Strengthening health systems

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Recent efforts to accelerate progress toward the health-related Millennium Development Goals have highlighted the importance of health systems as the bedrock for sustained improvements in health outcomes. Yet the nature of health systems and their current weaknesses are not well understood, and evidence on how best to improve health-system functioning is relatively sparse. This article explains the importance of health systems, highlights some of their common weaknesses, and provides illustrations of how they can be improved, drawn from experiences in Ghana, Kenya, Tanzania, and South Africa.

The term 'health system' is a shorthand way of referring to all the organisations, institutions and resources that are primarily concerned with improving health in a particular country. They ensure the provision of preventive, rehabilitative, curative, and other public health services, as well as the generation of the financial, physical, and human resources needed for service provision. Most importantly, health systems also encompass the management and governance arrangements that help ensure efficiency and equity in provision of service, responsiveness to patient needs, and accountability to communities and the broader society.

Why is a health system important?

The recent global focus on control of diseases such as HIV/Aids, tuberculosis (TB) and malaria has concentrated attention on interventions that need to be scaled up, such as antiretroviral therapy, TB and malaria treatment, or intermittent treatment of pregnant women for malaria. However, the great majority of interventions depend in some way on a basic infrastructure of services, which in turn depends on the existence of a higher-level infrastructure that provides resources and supervision. For example, a seriously ill child taken to a clinic with a fever needs a diagnosis by a health worker who can evaluate the child's condition; there also needs to be a range of drugs from which the health worker can select, and a means by which the child can be referred to hospital if necessary.

Common weaknesses in health systems

Health systems face a number of common constraints at different levels (see Table 1). At the community and household level, lack of demand – for example, for delivery by a trained birth attendant – can limit coverage. However, low take-up of service can also result from weaknesses at higher levels – for example, a lack of staff who are appropriately trained or who are sufficiently responsive to patient needs; services that lack basic equipment; or charging policies that make services unaffordable. At even higher levels, the health systems may lack capacity to manage a drug supply system effectively or to plan health-worker training programmes and anticipate expansion needs.

Table 1. Constraints to scaling up

Community and household	Inadequate demand for effective interventions; barriers to use of effective interventions
Health services delivery	Shortage and maldistribution of qualified staff; low pay; poor motivation; inadequate availability of drugs and medical supplies
Health sector policy and strategic management	Weak drug policies and supply systems; weak management systems; competing donor programmes
Public policies across sectors	Rigidities of government bureaucracy; limited communications and transport infrastructure
Environmental characteristics	Poor governance; political instability; unfavourable physical environment

Recent disease control initiatives are encountering these problems and are seeking ways to deal with them. However, there can be a big difference between the solutions from the perspective of a disease-specific programme and solutions from the perspective of the system as a whole. For example, the problem of lack of financial access often leads experts to recommend financial exemptions for specific conditions or diseases, whereas a systems response would seek to develop risk-pooling strategies that encompass all health problems.

Table 2. Health system constraints and possible disease-specific and health system responses

Constraint	Disease-specific response	Health system response
Patients' inability to pay for services	Price reductions for specific diseases	Risk-pooling strategies
Distance to facility	Outreach for specific diseases	Planning for new facilities
Poorly skilled staff	Training on specific diseases	Revising medical curricula
Poorly motivated staff	Financial incentives for delivering priority services	Reviewing salary structures and promotion procedures
Weak planning and management	Training workshops in planning and management	Restructuring ministries of health, developing cadre of dedicated managers
Lack of inter-sectoral action and partnership	Cross-sectoral committees to address specific diseases	Building systems of local government with representation from various sectors
Poor-quality care among private sector providers	Training for private sector providers	Developing accreditation and regulation systems

Table 2 illustrates the difference between responses to health system constraints that derive from a disease-specific focus and those that reflect a health systems focus.

How can health systems be strengthened?

Strengthening health systems requires action – simultaneously or appropriately sequenced – on a number of fronts. Managers may need to pay attention to the performance of a health system's functions (for example, financing, stewardship and regulation, service provision) as well as the relationships between the health system, its clients, and their communities.

Improving financial access to services

User fees have been one of the most contentious topics in health system discussions. Cost sharing by clients is often used to supplement other revenue sources in highly resource-constrained health systems. However, there is growing evidence that requiring user fees can seriously undermine the access of the poor to healthcare.

In February 2001, the government of Uganda abolished cost-sharing in public facilities at the community level. This policy change was followed by a marked increase in the use of health services by all population groups. In villages near public health centres, the increase was greatest among the poorest groups. The heightened demand meant, however, that centres ran out of drugs more often during the first year of implementation, but drug supplies gradually improved during the second year.

Fee removal needs to be accompanied by a package of measures to cope with its consequences, including replacing the lost revenue and ensuring services have the human and physical resources to cope with increased demand.

Making better use of the private sector

Private sources of healthcare – whether drug sellers or clinics – are often the first port of call when people fall ill. They may be geographically closer than public services, and more able to tailor the frequency and cost of services to clients' means. However, private health sources often provide poor-quality care.

In Tanzania, local drug shops are important sources of drugs. They are required to obtain a permit each year and to meet certain conditions relating to premises, qualifications of the seller, and products. They can carry nonprescription medicines only. A study in three districts found that despite regular inspections, many drug shops regularly violated regulations – including the sale of prohibited or inappropriately packaged drugs. Illegal drug sales may have contributed to poor quality treatment and encouraged the development of drug resistance, but they had important benefits. Supplies were more reliable in drug shops than in government facilities. Revising the regulations to permit drug shops to stock a small set of oral antibiotics, for example, would allow more constructive engagement between sales staff and regulators, including the provision of information on essential drugs, registered brands, appropriate dosing, and consumer advice. The Strategies for Enhancing Access to Medicines project in Tanzania has experimented with allowing a wider range of drugs to be provided in one region using accredited drug-dispensing outlets (that is, drug shops that meet specified quality criteria and whose staff have been trained by the project).

In Kilifi district, Kenya, an education programme piloted by the KEMRI-Wellcome Trust collaborative research programme worked with district health managers to train and inform rural drug retailers and communities. The programme's effectiveness was evaluated through annual household surveys of drug use and shop surveys administered in an early and a late implementation area. The programme showed major improvements in retailers' drug-selling practices. Between 1998 and 1999, the proportion of antimalarial drug users obtaining an adequate dose rose from 8 per cent to 33 per cent. By 2001, with a national change to sulphadoxine pyrimethamine, the proportion with an adequate dose had risen to 64 per cent. Over the three years, the proportion of shop-treated childhood fevers receiving an adequate dose of a recommended antimalarial drug within 24 hours rose from one per cent to 28 per cent.

Capacity to contract out service provision to other agencies

Contracting services to the private sector is increasingly advocated as a solution to the difficulties that governments face in managing and extending service provision. However, a South African experience demonstrates that there is no avoiding the need to strengthen government capacity – contracting out also requires government management expertise.

Successive studies have evaluated experiences in contracting out hospital care and primary care services in South Africa. One study compared three district hospitals whose management had been contracted out to the same private company, with three comparable, publicly managed district hospitals nearby. Overall, the contractor hospitals were able to provide care of similar quality at significantly lower cost – largely because they were twice as productive as the public hospitals as a result of more effective human resource policies. However, the contractor captured all the efficiency gains as profit. Because government officials had lacked the skills, capacities, and information required to negotiate a mutually beneficial contract with the private management company, contracting out actually cost the government more than directly providing services. In addition, government officials had underestimated the extent of potential competition for contracts, and therefore overestimated their dependence on the one contractor.

A similar study evaluated the performance of contracts with general practitioners (GPs) for primary care in two South African provinces and compared their performance with that of public clinics. GPs' costs were similar to those of small public clinics, but the service was generally of poorer quality. Exploration of the nature of the relationship between purchasers and providers found that the contract was incompletely specified and open to interpretation. Monitoring was constrained both by a lack of capacity and resources and the difficulty of monitoring a complex service delivered in remote locations. Sanctions for not providing contracted services appropriately were vague and rarely used because a sense of mutual dependence between parties to the contract had lessened their willingness to enter into disputes.

Any plan to introduce contract-based arrangements for service delivery must thus ensure government capacity is built to manage effectively these new types of relationship.

Strengthening community-based service delivery

Strengthening health systems, in all their various dimensions, is a long-term process that must develop within countries in ways that fit their specific context and circumstances. Thus, there is no universal blueprint; local experiences and evidence need to feed into the development of new approaches. The Ghana Community-based Health Planning and Services (CHPS) initiative demonstrates how strategies tested originally in a research project can evolve into nationwide service reforms to support community-based primary care. The approach was a response to difficulties experienced in scaling up volunteer village health-worker programmes, and in ensuring that Community Health Nurses, a new cadre of health worker introduced in response to problems with the volunteer approach, were active in community-based care rather than confined to fixed facilities. CHPS involves shifting to a programme of mobile community-based care provided by a resident nurse, as opposed to conventional facility-based and outreach services. Most importantly, introducing CHPS in a district involves extensive planning and community dialogue. Communities are required to demonstrate commitment by building a community health compound. Staff in more advanced districts serve as trainers for new districts.

Sustainability

Strengthening the health system is of fundamental importance if countries seek long-term and sustainable improvements in health. Countries need to identify which aspects of health system functioning need improvement, and develop programmes appropriate for a country's context and experiences. Although lessons cannot necessarily be transferred wholesale from one setting to another, much can be learned from good quality evaluation research of country programmes.

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The ***Disease Control Priorities Project*** *(DCPP) is an ongoing effort to assess disease control priorities and produce evidence-based analysis and resource materials to inform health policymaking in developing countries. DCPP has produced three volumes – 'Disease Control Priorities in Developing Countries,' 2nd edition, 'Global Burden of Disease and Risk Factors,' and a companion book in seven languages, 'Priorities in Health,' providing technical resources that can assist developing countries in improving their health systems, and ultimately the health of their people. Extensive information on health systems is available in 'Disease Control Priorities in Developing Countries,' 2nd edition, Chapter 3, 'Strengthening Health Systems.' The sources for the text and tables in this article are provided therein. This chapter, and the book as a whole, can be downloaded free at www.dcp2.org/pubs/DCP.*

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