MAKE IT HAPPEN

HOW DECISION-MAKERS CAN USE POLICY AND SYSTEMS RESEARCH TO STRENGTHEN HEALTH SYSTEMS

Alliance for Health Policy and Systems Research

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How decision-makers can use policy and systems research to strengthen health systems*

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INTRODUCTION

In his acceptance speech on his appointment as the new Director-General of the World Health Organization, Dr J.W. Lee said: "Now is the time to make it happen where it matters, by turning scientific knowledge into effective action for people's health."

A strong and imaginative renewal of efforts to strengthen capacities to produce and use health systems research (HSR) can – and should – "make it happen". A scale-up of HSR is on the horizon but a greater commitment from funding, research and policy-making communities is needed before the promises of such research will become apparent and translate into changes in health systems around the world.

For policy-makers in many developing countries the challenge of improving their health services seems daunting. There are conflicting views on centralization and decentralization, public vs. private providers, fee-charging and fee exemptions, and various forms of health insurance. They may feel that they are paying for research which produces no benefit and does not meet their needs for evidence to convince managers to change.

Not only can those challenges be overcome, but imagination and innovation can produce tangible results in improving health care at every level. Research can lead to cost savings, and provide the evidence to attract more money for priority areas. So, how to "make it happen"?

Mobilising intellectual and human resources in new partnerships with all the stakeholders is the key to change. Funding is very important but, as the evidence now shows in rich countries, it is not the size of the pot of money which drives success. It is the way

funding is prioritized and applied to best effect. Limited financial resources are not a defining barrier.

This summary aims to provide a straightforward guide to the key elements for discussion and action. It is hoped it may help to show how research can be a driving force to improve the performance of health policy and systems and the health of individuals and populations.

The power of knowledge acquired through such research will quickly pay dividends by avoiding the fragmentation of research capacity that has occurred in the past and liberating new human and financial resources to make progress much easier.

This is very important for policy-makers overwhelmed by life-threatening public health scourges such as TB, malaria and HIV/AIDS, and by the constraints to improving health system performance.

Messages to bear in mind

The central concern is how knowledge of health systems can be significantly increased and effectively applied to improve the health of the worst-off of the world's population. As this summary will clarify, the following inter-linked conclusions are of primary significance to policy- and decision-makers:

- Rapid progress towards disease-control targets in developing countries is greatly hampered by weak, poorly functioning or in some cases non-existent health systems. It is critical to know how to strengthen the health system and the specific actions appropriate for different settings.
- There are ways to relax barriers or constraints.
- Policy-makers can play a critical role in setting the research agenda to make relevant and high-quality research a reality.

- Lack of health systems research can lead to undesirable results in the health system. Research can contribute most when issues are formulated through clear and empirically verifiable hypotheses.
- There is already a rich body of knowledge to support evidence-based policy-making, so there is no need to reinvent the wheel.
- For developing countries, funding for research at 10 per cent of the global total is far too low to ensure impact. Similarly, it is a serious gap that only five per cent of HSR publications focus on the needs of the developing world.
- If the priorities of conflicting vested interests and stakeholders are harmonized, one can prevent critical problems disappearing from the agenda, and advocate for increased funding for HSR; successful strategies have been documented at every level.

It is of fundamental importance to pursue a process of getting research into policy and practice (known as GRIPP). This can be enhanced through approaches which one can afford; GRIPP will ensure there is a payback from research. Experience shows that all the key stakeholders should be ready to act according to the following checklist:

- Be bold and innovative so that together, civil society and the research community can collaborate to make sure the decision-makers recognize the benefits of research and use it to maximum effect.
- Keep all the key stakeholders involved in a solution-oriented alliance in order to broaden the institutional research framework, identify and update the research priorities, then apply the financial and human resources to address the priority agenda.
- Ensure that research results are good quality, timely, credible, and offer realistic recommendations and evidence to support decision-making.

- Be visible by communicating evidence so the audience understands, by mobilizing the different networks and key stakeholders and using the media to pass on critical evidence to decision-makers. Make use of the revolution in knowledge management.
- Identify the pressure points which influence policy-making. By being enterprising and on the alert to seize opportunities, it may be possible to insert the research evidence into the decision-making processes.

New approaches

The current challenge is to work out how best to strengthen the health system and overcome constraints by finding and applying different ways of delivering services, changing human resource practices and improving organizational structures.

The evidence suggests that strategies to strengthen health services in the 1990s did not make enough progress at least in part because too little health policy and systems research was carried out to identify the best solutions. Now, four broad areas of effort have emerged:

- Service provision: how should services be provided? Through formal, informal, public and private sectors? How should health services be organized for the consumer?
- Resources: from where, how much and how can they be pooled? What mechanisms are needed to transfer resources to service providers?
- Stewardship: this implies a steady hand from government in overseeing the health system, along with a clear vision and direction for health policy, put into practice through regulation and collecting and using key data.
- Money management: the report of the Commission on Macroeconomics and Health (CMH) notes that, while a lack of funding is often the ultimate constraint, success is not guaranteed by the simple provision of funding. Worse, it said "Without a health system that can use money well, spending will not merely be inefficient – it may be useless, or conceivably counterproductive."

Getting the flow right

Getting research into policy and practice is critical because researchers are often isolated in their specialized area of work, and such isolation can be worse in developing countries. Research priorities are skewed in favour of the rich world: as mentioned above, only 10 per cent of global research funds are spent on research involving 90 per cent of the world's health problems (which are mostly in developing countries).

A unified, national health research system is not simply a useful extra. It is part of the bedrock of the health system to which every sector has something to contribute, from biomedicine to health services.

There are lessons to be learnt from the industrialized world. Those who produce the research and those who use their work should be encouraged to get together to define priorities, synthesize knowledge, commission research, learn from the findings and put them into practice. This helps make sure the research topics meet the needs of decision-makers and are put across in ways that give research the best chance of being used. A checklist for actions aimed at ensuring this includes the following items:

- Manage the health systems and policy research agenda and make sure that research priorities are being set and resources allocated to them.
- Produce evidence both through original research and a synthesis of existing knowledge.
- Promote the use of evidence through, for example, the media and other advocacy channels and specific mechanisms designed to link evidence producers and users.
- Utilize evidence in decision-making.

In practice, the process is not clearly defined and politics can intervene at any point. There are various strategies on how to review progress in HSR and identify gaps and challenges. One of these is inviting all stakeholders to reflect on these challenges. Below, we

explain why more investment is needed and how to secure it from national and international sources, for use at all levels, including the research needs of villagers. That investment will strengthen the capacity to manage the research agenda and increase the utilization of research outputs by multiple stakeholders.

ACHIEVING GLOBAL HEALTH GOALS

The Millennium Development Goals are ambitious and include targets to reduce under-five mortality by two thirds, maternal mortality by 75 per cent and roll back malaria, TB and HIV/AIDS. We know how to do this clinically, but need new ways to make it a public health reality for all.

The challenges include managing scarce resources, with countries in regions like Sub-Saharan Africa spending only between $4 and $30 per capita on health (and with 60 per cent of that private spending). Nevertheless, $30 is enough to match the lowest estimate of what is needed to deliver an essential package of health services.

While a significant amount of money is being provided through mechanisms like the Global Fund, the US President's Emergency Plan for AIDS Relief, The Vaccine Fund, and other sources for immunization etc., the worry is that the poorest countries may struggle to cope with the volume because they do not have the "knowledge systems" needed to cope with such increased activity. A lack of capacity to manage and programme these funds may become a major constraint.

Part of the solution lies in dismantling the barriers such as those posed by poorly motivated staff or inefficient systems which supply and distribute drugs. However, these constraints are only part of the story. Fortunately, health policy and systems research has been developing answers which can pinpoint solutions. For example, contracts with private sector organizations have been demonstrated to be a useful way to scale up services.

The problem of getting information to make a good decision is compounded by the increasing complexity of the world of health policy-makers, planners and managers. Patterns of disease burden can change rapidly. Health system reforms are widespread and sometimes initiated by actors outside of the health sector, often as the result of decentralization.

Policy-makers in transitional economies face particular challenges, including the legacy of bureaucratic and unresponsive health systems. These have also been subject to multiple shocks during the transition process. HSR can be a boon to them better to understand and respond to the evolving context in which they work.

Health systems research – the poor relation

Health systems have been the poor relation on the research block compared to investment in new health technologies and drugs, and areas such as parasitology. USAID gave $72 million to health in 1998 but only $2m was for HSR. Other funders demonstrate similar patterns. Recent analyses of MEDLINE have shown that international publications in this field have moved from only 0.27 per cent of the total medical literature in 1991 to 0.71 per cent in 2000.

The good news is that several industrialized countries, as well as the former International Health Policy Programme and now the Alliance for Health Policy and Systems Research (AHPSR/the "Alliance") have been working to increase the attention and funding in this field. Nevertheless, in general, health systems research money has been limited, with grants typically in the range of $20,000–$30,000. So it has been challenging to build research capacity and almost impossible to undertake any major, operational studies.

It is imperative that research moves beyond scattered, small-scale studies and that a serious attempt is made to develop a consolidated body of knowledge in developing and transitional countries and their regions.

Part of this process means threading together a range of disciplines touching anthropology, epidemiology, demography, political science, sociology and economics, and defining career development for health systems researchers. Methodological developments are needed to help generalize from one context to another. Small-scale and controlled pilot interventions, and larger scale intervention programmes, need to be introduced with more rigorous experimental designs.

The development of health systems research – case studies for success

If one looks back over the last few decades, the Alma-Ata declaration of 1978 pointed the way, saying that "… every national programme should set aside a percentage of its funds for continuing health service research", stressing the need to organize health services research and development units.

The aim of universal provision was then shattered, as the Sub-Saharan African countries faced macroeconomic decline. The key question became how to generate adequate financing and address inadequate access to services.

The World Bank's 1987 report "Health Care Financing: An Agenda for Reform", proposed the introduction of, or increase in, user fees, health insurance schemes, more effective use of non-government resources and decentralization. Many countries in Sub-Saharan Africa introduced user fees into their free systems. New research evidence since then has led to a wide-ranging debate on the pros and cons of these strategies and how price and quality affect use. In the last five years, not only has the Bank changed its position on user fees, it now advises caution on their use in health systems. Uganda and South Africa have repealed user fees at the primary care level.

Reforms in industrialized countries in the 1990s focused on privatisation and commercialization. These models were often exported to low- and middle-income countries, with sophisticated models emerging in countries such as Colombia and Zambia.

In 2000, studies published by WHO and others argued that investment in health itself could promote the growth of the whole national economy and that HSR showed health benefits at global and local levels. These case studies illustrate the richness of methodological approaches used by HSR and the distinctiveness of the field.

The way research can influence change for the better can be seen in research from Georgia, India, South Africa, Tanzania and Thailand in respect of issues such as regulation of health providers, prevention of mother-to-child transmission of HIV, insurance schemes and informal institutions and networks, and drug delivery and reducing deaths among the

under-fives. In some cases the evidence shows that earlier health sector reform decisions had fundamental flaws.

On the global front, new research areas are emerging, notably relating to the international agreement on Trade-Related aspects of Intellectual Property Rights (TRIPS) and the pharmaceutical industry. Expanding pharmaceutical sectors in countries such as Brazil, India and Thailand need to be researched, along with the implications of TRIPS for access to pharmaceuticals in the poorest countries. The migration of health workers also needs analysis.

The challenges ahead

HSR can contribute in the short term to the achievement of the Millennium Development Goals. Target areas for action include:

- Human resources, which account for up to 60–70 per cent of health care costs. The major issues are: appropriate staffing profiles, deployment pattern of staff, and motivated workers to ensure health systems function well. If not addressed, communication between people will be poor, patients will be deterred from visiting facilities, technical quality may also be poor and absenteeism may be high. Alternative patterns of staffing for scaling up services and cost and training implications need to be assessed, as well as incentives to reduce absenteeism (and sanctions imposed on absentees).
- The brain drain, from public to private sectors, and to overseas countries, is a major issue that needs to be addressed.
- The use of the private sector might serve to expand access to care. Research can shed more light on the variety of actors in the private sector, the difficulties governments face in developing contractual relationships and the complexity of

instituting appropriate pricing structures and regulations. More evidence will help advise policy-makers better as lessons are generalized across countries.

- Programmes for the control of high-priority diseases, such as HIV/AIDS, need to be examined to assess the advantages of verticalized (selective) approaches to health services, versus more integrated and comprehensive approaches. There is a new twist in the current debate: Will focusing on a particular disease breathe new life into the broader health care system and develop positive spin-offs or lead to distortions throughout the sector?
- Major concerns of many developing countries are the effects of increased donor resources upon government spending in general; the effects of new development assistance mechanisms upon country "ownership" and established ways of working; the effects of complex drugs such as anti-retrovirals on the broader pharmaceutical management system; and the effects of scale-up on patterns of deployment of health staff.
- No less pressing is understanding the importance of good governance for development initiatives within the health sector. Examining the accountability of health care providers and managers can show the effect on quality and efficiency of health service delivery.
- Likewise, corruption not only wastes resources but can lead to distortions with even more disastrous effects, such as the administration or distribution of prescription drugs by people lacking the necessary skills, or promotions to senior positions on the basis of bribes rather than expertise. The evidence of the problem is growing, but solutions need to be tried and evaluated.

A defining characteristic of HSR is that it maintains a central focus on the use of results by health policy-makers and programme managers. It is inextricably linked to the emergence of new policy and operational issues. The task is to commission HSR to help rapidly scale up health services of the quality required to meet the needs of the world's poor.

STATE OF THE ART IN SELECTED AREAS

A range and variety of conditions mark the differences between low-and middle-income countries. There is no consensus on the overall classification of health systems. We can select three categories of countries, with distinctly differing associated health systems.

Health system research first developed in advanced market economies, the first category, with highly structured health systems in a complex environment. They have economic stability, a relatively slow pace of social change, efficient tax and social security systems, a well-organized legal and regulatory framework and enough trained people to operate these institutions. Data from these countries may be useful to some low- and many middle-income countries.

The second category includes those with weak administrative systems and professional regulatory arrangements and can be found in all regions. Income may typically be low and such countries have to cope with prolonged economic crisis and/or the epidemic of HIV/AIDS. Post-colonial financial problems, political crises, conflict and institutional decay have caused further decline. Local arrangements to help households cope with shocks have been stretched to breaking point, putting further pressure on health services. Help from outside donors is important for them.

The third category includes countries experiencing rapid and radical economic and institutional change and transition to a market economy. In adapting, their health systems have had to confront an ideological shift involving increased doubts about the role of the state. This has uncovered important lessons about the influence of rule-based, legal and administrative arrangements and what the public expects of the health system.

Research has moved policy discussion beyond the ideological debates. The focus is now on appropriate institutional arrangements for different circumstances, informed by systematic analyses of experience. It is accepted that the task of creating effective health services is a long-term one. Research makes an important contribution to it but there is no simple one-size-fits all solution.

Equity

How far health care meets the needs of different social groups has been of major concern throughout much of the 20th century, for example in Latin America, in the command economies and many former colonies. This international concern is also reflected in the "Primary Health Care" concept and "Health for All" strategies.

These have been reasonably successful in giving people access to affordable and effective basic health services in a number of low- and middle-income countries. The issue waned for a time but, with the return of poverty-reduction strategies, it is back at the top of the international development agenda.

Researchers have used surveys of household expenditure, public sector administrative data and national health accounts studies to measure and analyse access to services and the financial burden of care and various innovations. Several regional studies have applied methods used to document inequities in OECD countries to Latin America, the Caribbean, and Asia and the Pacific, particularly Bangladesh, China, Hong Kong, India (Punjab state), Indonesia, Korea, Nepal, Philippines, Sri Lanka, Taiwan, Thailand and Viet Nam.

Households face severe financial pressure when a family member falls seriously ill and this is most severe when it comes to finding cash to buy care.

Research has also shown up poor implementation of exemption policies. In Viet Nam, the rising importance of user fees has been associated with large inequalities in access, problems with the quality and cost of health services and a growing problem with health-related poverty. Sri Lanka and Thailand are exceptions, since the richer households that choose (relatively expensive) private hospital care are more likely to incur heavy costs, while the poor are relatively well protected because they use inexpensive government hospitals.

Understanding the limits on people's choices is important for policy design. Depending on their circumstances, people may use traditional healers, midwives, their kin, non-governmental organizations, private doctors, public health facilities, etc., based on a combination of cultural and ethnic beliefs, knowledge and experiences.

If the cost is too high then a poor individual may forgo medical care. Some 70 per cent of the poorest 20 per cent of China's population cited cost as the reason for not seeking care. In countries such as Sri Lanka and Thailand, where there was at least partial insurance cover for poor households, the income gradient was flat or even reversed. Women in the poorest quintile in seven Asian countries are much less likely than those in the richest quintiles to have medically assisted deliveries. In Bangladesh, Nepal and Pakistan, the use of hospital services for delivery is heavily concentrated among wealthier women. In the Philippines and Viet Nam, there is a much smaller gradient between rich and poor, largely explained by the better access of poor women to public facilities.

So a public sector oriented towards the poor enables poorer women to gain better access to safe, medically assisted deliveries. Universal health provision through taxation or social insurance should mean high, horizontal equity, but if the distribution of health facilities favours the urban population and workers in the formal sector, there can be differences in access to care. In South Korea, despite an expansion of social health insurance to the entire population, the poor, the elderly and rural folk have less access to health care. The type of provider chosen can vary significantly with income and there are big differences in the qualifications of health staff.

Results from studies in Asia indicate the best financial protection is provided by widespread risk pooling, minimal user fees and benefit packages that cover hospitalization. Tax-financed systems that include cover for hospital care generally meet these criteria (e.g., Hong Kong, Sri Lanka) as long as out-of-pocket charges are modest (e.g., Bangladesh). Social insurance financing, combined with a comprehensive benefit package, offers reasonable financial protection, but its population coverage depends on the ability of the government to make significant contributions for those in the informal sector, the unemployed and other vulnerable groups (e.g., in Mongolia and Thailand).

Research shows that well-targeted government subsidies can protect vulnerable groups from catastrophic expenditure on health and so reduce inequity. But government subsidies are often not well targeted. Often the better-off do better than the poor and research has revealed a similar pro-rich bias in Africa.

Wealthier social groups in urban areas get access to hospital services, which take a large share of public health spending in most countries. They have the financial and social power to ensure that they receive preferential treatment in public facilities. The pattern is different in Latin America. Since large segments of the population have access to some kind of care, additional spending by the public sector is often biased in favour of the poor as shown in studies in Mexico, Bolivia, and Peru. The challenge here is to identify the most appropriate financing strategy for the health system in different social and economic contexts. We also need to know how different financing strategies affect health system performance.

Health system reforms and change

Health systems around the world reflect very different and complex relationships. Reforms have divided responsibility for finance and provision of services between different agencies and there are new contractual relationships between purchasers and providers of services. There is also a trend towards the devolution of responsibility, for planning and monitoring of services, to local governments or special health authorities.

Dedicated institutions for pooling the risk of major medical expenses (e.g. national and local health insurance schemes) are on the increase as well as more involvement of non-governmental organizations and related bodies which operate between the state and the consumer.

Opportunities need to be seized as they arise for health system reforms. In China, the recent outbreak of severe acute respiratory syndrome (SARS) highlighted the importance of a coherent and effective health system for senior policy-makers. The tragedy acted as an important trigger for change.

The key concern is that fees will discourage utilization of required health care and hit the poor most.

The evidence demonstrates fees usually lead to reduced utilization. Unless fees are retained at the local level to improve health service quality, the overall effect is negative. Studies in 22 countries show utilization rose in eight (Benin, Burundi, Cameroon, Guinea, Mauritania, Senegal, Sierra Leone, and Togo) and fell in seven (Burkina Faso, Ghana, Kenya, Lesotho, Mozambique, Swaziland, and Zimbabwe) with mixed results in the remaining seven. These and the Asian studies give the strong conclusion that reliance on fees is highly inequitable.

In the light of this, policy-makers need evidence from studies that are methodologically and empirically strong with a good baseline for comparison. Fees must be seen in the context of the entire public health spending. Where the government links the elimination of fees to increases in funding of health services from other sources, the policy may be highly beneficial. However, where a broader policy is not being constructed, simply eliminating formal fees is unlikely to be beneficial and can lead to higher informal charges.

Data from transition economies and elsewhere show that there are people making money on the side from selling medicines or running sideline services to boost their low salaries. Such practices are so widespread they are no longer the exception and the health sectors of such countries increasingly resemble a publicly subsidized and poorly regulated private system. There may be problems for international plans to supply large quantities of pharmaceutical products to low-income countries since drugs could end up in both formal and informal markets, with serious health and cost consequences. Research is needed to provide greater knowledge of the formal and informal drug markets and of strategies for reducing inappropriate drug use where regulatory systems are weak.

We also need better knowledge of how the combination of formal payments and informal charges influences health workers, and to test strategies encouraging them to pay more attention to patients' interests.

This is why collaborative multidisciplinary research is needed with the participation of anthropologists, sociologists and political scientists as well as economists.

Community health insurance

Another topic that has generated much interest is the role of community health insurance (CHI) in opening access to healthcare and protecting the poor against medical expenses. The main policy-shaping concerns can be seen from studies in rural Burkina Faso, China, Ethiopia, Guinea-Conakry, Gujarat state in India, Philippines and Rwanda.

CHI seems largely to emerge in response to the inactivity of governments and the private sector in disfavoured catchment areas of the poorer, harder-to-reach, rural and informal sectors in low- and middle-income countries. Research shows that CHI has had modest outcomes, and is only one of a number of financing options.

The CHI research to date provides detail on schemes' successes and failures and addresses systemic problems on how CHI fits into the larger framework of health financing.

Research from China is particularly interesting. In the 1970s, its simple, cost-effective interventions produced dramatic improvements in health. The present economic boom has reduced the number of people living below the poverty line but change has created serious problems for the health sector. Research is helping the various health stakeholders cope with rapid change, and re-examine urban and rural health service differences, revenue from user charges and a pricing system which encouraged costly, hospital-based care. The Chinese have been good at communicating the issues to raise public and professional debate.

The example of health finance can be used to illustrate the evolution of health systems research. In Chinese urban areas, the pre-existing system has come under increasing pressure due to ageing of the insured population, rising costs of medical care and the financial pressures on the many state-owned enterprises through which health and social care is still commonly provided. The central government encouraged city governments to test new models of health insurance. Towards the end of the 1990s it decided to shift responsibility for urban health insurance to the Ministry of Labour and Social Security. Studies have documented the increasing difficulties experienced by people on lower incomes in paying for health care. The research also documents the unsustainably high costs generated by a combination of a rapidly ageing population and the dependence on hospital-based care for the elderly. These findings have stimulated efforts to make services more cost-effective and provide a safety net for the poor.

Local innovation is valued in China. However, new rural health insurance packages have been unexpectedly difficult to establish. The Government aims to establish a nationwide programme of health benefits for the rural poor and research will play a role in this.

Management reforms and the role of NGOs

This includes researching such issues as why the public may prefer one type of health provider to another. For example, studies have explored why facilities run by religious organizations or non-governmental organizations (NGOs) often enjoy a good reputation, finding that this reflects what the marketing industry would consider a consumer reaction to a particular "brand". The role of formal and informal partnerships may produce interesting new alliances, for example enlisting wider help from traditional organizations such as local

burial cooperatives. These collect money from older members of society concerned there will be no funds to cover their funeral costs. There are also private companies which organize employee care as part of the remuneration package.

Policy-makers can examine how they can harness the skills of NGOs. Often, local action only works for local needs and just as there are positive reports about their roles so there are also negative ones. Their role can be clarified by research involving sociologists and political scientists. Studies on small-scale innovations and health system reforms in eight African countries have helped implement reforms. A successful contractual arrangement for HIV/AIDS in Brazil was part of a larger national strategy. This involved non-governmental partners in the design of the contracting programme, backed by a dedicated, government unit. While giving a more active role to NGOs requires political acceptance, this need not compromise the autonomy of the government or the organization.

Experience and systematic research helps examine both formal and informal relationships in health systems. HSR is no longer a minor adjunct to the work of doctors and medical administrators. High-quality studies by well-trained experts from a range of disciplines are needed for decisions to make the benefits of medical knowledge available to people living in the complex environment of many low- and middle-income countries.

SETTING PRIORITIES

Priority setting, involving governments, multilateral and bilateral institutions, researchers and other stakeholders is a vital means of raising resources for health systems research. How can priority setting help health systems research to raise its profile and ensure the resources needed to meet its promise?

More funding for research is needed if policy-makers are to reap the strategic and financial benefits of good research. The pressure is to spend more on specific diseases and respond to major issues such as malaria, TB and HIV/AIDS, but research is needed to guide the development of the health system that underpins effective disease control.

As every policy-maker knows, priority setting is all about the optimal allocation of scarce research resources using explicit decision criteria. One must identify the resource flows that will be subject to competitive allocation. Research alternatives have to be identified, all stakeholders need to participate and a route to consensus should be set up. Last but not least, the fairness of priority setting must be assessed.

In choosing the tools for prioritizing, policy-makers will find useful examples outside the health sector, for example amongst researchers in space science and astronomy, disciplines with long histories of systems research. The policy-makers should help the research community to be well organized nationally and internationally. Priority setting itself helps to mobilize funding for research as well as producing a mapping of needed research.

Funding targets and the reality

According to best evidence, a rough target for research is two per cent of health expenditure. The Alliance estimates that between 1999 and 2003, and excluding institutional costs, a total of $134m was spent each year in the developing world directly on HSR projects. International donor funding accounted for about 69 per cent ($92m), governments 17 per cent ($23m) and the private sector 14 per cent ($18m). This was a meagre 0.017 per cent of total health expenditure, or only one fiftieth of the recommended two per cent.

World Bank country projects allocate funding to research and evaluation but this is often spent outside the country on agencies in the North or is not spent because research is not prioritised or allocation mechanisms put in place.

Funding with priority setting – how to bridge the gap?

When seeking HSR funding it is useful to involve the finance ministry. It has the expertise for negotiating, not just approving loans, and engagement helps ensure the ministry of health is seen as part of development investment. External donors may back funding where a project fits into a wider, regional priority research issue.

It is possible to reduce local fragmentation by helping national researchers mobilize through networking. One can call on the top research institutions and ministry research units to trigger this by their taking a lead.

It helps if one can show how the power of research has a real application in practice. This helps HSR compete with other research agendas by promising new knowledge for technological development and social gains.

A case study on Colombia has shown the problems caused by haphazard funding. Health systems research is scarce in Colombia. Of the research projects undertaken between 1990 and 1997, 40% were in the area of biomedical science, 29% in clinical science, 23% in epidemiology and only 8% in health systems research. The Ministry of Health has not had a clear health systems research policy, or indeed a health research policy overall. This is a vicious circle; if there is no policy to strengthen health systems research capacity it will be impossible to attain a critical mass of investigators and there will be no increase in the number of health systems research proposals for funding. The government is now trying to develop alternative financing mechanisms.

Priority setting for the global agenda

The WHO-backed Ad Hoc Committee on Health Research Relating to Future Intervention Options has proposed a method for selecting areas for research by identifying: what cannot be changed, what could be changed by improved efficiency, and what can be changed but is so expensive that research is needed to find ways of reducing the cost.

A useful process that has been proposed for priority setting in health systems research involves the following five steps:

STEP 1: Calculate the attributable costs or the relative severity of specific health system problems or constraints.
STEP 2: Identify the reasons for the persistence of health system problems and the kind of health systems research required to solve them: This will include: a lack of knowledge which requires analytical/strategic research; a lack of tools for resource allocation requiring applied/developmental research; inefficient use of existing tools requiring operational research.
STEP 3: Assess the current knowledge base for each problem.
STEP 4: Assess the potential benefits of possible research and development efforts.
STEP 5: Assess the current resource flows for these efforts.

National policy-makers should back efforts to generate a consensus between the numerous international stakeholders. They should seek a more proactive, coordinated role from bodies such as WHO and the Alliance. Whoever is funding the research, country needs should still be the priority, however pressing the global agenda.

Priority setting at national level

Approaches to priority setting for health systems research at national level can take into consideration governmental perspectives on health service delivery, welfare and economic development as well as the concerns of bilateral and multilateral development organizations working within countries.

Governments and bilateral agencies weigh up their investment in research in terms of its contribution to the basic health system objectives of health gain, equity, financial protection of the poorest segments of the population and responsiveness to consumer expectations.

In the social development arena, health systems research has to make its case in terms of poverty reduction, equity and governance.Trying to look at the whole health system and cross-cutting issues like insurance and financing is politically much more risky than most medical research. The research community itself may be disease-oriented and bow to political pressures and opportunities which promise funding.

Tanzania has developed a simple, effective checklist for research priority setting:

- Is it urgent?
- Magnitude of the problem
- Avoid duplication
- Is it feasible?
- Is it focused?

- Can results be applied?
- Does it add to new knowledge?
- Is it politically and ethically acceptable?

The big research picture may be seen by agreeing on a set of comparative indicators for priority setting and systematically agreeing priorities for disease control, household behaviour and health policy and systems. Research on the health system has two broad components: research on the institutions that mediate between the population and the providers (such as health insurers and regulators) and on the institutions that provide health services and resources (such as nurses).

Applying priority setting

How stakeholders work can be seen in the way that low-income Tanzania increased the government's and local researchers' voices in shaping donor and external partner agendas. Equally, agencies in middle-income countries have managed to influence the allocation of government funds.

Without becoming donor-driven, countries receiving funding may nevertheless want to consider how their aims tally with the expressed priorities of the donor - for example, in the case of Denmark, taking into account that country's focus on innovative research for equity and poverty alleviation. This includes elements such as control of communicable diseases, child and adolescent health and nutrition and the impact on health of the environment, migration and violent conflict. The UK has similar target groups and has tried to seek out "… *big ideas* which will make a real difference to poor people's lives".

Tanzania's approach, by involving all partner institutions in a forum, sought to overcome institutional rivalry and present many voices as one strong, independent and impartial voice.

Mexico has set up a Health Sector Research Fund as a spearhead and Colombia is considering a similar move. Such initiatives need to reassure scientists that these will not weaken their autonomy, resources and research agendas within unpredictable political environments.

An overview has been completed of the top five health system research issues, derived from consultations between researchers in 200 institutions in developing countries and their local stakeholders. The aim is to identify topics and their frequency: a fundamental preliminary component of a priority-setting process. The analysis is also useful because it compares challenges with projects actually initiated, and ranks HSR priorities by income region to compare the position of a country in relation to its neighbours. Sector analysis emerges as a top priority, followed by management and organisation.

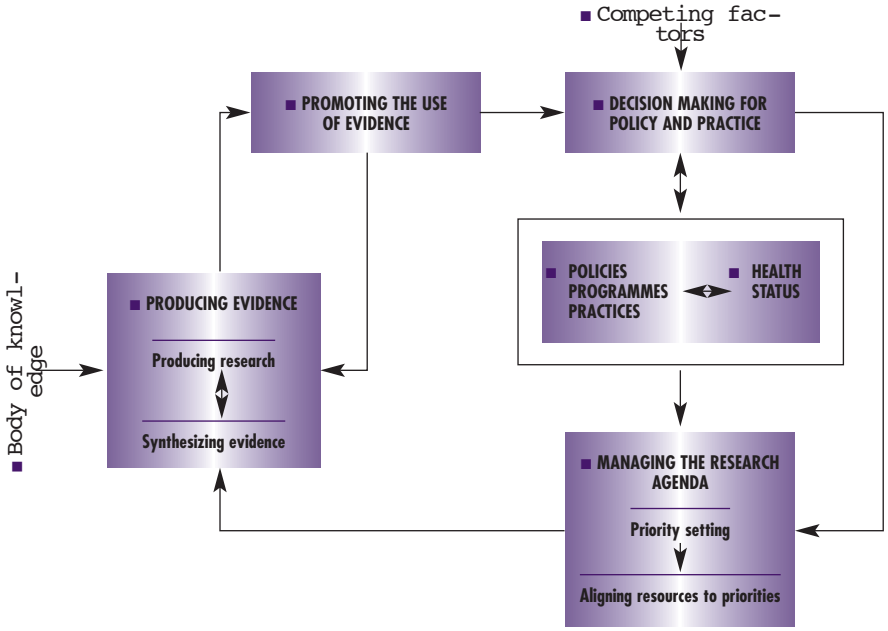
The message is that it is important and valuable to canvass systematically the priorities of various stakeholders, especially those at country level, agree the research agenda, and ensure that funding is available to address the identified research agenda.

GRIPP – GETTING RESEARCH INTO POLICY AND PRACTICE

Policy-makers and researchers know the danger that their efforts may end up on the shelf and be ignored. So getting a "GRIPP", to make sure work is put into practice, is critical.

Underpinning GRIPP is a conceptual framework designed to enable decision-makers to translate health systems research into health policy and practice. It helps them to analyse constraints and identify strategies to address them.

RESEARCH TO POLICY AND PRACTICE: STEPS IN AN ITERATIVE CYCLICAL PROCESS



Decision-makers and managers want research relevant to real life, not results written up in esoteric language and published only in inaccessible journals. Policy-makers perceive that the constraints to use research include lack of understanding of health systems and policy processes on the part of the researchers, research that fails to address the most pressing concerns of decision-makers, research reports that are difficult to read, research results that are not timely, and research recommendations that are an unrealistic "shopping list" with little regard to cost.

However, they are also aware that researchers feel that their painstaking and costly work is often ignored by the others. Also, funding agencies want to show that the money they gave has made a difference. These are universal problems.

Handling information for decision-making is essential because policy-making is a complex political process. The more the process is understood, the greater the ability to incorporate research findings in policy. This is true both for the researcher and the policy-maker.

This includes seizing the chance to insert evidence into the process at various junctures, perhaps by knowing about the interests, values and personal ambitions of stakeholders and the relationships between them. That means networking. One finds that past research can often be recycled and put to fresh use when circumstances change – the "dustbin" information model.

Policy-makers can publicise a hitherto unrecognized issue, thus securing a place for it on the policy action agenda. Similarly, researchers can help to formulate or modify existing policies, examine whether fresh research can help to justify a previous policy decision or play a part in others' adversarial policy debates.

Researchers in Lithuania looked at equity and health and found that existing laws were not being implemented. Partly stimulated by pressure from the WHO Regional Office for Europe the researchers were able to draw fresh support for action from the Lithuanian parliament. MPs reacted positively when presented with the evidence on poor implementation of the legislation already on the statute book.

Legislative moves also sprang out of research in Mumbai, India, to improve quality of care in private sector health care facilities. In Malaysia, research results helped cut waiting

times in hospitals, and in Indonesia improved immunization and produced cheaper vector control for malaria. In Burkina Faso, researchers showed past work had failed, partly because of inadequate input from health centre staff.

There are three strata of policy-making: 1) governance policies which relate to organizational and financial structures; 2) service policies for resource allocation and patterns of services and 3) practice policies on how practitioners use resources to deliver patient care. To win support from people in these areas, one needs to ensure that the topics chosen for research address the most pressing concerns of decision-makers.

The decision-making "actors" are politicians (including elected officials), managers and civil servants and those scientific and technical professionals who know health and medical disciplines. They have power links beyond any basic differences of interest -- all powerful forces to be harnessed.

Support may emerge from unexpected quarters, such as other decision-makers who have relied on research to formulate policies in the past but who have moved on to posts in other sectors. Similarly, look to other sectors for allies, for example NGOs or members of the pharmaceutical industry. Then there are "mediators" who facilitate communication, institutions as well as individuals, both inside and outside the research community, in academe, the bureaucracy or international agencies. It is equally important to identify financial stakeholders.

Entry points and the process

Always keep in mind that the process is not neat and does not progress in a straight line. It includes "managing the research agenda", "producing evidence" on priority issues with research conducted at national and global levels, "promoting" its use and "utilizing" it in "decision-making" in policy and practice.

Sometimes, as in the case of questions over the effectiveness of malaria control in Tanzania, the need for research proved to be an entry point. In South Africa, private care was absorbing a high proportion of the budget: researchers presented evidence on the pattern of expenditure and it was used by decision-makers who wanted to help the disadvantaged.

When international development agencies are funding, they can exert considerable influence on the GRIPP process. So, knowing their agendas and their policies and priorities is essential.

Identifying barriers and strategies

The GRIPP process is a continuum and to achieve it one often needs to repeat different steps through a cycle of complex actions. These are conceptual stepping-stones which help those responsible for shaping policy to identify barriers and to overcome them. Decision-makers can ensure they are familiar with GRIPP practices, perhaps by joint policy-maker/researcher seminars on ongoing research. In this way researchers and policy-makers will be able to appreciate more the benefits of trustworthy information and better understand the role of the decision-making process. The World Bank Institute (WBI), for example, runs such meetings which attract both key decision-makers and researchers from developing countries.

There are number of case studies from Burkina Faso, China, Thailand and the UK which show how one can involve stakeholders and win funding through structured dialogue and developing research questions. To cope with rapid turnover of staff, the Lao PDR and Zimbabwe have documented the outcomes of priority setting exercises. Initiatives undertaken will be more effective if one ensures that research teams collaborate with other sectors' researchers nationally and regionally. The more multi-disciplinary collaboration one can generate the more chance that bids will win funding for good research which can be used for decision-making.

It helps to keep the human factor in mind and recognize that researchers want their contribution to be given credit and valued and to help their career advancement, for example through publication in scientific journals. Their work should not be anonymous, unpublished material owned by ministries.

One way to get the best from this invaluable resource is to give researchers a place on government committees and task forces or locate them in dedicated institutes for particular topics as is the case in Canada, Mexico, Thailand and the UK. These centres use expert communicators and mobilize networks. Their work is backed by targeted dissemination, building alliances and championing the results to obtain early feedback on uptake and the impact of published research.

Such institutes can lead from the front in commissioning research and making sure it is implemented. However, data from Colombia point up some problems, such as delays and "bureaucratic overload" making results unusable.

The Mexican Health Foundation

The Mexican Health Foundation (FUNSALUD) is a good example of a private-public partnership for policy support. A private, not for profit foundation in Mexico, it is dedicated to the analysis of current and future issues (in health) and the development of critical public opinion. It is a think-tank providing a neutral forum where critical, strategic problems are considered. It has developed the capacity to influence decision-making, and its success is believed to stem from its efforts to involve and balance powerful but diverse industrial, government, civil society and academic interests.

It tackles (a) research on high priority health problems and health policy research, (b) production of policy proposals, research papers and scientific publications, (c) general dissemination of books, information resources and databases, (d) development of health researchers, (e) seminars and other activities to analyse further health reforms, (f) regional

networking for policy development including support for research efforts and high-level discussions with health ministries and social security institutions, and (g) consulting services.

FUNSALUD relies for its sustainability on its endowment, most of which was provided by Mexico's private sector, although significant support has come from the Government. In addition, further income is derived from grants and contracts. FUNSALUD's investment policies have attracted funds, and it manages not only its own funds but also provides fund management services to third parties including research and government institutions.

Production of priority research

It is important that the research undertaken is relevant, timely and produces valid results. Training initiatives may be needed to improve methodology and quality, as well as scientific peer review. Keeping issues relevant was achieved in Indonesia by sharing safety-net findings right to the top of government and listening to feedback. The credibility of the researchers is important and has helped in Mumbai, India and Thailand.

It is also important that research institutions themselves review their own mission and goals and see where they fit in the overall situation. Linkages between institutions can help. Good examples are the Health Economics and Policy Network for sub-Saharan Africa (HEPNet) and the Network for Health Systems and Services Research in the Southern Cone of Latin America (RED SALUD).

There a number of examples of countries using outreach programmes which contact their research diaspora in order to harness their expertise either through remote collaboration or by persuading them to return home. This in part tackles loss of expertise through the "brain drain". The Australian Network of Expatriate Researchers is doing this, as are the British, Finnish and Irish. Developing countries such as India have already taken this route, and others may benefit by following suit.

Promoting the use of evidence

Both policy-makers and researchers must realize that the publication of results is not the end, it is only the beginning. Research evidence reaches the potential user in three ways, by "diffusion" (through journals), "dissemination" (active, public moves to raise awareness and change attitudes) and "implementation", aimed at changing behaviour, through meetings with opinion leaders, administrative and economic interventions, audit, feedback and reminders.

Decision-makers and their research colleagues have a powerful ally in the Internet. It is a means for the research teams to become "entrepreneurs", to "sell" their ideas and increase the value of the outcomes. One can also seek support for capacity building from various agencies such as the Alliance for Health Policy and Systems Research, the Council on Health Research for Development, the International Clinical Epidemiology Network and the Global Forum for Health Research.

Better mapping of production and use of evidence will help unravel the complex triangle of international donors, researchers and policy-makers. It will help tackle concerns over projects formulated by "Northern" partners and, at worst, the imposition of a research agenda. "Parallel agendas", where national priorities get meagre funding and attention, while the foreign agenda attracts the majority of resources, become clearer.

Governance and capacity development

GRIPP is key in an action-oriented approach for individuals and institutions. Different "actors" have specific needs. That is why decision-makers should encourage researchers to use GRIPP to strengthen pre-project, intra-project, post-project and peri-project activities. This builds the 'entrepreneur' role of the researcher in creating trust, credibility and supportive relationships. Similarly it helps to build relationships with the funding agencies.

Institutional mechanisms for GRIPP can be strengthened. As in the UK, a mechanism can be set up for long term interaction between the research community, decision-makers, users of health care, and funders. Priority setting mechanisms are needed, which engage all stakeholders and which monitor progress. Capacity development should develop not only research capacity but also the capacity of decision-makers to support the translation of evidence to policy and practice.

If policy-makers and decision-makers wish to push through health reforms rapidly, they will need to seek out good research information to achieve this. The WHO, for example, has developed such support in child and maternal health and disease control. Similar sources of evidence for health systems are badly needed.

In the final analysis, policy-making is a political process, so GRIPP is complex, but both failure and success can illuminate the route through the labyrinth.

HSR CAPACITY IN DEVELOPING COUNTRIES

HSR has great potential to benefit health systems and society generally. Countries such as Denmark, Canada and Sweden and UN bodies like UNDP, UNICEF and WHO, and the World Bank have led from the front in putting health research as a priority in the development agenda.

The challenge today is for developing countries to forge ahead by demanding more good research, producing it and then using it.

A prime target is improving the 10/90 gap in research resources and the 5/95 gap in research publications. The establishment of the Alliance in 2000 should be seen as a dynamo to advocate and support knowledge generation and research capacity to address the needs of health system development.

Key messages

Increasing the supply of resources is not enough. The experience of developing countries is that under-investment in basic research is not the only market failure. Rather, public officials, the media, industry, community groups and other potential users rarely seize opportunities to capitalize on new knowledge. This weak demand is reflected in low national investment in R&D, low salaries for researchers and a limited use of research findings.

Commercial pressures may further distort allocations, as scientists seek private gain from intellectual property. A balance is needed between researchers' "push" towards their own interests and the market's "pull" towards applications with the highest returns. In these circumstances, strengthening research leadership can be instrumental in efficiently integrating push and pull.

Demand-led research should translate into greater public benefit to society and more private benefits to researchers, for the latter through improved salaries and prestige. Increasing costs will be outweighed by the added public benefit – a win-win situation.

Research managers also need to pursue better knowledge management, then demand creation (so their work is taken up by users), coalition-building and leadership development.

The general principle applies: "Regardless of current capabilities, individuals, firms and countries will be able to create wealth in proportion to their ability to learn." Knowledge promotes economic growth and better social outcomes. While different countries will have different needs, targets and funding needs must be identified by all.

Know your resources

Identifying capacities can help decision-makers benchmark their national strengths and weaknesses. This will also help them gauge when their strategy can reach critical mass and start to make an impact. Some elements to evaluate, in comparison with similar indicators for other countries and with country per capita income include:

- Health system researchers per million population
- Health-system project funding as a proportion of total health expenditure
- Experience of director/leader of research units
- Proportion of researchers with PhD and project funding per researcher
- Number of projects initiated per year
- Capacity development activities undertaken

The local and global challenge

Low national investment in R&D, inadequate equipment and supplies and low salaries for researchers offer little incentive for newly trained researchers to remain in advanced public research centres. Apart from boredom producing poor innovation, this situation can be worsened by the threat of a brain drain. Making provision for returning migrants, as mentioned earlier, and better access to the global research community, e.g. through the Internet, can help palliate this.

Capacity for knowledge production

The Alliance carried out a survey into research capacity in a large number of countries. A rough estimation was made of the total number of health systems research institutions, including numbers of researchers and projects and project funding, in low and middle-income countries outside Europe. On the basis of the 807 institutions identified by the Alliance, it was estimated that institutions in the 51 developing countries not in contact with the Alliance would, on the basis of their population, amount to 8% of the total in developing countries. The total universe was then estimated to comprise 878 institutions in all of the 133 developing countries. This procedure may have exaggerated the number of existing institutions as not all countries, particularly the smaller, low-income ones, necessarily have health systems research institutions. These extrapolations should be considered as highly tentative.

Low-income countries have the highest external research project funding as a proportion of total health expenditure, with 0.033 per cent, as against 0.007 per cent and 0.018 per cent for lower and upper middle-income countries respectively. As a whole, developing countries spend 0.017 per cent of health budgets on HSR. On average each institution has 3.2 projects; 21% of institutions have only 1-2 researchers in HSR; and only 24% of health systems researchers have PhDs – all indications of the need for capacity development.

Supporting training

Training is essential, but on its own is insufficient to increase HSR capacity. There are now resource centres and 'toolkits' such as those from the Alliance and The Collaborative Training Programme on Research for Policy Practice and Action to help tackle gaps across the gamut of research needs.

Direct support of research projects and networks

Demand for support for health systems research has been growing since the early 1990s. Many hundreds of applications have been made for project support and a significant number gained funding.

There are also a number of funding sources which can help develop regional HSR networks. By encouraging national research teams to participate in these networks, decision-makers may increase the value and reach of their own national research capacity.

While personal leadership is important, the overarching aim is greater, sustainable national commitment and more diversified support, including private-sector support. Improved research by networks increases demand for it and enhances cost recovery. It complements institutional foundations and develops bridges to policy-makers. Global networking can bring increased resources, better allocation to projects, and complementary funding, and contribute to identification of global research priorities.

There are useful experiences regarding the application of health systems research from networks in Latin America and Sub-Saharan Africa. HEPNet in Sub-Saharan Africa, for example, has identified how research is most often driven by donors, whose priorities do not accord with those of the receiving countries. Latin America's REDSALUD has emerged as a representative body for its region in HSR. Other examples of approaches to strengthen HSR capacity include the Health Research Coordination Unit of the Mexican Institute of

Social Security, South Africa's Health Systems Trust, the Health Economics Unit of the University of Cape Town in South Africa, the Health Policy Analysis Unit of the Ministry of Health of Uganda and Thailand's HSR Institute.

TIME TO MOVE THE RESEARCH AGENDA FORWARD

The good news is that there is now a remarkable wave of awareness and interest in the need to strengthen national health systems. A consensus has been reached on the importance of three elements: set national health priorities; address institutional and organizational constraints and opportunities; and monitor outcomes. While it is dangerous to expect developing countries to leap-frog over certain stages of HSR development, innovation guru Peter Drucker rightly says "the comparative advantage of less developed countries no longer lies in lower labour costs, but in the application of knowledge".

Research is most efficient when it is constantly interacting with and learning from real-life experience. Big gains in efficiency can come by simply applying knowledge already available. National research capacity expansion is as important as that of individuals and institutions.

The imperative to strengthen national health systems demands an innovative and comprehensive re-think of how HSR can become:

1. more integral to national health system development
2. more visible
3. broader and more comprehensive
4. more innovative
5. more ready to challenge itself to collaborate with others.

This summary should encourage you to dig deeper into HSR and then, in the words of WHO Director General Dr Lee, become a powerful part of the process required to "make it happen".

make it happen

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