



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 scarce 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.

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).

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

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 multidisciplinary. 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 India²), 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-

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

BOX 4.5 EXAMPLES OF PARTICIPATIVE APPROACHES TO SETTING PRIORITIES

(CONTINUED)

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 Network⁴ 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

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.