research options for overall impact on equity, likelihood of effectiveness, affordability, sustainability and deliverability in health systems, and potential for reducing existing burdens of disease. The CHNRI approach leads to dramatically different ranks of priority for health research options. When applied in specific research priority-setting exercises at the global (e.g. health research options for children with pneumonia) and national (e.g. child health research options in South Africa) levels, the top 10 priorities that emerged in each case were HPSR options, while the bottom 10 were mostly the classical but more popular innovation and discovery research options (Rudan, el Arifeen & Black 2006). New approaches to engaging civil society in research agenda-setting are also needed, and possible. For example, World Wide Web 'blogs' are proposed as a mechanism for setting international health research agendas (Rudan et al. 2007). With the rapid growth of the Internet globally, such approaches could also work to build capacity for setting national health research agendas.

Who should take on the task of building the capacity for priority-setting in national HPSR? The framework used in this Review suggests that this process should be led by MoH policy-makers assisted by their local national health research council where one exists, or at least the other main stakeholders (such as ministries of science and technology, universities and health-care providers). Credible leadership will be required to bring constituencies together (in person or virtually) and gain agreement on appropriate tools and processes for actual negotiation of priorities in such environments. The application of the Alliance HPSR Capacity Framework will assist all actors in seeing their role and the reach of their influence within complex contexts in which systems and policies operate.

Finally, we need to consider and develop indicators of progress in capacity for locally-owned and relevant HPSR priority-setting that can illuminate how health research funding in countries is increasingly directed to national HPSR priorities.

Conclusions

In this chapter we looked at the first of the four functions of the framework. Currently, priority-setting for research is dominated by a global agenda and mechanisms, and there is a real need to build capacity to enable national health systems to set their own agendas. Different political and health systems are likely to find different organizational mechanisms and criteria to mediate among the different stakeholders; support to enhance this capacity is important. Furthermore, we have argued that international funding agencies need to examine and, where appropriate, adjust their own mechanisms to take better account of national needs.

The end result of priority-setting mechanisms for HPSR is, of course, a set of research questions which require answers, together with the resources to implement them. In the following chapter we turn to the second function, the response to these priorities – the function of knowledge generation and dissemination.

Chapter 5

Enhancing capacity for knowledge generation

Key messages

- Experiences of low- and middle-income countries vary considerably in terms of their HPSR organizations and sectors.
- Previous capacity development strategies focused on individual skills development, but there is increasing recognition of the need to focus on all capacity dimensions and to pay special attention to institutional design.
- The centrepiece of HPSR capacity strengthening must be institutions and the wider HPSR environment.
- HPSR institutions and funding agencies must find ways of facilitating productive and capacity-enhancing partnerships and networks.
- Funding for capacity is needed both for specific initiatives and to complement general research funding.
- HPSR is a relatively young research field. As such, it poses methodological challenges that require solutions beyond the scope of individual institutions. Moreover, some countries need strategies to enhance the overall culture, identity and governance of the HPSR sector.

Introduction

We turn now to the second function in the framework – knowledge generation and dissemination in health policy and systems research (HPSR). HPSR is a new area of research activity – 20 years ago, the concept would have meant nothing in the research community, let alone among policy-makers. Now even the acronym is widely recognized – perhaps one indicator of acceptance! More significant, of course, is that it is seen to play an increasingly important role, particularly as the scale-up of priority programmes runs into health system constraints. As Box 5.1 suggests, the returns from health systems research can be substantial. But in reality, too little investment is made in this research area. That places serious limits on capacity, particularly in low- and middle-income countries.

This chapter explores the critical function of generating and disseminating HPSR. Though a significant proportion of HPSR research is conducted through international collaborations, we focus on activity at the national level. The chapter begins by identifying the key organizations involved in generating knowledge and assessing the current state of this function. It then discusses approaches to strengthening the capacity of the major institutions involved in creating knowledge – research institutions and universities (and, to a lesser degree, health ministries). As with other chapters, each country presents its own challenges, particularly in terms of resource levels; inevitably, this suggests different strategies for these different contexts.

Current situation regarding knowledge generation for HPSR

The capacity to carry out HPSR varies from place to place. While some research institutions in middle-income countries are very effective, the situation is uneven. The problems are most severe in the poorest and smallest countries, where limited capacity to produce knowledge is compounded by a dearth of domestic funding and by ‘brain drain’ (emigration of skilled personnel to developed countries), and where domestic research capacity focuses largely on research agendas that are set outside the country (Ali & Hill 2005). Policy-makers in countries with such weak capacity are either denied access to appropriate evidence, forced to rely on poor-quality research findings, dependent on international research organizations potentially unfamiliar with the country context or reliant on donor agencies for interpretation of the available evidence base.

There are common challenges for developing *any* health research capacity (Nchinda 2002); however, some are specific to HPSR. These arise from the distinctive nature of the demands for knowledge in the policy process, the need to package knowledge appropriately, and the methodological difficulties inherent in what is a relatively new and multidisciplinary area of research. As we saw in Chapter 4, HPSR is also significantly underprioritized in terms of resources (Ali & Hill 2005).

Organizations involved in HPSR knowledge generation

We consider first the characteristics of institutions which are involved in HPSR knowledge generation, keeping in mind the capacity elements of our conceptual framework.

Governance and leadership

Many different sorts of national organizations conduct HPSR: universities, research institutes, think tanks, non-governmental organizations (NGOs), private consulting firms, international agencies and government ministries, among others. A survey of research institutions in developing countries conducted in 2004 for the Alliance found that the majority (69%) were public institutions,

BOX 5.1 THE RETURNS FROM HEALTH SYSTEMS RESEARCH

A recent study estimated the potential returns from investment in new technology versus research to improve the delivery and use of health services. Surveying deaths among children aged less than 5 years in 42 low-income countries, the authors concluded that, while improved technology had the potential to avert 21.5% of deaths, greater use of services could avert 62.5% of child deaths. Despite the much greater returns from research on service delivery and use, the same study found that 97% of the grants awarded by the two largest public and private funders of global health research went to development of new technologies.

Source: Leroy et al. (2007).

while 30% were private (although the proportion of private institutions in upper-middle-income countries was higher – 40%). Regional and global research partnerships are increasingly prominent. Surprisingly, there appears to have been no systematic evaluation of the relative performance of these types of organizations. However, the diversity of organizations suggests that different models fit different contexts – or that it is not the organizational form or ownership that matters but more fundamental characteristics, which we explore below.

Different organizations have different overall objectives and activities. Universities combine research with teaching and may have a wide variety of subject specialisms; by contrast, independent research institutions are less likely to engage in educational activities and may have an institutional focus on a particular area (such as HPSR). Any of these may also engage in consultancy activities alongside their research. These different combinations of activities will inevitably lead to different tensions in terms of the emphasis on and type of research being conducted. For example, in some countries, academic departments traditionally favour disciplinary specialization. Given the multidisciplinary nature of HPSR, this may be one reason for the growth in new forms of organizations specializing in HPSR which embrace that way of working. Funsalud (Mexico), Curatio International Foundation (CIF, Georgia), Health Systems Trust (South Africa), the International Health Policy Programme (IHPP, Thailand) and the Institute for Health Policy (IHP, Sri Lanka) provide a few representative examples.

Accountability arrangements also differ. For example, research institutes may be set up and directly managed and funded by government, have non-profit-making aims with an independent charter or act as for-profit organizations. Successful HPSR organizations appear to be those that have the following characteristics. They

- possess a considerable degree of operational autonomy, but maintain close relations to public sector policy-makers;
- are considered neutral by stakeholders;
- are geared to recruiting and managing HPSR researchers; and
- can mobilize high-level technical expertise while rooting such work in a firm understanding of the policy context.

The importance of leadership has also been identified as a key success factor in developing HPSR institutions (Nchinda 2002; CCGHR & BRAC 2007). Pitayarangsarit & Tangcharoensathien (see Appendix) show the important role of a small, committed group of ministry officials in establishing much of Thailand's HPSR infrastructure, and subsequently in providing leadership to develop specific institutions.

Some leadership attributes are common to all organizations – and include the need to set clear and feasible objectives and to obtain wide ownership of these among colleagues. In knowledge-generating organizations, strategic goals and vision need to address issues such as the focus of research and its links to national health policy needs, its 'place' within the organization alongside other activities and relationships with other key partners. Leadership attributes include high scientific quality and innovation (including the ability to work in a multidisciplinary fashion), and familiarity with global research trends (Nchinda 2002).

Good management systems are necessary as well. Again, some of these, like competent human resources management, and management and mentoring schemes, are fundamental to all organizations. Others, such as quality management (through setting up internal peer-review mechanisms) and ethical scrutiny procedures, are specific to research organizations. Given the reliance of many HPSR organizations on a large number of small grants from multiple funders, with different accounting requirements, one key capacity for such organizations is their ability to manage and account for research funds received.

At the wider level, governance of and interrelationships within the HPSR sector are also important. Most obviously, a healthy HPSR sector will have well-established procedures for the ethical approval and conduct of research, and a regulatory framework to support these procedures; the degree to which this responsibility is self-regulated by the research community or by formal agencies varies. We examine issues of working partnerships in the section "Communication and networks" in page 82.

Resources

Human resources – the research skills base

Research is a highly skilled and labour-intensive activity. HPSR organizations need committed and competent researchers with a range and appropriate mix of disciplinary expertise. For example, research on the policy issues related to the challenge of noncommunicable disease in Russia required consideration of epidemiological, demographic, public finance, health service management, labour market and political factors (Suhrcke et al. 2007). HPSR organizations need to be able to attract such diverse talent as well as the rarer experts who can bridge these different disciplines, and then provide an environment that nurtures them.

Throughout the world, however, HPSR organizations report difficulties in recruiting capable researchers (COHRED 2007). Salary scales in the HPSR field are frequently inadequate to attract scientists with the requisite training and background. This problem is particularly acute for those with medical training, who can command high salaries based on their clinical experience.

Retaining skilled staff is a further challenge faced by HPSR institutions. People may leave for other countries or non-research activities within the country, and (most obviously in low-income countries) for projects or country offices of major development agencies. This latter problem can be severe, because the types of expertise that make a good HPSR researcher or manager are in demand by such agencies. Donors can create distortions in the market for local HPSR skills by paying rates for remuneration that are substantially different from the rates paid for the same skills by local HPSR organizations (Birdsall 2007).

As a consequence, salary patterns are beginning to change. For example, organizations as diverse as IHPP, CIF and IHP report compensation packages for HPSR experts that are significantly higher than for other (non-HPSR) researchers, with the compensation differential being as much as five times in the case of the Centre for Health System Development in Kyrgyzstan. Managers of these institutions report that paying higher salaries is often considered a critical factor in their successful development.

The way HPSR is commissioned poses a different set of issues. Several major funders of health research for low- and middle-income countries require that primary grant recipients be based in developed countries – the European Commission (EC) and its framework programmes for research and technological development is one prominent example of this, but many bilateral global health research agencies also require grant recipients to be based within the country from which the funds originate.[1] While some funders, such as the United Kingdom Department for International Development (DFID), have recently moved away from this policy towards open international competition, and others, such as the Swedish International Development and Cooperation (Sida/SAREC), combine allocations for national agencies with substantive funding targeted to low-income country institutions, the practice still provides strong incentives to researchers to emigrate to institutions in higher-income countries.

Other issues specific to HPSR make recruitment and retention particularly difficult. Since HPSR is relatively new and still insufficiently recognized as a field in its own right, working in an HPSR setting is often not attractive to good researchers who may fear being marginalized in their own fields or who cannot discern a clear career structure. In addition, the policy focus of HPSR may mean that research outputs are often not peer-reviewed academic papers but unpublished or even confidential reports to decision-makers. Junior researchers may fear that shifting to HPSR could damage their careers.

Infrastructure

Although HPSR does not have major equipment or laboratory requirements (unlike biomedical research), it is a labour-intensive activity which requires a basic infrastructure. In addition to appropriate office space for researchers, this includes access to adequate computing equipment and software, the Internet, and online and paper-based library facilities. Proper infrastructure not only facilitates research but also aids in recruiting capable researchers.

Finance

The ability to develop suitable infrastructure and retain competent HPSR staff both rely on sustainable financing (Nchinda 2002). Research institutions are funded through core institutional grants and/or through specific project contracts, which are often competitively awarded. Institutional funding consists of monies provided to an organization to cover its costs, without close linkage to outputs, typically in the form of a fixed budget. One example is a public sector research organization financed as part of the routine government budget. Project funding is given for specific outputs, and can take many forms ranging from consultancy contracts to research grants.

Core grants are attractive because they provide a base for building infrastructure as well as a sense of security for research staff. They can be particularly important in the early growth stages of a research institution. Once established, institutions may be able to maintain their level of infrastructure and research staff with less (or perhaps no) core funding if they are able to charge full economic costs (including indirect and infrastructure expenses) for any contracted research or consultancy work they undertake, and if they have a sufficient level of such commissioned work. The trend in economies of

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[1] See, for example, a recent award of grants by Irish Aid http://www.irishaid.gov.ie/grants_global.asp (last accessed 21 August 2007).

countries in the Organisation for Economic Co-operation and Development (OECD) is to diversify away from institutional core funding towards competitively based project grants, but the growing imbalance between institutional funding and project funding has been identified as a major concern by analysts (Conraths & Smidt 2005; Adams & Bekhradnia 2004).

A range of project funding sources are available to low-income countries research organizations. One source is through consultancy contracts awarded for specific pieces of analysis by donor or national agencies. This type of funding is most likely to involve monitoring and evaluation exercises, operational research or research on issues of importance to a particular sponsor. Although this work is often undertaken by consultancy firms, it can represent a significant source of financing for some research organizations. It may have disadvantages, however, in that it may be narrow in scope, project-oriented and targeted to the needs of a specific client, rather than aligning with the local policy agenda.

Another key source of funding is through (often competitively awarded) research grants. These can fund much broader areas of work than a typical consultancy contract and for longer time periods, and may allow greater scope for the organization to determine the actual work content. In middle-income countries most research grant funding for HPSR is from domestic sources, but in low-income countries international sources are dominant (Ali & Hill 2005). These include research funding agencies based in high-income countries prepared to provide grants to scientists in low-income countries; donor agencies; and philanthropic foundations such as the Bill & Melinda Gates Foundation and the Rockefeller Foundation. Much of this money is distributed through open, competitive mechanisms. Its large volume means that if HPSR organizations are geared to obtaining such funding, it can dwarf available domestic funding. These grants typically flow through partners in developed countries and are administered through agency-specific accounting systems, both of which may require specific capacities for partners in developing countries in terms of accessing funds and accounting for them. Indeed, as organizations rely more on diverse funding sources, financial management capacity becomes critical.

Funding agencies differ in their willingness to allow or their desire to incorporate funding for capacity development activities as opposed to generation of research findings. The EC, for example, has explicitly incorporated capacity development in its International Cooperation with Developing Countries (INCO-DEV) funding programmes (Van Damme et al. 2004). Where funding agencies do not explicitly allow for national research institutions to build capacity development activities into their grants, this may not only affect the development of institutional capacity, but also the quality of research conducted.

By its very nature, HPSR is a public good, and its outputs have little commercial value. Public or philanthropic funding of HPSR is thus a necessity. Richer health systems recognize this by relying predominantly on domestic public financing to support policy research. Even in the USA, where philanthropy typically makes a significant contribution to research, public federal funding for health services research amounts to about US$ 1.5 billion per annum, whereas the largest philanthropic funder made US$ 5–6 million per annum available (Coalition for Health Services Research 2005). However, as pointed out in Chapter 4, priority for financing HPSR among low-income-country governments remains low. Inevitably, the lack of public financing is most severe in such countries. Consequently, in many of the poorer countries the key HPSR institutions depend substantially on external research funding, with a significant component of this coming from international competitive grants.

Communication and networks

Effective HPSR institutions do not operate in isolation; they need to be able to communicate with a variety of stakeholders, including policy-makers, research funders, knowledge brokers and advocacy organizations. This communication may be through networks that are informal, such as those operating in the Thai health sector (see Appendix), or formal (such as Equitap, Equinet, HEPNet[2] or even the Alliance itself). The importance of such networks is increasingly being recognized (Stein et al. 2001), although in practice potential benefits must be weighed against time costs associated with membership.

Partnerships between research institutions or between researchers are also increasingly important in HPSR. This is the result both of growing awareness of the benefits that partnerships can bring to research organizations in general, and the trend for a growing share of international HPSR funding to be available only through partnerships. Partnerships in HPSR generally take two forms – between organizations in developed and developing countries, and between developing countries themselves.

Research partnerships offer a number of benefits (Oldham 2005), and there are specific advantages for HPSR. These include:

- enabling the sharing of knowledge and expertise, and acquisition of new skills;
- strengthening the research system as a whole by increasing linkages and communication between researchers;
- increasing the pool of funds available to individual institutions;
- enabling joint approaches to problems otherwise impossible for individual institutions to solve;
- facilitating comparative research between countries; and
- in the case of international partnerships, providing national HPSR researchers with a broader perspective for analysing issues and problems in their own health systems.

There are, however, also associated difficulties. A diverse literature describes problems that can arise in partnerships between 'northern' and 'southern' (i.e. between developed- and developing-country) institutions (Gaillard 1994; Edejer 1999; Jentsch & Pilley 2003; Binka 2005). Of these, common problems in HPSR research include domination and exploitation of southern partners by stronger northern partners; the use of southern HPSR organizations as data collectors, with little role in analysis, which has at times been characterized as 'safari research' (Acosta-Lazares et al. 2000; p1.); and downgrading of capacity-strengthening objectives by northern partners more interested in academic publications than capacity strengthening (Bernard 1988; CCGHR 2007; Ter Kuile 2007). A more specific problem is that funding agencies in developed countries may be less ready to fund coordination costs of partners in developing countries, thus inhibiting them from taking a leadership role.

For many researchers, communication skills have largely been developed in the written, often formal academic writing mode, with less emphasis on other means of communication. It is increasingly important for HPSR institutions to have the capacity to communicate using a range of approaches. Researchers as individuals and as organizations need to consider carefully the dissemination aspects of research alongside the production of knowledge. Strategies to improve dissemination include involving key stakeholders from the inception of a research project, and developing a variety of forms of output ranging from traditional peer-reviewed articles and policy briefs through to videos and even dramas. This element of dissemination is closely associated with

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[2] Equitap, Equity in Asia-Pacific Health Systems; Equinet, Regional Network for Equity in Health in Southern Africa; HEPnet, Health Economics and Policy Network in Africa.

the function of filtering and amplification, which is discussed further in Chapter 6.

Another element of this capacity dimension is access to and management of information. Organizations involved in HPSR require information at various levels. First, they require access to information as part of their research function. Long-established HPSR institutions have built up mechanisms for identifying and accessing routine data either through in-country data sets (such as demographic surveillance systems) or through Internet-based information (including access to other published research), as well as generating their own systematic primary data sources. However, such institutions also require information about the HPSR environment within which they operate. This would include identifying emerging health policy and system research needs, future research funding opportunities, activities of potential partners and competitors, and information concerning the skilled labour market. Finally, in common with any organization, HPSR institutions require information to support their internal management and governance functions. The capacity to manage such information can be a critical component of the success or failure of an HPSR institution – yet it is often not given the attention it deserves.

Technical research capacity

As Chapter 1 indicated, the health system requires a variety of types of research, each with its own set of methods appropriate to the particular questions it seeks to answer. The areas of basic science and biomedical research are the best established, with HPSR a relatively recent addition. HPSR itself covers a range of areas of focus, including health systems research related to specific diseases (e.g. different approaches to delivery of DOTS (directly observed treatment, short-course)), research into more generic systems issues (e.g. methods of financing health care), and research into the content and processes of health policy-making. Fundamental to these areas of inquiry is a need for research into basic health system concepts (such as recent work on the importance of trust in health systems (Gilson 2003)). As was argued in Chapter 4, national health research needs go beyond adapting interventions to fit local systems – HPSR must assist in building sustainable and effective health systems. This includes ‘discovery and innovation’ for health systems, i.e. in stewardship, governance, financing, resource management and informatics, as well as service delivery.

Prior to the 1980s, HPSR often consisted either of document reviews or analyses of particular problems using the tools of a single discipline, such as public finance. Now that health policy problems are increasingly recognized to be multifaceted and health systems complex, more comprehensive, multidisciplinary methods are becoming more common. Qualitative research methods are now widely used alongside well-established quantitative approaches.

There are, however, areas within HPSR where methodological and conceptual development is still needed. Examples include methods related to comparison across different contexts and health systems; methodologically challenging areas such as research into corruption; basic concepts such as equity; the ethical dimensions of HPSR and systematic reviews of HPSR. While the Cochrane Collaboration has well-established approaches to the syntheses of effectiveness research, systematic reviews of HPSR relevant to developing countries suffer from the limited number of high quality health systems impact evaluations that meet typical inclusion criteria, and the lack of consensus around appropriate methods to synthesize evidence regarding other types of (non-effectiveness) research questions (such as, how communities perceive an intervention, or how best to implement a particular policy change). Given the multidisciplinary nature of much HPSR, there is also a need for greater understanding of how different disciplines relate to each other and can be complementary.

Even where methods exist, their application in low- and middle-income country contexts may be very limited. For example, an unpublished thesis sought to identify how many systematic reviews in the health field have been conducted which included at least one author from any of 10 low-income Sub-Saharan African countries (Burkina Faso, Cameroon, the Central African Republic, Ethiopia, Kenya, Mozambique, Niger, Uganda, the United Republic of Tanzania, and Zambia). A total of 27 systematic reviews were identified that met these criteria. However, the vast majority were reviews of clinical, not health policy and system interventions. Only two reviews addressed service delivery issues, and none addressed governance or health financing arrangements (Sachs 2007).

All these points suggest an important area in which HPSR needs to be strengthened, and yet responsibility for making it happen lies beyond any particular health system or research organization.

Strategies for improving capacity

Having outlined the key dimensions relating to the capacity of HPSR organizations, we now examine strategic elements for strengthening capacity that we suggest are critical.

Developing research organizations

Initiatives to strengthen HPSR capacity have largely focused on training individuals in the belief that shortages of researchers were the critical constraint. This is not entirely correct; the centrepiece of HPSR capacity strengthening must be strengthening *institutions* and the wider HPSR *environment*. Such interventions are more likely to result in sustainable HPSR capacity than solely investing in individuals. Furthermore, strong institutions can substantially compensate for adverse conditions, including limited national funding. Institutions also provide the necessary environment for the multidisciplinary approach which is central to HPSR.

Low-income countries with a major capacity gap may need to devise strategies aimed at setting up new research organizations. Even where research organizations already exist, it might be worthwhile assessing whether they meet the wider system needs.

HPSR organizations should respond to national health policy needs. However, they also need sufficient operational and financial autonomy so that they can mobilize and manage resources, recruit and retain skilled experts, and pursue a coherent research strategy which is not excessively influenced by short-term or external pressures. The difficulty in achieving this balance is illustrated by DFID-funded efforts to create specialized HPSR units within health ministries (see Box 5.2).

The outputs of HPSR must, of course, be credible to policy-makers. However, this is not always easy, as too close a connection with particular stakeholders can create a perception that the research is biased. However, too great a distance from decision-makers, particularly key public officials, can lead to the research being ignored. In developing governance arrangements for new or existing HPSR institutions, careful attention needs to be given to these tensions.

An example of the attainment of such a balance can be seen in China, Hong Kong Special Administrative Region (see Box 5.3).

Investing in leadership and management of HPSR institutions

Having research institutions is, of course, not enough. High-quality research requires trained staff, infrastructure and leadership. Organizational theory stresses the importance of leadership in building strong and effective institutions (e.g. Yukl 2005). Organizations need to start by recruiting appropriate leaders who have a range of abilities, in addition to research skills. Senior institutional

BOX 5.2 EXPERIENCES WITH INSTITUTIONAL SUSTAINABILITY IN THE HEALTH ECONOMICS AND POLICY UNITS OF BANGLADESH, KYRGYZSTAN AND THAILAND

DFID has supported the establishment of HPSR or health economics units as sub-departments of ministries of health in Bangladesh, Nepal and Kyrgyzstan. However, this has had varying success (Rannan-Eliya 2007).

Particular problems include an inability to attract and retain specialized technical staff under normal civil service regulations and remuneration levels; inability to ensure adequate financing; instability in leadership; and lack of adequate protection against short-term political pressures.

In some cases, recognition of these problems led to subsequent efforts to base HPSR units within external autonomous organizations, such as universities. However, results have been poor. This is either because these host organizations are so autonomous that they find it difficult to sustain a research agenda that satisfies the policy-makers, or because they have other long-standing objectives which prevent a strong focus on HPSR.

The most successful in terms of sustainability has been the Kyrgyz Health Policy Unit. In the early 2000s, when it was clear that its core DFID funding was unlikely to be sustained, the unit launched a systematic analysis of its potential options, and a global review of the problems faced by other similar centres (Jakab, Tairova & Akhmatova 2004). This led the Kyrgyz unit to develop a long-term strategy that involved creating its own successor, which was a new, legally-independent research and training centre, operating outside the health ministry structure, but with lines of accountability to senior ministry staff. This has provided the long-term operational flexibility needed to retain staff and mobilize resources, while allowing the centre to maintain its close relationship with key policy-makers.

This approach contrasts with capacity-strengthening efforts in Thailand, which focused on creating an autonomous public sector HPSR institute (the Health Systems Research Institute, HSRI) outside the health ministry. However, as it matured, its economics analytic unit shifted into the Bureau of Policy and Strategy in the Ministry of Public Health, and it became a semi-autonomous unit. Unusually, this new unit, IHPP (International Health Policy Program), is able to function in a civil service environment, employing civil servants but paying supplements to normal salary scales; and it has extensive ability to mobilize its own funding (see Appendix).

BOX 5.3 ESTABLISHING AN HPSR UNIT IN HONG KONG SAR

A review (Harvard Team 1999) of Hong Kong SAR's health system recommended to the territory's health bureau the establishment of a new HPSR institution. Although HPSR was conducted in Hong Kong SAR's public sector university medical and economic departments, its range was limited and usually not responsive to decision-makers. While interest and the financial and technical resources to establish the necessary HPSR capacity existed in the territory's Hospital Authority (HA), policy-makers were not inclined to develop a centre there, partly because the HA was itself a major stakeholder with which the bureau had to negotiate. No new HPSR institution was established, and instead the bureau became a commissioner of research. Under this approach, the leading HPSR centre that emerged was a specialized research group that evolved in a newly established public health school within one of the local universities. This group has the advantages of its staff enjoying good relationships with key public sector officials, being able to pay competitive remuneration and yet being seen by most stakeholders as sufficiently neutral.

Source: Leung (2007).

staff need to be able to develop management and leadership skills, and to be given adequate freedom to exercise these skills. Investment in this area should be seen as an important strategy for developing such organizations. Networking and exchange among leaders can also be an effective capacity-strengthening strategy.

Alongside the development of leadership skills, organizations need effective management systems, particularly in the areas of finance, staffing and future planning. Such systems may historically have been neglected, but they are likely to be critical elements for success – particularly for institutions seeking greater autonomy and financial diversification.

Ensuring a supply of researchers

The next set of capacity strategies relate to recruitment and retention of high-quality scientists. We have argued that previous capacity support focused on individuals rather than institutions. For this reason, strategies need to link research training to the wider development of those institutions, including ensuring that, alongside technical staff training, there are clear strategies and resources in place to ensure employment opportunities, and that appropriate research environments are part of the wider staff development packages. It would appear that a shift *is* occurring towards a more institutional approach, which we would endorse. As such, HPSR institutions need, as part of their long-term strategies, to develop specific strategies related to staff and which take account of the following issues.

Valuing researchers and nurturing young professionals

As with any professional group, health policy and systems researchers seek recognition in a number of ways. Without such recognition, they will find employment elsewhere. Because HPSR is a young field, it can lack the recognition and clear career structures of more established research fields. This – in addition to obvious issues of pay and infrastructure that apply to all research staff – may make it difficult for HPSR organizations to attract and retain young researchers. These problems compound the general difficulty that poorer countries face in attracting back young researchers who have trained abroad.

HPSR institutions can respond by providing concrete opportunities to attract potential researchers, and then providing them with a viable professional pathway. Such employment opportunities can be very important for young researchers who have just graduated abroad, and who are most likely to return to their countries immediately after graduation. Some donors (e.g. Special Programme for Research and Training in Tropical Diseases, TDR; Sida/SAREC; and the Danish International Development Agency, DANIDA) have introduced innovative approaches to encourage doctoral students to maintain links with their home institution. The 'sandwich model' of doctoral training requires students to conduct their research in their local context, with time at the supporting international university for coursework, analysis and composition. By ensuring that trainees select thesis subjects that are more specific and relevant to the problems of their countries, this model has helped trainees to resume research in their home environment on completion. In some instances it has also accelerated the process of institutional strengthening (Nchinda 2002).

Senior researchers can provide important role models for junior researchers and, where HPSR is not well established, be influential mentors. This is especially important since there is little formal guidance on careers in HPSR. Thai policy-makers have paid particular attention to these issues in the past decade, helping the country build a sizeable group of committed and trained health policy and systems researchers (see Appendix).

Developing an identity for HPSR and a critical mass of health policy and systems researchers

Implicit in bettering recognition for researchers is the need to develop a more coherent disciplinary and professional identity for HPSR globally and nationally. Additionally, a critical mass of health policy and systems researchers must be cultivated at both the national and international levels to provide personal and professional mutual support.

Leading academic centres have moved in recent years to recognize HPSR as a distinct area of knowledge in its own right. The benefits of putting HPSR on clearer academic footing are illustrated by a senior researcher at one of Bangladesh's universities, who observed that the emergence of many academic institutions competing for the same skill mix has made it easier to recruit good staff because people are less afraid that they may be left professionally stranded if they decide to leave their current institution (Rahman, personal communication, 2007).

Ensuring financial sustainability

Diversified funding sources

Ensuring a long-term reliable source of funding for HPSR organizations which will cover all their operational and capital costs is essential. Individual research organizations need to develop their own specific strategies for financial sustainability which fit the particular health system and wider context within which they operate. There are various issues that such strategies need to consider.

Given the reality of financial constraints within the health system, and the seeming trend towards more project-based funding for research, organizations need to develop strategies to diversify their sources of funding. For example, in the case of IHPP in Thailand, this type of funding has grown from being a supplement to core funding to being the major source of financing (Appendix), and similar trends are reported by leading HPSR centres in Kyrgyzstan and Sri Lanka.

For funders of HPSR activities, whether at the national or international level, consideration needs to be given to the balance between core institutional funding and project-based funding. It is particularly important for research funders to recognize that 'young' institutions are likely to require more core support before they are in a position to diversify their funding; however, even mature institutions may need such funding to ensure that they can work on key issues which may not be funded through project work. Furthermore, research funders need to recognize that whether making monies available through core or project routes, many institutions in low- and middle-income country institutions need support, over and above normal operational costs, for capacity-development activities.

One area where the current policy of many donor agencies is unsupportive relates to procurement practices for consultancy work. Where remuneration is inadequate, HPSR organizations may face pressure to allow staff to supplement their incomes with external work. However, this practice can be counterproductive and result in researchers' incentives diverting from the institution's agenda. Such work can also be difficult to monitor and may cause internal tensions. In addition, if consulting contracts do not allow charging of overhead costs, an institution may find it harder to recover its core operating costs, undermining its sustainability. Ultimately this problem stems from low basic remuneration, and overly-rigid institutional rules may, under such circumstances, lead to further loss of staff. Such situations require concerted action by both institutions and contracting agencies. HPSR institutions need to develop clear policies for consultancy work and to apply them uniformly. Contracting agencies need to revisit their own policies to assess the potential damage they inflict on institutional capacity when they preferentially use individual consultancy contracts – often on the grounds of minimizing costs – to obtain HPSR inputs from HPSR organizations, instead of full institutional contracts.

Financial management

The quality of financial management can be critical in ensuring financial sustainability. This Review cannot cover all the important issues and challenges in improving financial management.[3] However, the following are two common issues that effective HPSR capacity-building efforts must pay attention to.

First, where an organization's rules and governance are not designed to manage a more diversified funding base, then change is necessary. If this is not possible within the public sector framework, consideration should be given to alternative institutional structures and locations.

Second, a shift to project funding requires that an institution has internal financial controls and information systems that will satisfy the reporting requirements of funders. HPSR organizations may need to make significant investments in upgrading their own internal systems.

Funding agency responsibilities

Accordingly, agencies that fund research (and consultancy) may need to reconsider their funding policies at various levels. Their approaches to contracting mechanisms may need to take account of the current stage of any particular national HPSR sector. In countries where HPSR institutions are weak or emerging, funding policies need to recognize that costs of such institutions may be higher than more established institutions. Additionally, agencies need to consider their mechanisms for funding research, and in particular what mix of core and project funding they use. Related to this is the need, as stressed in the preceding chapter, for greater emphasis on either channelling funds to local research priority-setting approaches for distribution to national institutions or, if necessary, funding national research institutions directly.

Furthermore, agencies need to take account in their procurement policies of the effects of individual consultancy contracts on institutions. As described above, such

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[3] For an excellent and detailed coverage of the key issues the reader is referred to Struyk (2002).

contracts have potential negative effects on research organizations; but more fundamentally, private contracts limit the degree of responsibility and autonomy given to developing country institutions. Over time they may undermine the development of problem-solving capacity (Gaillard 1994).

We suggest that agencies also need to incorporate specific costs into research funding for institutional and indeed sectoral capacity building. This has, for example, been a feature of EC-funded research (Van Damme et al. 2004).

Finally, of course, all these measures require much greater investment by funders in capacity development through dedicated strategies.

Investing in future HPSR methods development

There are a number of areas in which methodological development is needed as outlined earlier, such as comparative methodologies and systematic reviews. Developing technical research capacity must be the collective responsibility of all knowledge-generating HPSR organizations, with adequate attention being paid to this by priority-setting and funding organizations. It is a responsibility that is truly global.

Developing appropriate methods for disseminating research results is a related area which also warrants capacity development. Research institutions need to be able to draw on a range of approaches to disseminating output in forms that are acceptable and digestible to a range of audiences. At one level, this objective will require greater emphasis in staff training and continuous outreach efforts. However, new approaches to dissemination must be developed as well. This is further discussed in the section in the following chapter on knowledge brokering.

Improving partnership strategies

We suggested earlier that partnerships are becoming an increasingly important feature of research activity. Partnerships provide a means of bridging complementary disciplines and facilite cross-country comparative work. They also provide opportunities for capacity strengthening through exchange of staff, ideas and skills. However, increasing recognition of the potential problems of partnerships (Bernard 1988; Binka 2005; Jentsch & Pilley 2003; Gaillard 1994; CCGHR 2007) has stimulated strategies for improving the design and management of such interactions – especially those involving partners in developed and developing countries (see, for example, the guidelines issued by the Swiss Commission for Research Partnership with Developing Countries, Box 5.4). These guidelines stress the need for equality between partners in the use of results, access to information, management responsibility and agenda setting. One promising approach to this goal is for organizations in developing countries to take the lead in initiating and coordinating partnerships. Managing complex partnership arrangements can be difficult, however, and in some institutions, research management capacity may need to be specifically strengthened. Partners in developed countries must be sensitive to the effects that unequal relationships can have on partners from developing countries, and to consider explicitly, in their activities, how to ensure capacity is strengthened rather than constrained.

Given the unevenness of research capacity in health systems in developing countries, there is also potential for more learning between partners within developing country contexts.

Since partnerships bring great benefit to the HPSR process, funding agencies should continue to support them and to encourage their formation in funded research. Special attention should also be given to supporting partnerships initiated and led by HPSR organizations in

BOX 5.4 PRINCIPLES OF RESEARCH PARTNERSHIP

- Decide on the objectives together.
- Build up mutual trust.
- Share information, develop networks.
- Share responsibility.
- Create transparency.
- Monitor and evaluate the collaboration.
- Disseminate the results.
- Apply the results.
- Share the profits equitably.
- Increase research capacity.
- Build on achievements.

Source: Maselli, Lys & Schmid (2006).

developing countries. This must include providing such institutions with funding to cover their coordination costs.

Developing an HPSR culture and critical mass

The discussion above has focused largely on strategies for enhancing the capacity of individual research organizations. However, some countries also need to strengthen the knowledge generation and dissemination function at the wider system level.

An effective health research system depends on a critical mass of organizations and researchers. Mexico, South Africa and Thailand all have several institutions involved in HPSR, and that seems to provide a healthy environment – policy-makers are not forced to rely on one institution alone for advice, and there is greater scope for institutional collaboration and competition. Other essential components of the system include effective inter-institutional communication and networking, and developing a culture and identity for HPSR.

Attention also must be paid to the wider governance of the HPSR sector, including areas such as ethical scrutiny and the relationships between the research community and policy processes.

Accordingly, countries with weak HPSR capacity may require comprehensive assessment of the state of the national HPSR sector, led perhaps by a partnership of research institutions and government to identify system capacity needs.

Conclusions

Of the four functions that make up the HPSR framework, knowledge generation and dissemination has received the most attention in terms of capacity strengthening. Yet it is clear that some countries and some organizations still have major capacity needs in terms of governance and leadership, resources (human, material and financial), communication and quality of research. Strategies are needed to identify and respond to these needs at the institutional level and beyond. In the following chapter, we examine what happens to the results of research – the filtering and amplification function.

Chapter 6

Capacity for evidence filtration and amplification

Key messages

- Filtering and amplifying evidence is an increasingly important reality in the policy process.
- A range of organizations are involved in the filtering and amplification function with different motives, legitimacy and ways of working.
- There is little knowledge about this function, however, and less so about the capacity requirements of the varied organizations involved.
- Civil society organizations involved in this work, and policy-makers responding to them, need to be able to map the political context.
- There is potential for an increasing role in low- and middle-income countries for knowledge broker organizations.

Introduction

Old assumptions that the outputs of research will feed cleanly into policy-making are now widely accepted as naive. We are all familiar with examples of evidence that has been ignored in developing policy processes. It is clear that the links and dynamics between research and policy-making are complex and only partially understood. Where we previously assumed a somewhat straightforward influence of objective research on a transparent policy-making agenda, a rich literature is now analysing several complicating factors, as represented by the analytical framework at the core of this Review. This chapter discusses two functions – *filtering* and *amplification* – that help explain why some research output is picked up by policy-makers, whereas other research never influences decisions on the policy-making agenda. As information and 'evidence' proliferates, this function is becoming increasingly important helping policy-makers to choose which issues to focus on.

'Filtering' and 'amplification' are terms that have previously been used in discussions about the way in which civil society networks try to influence policy (Perkin & Court 2005). For this chapter we propose the following definitions.

- Filtering is a function through which stakeholders determine which research is most relevant as the evidence base for their respective arguments in the policy-making process.
- Amplification is a function through which stakeholders seek to make the evidence base of their arguments generally accepted as a means of increasing influence on policy-making.

Filtering and amplification occur in the context of the ideological and strategic politics of health. Research and policy-making across all sectors are influenced by political value judgements:

> Research–policy links are dramatically shaped by the political context. The policy process and the production of research are in themselves political processes from start to finish. (ODI 2004, p. 2)

While it is clear that research evidence is likely to constitute one among multiple influences on health policy-making, the quality of democratic processes is likely to be enhanced if stakeholders in policy debates develop their positions and arguments based on evidence, as well as political incentives, public opinion and budgetary considerations.

This chapter seeks first to understand how research evidence is filtered and amplified by different actors, particularly civil society organizations. It does this through exploring both the theoretical literature as well as a number of current examples from the health sector. The second half of the chapter addresses current capacity constraints that affect how evidence is filtered and amplified, and what could be done to enhance capacity among civil society organizations, researchers and policy-makers to increase the influence of research on policy-making.

Filtering and amplification: a brief review

We begin by providing an overview of the functions of filtering and amplification.

Filtering – selecting and organizing evidence

> The filtering function of a network allows unmanageable amounts of information … to be organized and used in a productive way. Filters 'decide' what information is worth paying attention to. Media content editors often carry out filtering functions by 'deciding' what is disseminated to the general public. Filtering networks can provide policy-makers with a similar service. (Mendizabal 2006, p. 5)

Networks and organizations can filter evidence on different criteria, such as:

- traditional scientific research criteria, including validity, reliability, generalizability, minimization of bias, methodological rigour and testing causal hypotheses;
- social construction criteria, including acknowledging and taking into account the development of and influences on research-generated knowledge, including issues such as doing justice to particular cases or transferability of knowledge across contexts;
- artistic and evocative criteria, including the extent to which new or novel perspectives are provided, aesthetic quality and interpretative vitality, creativity, authenticity, and the ability to connect with and move audiences; and
- critical change criteria, including an increased consciousness about inequalities and injustices: their source and nature, representation of the perspectives of the less powerful and identification of strategies for change (adapted from Patton 2001, cited in Kuruvilla (2005)).

Stakeholders will select evidence on the basis of one or more of these criteria so the filtering of evidence, to a considerable degree, is based on value judgements and politics. While traditional scientific research criteria are, in one sense, more objective than the other types of criteria proposed, the choice to rely on such criteria can itself be politically motivated. Kuruvilla exemplifies this point with the People's Health Movement (PHM). On the basis of *social construction* and *critical change* criteria, the PHM challenges the data that are filtered and amplified by the World Health Organization (WHO) and the Joint United Nations Programme on HIV/AIDS (UNAIDS), with the intention to ask the broader and more political questions of why global health targets are not being met, and health and development are not prioritized sufficiently on the global policy agenda (Kuruvilla 2005).

Box 6.1 gives an example of the selective use of evidence in policy discussion on HIV/AIDS in South Africa.

Amplification – communicating evidence

The evidence that has been selected through the filtering function must be amplified effectively in order to impact policy-making. Filtering and amplification are two sides of the same coin. Journal editors, for example, filter prospective texts and allow some to go through a peer-review process that determines whether or not they will be published; all of this is done mainly, if not only, on the basis of traditional scientific research criteria. The mass media serve a similar function for the broader public, but the selection criteria are often less clear-cut. Newspaper editors play much the same role as academic journal editors in that they may select certain pieces of research out of a broad range of other forms of information for dissemination in their newspaper. Some media may have a distinct HPSR profile, whereas others search for whatever information will contribute to a 'good story' about health issues.

Amplification does not occur only, or even primarily, through media – a variety of other communication channels can be used to amplify messages. Personal face-to-face meetings can be extremely influential in determining which research results are listened to. Advocacy groups can amplify messages based on research through targeted advocacy campaigns that may aim to mobilize public opinion around issues as diverse as the need to scale up development assistance in health, or raise awareness and action about medical malpractice. Box 6.2 gives an example of the media's role in amplifying evidence.

BOX 6.1 THE IMPLICATIONS OF FILTERED EVIDENCE FOR HIV/AIDS POLICY IN SOUTH AFRICA

HIV/AIDS treatment policies in South Africa have been heavily contested despite the fact that advocates on all sides of the debate have drawn upon evidence. The history of the debate illustrates well how different filters can be applied to evidence for different purposes.

In 2000, South African President Thabo Mbeki chose to support the assertion that there was no link between the HIV virus and AIDS (thereby denying the existence of a clinically defined disease) by drawing together a range of 'expert researchers', including representatives from the so-called AIDS 'dissident' community. Research conducted by certain expert panel members questioned, in complex biomedical terms, the processes by which HIV caused AIDS and also called into question the efficacy of antiretroviral (ARV) therapies. This 'evidence' concerning the toxic nature of ARVs, though discredited by the mainstream (western) scientific community, was also disseminated by ANC Today, the Web-based newspaper of the African National Congress (ANC).

In 1998, the Treatment Action Campaign (TAC) was launched in South Africa, in response to the ANC government's refusal to provide zidovudine (AZT) to prevent mother-to-child transmission (MTCT) of HIV; it has since become a powerful civil society organization working for the public provision of AIDS treatment. Partly due to TAC efforts, but also due to political pressures, the government initiated MTCT pilot sites in 2001 and a national roll-out of ARVs at the dawn of the campaign for the 2004 general elections. Further support for MTCT has come from the local research community involved in MTCT studies that have provided the evidence and scientific legitimacy for the focus. The local TAC campaign has been strengthened by an ever-growing network of global AIDS activism (Fourie 2006).

Taken in the context of a young post-apartheid state, Schneider (2002 p.153) interprets the denial of the link between HIV and AIDS as an attempt by President Mbeki to challenge western orthodoxy and dominance, taking the fundamentals of biomedical research into the political arena in "a battle between certain state and non-state actors to define who has the right to speak about AIDS, to determine the response to AIDS and even to define the problem itself". Schneider & Fassin (2002) also point to the fact that AIDS in Africa is still approached predominantly through a behavioural and neo-liberal perspective that fails to systematically address the social, economic and historical determinants of the epidemic.

BOX 6.2 AMPLIFYING EVIDENCE CONCERNING 'MAD COW DISEASE' IN THE UNITED KINGDOM

'Mad cow disease' (bovine spongiform encephalopathy, BSE) in the United Kingdom in the early to mid-1990s provides an excellent example of how the media can amplify certain research findings and push evidence into the policy arena. Research at the Institute of Environmental Health Officers had, for some time, shown that unregulated practices at abattoirs could lead to public health risks. However, the researchers' calls for action through the established channels had not led to political action, so instead the researchers started feeding research results directly to selected journalists. Where research results alone had failed to motivate political action, public criticism in the media provided sufficient political incentives to impose stricter regulations. But politicians were equally shrewd in using the media for their own purposes. Government media releases about public health risks from BSE were ostensibly based on commissioned research, but subsequent analyses of the original research reports show that political spin doctors removed several scientific qualifications that risked causing public alarm.

Source: Miller (1999).

Organizations and networks involved in filtering and amplification in health

The role of civil society organizations and networks

A variety of organizations may be involved in filtering and amplification functions. For example, in disseminating their research findings, researchers may also actively identify messages that they believe are policy-relevant and ensure broader amplification of these messages. Policy advisors within health ministries may also actively identify key research findings and communicate them to policy-makers. However, this chapter focuses in particular on civil society organizations and the role that they play in filtering and amplification.

Civil society organizations encompass all organizations, distinct from the state, the family or the market, that are formed to pursue shared interests or values (Sanders et al. 2004). In the health sector there is a range of civil society organizations, with varying degrees of formality and power. Lavalle, Acharya & Houtzager (2005) refer to a simple typology of relevant civil society organizations.

- Associations – based around geographical communities or issue-based communities, they include professional associations (such as medical and nursing associations).
- Coordinators – they bring together and coordinate other collective actors, and mediate relations with the state (such as the Christian health associations, representing mission health care providers, active in many sub-Saharan African countries).
- Advocacy nongovernmental organizations (NGOs) – they focus on transforming social problems into public issues and campaign on policy issues (such as the People's Health Movement, or the Treatment Action Campaign).
- Service non-profit organizations – their primary focus is service provision to the public (such as mission health care providers, World Vision, Oxfam and Save the Children Fund).

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[1] http://www.ibon.org (last accessed 22 August 2007).

- Think tanks – groups focus on summarizing and disseminating ideas to those engaged in making 'real world' decisions (Bentley 2004, p. 40), and as such can be very powerful 'amplifiers'. Examples include the IBON Foundation,[1] a think tank in the Philippines that analyses and disseminates data about socio-economic and health conditions in that country, as well as institutions in developed countries, such as the Center for Global Development in the USA and the Overseas Development Institute in the United Kingdom.
- Knowledge brokers – these are organizations about whom there is increasing interest, and which are dedicated to creating links between the knowledge base and those who need to use knowledge for policy- and decision-making (CHSRF 2003). Knowledge brokers may be based in health ministries; they may also be independent organizations, such as the Regional East African Community Health (REACH) Policy Initiative.

While advocacy groups are explicitly and primarily involved in advocacy, many other civil society organizations engage in policy debates, particularly when issues that they are concerned about reach the policy agenda. Through generating greater awareness and debate of political issues, civil society organizations can broaden participation in policy debates. Although there is no straightforward correspondence between the extent of democracy and the role of civil society organizations, it does seem that in more vibrant democracies there is more likely to be a greater range of active civil society organizations involved in filtering and amplifying research evidence; the rather simplistic linkage from researchers to policy-makers is most unlikely to be an accurate reflection of reality. In international health, several global actors have tried to promote civil society organization participation in policy and decision-making. For example, the Global Fund to Fight AIDS, Tuberculosis and Malaria requires the participation of representatives from the private sector as part of its Country Coordinating Mechanisms, and also reserves seats for NGOs on its own board. It seems likely that, in the future, the role of civil society organizations in filtering and amplifying research evidence will become even greater.

While many civil society organizations focus their policy efforts in their own country, an increasing number of them are active at the global level seeking to influence global level decision-makers such as the World Bank or WHO, or multinational firms, or governments of high-income countries influential in development assistance processes.

Over the past decade, a broad swathe of NGOs in developed countries that have historically had a primary focus on service delivery have increasingly moved into advocacy and policy work in recognition of the fact that their traditional development activities are ineffective and unsustainable without broader policy change (Hudson 2000; Chapman & Wameyo 2001). These groups may use research both to help define their advocacy positions and to provide additional arguments to support their advocacy activities.

Although individual civil society organizations often play active roles in filtering and amplifying research evidence, much of the literature ascribes the filtering function mainly to policy networks that are viewed as "formal or informal structures that link actors (individuals or organizations) who share a common interest on a specific issue or who share a general set of values" (Perkin & Court 2005, p. 3). Such networks can involve differing degrees of collaboration and interaction (Chapman & Wameyo 2001). In low- and middle-income country contexts, policy networks are often informal in nature. They may form around a single issue (see Box 6.3 on tobacco control in Thailand) or be made up of a somewhat fluid group of actors who are broadly engaged in health policy debates, and through repeated interactions establish working relationships that amount to a network. In issue-specific networks, stakeholders

BOX 6.3 BUILDING POLICY NETWORKS FOR TOBACCO CONTROL IN THAILAND

During the late 1980s a series of royal decrees in Thailand limited tobacco advertising and enforced labelling of tobacco as a harmful product. These had been supported by local NGOs such as Action for Smoking and Health (ASH Thailand), an NGO established in 1986 under the auspices of the Rural Doctor Society.

During the early 1990s the Thai Health Systems Research Institute (HSRI) provided a renewed focus on the issue of tobacco consumption. This was particularly important given arrangements under the General Agreement on Tariffs and Trade (GATT) and pressures on Thailand to open up its tobacco markets.

Research provided clear evidence on the epidemiology and trends of tobacco consumption, the cost of tobacco-related illnesses, and income and price elasticity based on Thai household surveys. This evidence served as a platform for effective health promotion strategies. In 1994–1995 the Tobacco Office and HSRI facilitated a forum for exchange of experience, and visits between Thailand and VicHealth, an Australian tobacco control NGO. At the first biennial HSRI conference in February 1995, the VicHealth Chief Executive Officer was invited to speak about the Australian experience with tobacco control. A notable outcome of this informal Thai-Australian collaboration was confidence among Thai partners about the feasibility of a dedicated tax-for-health movement. As a result of conviction and commitments by Thai anti-tobacco champions, multiple stakeholders were involved in consultations, with the aim of achieving a dedicated tobacco tax for health promotion. A policy recommendation to establish such a mechanism was made to the government in 1996.

In 1999, the Minister of Finance established a Health Promotion Foundation funded by a dedicated tobacco and alcohol tax. This tax represented a major shift from the conventional central pooling of all government tax revenues. It took another two years for the drafting of a bill for consideration by the House of Representatives and Senate. Finally, the Thai Health Promotion Foundation Act of 2001 was promulgated, and the organization ThaiHealth was launched in October 2001.

Critical success factors in the founding of ThaiHealth include evidence-based advocacy by civil society organizations and political support from the Ministry of Finance. Lessons learned from VicHealth were valuable, and provided a context for such movement in Thailand. However, the process was an internal one, spearheaded by national anti-tobacco champions. More recent evidence drawn from national household surveys suggests that tobacco consumption has been reduced as a result of these measures.

Sources: Chantornvong & McCargo (2000); Tangcharoensathien et al. (2006).

might strategically seek to bring additional members into the network to reinforce or complement existing network members. Such policy networks can facilitate information exchange, promote coordinated advocacy campaigns and, through repeated interactions, promote trust between network members. All these functions have significant implications for how research evidence is picked up and disseminated.

Finally, the media are vital to the functioning of civil society. Professional and academic journals, such as the *Lancet* or the *American Journal of Public Health,* are the targets for many researcher-led dissemination activities. But other forms of media, such as television news and daily newspapers, are often more effective in reaching larger audiences.

Understanding the basis of civil society organization legitimacy

While the accountability structures and hence the foundations of legitimacy for government are clear (if not always perfectly functional), the accountability and legitimacy of civil society organizations may be unclear, and vary widely across different types of organizations. It is important to understand the basis of legitimacy for civil society organizations involved in filtering and amplification – both from the perspective of policy-makers, who need to assess how legitimate a voice a particular civil society organization brings to the policy arena, and from the perspective of the civil society organization itself. The civil society organization needs to ask itself with what legitimacy it is seeking to influence the policy-making agenda, and then build its advocacy strategy around the answer to that question. The literature identifies several possible bases of legitimacy for civil society organization advocacy with respect to health policy (Kuruvilla 2005).

- Moral. Advocacy groups can claim legitimacy on the basis of the values and ethical imperatives that motivate their advocacy. For example, advocacy for upholding fundamental human rights in the provision of health services in relation to a politically marginalized group of the population may be based on moral legitimacy.
- Technical. Advocacy groups that hold unique professional expertise and experience in the relevant policy field may legitimately have an impact on policy since their professional opinions may be crucial for policy success.
- Political. Advocacy initiatives may derive their legitimacy from successfully mobilizing public support for their cause through various forms of political activism.
- Representative. Advocacy efforts can gain legitimacy by being based on mandates given by a specific community to influence policy-making on their behalf.

Policy advocacy is more likely to get access and be effective if it combines two or more of these sources of legitimacy. Box 6.4 reports on a study of United Kingdom-based development advocacy NGOs and their legitimacy.

Building capacity for filtering and amplification

Developing capacity to filter and amplify research evidence is particularly important for civil society organizations who are actively engaged in these functions. However, it is also important that other actors understand this function, and the role that civil society organizations can play in filtering and amplifying research evidence. We look first at how civil society organizations understand the broader political landscape and hence how best they can situate themselves, and their use of research evidence within this landscape. This section also considers the issue from the other side, in terms of how researchers and policy-makers can best understand the role of civil society organizations in filtering and amplifying research, with respect to a particular policy issue, and accordingly how best to deal with such organizations. We then examine the capacity needs of civil society organizations in terms of filtering and amplifying research evidence. Much of this chapter has focused on the role of civil society organizations in communicating evidence as part of a process to achieve their own (advocacy) goals. However, there is increasing interest in the establishment of knowledge brokers

BOX 6.4 BASES FOR CIVIL SOCIETY ORGANIZATION LEGITIMACY IN UNITED KINGDOM DEVELOPMENT ADVOCACY

In a study of 31 United Kingdom-based development NGOs engaged in advocacy, including health NGOs, it was found that:

- 15% claimed legitimacy based upon moral arguments, i.e. that they were upholding basic moral rights;
- 50% claimed legitimacy on the basis of their links with developing countries and the technical expertise and experience derived from these links; and
- 30% claimed legitimacy on representative grounds, with 10% referring to their organizational structures and governance, including democratic membership, and 20% stating that they were 'speaking for' developing countries.

Political legitimacy was not mentioned. Some NGOs claimed legitimacy based on their organizational history. The 50% of NGOs claiming legitimacy based on their links with developing countries were largely service delivery NGOs that drew on their operational grassroots work for advocacy purposes.

Source: Hudson (2000), Hudson (2002).

within the health sector. Such brokers have as their primary mandate the objective identification, assessment and synthesis of research evidence, and the communication of summaries of such evidence to policy-makers. The final section considers the role for such knowledge brokers, and how their capacity may be enhanced.

Understanding the political context

Civil society organization perspectives

Effective participation by civil society organizations in policy discourse requires an understanding of the political context. That political context will differ not only from country to country but also from issue to issue. For example, while some high-profile and highly contested issues – such as health worker compensation – may engage a broad set of actors in an open and widely publicized discussion, other, perhaps more technocratic issues, such as procedures for allocating government health budgets, may be debated within smaller and more closed policy circles. Civil society organizations need to start with a solid understanding of the formal rules of the policy-making process; however, advocacy strategies also require an understanding of the real political dynamics at play in a particular policy arena.

We discussed earlier the different foundations for civil society organizations' claims to legitimacy. The bases from which a civil society organization draws its legitimacy should also affect how it operates in the policy arena. For example, civil society organizations that derive their legitimacy on technical grounds are probably under stronger pressure to produce evidence-informed arguments than those that derive their legitimacy from political or representative perspectives. Civil society organizations also need to consider whether the legitimacy that they claim for themselves is acknowledged or disputed by policy-makers. Issues of trust and reputation appear to be critical in determining whether policy-makers listen to outside voices (Innvaer et al. 2002). It is also important to understand the nature of policy networks and the extent to which they are open or closed, and transparent or opaque in their operations. For example, in the face of closed policy networks civil society organizations are unlikely to be easily able to gain the ear of policy-makers and may need to mobilize their political base in order to be heard.

Policy-maker perspectives

Policy-makers are subject to multiple competing demands to be heard. The analytical dimensions described above, particularly the basis of civil society organization claims to legitimacy and the frames used in the policy process, will also affect whether or not policy-makers should give time and attention to a particular civil society organization. If the legitimacy of a civil society organization is based primarily on its technical arguments, these arguments should be based on solid research or empirical evidence.

Enhancing capacity to understand the political context

The capacity needs of civil society organizations in terms of employing evidence to engage effectively in policy processes have been recognized relatively recently, and there is currently limited understanding of the exact nature of their requirements. A recent initiative outside the health sector identified an increased demand from civil society organizations in developing countries for capacity development support in order to understand policy processes better, and proposed the development of regional hubs to support civil society organizations in this manner (ODI undated). Certainly in the health sector, multiple tools for stakeholder assessment exist[2] that enable users to map different stakeholders with respect to a particular policy issue and develop strategies about how best to approach them. Such tools could be employed to help civil society organizations map the policy environment within which they work.

Enhancing capacities to filter and amplify research evidence

In order to appropriately employ evidence in policy and decision-making, civil society organizations, like policy-makers, need to be able to assess the quality of research, appraise its generalizability to different contexts and potentially synthesize research findings from multiple studies. There is no systematic evidence about the extent to which civil society organizations actually have these capacities. Some civil society organizations, such as Save the Children Fund, United Kingdom, maintain separate research or evaluation units that give them in-house capacity to identify, appraise and apply research findings. Many NGOs in developing countries also have mandates that combine research and advocacy, and sometimes service delivery, and accordingly have in-house research capacity. BRAC, for example, in Bangladesh runs major social programmes, including those concerned with health, but also has a strong monitoring and evaluation unit, and a human rights and advocacy unit.[3] The Centre for Enquiry into Health and Allied Themes (CEHAT) in India 'is involved in research, action, service and advocacy on health; and has conducted many research projects.[4] The African Council for Sustainable Health Development (ACOSHED), a West African initiative, also operates through a combination of advocacy and operational research that it undertakes itself. However, it is probably unlikely to make sense for all civil society organizations with an interest in health policies and health systems to invest in developing HPSR capacity. In some instances civil society organizations may be better off developing relationships with other

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[2] See, for example, PolicyMaker, an interactive software program that allows users to identify the position of different stakeholder groups on specific policy issues and their relative power; also Nash, Hudson & Luttrell (2006).

[3] See http://www.brac.net (last accessed 22 August 2007).

[4] See http://www.cehat.org (last accessed 22 August 2007).

BOX 6.5 ENHANCING THE CAPACITY OF ADVOCATES TO USE EVIDENCE

Extract from an interview with Ravi Narayan, Former Coordinator of the People's Health Movement

"I think several interesting developments have taken place during my period as coordinator in which I think there's been a sort of institutional elevation of this whole idea [of linking research to advocacy]. One is the creation of the International People's Health University. This was launched at the Second People's Health Assembly (PHA2) by academics and researchers from all over the world. It will soon be part of every People's Health Movement. At regional or international conferences, a week before or after, like a satellite programme, it will train young activists in understanding this sort of evidence and research. So we had 60 youngsters at PHA2 in Cuenca in Ecuador last July who came a week earlier, who looked at this evidence about globalisation and health and so on, and then formed themselves into three small groups as a follow up activity. One group is going to continue to look at trade and health issues and evidence. Another is going to look at the success and failures of primary health care programmes. And another is looking at social determinants.

These are little networks of youngsters who are upcoming public health professionals or activists or researchers or whatever. They haven't made up their mind where they fit in the system, but they all came to the assembly and were invited to come a week earlier. And we have just agreed to evaluate what has happened since they went home, and are working on how we continue this."

Source: Real Health News (2006).

organizations or researchers who can contribute to this capacity.

While there is increasing awareness of the need to inform and train policy-makers in how to identify and assess research evidence, to date very little attention has been paid by external or international actors to strengthening capacity among civil society organizations in low- and middle-income countries on their assessment and use of research evidence. However, this is not to say that there is no activity in this field. For example, the mandate of the Training and Research Support Centre (TARSC)[5] in Zimbabwe is to provide training, research and support services to state and civil society organizations with a particular focus on supporting community-based work. TARSC currently houses the secretariat for Equinet,[6] an initiative in Southern Africa that engages policy-makers, researchers and civil society, directly supports HPSR and aims to provide a forum for dialogue, learning, sharing of information and experience, and critical analysis in order to influence policy, politics and practice towards health equity. Formal networks such as Equinet provide opportunities both for capacity development among civil society organizations but also for networking between researchers and civil society organizations. Similarly, the People's Health Movement has initiated activities to help strengthen research skills among activists (Box 6.5).

Greater attention has been paid by external, donor-funded programmes to developing capacity among low- and

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[5] See http://www.tarsc.org

[6] See http://www.equinetafrica.org

BOX 6.6 DIFFERING AIMS IN RESEARCH AMPLIFICATION

Researchers and civil society organizations may not always agree on how research findings should be amplified. In particular, researchers are more likely to be concerned about the scientific basis of research results, whereas advocacy civil society organizations are likely to place greater weight on using research to support their transformational objectives. One particular example regarding research on the early phase of the Global Alliance on Vaccines and Immunizations (GAVI) illustrates this.

The Save the Children Fund, United Kingdom, supported the design and implementation of a study, carried out by United Kingdom-based researchers, into country experiences in applying for funding from GAVI (Starling et al. 2002). Shortly after the release of the study report, Save the Children UK issued a press release, without prior discussion of its contents with the researchers who did the work. The press release made a number of interpretations that went beyond the evidence presented in the report, and rather reflected the views and critiques of Save the Children UK. The researchers protested the press release, and the civil society organization later issued an apology for any confusion that may have arisen. The story illustrates how differing values and objectives can give rise to difficulties in researcher–civil society organization relations.

Source: Walt & Brugha, personal communication, (2007).

middle-income country journalists engaged in reporting on health policy issues. Several organizations such as the Panos Institute and the Population Council have offered training for journalists working in the health sector, which typically incorporates some grounding in health research.

In terms of capacity to amplify research evidence, most advocacy organizations have well-established strategies for raising the political profile of an issue, from contacting a member of parliament to staging a media campaign or public demonstration. The more difficult issue, however, regards how best to amplify research evidence in a way that protects its integrity and rigour, and captures its nuances, while also giving it wider accessibility. In order to enhance the impact of research evidence, it may be re-packaged by civil society organizations for use in policy debates in ways that make researchers uncomfortable (see Box 6.6). The establishment of three-way trusted relations between civil society organizations, policy-makers and researchers can ease this process, as it is provides opportunities for informal dialogue and exchange around research without the pressure of communicating research in one or two headline sentences.

This section has been constrained by the lack of any clear evidence about current organizational capacity to manage research evidence (either in terms of staff skills, knowledge management systems, or leadership and governance). While an increasing number of civil society organizations are active in this sphere, there is very little, if any, systematic knowledge about their capacity. It is therefore extremely difficult to draw concrete conclusions about how best to address this area, and it is clear that further research in the area is needed.

BOX 6.7 SCIENTIFICALLY BASED KNOWLEDGE BROKERING: THE EXAMPLE OF REACH

In Kenya, Uganda and the United Republic of Tanzania various stakeholders, including policy-makers, researchers from universities and civil society have, since 2002, been interested in the idea of developing a knowledge broker for the health sector. These three countries share a common burden: they carry the highest preventable burdens of ill-health in the world. This disease burden could be significantly reduced through the application of existing knowledge.

To achieve this, the three countries have created an institutional mechanism, the Regional East African Community Health (REACH) Policy Initiative, which will act as a knowledge broker, bridging the gap between health research, and policy- and decision-making. REACH is housed within the East African Community Health Research Commission in Arusha and supports a node in each constituent country.

REACH aims to provide evidence that is accessible, timely, credible and trusted, and packaged in a user-friendly format, relevant to the local context. In so doing it will build capacity for more effective linkages between researchers and policy-makers. In 2007, its first year of operation, REACH is developing policy briefs to help decision-makers understand and address the policy implications of recent research on the role of male circumcision in preventing HIV/AIDS transmission, and is also working with policy-makers to identify near- and mid-term policy priorities and evidence needs in terms of development of these policies. The Alliance is providing support to the latter activity.

Promoting scientifically based 'knowledge brokering'

Most of the civil society organizations discussed in this chapter have been formed with a specific set of shared values or objectives in mind. Few of these have focused primarily on objective syntheses of the evidence base. However the use of knowledge brokering (defined broadly as supporting evidence-based decision- and policy-making by encouraging the connections that ease knowledge transfer (CHSRF 2003)) has become increasingly talked about (if less actively engaged in) in high-income countries. Knowledge broker functions are broad but might include the following:

- facilitating exchange of information and ideas between researchers and decision-makers;
- promoting the use of research in health policy and planning;
- transforming policy issues into research questions, and thus promoting policy relevant research; and
- synthesizing and summarizing research for consumption by policy-makers.

These activities have been pursued mainly in industrialized countries such as Canada and the United Kingdom, but there is increasing interest in their application to low-income country contexts, as proposed in the REACH policy initiative (see Box 6.7), and as demonstrated in the WHO Regional Office for Europe Health Evidence Network (HEN) (WHO Regional Office for Europe 2007). The approaches to scientifically based knowledge filtration and amplification are largely untested outside high-income country contexts, and as knowledge-brokering activities are pursued elsewhere, it is critical that they be evaluated and learned from.

Given the fact that in low- and middle-income countries very few knowledge broker organizations exist, this is an area where substantive yet circumspect investment is needed. Knowledge broker roles can be housed within health ministries or universities, or brokers can serve as stand-alone organizations. Careful analysis is warranted regarding where best to locate a knowledge broker function (see also Chapter 7). But regardless of the organizational home, capacity strengthening is likely to be needed in terms of establishing appropriate organizational operating procedures, governance mechanisms, staffing and access to necessary research evidence, as well as creating the essential networks between the knowledge broker in the middle, researchers on one hand and policy-makers on the other. As noted above, careful evaluation of knowledge-brokering organizations and functions is required in order to fine-tune the concepts and practices that have been promulgated in high-income countries to the diverse contexts of low- and middle-income countries.

Conclusions and recommendations

While the phrase 'filtration and amplification' may be an unwieldy one, it captures a set of activities which in complex societies are key to how policy-makers hear about and react to research evidence. The role of civil society and media groups in filtering research and amplifying specific findings has been seriously neglected. With heightened pressures to enhance democratization processes, and increasingly easy access to all sorts of information and evidence via the Internet, the roles of filtering and amplification are likely to become even more important. On the one hand, this is a process that is already under way, and neither health systems researchers nor policy-makers can do much to affect it. On the other hand, the process also offers considerable potential in terms of opening up decision-making processes to evidence. As noted by Nutley (2003),

> There may be some benefits from initiatives that seek to introduce more instrumental rationality into the policy-making process but there is even more to be gained from opening up policy-making processes: enabling participation by a wide range of stakeholders and citizens (p.15).

Due to the historic neglect of this function, or perhaps the fact that it is a new function that has developed relatively fast, very little is known about civil society organization capacity to engage with research evidence, and how best (if at all) to develop capacity among civil society organizations to assess and apply evidence. Understanding these issues is made even more complex because of the great variety of civil society organizations – in terms of their mandate, size and capacity. More analytical work is needed in order to understand better what role civil society organizations currently play in filtering and amplifying evidence in the health policy sphere and how their capacity may be strengthened, particularly with respect to the filtering and amplifying of research evidence. Health policy and systems research can make a major contribution in terms of casting light on the way in which civil society organizations use research and engage with the policy process.

For civil society organizations to be able to engage effectively in complex political environments, it is important that they map and understand the political context. Most HPSR advocacy initiatives will take place in political contexts where civil society organization legitimacy is unclear or disputed, and where the nature and quality of research is contested. Such complexities make it all the more important to have a solid understanding of the political context for HPSR advocacy to be successful. It is equally important for health policy-makers, and health policy and systems researchers to understand the role that civil society organizations can play in manipulating and disseminating evidence (including research), and the basis on which they are performing this function. Such an understanding should help policy-makers determine which of the various amplifiers and messages it is most important for them to listen to, and help researchers determine which civil society organizations they may best be able to work with.

Finally, although there is substantial interest in developing more scientifically-based knowledge broker-type roles, to date only very limited implementation of such initiatives has taken place in low-income country contexts. While we are now seeing some such initiatives emerge, such as REACH in East Africa, and the Evidence-Informed Policy Network (EVIPNet) in several regions, the implementation of such initiatives must be intensified and combined with strong evaluation processes so that we can learn what works in different country contexts.

We turn now to Chapter 7 to discuss the final and ultimately most critical function in this process, that of policy-making.

Chapter 7

Enhancing capacity to use HPSR evidence in policy-making processes

Key messages

- Surprisinging few data exist regarding the real capacity constraints facing the use of evidence in policy. Policy-makers' capacity to understand and use research has been neglected, both as a research topic and as an area of investment in terms of promoting evidence-informed policy.

- Research evidence may play different roles at different stages of the policy formulation cycle. Since evidence can come from many different sources, in many different forms and with varying degrees of quality (and transferability), significant capacities are required to draw upon research evidence in policy-making.

- There are many contextual factors, outside the direct control of policy-makers, which affect how research evidence is likely to be used in policy. However, the government itself has a role to play in terms of influencing the overall context and incentives for using evidence.

- Policy-makers and their advisers, wherever they are located, need a set of skills to enable them to use research in their decision-making. In particular, policy-makers need to be able to:

  - identify situations where research can help;

  - articulate research questions for topics of policy-relevant research; and

  - access and assess research findings and incorporate them in decision-making.

- Discrete interventions may have somewhat limited effect unless accompanied by broader structural reforms that bring about change in civil service culture, and which are potentially supported by stronger demands from civil society groups in terms of enhancing transparency and accountability in policy processes.

Introduction

We have now reached the final and most critical of the functions that make up our conceptual framework – policy-making itself. No matter how well the previous three functions are working, they are all means to an end – to improve the degree to which policies are informed by evidence. And yet very little is known about how policy is made in practice or the forces that impinge on it. Examples abound of policies that fail to take account of available evidence; the frustrations that causes are familiar to everyone in the field. But why does it happen? If there are gaps in understanding how policy is decided, even less is known about the capacity needs of policy-makers and the institutions in which they work. Other chapters have dealt with the functions further up the chain of interaction – priority-setting; generation of research knowledge; and mediation of research evidence through filtering and amplification. But all these steps ultimately come together in policy-making. Building on Chapter 2, we first outline the typical stages and processes of policy-making and the factors that influence how national policy-makers use research evidence. We then consider the key institutions involved in national policy-making processes and their capacity needs. We review strategies for enhancing capacity of key players for using research-based evidence. Because governments clearly have a role in overseeing all the steps in the policy-making process, we end by summarizing and reflecting on the previous chapters and their implications for policy-makers.

Policy processes and the use of evidence by national policy-makers

The policy process

Chapter 2 described how policy-making is a complex, non-linear, incremental and messy process. Many factors influence policy-making, including context (e.g. political election cycles, the state of the government's finances, health systems and governance structures, as well as media hype and political crises) and the ideologies and values of the policy-makers themselves (Trossle et al. 1999; Black 2001; Bowen & Zwi 2005).

Indeed, although the 'engineering' model of how knowledge is incorporated into policy suggests a linear progression from identifying a problem that requires a policy solution, ranking the objectives a solution should achieve and weighing alternative policy options to maximize objectives, in reality, this approach is rarely pursued. The actual steps of the policy process depend on the country and its particular policy structures and mechanisms. However, as noted in Chapter 2, stages in the policy process typically identified are:

- agenda setting – drawing attention to particular problems and issues;
- policy formulation – participating in the development of policy strategies and design;
- implementation – facilitating the execution of agreed policies; and
- evaluation – providing feedback on the implementation and effects of the policy.

Evidence can be used at any of these stages. The resulting policies can be expressed in various ways from internal ministry goals and targets to formal regulations or legal directives. Box 7.1 indicates different expressions of health policies from Ghana.

BOX 7.1 EXPRESSIONS OF HEALTH POLICIES: EXAMPLES FROM GHANA

Health policies may be expressed in multiple forms. In Ghana these include the following.

- **Visions** – By the year 2000, all people will attain a level of health that will permit them to lead a socially and economically productive life (Alma Ata Declaration WHO/UNICEF, 1978).
- **Goals and objectives** – The basic goal and objectives of Ghana's health policy will be to maximize the total healthy life of the Ghanaian people and, by 1990, achieve basic primary health care for 80% of the population, and effectively attack 80% of the unnecessary death and disability among Ghanaians (Ministry of Health, Ghana 1978).
- **Organizational strategies** – The proposed primary health care system will have services provided at three levels (Ministry of Health, Ghana 1978).
- **Programme strategies** – Maternal and child health services will be integrated and made accessible to all women and children in Ghana, within the context of primary health care.
- **Targets** – Ghana will attain full childhood immunization coverage of 80% by 4 June 1990 (Policy statement made by the Head of State to Mr James Grant, Executive Director, UNICEF).
- **Implementation plan** – The policy of the Ministry is to implement the primary health care strategy in phases. It is recommended to start with 5–10 districts (Ministry of Health, Ghana 1978).
- **Minuted decision** – District health management teams should introduce community registers in all communities (Regional Directors and Divisional Heads Conference, Accra, 1989).
- **Regulation or guideline** – All government health institutions will charge patients the full cost of drugs. The poor are to be exempt from paying hospital fees (Hospital Fees Legislative Instrument 1313, 1985).
- **Directive** – No Ministry of Health official should drive a Ministry vehicle without having a driving license (Circular from the Director of Health Services, Ministry of Health, November 1991).

Source: Asamoa-Baah (1992).

How do policy-makers use research evidence?

Many types of evidence are available to policy-makers. Moreover, policy-makers create, select, use and interpret evidence in different ways at different stages of the policy process, and depending on the policy context and their personal beliefs and values. Research evidence is only one kind of evidence; policy-makers will also heed other types which may be less robust, for example, 'expert' opinions and views or less rigorous 'think pieces' available through the Internet (Bowen & Zwi 2005). Research itself includes outputs from a range of study designs from randomized control trials (providing highly robust data on effectiveness), to systematic reviews, to qualitative and process research, which illuminates feasibility and acceptability issues. Research will be of varying degrees of rigour and quality; for policy-makers who may not be schooled in research it can be challenging to determine what research to trust. In addition, research results, particularly in the field of

HPSR, are often complex and nuanced, and rarely is there clear evidence that a particular policy or strategy is effective under all conditions. Policy-makers in low- and middle-income countries in particular will often have to draw upon research findings from elsewhere, and thus face complex questions regarding the transferability of conclusions from one setting to another. For all these reasons, evidence may be challenged. Significant capacities are therefore required to use research evidence in policy-making.

Results of studies exploring what factors facilitate or hinder the use of research evidence in policy-making are contradictory, making it hard to extract general lessons or conclusions (van den Heuvel, Wieringh & van den Heuvel 1997; Trostle et al. 1999; Gerhardus et al. 2000). A systematic review of decision-makers' perceptions of their use of evidence is somewhat instructive but is limited almost entirely to high-income settings (Innvaer et al. 2002). The authors examined 24 studies looking at facilitators of and barriers to research use, as well as the nature of 'use' reported by decision-makers. They found some striking similarities. Common facilitators include personal contact and timely and relevant research. Also mentioned were the need for clear summary recommendations, quality research that confirmed current policy and data on effectiveness. Community pressure and client demand were mentioned by a handful of studies. Conversely, barriers were cited as lack of personal contact, lack of timeliness and relevance, and mutual mistrust between the two 'communities' of researchers and decision-makers. Power and budgetary struggles, and political instability and high turnover of staff were also mentioned.

The role of research evidence may vary at different times in the policy formulation cycle. For example, the universal coverage policy in Thailand (see Appendix) was informed by evidence at multiple stages. Occasionally, use of evidence may be direct (i.e. the primary basis for policy formulation), but this is rare unless the research is commissioned by the policy-makers themselves (the arrow linking the policy-making process to research priority-setting in the framework) (Innvaer et al. 2002). But research may often play a role in bringing a particular issue onto the policy-making agenda or in establishing the legitimacy of a particular policy concern. The final policy stage – evaluation – is usually neglected, or is conducted in-house and remains unpublished or inaccessible to the public domain. Interpretation of evidence (including determination of relevance, utility and quality) is often selective and influenced by a range of factors that include interpersonal relations, existing beliefs, political ideologies and institutional structures (Court & Cotterrel 2006). A recent prominent example is the use of evidence by President Thabo Mbeki to support his view on the causes of AIDS (see Box 6.1). Even compelling evidence may fall foul of political ideology and agendas. In the United Kingdom two reports with similar messages, but produced 20 years apart in different political contexts, met very different fates. The Black report (DHSS 1980), which provided extensive evidence of health inequalities in the United Kingdom, was dismissed by the incumbent Conservative government, while its successor, the Acheson report (Department of Health 1998), which was commissioned by the Labour government, reached similar conclusions and led to policy changes (Bowen & Zwi 2005).

In policy institutions that have election or reporting cycles to consider, the selective interpretation of evidence by both national and international policy-makers is partly a function of pressure on them to produce short-term outcomes. For example, pressures to illustrate success can lead to emphasizing the most positive findings, while negative or less positive ones are suppressed. Parkhurst (2002) has shown how the Ugandan government, striving to demonstrate a decline in HIV prevalence to secure donor funding, played up the results of a single district to imply that a nationwide decline in HIV seroprevalence had been achieved between 1989 and 1998. Furthermore, policy-makers dealing with multiple sectors must juggle a hierarchy of issues, which means they will often give greater weight to evidence on issues of security and macroeconomics than to those relating to public health or health systems. Finally, the nature and extent of democratic and political freedoms, including the independence of academic institutions and the media and the strength of civil society institutions, influence the independence of research and whether and how it can be used. There are many examples in which the media and advocacy groups have influenced the course of policy; these are dealt with in Chapter 6.

How contextual factors affect the use of evidence in policy

As suggested above, there are many contextual factors outside the direct control of policy-makers which affect how research evidence is likely to be used. However, the government also plays a role in influencing the overall context and the incentives to use evidence. At the broadest level, this influence reflects the nature of democratic development and the openness and transparency of decision-making. A recent synthesis of studies suggested that government 'disinterest' in the use of research appeared strongest where the 'accountability gap' is greatest. More discrete measures to promote the use of evidence in policy were unlikely to be successful unless they were "part and parcel of comprehensive civil service and public policy reforms that emphasize professionalism, research-based innovation and participatory decision-making" (Livny, Mehendale & Vanags 2006).

Government regulations and/or traditions are likely to affect the nature of consultative and analytical processes. For example, some countries conduct formal consultations as part of decentralized planning processes, which enable a range of stakeholders to engage in policy development. Such processes may enhance transparency and lead to stronger demands for evidence-informed policy. Specific mechanisms can be put in place to require that research evidence be reviewed as part of policy development. Guidelines in the United Kingdom, for instance, require departments to publish summaries of the evidence base for policy initiatives (Her Majesty's Government; UK, 2005)

A further contextual factor that affects research use concerns the nature of the broader health research system. Long lead times between identification of a topic worthy of investigation and the conduct and dissemination of the research; the time it takes to secure funding; and the lack of mechanisms for identifying health systems research priorities in the context of national health development may all inhibit the appropriate use of research evidence in policy-making.

Trust between researchers and policy-makers also emerges as a key factor bearing on the extent to which research evidence is relied on in policy-making, and case studies demonstrate the importance of personal relationships between policy-makers and researchers (see Box 7.2). Government policy may support the development of close relationships between these groups.

Organizations involved in national policy-making and their capacity needs

Organizations involved in policy-making

Institutions involved in policy-making vary widely between countries but include the following:

- Health ministries – These often have special units or departments, such as health policy units or health-planning divisions that have a particular focus on synthesizing evidence and using it to support policy development. In some contexts (as in Ghana) health research units have been established within health ministries as a means to coordinate research agendas and promote research capacity within the ministry.

BOX 7.2 THE IMPORTANCE OF PERSONAL RELATIONS BETWEEN POLICY-MAKERS AND RESEARCHERS

The successful use of evidence in the development and implementation of Universal Coverage for Health Care Policy in Thailand was supported by a dense network of relations between researchers, policy-makers and politicians. Dr Suraphong Seubwonglee, MD and member of the Thai Rak Thai Party, linked Dr Sanguan Nittayarumphong, a proponent of reform, based within the Ministry of Health, to the leader of the Thai Rak Thai Party in 1999. Based on accumulated research knowledge, Sanguan produced a booklet promoting universal access to health care. After the idea was adopted, Sanguan contacted Viroj Tangcharoensathien, a health economist and researcher, who used to work with him at the Bureau of Policy and Planning, to revise the feasibility analysis previously conducted so that it reflected the newly proposed design of the system. This analysis made the policy look more feasible. Other research conducted by part of the same network of research professionals, including Dr Supasit Pannurunothai and the Health Systems Research Institute Research Committee on Universal Coverage, helped provide comparative evidence from other countries, which also shaped the policy. The shared careers and experiences, in this case, helped ensure trust between researchers and policy-makers.

Source: Pitayarangsarit & Tangcharoensathien (2007), Appendix 1.

- Other central government departments – Many government departments have a role to play in developing health policy, particularly ministries of finance, planning, labour, social welfare and local government. While such ministries have specific technical skills relevant to their mandate, few are likely to have the technical skills to undertake or even interpret health policy and systems research, and commonly have weaker links than health ministries to HPSR organizations.
- Parliamentary and executive bodies – These play critical roles in some political systems. Parliamentary committees provide checks and balances over policies promoted and implemented by health ministries, as well as budgetary oversight and approval. In Southern Africa, parliamentary committees analysed and made input on equity issues in the health budget (in the United Republic of Tanzania, South Africa and Zambia), and raised and promoted debate on issues of migration of health personnel and quality of health services in Malawi (Equinet 2004). In more affluent countries, parliamentarians serving on such committees have their own research staff who track relevant research findings and liaise with civil society.
- Decentralized levels of government – In some systems, particularly those of larger states such as Brazil, China and India, there are highly decentralized roles, and local government, in various forms, may take major responsibility for health policy.

As discussed in Chapter 5, there are advantages and disadvantages to having research organizations embedded within policy-making bodies. The rationale for locating such units within policy-making bodies is that proximity to research experts encourages policy-makers to access and employ research evidence in decision-making. Also, research units located within policy-making bodies are more likely to undertake policy-relevant studies. However, there appears to be little evidence to support these theories. Furthermore, there are potential dangers

BOX 7.3 THE IMPORTANCE OF INDEPENDENT RESEARCH

In 2002, after nearly three decades of reform efforts, Nepal's Parliament passed a liberal abortion law. It took a combination of research and human rights advocacy to force a policy change. Local nongovernmental organizations (NGOs), supported by international research agencies, joined forces with health workers and human rights groups to document the impact of unsafe abortion in terms of:

- preventable maternal deaths
- cost to the health sector
- gender-unequal enforcement of the abortion law.

No government-sponsored research programme would have addressed the issue despite the fact that an estimated 50% of maternal deaths were directly attributable to unsafe abortion.

Source: Thapa (2004).

associated with such a strategy. For example, research units established within policy-making organizations that depend on these for their governance and finance may find their research independence curtailed by this relationship. It is also important to maintain research capacities independent of government, as the case of the liberalization of abortion policy in Nepal illustrates (Box 7.3).

As noted in Chapter 5, however, some of the research institutions which appear to have been most successful in terms of providing policy-relevant evidence (such as the Health Systems Research Institute in Thailand and the National Institute for Public Health in Mexico) have roots in health ministries but largely maintain their independence.

Capacity needs of policy-making institutions

The conceptual framework identified three dimensions of organizational capacity. We use these to consider the capacity needs of health policy institutions with respect to the use of evidence in policy-making.

Leadership and governance

In order to use evidence in policy-making, ministries and other policy bodies need to have mechanisms and structures to commission research and syntheses from external organizations, and to ensure that the quality of commissioned products is high. Such processes depend on sufficient capacity – skilled staff and established processes for commissioning such products

Perhaps more important, and as highlighted earlier in this chapter, governance structures and accountability for decisions are likely to significantly influence the incentives for using evidence in policy-making. If there are incentives for the organization as a whole to use evidence in policy, then these incentives also need to be translated to individual units and staff members. For example, staff performance assessments could include appraisal of skills and behaviours with respect to evidence use.

Less tangible incentives to the use of evidence relate also to the culture of the organization. Case studies of countries that have been successful in creating a culture of evidence-informed decision-making (again, such as Thailand (see Appendix) and Mexico) often suggest that strong leadership has been a critical factor behind this success. Such leadership can be important in establishing a culture that values evidence and ensuring adequate incentives for staff to use it. Strong leadership within policy-making bodies is also likely to have broader repercussions. As the previous chapters have illustrated, the effective use of evidence in policy requires the coordination of multiple actors; increasingly, policy development occurs through the repeated interaction of policy-makers, civil society organizations and researchers. While leadership for such policy networks could come from multiple sources, its most natural home is within the ministry of health. Strong leadership capacity within the ministry of health might therefore help ensure that research agendas are policy-relevant, that researchers feel motivated to communicate findings in a manner that is accessible to policy-makers and that civil society organizations invest in developing the evidence base behind their advocacy efforts.

At a wider level, government also has a responsibility to ensure that all four functions set out in the framework operate effectively and with due governance and accountability. For example, mechanisms are needed to ensure that research is conducted in an ethical manner; that educational policies incorporate provisions for HPSR training; that public sector pay recognizes the needs of the research community; that aid processes in low-income countries consider research needs, including capacity building; and that national-priority setting receives proper attention.

Resources

The two key resources required in ensuring adequate capacity within policy processes are human and financial. Policy-makers and their advisers, wherever they are located, need a set of skills to enable them to use research in their policy and decision-making. In particular, policy-makers need to be able to:

- identify situations where research can help;
- articulate research questions for topics of policy-relevant research; and
- access and assess research findings and incorporate them in decision-making.

Capacity to do this may not require research degree qualifications, but it does benefit from a strong grounding in research, including, for example, different research approaches and methods, and issues involved in applying research findings from one context to another.

There is surprisingly little sound evidence about the capacities that policy-makers need in order to do a better job at using research. A self-assessment tool developed by the Canadian Health Services Research Foundation attempts to enable policy-makers to understand and address the organizational barriers to more effective use of research evidence (Box 7.4).

Recent work by the Alliance in Viet Nam has attempted to adapt this self-assessment tool for use by policy-makers in other contexts. Findings from Viet Nam indicate that policy-makers felt they had sufficient skills to employ research in their decision-making processes, but lacked the incentives to do so. Greater evidence is needed from different contexts to understand whether the key obstacles to evidence use are bureaucratic barriers and lack of incentives, or whether inadequate skills is the primary issue facing staff.

In some contexts, salary levels for civil servants compared to other professions are low, and this may cause retention problems for skilled staff. Ministry of health officials with a higher degree (and therefore stronger research skills) may also easily find employment domestically in think tanks or donor agencies, and overseas in international organizations or universities. Retention and motivation of skilled civil servants is a primary challenge for many low-income (and some middle- and higher-income) countries, and is likely to require attention to working conditions, public sector ethos and opportuni-

BOX 7.4 TOOL FOR SELF-ASSESSING EFFECTIVE USE OF RESEARCH EVIDENCE

The tool focuses on four different aspects of organizational capacity, each with implications for staff skills.

1. **Acquire research**
   Can the organization find and obtain the research findings it needs?
2. **Assess research**
   Can the organization assess research findings to ensure they are reliable, relevant and applicable to you?
3. **Adapt its format**
   Can the organization present the research to decision-makers in a useful way?
4. **Apply it in decisions**
   Are there skills, structures, processes and the culture in the organization to promote and use research findings in decision-making?

Source: CHSRF (2005).

ties for career development, as well as better remuneration. These problems are analogous to those discussed in Chapter 5 and may require coordinated solutions.

Effective use of research evidence in policy- and decision-making requires financial resources. For example, resources are required to commission studies on specific topics, organize consultative meetings with civil society organizations and researchers, pay salaries to retain well-trained ministry of health officials and invest in ongoing staff development. Infrastructural development may also be necessary in areas such as Internet access. In least-developed health systems, lack of financial resources can be a significant barrier to being able to manage consultative processes. Further, where support for such processes is predominantly donor-provided, there may be limited government ownership of them (Livny, Mehendale & Vanags 2006).

In low-income country contexts, donors have commonly provided support to the development of research capacity and to strengthening information systems, but appear less likely to support the development of capacity in health ministries to acquire, assess and use evidence in policy-making. The United Kingdom Department for International Development (DFID)-supported policy advisory units (see Chapter 5) seem to be relatively rare examples of such donor investment.

Communication and networks

As previous chapters have illustrated, communication capacity and ability to network broadly with researchers and civil society organizations involved in filtering and amplifying work are increasingly core capabilities that health ministries and other policy-making bodies need to develop. Most governments have formal mechanisms to facilitate such communication. For example, government departments often establish ad hoc working groups or committees that allow them to access specific expertise for policy development. Governments may also work with knowledge broker organizations, such as the Regional East African Community Health (REACH) Policy initiative (see Chapter 6). With the development of civil society organizations and their enhanced role in advocacy, government officials also need the capacity to determine which stakeholders to listen to. As discussed in Chapter 6, civil society organizations derive their legitimacy from different bases, and policy-makers need to understand the source of a particular civil society organization's legitimacy and determine accordingly how seriously to take its arguments. In addition, policy-makers need to be able to communicate effectively with their counterparts in other government bodies and departments in order to share relevant research evidence and knowledge.

Strategies to enhance capacity to use evidence in policy-making

Ultimately, the use of evidence in policy-making requires the coming together of multiple different processes; accordingly, strategies to promote the use of evidence in policy can operate at different levels. Box 7.5 groups and summarizes the main strategies identified and the key actors likely to be responsible for them. The following sections of this chapter are grouped by these sets of interventions.

In advance of embarking upon capacity development strategies, a country-wide assessment of existing capacities and constraints might enable the identification of key problems and the wise targeting of resources. A framework such as that presented in Chapter 3 could help guide such an assessment.

Enhance supply of policy-relevant research products

As described earlier, a number of factors associated with the overarching health research system prevent the effective use of evidence. Improvement is brought about by strengthening priority-setting processes, particularly for health policy and systems research, and ensuring that funding follows identified priorities. Policy-makers, researchers and research funders need to commit to participating jointly in priority-setting processes and to abiding by the results. The particular challenges around priority-setting were discussed in Chapter 4.

In many instances, however, policy-makers are unlikely to act on a single research study; multiple sources of research evidence need to be brought together. In light of this, the current trend of requiring researchers working on a particular study to produce policy briefs and engage policy-makers may be misplaced. While occasionally policy positions will be influenced by a single study, far greater investment needs to be made in the development of transparent and short research syntheses for policy-makers. While the evidence-based medicine movement has brought major changes to how clinical decision-making is approached (Rosenberg & Donald 1995), policy-making has not kept pace. As noted in Chapter 5 further methodological development is needed in this field.

In addition, systematic reviews and policy briefs need to be made easily accessible – ideally, at least for those with Internet access, via the World Wide Web. There is currently a proliferation of Web portals providing evidence relating to health systems (for example, see Eldis health systems dossier,[1] World Bank online resource centre[2]). While these Web sites can provide a useful service, the criteria used to select research articles, and the methods used to create briefs and dossiers, are not always apparent. Consequently, policy-makers are hard put to assess the reliability and generalizability of the findings presented. One study, of government-run Web portals which link to websites on health, concluded that information available via such portals was unlikely to be based on systematic reviews and was often unclear, incomplete and misleading (Glenton, Paulsen & Oxman 2005).

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[1] http://www.eldis.ids.ac.uk/go/topics/resource-guides/health-systems (last accessed 22 August 2007).

[2] http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTHEALTHNUTRITIONANDPOPULATION/EXTHSD/0,,menuPK:376799~pagePK:149018~piPK:149093~theSitePK:376793,00.html (last accessed 22 August 2007).

BOX 7.5 SUMMARY OF STRATEGIES TO ENHANCE CAPACITY TO USE EVIDENCE IN POLICY-MAKING

Area of intervention	Types of interventions	Key actors		
		Government	Funder	Researcher
Enhance supply of policy-relevant research products				
Ensure relevance of HPSR research	Promote joint priority-setting exercises	■	■	■
Increase production and accessibility of evidence-based briefs	Support development of policy briefs	■	■	■
	Support development of systematic reviews	■	■	■
	Archive briefs, evidence syntheses and research summaries in an easily accessible form (e.g. on-line databases)	■	■	■
Enhance capacity of policy-making organizations to use evidence				
Strengthen individual staff skills and institutional behaviours	Provide training or mentoring in use of research evidence, commissioning of research studies and briefs	■	■	
	Create stronger incentives for evidence use (e.g. through performance assessments, staff appraisals and leadership programmes)	■		
Increase financing for functions related to evidence use	Secure donor funding or raise government revenues to support development of policy analysis units, or perhaps research units within government bodies	■	■	
Enhance access to evidence	Improve access to research resources through improved Internet access, development of low-cost databases of research evidence (such as HINARI)		■	
Establish new organizational mechanisms to support evidence use in policy				
Develop and support knowledge broker capacity	Establish knowledge broker organizations in or outside of government, such as NICE (United Kingdom), REACH (East Africa), health technology assessment units, CHSRF (Canada)	■	■	
	Establish networks (such as EVIPNet) to support knowledge broker-type functions through training and exchange of experience	■	■	
Build health research capacity in, or close to policy organizations	Establish health systems research units in health ministries or in organizations with links to ministries	■	■	

BOX 7.5 SUMMARY OF STRATEGIES TO ENHANCE CAPACITY TO USE EVIDENCE IN POLICY-MAKING

Area of intervention	Types of interventions	Key actors		
		Government	Funder	Researcher
Promote networking				
Establish institutional mechanisms that promote exchange between research and policy worlds	Revolving door mechanisms whereby policy-makers spend time in research organizations and think tanks	■		
	'Shadowing' [i.e.observing a professional researcher or policy maker at work] and job swaps	■		
	Develop databases of researchers active within the country, including their skills and areas of interest			■
	Encourage regional networks such as Equinet	■	■	
Encourage mechanisms that bring technical expertise into government	Encourage the establishment of special commissions or technical advisory groups	■		
Conduct special events or meetings that bring key actors together	Run 'safe harbour fora' or other policy-oriented events that bring policy-makers, researchers and civil society together to discuss evidence and policy issues		■	
Require policy-maker participation in research	Ensure that recipients of major research grants are required to engage regularly with policy-makers	■		
Establish norms and regulations	Support legislation that requires publication of evidence base for new policies	■		
	Mandate evaluation of new social and health programmes	■		
	Integrate operational research and evaluation into existing processes and programmes	■	■	

Acronyms:

CHSRF	Canadian Health Services Research Foundation
EVIPNet	Evidence-Informed Policy Networks
HINARI	Health InterNetwork Access to Research Initiative
NICE	National Institute for Health and Clinical Excellence
REACH	Regional East African Community Health Policy Initiative.

■ A square indicates the actors with primary responsibility for pursuing the intervention, but successful interventions may require collaboration between governments, funders and researchers.

Enhance capacity of policy-making organizations to use evidence

Skills in using evidence may be improved through training and development programmes for policy-makers and other policy agents. For example, in Ghana in the 1990s there was recognition that, despite a long tradition of health research in the country, policy-makers were generally unaware of its usefulness. The then Director of Medical Services set up a programme to sensitize and motivate policy-makers and programme managers to the importance of studies. A series of 'consultative meetings' were held to demonstrate relevance by showcasing examples of operational research conducted by universities, research institutions and the ministry of health that had helped to solve problems and inform policy. For example, one study (Dovlo et al. 1990), addressed issues regarding clients' dissatisfaction with government health services. This study and subsequent discussion led to client perspectives of quality of care becoming one of the main pillars of health reforms in Ghana. Surprisingly, the review of capacity development initiatives in Chapter 3 found relatively few initiatives targeted at developing skills in using evidence. Training courses on health system issues, such as the World Bank Flagship course, typically aim to enhance knowledge rather than build skills in using research.

It is also important that policy-makers feel they can request short and accessible research summaries rather than long, detailed reports which are likely to remain unread. In the United Republic of Tanzania, policy on malaria only changed after evidence was made available to policy-makers in an accessible way. While the increase in chloroquine-resistant malaria had been documented by researchers for 10 years, the lengthy periodic reports submitted to the Ministry of Health were routinely ignored. Eventually researchers produced a short, snappy policy brief, and the result was almost immediate action (de Savigny, personal communication, 2007). In this case it was the researchers who acted, but policy-makers can proactively demand such briefs.

Building on the discussion in Chapter 6, policy-makers also need skills to manage advocacy and civil society groups and determine which groups to listen to.

Competence in using evidence needs to be complemented by availability of relevant evidence; this cannot be taken for granted in all countries, particularly those with poor Internet access. In Viet Nam, for example, policy-makers' self-assessment was that, although they had access to studies and evidence via the Internet, the quality of access was poor.

Finally, as observed earlier, enhancing skills and organizational capacity to obtain and use evidence in policy may be of limited value without incentives. While many incentives operate in the broader environment (and not at the organizational level), there are specific things that organizations can do to encourage evidence use. These include using evidence as a dimension in staff performance assessments and providing resources to policy units to enable them to draw on evidence.

Establish new organizational mechanisms to support use of evidence in policy

Some of the best examples of cultivating organizations dedicated to supporting evidence use in policy come from high-income countries. In the United Kingdom, the government established the National Institute for Health and Clinical Excellence (NICE), which has been seen as a "policy embodiment of evidence-based medicine" (Sheldon et al. 2004, p. 1). NICE's mandate and processes are described in Box 7.6. There is increasing interest in the development of such mechanisms in other countries. For example, the REACH initiative in East Africa (see Chapter 6) aims to establish a new organization with a mandate to collate, summarize and package research evidence relevant to policy concerns

BOX 7.6 NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE, UNITED KINGDOM

The National Institute for Health and Clinical Excellence (NICE) was established by the United Kingdom's Department of Health in 1999 to improve standards of care and to reduce inequalities in access to new treatments. It was established partly from pressure to make better use of research evidence generated both by the national health system's own Research and Development Programme, as well as internationally. Specifically, NICE's objectives are to identify best practice and advise health professionals on which treatments work best and are cost-effective. NICE produces 30–50 guidance publications each year for health providers. Its procedures for developing guidance on public health interventions or programmes involve a wide range of stakeholders and a systematic review of published evidence. The steps are shown below.

1. **Topic selected**
   The intervention/programme topic is referred to NICE by the Department of Health.
2. **Stakeholders register interest**
   Potential stakeholders are asked to register an interest. Stakeholders may include national organizations representing professionals, research and academic institutions, industry and special interest groups from the general public. Stakeholders are consulted throughout the guidance development process.
3. **Scope prepared**
   The scope sets out what the guidance will – and will not – cover, and outlines the review process. After a consultation period the scope is finalized.
4. **Evidence reviewed**
   A synopsis is prepared, with an evidence review and economic appraisal of the intervention/ programme. The evidence review may be done by NICE or by a contracted research body. Stakeholders comment on the synopsis.
5. **Draft intervention guidance prepared**
   The Public Health Interventions Advisory Committee (PHIAC) reviews the synopsis and produces draft intervention/programme guidance.
6. **Consultation on the draft guidance**
   There is a one-month consultation period on the draft guidance.
7. **Fieldwork carried out**
   The draft guidance is also field-tested. A series of fieldwork meetings are held with practitioners not previously involved in developing the guidance. The meeting reports are combined into a technical report which is submitted to PHIAC.
8. **Final guidance produced**
   PHIAC reviews the technical report and comments from the consultation, and produces the final guidance.
9. **Guidance issued**
   After peer review, NICE formally approves the final guidance and issues it to the national health system.

Although the actual implementation of NICE guidance notes is variable (depending on the environment in which they are being implemented, the support given to providers and costs), NICE's role is considered critical in synthesizing medical research evidence to directly guide policy and practice.

Source: Sheldon et al. (2004); NICE website: http://www.nice.org.uk (last accessed 22 August 2007).

BOX 7.7 GOVERNMENT COMMITTEE AND RESEARCHER INTERACTION: EXAMPLES FROM THE UNITED KINGDOM

In the United Kingdom, academics are frequently called to give evidence to a range of government committees – either through ad hoc meetings with ministers or policy advisors, or more formally through presentations to select committees or parliamentary hearings. These usually take place at the policy formulation stage when government is consulting and asking for 'expert opinions', though they can also occur when an existing policy is being reviewed. Formal requests to present at select committees are government-initiated, but it is possible for other actors to initiate other types of public consultations.

Another example involves a coalition of NGOs and academics wanting to increase the United Kingdom Government's commitment to expenditure on family planning commodities in support of the Millennium Development Goals. The coalition suggested and secured a parliamentary hearing on 'The Impact of Population Growth on the MDGs', which resulted in subsequent amendments to Department for International Development policy documents and mention of the importance of supporting population policies, particularly in Africa, in parliamentary debates and speeches.

Source: Mayhew, Personal communication, 2007.

and present this in a timely fashion to policy-makers (van Kammen, de Savigny & Sewankambo 2006). Such knowledge brokers are primarily intended to act as bridges between policy- and decision-makers on the one hand, and researchers on the other; they are discussed more fully in Chapter 6. Knowledge brokers may be embedded within government offices or be more independent. For example a recent survey of more than 400 knowledge brokers in Canada found that 30% were working in universities, 10% in foundations or research funding agencies, and the remaining 60% in different levels of the health system (Lomas 2007).

Promote networking

In many countries, the border between the research and policy sectors is a fluid one. In South Africa, leading academic health research institutions, such as the Centre for Health Policy at the University of Witswatersrand in Johannesburg, train students who then go on to assume posts in health-related ministries and departments. Similarly, specialist institutions like the London School of Hygiene and Tropical Medicine in the United Kingdom have alumni throughout DFID and other government health agencies. This enhances research-related capacities of government institutions and can facilitate academics' access to policy processes. A study in the Lao People's Democratic Republic noted that at the national level, the "blurred line between researchers and administrators" could work to the advantage of efforts to promote the use of evidence in policy (Jonsson et al. 2006).

Some international programmes promote networks between researchers and policy-makers. For example, the International Health Policy Programme (see chapter 3) required that each research team identify a local policy advisor to advise the project; while partly aimed at ensuring policy relevance, this strategy had the added advantage of strengthening policy-maker/researcher networks. Simple initiatives that governments in low-income countries can take to encourage the development of such networks include policies that support secondments, job swaps and shadowing between the two communities.

Too often interaction between researchers and policy-makers depends on personal relationships. Establishing formal processes of exchange and communication between researchers and policy-makers may help to mainstream the role of research evidence in policy processes and promote the sustainability of interactions. While developed countries typically have a number of expert committees at parliamentary, department or ministry levels that call on or commission research (see Box 7.7 for an example), in less developed (or less democratic) countries few such mechanisms may exist.

Standing committees or advisory groups may also be established in less-developed countries; for example, the Bill & Melinda Gates Foundation is supporting the development of capacity at the country level to provide independent, scientific advice on vaccines and immunization programmes through the development of expert advisory bodies.[3]

While there are a range of alternative advisory models that could be employed by policy-makers, it is not clear whether one model is more effective than others or which models suit which decisions.

Establish norms and regulations regarding evidence use in policy-making

Some agencies and low- and middle-income countries have tried to incorporate research formally into policy processes. In Ghana, for example, the annual 'partners meeting' (of government bodies, donors and implementing NGOs) was used as a vehicle within which to develop a formal entry point for research evidence from both routine ministry sources and independent sources, to become part of the health policy process. Its structure is shown in Box 7.8, which also summarizes the experience of Mexico in requiring evaluative evidence of the effects of social programmes.

While national governments can do much to establish norms and regulations that support the development and use of research evidence, this is also an area where international actors need to be more active. There is increasing recognition of how health system constraints impede progress in scaling-up service delivery, and several agencies, such as GAVI and the Global Fund to Fight AIDS, Tuberculosis and Malaria, have began to focus on this area; rarely has such investment in health system-strengthening programmes been routinely accompanied by research and evaluation both to document the effects of the strategies supported and to learn lessons. Support for evaluative and operational research should be part of the norm for funders of health systems.

Conclusions

While multiple strategies to strengthen capacity for use of evidence in policy-making have been outlined in this chapter, discrete interventions may have somewhat limited effect unless accompanied by broader reforms in civil service culture, and potentially supported by stronger demands from civil society groups, in terms of enhancing transparency and accountability in policy processes. The strategies pursued in any particular country to promote evidence use need to be rooted in an understanding of the broader political context. For example, there may be limited returns to investing in skill-building for policy-makers or improving policy-maker access to resources, if in the end evidence is not valued and politics will always trump efforts to increase capacity. In such contexts, twin strategies may be necessary, involving enhancing civil

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[3] http://www.gatesfoundation.org/GlobalHealth/Grantseekers/RFP/RFP_Vaccines.htm (last accessed 22 August 2007).

BOX 7.8 ESTABLISHING NORMS AND REGULATIONS REGARDING EVIDENCE USE IN GHANA AND MEXICO

Incorporating research into health sector review processes in Ghana

In Ghana, the Ministry of Health and Partners Summit is the main policy-determining platform where decisions affecting the health sector are jointly made by the MoH and its agencies, such as the Ghana Health Service and other stakeholders. Two summits are held each year. The first receives and discusses a report from an independent review team on the performance of the sector in the previous year. At the second, stakeholders discuss performance for the first half of the current year and pledge financial support for planning and budgeting. A summary 'aide-memoire' of discussions and recommendations is produced. Reports and aide-memoires are available on the Internet.[4]

The summit has created a demand for information for decision-making. The process brings together information needed to assess implementation of MoH policies and strategic plans as well as identifying issues requiring the development of new policies and guidelines.

Mandating evaluations in Mexico

The large-scale Mexican conditional cash transfer programme Progresa was designed in 1997 during the Zedillo administration as a part of a poverty reduction agenda. The programme's sustainability was a concern. Previously, it was common for each new administration to establish its own social programmes. Thus, it was likely that the change of administration in 2000 meant that Progresa would be cut. To ensure the programme's survival through political changes, it needed to demonstrate positive impact. What followed was an impressive and rigorous randomized controlled effectiveness evaluation of the large-scale social welfare programme that initiated important changes in the design of social policy. The evidence of its positive impact was strong and contributed to the new administration's decision to expand rather than curtail the programme.

Moreover, after release of the external evaluation to the public, the Mexican Congress issued a law in 1999 requiring social programmes to carry out annual impact evaluations, preferably by external evaluators. This set in motion important changes to the design of social policy in Mexico from being driven by individual and political interests to being driven by evidence. Furthermore, substantial financial resources were dedicated to back the mandate, and the evaluation results were used to allocate resources. This provided incentives for programme managers to design innovative but conceptually sound programmes, which would be evaluated to determine whether they merited expansion. The law and funding effectively built evaluation into the management, planning and resource allocation processes for large-scale social welfare programmes – and provided incentives for innovation and effectiveness. Evaluation became an opportunity for learning and benefit, rather than a threat or judgment.

Sources: Ministry of Health, Ghana (1999); Barber (2007).

[4] http://www.danida-health-ghana.org (last accessed 22 August 2007).

society organizations' access to information, while at the same time working with policy-makers to convince them of the advantages of using evidence to inform policy.

Other things being equal, policy-makers are likely to accord more trust to research evidence coming from national institutes, and country-specific research findings are likely to be better tailored to the country's own needs and take into account the country context. These observations underline the importance of investing in capacity to generate health policy and systems knowledge at the country level. However, it is unlikely that all policy questions can be addressed through locally conducted research (especially for HPSR, where the existing evidence base is limited); and in most cases policy-makers seem to prefer to rely on multiple sources of evidence – coming from their own country, but supported by evidence from elsewhere. This suggests that, in addition to developing local capacity for HPSR, we need to invest in syntheses of the global research literature. Increasing policy-makers' access to and use of research from other countries requires a better understanding of the generalizability of that research; and multicountry studies are required to analyse how context influences the effectiveness of different policy options.

Policy-makers' capacity to understand and use research has been neglected, both as a research topic and as an area of investment in terms of promoting evidence-informed policy. For example, in terms of research, more evidence is needed on how organizational distance from government affects the relevance of research conducted, the independence of such research and trust between policy-makers and researchers. Similarly, a variety of technical advisory mechanisms are available to governments seeking to draw evidence into policy-making in a more formalized manner, but there is limited information about their comparative advantages. Finally, but perhaps most critically, there is a surprising lack of data as to the real capacity constraints facing the use of evidence in policy: to what extent is the lack of incentives the most critical barrier (versus lack of skills or lack of organizational capacity)? To develop effective programmes in this area, ensure wise investment in promoting evidence-informed policy, and ultimately sound policy choices, a great deal more sound data are required.

Chapter 8

Sound Choices: addressing the capacity challenge

Introduction

Low- and middle-income countries face major health challenges. For some the Millennium Development Goals (MDGs) are unlikely to be met; but even in those countries where these targets *will* be achieved, the burden of significant and avoidable disease still exists. The gap between the health experience of regions, countries and population groups is an unacceptable global travesty; unacceptable because it is avoidable. A telling example is maternal mortality statistics: around 210 million women become pregnant each year; of these, 20 million experience pregnancy-related illness and 500 000 die from complications of pregnancy or childbirth.

Given our knowledge about the causes of maternal mortality and appropriate interventions to improve maternal health, these numbers alone are horrific. However, they become particularly unacceptable when disaggregated into different regions. Consider the lifetime risk of dying in pregnancy: in Africa it is 1 in 12 compared with Europe, where it is 1 in 4000. Why does this major discrepancy exist? One critical determinant is differences between countries in income, educational achievement and the role of women in society; varied levels of funding available to support national health systems are also important. But we also know that some health systems, despite low levels of resources, are able to take evidence about appropriate interventions in the field of maternal mortality (for example, the need for skilled birth attendants and emergency obstetric care) and contextualize it within their own health systems to find solutions that work. The key here is a system of policy-making that can decide effectively on the use of scarce resources based on robust evidence for what works well within a given context. The variations in health and health systems experience suggest that many countries simply do not have the necessary policy-making components in place. The underlying causes of such policy-making failures have been the subject of this Review. We have focused particularly on capacity constraints at all stages of the processes that lead to poor policy performance: constraints on research priority-setting – determining what evidence is needed; constraints on generating and disseminating knowledge – the research function; constraints on transmitting the knowledge from researchers to policy-makers in a useful and usable format; and, finally, constraints on the capacity of the policy processes themselves to use evidence.

To assist in this process, we have developed a framework for understanding these four functions and their interrelationships; the previous four chapters have analysed each of these in turn. In this final chapter we synthesize the key messages from these chapters and propose a number of broad strategies for actors who have an interest in strengthening health system capacity.

Capacity needs

It is increasingly recognized that policy-making is a messy process in which policies emerge, as more or less explicit products, from a maelstrom of forces; it is also recognized that it would be naive (and indeed inappropriate) to assume that policy-making will ever be "completely rational and value free". There is, however, growing acknowledgement of the importance of finding ways to increase the influence of evidence about what works – and what does not – and under what circumstances. This is particularly true for low- and middle-income countries, where every dollar wasted in ineffective services has a high opportunity cost in terms of loss of life and suffering. A growing vocabulary in the literature describes decision-making that either does not take account of the current state of knowledge or fails to seek evidence where uncertainty exists: the 'know-do gap'; the failure to get research into policy and practice; the need for evidence-based or informed policy; and so on. This Review focuses on a major barrier to achieving policy-making that is more informed by evidence – capacity constraints.

Given the remit of the Alliance, we approached this task through the lens of health policy and systems research (HPSR) and are particularly concerned with finding ways to activate the full potential of HPSR to contribute to better policies. HPSR faces particular challenges in getting its outputs into the policy arena. These challenges include its newness as a field, the methodological impediments posed by this newness and the low level of resources dedicated to HPSR. These challenges have been discussed in the different chapters.

The framework presented in Chapter 3 broke down the process into four key functions; the subsequent chapters analysed in turn both the state of each function and the capacity needs of the organizations most closely associated with them. Appendix also used the framework to analyse a country case study – Thailand. We believe, as a result of the process of writing this Review, that the framework can be a useful tool for understanding the current state of the research–policy interface and its capacity limitations in a health system. It could be used by a variety of key actors and, most important, national policy-makers, research leaders and international funding agencies, to structure an analysis of a situation and obtain an overview of the critical areas for capacity development in any particular country. This need for country-specific analysis accords closely with a theme running throughout the Review – that each country faces different hurdles in this area. While the level of income of a country is clearly a major differentiating factor, others such as the type of political system are also likely to result in different pressures and capacity needs.

One clear and self-evident generalization is that the ability of policy-makers to draw on appropriate high-quality evidence is often restricted by its availability; in this reality lie the roots of the first general constraint. Increasing the body of evidence requires funding for research. Such funding is determined by priority-setting processes, and these are largely internationally driven with limited responsiveness to national research agendas and their health policy and system needs. This suggests the need for action at two levels: first, by seeking ways of making international processes more locally responsive; and second, by building the capacity of national priority-setting processes through both the leadership of the government and developing and strengthening national research funding bodies.

Of course, generating appropriate, trustworthy evidence also depends on the availability of research organizations to generate new knowledge. The current capacity of such organizations in low- and middle-income countries is quite varied – a number of institutions in some countries have excellent capacity, while others are severely limited in what they can do; still other countries have no credible organizations currently conducting HPSR. This dimension of the framework – the research function – has historically received the most attention by funders. That attention has often focused primarily on training individual researchers. We argue that capacity-strengthening strategies need to focus more on the holistic needs of institutions, including skills and career development alongside attention to the other key dimensions of capacity. These include less tangible aspects, such as developing leadership, governance and administrative systems, and strengthening networks among the research community both nationally and internationally.

We have also drawn attention to the need for more research on methodological development. HPSR is a relatively new field, and it has special needs in terms of both its multidisciplinary nature and its frequent context specificity. In particular, HPSR can benefit from investment in the following methodologies: conducting systematic reviews of HPSR; understanding the nature of generalizability of context-specific findings; and conceptual developments exploring issues such as the role of trust and accountability in health systems.

The third function addressed in this Review is the most neglected in terms of general understanding. While few people would see the link between the outputs of research and the incorporation of evidence in policy formation as a direct and simple one, there is little general appreciation of the often complex processes that mediate between these different functions. We call this function filtration and amplification; the former refers to the process of selecting particular pieces of evidence for transmission to policy-makers and the latter to the way in which that information is packaged. Filtration and amplification covers a spectrum of activity from knowledge brokering, which purports to select and synthesize evidence (into a digestible format) on the basis of explicit scientific criteria, to advocacy, which has a clear purpose of influencing a policy stance in a particular way. Somewhere between these lies the role of media. Organizations engaging in these activities are likely to have different capacity needs. Currently, none of these needs appears to have been systematically addressed by capacity initiatives.

The function of policy-making itself is, naturally, the crucial end point. For policy-makers, evidence generated from research findings is only one consideration among many. However, one goal of organizations such as the Alliance is to encourage policy-makers to draw more on evidence in their deliberations and to help them overcome any capacity constraints that prevent this. Capacity development needs may include developing skills in commissioning and interpreting evidence, mechanisms to nurture stronger relationships with researchers and tools to assess the legitimacy of organizations that filter and amplify research.

Policy-makers also have a responsibility as stewards for the whole health system. In this role they need to be able to assess the capacity of each element, or function, and lead or support initiatives related either to individual elements or the interface between them. Such a comprehensive view of all the elements of an evidence-informed health policy-making process is often lacking, yet critical. This brings us back to the potential of the framework as a tool to assist in this assessment.

Finally (as perhaps befits a review of this topic), we would draw attention to the general lack of evidence about the various functions analysed and their interrelationships. It is striking, for example, that there has been no clear assessment of the different strategies deployed to strengthen research capacity.

Figure 8.1 summarizes the above points, relating the key messages to the Alliance's framework.

Capacity strategies

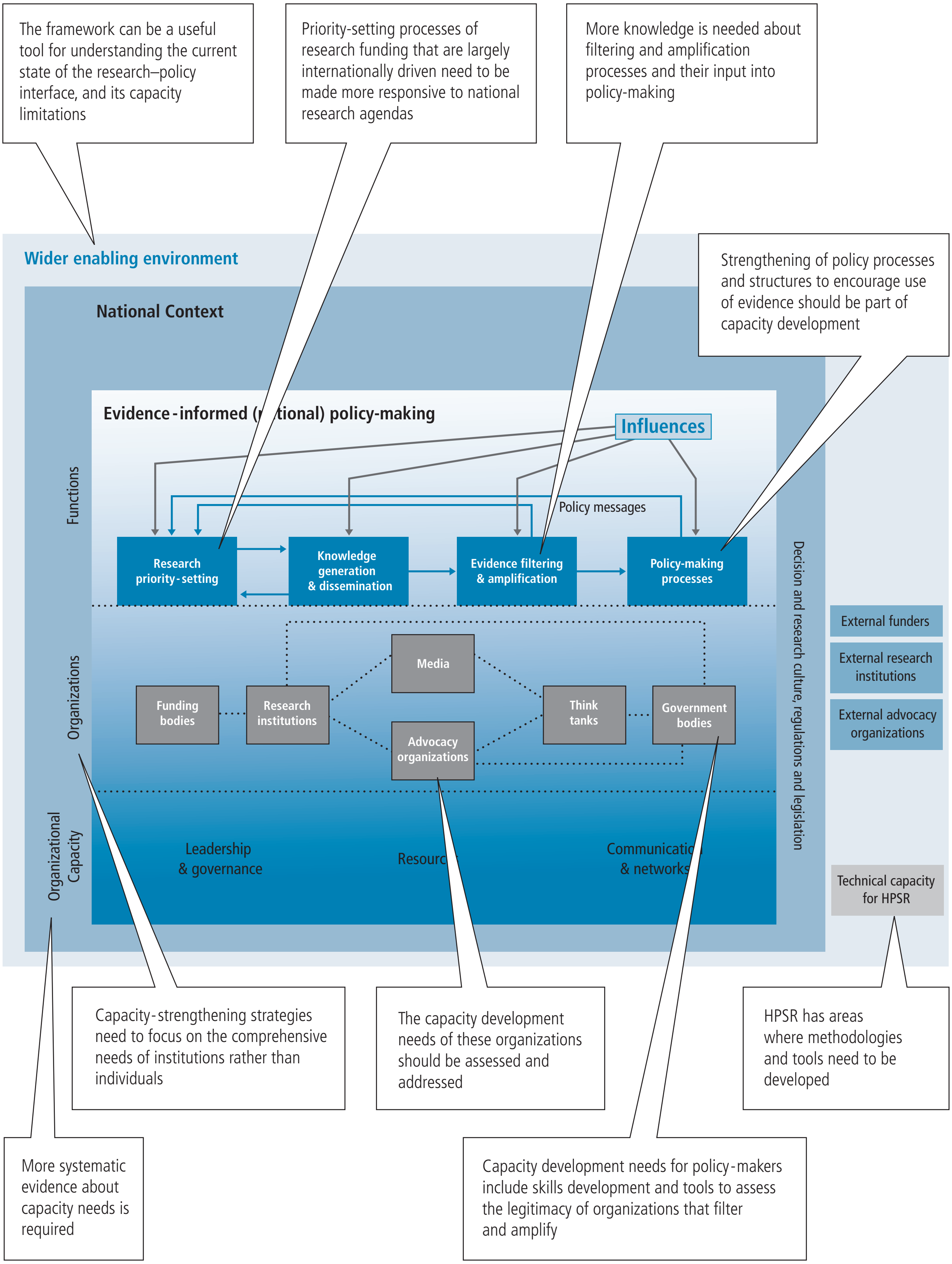
The preceding section has set out a number of key messages that were discussed earlier. It is important, however, that these messages lead to action by relevant stakeholders, and in this final section we suggest some potential strategies.

Enhancing evidence on capacity development in the HPSR field

A greater body of evidence is clearly needed about the current capacity in this field, the constraints on it and strategies to enhance it. Throughout the Review we have pointed out where we see critical gaps, but we also recognize the low level of robust evidence in this area. Evidence is particularly needed in two related domains.

First, there is a need to better understand the impact of the different capacity-strengthening initiatives that have taken place in the past or are currently ongoing. A common approach to such evaluations, and one which took particular account of the effect of contextual differences at the country level, would allow comparative analysis and lead to clearer future strategies for appropriate investment by international funders.

Figure 8.1 Key messages related to the Alliance framework



The framework can be a useful tool for understanding the current state of the research–policy interface, and its capacity limitations

Priority-setting processes of research funding that are largely internationally driven need to be made more responsive to national research agendas

More knowledge is needed about filtering and amplification processes and their input into policy-making

Strengthening of policy processes and structures to encourage use of evidence should be part of capacity development

Capacity-strengthening strategies need to focus on the comprehensive needs of institutions rather than individuals

The capacity development needs of these organizations should be assessed and addressed

HPSR has areas where methodologies and tools need to be developed

More systematic evidence about capacity needs is required

Capacity development needs for policy-makers include skills development and tools to assess the legitimacy of organizations that filter and amplify

Second, investment is needed to support nationally driven approaches to mapping capacity needs related to the research–policy interface. The framework presented here provides an entry point for such work and complements other approaches, such as that developed by the Council on Health Research for Development (COHRED) to assess national research systems. Such investment would include both the development of more specific tools and support to the conduct of such assessments, and development of subsequent strategies. This mapping and the resultant strategies must be comprehensive; that is, they need to consider the four functions analysed here and the organizations engaging in them, together with wider networking and partnership relations and the governance of the sector.

Strengthening the global and national architecture for funding health systems research

The current global dominance of both funding and decisions on the *focus* of such funding has, we have argued, negative effects on national health systems and suggests the need for strategies in this area on the part of international partners as well as national bodies.

First, mechanisms for funding HPSR need to be developed that both reduce the current fragmentation of approaches and allow greater national ownership of subsequent priorities, in other words, a sector-wide approach to HPSR. International agencies will have to devolve some of their current decision-making powers from the global level to the national level; we recognize that this poses challenges in terms of accountability and agency mandates, but these challenges need to be confronted if national capacity is to be enhanced and relevant priorities set. At the same time, national stakeholders, under the leadership of the health ministry, need to ensure that there are appropriate national level priority-setting bodies with robust mechanisms for consulting and determining priorities.

We realize, of course, that significant international funding will continue to be controlled at the international level; indeed, some of that is likely to be appropriate where HPSR has cross-boundary questions to answer. However, even here, global funders need to examine the processes both to ensure that there is adequate and appropriate representation by low- and middle-income countries on the bodies that set priorities and make disbursements and that decisions support rather than constrain the capacity of emerging HPSR institutions.

Responding to the needs of HPSR

Given HPSR's relative 'youth', and its particular needs as a multidisciplinary endeavour, investment is needed to nurture it and strengthen its capacity. Strategies are needed in various areas. First, investment is needed to strengthen HPSR methods. Two of the key characteristics of much HPSR – bringing different disciplines together and taking account of contextual variations – introduce real challenges that require methodological investment, which funding agencies need to recognize and respond to. One particular example that we have referred to is the clear need for developing methods for systematic reviews of HPSR.

Second, at the national level, institutions which engage in HPSR have investment needs in terms of the dimensions of capacity that we have identified. Clearly, these vary from country to country and institution to institution. As such, support is needed to assist these HPSR institutions in assessing their needs and developing strategies to meet them. Examples include development of leadership programmes and support towards fostering partnerships between institutions and, more broadly, development of larger networks. In some small and particularly poorly resourced health systems, where no HPSR capacity exists at all, a strategy may be needed both to build this, and to find interim arrangements, perhaps with neighbouring countries, for support.

Enhance investment in evidence synthesis, knowledge translation and use

One of the constraints on the use of evidence lies in the processes which translate it into a form usable by policy-makers. Investment in better understanding the particular needs of policy-makers and developing more appropriate responses are needed. How this will be initiated will vary between countries, with different sets of civil society organizations, knowledge brokers, research institutions and government bodies having a potential role. Each will have different capacity needs, and a country-by-country assessment may be appropriate.

At an international level, investment is also needed both in developing methods of synthesizing evidence and providing easily accessible and digestible information for policy-makers.

Roles of key stakeholders

We turn finally to the roles of key stakeholders in delivering these strategies. The following section sets out the key roles and responsibilities that follow from our analysis, and Box 8.1 summarizes this.

National health leaders

National health leaders are the key actors for several reasons. First, as stewards of the health system they are ultimately responsible for all activities in the sector. Second, there is increasing recognition that different country contexts require different solutions and responses; as such the natural leadership should come from this level. Finally, in their role as national policy-makers they are also the group with the biggest stake in implementing policy effectively – in enhancing their own roles as policy-makers through the use of better evidence. The key role of this group is to lead the process of capacity development. This is likely to involve consulting with and engaging other key actors involved in the various functions. In the first instance, it may be helpful to carry out a national assessment of the state of policy processes and related functions. Such an assessment will pinpoint the functions and institutions most in need of capacity support and allow the development of more specific support strategies for which resources can be sought. National leaders also have a responsibility to set clear standards in a number of areas, including the appropriate use of evidence in policy and ethical governance.

Research institution leaders

Leaders of national research institutions have responsibilities at two levels. First, at the level of their own organizations they have an ongoing responsibility to assess the health of their organization and seek strategies to overcome any particular constraints, outlined in Chapter 5, which affect them. This, of course, is likely in most cases to require financial resources, and a critical role for such leaders is inevitably the pursuit of funding. However they also have a wider responsibility to contribute, alongside other research leaders, to ensuring the effectiveness of the knowledge generation function and maximizing its contribution to policy-making. This will involve the development of networks, and of new analytical methods in the HPSR field, as well as synthesis of evidence for policy briefs.

We have seen also that national research can be affected both positively and negatively by the activities of research institutions based in other, usually developed countries. At a minimum, leaders of such institutions that work in low-income countries have a clear responsibility to ensure that their activities do not constrain the development of national research organizations. However, as development-focused organizations, they also need to take the issue of capacity development seriously and include consideration of it in all their activities through, for example, ensuring that partnerships between developed and developing countries are equitable and include explicit capacity-strengthening activities.

BOX 8.1 ACTIONS REQUIRED OF KEY ACTORS

National health leaders

- National policy-makers have a responsibility for assessing the capacity within their health research system, across all functions, and leading or supporting initiatives to strengthen that capacity.
- National leaders should seek partnership with other key actors from all the functions to carry out a national assessment of the state of policy processes and related functions. Such an assessment will pinpoint the functions and institutions most in need of capacity support and allow the development of more specific support strategies for which resources can be sought.
- Governments must develop and strengthen national research funding bodies and work with their international counterparts to ensure that research financing emanates from strong national research priority-setting processes, which in turn emanate from national health policy and system needs.
- A culture (and resulting legislation and regulation) that supports research and evidence-informed policy-making must be fostered from within government.

Research institution leaders

- National research institution leaders have an ongoing responsibility to assess the health of their organization and seek strategies to overcome any particular constraints which affect them. To pursue these strategies, leaders of research institutions will likely need to identify and secure funding.
- At a wider level, national research institution leaders have a responsibility to work, alongside other research leaders, to increase the effectiveness of the knowledge-generation industry and maximize its contribution to policy-making. This will include developing networks, ensuring ethical guidelines are in place and followed, and identifying and developing new methods in the HPSR field.
- Research institution leaders should seek to strengthen capacity by working in partnership with other research leaders nationally and internationally (particularly those working in developing country contexts).
- Leaders of research institutions from developed countries whose institutions work in developing countries have a responsibility, at a minimum, to ensure that their activities do not constrain the development of national research organizations in developing countries. As development-focused organizations, they should also take the issue of capacity development seriously, and include consideration of it in all their activities (for example, through ensuring developed–developing country partnerships are equitable and include explicit capacity-strengthening activities).

BOX 8.1 ACTIONS REQUIRED OF KEY ACTORS

International funding and development agencies	■ In recognizing the importance of HPSR and its contribution to evidence-informed policy processes, funding agencies should invest in the strengthening of HPSR methods, and the capacity development of all the functions in the evidence-informed policy process. ■ All funding and development agencies have, at a minimum, the responsibility to consider the impact of their activities on national capacity – for instance, considering the effect their payment structure has on national institutions and staff retention; additionally, they should consider how their priority-setting processes relate to national priorities and priority-setting processes. ■ Funding and development agencies should support and encourage greater local control over priority-setting for research. ■ They should also support the development of a critical mass of research institutions through long-term programmes, rather than short-term projects and consultancies, particularly for institutions with fragile or emerging capabilities. ■ Funding agencies have a role in funding research in the area of capacity development generally, and more specifically in the area of evidence-informed policy-making. This role is currently neglected.

We have also indicated that policy-makers may place particular emphasis on briefs that synthesize evidence from a number of sources. Leaders of national HPSR organizations (and their funders) need to pay more attention both to developing the methodologies for briefs and to conducting syntheses.

International funding and development agencies

While we suggest that leadership for identifying capacity strategies should come from national organizations, we fully recognize the important role of international agencies in supporting this both in terms of funding and of technical support. For some agencies, such as the Alliance, capacity strengthening is a core component of their mission; for such organizations we hope that the focus that we have laid within the Review on a comprehensive approach to capacity strikes a chord. For other organizations for whom capacity-strengthening activities may either be peripheral or non-existent we urge deliberate consideration of the impact of their activities on national capacity. We have seen, for instance, the difficulties that inappropriate salaries set by development agencies can have on the ability of national institutions to retain staff. International research funding agencies therefore need to better align with national priority-setting processes. Indeed, a general message from this Review is the need, particularly in the area of HPSR, for greater local control over priority-setting for research.

The form of funding can also be critical for research institutions with fragile or emerging capabilities. Long-term programmes rather than short-term projects or consulting assignments are essential to enable them to develop a sustainable foundation.

HPSR in general and the capacity development of all the functions in evidence-informed policy processes have been neglected by funding agencies, and we urge funding agencies to reassess their own contribution to this critical area. In particular, greater focus is needed on building capacity to employ evidence in policy-making.

Finally, at various places in this Review we have pointed out the lack of sound evidence about our subject.

Our final message to funders is a plea for funding for research into the neglected area of capacity development both generally and more specifically in the area of evidence-informed policy-making.

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Appendix

Capacity development for health policy and systems research: experience and lessons from Thailand

Key message

Creation of relevant knowledge through research is very crucial, but not adequate by itself; it must interact with social movement or social learning. Without relevant knowledge, social movement cannot go very strong or may deviate to something else.… Politicians have authority over utilization of state resources and in law promulgation, which are very often needed in development. Thus without political involvement the working structure is not complete. Politics without knowledge and social movement will not solve the problems (Wasi 2000).

Key message

Introduction

Thailand was in a state of political turmoil at the end of 2006. Upheaval notwithstanding, the Thai Parliament passed the National Health Act in January 2007. This act was the result of vigorous efforts on the part of health policy networks in Thailand dating back to 1999. The act forms the 'health constitution' of Thai society, stipulating the directions, philosophy and principles of the health system (National Health System Reform Committee 2002). It was developed using the 'triangle that moves the mountain' approach. Prawase Wasi explained that "the mountain means a big and very difficult problem, usually unmovable. The Triangle consists of: (1) Creation of relevant knowledge through research, (2) Social movement or social learning and (3) Political involvement" (Wasi 2000).

Since the transformation from the absolute monarchy to the constitutional monarchy in 1932, the structures of political power in Thailand have fluctuated between military dictatorships and civilian governments. Although an initial transition to democratic rule was made in 1973 there have been many subsequent military coups. The political environment has had a significant impact on the health sector; in particular, the events of the 1970s helped instil a shared set of values and a desire for health-care reform in order to ensure a more equitable health system, among many medical students of that era. As these medical students graduated and took up posts in the health sector, they carried their experience with them. Now holding senior positions in the Thai health system, they have not only driven health reform in Thailand but have also forged active alliances with civil society groups within the country and internationally.

The Thai National Health Act is an obvious example of a health policy shift which involved wide participation and reflected cumulative capacity in generating evidence through research, as well as communicating it to stakeholders. Other policy reforms also demonstrate the role and capacity of Thai organizations in each of the four functions identified in this Review: priority setting, knowledge generation, filtering and amplification of the knowledge created, and application of that knowledge to policy-making.

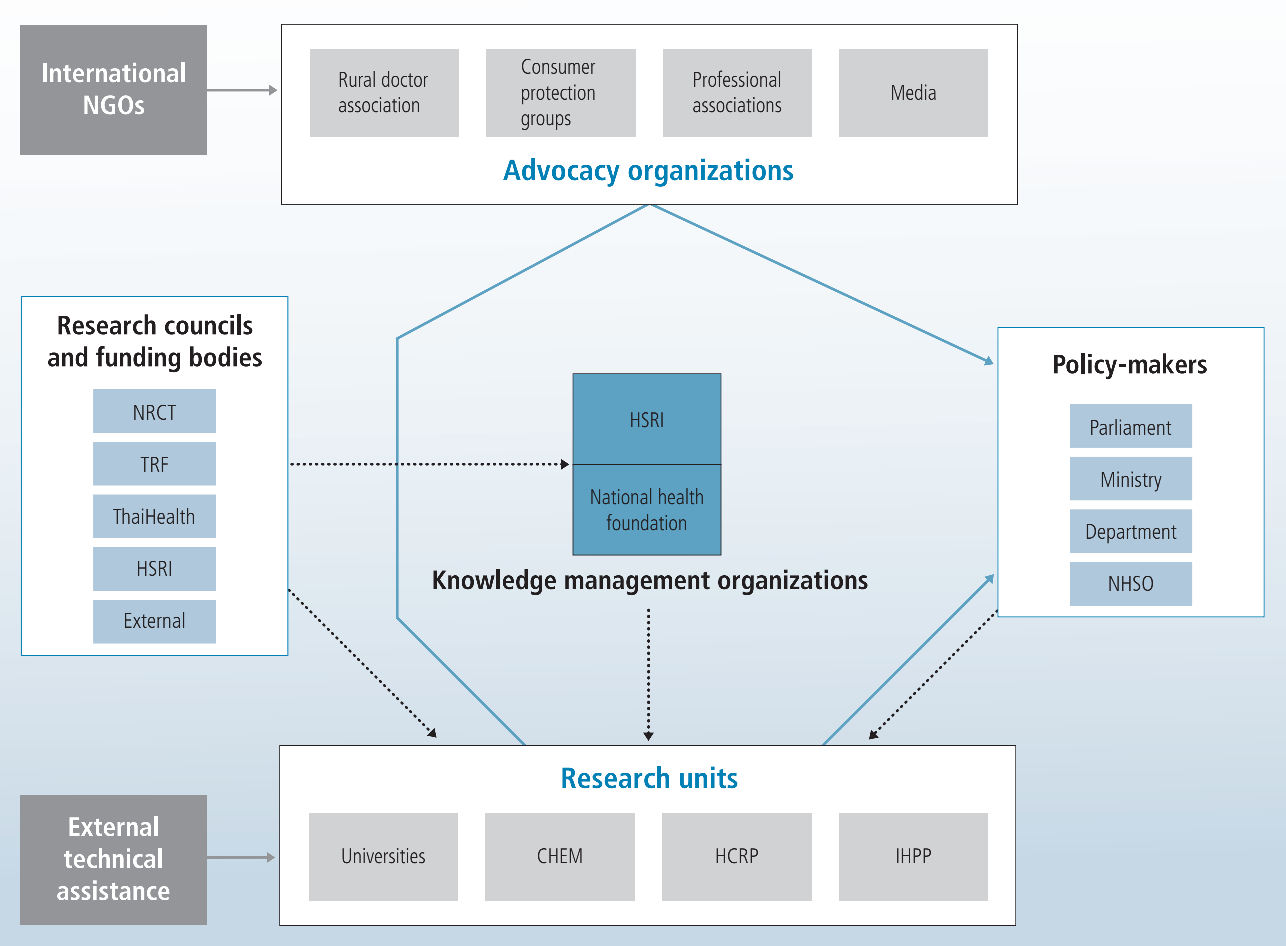
This case-study uses the framework developed by the Alliance to document the key organizations involved in health policy and systems research (HPSR) in Thailand and the functions they perform, and considers how these roles have contributed to health system reform. The final sections evaluate the effects of initiatives in Thailand to strengthen capacity in HPSR, and draw conclusions about the factors that have contributed to the success of those initiatives.

Key organizations involved in HPSR in Thailand

Myriad organizations work in the HPSR field in Thailand – governmental, nongovernmental and civil society. Many are financed through tax revenues, while others receive international funding. The current dominant organizations in HPSR are:

- government organizations, including the Ministry of Public Health, the Health Committee of the House of Representatives and Senate, and the National Health Security Office (NHSO);
- funding agencies, including the Health Systems Research Institute (HSRI – an autonomous government agency funded from general tax revenues), the National Research Council of Thailand (NRCT – a government body funded by general tax), the Thailand Research Fund (TRF – an autonomous public body funded by a general tax) and the ThaiHealth Foundation (an autonomous body funded by a 2% earmark tax from tobacco and alcohol);
- research institutes such as the International Health Policy Program (IHPP), Centre for Health Equity Monitoring (CHEM), Health Care Reform Project

Figure A.1 Organizations involved in HPSR in Thailand



(HCRP), universities and other think tanks (all research institutes are funded by grants from government or international agencies);

- knowledge-management organizations which package and synthesize evidence, for example, the National Health Foundation (NHF – a nongovernmental organization (NGO) funded by project and programme grants); and
- advocacy and civil society organizations such as the Rural Doctor Society and the Consumer Protection Foundation.

Figure A.1 shows the relationships among the various organizations.

Recently, there has been a growing focus in Thailand on the importance of knowledge management in linking together the four functions of HPSR; for example, HSRI and NHF play increasingly important roles in coordinating priority setting, research management and research dissemination, as well as facilitating the use of evidence in policy debates. Box A.1 describes in more detail the objectives and strategies of such organizations active in Thailand.

The sections below discuss the roles of the various organizations in Thailand with respect to the four main functions identified in the Review.

Priority setting

The NRCT has been responsible for the formulation of national research policy since 1964. Participation in the research priority-setting process has gradually increased over time, however, from a limited group of experts in each discipline to all stakeholders in research

BOX A.1 OBJECTIVES AND STRATEGIES OF THE MAIN HPSR ORGANIZATIONS OPERATING IN THAILAND

Health Systems Research Institute, Thailand – established in 1992 as an autonomous government agency.

Mission (2007): creating mechanisms in knowledge management for societal growth and linkages to politicians to promote health-system reform and balanced health systems.

Main functions: Promoting and supporting research and academic activities aimed at obtaining essential knowledge and information for policy-making and restructuring of the health system.

Strategies for achieving the vision:

1. Research management: improving the process of research management to be efficient and consistent with health system reform
2. Partnership development: developing networks of research institutes and health partners to enhance the process for public health policy
3. Area-based capacity development: supporting participatory action research in specific areas – both geographic areas and specific components of the health system
4. Getting knowledge into practice: developing policy advocacy and social mobilization to influence health system reform.

National Health Foundation (NHF) – established in 1991 as an NGO

Objectives: In the beginning the foundation aimed to open the public space for knowledge exchange and seek consensus for national health policy. After 2002, the focus changed to create a knowledge-based society for health.

Main functions: research management, knowledge management and health communication.

Strategies for achieving the objective:

1. Conducting public fora for direct communication and knowledge exchange among related stakeholders in specific policy issues
2. Network development on specific policy issues.

(including both users and researchers). For example, the 2008–2010 National Strategic Plan for Research was elaborated through a bottom-up process based on four regional research plans.

While the NRCT sets high-level priorities, these priorities actually drive less than half of the total (health and non-health) research budgets, with public organizations and state enterprises being given considerable latitude in determining their own research priorities. For example,

BOX A.1 (CONTINUED) OBJECTIVES AND STRATEGIES OF THE MAIN HPSR ORGANIZATIONS OPERATING IN THAILAND

Health Care Reform Project
– established in 1997 as a cooperation between the Thai Government and the European Commission

Objectives: The first phase (1997–2001) focused on research and field-model development to recommend and demonstrate appropriate models of health-care service. The second phase focuses on capacity building of key functions and structures of the health-care system.

Main functions in the first phase:

1 Policy research and development (especially in primary health care and health insurance)
2 Field-model development (especially in primary health care and health care financing)
3 Capacity building/training
4 Advocacy through the promotion of civil society involvement.

Center for Health Equity Monitoring (CHEM) – established in 1998 as a unit within Naresuan University

Objectives: To conduct research for developing a health equity index; to promote the use of the index through partners; and to monitor equity aspects of the Thai health system.

Main functions and strategies:

1 Conducting research (regarding the equity of the health system)
2 Collaborating with partners for equity index development and knowledge sharing
3 Developing indexes and databases, such as diagnostic related groups (Thai DRG Grouper) that guide government funding decisions.
4 Training post-graduates in HPSR.

the research budget for the whole country in 2003 (Office of Policy and Planning 2007) was 10.2 million baht,[1] 11.5% of which was for proposals reviewed by NRCT, 3.5% was for the programmes granted by the NRCT, 9.8% was for programmes granted by the TRF, 8.1% was for the programmes granted by the National Science and Technology Development Agency (NSTDA) and 1.1% was for programmes granted by HSRI. The remaining 66% (6.8 million baht) was scattered though the regular budgets of public organizations and state enterprises. The NRCT recognizes that each department, faculty and research organization has its own research priorities (National Research Council of Thailand 1997); the review process is meant to reduce duplication in government-funded research.

Priorities identified by the NRCT do not always match allocations made by public organizations, however.

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[1] At the time of writing 1US$ =32.7 baht

BOX A.1 (CONTINUED) OBJECTIVES AND STRATEGIES OF THE MAIN HPSR ORGANIZATIONS OPERATING IN THAILAND

International Health Policy Program Thailand (IHPP) – established in 1998 as a programme under HSRI, transformed into an independent organization jointly supported by the Ministry of Public Health and HSRI in 2001

Mission: To develop and strengthen human capacity in two major areas, namely, HPSR and international health.

Objectives: research, capacity building, and strengthening the country's capacity in research and communication in international health arenas.

Strategies for achieving the objectives:

1. Conduct policy-relevant HPSR
2. Encourage policy interface wherever possible to get research into policy and practice
3. Foster partnerships and networks with key stakeholders in the long term
4. Foster regional credibility by exposing researchers to international fora and partners
5. Publish research articles in peer-reviewed journals, both domestically and internationally
6. Research capacity-building through apprenticeships and financially supporting people to attain post-graduate degrees.

Sources: Phoolcharoen (2004); http://www.thainhf.org/ThaiNHF/a.asp; Wongkhongkhathep, Jongudomsuk & Srivanichakom (2000); http://www.hcrp.or.th/; http://www.med.nu.ac.th/chem/ (last accessed 28 August 2007); Pitayarangsarit (2005); http://www.ihpp.thaigov.net/ (last accessed 23 August 2007).

For example, differences between the research plans approved for the regular budget and the actual research topics arise as organizations have the authority to adjust their work plans according to emerging problems and needs.

Previous national plans were criticized because they proposed what research should be conducted but did not prioritize across topics. In 2005, the NRCT Committee on Bio-medical Science initiated a priority-setting project for health research guided by a list of diseases with a considerable burden on health, and appointed a working group to conduct the project. The working group was composed of experts in health and research methods from five universities across Thailand, and the secretariat for this process was formed by the National Health Foundation. The working group used a conventional survey with 365 respondents, followed by a consultative meeting with researcher representatives. The respondents were asked to rank 10 of 20 diseases (from the 20 diseases in Thailand with the highest burden on health) to be suggested for research investment and then rated each according to three barriers to solving the problem: lack of knowledge; lack of technology; and lack of system capacity. The report was produced in September 2006, but the results were not included in the 2008–2010 draft plan, which had been issued prior to this.

There were limitations to this study. The burden of disease was the only input information for respondents, and the study was able to rank only the 'priority diseases' but not for research agendas within a disease or for health systems research priorities that were not linked to a specific disease.

Knowledge generation and management

Two critical public agencies were established in 1992. Each has a high degree of autonomy and is not bound by the usual bureaucratic rules and regulations.

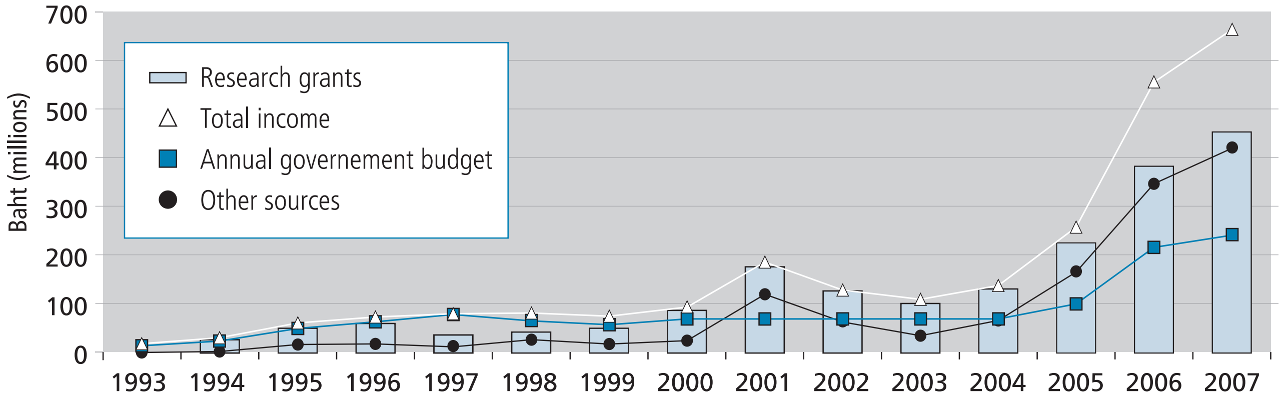
The TRF is a role model for research management in Thailand. The fund aims to strengthen Thai research infrastructure across all sectors, including research policy, budgeting, research institutions and researchers. The TRF offers a range of awards, including grants for basic research, research career development, post-doctoral research, new researchers, senior researchers and graduate student fellowships. The health sector in Thailand has benefited from many of them. For example, the Faculty of Medicine, Naresuan University, managed the graduate student fellowships in health system and policy; the College of Public Health at Chulalongkorn University managed the graduate student fellowships in health system development; and HSRI benefited from the grants to senior researchers, which helped to build a cadre of young researchers as well as promoting institutional development. The work done under these last grants led to the development of the current International Health Policy Program in Thailand (Box A.1). The TRF identifies four levels of research agendas: national; sectoral; area; and platforms. At the platform level, TRF supports learning and information exchange among technical experts and researchers, and those who use evidence in policy development. The TRF has also advocated for the establishment of two distinct research careers, namely, the professional researcher and the research administrator.

HSRI has its own board chaired by the Minister of Health; it supports health research and also undertakes research synthesis for policy purposes (see Box A.1). Although HSRI started out by conducting much research in-house, during its second phase (1997–2004) it evolved more along the lines of a research management model, contracting out most of its research. HSRI works with about 30 affiliate research agencies and has supported the establishment of research agencies and research networks, including the Health System Reform Office, the Health Information System Development Office, the Health Insurance System Reform Office, the Social and Health Research Institute, the International Health Policy Program, the Center for Health Equity and Monitoring, and the Clinical Research Collaboration Network. HSRI created alliances of organizations for each research programme and let these groups identify their research agendas and formulate their research plans. Stakeholders, including political appointees, senior health administrators, service providers, community leaders and consumer representatives, were identified and invited to become involved at the beginning. As a consequence it was possible to secure resources for the resulting programme of work from several sources, such as the Ministry of Public Health, the Thai Health Promotion Fund and the National Health Security Office (NHSO).

In 2007, 63% of HSRI funds were from sources other than the government budget. It spent approximately 659 million baht, of which 5% was for administrative support, 3% for research management, 6% for network development and 69% for research grants (see Figure A.2). The remaining 17% was the budget for the Office of Hospital Accreditation and the National Health System Reform Office.

Increasing funds for health research have come from the Thai Health Promotion Fund (ThaiHealth). Since 2002, ThaiHealth has supported various projects that serve the objectives of health promotion and relate to

Figure A.2 Annual government budget and research grants provided by HSRI, 1993–2006



the 13 programmes approved by the ThaiHealth Board, including supporting the cycle of knowledge generation to policy change and implementation. Each of the 13 programmes aims to develop an issue network, which would generate knowledge, develop alternative policies for the issue and include advocacy efforts to support it. Some sub-programmes were outsourced to other experienced organizations. For example, the NHF has managed the project Civil Society Network for Health Promotion, funded by ThaiHealth.

Overlapping membership of the governance bodies of these organizations helps promote mutual knowledge transfer and coordination; for example, Dr Suwit Wibulpolprasert is a board member of HSRI, ThaiHealth, NHF and a member of the Research Evaluation and Monitoring Committee of the TRF.

Most of the organizations described above were institutionalized in the years following 1992. They have seen an increase in national financial support only during the past five years. Before that time, the organizations' pioneering leaders struggled to keep them afloat, seeking funds from multiple external sources, which during the late 1980s and early 1990s played a much bigger role in supporting knowledge generation. For example, the core group of the Health Care Reform Project (see Box A.1) was involved in the Health Card Project (1988–2002) supported by the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), the Ayuthaya Project on the development of model primary health care in an urban setting by the Institute for Tropical Medicine, Antwerp, Belgium (1990–1995), the Community Health Project in Khon Kaen Province (1991–1996) by the Japan International Cooperation Agency and the Health Care Reform Project by the European Union (EU, 1997–2001 and 2004–2009). Other international sources (including the World Health Organization (WHO), the United Nations Children's Fund (UNICEF), the United Nations Population Fund (UNFPA) and the United States Agency for International Development (USAID)) provided for other recipients in Thailand.

Filtering and amplification of knowledge

> In the Thai context, many prominent doctors are able to present themselves as government officials, academics and/or NGO activists, depending on the situation. This flexibility of approach, a reflection of the pluralism and relative openness of Thai society, is often crucial for the project of alliance-building, since leading doctors are able to command respect and support from a wide range of organization and social groups. (Chantornvong & McCargo 2001, p.52)

It is true that several senior health officials in Thailand have activist roots, and occasionally play this role depending on the situation they find themselves in. Many of the current health sector leaders were student activists who entered the civil service compulsorily on graduation and worked initially in rural districts. Others are also founding members of advocacy organizations: Dr Suwit Wibulpolprasert (the Ministry of Public Health Senior Adviser on Health Economics) was a founding member of the Rural Doctor Society (1978), the Rural Doctor Foundation (1982), the Sampran Group (1986) and the IHPP (2002); Dr Sanguan Nittayarumpong (General Secretary of the NHSO) was a founding member of the Sampran Group (1986), the NHF (1990), the Foundation for Consumers (1994) and Chairman of the Local Development Institute (LDI, during 1998); Dr Somsak Chunharas (a senior public health adviser) is the Secretary General of the NHF, Dr Chuchai Supawong is a consultant to Thailand's National Human Rights Commission, a committee member of the NHF and was the first Secretary General of Thailand's National Human Rights Commission (1999). Box 6.3 in the main Review exemplifies how these close personal networks, and willingness to work across the domains of research, civil society advocacy and policy have contributed to policy change in the field of tobacco control.

The rural doctor networks in particular have played a prominent role in public health advocacy. The initial gathering dated back to the establishment of the Rural Doctor Federation in 1976, and the network has since evolved into three organizations: the Rural Doctor Society, the Rural Doctor Foundation and the Sampran Group – a working group coordinating the support of health service policies and organized by the Bureau of Health Policy and Strategy. Many major policy movements were initiated by the Sampran Group, including, for example, blocking the amendments to patent law on pharmaceutical products in 1992, promoting generic names on labelling and advertising of pharmaceuticals, establishing ThaiHealth and spearheading health system reform through the drafting process of the National Health Act.

Consumer movements were previously coordinated through the Coordinating Committee for Primary Health Care of Thai NGOs (CCPN), an NGO that was founded in 1983. More recently, the Foundation for Consumers (FFC) – also an NGO – was founded. This organization works directly with consumers in policy advocacy for consumer protection. The FFC has many instruments for advocacy, such as *Smart Buyer* magazine and the television programme 'Assembly of Consumers'. The FFC also strengthened the consumer network by supporting many sub-networks. Successful policy initiatives arising from the consumer movement include the anti-corruption campaign on a drug scandal worth 1400 million baht (initial information for this campaign was derived from the Rural Doctor Society and the Rural Pharmacist Association), the campaign for universal coverage of health care and support for the use of compulsory licensing to increase access to affordable medicines. The campaign to achieve universal coverage of health care for the whole country benefited from multiple alliances (see Box A.2).

Again, strong linkages between many NGOs appear to be an important factor in their success. In particular, the LDI has played a key coordinating role. The LDI, itself an NGO, functions as a coordinator for learning communities and policy advocacy. The LDI emphasizes community empowerment and self-reliance through supporting local initiatives and influencing macro-policy formulation).[2] The LDI has alliances with both NGOs and public organizations. It also has a mandate to strengthen civil society organizations, including at the provincial level, a goal it shares with the health system reform movement.

Media have played a crucial role in issue amplification, especially on 'hot' issues. Many newspapers have direct

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[2] http://www.ldinet.org (last accessed 23 August 2007).

BOX A.2 UNIVERSAL HEALTH CARE COVERAGE IN THAILAND

Policy context: Thailand's democratization created new actors in the health policy-making process, which had long been under the control of bureaucrats and professionals. When proposals for universal coverage coming from the Ministry of Public Health had not met with success, key policy champions tried to engineer the development of a broader coalition in favour of the policy. The Thai Rak Thai Party adopted the policy as part of its 2001 political campaign. The campaign was also supported by senior officers in the Ministry of Public Health, 11 NGO networks forming the Campaign Project for Universal Coverage and more than 50 000 general citizens. However, there was also significant opposition to the reform coming mainly (initially) from health care providers within the MOPH system, the Social Security Office, together with labour unions and the Civil Servant Commission.

Getting evidence into policy: Much policy-relevant research was conducted, including the following.

- The Health Care Reform Office (with EU support) carried out research and development on models of health-care financing and implementing a primary care system.
- HSRI appointed a task force to develop a proposal of the design of the universal coverage of health care, which was useful in the policy formulation process.
- The Center for Health Equity Monitoring created the health equity index for Thailand and monitored the changes regarding equity in health. Their study of the budget required for the universal coverage scheme was used to communicate with the politicians – as evidence on the feasibility of the policy.
- IHPP contributed to the cost studies and budget required for the scheme during the implementation phase and produced a manual for analysing the financial status and performance of hospitals.

Dr Nitayarumpong, a member of the health research community, played a pivotal role as a policy entrepreneur, helping to disseminate the evidence to politicians and NGOs for use in policy debates.

Impacts: In 2001, the newly elected government established a tax-financed health-care scheme which entitled all citizens to health care. In 2002, Parliament passed the National Health Security Act, which established the NHSO. This office was tasked with acting as a purchaser of health services separate from the Ministry of Public Health. Health insurance coverage among Thais rose from 69% in 2000 to 91.9% in 2002.

Source: Pitayarangsarit (2004).

contact with researchers and NGOs such as the Rural Doctor Society and the Rural Pharmacist Association. Many research-funding organizations such as HSRI, TRF and NHF also produce press releases for journalists. Freedom in disseminating information has increased but also fluctuated over time, depending on the government in power.

Application of knowledge to policy-making

The Ministry of Public Health is the primary organization responsible for service provision and the overall governance and regulation of the health system. Historically, policy-making was mostly the preserve of bureaucrats,

BOX A.3 INVESTING IN PROTON RADIATION THERAPY: DESIGNING POLICY BASED ON EVIDENCE

Policy context: In 2000, the National Cancer Institute (NCI) of Thailand proposed an investment of 4500 million baht (about US$ 120 million) through a loan for a proton radiation therapy centre. The Ministry of Public Health appointed a committee to review the appropriateness of investing in this expensive service.

Getting evidence into policy: Three substudies were conducted by IHPP (without a grant): a literature review on clinical effectiveness; the health needs and service impact; and the opinions of the radiotherapists on the potential utility of the therapy for cancer treatment in Thailand. The findings presented to the ad hoc committee suggested that the proposal be rejected.

Impacts: Based on the analysis of the committee the Ministry of Public Health rejected the proton investment project. There was also a recommendation to legally establish a Technology Assessment Committee to deal with similar cases in the future.

Source: Prakongsai, Tantivess & Tangcharoensathien (2001); Prakongsai, Tangcharoensathien & Chunharas (2006).

but of late political parties and political appointees are increasingly engaged in policy design. Furthermore, decision-making powers have to some extent been transferred to actors outside the Ministry of Public Health. These developments reflect the increasingly pluralistic political system. Key organizations that now require evidence for policy-making include the policy and planning divisions of all Ministry of Public Health departments, the NHSO, which performs a purchasing role, political appointees and also the Health Commission of the Parliament.

Personal contacts between researchers and policy-makers can help get evidence into policy. This was particularly the case for the Universal Coverage for Health Care Policy (see Box 7.2 in the main review).

The role of HPSR in policy development and implementation

This section provides a series of examples of how HPSR evidence has been used in policy development in Thailand. Clearly, research evidence has played different roles in different contexts. Where the policy issue is not politically charged, research evidence may be used directly. For example, with respect to a proposal for a major investment in proton radiation therapy, research played a direct role in influencing the decision not to proceed (Box A.3). A more deliberative formulation is reflected in the policy on renal replacement therapy in Thailand (Box A.4). Researchers spent several years conducting research on different aspects of the issue and regularly presented findings and recommendations to the Health Minister, the NHSO Board and the Health Committee of Parliament. While the NHSO Board was reluctant to fully adopt the findings of the research, a small pilot project based on the research was nevertheless initiated, which led to a Ministry of Public Health

BOX A.4 RENAL REPLACEMENT THERAPY IN THAILAND

Policy context: The universal coverage scheme has never included renal replacement therapy for end-stage renal disease patients in the benefit package. This is despite the fact that a policy decision to include renal replacement therapy was decided in March 2005 by the former Minister of Health, who chaired the board of the NHSO. Members of the board did not approve of the policy to extend the therapy due to its significant long-term financial implications. While universal access to ART was successfully advocated by an active civil society movement, the extension of coverage to renal replacement has received much less vocal support.

Getting evidence into policy: IHPP, with partners, conducted a package of research in 2005, including an incidence survey, a 20-year demand forecast, estimates of fiscal requirements given different cost scenarios, a supply-side assessment and identification of bottlenecks for scale-up, a cost-effectiveness analysis and consideration of rationing criteria. Economic evaluation of renal replacement therapy strongly suggested that it was not appropriate to allocate resources for it in the first stage of the universal health care-coverage programme. However, due to the implications of catastrophic illnesses on households (and inequities across the other two public insurance schemes), the researchers and partners recommended that the NHSO extend the service to its beneficiaries selectively, on a case-by-case basis. A comprehensive policy package was proposed in September 2005. Research progress and recommendations were regularly presented to the Health Minister and the NHSO Board, and also to the Health Committee of Parliament.

Impacts: Limited uptake of the research appears to have occurred, although the researchers were appointed as members of a Ministry of Public Health task force to develop the national strategic plan for treatment of chronic renal failure patients. The NHSO later approved a small project to support 200 cases of renal transplantation.

Source: Pitayarangsarit, Tangcharoensathien & Daengpayont (2006).

task force on the development of a national strategic plan for treatment of patients with chronic renal failure.

This case was in contrast to the policy on antiretroviral therapy (ART) provision (Box A.5), which was more politically charged. A coalition of AIDS activists advocated strenuously for a new policy on ART provision. Lessons regarding treatment benefits, advocacy on treatment by global activists, changes of drug regimen and a substantial decrease in drug prices were all used by the coalition to advocate for ART provision for all people with HIV/AIDS. Even though a cost-effectiveness analysis of ART was not yet completed, ART provision for all was made policy in 2001. This shows that when a policy issue is very politically sensitive, other factors besides research evidence are likely to substantially influence decision-making.

The process of tobacco control in Thailand has been very political – involving multiple stakeholders, including the Ministry of Public Health, the international tobacco industry and civil society (as described in Box 6.3 in the main review). Research played a major role in demonstrating trends in tobacco consumption, the cost of tobacco-related illnesses, and providing evidence on the sensitivity of consumption patterns to changes in

BOX A.5 ANTIRETROVIRAL THERAPY PROVISION IN THAILAND

Policy context: From 1996 until 2001, ART therapy was available through the public health-care system to only a limited degree, largely through a research network conducting clinical assessments of antiretroviral medication in public hospitals. The policy to extend the service to all people with HIV/AIDS was opposed by many health economics researchers and professionals because they were concerned about the long-term budget requirements and programme sustainability. Over time the context changed; drug prices fell and the focus increased on human rights and ethics issues associated with access to treatment. The local production of many new generic antiretroviral medications was also crucial, because this lowered costs of the therapy. The policy to extend the service was supported by a very active civil society movement, including ART-advocacy coalitions; the National AIDS Network; the Drug Study Group; the Thai AIDS Society; the Thai Lawyers Association; individual scientists from the Government Pharmaceutical Organization; experts on intellectual property laws; and HIV clinicians from medical institutes.

Getting evidence into policy: The first decision that limited ART service to a research network was clearly influenced by cost-effectiveness data and the budget impact; a domestic study illustrated the unaffordable fiscal burden and inefficient use of resources in public provision of ART. But in 2001 the previous cost-effectiveness data were overruled, and the decision was made to include ART in the universal health care coverage package. The substantial decrease in drug prices owing to local generic production was critical. Networks of NGOs and people living with HIV/AIDS made use of such information to encourage the Ministry of Public Health to extend treatment to all people in need.

Impacts: The ART policy changed in 2001 when the new government pledged to extend the service to more people, as part of its commitment to universal health coverage. Targets of people receiving ART escalated from 6500 in 2002 to 23 000 and 50 000 in 2003 and 2004, respectively.

Source: Tantivess & Walt (2006).

price and income. The evidence served as a platform for effective health promotion strategies and was used by civil society organizations to advocate for a dedicated tobacco tax linked to health promotion activities. Success factors behind the 1999 reform that established the dedicated tobacco tax included the active role played by civil society, founded on research evidence, political support from the Ministry of Finance and engagement of international actors.

When policy issues are politically contentious, civil servants at the Ministry of Public Health will sometimes disseminate research results to civil society organizations to exert external pressure for policy change. The universal coverage policy case illustrates this point (Box A.2). Several attempts were made to propose a universal coverage bill via bureaucratic channels, but success was achieved only by linking political parties with NGOs, including the People Living with HIV/AIDS Network, and the wider dissemination of the idea via a booklet on the topic (Nittayaramphong, personal communication, 2002).

Capacity development in HPSR

Past initiatives

Several previous initiatives have attempted to strengthen HPSR capacity in Thailand. In 1986, the Pew Charitable Trusts supported HPSR in countries in Asia and Africa through the International Health Policy Programme (not to be confused with the current IHPP-Thailand). IHPP competitively identified a team of economists in Thammasat University. Unfortunately, this group had a limited understanding of the policy needs of the Ministry of Public Health. Although the director of the ministry's planning division played a bridging role between the researchers and the Ministry, this did not function very well. The group's work on costing and health-financing analysis did not leave a lasting legacy in terms of HPSR institutional capacity either in the Ministry of Public Health or in Thammasat University. When IHPP support ended, so did the programme.

In 1988, USAID supported a Health Economics Programme, physically located in the Health Planning Division of the Ministry of Public Health. Following the military coup in 1992, USAID withdrew totally, and several plans to enhance capacity and support research in health economics and financing failed to fully materialize.

In 1994, Chulalongkorn Faculty of Economics established a Centre for Health Economics (also a WHO Collaborating Centre), which provided courses at the master's level in health economics and related fields. The goal was to strengthen research capacity and the application of health economics to policy formulation and planning in Thailand and South-East Asia. Due to the nature of the curriculum and limited research (judged by research profiles and publication records (Faculty of Economics, Chulalongkorn University 2007)), as well as the distance from the policy environment, the Centre for Health Economics contributed little to policy formulation, monitoring or evaluation in the vibrant health-care reform of the past decade.

The Field Epidemiology Training Program (FETP) initiated in 1979 but still operational, represents a good model of a successful capacity development programme (even though field epidemiology clearly entails skills different from those key to HPSR). The FETP was initiated by far-sighted leaders within the Ministry of Public Health's Communicable Disease Control Department. It was initially supported financially by the US Centers for Disease Control and Prevention, but fully managed by the Epidemiology Department of the Ministry of Public Health. FETP is a formal on-the-job field-training programme (affiliated with the epidemiology division), involving two years spent conducting field epidemiology and disease outbreak investigations, and a third year either in Thailand or abroad with full scholarship. Candidates were doctors mainly from rural districts. The opportunity to study for a master's degree provided a strong, non-financial incentive. FETP alumni made significant contributions to the epidemiology services and development of weekly epidemiological surveillance systems. They are now posted at several high levels in the Ministry of Public Health. Epidemiological capacity in Thailand has flourished, and the country has fulfilled all core competencies as required by WHO`s International Health Regulations.

National efforts to enhance capacity

In the past two decades, the Ministry of Public Health focused on rural health service extension and production of health workers (Wibulpholprasert 2006), and failed to produce an explicit policy direction or vision for capacity development for HPSR. Historically, policy-makers in the ministry have been recruited from experienced provincial chief medical officers. Policy decisions were not that sophisticated and were made based largely upon experience and intuition rather than evidence.

Table A.1 The joint WHO-Thailand IHPP fellowship programme, 1998–2007

Biennium	Certificates/master's degrees	PhD	Total
1998–99	Seven degrees (across public health, human resources for health; health economics; health service management; international health; health policy, planning and financing)	—	7
2000–01	One degree (public health – epidemiology)	Seven degrees (across the fields of health economics, policy analysis, service management and public health)	8
2002–03	One degree (health promotion)	Five degrees (medical anthropology; health economics, policy and public health)	6
2004–05	Four degrees (across the fields of epidemiology and public health)	Two degrees (health service research and public health nutrition)	6
2006–07	Five certificates and four degrees (across the fields of genetic epidemiology and public health)	—	9
Over the past decade	Five certificates and 17 degrees	Fourteen degrees	36

Source: WHO Thailand Office (2007).

When the HSRI bill was enacted in 1992, it mandated HSRI to provide funding to support health systems research, as a vital element of health system development. A few key staff were seconded from the Ministry of Public Health to work full-time for HSRI. HSRI experience during the period of 1992–1995 indicated that calls for proposals often elicited low-quality proposals. While HSRI fully exploited a few good researchers, there were only a limited number of committed, professional researchers in HPSR. In the context of ample resources for health systems research, this became the main constraint. The development of IHPP-Thailand responded to this need, using the experiences from FETP and the Senior Research Scholar Programme (supported by the TRF).

An informal discussion during the World Health Assembly in May 2000 among Thai delegates reflected an urgent need to enhance capacity in HPSR. With the leadership of the Deputy Permanent Secretary of the Ministry of Public Health responsible for International Health,[3] IHPP was set up under a memorandum of understanding between the Ministry of Public Health and HSRI. The first task was to recruit fellows for a research apprenticeship for a few years prior to PhD training in a needed area (IHPP-Thailand 2002). The WHO Thailand Office and IHPP-Thailand have jointly managed the fellowship programme since 2000. IHPP-Thailand also focused on post-doctoral research assignments to ensure that returning graduates employed their new skills. Table A.1 shows the numbers of students enrolled in the programme over the past decade.

Nearly all the 36 fellows who received a certificate or degree through the programme are now actively

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[3] That is why IHPP-Thailand, has two major foci, one on capacity in HPSR and the other on international health.

Table A.2 Numbers of IHPP researchers, grants and their sources, 2004–2006

Number of researchers				Research grants (Thai baht)				
Year	Total No. of researchers	Cumulative on study leave	PhD graduated	Domestic source	%	International source	%	Total grants
1999	7	2	1	2390 820	88	338 400	12	2 729 220
2000	9	3	1	3 477 003	100	—	—	3 477 003
2001	15	5	1	9 977 614	51	9 775 997	49	19 753 611
2002	16	9	1	569 490	29	1 400 560	71	1 970 050
2003	16	9	2	4 860 754	30	11 179 682	70	16 040 436
2004	16	7	3	1 274 750	32	2 676 553	68	3 951 303
2005	16	7	4	12 481 804	38	20 686 754	62	33 168 558
2006	17	4	8	14 736 746	53	13 072 739	47	27 809 486

engaged in HPSR (mainly in the Ministry of Public Health and a few universities), and there has been no loss to overseas institutions. The high return rate contributes to sustainable capacity development.

Most IHPP fellows were recruited from talented young medical and public health staff who had some years of experience in public health and related fields. They were, on average, in their mid-thirties when they completed their studies, meaning that they would theoretically be able to work approximately 25 years before retiring. In addition to the WHO long-term fellowships, IHPP also seeks support from other sources. By 2007, 10 PhDs in IHPP constituted a significant capacity to supervise and conduct more diversified HPSR.

With the increasing number of PhD researchers and a strong reputation, IHPP finds it increasingly easy to get funding. Initially, international funding accounted for more than half of total revenues, and there was substantial fluctuation in income; but this has changed since 2006. In 2005, IHPP established the Foundation of the International Health Policy Programme, which provided an independent organization for financial and human resource management. Since that time, research grants have paid out competitive 'top-up' fees to retain proficient researchers. Table A.2 shows the research capacity in Thailand over the period 2004–2006.

Thailand is seeing an exponential growth of capacity in HPSR in 2007. Inspired by the British model set forth by the National Institute of Clinical Excellence (NICE), a special three-year programme (Health Intervention and Technology Assessment) was initiated with funding secured from multiple local resources in the amount of 55 million baht (US$ 1.7 million). The Health Intervention and Technology Assessment Programme attracted some 15 additional professionals (7–8 post-doctoral) and should contribute significantly to producing evidence regarding the adoption of health technologies. The scale-up of IHPP is also reflected in the number of publications (IHPP-Thailand 2006), see Table A.3.

Table A.3 Publication records, IHPP-Thailand 2001–2006

	International journal	Thai journal	Research report	Book chapter English	Book chapter Thai	Proceedings (Thai/ international)
2001	2	11	4	0	2	1
2002	4	15	2	3	7	2
2003	5	11	6	1	1	2
2004	7	14	12	12	4	1
2005	12	9	17	3	0	5
2006	13	16	13	2	2	10
Total	43	76	54	21	16	21

International collaboration

International collaboration can help strengthen research capacity, sustain funding and provide academic assistance. Many Thai students have studied abroad, but only in relatively few cases has that led to long-term institutional collaboration. Among the more successful collaborations are those with the Institute for Tropical Medicine, Antwerp, Belgium, and the London School of Hygiene and Tropical Medicine. The collaboration with the Institute for Tropical Medicine was strengthened by Dr Nitayarumphong after he received a scholarship from the Belgian government to study for a master's degree at the institute in 1984. Based upon his recommendation, a further 31 persons graduated from this university during the period 1986–2002.

The Health Planning Division of the Ministry of Public Health has a long-established research collaboration with the Health Economics and Financing Programme of the London School of Hygiene and Tropical Medicine; and after Dr Tangcharoensathien graduated from the latter, the relationship emerged more formally between the two institutions, and later IHPP-Thailand. This partnership is characterized by collaborative research and building of research capacity through PhD training.

Most of the capacity-development activities are targeted to individuals rather than strengthening the institutional capacity of IHPP-Thailand. To date, there is continued support and partnership through the Health Economics and Financing Programme for PhD training in various fields.

In addition to these collaborative measures, other partners such as WHO, UNAIDS, the World Bank, the Harvard School of Public Health, the International Labour Organisation and the Rockefeller Foundation also bring technical support, helping local researchers keep abreast of recent research developments, and occasionally provide grants for specific projects. Thai teams also have links to regional networks, including the Asia Pacific National Health Account Network and Equitap (Equity in Asia-Pacific Health Systems) funded by the EU. These networks provide opportunities to exchange knowledge and share lessons learned among developing and transitional countries.

Explaining the successes

Shared values and informal networking

Common experience of the difficult political transition in the 1970s helped define the values of many current public health officials; it influenced their vision of health system reforms and social development. Informal and formal health policy networks, such as the Sampran Group, forged by the events of the 1970s, have contributed significantly to the growth of HPSR evidence and to policy changes. The membership of the network is small, and the members have a close relationship dating back to 1986. At that time, they worked independently but met and exchanged ideas regularly. These individuals bring their cumulative experiences and interests into the research institutions, funding and advocacy organizations they work in and collaborate with. During recent years their capacity to influence national policy has increased significantly as they have attained senior positions.

An active role for civil society

The political shift in 1997 provided the opportunity to strengthen civil society organizations that have since played a major role in health policy development, often drawing on research evidence. Several organizations have been involved in strengthening civil society networks. This success was partly developed through established relationship between health officials (who were also sometimes researchers) and partnerships between NGOs and civil society organizations. As Thai politics have become more pluralistic, the role of civil society in influencing policy debates has become increasingly important.

Establishing dedicated institutions for HPSR

The institutionalization of HSRI was a great contribution to the growth and success of health policy and system research in Thailand. Without the constraints of regular bureaucratic rules, HSRI was able to work independently and efficiently, providing competitive salaries for its staff. HSRI also supported many Ministry of Public Health staff and promising researchers to train abroad, and developed research units through financial and logistical assistance. TRF's approach to strengthening both research teams and individuals was also effective. The selective process and the incentives (scholarship for domestic study or study aboard) were crucial in helping to identify potentially capable researchers. Parallel emphasis on research management and improving the work environment helped not only to retain research staff but allowed them to continue to be productive. While researchers within the Ministry of Public Health have an advantage in terms of links to policy-making, the Thai MOPH cannot ensure an appropriate career ladder for researchers, and lacks the necessary systems to support appropriate human resource and funding management.

Moving from international to domestic funding

While international funding sources were significant for starting many projects and strengthening the early capacity of research organizations in Thailand, the increase in domestic research funding through HSRI and the earmarked tax of the ThaiHealth Fund has led to quantum improvements in HPSR capacity by facilitating many policy-research packages and promoting links from research to policy via knowledge management processes.

Formalizing processes for promoting evidence-informed policy

In the Thai context, close relationships between researchers and research users has been a critical factor both in developing a culture of evidence-informed policy and actually employing evidence in policy-making. Thus far, however, much of this culture has relied upon connections between particular individuals and their motivation to make this link. Further attention now needs to be paid to designing a system to promote, or even enforce, the use of evidence in policy-making institutionally.

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Notes


Alliance for Health Policy and Systems Research

Sound Choices

Enhancing Capacity for Evidence-Informed Health Policy

While health systems constraints are increasingly recognized as primary barriers to the scaling up of health services and achievement of health goals, knowledge regarding how to improve health systems is often weak and frequently not well-utilized in policy-making. Health policy and systems research is typically context-specific thus to apply research evidence to policy, national-level capacity is needed.

This Review addresses how capacity constraints, particularly at the country level, impede progress in generating policy-relevant health systems knowledge and employing such evidence in the policy process. Capacity constraints related to four main functions (research priority-setting, generating and disseminating knowledge, transmitting knowledge from researchers to policy-makers; and, finally, applying evidence to the policy process) are explored and illustrated using country examples.

The Review concludes with practical lessons for different groups of stakeholders: national health leaders, research institution leaders and international funding and development agencies:

- More evidence is needed about how capacity constraints in countries inhibit evidence-informed health policy, and which strategies are effective in addressing these constraints.
- The dominance of international funding for health policy and systems research, particularly in low income countries, sometimes distorts local priorities and fragments nascent capacity. Better coordinated, and nationally-owned funding approaches are needed.
- Health policy and systems research faces particular challenges due to its youth, its multi-disciplinary nature and its need to take account of contextual variations. For these reasons (i) greater investment is needed in developing health policy and systems research methods and supporting their use and (ii) national organizations with specific mandates in health policy and systems research need to be nurtured.
- Finally, the application of evidence to health policy has been historically neglected both as a field of study, and as an area of investment. Greater investment at the country level in strategies to promote evidence synthesis, knowledge translation and use is required, and should be carefully evaluated.

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