

## Chapter Seven

# Health Systems: principled integrated care

To meet the formidable challenges described earlier, this chapter calls for the reinforcement of health systems to be based on the core principles of primary health care as outlined at Alma-Ata in 1978: universal access and coverage on the basis of need; health equity as part of development oriented to social justice; community participation in defining and implementing health agendas; and intersectoral approaches to health. These principles remain valid, but must be reinterpreted in light of the dramatic changes in the health field during the past 25 years. Four important issues that health systems must confront are examined: the global health workforce crisis, inadequate health information, lack of financial resources, and the stewardship challenge of implementing pro-equity health policies in a pluralistic environment.



# 7

## Health Systems: principled integrated care

Confronting the global health challenges examined in the previous chapters requires health systems to be strengthened. Without this, the health goals described in this report will remain beyond reach. The lessons learnt from past successes, including the skills and strategies developed from the experiences of tackling polio and SARS, must be applied in combating the HIV/AIDS treatment emergency and in working towards the Millennium Development Goals (MDGs). Progress towards these and other objectives will not be sustainable unless specific health targets – including the “3 by 5” target of reaching three million people in developing countries with combination antiretroviral therapy for HIV/AIDS by the end of 2005 – support a broad horizontal build-up of the capacities of health systems.

Despite the health reforms of recent decades, inadequate progress has been made in building health systems that promote collective health improvement. Now, however, fresh opportunities are emerging. Health stands high on the international development agenda, and new funds are becoming available for health work in poor countries. Extending health-enabling conditions and quality care to all is the major imperative for health systems.

This chapter explores how the values and practices of primary health care, adapted to the realities of today’s complex health landscape, might provide a basis for the improvement of health systems. It reviews basic ideas about primary health care and clarifies the concept of the development of health systems that are based on primary health care. It then examines four major challenges facing health systems: the global health workforce crisis; the lack of appropriate, timely evidence; the lack of financial resources; and the stewardship challenge of implementing pro-equity health policies in a pluralistic environment. The final section looks at how WHO is working with countries to clarify health systems goals and to strengthen systems in line with primary health care principles.

The health system comprises all organizations, institutions and resources that produce actions whose primary purpose is to improve health (*1*). The health care system refers to the institutions, people and resources involved in delivering health care to individuals. This chapter is mostly concerned with health care systems. Nevertheless, health care providers are often involved in promoting health-enabling conditions in the community. Indeed, this relationship between patient care and public health functions is one of the defining characteristics of the primary health care approach.

The health systems performance assessment framework developed by WHO in the late 1990s was an attempt to put into effect the primary health care concern for equity and population health outcomes, by providing analytical tools to translate these concerns into relevant

evidence. The framework drew the attention of policy-makers to issues such as the catastrophic health expenditure in a number of countries. Although this report does not directly apply the framework, it assumes that policy-makers will use this and other relevant tools to measure the success of an approach to health systems scale-up based on primary health care.

Valuable knowledge has been gained in recent years about how health systems work and why they fail. Initiatives such as the European Observatory on Health Care Systems are producing important insights (see Box 7.1), though fundamental questions remain unresolved. This report does not propose a complete model of the development of health systems based on primary health care, which would be impossible given the current state of evidence. The aim is to open lines of enquiry that will be of use to countries and international health partners as they weigh options and take action to strengthen systems, making them responsive to the needs and demands of all, especially the poor.

## The core principles of primary health care

Primary health care became a core policy for WHO in 1978, with the adoption of the Declaration of Alma-Ata and the strategy of “Health for all by the year 2000”. Twenty-five years later, international support for the values of primary health care remains strong. Preliminary results of a major review suggest that many in the global health community consider a primary health care orientation to be crucial for equitable progress in health (2).

No uniform, universally applicable definition of primary health care exists. Ambiguities were present in the Alma-Ata document, in which the concept was discussed as both a level of care and an overall approach to health policy and service provision. In high-income and middle-income countries, primary health care is mainly understood to be the first level of care. In low-income countries where significant challenges in access to health care persist, it is seen more as a system-wide strategy.

### Box 7.1 The European Observatory on Health Care Systems

Countries in the European Region – diverse in terms of language, history and wealth – have an array of approaches to the organization of health systems. The European Observatory on Health Care Systems and policies seeks to disseminate information on more than a decade of change, analysing the reforms and generating evidence on what works in different contexts and why. It ensures that Europe’s national policy-makers can set their own experiences in the European context and make comparisons across borders, draw on thematic and comparative analysis of the key challenges they face, and have access to clear, practical evidence.

The Observatory is a partnership that brings together the WHO Regional Office for Europe, governments (Greece, Norway and Spain), international and nongovernmental agencies (the European Investment Bank, the Open Society Institute, and the World Bank) and academia (the London School of Economics and Political Science and the London School of Hygiene and Tropical Medicine). All the Observatory’s materials are available on its web site.<sup>1</sup>

**Information and monitoring.** The Health System in Transition series of 70 country profiles provides analytical answers to a standard

set of questions and uses clear definitions to create a baseline of information, drawing attention to what is distinct about a particular country. The Observatory covers the whole European Region and some additional OECD countries, to allow systematic comparisons and the review of reforms over time.

**Analysis.** The Observatory produces comprehensive studies on key health system and policy areas, including hospitals, funding, regulation, European enlargement, social health insurance, purchasing, primary care, pharmaceuticals, mental health, human resources, and targets. It uses secondary or meta-analytical research, bringing together experts from across Europe to synthesize existing findings, to work country experiences into a conceptual framework and to draw out practical lessons and options.

**Dissemination.** Engaging with policy-makers and their advisers helps ensure they can use the information and analyses generated. The Observatory runs seminars and workshops for small groups of high level policy-makers, often in partnership with agencies supporting health system and policy reform, on matters such as funding options, the implications of EU accession for new Member States, or equity.

<sup>1</sup> [www.observatory.dk](http://www.observatory.dk).

It is useful to understand primary health care as involving both core principles and a variable set of basic activities. For the purposes of this discussion, it is the principles that are most significant (3), including:

- universal access to care and coverage on the basis of need;
- commitment to health equity as part of development oriented to social justice;
- community participation in defining and implementing health agendas;
- intersectoral approaches to health.

## Enduring principles in a changing environment

The global, national and local environments in which primary health care values must be translated into action have changed fundamentally in the past 25 years. Key demographic and epidemiological shifts include ageing populations, the explosion of HIV/AIDS, and the expanding double burden of diseases in low-income and middle-income countries (see the example in Box 7.2). Advances in health technology have transformed many aspects of medical practice and raised expectations concerning the types of functions and services that health systems should provide.

The institutional context of health policy-making and health care delivery has also changed. Government responsibilities and objectives in the health sector have been redefined, with private sector entities, both for-profit and not-for-profit, playing an increasingly visible role in health care provision. The reasons for collaborative patterns vary, but chronic underfunding of publicly financed health services is often an important factor. Processes of decentralization and health sector reform have had mixed effects on health care system performance (4).

The ideas and activities associated with primary health care have themselves undergone changes. In the 1980s, the approach termed “selective primary health care” gained favour. By focusing on the technical challenges of delivering limited basic interventions in poor areas, this strategy encouraged “vertical” programme structures. These programmes produced

### Box 7.2 Primary care in a changing environment: the “health houses” of the Islamic Republic of Iran

The Government of the Islamic Republic of Iran has invested strongly in training health care providers. Primary health care facilities, popularly known as “health houses”, provide an active network staffed by community health workers, or *behvarzes*, who are trained and regularly supervised by staff from district health centres. The *behvarzes* provide basic care and advice on many aspects of maternal and child health and common communicable diseases. They also record local health information through the “vital horoscope” data system, which includes information collected during annual household visits. This system provides valuable information for planning services both locally and nationally. There are high levels of community involvement in the delivery of community-based health care; 90% of the population belongs to a health insurance scheme, and some schemes are explicitly designed to protect the poor.

Today, the Islamic Republic of Iran faces several challenges to maintaining these achievements in a changing environment. The country’s epidemiological profile has changed, partly as a consequence of the success of the strategy led by primary care. The major burden of disease is attributable to noncommunicable diseases and injuries, though there are some differences between richer and poorer provinces. Urbaniza-

tion is increasing, with an associated change in lifestyle. The private health sector is increasing. Clinical case management is often not as evidence-based as it could be. A recent study on health financing demonstrated that the financing system is not as equitable as had been thought: out-of-pocket payments are high, and the poor are less well protected from catastrophic health expenditures than they were previously.

The government is moving to respond to these new challenges. It is already beginning to reorient the primary health care activities delivered in health houses. Technical guidelines for interventions and training for different cadres of health worker are being reviewed as part of an effort to improve quality of care. There are discussions about a common benefit package, what it should include and by whom it should be provided; specifically, how to involve private providers more effectively in the delivery of critical interventions, both preventive and curative, for example through contracting. The different insurance schemes are being reviewed within a broader analysis of overall health system financing, and there are debates about what sort of organizational arrangements within the public sector would enhance the quality and efficiency of public providers.

important gains, for example in immunization coverage and child mortality reduction, but were at odds with the comprehensive vision of primary health care developed at Alma-Ata, notably its emphasis on tackling the socioeconomic determinants of ill-health. In the 1990s, the World Bank recommended a set of core public health interventions and a package of essential clinical services influenced by primary health care models, though critics questioned whether these strategies responded adequately to the messages of equity and community participation delivered at Alma-Ata (5).

Originally, primary health care and the health-for-all movement represented an effort to change practices and structures in the health sector based on population health criteria. Subsequent health sector reform efforts have often been steered by criteria largely extrinsic to health (for example, broad commitments to decentralization or civil service reform, or the need to reduce government spending). Reaffirmation of primary health care principles by global health stakeholders signals a recognition of the need to return to population health criteria as the basis for decisions affecting how health care services are organized, paid for and delivered.

## Principles in a systems perspective

This report reinforces an important conceptual shift towards the model of health systems based on primary health care. In a systems perspective, the potential conflict between primary health care as a discrete level of care and as an overall approach to responsive, equitable health service provision can be reconciled. This shift emphasizes that primary health care is integrated into a larger whole, and its principles will inform and guide the functioning of the overall system.

A health system based on primary health care will:

- build on the Alma-Ata principles of equity, universal access, community participation, and intersectoral approaches;
- take account of broader population health issues, reflecting and reinforcing public health functions;
- create the conditions for effective provision of services to poor and excluded groups;
- organize integrated and seamless care, linking prevention, acute care and chronic care across all components of the health system;
- continuously evaluate and strive to improve performance.

Intervention across the disease continuum is needed to achieve the comprehensive care envisaged by such a system. To deal with the increasing burden of chronic diseases, both noncommunicable and communicable, requires upstream health promotion and disease prevention in the community as well as downstream disease management within health care services. Two integrated health care models, the chronic care model and its extension – WHO's innovative care for chronic conditions framework – promote primary health care concepts: intersectoral partnerships, community participation and seamless population-based care. Evidence supports the use of these integrated models as a means of implementing primary health care principles, with demonstrated reduction in health care costs, lower use of health care services, and improved health status (6–9).

Linking expanded HIV/AIDS treatment and health care systems development is a crucial challenge. No blueprint exists, but valuable examples are emerging. Since May 2001, Médecins Sans Frontières has provided antiretroviral therapy for HIV/AIDS through primary health care centres in the township of Khayelitsha, South Africa (10). The delivery of HIV/AIDS treatment in a primary health care setting underscores the potential for integration of different types of care and begins to show how scaling up treatment could fit into – and help drive

– an overall strengthening of health care systems based on primary health care principles. The Khayelitsha antiretroviral programme uses a nurse-based service model and relies on strong community mobilization for peer support. It has shown that HIV/AIDS treatment can be rolled out most effectively if:

- the entire health system is mobilized and HIV/AIDS treatment activities are integrated into the basic package of care;
- treatment services are decentralized to ensure coverage and community involvement;
- treatment and care are part of a “continuum of care” supported by a facility-linked home-based care system and a referral system.

The additional resources that must flow into countries’ health sectors to support HIV/AIDS control efforts, including “3 by 5”, can be used in ways that will strengthen health systems horizontally. Developing context-specific strategies to achieve this will be part of WHO’s technical collaboration with countries. Similarly, if the recommendations of the Commission on Macroeconomics and Health for large increases in global investment in health are followed by the international community, the coming years will offer a crucial opportunity for development of health systems that are led by primary health care.

Enormous obstacles to the scale-up of health systems based on primary health care persist. In some countries, violent conflicts and other emergencies have seriously damaged health systems (see Box 7.3). Multiple forms of inefficiency undermine systems, such as government health expenditure disproportionately devoted to tertiary care and programmes that do not focus on a significant burden of disease (11). Lack of financial resources remains a fundamental problem. Total health expenditure is still less than US\$ 15 per capita in almost 20% of

### Box 7.3 Rebuilding Iraq’s health sector

The Gulf War of 1991 and the economic sanctions marked the start of the decline of a health care delivery system that had been a model for the region during the 1980s. Health indicators dropped to levels comparable to some of the least developed countries: in 1996, infant, child, and maternal mortality rates were estimated at 100/1000, 120/1000, and 300/100 000 live births, respectively, a twofold increase over 1990 levels. The Oil for Food programme brought a relative improvement of the health of Iraqi people, although still far from pre-1990 levels. Health outcomes are now among the poorest in the region.

Iraq is below the regional average in terms of physicians to population (5.3 doctors per 10 000 population in 2002); there are too many specialists but too few primary health doctors and nurses. Following the 2003 war, the health infrastructure, which had suffered from years of disrepair, was further weakened by the widespread looting, inadequate electricity and water supply, and institutional instability.

The pre-2003 war health system was hospital-based and driven by curative care, and did not respond adequately to health needs. The challenge for Iraqi policy-makers and the donor community is to re-establish basic services in the short term while transforming the inefficient and inadequate health services to a system based on primary care, prevention, and evidence-based policy. The new system should tackle the disease burden faced by Iraq’s people and be affordable within the available envelope of public finance.

Major challenges face the health sector: limited capacity of the Ministry of Health (and health directorates in governorates) to

undertake essential public health functions; lack of a package of health services that includes catastrophic care in the event of emergency and diagnostic and laboratory facilities; external brain drain of human resources; lack of an information system for informed decisions at the policy and implementation levels; inadequate financial resources and unclear mechanisms for smooth flow of funds to meet the investment and operational costs of the system; and the need for improved coordination among all stakeholders in health to optimize donated resources.

Senior staff from the Ministry of Health, officials from the Coalition Provisional Authority, and representatives of organizations of the United Nations system, nongovernmental organizations and donors met in Baghdad in August 2003 to determine immediate and medium-term priorities to enable the health sector to provide health services that are accessible, equitable, affordable and of adequate quality.

Re-establishing the functioning of the health sector to pre-war levels requires funds for salaries and other priority recurrent expenditure. It is estimated that Iraq’s financial requirements for health services in 2004 – from government and donor sources – will be in the order of US\$ 0.8–1.6 billion (or US\$ 33–66 per capita). Assuming a sustained and increasing income, the projections for the period 2004–2007 are in the range of US\$ 3.7–7.8 billion, which at the end of the period translate into a per capita public expenditure of US\$ 40–84. Forecasting economic performance, fiscal capacity and donors’ willingness to sustain Iraq for the period 2004–2007, however, is an exercise fraught with difficulties.

WHO Member States. In many countries, especially the poorest, people in need of treatment for themselves or their families still pay for the bulk of health services out of pocket.

All efforts to improve health care systems in developing countries must confront several main challenges: workforce development and retention; health information management; financing; and government stewardship within a pluralistic health landscape. The remaining sections of this chapter consider these topics. Systems face difficulties in numerous other areas as well, but all four of these problems demand urgent action in order to scale up the system to meet health targets. If constraints in these areas are not overcome, little progress will be made in improving access to care among the poorest.

## The global health workforce crisis

The most critical issue facing health care systems is the shortage of the people who make them work. Although this crisis is greatest in developing countries, particularly in sub-Saharan Africa, it affects all nations. It severely constrains the response to the AIDS treatment emergency and the development of health systems driven by primary health care, even as AIDS reduces the available workforce. Botswana's commitment to provide free antiretroviral therapy to all eligible citizens is frustrated, not by financing, but by the severe lack of health personnel (12).

Unfortunately, workforce issues are still considered to be relatively unimportant by both national governments and international agencies. Rapid and substantial strengthening of the workforce is urgently required to capitalize on the funds and pharmaceuticals that are now available.

The health workforce crisis has to be confronted in an economic and policy environment very different from that of 25 years ago. Traditional models in which the government directly recruits, trains, hires and deploys health professionals no longer reflect the reality of most developing countries. Most countries have undergone decentralization and reforms of the civil service and the health sector. There has been a great expansion in the health care roles of nongovernmental organizations and private providers. Furthermore, all countries are now part of the global marketplace for health professionals, and the effects of the demand–supply imbalance will only increase as trade in health services increases (13). Accordingly, new models for health workforce strengthening must be developed and evaluated (14).

### Size, composition and distribution of the health workforce

The number of health workers in a country is a key indicator of its capacity to scale up delivery of interventions. This crisis is nowhere greater than in sub-Saharan Africa, where limitations on staffing are now recognized as a major constraint to achieving national health goals and the MDGs (15). In Chad and the United Republic of Tanzania, for example, the current workforce is grossly insufficient for the extensive delivery of priority interventions (16). Countries facing such extreme personnel shortages urgently need a rapid increase in the numbers of health workers to perform key tasks, particularly the delivery of services at community level in underserved areas.

The number of health workers in a country is not the only determinant of access to primary health care. Figure 7.1 shows that the number of births at which skilled attendants are present is only partially related to the number of health professionals in a country.<sup>1</sup> Guinea, Indone-

<sup>1</sup> The term "health professionals" is defined for the WHO database as including physicians, nurses, midwives, dentists and pharmacists.

sia and Paraguay have similar workforce numbers but wide differences in the level of coverage. This is caused by several factors, including the skill mix of health workers, their geographical and functional distribution, and their productivity. These data indicate the importance of using the existing workforce more effectively.

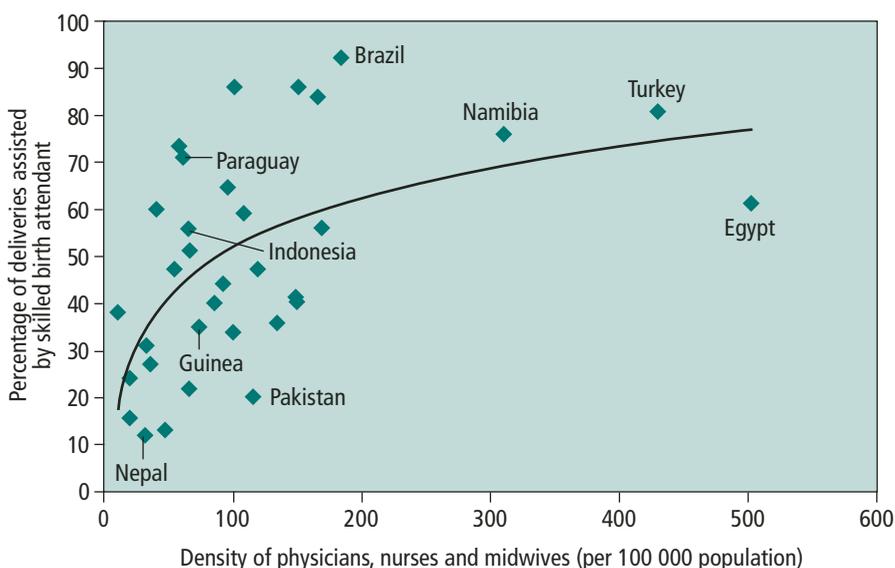
Gender discrimination in the health professions has many serious implications for the long-term strength of the health care system and especially for the delivery of services to poor and disadvantaged populations. A specific issue concerns the under-representation of women among those who manage and direct services, even though most health care workers are women. For example, in South Africa, men represent only 29% of personnel in administration overall, but they occupy 65% of all senior management posts (17). Without proper representation at the managerial and leadership levels, women's needs as employees within the health system will continue to be neglected. More generally, workforce policy and planning must consider gender and life-cycle issues, not only out of concern for equity, but also to enable efficient and effective development of a health care system that responds to and meets the particular needs of women.

## Workforce training

Meeting urgent health challenges while laying stronger foundations for health systems requires that health planners consider the composition of the health workforce in terms of training levels and skill categories. In developed countries, experimentation with new categories of health worker is a response to cost-containment and quality of care concerns. In developing countries such experimentation is a direct response to limited supply.

To achieve the goals associated with health care systems driven by primary health care, new options for the education and in-service training of health care workers are required so as to

**Figure 7.1 Relationship between births accompanied by skilled attendants and number of health professionals,<sup>a</sup> 33 developing and transition countries**



<sup>a</sup>WHO/UNICEF latest estimates.

ensure a workforce more closely attuned to country needs. Training of students from developing countries at high-prestige institutions in developed countries is useful only when there is no local or regional alternative. Although there are about twice as many nursing schools as medical schools worldwide, in the African Region there are 38 nursing schools and 64 medical schools. This suggests that too many expensive health workers are produced in places that might have a greater need for new types of providers with an education more focused on primary health care. The public health workforce also needs strengthening, based on a new approach to in-country or regional training that emphasizes the management of health problems at the district level (18).

The workforce of doctors is often complemented by training nurse practitioners, “assistant medical officers” and mid-level professionals. These categories are health professionals who can assume many of the responsibilities previously reserved for those with a full medical degree (see Box 7.4). For example, many studies in developed countries show that nurse practitioners can reduce the costs of care without harming, and sometimes actually improving, health outcomes (21, 22). In the Pacific Islands, mid-level practitioners, with various titles such as medex, health assistant, or health officer, play an important role in meeting curative and preventive needs, especially in remote or rural areas (23). In other countries, community health workers are trained in very specific and high-priority activities, making it possible to serve populations that are out of the reach of formal health care services.

In the past, primary health care strategies based on community health workers or other alternative health care providers have been difficult to sustain (24). However, evidence suggests that such strategies can be effective, given appropriate training (25, 26). To be successful, the creation of new types of health worker requires that they be valued for their distinctive contribution, rather than treated as second-class providers. This means offering them career development prospects, rotation to and from rural and underserved areas, good working conditions, the chance to work as a team with other professionals, and an adequate salary. New cadres can be seen not only as a pragmatic response to current shortages, but as a cohort whose skills can be continually upgraded through in-service training, leading in the longer term to their incorporation in the more highly qualified professional categories. Evidence is growing that community members can carry out a wide range of health care tasks, including treatment of more complex conditions (10, 25–28).

### Migration of health workers

Policy-makers in all countries are concerned about “brain drain” of the health workforce within and between countries, although relevant research is still in its infancy (29). The movement of health professionals closely follows the migration pattern of all professionals. While

#### Box 7.4 Training assistant medical officers: the *técnicos* of Mozambique

In 1984, a three-year programme was initiated to create assistant medical officers (*técnicos de cirurgia*) to perform fairly advanced surgical procedures in remote areas where consultants were not available (19). The programme trains middle-level health workers in skills required for three broad priority areas: pregnancy-related complications, trauma-related complications and emergency inflammatory conditions. Two years of lectures and practical sessions in the Maputo Central hospital are followed by a one-year internship at a provincial hospital, under the direct supervision of a surgeon.

Forty-six assistant medical officers were trained between 1984 and 1999, and the evaluation of their influence on quality of care is promising. For example, a comparison of 1000 consecutive caesarean sections conducted by *técnicos de cirurgia* with the same number conducted by obstetricians or gynaecologists indicated that there were no differences in the outcomes of this type of delivery or in the associated surgical interventions (20). Many countries have now started or are considering similar programmes, based on their claimed cost-effectiveness. The potential impact of this type of health worker on both quality and efficiency of health care must continue to be evaluated.

doctors and nurses make up only a small proportion of professional migrants, their loss weakens health systems.

The internal movement of the workforce to urban areas is common to all countries. Within a region, there is also movement from poorer to richer countries, for example from Zambia to South Africa or from the United Republic of Tanzania to Botswana. The most controversial “brain drain” is international professional migration from poorer to wealthier countries (30). While the departure of doctors receives the most attention, it is the departure of nurses and other health professionals that can easily cripple a health system. Nurses are in high demand in developed countries, partly because of population ageing. Some efforts have been made to promote ethical practices in international recruitment, but results have yet to be assessed (31).

Workforce mobility creates additional imbalances just when increased financial resources are beginning to flow to some developing countries. This requires better workforce planning in developed countries, attention to issues of pay and other rewards in developing countries, and improved management of the workforce in all countries.

### Paying more and paying differently

Raising wages may increase the number of health workers and their productivity and may succeed in countries where health workers are paid less than comparable professions. It may be less successful, however, in countries where health sector wages are higher than those of comparable professions. Wages take the single largest share of health expenditure, so increases have to be carefully evaluated for their impact both on the availability and productivity of health workers and on aggregate budgets. The role of public sector unions in negotiating with governments for pay increases is an additional complexity.

As well as raising salaries, other strategies to improve productivity include non-financial benefits such as housing, electricity and telephones, on-the-job training with professional supervision, and opportunities for rotation and promotion. In rural Senegal, providing nurses with motorcycles not only made it possible to increase immunization coverage but also improved their access to technical support and reduced their isolation (32).

Both financial and non-financial incentives can also reduce geographical imbalances in the distribution of health workers. For example, in Indonesia, a bonus of as much as 100% of the normal salary attracted medical graduates from Jakarta to the outer islands (33). Recruitment and training of people from remote areas, who are committed to their region of origin, have also been proposed.

Finally, nongovernmental organizations concerned with health and private providers are a large and increasing presence in most countries. Governments could consider partnerships in which the public sector provides financial support and the nongovernmental organizations manage and provide the direct services. Often, private health workers are available in places that the public sector finds difficult to reach. In such situations, establishing formal programmes either to contract private providers or to reimburse the services they provide may be the most pragmatic response. In the mid-1990s, the Government of Guatemala was obliged to expand health care services to unserved populations as part of the negotiated peace agreements that took place at the time. It contracted more than 100 nongovernmental organizations to provide basic health care services to some 3 million of the country's citizens, predominantly indigenous and rural people, who previously had no access to services (34). Recently, Cambodia has successfully experimented with contracting nongovernmental organizations and private providers to deliver basic services to underserved groups (35).

## Improving quality: workers and systems

All health systems need to create an environment for effective team learning for quality improvement. While the quality of care depends to some extent on the individual characteristics of health care workers, levels of performance are determined to a far greater extent by the organization of the health care system in which they work. Many health care organizations are moving from a practice of blaming individual health care workers for deficiencies to a culture of team learning and shared quality improvement.

Recognizing that the quality of health care is fundamentally a system issue is the first step towards making improvements in processes and outcomes of care. System-level quality improvements require a clear definition of optimal care and a framework for changing the system. Essential components of optimal care include decision support tools for health care workers, with written care guidelines and diagnostic and treatment algorithms; and necessary supplies, medical equipment, laboratory access and medications. Also needed are clinical information systems (which can be computerized or paper-based), guidelines for planned visits and active follow-up, and systematic support to patients for self-management of their conditions and referral to community resources. Evidence suggests that health systems with strong, integrated primary care are associated with better outcomes, probably because they provide for more comprehensive, longitudinal and coordinated care (36).

There is also a requirement for a method that will enable health care workers to make improvements (37). Health care teams should be able to develop and test changes in their local settings, which will enable them systematically to make improvements in processes of health care. One such method is the model for improvement (38), which enables rapid testing and evaluation by health care teams of potential improvements in their work. Working together in groups of teams helps communication and spreads innovations to larger groups (39, 40).

### Box 7.5 Creating a skilled workforce for tomorrow

The process of building a motivated workforce with the relevant skills can begin immediately, using existing budgets and staff. These activities also require continuous investments of time and leadership, and the involvement of health workers and communities in planning and managing their own futures.

Immediate actions that should be taken include: mobilizing communities and community workers; engaging traditional healers and enlisting volunteers; raising productivity among current health workers through improved supervision and support; and assessing and obtaining feedback on quality of practice.

Reorienting managerial staff to new functions takes time and planning. This process includes:

- developing and implementing on-the-job training to upgrade skills;
- contracting with the private sector and nongovernmental organizations;
- introducing flexible new contract opportunities for part-time work; improving working conditions with better drug distribution and supply of other essential medical supplies;
- strengthening collaboration among health workers, traditional healers, volunteers and community members.

Preparing for changes to institutions, policies and legislation requires undertaking studies and analyses that need to be started immediately. Design, approval and implementation of the changes, how-

ever, need time and will have an impact in the medium term. Some actions in this category include:

- developing pay and non-pay incentive packages to improve staff recruitment and retention;
- developing a plan to improve training capacity and management practices;
- coordinating donor contributions to workforce development; designing and implementing safety guidelines, clinical protocols, and anti-discrimination policies to improve working conditions;
- building extensive partnerships with civil society.

Urgent problems require urgent action. Governments must not lose sight, however, of the long-term requirements of the health system. While tackling more urgent activities, governments can lay the foundations for effective workforce policies, by:

- analysing the labour market, relative wages and supply trends so as to be able to design appropriate recruitment, retention, and wage policies;
- developing long-term plans for achieving appropriate mixes of skills and geographical distribution of health care professionals;
- expanding opportunities for management training and for the improvement of management practices;
- developing strategies for strengthening the relationship between public and private providers and financing.

## Responding to the workforce crisis

Taking action to meet the workforce crisis is not easy and requires paying attention to all areas of workforce needs, from training to morale, and from local to global determinants. WHO has a major advocacy role in building and sustaining awareness of the extent of the crisis.

Some actions can be taken immediately, others require more time and planning (see Box 7.5). In the most urgent circumstances, for example scaling up HIV/AIDS treatment, countries can mobilize community resources, volunteers and traditional healers to collaborate in expanding access to primary health care (see Box 3.2 in Chapter 3). Health care workers' productivity can be improved through better supervision, support and morale-building. In the short term, governments can initiate programmes that mobilize nongovernmental and private sector resources by contracting the delivery of services, upgrading staff skills, and making sure that workers have the drugs and medical supplies they need to do their job.

In the medium term, governments can bring in changes requiring more planning, reorientation of administrative staff, and changes in budgeting such as pay policies, non-pay incentives, and expanded training capacities. New guidelines and policies can be adopted. Collaboration with communities and local governments can be deepened. Important lessons can be learnt from country experiences, whether very successful or less so (14). Policy-makers may suggest that any proposed new project or policy include a formal "human resources impact assessment" during its preparation; international agencies and donors could also be brought into this process (41).

Finally, governments should keep sight of the conditions necessary to motivate and sustain good health service delivery. This means taking the dynamic nature of labour markets seriously, and recognizing the long-term limits and expectations of health care workers. It also means establishing more clearly the expected roles of public and private providers in a future system of universal coverage. WHO is actively working with countries to develop long-term and short-term solutions. An example from the Region of the Americas is provided in Box 7.6.

### Box 7.6 The Observatory of Human Resources in Health Sector Reforms

The Observatory is a cooperative initiative promoted by the Pan American Health Organization/WHO Regional Office for the Americas. Its goals are to produce and share knowledge among the countries of the region to support human resources policy decisions and improve workforce development in the health services sector.

The initiative supports the creation of national inter-institutional groups (for example, ministries of health, universities, and professional associations) to collect information on the stock of human resources for health and to analyse imbalances and trends, to prioritize an agenda of issues to be tackled, and to advise on long-term and medium-term policy development. Nineteen countries participate in the initiative, with different emphases and priorities, according to national concerns. The networking efforts are geared to making the country experiences applicable in other contexts, through construction of databases and dissemination of lessons learnt. The main lessons to date are as follows:

- The Observatory is a way to improve the stewardship role of ministries of health in human resources.

- The inter-institutional Observatory groups can help to maintain the human resources agenda during the transition between administrations.
- There is a need to integrate key stakeholders: universities, ministries of health, and professional associations, even though there may be substantial conflicts between them.
- Evidence needs to be developed from more reliable and stable statistical sources (for example, the International Labour Organization and household surveys).
- New approaches should be found to use the information in shaping policies (for example, to improve geographical distribution and to correct public-private imbalances).

General information about the network, its meetings and useful links can be found at [http://observatorio\\_rh.tripod.com/](http://observatorio_rh.tripod.com/).

## Health information: better but not good enough

### The evolution of health information

Shortages of adequate health information, as well as shortages of personnel, contribute to the potential collapse of some health care systems and threaten the long-term viability of others. Health care systems oriented to primary health care principles need robust health information components in order that the health needs of populations, especially those that are poor and marginalized, can be understood; to ensure that programmes are reaching those most in need; to measure the effects of interventions; and to assess and improve performance. As noted above, tools and structures for obtaining, organizing and sharing information are vital for improving the work of individual health care providers and raising the quality of care throughout the system.

The amount of information available to health policy-makers and planners at the time of the Declaration of Alma-Ata on primary health care was limited. The main sources of population-based health information were vital registration, censuses, national surveys, and research studies. Information was generated through routine reporting at facility level. However, data were rarely collated and used at national level, and feedback mechanisms from central to local levels were missing.

Substantial progress has been made since then in the field of health information. An increasing volume of data has become available on health status, health services utilization, and determinants of health through population-based health interview surveys. Many countries now have good data, disaggregated by sex, on levels and trends in child mortality, coverage of selected health interventions, and incidence and prevalence of certain diseases. They often have some limited information on equity in health. However, many critical gaps remain. Levels of adult mortality are poorly measured in most populations and accurate cause-of-death data are not generally available. Morbidity is inadequately measured for most conditions. Coverage and costs of many interventions are not monitored properly and insufficient information is available to monitor equity satisfactorily. The quality of health information is often highly variable and poorly documented. There is little standardization across definitions and methodologies.

Critically, the use of health information for the management of health services at the local level and for health policy-making and planning at the national level remains limited. Very few countries have developed effective and efficient health information systems that take into account the needs of different levels of users, from local to national and global levels. Much of the information collection and analysis is driven by vertical health programmes, often in the context of international initiatives, and integration is lacking.

### An information system driven by primary health care

In the context of health systems driven by primary health care, a health information system can be defined as an integrated effort to collect, process, report and use health information and knowledge to influence policy-making, programme action, and research.

Health information systems use a range of data collection and analysis tools and methods. Accurate and continuous statistics on basic demographic events are a foundation of rational health and public policy. National vital registration systems (considered the “gold standard”) currently cover less than one-third of the world’s estimated mortality. Significant regional disparity exists, ranging from over 90% of all mortality coverage in the European Region to

less than 10% coverage in the South-East Asia and African Regions (42, 43) (see Table 7.1). Trends in coverage are slowly improving. Considerable effort has been devoted to developing less expensive and more accurate alternatives to national routine death certification, such as sample registration systems and survey-based or census-based questions on sibling deaths or deaths in the household. When used alone or with accompanying vital registration systems, sampling can improve coverage of events where resources are limited. These systems have been introduced in China and India, to take two examples, and are applicable to other resource-poor settings (see Box 1.1 in Chapter 1).

Population-based household surveys have become the major source of health information. Much of the information generated by surveys is based on self-reporting, raising issues of reliability, validity and cross-population comparability. In the field of morbidity and evaluation of interventions, there is an urgent need to consider a much larger and broader investment in biological and clinical data collection in surveys (44). In most countries, equity considerations are still not fully integrated into health information systems.

Health information can be used for at least four distinct but related purposes: strategic decision-making, programme implementation or management, monitoring of outcomes or achievements, and evaluation of what works and what does not. Strategic decision-making by health policy-makers should be based on the best available evidence. Data from vital registration systems, epidemiological studies, household surveys, censuses, and health service providers often give highly uncertain information about the true population value of a health indicator. Assessments of any health indicator should be based on the integration of all relevant information and the use of criteria such as internal consistency and prior knowledge of disease history to improve estimates from uncertain or inconsistent data.

In addition to the routine use of models to estimate life tables in areas where vital registration systems do not attain high rates of coverage, estimates of the incidence, prevalence and mortality of diseases increasingly use explicit models to derive best estimates from uncertain, incomplete or contradictory population data. The focus has been on the national, regional and global levels, although estimates for local areas, including districts, are increasingly becoming available.

The problems and weaknesses of routine health service statistics are well known (45). Several countries have now made progress in developing routine health information systems, including the use of better technology, mapping, and focusing more extensively on local user needs. The introduction of new technology in a well-designed system allows better surveillance of key diseases and also more accurate and timely programme monitoring.

### Improving information systems

In recent years, significant attempts have been made to reform health systems as a whole, with increasing attention given to the decentralization of resources and decision-making to district level. Such reforms entail the need for better health information systems at local level. At the same time it has been increasingly understood that local individuals and families have to be involved in the generation, dissemination and use of health informa-

**Table 7.1 Availability of death registration data – number of countries by WHO region**

Region	Usable data	Complete coverage	Total countries
Africa	4	1	46
Americas	32	14	35
South-East Asia	4	0	11
Europe	48	39	51
Eastern Mediterranean	7	4	22
Western Pacific	22	8	27
<b>Total</b>	<b>117</b>	<b>66</b>	<b>192</b>

tion. Involving people in the planning and implementation of health care was a fundamental principle of Alma-Ata and still has important implications for the way that health information systems operate.

Equity in health is another of the key principles of primary health care. This requires the ability to measure inequalities in access to and use of health services, risk factors, and key health outcomes. It also means identifying which groups of people are the most disadvantaged – often poor people, ethnic groups or women. This type of information imposes a considerable additional burden on health information systems and is not routinely available in many countries. Surveys are currently the most important method of collecting information on the equity dimension of health, but much more work is needed to integrate equity monitoring into health information systems, both with surveys and with other methods of data collection and analysis. The aim of the World Health Survey, launched by WHO in 2001, is to provide valid, reliable and comparable data on population health and health system performance, through a household survey. The programme emphasizes monitoring the MDGs and critical outcomes among poor populations.

Improvement in health information systems is needed at local, national and international levels, and more integration between these levels is required to deal with global health threats and the growth of knowledge (see Box 7.7). Countries will benefit greatly if health information systems are based on a national plan with a framework, indicators, and data collection, analysis and dissemination strategies. The strategic plan should also be specific about how the different tools and methods will be applied and complement each other, how health information needs are met at the subnational, national and global levels, and what kind of investments are needed. The latter include human resources, infrastructure (technology, laboratories, etc.), and operational budgets for health data collection efforts. National bodies

### Box 7.7 Reliable and timely information for health

The Health InterNetwork (HIN), led by WHO, is an initiative of the United Nations Millennium Action Plan to meet the information needs of health professionals, researchers and policy-makers in developing countries.<sup>1</sup> Since it began in September 2000, HIN has improved health by using the Internet to enhance the flow of health information, focusing on content, Internet connectivity, and capacity building.

HIN provides a vast online health library to personnel in government departments, teaching and research institutions, and other non-profit organizations. International agencies, national organizations and the academic and private sectors are contributing content, and HIN is working with local partners to publish local health information. The five priority content areas are: scientific and biomedical journals, education and training resources, information for health policy and practice, statistical data, and public health software for public health and clinical management.

During its first year, HIN achieved a major breakthrough in the provision of health content. Through an agreement reached by WHO with the world's major biomedical publishers, over 2200 medical and scientific publications are now available online to public and non-profit institutions in 113 developing countries. HIN's Access to Research Initiative (HINARI) is making the journals available online free of charge or at greatly reduced rates, based on a country's ability to pay.

<sup>1</sup> Web site: [www.healthinternetwork.net](http://www.healthinternetwork.net).

HIN's second phase is providing the up-to-date information needed to educate and upgrade the skills of the health workforce. It includes online courses and references covering public health, medicine and nursing, as well as specialized topics for developing country practitioners.

Health personnel need easy, reliable and affordable access to the Internet if they are to use it in their work. Infrastructure and cost are important obstacles, and Internet use is limited outside many capitals where power sources are unreliable and service providers are rare. HIN India was developed to test the logistics, cost and partnership models for improving the flow of information with remote areas. It has established Internet access sites in hospitals, clinics, research and educational institutes and public health facilities in two states. Local partners played a key role by supplying, installing and maintaining computer hardware and software, and in establishing Internet connections. Capacity building is essential, and HIN provides training materials that institutions use to ensure that health workers, policy-makers and researchers have the skills needed to find, use and share public health information online.

Well-documented, successful strategies to bridge the digital divide in health information remain the exception rather than the norm. In the words of a tuberculosis programme coordinator in the field in India: "without computers and the Internet, we are fighting 21st-century health problems with 19th-century tools".

with participation of stakeholders of different levels of users and technical experts need to guide and oversee the implementation of the national plans.

## The Health Metrics Network

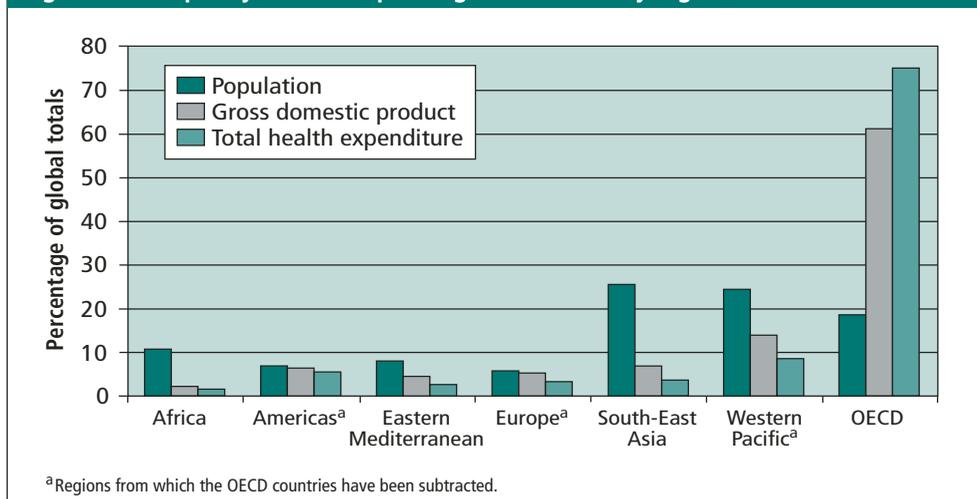
The strengthening of these systems requires a collaborative effort. The Health Metrics Network, to be launched in 2004, will focus on improvements to the availability and utilization of reliable health information for policy-making and planning, programme monitoring and evaluation, monitoring of international goals, and measuring equity in health. Through the collaboration of many partners, and with careful planning and establishment of clear targets, the Network aims to strengthen the capacity of health information systems to provide high quality, timely information in a form that is useful for public health work at the national, subnational and global levels. It is a broad partnership that includes WHO, other international organizations, bilateral agencies, foundations, ministries of health, statistical organizations, academic institutions, and organizations representing civil society. This kind of network is necessary to enhance the efficiency and effectiveness of the assistance provided by investors in health information. The Health Metrics Network partnership should also be able to accelerate development and scaling-up of innovations in monitoring and evaluation of health status and health programmes. Standardization and enhancement of methods to assess quality of health information will greatly assist the measurement of progress towards achieving global goals such as the MDGs.

## Financing health systems

Many of the functions of health care systems depend on adequate financing. If sustainable financing mechanisms are not put in place, innovative ideas for strengthening the primary health care base of health care systems will not yield results.

Globally, health spending has grown substantially over the last 25 years, driven largely by rapid changes in technology and increasingly complex institutions for financing and delivering care. Yet in the world's poorest countries, health spending has grown slowly, if at all. Consequently, there is great inequality in global health spending today (see Figure 7.2). Countries of the Organisation for Economic Co-operation and Development accounted for less

**Figure 7.2 Inequality in health spending and incomes by region, 2001**



than 20% of the world's population in the year 2000 but were responsible for almost 90% of the world's health spending. The African Region accounts for about 25% of the global burden of disease but only about 2% of global health spending (see Annex Tables 4 and 5).

While spending levels have changed, the options for financing health systems have not. In 1978, WHO discussed the same financing sources that are being debated today, namely general taxation, earmarked taxes, social security, community-based financing, fees, and external assistance (46). Applied policy studies are still lacking, however. For example, a recent review of 127 studies on community health insurance schemes found that only two of them had sufficient internal validity to enable conclusions to be drawn regarding the impact on utilization and financial protection (47). Without reliable information, health financing policies continue to be dominated by opinions rather than evidence.

### Developing sustainable financing

Policy decisions about financing mechanisms have multiple effects. They influence how much money can be mobilized, how equitably those resources are raised and applied, and the efficiency of the resulting services or interventions. The context within which health financing operates will significantly alter its effects. However, the principles for improving health financing are essentially the same everywhere: reduce the extent to which people have to make large out-of-pocket payments at the point of service; increase the accountability of institutions responsible for managing insurance and health care provision; improve the pooling of health fund contributions across rich and poor, healthy and ill; and raise money through administratively efficient means. The key policy questions relating to health financing are very different, however, in rich and poor countries. Thus, the following discussion will consider high-income, middle-income, and low-income countries separately.

In high-income countries, with per capita incomes above US\$ 8000, resources for health are relatively plentiful though not necessarily equitably distributed. An average of 8% of national income is spent on health. Among these countries, annual health spending ranges from US\$ 1000 to more than US\$ 4000 per capita. The issues that dominate discussions of health financing relate largely to the effectiveness of spending, cost containment and equity.

In middle-income countries, with per capita incomes between US\$ 1000 and US\$ 8000, resources are more constrained and health services are less widely accessible. Countries in this category spend between 3% and 7% of national income on health, representing an annual expenditure of between US\$ 75 and US\$ 550 per capita. In these countries, the health financing system is often a critical obstacle to making health interventions accessible to all. Frequently the population is segmented between those in government or formal sector employment who benefit from relatively well-financed health insurance schemes, and those who rely on more poorly funded ministry-run services or pay out of pocket for private care. Many of these countries, notably in Asia, mobilize very little through the public sector.

In low-income countries, with annual per capita income of less than US\$ 1000, health financing discussions are dominated by the fundamental constraint of too few resources. In most of these countries, only 1–3% of gross domestic product is spent on health and, because their per capita income is so low, this translates into health spending per capita of between US\$ 2 and US\$ 50. Even if these countries spent 10% of their income on health services, the investment, if spread equitably across the population, would suffice only for very rudimentary health care.

Public policy should not allow fees at point of service to become an obstacle for obtaining necessary care, or become a catastrophic financial burden on households. In practice,

policies on fees depend on the population's capacity to pay, its impact on utilization, the kinds of services being provided, and the impact of fees on the quality and availability of services. In cases where service quality can be maintained or improved, eliminating fees may increase access. This appears to be the recent experience in Uganda, where user fees were eliminated because the government simultaneously increased its financial and managerial support. In cases where service quality cannot be maintained or improved by other means, fees can provide critical incentives and resources to keep services available. This appears to have been the experience with the Bamako Initiative when the retention of fees helped to ensure the availability of drugs even if other programmes were ineffective (48). Therefore, public policy toward fees must be pragmatic, based on full consideration of the context and the net impact on the population's access to good-quality health services.

Sustaining the health system without relying heavily on fees requires the mobilization of other sources, including general and earmarked taxes, social insurance contributions, private insurance premiums, or community insurance prepayment. In practice, the use of particular sources will depend on the population's capacity to pay, administrative capacities to collect, the kinds and quality of services that are made available, and the effectiveness of existing institutions and forms of financing.

In low-income countries, general taxation is a very attractive way to build a strong public role in health service delivery, because it is administratively easier to manage than more complex insurance or regulatory arrangements. Nevertheless, general taxation only works if the tax base is broad, tax administration is effective, and funds are allocated to health services and used well. If any one of these factors is missing, the more effective alternative may be to establish an independent social insurance administrator or encourage the formation of community insurance programmes. Pragmatism is a useful guiding principle in finding ways to mobilize and apply resources to improve health.

### Unblocking system bottlenecks

Much progress has been made in rationalizing the choice of priority interventions since the time of the standard "minimum package" of the early 1990s. New tools are now available. For example, the WHO-CHOICE project is a database on the health impact and costs of a large number of health interventions – preventive, promotive, curative and rehabilitative (49). Prioritizing cost-effective interventions is all the more important as new funds become available to the health sector. Care must be taken to ensure that external funding is additional to, and not a substitute for, domestic financing, but also that financing which flows from outside sources does not lead to (further) fragmentation of the national health system.

New funds remove only one of the obstacles to equitable, universal health care provision. Institutions receiving increased funds, whether governmental or nongovernmental, must improve programme implementation. Trained staff, information systems, audit mechanisms, and financial controls must be strengthened to handle the increased financial flow.

Thus, while resource mobilization remains a challenge, the results-driven allocation of resources also requires new strategies. Effective management of the new funds now becoming available to the health sector, particularly in sub-Saharan African countries, requires innovative approaches to medium-term budgeting. Solutions must be found to loosen the system bottlenecks – in human resources and other areas – that make it difficult to translate more money into better health outcomes. One promising approach is Marginal Budgeting for Bottlenecks, based on work in a number of west African countries. As ministries of health develop their medium-term expenditure plans, system bottlenecks need to be clearly identified

and strategies for unblocking them costed. The approach has produced encouraging results in Mali and Mauritania and is now set to be implemented in several Indian states (50).

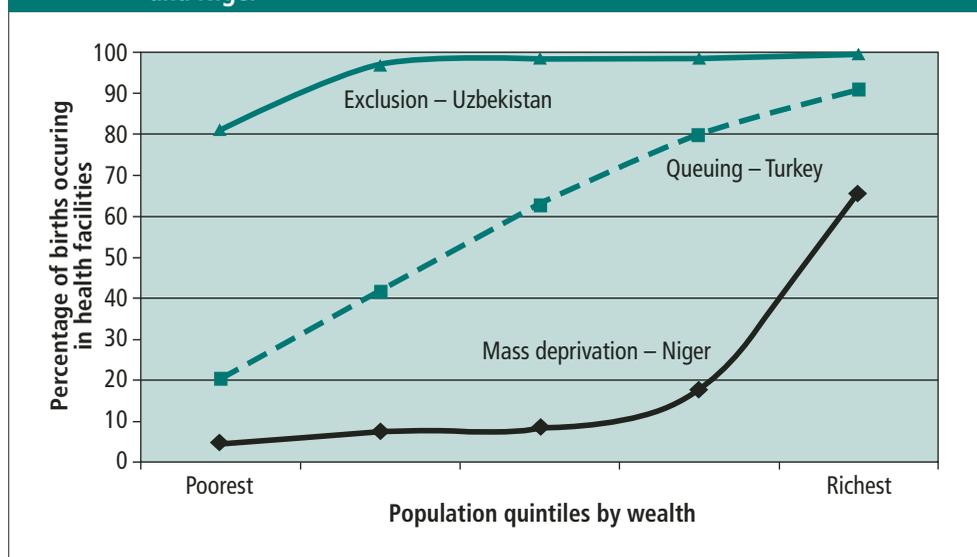
## Pro-equity health systems: government's central role

If a key responsibility of the health system is to narrow health equity gaps – a fundamental principle of primary health care – then a criterion for evaluating strategies in workforce development, health information, financing strategies and other areas must be the degree to which these strategies are pro-equity.

The mutual reinforcement of poverty and ill-health is increasingly well understood, and there is growing evidence of how unequally and inequitably resources, efforts and outcomes are distributed. Benefit incidence studies consistently show that people living in poverty receive less than a proportional share of public funding for health, relative to the better-off (51–55). Income is not the only relevant factor. Poverty is fundamentally a condition in which individuals lack the capacities required to satisfy their needs, fulfil their aspirations and participate fully in society (56). Hence, the lack of political empowerment and education are factors in the exclusion of people from health care. Gender, racial and ethnic discrimination contribute significantly to inequities in health and in access to health care services.

Policies that improve a country's aggregate health indicators are not necessarily fair or pro-equity. Where countries have succeeded in improving health outcomes and reducing inequity, health system development policies have had to “swim against the tide”, explicitly countering the bias to serve the better-off first (57–60). Whatever the specific configuration of a country's health sector, effective stewardship of the whole health sector by the government – including supervision, monitoring and enforcement of health policies – is vital, if pro-equity outcomes are to be achieved (61).

**Figure 7.3. Distribution patterns of health care deprivation, Uzbekistan, Turkey and Niger**



## Patterns of inequitable access to care

Pro-equity health care strategies will vary by context. The key difference concerns the pattern of inequitable access to care, which takes three distinct forms. In the poorest countries, the pattern can be characterized as mass deprivation – the majority of the population has equivalent but deficient access to health care services while a small privileged class finds ways to obtain the care it needs. In somewhat better-off countries, such inequities can be described as queuing – general access to health services is better, but middle-income and upper-income groups benefit most, while poorer groups must wait for a “trickle down” effect. In some countries, inequities take the form of exclusion whereby the majority of the population has reasonable access to services, but a poor minority of the population is deprived. These patterns can be visualized by considering the percentage of births that occur in a health facility (as a proxy for general access to health services) by income quintile (see Figure 7.3).

The manner in which systems based on primary health care develop will vary across these differing contexts. In some cases, programmes targeted at specific population groups are urgently needed to achieve pro-equity outcomes. In other instances, broad strengthening of the whole system is the priority. These two approaches can also be combined.

In countries characterized by exclusion, targeting will probably be needed to combat social inequality and inequality in access to health services. Such a strategy might apply to middle-income and low-income countries such as Chile and Uzbekistan, but it is also appropriate in wealthier countries in which marginal populations remain excluded from otherwise universal services because of discrimination by race, ethnicity or gender, income poverty, or social stigmatization. Progress will not take place without government action, either through the provision or payment of services, or the design of appropriate incentives to the nongovernmental sector. Examples of targeting include recent efforts in Chile and New Zealand to make health services more culturally appropriate and accessible to indigenous populations (62), as well as an Australian programme to strengthen primary health care among the indigenous people of the Tiwi Islands (see Box 7.8).

Three types of targeting strategies have been commonly used: direct, characteristic and self-targeting. They are not mutually exclusive and are, in fact, often employed in combination. Direct targeting seeks to provide benefits only to the poor. One approach is to waive the cost

### Box 7.8 Community health reforms in the Tiwi Islands

The remote Tiwi Islands are located 60 km north of the Australian coast in the Arafura Sea, with a population of over 2000 consisting mainly of indigenous people. Unemployment is high and housing conditions are generally of low quality. Very high rates of chronic conditions have been recorded, especially diabetes and renal and respiratory tract conditions. In 1997, the Australian Commonwealth and Territory governments negotiated with the community-based Tiwi Council to reform existing primary health care services, through a Coordinated Care Trial with four broad objectives:

- to achieve Tiwi community control of health services, through the establishment of an area health board to administer pooled health sector funds;
- to improve the effectiveness of preventive measures based on local participation in community programmes;
- to improve the quality and effectiveness of health services, through

the use of increased resources for a mix of primary coordinated care and population-based health services;

- to improve the standard of care according to best practice guidelines and protocols.

The trial ran for three years. Health outcomes could not be measured in this short phase, but process measures of success were achieved (63), including:

- community control, by the establishment of the Tiwi Health Board, which now determines health policy and expenditures;
- increased community awareness of health issues among Tiwi islanders, and greater community input into service delivery;
- improved prevention services, especially those tackling urgent local problems;
- increased number and improved quality of primary health services;
- reduction in avoidable hospitalization.

of care for individuals who cannot afford to pay. Implementing this strategy requires means testing (assessment of the patient's financial capability). Waivers reliant on means testing demand substantial administrative capacity. Governments can also make direct conditional cash transfers to poor families to reward household behaviour change, such as bringing children to health centres for regular check-ups. Again, this requires considerable institutional capacity. In parts of Latin America, such approaches have increased participation in preventive health care (64).

Characteristic targeting attempts to benefit particular groups of poor people based on specific attributes that cause further deprivation. Criteria can include geographical location, gender, ethnicity, particular diseases (for example, HIV/AIDS), or other factors. Self-targeting relies on the better-off to opt out of services perceived to be of low quality. Such services may involve greater waiting time or a poorer service environment.

Countries and areas characterized by the queuing pattern of inequitable health care access include Turkey and the wealthier states and provinces of China and India. In such settings, pro-equity policies have to find the right balance between efforts to build on and expand the existing institutions of health care, effectively reducing the barriers that lead to queuing, while identifying and targeting those groups that would otherwise be excluded without special attention. Again, active government participation is required.

In 2001, Thailand began a programme to extend universal health insurance coverage to those without access to health services. Under the new programme, dubbed the "30 baht health plan", people register as patients with local health care providers and can then obtain all needed medical care for a co-payment of 30 baht (about US\$ 0.35). The system is financed jointly from taxes and contributions by workers and employers, while health care providers are reimbursed on a capitation basis. The programme is not without its problems, but still represents a bold effort to confront health inequities (65). Another successful attempt to expand coverage to the poor was the health insurance reform in Colombia in the mid-1990s. Between 1995 and 2001 the number of contributors to the mandatory health insurance system was expanded from 9.2 to 18.2 million people. At the same time, the system was reformed so as to explicitly cross-subsidize the poor and unemployed. In 1995, 3 million people benefited from these cross-subsidies; by 2001 their number had grown to 11 million. Thus, millions of non-contributing individuals gained access to roughly the same package of benefits as those who made the contributions, in the public or private facility of their choice, and in the same way as those more affluent citizens who regularly contribute (66, 67).

Countries with mass deprivation represent the greatest challenge of all. In such countries, most of the population is deprived of health care, with only the richest able to buy it. To speak of "targeting" in such circumstances is not useful. The main effort is best characterized as "scaling up", meaning overall extension and strengthening of the health system. Countries in this category need rapid expansion of outreach and extension of primary care facilities and hospitals, along with increased investments in other sectors such as education, water and sanitation. Redressing geographical and rural-urban imbalances can often go a long way towards accelerating progress in these countries. But the limited scale of public resources also requires innovations that build on and support local and community participation and the activity of the nongovernmental sector, as implied by the principles of primary health care.

Some innovative approaches have succeeded in extending health care to poor people despite resource, infrastructure and workforce constraints. In its Expanded Programme on Immunization, Bangladesh for example, used outreach programmes in rural areas and enlisted the active nongovernmental sector for service provision in urban areas to effectively bridge both

the infrastructure and human resource gap (68). Scaling up was combined with prioritizing service delivery to rural areas and the poor and, as a result, considerable advance was made in reducing infant mortality rates. However, this intervention could not be accompanied by a complementary increase in attended births as this requires a very different approach to service delivery – infrastructure requirements are greater as are the required facility staff skills. Both of these necessitate substantial additional resources as well as the capacity to use them effectively. This underscores the point that, while responsible government stewardship is vital to pro-equity health improvement, major gains cannot be achieved in countries confronting mass deprivation without substantially increased international support.

### The goal: universal access

An approach to the development of health care systems driven by primary health care must aim at universal access to quality health care services. Speeding the historical movement towards universal coverage will ensure that general health systems improvement does not mask – or contribute to – widening health inequalities.

There are many obstacles to this goal, including limitations in financial resources, education and skilled personnel. But strong stewardship plays a significant role in dealing with these constraints. How rapidly countries advance towards universal coverage depends on whether governments accept a situation in which health benefits gradually trickle down from the rich to the poor, or whether they accelerate actions to ensure a fair distribution of health care resources and benefits to all social groups.

### Government stewardship, community involvement

Responsible health sector oversight and pro-equity commitments by the state are essential to building and maintaining health systems based on primary health care. However, governments must engage with and respond to communities in a two-way relationship if they are to perform their stewardship role effectively. Community involvement – including the dimensions of participation, ownership and empowerment – is a key demand-side component of the health system, necessary to promote accountability and effectiveness.

The Declaration of Alma-Ata acknowledged the importance of community involvement in defining health objectives and implementing strategies. The declaration affirmed that “people have the right and duty to participate individually and collectively in the planning and implementation of their health care” (3). However, the concept of community participation was not easy to put into practice. In some cases, such participation emerged as a crucial factor in improving the performance of health systems. At community-owned health centres in Mali, for example, the fact that communities paid the salaries of health centre staff led to dramatic changes in the way nurses related to their clients (69). In a Sudanese village, a community-driven project has generated income and strengthened social capital – with positive implications for health (see Box 7.9). However, all too often “community participation” has been limited to setting up health committees that acted as vehicles for cost recovery. Indeed, in some countries in west Africa, the term “community participation”, applied in the health field, became synonymous with “co-payment”.

Recent years have seen a move away from narrow definitions of community and community participation (through health committees, for example) to a wider view based on the involvement of civil society organizations. Such organizations are highly diverse. They may manage or co-manage health facilities (as the Federation of Community Health Associations does in Mali), promote self-help and self-reliance, act as champions of forgotten or excluded

groups (as in the case of organizations of people living with HIV/AIDS), or practise consumer protection (like Thailand's Consumer Foundation).

One of the key roles of civil society organizations is to hold health care providers as well as governments accountable for what they do and how they do it. Where civil society is active, organizations can monitor government policy choices and practise advocacy. As stewards of the health system, ministries of health are responsible for protecting citizens' health and ensuring that quality health care is delivered to all who need it. This requires making the best choices given the available evidence, and systematically privileging the public interest over other competing priorities. This responsibility ultimately rests with governments, even in a context of decentralization where lines of accountability may be blurred. Yet without mechanisms enabling people to hold officials accountable, stewardship may falter. To enable effective pressure for accountability, accurate information about health and health systems performance is required throughout civil society. Government should make such information public and accessible. The Mexican Secretariat of Health, for example, has published a comprehensive, user-friendly overview of the country's state of health and of the performance of the health system (70). Civil society groups themselves, in their watchdog function, also generate and share information for accountability. This has been the case with Thailand's National Forums for Health Care Reform (71).

When the right structures are in place, effective governance and vigorous community involvement support each other. Participatory budgeting in Porto Alegre, Brazil, offers an example of consensus building with the community in what is usually a mainstream government activity. Initiated in 1988, the process is now substantially consumer driven, with the implementing agency accountable to its clients. Matching expenditure allocations to needs expressed by the community has produced measurable improvements in access to social services (72).

### Box 7.9 Building partnerships for health in Sudan

The Sudanese Basic Development Needs (BDN) programme was introduced in 1998 in Kosha, a remote village in Northern State with a population of around 2500. A needs assessment survey undertaken there showed multiple social, economic and health problems. A great majority of households had no latrines and 99% of the population used water directly from the river. Many pregnant women suffered miscarriages perhaps because of the strain of carrying water. Poor sanitation and hygiene resulted in many health problems, especially diarrhoeal diseases, malnutrition and eye infections. Vaccination coverage for children and mothers was very low and there was little practice of family planning methods, although the fertility rate was among the highest in the country. Most of the people were extremely poor and unemployment was very high.

Shortly after the introduction of the BDN programme, significant changes were recorded in the lives of this population. The community itself has rehabilitated the health centre, financially supported the medical assistant, and adopted self-financed community health insurance through the community development fund. All households now have access to safe water indoors, and over 60% of houses have sanitary latrines. This has resulted in a marked improvement of health indicators and a reduction in common diseases (diarrhoea, acute respiratory infections, malaria and dysentery), increased coverage of vaccination and antena-

tal care, and a reduction in the malnutrition rate to less than 1%.

The participation of local people in these matters has produced other positive changes: the enrolment of girls and boys in school has increased and adults have also participated in informal literacy classes; a nursery school has been established; and the youth social club has been renovated. Moreover, a women's committee has been formed to initiate and support activities related to development of women's status. The income of a majority of families has greatly increased through the cultivation of vegetables and fruit trees, with the assistance of small loans from the village development committee. The village now has electricity, enabling the community to acquire television and satellite for evening entertainment. In addition to WHO, the community has managed to build strong partnerships with UNICEF, UNFPA, the Government of the Netherlands, the Canadian International Development Agency, local government and many nongovernmental organizations.

The success of Kosha village has inspired five neighbouring villages to organize themselves, without any intervention from the national programme. Two of these villages have already completed the baseline survey and the training of community organizations using their own resources. The population of Kosha village itself is confident that it can continue to make improvements in health and quality of life through sustained self-help and self-reliant interventions.

Realizing genuine community involvement requires overcoming numerous obstacles. Two issues are particularly constraining. First, communities, especially poor rural ones, may be unaware of the mechanisms for involvement. Second, relatively wealthy and more influential social groups can often dominate political processes at community level, again particularly in rural areas. When the better-off are allowed to “represent” the whole community in planning and implementation discussions, relatively affluent groups can absorb benefits at the expense of poor groups. Both these patterns restrict the capacity of poor people to participate fully in processes designed to foster community involvement in the health system. Implementing policies to overcome these obstacles is a key aspect of government stewardship in health.

## Building systems based on principles: WHO cooperation with countries

The health goals described in this report will not be met without significant strengthening of health systems in low-income and middle-income countries. This applies to achieving the MDGs, scaling up HIV/AIDS prevention and treatment, managing the double burden, and the other key health objectives.

There are numerous ways in which health systems strengthening could be undertaken and systems development priorities set. This chapter has proposed that countries’ efforts to build up their health systems in the coming years should be guided by the values of primary health care. It has argued that, despite sweeping changes in the global health policy environment over the past quarter-century, the core principles of primary health care remain valid.

Even greater challenges lie in the future for health systems. In the years ahead, environmental change will affect population health in ways not yet understood. Health systems are already grappling with the effects of economic globalization, including migration and the impact of trade patterns and practices on population health. As issues such as intellectual property rights and trade in services continue to be debated in international forums, health systems will face new pressures. In this context, resolute commitment to the primary health care values of equity, universal access to care, community involvement and intersectoral action will be more important than ever.

This chapter has begun to investigate how a health systems effort based on primary health care might confront key challenges in workforce development and retention, information management, health financing, and pro-equity stewardship. Clearly, however, this investigation must be carried further. Much remains to be understood about how health systems function, why they fail or respond slowly to some crises, and about how primary health care principles can be translated into practical policies that will yield health improvements for communities. Intensified research and information sharing on health systems must be high on the agenda of the global health community.

Promoting health systems research is an element of WHO’s programme for more effective cooperative work with countries. WHO will also work closely with countries to exploit fully current health systems knowledge and the results of ongoing research. The priorities for this work include:

- strengthening the quality of policy research and improving international access to current evidence about the effectiveness of primary health care models and interventions;
- building new networks to facilitate the sharing of best practices and experience;

- developing a coherent “programme of work” for primary health care that effectively integrates all levels of WHO;
- improving communication and collaboration with other international agencies to avoid sending contradictory messages on health systems development;
- developing an evaluative framework and a review process that will help Member States to review existing primary health care policies and plan any necessary changes (2).

Above all, WHO’s commitment with respect to health care systems based on primary health care is to move the Organization’s focus as rapidly as possible from advocating principles to supporting practical application through technical cooperation with Member States. Current global consultations on primary health care will provide opportunities for sharing evidence and comparing country experiences. The urgency of global health challenges demands that this knowledge be turned speedily into action for health systems improvement based on primary health care.

The commitment to cooperation with countries on health systems development is part of a broader change in WHO’s way of working. At a time when new challenges need to be met with new responses, WHO is altering its approach and redirecting its resources. The Organization is reinforcing its technical collaboration and support for people in governments, the private sector and civil society who are engaged in health work. This support will come from all levels of WHO and will be displayed in specific country cooperation strategies. Strengthening WHO’s presence in countries and intensifying country-level collaboration is the best way for the Organization to accelerate progress towards the goals that unite the global health community: measurable health improvements for all, and vigorous strides to close equity gaps.

This report began by describing the contrasts that characterize global health. An approach based on primary health care recognizes the need to attack the roots of health disparities intersectorally. Hence the importance of the MDGs, and the global compact on which the goals are founded. The health sector can make the most effective contribution to the attainment of the MDGs, HIV/AIDS treatment targets and other objectives by strengthening health care systems. Working together to build effective, responsive, pro-equity health care systems, WHO, Member States and their partners will shape a more just, more secure and healthier future for all.

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