that of a “system,” which is a set of objects and the relationships between the objects and their attributes or properties. From systems theory we understand a system as the continuum of inputs, processes, and outputs. Therefore, within our understanding of the need for health services, the health system is:

• The totality of the required resources, including human, mechanical, material, and financial
• The formal and informal organization interactions or conversions of these resources in the provision of direct services to individuals and populations to help them maintain good health status or improve their health status when it is perceived in need, either from disease, physical disability, or trauma
• The final product of health, which can vary in definition, but is commonly understood as the state of complete physical, mental, and social (even spiritual) well-being or the ability to live one’s life in a manner that is compatible with achieving one’s social and individual goals

The last theoretical component of systems is that they are either “closed” or “open.” Closed systems are completely self-contained, are not influenced by external events and eventually must die. Open systems, on the other hand, interact with their external environment by exchanging materials, energies, or information, and are influenced by or can influence this environment; they must adjust to the environment to survive over time. The environment can be generally classified as political, economic, social, and technological, as well as physical, the space available and the way system components relate physically to each other.

Health systems are open and must be approached from this perspective. They are open to their local and national environments, and now, ever increasingly, to

LEARNING OBJECTIVES

- Explore the application of health services management to low- and middle-income countries.
- Understand the structure of health systems.
- Understand the concept and dimensions of health system performance.
- Explore national, organizational, provider, and patient interventions to improve the performance of health systems.

INTRODUCTION TO HEALTH SYSTEMS

Have you ever wondered why, in light of great scientific advances, modern communications, and the availability of many cures, treatments, and preventive measures for most diseases commonly found in low- and middle-income countries (LMIC), those diseases still persist and often with great prevalence and incidence? This is the conundrum that we hope to explore further in this chapter, especially as it relates to the organization, management, and delivery of services to reach those in need to either prevent or treat the many diseases, both chronic and infectious, found in LMIC.

In order to start this task, it is important to understand how services that maintain and improve health are provided to individuals and populations in both urban and rural areas.

The perspective that is most often used in understanding the delivery of health and medical services is
Health systems are one of several determinants of health, and high-performing health systems can improve the health of populations. While there is no perfect health system, an understanding of the system in its current form allows us to gain a comprehensive picture of how it contributes to maintaining health, and thereby also start to understand the various interactions required of its various components.

Theoretically, components within a system can be deterministic, i.e., the components function according to a completely predictable or definable relationship, as in most mechanical systems; or they can be probabilistic, where the relationships cannot be perfectly predicted, as in most human or human-machine systems, like health care. WHO suggests that health system boundaries should encompass all whose primary intent is to improve and protect health, and to make it fair and responsive to all, especially those who are worst off.

What, then, makes a health system good? What makes it equitable? And how does one evaluate a health system or components of it? The World Health Organization published as part of its annual “World Health Report” a complete and noteworthy edition on “Health Systems: Improving Performance.” It provided a detailed presentation and analysis of why health systems matter, how well they are performing, choosing interventions and organizational failings, the resources needed, the financing and governance. In summary, it defined four key functions of a health system: “providing services; generating the human and physical resources that make service delivery possible; raising and pooling the resources used to pay for health; and thereby also start to understand the various interactions required of its various components.”

The then Director General, Dr. Gro Bruntland stated: “Whatever standard we apply, it is evident that health systems in some countries perform well, while others perform poorly. This is not due just to differences in income or expenditure: we know that performance can vary markedly, even in countries with very similar levels of health spending. The way health systems are designed, managed, and financed affects people’s lives and livelihoods. The difference between a well-performing health system and one that is failing can be measured in death, disability, impoverishment, humiliation, and despair.”

The report concluded that:

- Ultimate responsibility for the performance of a country’s health system lies with government.
- Dollar for dollar spent on health, many countries are falling short of their performance potential. The result is a large number of preventable deaths and lives stunted by disability. The impact of this failure is born disproportionately by the poor.
- Health systems are not just concerned with improving people’s health but with protecting them against the financial costs of illness.
- Within governments, many health ministries focus on the public sector, often disregarding the (frequently much larger) privately financed provision of care.

Health systems have not always existed, nor have they existed for long in their present form. Early attempts to provide organized national and international access to health services have gone through various stages of evolution throughout the last century and will continue to evolve in this century. Early attempts to found national health systems were common throughout Western Europe, starting with the protection of workers, and are now being followed by most countries around the world, in some attempt to provide health care for all their citizens. The first attempt was in Russia following the Bolshevik Revolution in 1917, but it took many more years and a Second World War for most governments to catch on. New Zealand introduced a national health service in 1938; in Britain it was in 1948 with the National Health Service; and in Canada, which is widely known for its health system, national Medicare only came into existence in 1971. The US remains the only Organisation for Economic Cooperation and Development (OECD) country without a national health delivery system, and Cuba remains a model of what a public system can achieve with limited financial resources.

Today, most countries’ health systems have evolved along two lines: the employee/employer payment scheme or the tax-based model, whereby all tax payers contribute all or part of the required financial inputs. Both involve a mix, to widely varying degrees, of public vs. private service provision. Comparing health systems is an often useful exercise, especially for learning new ideas.

The World Health Organization came into being in 1946 and its efforts to promote viable and effective health services culminated with the Declaration of Alma Ata in 1978, which advocated the concept and strategy of primary health care as a means to achieve health for all. While much debate has persisted concerning the value and utility of primary health care, it remains a viable approach for providing an acceptable level of health services in countries at all levels of economic and social development. Debate now centers on how best to deliver services, through public or private providers, and the appropriate mix of financing mechanisms: government expenditure, out of pocket, or various types of insurance.

Health systems matter in the achievement of health, especially for those at the lower end of the socio-economic spectrum, but also for the wealthy. While health systems are complex, proper health system understanding and
management offers the potential for coordination of services, and accessibility to these services for those who need them according to their needs. Health service providers may be from the public or private sectors, and how they interact and are coordinated are all issues of great concern within the health system perspective. A systems perspective on health also helps us get out of our “health” box, in thinking that only medical services and technologies are important; rather, through a systems perspective we come to understand that seat belt laws, safe roads, antismoking legislation, firearm registries, dietary recommendations, workplace safety and weather predictions all help to maintain good health.

THE PERFORMANCE OF HEALTH SYSTEMS

We have argued above that health systems are important to people’s health, and that some systems seem to achieve more than others, but in order to assess this critically, one must measure it against the objectives of a health system. The World Health Report 2000 defines three objectives for health systems: improving the health of the population they serve; responding to people’s expectations; and providing financial protection against the costs of ill-health. Furthermore, it attempts to assess the average level of attainment of a given objective and its distribution across the population. This follows a growing interest in equity, making it an essential element of performance. These objectives and measures will be discussed in a general sense, without specifically referring to those from the WHO report. For the first measure, the health status of a population would be measured by an average, such as life expectancy or infant mortality as well as the range of life expectancy across subgroups within a population. This follows a growing interest in equity, making it an essential element of performance.

Functions of the Health System

The formal health care system may not be the only or even the main provider of care to a population, but it nevertheless has several functions that promote the objectives of the system (see Figure 15-1). These are stewardship, the creation of resources, delivery of services, and financing.

Stewardship is defined as oversight of the other functions of the health system and it is the one function that is undeniably best done by national governments. However, national governments have tended to neglect this function because of a lack of managerial capacity, data, and the unorganized nature of many LMIC health systems, which make this a considerable challenge. The focus of many national health systems has been on service delivery, with the majority of a health system’s budget being taken up by recurrent costs, particularly staff salaries. Effective oversight would allow governments to assess the performance of the system with respect to the other functions, and allow it to target certain areas for reform and monitor the impact of health care reforms.

Creating resources refers to investment in health care infrastructure and training of health professionals, which is commonly undertaken by the public sector, though some middle-income countries have large private sectors that include medical schools and high-technology facilities with private financing. Service provision has traditionally been the main role of health systems, but this is increasingly being questioned because of difficulties with public management in many low- and middle-income countries. These difficulties have included poor incentives for public providers leading to poor quality of care (particularly with regard to responsiveness) and widespread use of private sector providers. As a result, some authors have suggested that the government’s role should be to purchase services and monitor the quality, as part of the financing function.

Revenue to fund health systems may come from income tax revenue, like in the UK; employment insurance schemes, as in most of Latin America; the purchase of private insurance; or out-of-pocket payments...
by patients at the point of care, as in India. Since the 
health expenditure of individuals is unpredictable, pre-
payment systems with significant coverage protect 
patients from impoverishment due to health care 
expenditures. The financial impact of illness also varies 
according to how risk of illness (and therefore expense) 
is pooled. Prepayment systems where insurance premi-
ums are based on ability to pay rather than propensity 
for illness allow for cross-subsidy from the rich to the 
poor and from the healthy to sick. In a sufficiently large 
risk pool, the costs from year to year will be more pre-
dictable and with an appropriate mix of young, old, 
rich, poor, healthy, and sick, the costs will be affordable 
for all. Health systems that are financed by income tax 
provide the greatest potential for pooling risk, while 
those financed primarily by out-of-pocket payments 
have the worst impact on fair financing. This is because 
the poor pay a higher proportion of their income than 
the rich when costs are fixed, and the unpredictable 
nature of out-of-pocket costs is greater for those with 
no financial cushion or limited access to credit.

THE STRUCTURE OF HEALTH SYSTEMS

Health systems in industrialized countries are highly 
structured and were developed in a context of economic 
stability, with a moderate pace of social change, efficient 
systems for taxation, strong regulatory frameworks, and 
sufficient numbers of skilled personnel to run these 
institutions. These conditions are not found in most 
low- and middle-income countries. In the second half 
of the 20th century, many developing countries estab-
lished national health systems ostensibly designed to 
provide comprehensive services for the whole popula-
tion, much like the UK’s National Health Service, which 
served as an international model. However, countries 
did not fund or staff these services sufficiently to 
achieve their stated goals, either due to financial crises 
or a lack of commitment to universality. Most LMIC 
governments’ incapacity to provide comprehensive 
health services for the whole population has led to the 
emergence of other service providers to meet growing 
patient demand. In these pluralistic health systems, the 
distinction between public and private are blurred. The 
more important distinction is between the organized 
sector, which is subject to some measure of government 
oversight and the unorganized or informal sector, which 
operates according to locally negotiated rules and is 
largely independent of the state.

Table 15-1 shows the types of providers and institu-
tions that support the basic functions of a health system, 
namely public health, consultation and treatment, pro-
vision of drugs, physical support for the infirm, and 
management of inter-temporal expenditure (i.e., unpre-
dictable and potentially costly health expenses). The 
providers and institutions are divided into the organized 
and the unorganized health sectors. The former includes 
public services run by the government and licensed pri-
ate providers, while the latter includes marketized serv-
ces, such as those given by unlicensed private providers, 
and the non-marketized services provided by household 
members and neighbors. The importance of the various
CHAPTER 15

sectors varies tremendously according to the history and relative capacity of each health system. Health policy recommendations should not be transferred from one context to the next without knowing to what extent they are comparable. In Niger, for instance, 16 percent of deliveries are attended by trained birth attendants, so the vast majority of obstetrical services are provided by family members in the home (in the non-marketized sector) or by a traditional midwife charging fees (in the marketized sector). In Sri Lanka, 97 percent of births are attended by trained personnel, so initiatives to reduce perinatal mortality in these two countries would target very different segments of the health system to achieve similar goals.

Table 15-1. Pluralistic health systems.

<table>
<thead>
<tr>
<th>Health-related function</th>
<th>Unorganized health sector</th>
<th>Organized health sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public health</td>
<td>Household/community</td>
<td>Government public health service and regulations</td>
</tr>
<tr>
<td></td>
<td>environmental hygiene</td>
<td>Public or private supply of water and other health-related goods</td>
</tr>
<tr>
<td>Skilled consultation</td>
<td>Use of health-related</td>
<td>Public health services</td>
</tr>
<tr>
<td>and treatment</td>
<td>knowledge by household</td>
<td>Licensed for-profit health workers and facilities</td>
</tr>
<tr>
<td></td>
<td>members</td>
<td>Licensed/regulated NGOs, faith-based organizations etc.</td>
</tr>
<tr>
<td>Medical-related goods</td>
<td>Household/community</td>
<td>Government pharmacies</td>
</tr>
<tr>
<td></td>
<td>production of traditional</td>
<td>Licensed private pharmacies</td>
</tr>
<tr>
<td></td>
<td>medicines</td>
<td></td>
</tr>
<tr>
<td>Physical support of</td>
<td>Household care of sick and</td>
<td>Government hospitals</td>
</tr>
<tr>
<td>acutely ill, chronically</td>
<td>disabled</td>
<td>Licensed or regulated hospitals and nursing homes</td>
</tr>
<tr>
<td>ill, and disabled</td>
<td>Community support for</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AIDS patients and people</td>
<td></td>
</tr>
<tr>
<td></td>
<td>with chronic illnesses and disabilities</td>
<td></td>
</tr>
<tr>
<td>Management of</td>
<td>Inter-household/intercommunity</td>
<td>Money lending</td>
</tr>
<tr>
<td>inter-temporal expenditure</td>
<td>reciprocals arrangements to</td>
<td>Funeral societies/informal credit systems</td>
</tr>
<tr>
<td></td>
<td>cope with health shocks</td>
<td>Local health insurance schemes</td>
</tr>
</tbody>
</table>

From Beyond public and private? Unorganised markets in health care delivery.

approaches to improving the performance of health systems

Now that we have broadly defined the goals, functions, and the general criteria for assessing the performance of health systems, we will now review a series of approaches to improving performance. We have subdivided these approaches according to the perspective they take, or the
Public enterprises
Private sector players
Professional groups and unions
Voluntary organizations
Health education institutions
Public participation
International actors (e.g., WHO)

Regulation of Health Matters
Governments have often found fertile ground for the implementation of laws to protect citizens from the actions of many parts of the health system, whether they are private or public.

Regulation involves the stipulation and enforcement of various standards and is often regarded as government surveillance. This surveillance can focus on a wide variety of health system components, such as:

- Health professions, including licensing, registration, salary, training, and supply
- Technical specifications and standards, including quantity of high-technology equipment and waiting times for patients to access them
- Pharmaceuticals, including safety and approval for sale, inclusion in supply lists, and pricing
- Hospitals, including governance, accreditation, budgets, physical structures, and even procedures involving wait lists
- Insurance plans and sickness funds

One of the goals of a health system is to minimize the financial impact of ill health on the population. In countries with limited insurance coverage, the cost of health services is a common cause of impoverishment. The descent into poverty is the result of a sequence of events that are largely preventable. A breadwinner becomes ill; he or she is no longer able to work, with resultant loss of income. Either the person goes without treatment, or the costs of treatment lead to sale of assets and debt for the family. Food becomes scarce; children become malnourished and may be taken out of school and put to work to support the family. The poor family has been further impoverished, often irrevocably. The adult who has fallen ill may die, increasing the proportion of dependents to providers, and if the adult remains disabled, they are a further burden on the family's resources.

There are many factors which predispose to the sequence of events. The first is untreated morbidity, as poor patients may not consult health providers for financial reasons and may not be hospitalized when it is recommended because they cannot afford it. For example, in China, one-quarter of patients were not hospitalized despite medical recommendations, and of these the majority were for financial reasons. Access to all forms of care may be reduced because user fees are common in many LMIC health systems. Formal and informal user fees are high compared to salaries of the poor, and lack of insurance means that they do not have any financial protection for catastrophic health costs, which often lead to long-term impoverishment. Lastly, the care the poor access is often of low quality, with irrational use of drugs which may be wasteful and potentially harmful. The widespread and unnecessary use of intramuscular and intravenous treatments for conditions such as viral infections is an example of this.
Decentralization

The role of the public sector is in the development, financing, and implementation of policies to guide service delivery. One of the more common recent policies has been decentralization, or the delegating of decision-making power from central to local levels of government. The three key elements of decentralization include: the amount of choice or options that are transferred from central institutions to institutions at the periphery; what choices local officials make with their increased discretion; and what effect these choices have on the performance of the health system. Decentralization can therefore take various forms:

- **Deconcentration** involves passing some administrative authority from central government offices to the local offices of central government ministries.
- **Devolution** involves passing responsibility and a degree of independence to regional or local government, with or without financial responsibility (i.e., the ability to raise and spend revenues).
- **Delegation** involves passing responsibilities to local offices or organizations outside the structure of the central government such as quasi-public (non-governmental, voluntary) organizations, but with central government retaining indirect control (as in many national Global Fund funded activities).
- **Privatization** involves the transfer of ownership and government functions from public to private bodies, which may consist of voluntary organizations and for-profit and not-for-profit organizations, with varying degrees of government regulation.

Over the past two decades bilateral and multilateral financial and development agencies have been encouraging decentralization as an important strategy in achieving greater health outcomes by facilitating greater efficiency, effectiveness, equity, participation, and multisectoral collaboration. While in theory, it sounds good to decentralize, to get decision-making closer to where the decisions need to be made and where they can have greatest impact. But, as some analysts have concluded, it is important to also understand the political and economic contexts of any decentralization activity. Birn, Zimmerman, and Garfield looked at Nicaragua in the 1990s when decentralization was implemented alongside International Monetary Fund (IMF) structural adjustment policies that favoured budget cuts to social services, including primary health care, promotion of user fees, and privatization. They concluded that decentralization brought few benefits to Nicaragua, particularly in the areas of health policy development, priority setting, and programming; and that it is not sufficient to analyze decentralization as a sector-specific reform that can be ameliorated through technocratic modifications. The political context must also be taken into account, which is consistent with a systems perspective.

Privatization

Most countries of the world have health systems in which both the public and private sectors play a role. The degree to which each is allowed to flourish is usually controlled by the government, though the private sector and multilateral finance and development agencies may also play major roles. The debate regarding whether the public or private sector should be promoted raged through the 1990s and continues today. There is an agreement on a strong government role in regulation, compensating for market failures (particularly in the area of health insurance), and addressing inequalities in access to care. However, whether government should be primarily involved in care provision or should contract it out to the private sector and regulate quality remains an area of contention.

Health markets are fragmented in terms of their structure as noted in Table 15-1, but also in terms of their clientele. The rich tend to use the highest quality private services and the best government referral hospitals, while the poor use low-end government services and informal sector private providers. The rich and powerful push for the development of high-end private facilities and public tertiary care in urban areas, which reduces funds available for the provision of basic care for the poor in rural areas. In this way, the health system reproduces the inequalities found in society at large.

Private-Public Partnerships

Recognizing that most LMIC governments are not in a position to implement a health system that meets the needs of its more wealthy citizens, they often try to enter into partnerships with the private sector for the delivery of various medical interventions. While historically, most health service delivery was done privately (often by churches), the number of private health system actors, both in the not-for-profit and for-profit sectors, has grown substantially. Many private businesses, especially in the pharmaceutical and health technology sectors, have substantial roles to play, and are now being courted by government to join with them in the delivery of services. However, it is in the voluntary sector or non-governmental organizations (NGOs) and private voluntary organizations (PVOs) where the greatest growth has been seen in recent years.

Large international NGOs like Oxfam, World Vision, Caritas, CARE, MSF, etc. have been increasingly vocal about their role within the health care system, because they are able to deploy large sums of money and large numbers of personnel quite effectively. Add to these the growing number of private philanthropic organizations, like the Rockefeller Foundation, Ford Foundation, and now the colossal Bill and Melinda
Gates Foundation, and now this part of the private sector is highly competitive with the usual forms of bilateral (national aid agencies) and multilateral (UN agencies and World Bank) aid in the health sector.

With the WHO’s emphasis on improving health systems, it became a staunch advocate of partnering with the private sector in dealing with worldwide health problems, including the infectious diseases of public health importance. This led to the creation of the Global Fund for HIV/AIDS, Tuberculosis and Malaria as the lead financial agency. The Global Fund is a partnership between governments, civil society, the private sector, and affected communities, and acts primarily as an agent to review and finance projects. Drug and vaccine development, too, has come more and more under this type of organizational structure. “A large variety of public-private partnerships, combining the skills of a wide range of collaborators, have arisen for product development and disease control through product donation and distribution, or the general strengthening or coordination of health services. Administratively, such partnerships may either involve affiliation with international organizations (i.e., they are essentially public-sector programmes with private-sector participation), or they may be legally independent not-for-profit bodies.” Widdus concludes that such partnerships show promise but are not a panacea, and should be regarded as social experiments.

**Contracting**

Health managers easily recognize that they often cannot control all the necessary inputs for ensuring good health and good services to their patients and other clientele. From the open systems perspective they realize that there are many patient-based services that might be more efficiently delivered by organizations outside of their own. This has led to the contracting out of certain services. Services can be described by the degree to which their quality can be measured and the contestability or level of competition for provision of that service. It is best to contract out services whose quality can be easily assessed and for which there is a number of providers competing to provide that service. Examples of these services are laundry, food production, and maintenance. Services whose quality is harder to assess include ambulatory care (for which there is ample competition) and health policy (for which there is much less). The difficulty in contracting out these types of services is that providers may reduce quality while keeping costs constant to increase profit, and the contracting agent may not realize it.

**Accreditation**

A key component of any health system is the human resources that carry out its daily activities. While the medical profession continues to dominate health services, they have lost some ground to other players such as nurses and allied health professionals in recent years. Hospitals continue to be at the centre of most health systems, though there has been an increasing emphasis on ambulatory and primary care in some countries. But, whether it is a doctor, a nurse, or a community health agent, it is only through the development and implementation of competency-based criteria that patients and communities can be assured that they are getting good health service providers. These criteria are put together into a system of accreditation, which also includes forms of membership, compliance, and enforcement.

Accreditation is common for health professionals and also for major health facilities in the more wealthy countries, but is sorely lacking in the poorer ones. While professional associations provide some control over the training, work, and standards of a particular group of providers (e.g., doctors and nurses), they have varying degrees of credibility in the sense of what they can enforce. A problem, particularly in LMIC, is how to integrate and accommodate traditional healers within the broader health system. Large proportions of such populations seek help from traditional practitioners for a wide range of problems. Whether it be a herbalist, bone setter, or spiritualist, these practitioners often constitute the first line of health-seeking behavior for many. They present a particular challenge to the coordination of health services, but also to any attempts at accreditation and standardization.

**APPLICATION OF THEORIES OF MANAGEMENT AND ORGANIZATIONAL BEHAVIOR**

In the management of any organization there is much left to the discretion of the managers. This discretion is informed by knowledge, experience, and intuition. While experience and intuition are personal and acquired over time in a somewhat haphazard way, the knowledge component is one that can be actively worked on in a systematic manner, either through formal education, including continuing education, or informal reading. The validity of such knowledge, then, comes into question, especially that written in the popular press, which is so pervasive in the area of management. However, much can be done to ensure validity of this knowledge through good research.

Research into health systems, policy, and management has now been going on for about 35 years, and the volume continues to increase, though that pertaining to international health and development is scarce, with most of the research looking at private sector companies, and usually those with many employees. However, there is much happening today to promote health system and policy research, especially in the multilateral sector, which has recently seen the birth of the Alliance...
for Health Systems and Policy Research, and within universities, where more and more young researchers are interested in applying their skills to international health. A new Centre for Health Systems Studies has just recently opened at the Bangladesh Rural Advanced Committee (BRAC) University and a Canadian group has made an inventory of all the international health systems researchers in their country.32

The theoretical perspectives of resource dependency,33 population ecology, institutionalization, and theories of evaluation are all now utilized to gain more information on how to make health systems and interventions more effective, efficient, and equitable. Concerning equity, the Global Equity Gauge Alliance34 is at the forefront (www.gega.org.za).

Organizational culture is a theory that is particularly relevant to management. By learning from aspects of national cultures, and focusing on issues like values and beliefs, rites and rituals, symbols and heroes, myths and cultural networks, managers who apply them to their workplace can make significant changes to achieve better outcomes in many aspects of organizational life.

Whether a manager is working within a private or public environment, he or she can gain valuable insight by reading the literature on health management,35 which has now accumulated many years of research experience in understanding the behavior of organizations and the people that work in them. There is also now much literature on leadership, a very important, though often lacking, component of any well-functioning health system.

PERFORMANCE OF NGOs, GOVERNMENT INSTITUTIONS, AND PRIVATE COMPANIES

The dominant actors in governance and implementation of health services worldwide continue to change. For much of the period around Alma Ata and the 1980s, the WHO held a leading role. Then several of the multilaterals, especially the World Bank, began to occupy a more central role as they created new divisions with a health mandate and increased spending in this area. All the while NGOs were also prevalent and gaining in numbers, distribution, and importance, especially those with large international profiles and those with strong roots in communities. However, there is some action now on the part of large bilateral donors to take greater control of the development agenda and underfund NGOs who are seen as more independent, but innovative. Private donor agencies are also growing in importance in global health. These trends result in the medium- to small-sized NGOs and community-based organizations having more of a struggle to stay alive and do their work, even though this work is often recognized as being more effective due to the close proximity to communities, families, and people.

An area that requires further attention is the evaluation of the impact of all levels of organizational involvement in overseas development assistance. It was only after much damage was done that the World Bank and International Monetary Fund began to understand the devastating impact to health and other social services resulting directly from their structural adjustment programs.36 Governments in high-income countries, with their large bilateral aid agencies, also struggle to understand their effectiveness. NGOs and community-based organizations, while much closer to the people who have the opportunity to directly see the impact of their work, are still in need of good monitoring and evaluation. This evaluation can be done through participatory methodologies that can provide information on outcomes while building capacity.

Provider Perspective

Addressing health system issues from the perspective of providers is important because they are the individuals who do the work of the health care system. Whether they belong to formal professional associations or are unlicensed individuals working in isolation, they collectively make decisions that have a large impact on health resource utilization and, to a lesser extent, population health outcomes. Who are the providers? The broadest definition includes health service providers and health management and support workers.37 Health service providers are those who directly provide services to patients, while health management and support workers set up and run the infrastructure needed to provide health services. This section will only discuss the former, as there is the most information on this group, though future work may study a broader range of health human resources.

There are numerous challenges facing the health workforce, including the numbers, distribution, skill mix, and working conditions. The WHO estimates that there is a global shortage of approximately 4 million health service providers, though not every region has a shortage.38 The global distribution of health workers is such that the largest number of health service providers is in the regions with the healthiest populations. For example, the WHO region of the Americas has 10 percent of the global burden of disease, but 37 percent of the world’s health workers and 50 percent of the resources for health. On the other hand, Africa bears 24 percent of the global burden of disease with only 3 percent of the world’s health workers and less than 1 percent of the global expenditure on health.39 The distribution within countries is similarly skewed, with most providers in the cities, where health outcomes tend to be better than in rural areas. The skill
mix of nurses, doctors, midwives, and public health workers should vary according to the needs of the population, but this is often not the case because these needs are not taken into account in basic training programs. The working conditions of providers are not always conducive to high performance and low pay in the health sector may lead providers to seek informal payments or work in a different field altogether.

The key human resources issues are:

1. Managing the entry into the workforce
2. Enhancing the performance of existing workers
3. Limiting rates of attrition

Getting the right mix of skills and diversity (racial, gender, and regional) in the health workforce is a key issue for educational institutions. This is being done through reforms in medical and nursing curriculums, the opening of schools of public health (particularly in Asia), and the use of quotas for disadvantaged minorities (this is common in India, where a significant number of university spots are reserved for lower caste and ethnic minority students).40

Improving the performance of existing workers is a strategy that may have the greatest short- and medium-term effect, given the time required to train a new generation of health care providers. The key elements to be improved are:

- Availability
- Competence
- Responsiveness
- Productivity

The strategies to achieve this include:

- Matching skills to tasks
- Adequate supervision
- Appropriate financial incentives and remuneration
- Enhancing organization commitment
- Promoting lifelong learning
- Promoting responsibility with accountability41

There is extensive literature on improving the appropriateness of care in developed countries and very little from developing countries, but there is no consensus on which methods are most effective for bringing the current practice of health providers in line with "best practice" (based on the best available evidence).42 Furthermore, approaches that have worked in developed countries may not be as effective in developing countries given the differences in practice environments. Retaining the health workforce is another challenge, as wealthier countries often draw health professionals away from poorer countries (with greater need), or people leave the profession because of low pay or poor working conditions.

**Individual/ Patient Perspective**

One of the goals of a health system is responsiveness, a term which essentially means that the system provides services that reflect the preferences of its users.43 This is one of the keys to ensuring that the system is used appropriately, promotes the dignity of patients, and optimizes patient satisfaction. One of the most systematic attempts to understand the perspective and experience of the lower socioeconomic stratum of health system users was conducted by the World Bank and compiled in a report called "Voices of the Poor."44 It concludes that state services are generally felt to be ineffective, inaccessible, and disempowering by the poor. This is particularly true of health services and education. Preferential treatment is given to those who are well dressed, or have money or influence, while the poor complain of callous, rushed, or ineffective consultations. Many state institutions reproduce the social inequalities that are present elsewhere in society.

Patients generally consult private or informal services for minor acute problems and government facilities for more severe problems. The experience varies in different countries, but generally government health agencies are often not used because they may be difficult to access, may lack medicines, and their staff may be unsympathetic. The barriers to consultation for the poor include:

- Distance
- Transportation
- Time for travel
- Shortage of medicine
- Costs
- Discrimination by staff
- Staff absenteeism
- Ineffective treatment

Health services are very expensive for the poor, when one includes cost of consultation, travel, informal payments, medicine, and lost income. Furthermore, the cost of informal payments in “free” government services is unpredictable and is often regressive, meaning that costs are a much higher proportion of income for the poor than the rich.

**Using the Patient Perspective to Improve Health System Performance:—The Demand Side in Health Service Delivery**

Though the national, organizational, and provider perspectives mentioned above are key factors in health system performance, ultimately it is the patients who choose which type of health services to seek under which circumstances and which provider instructions to follow and which to ignore. In countries where out-of-pocket expenditure is one of the main sources of health care finance (as in India or China), patients’ purchasing power can be harnessed to improve access or quality. Approaches that go through health system users to enhance performance usually refer to
the demand side in health services (as opposed to the supply discussed in the previous sections).

The demand side in health care has several meanings.\textsuperscript{45} It includes leveraging inputs, such as contribution of land, labor, and time (local representation) from communities to health facilities, as well as the private purchase of health goods like oral rehydration salts or insecticided-treated nets to prevent malaria. It also refers to understanding and changing demand-side behaviors, such as health-promoting behaviors and health-seeking behavior.

The demand side can also be stimulated to provoke changes in provider behavior through consultative processes or involvement in the planning, designing, management, and monitoring of the health service industry. The most direct form of intervention in this area is demand-side financing, which channels resources directly to users who then purchase health services. An example of this is giving vouchers for treatment of sexually transmitted disease to commercial sex workers.\textsuperscript{46} These patients then use the voucher to obtain treatment from approved health care providers, who then present the vouchers to a financing agent who reimburses them for their services. Enhancing patient’s purchasing power in this way can create a market for services to a group who is either too poor or marginalized to be considered viable customers by existing providers.

Ideally, empowered citizens/consumers use their collective voice to hold providers and policymakers to account for fulfilling their contract to deliver competent, responsive services. The more direct form of accountability is between service providers and users, involving the poor in monitoring and providing services and making provider income dependent on accountability to users. The indirect form of accountability is between government and citizens, where broader political change allows citizens to use democratic means to have input into the reform of health systems.\textsuperscript{47}

**DETERMINANTS OF THE BEHAVIOR OF HEALTH SERVICE PROVIDERS**

In the previous section, we have discussed the various levels at which one can intervene to improve the performance of health systems. Ultimately, health systems should provide the right service to the right patient at the right time in the most cost-effective setting. As one might imagine, this is not often the case in either high-income or lower-middle-income countries. However, the degree to which appropriate management of patients’ conditions is practiced in the health system depends on a series of factors relating to the national and organizational context, and the providers and patients themselves. Figure 15-2 is inspired from a model of the determinants of the behavior of private providers by Brugha and Zwi,\textsuperscript{48} though it could be applied to all health service providers. The national context includes the structure of the health system and the degree of interaction between the public and private sector. It also refers to the regulatory environment, the influence of pharmaceutical companies, and the availability of health-related technologies and treatments (which may or may not be effectively regulated by the government). The practice and social environment includes the incentive structure for providers from ownership (e.g., market exposure for private practitioners with recurrent expenses), how providers are paid, their degree of supervision, and the expectations of the community or patients. The next level is the providers, their level of training, opportunities for continuing medical education, the degree to which their knowledge and practice is influenced by the drug industry, and their ability to access timely information on evidence-based practice in the form of guidelines. Lastly, the interaction between providers and patients is affected by a provider’s caseload; the number of patients seen in a day; the provider’s ability to choose the correct management; and the availability, acceptability, and affordability of this approach. All these factors contribute to the proportion of appropriate and inappropriate management of patients’ health conditions in these providers.

**Case Study: Private Providers in India**

The following case study examines the determinants of the behavior of health care providers in one country (India) in more depth.

**NATIONAL CONTEXT**

India is a low-income country with a population of 1.065 billion and a GDP per capita of $1,568 at purchasing power parity.\textsuperscript{49} Life expectancy is 62 years, though this hides a bimodal mortality profile, with a significant portion of the population still struggling with the infectious diseases associated with extreme poverty and another large group of middle- and upper-class people with predominantly chronic, lifestyle-related diseases.\textsuperscript{50} The total expenditure on health care is 6.1 percent of GDP, with government spending about 1.3 percent of GDP on health. This expenditure is lower than many countries with comparable economic development\textsuperscript{51,52} and means that 78.7 percent of health expenditure is private expenditure, which compensates for the low level of public investment. Similarly, according to WHO data, 77.5 percent of health expenses are out of pocket at point of service, which indicates a very low level of insurance coverage, less than 10 percent by most accounts.\textsuperscript{53}

After independence, the Indian government set up a health care system modeled after the United Kingdom’s National Health Service, with comprehensive, free services for all. However, government mostly invested in infrastructure, creating a vast network of facilities that were chronically underfunded.\textsuperscript{54} Increasing, unmet demand for
services, along with decreasing government investment in health left a gap in which the private sector could flourish. The National Health Policy was to promote the private sector starting from 1982, though the government did little to assess its capacity or monitor its behavior, and did not include it in planning strategies. The result of this has been unrestricted growth of private expenditures on health, with per capita spending increasing by 12.5 percent per year since 1960. The predominance of out-of-pocket spending by patients means that it is very difficult for the government to control costs. In 2001 there were 400,000 registered private providers, of whom 80 percent are in private practice. On top of this, there are an estimated 1.2 million less than fully qualified (LTFQ) physicians, who are unregistered and all practicing in the private sector.

**Policy Context**

The government has made several attempts at regulating the behavior of private providers. The first approach was by establishing the Medical Council of India, which regulates medical education and registers physicians through its branches at the state level. Recent studies have shown that there is no systematic database of its members and few private providers are aware of or follow its recommendations. Furthermore, there are allegations that the Council exists more to protect the interests of its members than to protect the public. This claim is supported by the fact that few state councils have ever suspended any members, despite numerous complaints. The perceived failure of self-regulation led to the application of the 1986 Consumer Protection Act to any paid medical service. The argument was that if health care was being run as a business, patients should be able to seek compensation for inadequate services through the consumer courts. This move strengthened the notion of patients' rights, but had the limitation that complainants must prove negligence, and the complexity of most medical malpractice cases requires a level of expertise that the courts or defendants are not equipped to provide. The massive demand for these services has since led to a backlog of 200,000 cases with few funds in the cash-strapped legal system to process them.

**Practice Environment**

There are no comprehensive studies that describe the practice context of private providers in India, so the results of several smaller studies have been brought

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**Figure 15-2.** Determinants of health service provider behavior. From Brugha R, Zwi A. Improving the quality of private sector delivery of public health services: challenges and strategies. *Health Policy and Planning* 1998;13:107–120. (Adapted with permission.)
together to highlight some of the key elements that affect their behavior. In a study from Ahmedabad, in Gujarat, 92 percent of private providers (PP) surveyed were sole proprietors of their clinics, with unlimited liability.62 The high risk associated with this type of business meant that 46 percent of PP used mostly personal equity to establish their practice and 35 percent of PP borrowed more than 50 percent of capital costs at 15 percent interest. The main risks to the viability of their enterprise in the competitive urban ambulatory care market were fluctuations in patient flow, poor recovery of costs, and increasing operating costs (mostly equipment and location). Three-quarters of physicians in the sample charged fee-for-service based on cost and market price, while others charged a flat fee. Providers stated that kickbacks for specialist referrals, over-prescription of drugs, and inadequate disposal of biohazardous waste were common problems.63 A study of diagnostic laboratory owners showed that the competition between laboratories in cities has made commissions the norm.64

PROVIDER KNOWLEDGE AND ATTITUDES

Many studies have shown that PP tend to be isolated from professional organizations and have few opportunities for continuing medical education (CME) beyond that which comes from pharmaceutical companies.65,66 In Bombay, there is one medical representative for every four physicians in the city.67 Companies such as Abbot spend approximately $20 per physician visited per month on marketing, CME, dinners, and gifts. An in-depth qualitative study suggested that physicians who worked in solo practices and had lower levels of training were more likely to “cooperate” with medical representatives to help “move stock” in local pharmacies.68 Studies on awareness of relevant clinical practice guidelines have shown a moderate level of knowledge.69

PATIENT-PROVIDER INTERACTION

There are very few data on this aspect of provider behavior. For common conditions like childhood diarrhea or acute respiratory illness, physicians in several studies had information on the correct approach and access to treatments like oral rehydration salts (ORS) and basic antibiotics.70 A study in a slum in Karachi, Pakistan, (which is similar to many Indian slums) showed that average consultation time was three minutes plus two minutes for dispensing drugs.71

APPROPRIATENESS OF CLINICAL MANAGEMENT

There are a few studies looking at appropriateness of treatments for private providers in India and Pakistan (included because of the similarities between the two countries), but the results are not encouraging. In Bihar, only 15 percent of providers measured respiratory rate in cases of acute respiratory illness in children, despite the ease and significant diagnostic value of this exam.72 A study of private providers’ management of TB showed 80 different treatments, most of which were not recommended and more expensive.73 Analysis of prescriptions in the district of Satara, Maharashtra, showed that 19 percent of prescriptions were irrational, 47 percent were unnecessary, and 11 percent were hazardous.74 Unnecessary injections were given in 24 percent of cases. In the Karachi study mentioned above,75 a mean of four drugs were prescribed for childhood diarrhea, with 66 percent of patients receiving antibiotics and only 29 percent receiving ORS. Based on the prevalence of bacterial diarrhea in children, it is estimated that less than 10 percent of patients require antibiotics, though all should receive ORS. It is interesting to note that most physicians asked patients about blood in stool or fever (situations where antibiotics would be needed), but went on to give antibiotics anyway, citing that patients would not respect them or go elsewhere if they did not.76 This underlines the fact that provider knowledge and access to treatments are not the greatest barriers to appropriate care for common conditions. Improving the appropriateness of patient care requires a broad understanding of the determinants of these providers’ behavior, and interventions that target various levels (national, organizational, provider, and patient) may be more effective at modifying the root cause.

SUMMARY

The health system perspective is very useful in working towards the improvement of individual and population health by helping to identify management and organizational issues within the health system. Issues of coordination, integration, effectiveness, efficiency, reliability, accessibility, equity, public-private involvement, and community participation are all important to consider in the delivery of health services.77,78 Added to these various national concerns are now those of globalization.79 Diseases are crossing borders with high speed and volume, health professionals are migrating to greener fields, technology is becoming more widely available, advocacy is on the increase, and we are all communicating more with each other. How these things can be brought to improve our global health and not denigrate it is the emerging question of the day. Understanding these phenomena and making use of them in the management and organization of health services to meet the growing and changing needs of all is the challenge we leave you with.

STUDY QUESTIONS

1. List the functions of a health system, how they interact, and explain the level of priority given to each function in your country.
2. What are some advantages and disadvantages to nations in decentralization, privatization,
public-private partnerships, and contracting in the health sector?

3. Using the case study of private providers in India as an example, look at the determinants of health service provider behavior in another country. Include the national context, provider knowledge and attitudes, patient-provider interactions, and the practice and social environment.

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