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# Health Policy Research in South Asia

## *Building Capacity for Reform*

Abdo S. Yazbeck
David H. Peters
*Editors*

THE WORLD BANK

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# Foreword

In many ways the future is bright for South Asia. The past few years have seen amazing achievements in economic outlook, as well as in human development, health, and education. But South Asia continues to face difficult challenges, especially in the areas related to the Millennium Development Goals. Almost half of the world's poor, living at less than $1 a day, live in South Asia. This pervasive poverty contributes to and is exacerbated by low levels of human development. The picture is of high levels of illiteracy, maternal mortality, and malnutrition.

In order for South Asian countries to achieve a brighter future, investments in human capital are needed. Investments, however, will produce the desired results only if the enabling policy environments are in place. In the health sector, an enabling environment would mean equitable and efficient resource allocation policies, strong institutional frameworks, and a clear understanding of the role of the public sector as a steward of health sector activities for both private and public entities. Devising appropriate policies and building enabling institutions can take place only if there is a firm understanding of the needs of each of the countries and of the constraints faced by the health system and the population. In other words, there is a clear need for health policy research to allow policymakers to design and implement programs.

This book focuses on this theme, emphasizing the need for timely and homegrown health policy research to feed into the policy

process. The message is simple: South Asian researchers and institutions can and do produce high-quality, state-of-the-art health policy research and are able to influence the policy debate. By collecting and disseminating such a variety of research papers in the health sector, the editors of this book not only help bring together a rich group of health policy research findings for a range of audiences in South Asia, but also more broadly contribute to learning for audiences in other regions facing similar challenges.

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# Acronyms and Abbreviations

| | |
|---|---|
| ACT | Advocacy for Control of Tuberculosis |
| ADP | Annual Development Plan |
| AHCPR | [United States] Agency for Health Care Policy Research |
| ALOS | Average length of stay |
| ANM | Auxiliary nurse midwife |
| APHEN | Asia Pacific Health Economics Network |
| APHIDB | Andhra Pradesh Health Institutions Database |
| APNHAN | Asia-Pacific National Health Accounts Network |
| APP | Alternative private practitioner |
| APVVP | Andhra Pradesh Vaidya Vidhana Parishad |
| ASCI | Administrative Staff College of India |
| ATC | Anatomic, Therapeutic, Chemical |
| BBS | Bangladesh Bureau of Statistics |
| BCC | Behavior Change Communications |
| BCG | Bacillus Calmette Guerin |
| BEACH | Bettering the Evaluation and Care of Health |
| BGFES98 | Bangladesh Facility Efficiency Study Phase I |
| BIA | Benefit incidence analysis |
| BIMARU | Bihar, Madhya Pradesh, Rajasthan, and Uttar Pradesh (India) |

| | |
|---|---|
| BIS | Bureau of Indian Standards |
| CB CFS | Central Bank of Sri Lanka Consumer Finance Survey |
| CGPSL | College of General Practitioners of Sri Lanka |
| CMMU | Construction Management and Maintenance Unit |
| COMAC-HSR | Concerted Action Programme on Quality Assurance |
| CSD | Census and Statistics Department |
| CSQ | Client satisfaction questionnaire |
| CT | Computerized tomography |
| DALY | Disability-adjusted life-year |
| DCH | Diploma in Child Health |
| DfID | [United Kingdom] Department for International Development |
| DFM | Diploma in Family Medicine |
| DG | Director general |
| DH | District hospital |
| DHS | Demographic and health survey |
| DOH | Department of Health |
| DOTS | Directly Observed Treatment, Short-Course |
| DPT | Diphtheria-pertussis-tetanus |
| ECG | Electrocardiogram |
| EIP | Evidence and Information for Policy |
| EPI | Expanded program of immunization |
| ESP | Essential Services Package |
| FCGP | Fellow of the College of General Practitioners of Sri Lanka |
| FSI | Floor space index |
| GDP | Gross domestic product |
| GH | General hospital |
| GNP | Gross national product |

| | |
|---|---|
| GP | General practitioner |
| HCI | Health care institution |
| HDI | Human Development Index |
| HDS | Health and Demographics Survey |
| HEDIS | Health Plan and Employer Data Information Set |
| HES | Household expenditure survey |
| HEU | Health Economics Unit |
| HEU/DI | Health Economics Unit/Data International |
| HIPC | Heavily indebted poor country |
| HPSP | Health and Population Sector Program |
| HWG | Health Watch Group |
| ICHA | International Classification of Health Accounts |
| ICPC | International Classification of Primary Care |
| IEC | Information, education, and communications |
| IHSD | Institute for Health Sector Development |
| IIPS | International Institute for Population Sciences |
| IMC | Indian Medical Council |
| IMF | International Monetary Fund |
| IMPA | Independent Medical Practitioners Association |
| IMR | Infant mortality rate |
| IMS | Indicator Measurement Systems |
| IPS | Institute of Policy Studies |
| IPS PCS 2000 | Institute of Policy Studies Private Clinic Study 2000 |
| JCAHO | Joint Commission on Accreditation of Health Care Organizations |
| LHV | Lady health volunteer |
| MCGP | Member of the College of General Practitioners of Sri Lanka |
| MCH | Medical college hospital |
| MHSS | Morbidity and health status survey |
| MIS | Management information systems |

| | |
|---|---|
| MOH | Ministry of Health |
| MOHFW | Ministry of Health and Family Welfare |
| MOS | Medical Outcomes Study |
| NACER | National Council for Applied Economics Research |
| NADHI | North Arcot District Health Information |
| NAMCS | National Ambulatory Medical Care Survey |
| NCQA | National Committee for Quality Assurance |
| NFHS | National Family Health Survey |
| NGO | Nongovernmental organization |
| NHA | National health account |
| NHE | National health expenditure |
| NIPORT | National Institute of Population Research and Training |
| NSS | National Sample Survey |
| NSSO | National Sample Survey Organization |
| OECD | Organisation for Economic Co-operation and Development |
| OPV | Oral poliovirus vaccine |
| ORS | Oral rehydration solution |
| ORT | Oral rehydration therapy |
| PAHO | Pan American Health Organization |
| PER | Public expenditure review |
| PHC | Primary health center |
| PIP | Project Implementation Plan |
| PRA | Participatory rural appraisal |
| PRSP | Poverty Reduction Strategy Paper |
| PSQ | Patient satisfaction questionnaire |
| PSU | Primary sampling unit |
| PWD | Public Works Department |
| QOST | Quality of Service in Texas |
| REACH | Resource Group for Education and Advocacy for Community Health |

| | |
|---|---|
| Rs. | Rupees |
| RTI | Reproductive tract infection |
| SEAR | Southeast Asia region |
| SEARO | South-East Asia Regional Office |
| SHA | System of Health Accounts |
| SLI | Standard of living index |
| SLNHA | Sri Lanka national health account |
| SLPFS98 | Sri Lanka Public Facility Study 1998 |
| SMR | Standardized mortality rate |
| STD | Sexually transmitted disease |
| STI | Sexually transmitted infection |
| TEH | Total expenditures on health |
| THC | Thana health complex |
| Tk. | Takas |
| TRC | Tuberculosis Research Centre |
| UHC | Upazila health complex |
| UHFWC | Union health and family welfare center |
| UNDP | United Nations Development Programme |
| UP | Uttar Pradesh (India) |
| USAID | United States Agency for International Development |
| WHO | World Health Organization |
| WONCA | World Organization of National Colleges, Academies, and Academic Association of General Practitioners/Family Physicians |

SECTION I

# Introduction

CHAPTER 1

# Overview

*Abdo S. Yazbeck, World Bank*
*David H. Peters, Johns Hopkins University*

## Section I: Introduction

South Asia is a region of contrasts. It covers eight sovereign nations ranging in population from 250,000 in the Maldives to 1 billion in India. The region can boast of impressive technological achievements, yet it contains more than 40 percent of the world's poor, who live on less than a dollar a day. In the health sector, the contrasts and needs are equally impressive. At one end of the spectrum, there are amazing achievements in health outcomes in Sri Lanka and in the southern Indian state of Kerala, where infant mortality rates (IMRs) are 15 and 16 deaths per 1,000 live births, respectively. At the other end of the spectrum, IMRs are 163 deaths per 1,000 live births in Afghanistan and 85 deaths per 1,000 live births in the northern Indian state of Uttar Pradesh. Similarly pronounced differences exist in other health indicators, including maternal mortality, fertility, and—to a lesser extent—nutrition (see table 1.1).

Such large variations in health, nutrition, and fertility outcomes are no doubt the result of many different factors, some within and others outside what is traditionally considered the health sector. The factors outside the health sector that most likely affect these outcomes include determinants related to the performance of the economy, such as income and food security, as well as other factors, such as education, water and sanitation conditions, roads, and

**Table 1.1** Selected Health Indicators in South Asian Countries

| COUNTRY | POPULATION (2001) | GNP PER CAPITA (2001) | INFANT MORTALITY RATE (2000) | TOTAL FERTILITY RATE (2000) | CHILDHOOD MALNUTRITION (1997–2000)[a] |
|---|---|---|---|---|---|
| Afghanistan | 27,247,944 | — | 163 | 7 | 49 |
| Bangladesh | 133,405,392 | 370 | 60 | 3 | 48 |
| Bhutan | 828,044 | 640 | 58 | 5 | 19 |
| India | 1,033,389,824 | 460 | 69 | 3 | 47 |
| Nepal | 23,584,706 | 250 | 74 | 4 | 47 |
| Pakistan | 141,450,160 | 420 | 83 | 5 | — |
| Sri Lanka | 19,649,486 | 830 | 15 | 2 | — |

— = Not available.
*Note:* GNP = gross national product.
a. Most recent data from 1997–2000.
*Source:* World Bank, *World Development Indicators 2002* database.

social and cultural factors related to gender relations and traditional beliefs. Health sector policymakers have little direct impact on such factors, but they do have considerable influence over the performance of the health sector and its effectiveness in addressing the needs of the population. When policymakers fully understand the strengths and weaknesses of the health sector, they can make adjustments and reforms that will make the sector more effective. To understand the sector fully, policymakers need access to up-to-date, accurate health policy research. It is this need for health policy research that is the main focus of this book. The volume highlights the excellent research that has been conducted by South Asian institutions and researchers to support health policymaking in the region.

It is clearly not feasible to cover all aspects of health policy research in one volume, so we decided to organize the book around four research areas that capture some of the best recent research efforts in South Asia: (a) inequality analysis, (b) expenditure analysis, (c) private sector analysis, and (d) consumer and provider perspectives. In each research area, we selected a number of papers that covered different dimensions of the topic. For example, in the area of expenditure analysis, we have included a chapter that covers traditional public expenditure reviews, a chapter that covers the

sophisticated application of the national health accounts approach, and a chapter that focuses on facility-based expenditure and cost analysis. Most of the research involves survey techniques but does not rely on clinical epidemiology, demography, or anthropological methods. The inequality, expenditures, and private markets analyses and, to a lesser extent, the consumer and provider perspectives rely heavily on health economics and other forms of applied microeconomics. This volume does not cover basic science research and studies oriented toward specific health conditions or exposures to health risks.

The driving force behind the increase in locally produced health policy research in South Asia has been a shift in how development agencies such as the World Bank, the World Health Organization (WHO), and bilateral donors finance research in the region. Increasingly, local researchers and institutions in South Asia have been contracted to conduct research meant to feed into regional needs and reform efforts. In fact, 7 of the last 12 chapters in this volume summarize studies supported by the World Bank; the United Kingdom Department for International Development (DfID), the WHO, and others supported the studies described in the remaining chapters. In choosing papers for this volume, we used the following selection criteria. First, we wanted research conducted by South Asian institutions or researchers. Second, we wanted innovative papers that used state-of-the-art methodologies for collecting and analyzing data. Third, we looked for papers that used research findings as a basis for policy recommendations. In other words, we chose applied practical research with a policy dimension over basic research and data collection. Finally, we wanted papers that used methods that could be tried out in other countries and thereby serve as a South-South exchange of ideas to promote further research. Not every paper in this volume meets all these criteria, but we tried to select papers that met most of them.

Why focus on South Asian researchers and research institutions? This body of researchers is producing high-quality and innovative research. Included in this volume are pathbreaking pieces of work covering some of the most detailed subnational benefit incidence

analysis (BIA) work to date (chapter 3), one of the best examples of applying a national health accounts approach to a low-income country (chapter 7), innovative approaches in researching the ways the private sector can provide health services (chapters 10, 11, and 13), and new emphases on consumer redress (chapter 12) and enhancing the voice of citizens (chapter 14). In addition to the innovations, the book covers excellent examples of research that is directly linked to policy in the areas of equality (chapters 4 and 5), public expenditure analysis (chapter 6), cost-efficiency (chapter 8), and public-private collaboration in delivering health services (chapter 9).

Local participation and ownership of research products are also important for other reasons. Locally managed research is likely to be more relevant to local policymakers and to be more closely and practically linked to politically feasible reforms and policies. In many cases, research by a local institution improves the quality of data collection and makes the findings more acceptable to policymakers and civil society. As noted above, donors and multilateral agencies working in South Asia are increasingly contracting locally based researchers and research institutions (instead of international consultants) to do studies. By supporting local research institutions, donors are helping develop local capacity to make and to manage health policy. As health systems evolve, it is important to have the analytical capacity at the local level to monitor conditions and evaluate the impact of reforms. International technical assistance may still be needed to share information and techniques gleaned from experience in other countries and regions of the world, but only in a supportive role. This volume is another way to share the findings of health policy research among the countries of South Asia and with countries in other parts of the world.

In the remainder of this chapter, we briefly review the research presented in the four main parts of the book: inequality analysis, expenditure analysis, private sector analysis, and consumer and provider perspectives. We conclude the chapter by highlighting some of the methodological innovations represented in the volume and some of the policy-relevant outcomes that emerged from the research.

## Section II: Inequality Analysis (Chapters 3–5)

The global development community has increasingly focused on the plight of the poor and on the need not only to stress economic growth, but also to take into account the substantial inequalities in income and in socioeconomic measures such as health and education (IMF and World Bank 1999a, 1999b, 1999c, 2001; World Bank 2000). Similarly, the international health community has in recent years increasingly focused on the heath needs of the poor and on inequality both in health outcomes and in the use of health services (Claeson and others 2002; Peters and others 2002; WHO 1999, 2001; World Bank 1997).

In 2000, the World Bank released the results of analytical work on health inequality (Gwatkin and others 2000) that had been done using demographic and health surveys (DHSs) financed by the U.S. Agency for International Development (USAID). Using DHS data on 44 low- and middle-income countries, Gwatkin and others (2000) took household responses to questions about assets and grouped them in wealth categories to show the differences in health, fertility, and nutritional outcomes, and service use between the rich and the poor. Four of the 44 countries analyzed were in South Asia; in all four of these countries, there were large gaps between the rich and poor in all outcomes (table 1.2).

From the perspective of health sector policy, there is a qualitative difference between the inequality described in the first three rows of table 1.2 and that described in the last two rows. As discussed above, health sector outcomes, such as those in the first three rows, are determined by factors within as well as outside the health sector. While health outcomes are the ultimate objectives of a health system, policymakers have far more control over health sector outputs, such as those in the last two rows. The three chapters on health inequality research in this volume (chapters 3–5) focus on the determinants of inequality in health outcomes that fall within the health sector and, therefore, within the direct sphere of influence of health sector policymakers. The three chapters look at inequality in the health sector from three different perspectives. Chapter 3 is a

**Table 1.2** Inequality in Health Outcomes and Health Sector Outputs in South Asia (wealth quintiles)

| OUTCOMES AND OUTPUTS | BANGLADESH 1996/97 | | INDIA 1992/93 | | NEPAL 1996 | | PAKISTAN 1991 | |
|---|---|---|---|---|---|---|---|---|
| | POOREST | RICHEST | POOREST | RICHEST | POOREST | RICHEST | POOREST | RICHEST |
| Infant mortality rate[a] | 96 | 57 | 109 | 44 | 96 | 64 | 87 | 62 |
| Child stunting[b] | 50 | 24 | 65 | 31 | 59 | 32 | 61 | 33 |
| Fertility rate[c] | 3.8 | 2.2 | 4.1 | 2.1 | 6.2 | 2.9 | 5.1 | 4 |
| Full immunization | 47 | 67 | 17 | 65 | 32 | 71 | 22 | 55 |
| Attended delivery | 2 | 30 | 12 | 79 | 3 | 34 | 4.6 | 55 |

[a]Deaths under age 12 months per 1,000 live births.
[b]Percentage of children under age 5 years whose height for age is below –2 standard deviation z-score.
[c]Births per woman ages 15–49 years.
*Source:* Gwatkin and others 2000.

detailed study of public sector subsidies for health in India as a whole and in its largest states and regions. Chapter 4 takes a national health accounts approach and compares inequality in outcomes, outputs, and financing in three South Asian countries. Chapter 5 looks at geographic inequality in resource allocation in the health sector and suggests a different rationale for allocating resources.

In chapter 3, Ajay Mahal focuses on equality in public subsidies to the health sector in India as a whole and in the 16 largest states and regions. The chapter summarizes what can be described as one of the most detailed and comprehensive benefit-incidence studies for the health sector in a low-income country (Mahal and others 2000). The work stands out in a number of ways. First, the study not only looked at the national subsidy but also disaggregated it by states and regions, thus making possible comparisons among them. Moreover, the analysis was disaggregated by gender, urban-rural residence, poverty status, and membership in a scheduled caste or tribe, recognized disadvantaged groups in India. Second, the study looked at the resource allocation decisions underlying the findings, such as alloca-

tions to the different levels of care, which have important policy implications for the future. Third, the limited availability of cost data in many Indian states led the researchers to develop innovative ways to assess the costs of services and to test two different methodologies to ensure that the main findings were robust. Officials in the Indian government have already used the findings of the study to emphasize the need to make the health system more equitable.

In chapter 4, researchers from the Institute of Policy Studies in Sri Lanka, Data International in Bangladesh, and Nepal Health Economics Association compared equality in the health sectors in three South Asian countries—Bangladesh, Nepal, and Sri Lanka—using a national health accounts approach, among other methodologies. This was the first such use of national health accounts in South Asia to compare equality among countries. Another important methodological element of the study was the use of state-of-the-art techniques such as concentration indexes for measuring inequality. The study covered a wider range of the different dimensions of equality than has been attempted in any other studies of equality in the health sector. The study looked first at inequality in health sector outcomes (infant and child mortality and reporting of illnesses), then turned to inequality in heath sector outputs (use of health care services) and in benefits from government subsidies. It went on to look at the distribution of payments for health services and finally studied the redistributional nature of the different ways in which the governments of the three countries finance health services.

The last chapter in section II—chapter 5—provides a natural transition to section III on expenditure analysis. Chapter 5, written by the team at the Health Economics Unit of the Ministry of Health and Family Welfare in Bangladesh, is an extension of a traditional public expenditure review (PER) with a focus on equality in geographical resource allocation. Two features in chapter 5 provide valuable lessons for researchers and policymakers interested in equality in public expenditure. First, the chapter highlights the need to go beyond the basic and superficial description of budget and expenditure allocations to look carefully at the mechanisms underlying historic allocation decisions. Second, the chapter introduces

the concept of needs-based resource allocation to replace or correct the facility-based approach used in the health sector in Bangladesh and in most other countries in South Asia and elsewhere.

## Section III: Expenditure Analysis (Chapters 6–8)

The simplest way to describe the essence of expenditure analysis in the health or any other sector is that it is an exercise that involves following the money. This seemingly simple exercise is especially important in the health sectors in South Asian countries. According to the global national health accounts maintained by the WHO, South Asian countries stand out in terms of having a weak public financial commitment to the health sector and a heavy reliance on private out-of-pocket spending. Five South Asian countries—India, Pakistan, Nepal, Afghanistan, and Sri Lanka—are ranked among the lowest in the world in terms of national public sector spending on health as a percentage of gross domestic product (GDP). In another measure of the lack of public commitment—the share of total health spending by private sources—India, Pakistan, and Nepal are in the top 20 countries (out of 190) in which private spending accounts for more than 75 percent of all health sector spending.

The low levels of public spending on health in South Asia make it especially critical to determine the efficiency and equality of this expenditure. The three chapters in section II look at the equality of public allocations, while the three chapters in section III look at different dimensions of the efficiency of public and private spending. Chapter 6 takes a traditional approach to PERs and links the objectives of health programs in Bangladesh with public expenditures on them. Chapter 7 uses a national health accounts methodology to analyze private health expenditures in Sri Lanka. Chapter 8 focuses on the dominant element of public spending—facility-based expenditures—in Bangladesh and uses a facility survey to look at the cost-efficiency of the allocation decisions. These three chapters take different approaches, but they all highlight the

importance of analyzing expenditures in the health sector, and they all provide an empirical basis for policy options.

Chapter 6, which was also written by the Health Economics Unit of the Ministry of Health and Family Welfare in Bangladesh, is an excellent example of how basic PERs in the health sector can support the implementation of programs and provide empirical inputs into the policy process. The chapter highlights the link between the PER exercise carried out by the Health Economics Unit and the main elements of the reform in the health sector in Bangladesh. The PER looks at the extent to which the government's policy of targeting the services most often used by the poor achieved its stated objective of reaching low-income groups. It also looks carefully at the government's expenditure allocations within the package of priority services. In addition to addressing country-specific policy issues, chapter 6 highlights the basic elements of a PER, including (a) looking at overall expenditures in the sector and the extent to which they are consistent with the original budget figures; (b) reviewing the breakdown of expenditures by programs, levels of care, and inputs; (c) analyzing domestic sources of financing as well as external support; (d) analyzing the overall resource envelope; (e) analyzing the equality of resource allocation; and (f) examining the budget processes that drive allocation decisions.

In chapter 7, which was written by the Institute of Policy Studies and the Ministry of Health in Sri Lanka, the authors used national health accounts techniques to collect and report on all health sector expenditures in Sri Lanka. While national health accounts are becoming standard exercises in member countries of the Organisation for Economic Co-operation and Development (OECD), very few developing countries have invested in collecting the data needed to conduct and maintain them. The Sri Lanka accounts summarized in chapter 7 are a way for low-income countries to expand basic expenditure analysis in the health sector. Chapter 7 highlights the main distinguishing feature and strength of national health accounts, which is that they capture both private and public expenditures in the health sector. Without this feature, policymakers are working with an incomplete picture, typically

consisting only of the government's expenditures. The authors summarize a number of important outcomes of the Sri Lanka national health accounts, including analyses of (a) trends in total expenditures, (b) sources of financing, (c) public and private expenditures disaggregated by function and level of care, (d) types of providers, (e) allocations of expenditures among geographic areas, and (f) international comparisons.

Chapter 8 looks at efficiency in the health sector in Bangladesh using facility-based data. In this expenditure study, Ravi Rannan-Eliya and Aparnaa Somanathan challenge the long-standing assumption that lower-level facilities deliver health care at lower costs. They conducted a relatively low-cost data collection effort. The data from the facility survey allowed the researchers to go beyond the basic expenditure data reported in the government system. These data made it possible for them to directly observe inputs such as the availability and functioning of basic equipment in different departments in hospitals and clinics, the availability and functioning of basic utilities needed for equipment to function, staff availability and classification in facilities, time allocation patterns of providers by classification, use of services by type of service, and performance indicators such as bed occupancy rates. The survey and the budget data together allowed the researchers to calculate average-cost numbers for the different levels of care and to point out suboptimal investments to policymakers.

## Section IV: Private Sector Analysis (Chapters 9–11)

Health policymakers and researchers have neglected the private sector in South Asia for a long time. Nonetheless, the private sector is a large and growing part of South Asia's health systems, in terms of both financing and providing health services. Several chapters in this volume highlight the dependence of national health systems in South Asia on private financing for health services—49 percent of all health spending in Sri Lanka, 64 percent in Bangladesh, 77 percent in Nepal, and 82 percent in India (WHO 2001).

In addition to the large role that the private sector plays in financing health care, it provides a significant proportion of health services in low-income countries (Berman and Rose 1996). For example, in a comparison of DHS results in 38 countries, Gwatkin and others (2000) found that, on average, 77 percent of childhood diarrhea treatments were provided by the private sector, with even higher figures in Bangladesh (92 percent), Nepal (90 percent), and India (84 percent). The private sector is responsible for the largest segment of the health care market in South Asia, though there are important differences between countries and types of services. In chapter 9, V. R. Muraleedharan and Sunil Nandraj point out that the most numerous type of providers in India (about 1 million) are private, unqualified medical practitioners who largely cater to the rural poor. They also note that 70 percent of the country's qualified medical doctors work in the private sector, largely in urban areas. Quoting the National Sample Survey Organisation (NSSO 1998), the authors demonstrate that the private sector portion of both inpatient and outpatient services is growing, with more than 80 percent of outpatient visits and more than half of hospitalizations now occurring in the private sector. At the other end of the spectrum, Rannan-Eliya and his colleagues (chapter 11) note that 45 percent of outpatient visits in Sri Lanka are to private general practitioners.

Despite the growing role of the private sector in financing and providing health care in South Asia, many governments in the region view the private sector with suspicion and are not convinced of its appropriateness, quality, or cost-effectiveness. As a result, many governments have yet to decide how to approach the question of the private sector's role in health care. However, in order to make informed policy decisions and develop strategies to deal with the private sector, governments will need much more information about its nature, composition, activities, opportunities for collaboration, and areas of failure. At this stage, most of the analysis that has been done is descriptive in nature, meaning that it simply identifies the size and location of different parts of the private sector and documents experiences. The research in this volume extends

this body of knowledge a stage further by examining how the private sector is actually functioning in South Asia and analyzing what options governments have to deal with its various components.

The authors of these chapters examine various dimensions of private sector health care in South Asia, which we define as all providers and suppliers of health inputs outside the government sector, including both for-profit organizations and nonprofit nongovernmental organizations (NGOs). Private health providers themselves consist of a disparate group of traditional healers, drug vendors, shopkeepers, and unqualified practitioners, as well as professional pharmacists, laboratory technicians, nurses, and doctors. However, the distinction between public and private is not complete. The authors from India (chapters 9 and 10) and Sri Lanka (chapter 11) point out how public sector practitioners also practice privately, in some cases legally (in Sri Lanka) and in other cases illegally (in Uttar Pradesh, India).

The chapters in this section shed light on how different parts of the private sector operate in India and Sri Lanka, using innovative analytical methodologies that yield new insights on the subject. In chapter 9, Muraleedharan and Nandraj synthesize the literature on private health care provision in India as a basis for a detailed exposition of government options for dealing with private providers. Recognizing the limited capacity of governments to monitor their contracts and regulate the private sector, they point to six specific ways in which governments can collaborate with the private sector to reach a set of policy objectives, including increased access, safety, and accountability of all health services.

In his study of private health provision in India's largest state, Uttar Pradesh, (chapter 10), S. Chakraborty has conducted an innovative survey to assess how different parts of the health-provider market function—qualified and unqualified medical practitioners, small and large hospitals, and diagnostic centers. In addition to reporting hard-to-find empirical data on the motivations, quality of care, and pricing practices of these private markets, he has identified the constraints that prevent different types of private providers from providing quality services and from

collaborating with the government. Chapter 11 reports on another empirical study of private practice behavior, this time a study of general practitioners in Sri Lanka. For the first time, Rannan-Eliya and his colleagues have been able to adapt survey methods used for private practitioners in Australia and the United States to assess the quality of care in a developing country using a nationally representative sample of private general practitioners. They provide new quantitative information about the different levels of services provided by private practitioners, how much they charge, and how they operate. The authors conclude that private practitioners in Sri Lanka provide a substantial volume of good-quality clinical care, thus reducing the burden on government services. The practitioners themselves are concerned about the lack of vocational training available to them, weak referral mechanisms between the public and private sectors, and inadequate financing methods to ensure that future doctors will have incentives to go into private practice.

### Section V: Consumer and Provider Perspectives (Chapters 12–14)

The views of the users of health services and providers have not been well researched in South Asia. Each of the three chapters in this section uses a different approach and brings a unique perspective to this subject. In chapter 12, Bejon Misra reports on a study that looked specifically at consumer redress in public and private hospitals in India, a subject that is rarely examined. He conducted surveys both at health facilities and at the Consumer Courts, which are special forums that were established under the Consumer Protection Act to deal with consumer complaints efficiently. The study found that hospitals themselves are not well equipped to deal with consumer complaints, most of which tend to be concerned with nonclinical issues such as sanitation, availability of water and power, and billing procedures. Unfortunately, the study found that the Consumer Courts are very inefficient and not very accessible, which leaves both consumers and defendants dissatisfied. As a

result of these investigations, Misra is able to propose a wide variety of measures that would make health services more accountable and provide genuine means of redress to consumers.

In chapter 13, Prasanta Mahapatra takes another approach to examining the quality of health services in Andhra Pradesh, India. Defining "quality of care" in terms of health attainment (technical quality) and responsiveness (interpersonal quality), Mahapatra's group adapted research instruments from other countries to document the physical structures and clinical practices of public and private health providers and patient satisfaction with them both. In assessing the evidence from his study, Mahapatra concludes that technical quality may be slightly better in the public sector facilities that he studied than in the private sector facilities, but the private sector appears to provide better interpersonal quality of care. More important, he highlights the facts that quality-related practices are poorly developed in both the public and private sectors and that there is insufficient orientation toward clients throughout the entire health sector in Andhra Pradesh.

Chapter 14 raises the issue of how the voices of consumers and other stakeholders can be heard in the process of health sector reform in Bangladesh. Nilufar Ahmad details an extensive consultation process among 34 stakeholder groups in the preparation of Bangladesh's Health and Population Sector Program that began in 1998. The process showed how consultation could be used to reach a consensus about which programs should be prioritized and which vulnerable groups, notably women and children, should be targeted. Through the participatory process, it became clear that a majority of Bangladeshi citizens are not aware of their right to receive health care and, therefore, are not taking advantage of the high-quality services that already exist. Partly influenced by the surveys that were conducted as part of the Health and Population Sector Program, the government has adopted a Patients' Rights Charter and established a National Steering Committee for stakeholder participation within the Ministry of Health and Family Welfare, consisting of government officials, women's organizations, and NGOs.

## Methodologies and Implications

As mentioned above, a major purpose of this volume is to share innovative research methodologies being used in South Asia to provide the empirical basis for health sector reform and policy development. In this section we highlight two elements of the methodologies used in chapters 3–14 (data collection and analysis techniques) and some of the emerging themes.

### *Data Collection Efforts*

Given the nature of this volume (collection of research articles), it is not surprising to find a wide range of methodologies and associated data collection efforts used. Two areas stand out in terms of innovation and effectiveness: flexible facility-based surveys and qualitative participatory techniques. A number of chapters used facility-based surveys to both measure performance and understand the constraints faced by the health sector. Chapter 8 used a facility survey to measure unit cost of service delivery at four different levels of care in Bangladesh. The survey allowed the researchers to pinpoint inefficiencies and the policies that caused them. Chapters 10 and 13 used facility surveys to look at multiple dimensions of the private health sector in two different states in India. These surveys helped, for the first time in India, to better define the size and makeup of the private sector (including the informal sector), measure the quality of care of privately and publicly provided services, capture the perspective of providers in the private sector, and explore potential forms of public-private collaboration.

The facility survey in chapter 11 successfully applied techniques from industrial countries to Sri Lanka. Since the survey was nationally representative, it allowed for estimation of the real contribution of the private sector to health care delivery in terms of volume of service, type of services, and cost of services. Moreover, the survey looked at the profile of providers and explored policy issues. And finally, the facility survey in chapter 12 captured critical dimensions of consumer redress in the health sector in three cities in India.

While quantitative surveys for households and facilities can capture what is happening in the health sector, they are limited in terms of reaching a deep understanding of why services are poor. Chapter 14 highlights the different ways qualitative techniques can be used. Participatory rural appraisal techniques are used for clients (poor rural women), community leaders, providers, and professional associations to diagnose problems in the health sector in Bangladesh and to identify solutions and support reforms. A different set of qualitative tools were used in chapter 12 to supplement a facilities survey. Legal case reviews and key informant interviews were used to assess the consumer redress system.

### *Crosscutting Implications and Emerging Themes*

The richness of the research papers in this volume makes it difficult to quickly capture the main themes and implications of their research. But three repeated themes can be highlighted: equality of public spending, the role of the private sector, and the role of consumers. On the theme of equality in public expenditures, research in Bangladesh, India, Nepal, and Sri Lanka shows that in some parts of South Asia—such as south India and Sri Lanka—governments do a much better job of distributing subsidies in the health sector than other regions. The different chapters that tackled this issue (chapters 3–7, 12, and 14) not only measure the inequalities, but also suggest different policy tools that include establishing geographic allocations formulas, reallocating resources between different levels of care, educating vulnerable groups about their rights, introducing community-based monitoring, and strengthening redress mechanisms.

Another repeated theme relates to the role of the private sector in health services delivery and finance in South Asia (chapters 4, 7, 9–11, and 13). The research overwhelmingly documents the dominance of the private sector in Bangladesh and India and finds a very strong private sector in Sri Lanka. The research also highlights different policy instruments available to the government for working with the private sector to achieve health sector outcomes.

A third general theme is the role of consumers and the mechanisms available to them to influence health services delivery. The authors in this volume have supported the belief that individuals and households can make a difference in how health services are delivered. By documenting the limited ability of patients and households to influence health services, they propose a number of policy recommendations, which include improving consumer education, developing and disseminating a patient bill of rights, building community watch committees to oversee service delivery, and improving consumer redress mechanisms. Underlying these policy recommendations is the need to strengthen the links between policymakers and potential health care consumers, as well as to change the nature of the relationship between consumers and providers in the private and public sectors.

While the three themes summarized above cut across several of the chapters in this volume, a more basic theme underlies all the chapters and is the main motivation for conducting health policy research. That theme is that empirical research can and should challenge basic assumptions about the health sector and will provide policymakers some of the tools needed to improve and monitor the performance of the sector. This volume includes a number of clear applications of this theme, but two examples can make the point. In chapter 3, Mahal takes on the assumption that health spending in India is pro-poor and shows that the overwhelming majority of states in India have a strong pro-rich orientation. In chapter 8, Rannan-Eliya and Somanathan challenge the assumption that some of the lower-level health care facilities in Bangladesh are efficient by measuring the unit cost of delivery and linking the results to the level of utilization and staffing patterns of these facilities. Such findings about the unintended results in the performance of their health systems should motivate policymakers and planners to change course. By conducting and disseminating the results of their work, the South Asian institutions and researchers represented in this volume have the opportunity to provide valuable support for informed policymaking in the health sector.

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CHAPTER 2

# A Framework for Health Policy Research in South Asia

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The research presented in this volume offers a highly selective view of health research that should be conducted in South Asia. Each of the chapters deals with policy issues that have tended to be ignored in the past, and each represents a study that was conducted by South Asian institutions (some of the authors have since moved). The chapters are oriented toward providing the information needed to develop policies and strategies to improve the performance of health systems in South Asian countries.

To put this research in context, it should be recognized that health systems research is only one of several priority areas of health research in South Asia. The Ad Hoc Committee on Health Research Relating to Future Intervention Options (1996) highlighted how knowledge obtained through research is responsible for much of the health gains made during the 20th century. Yet commitment to health research has been declining and has concentrated on health concerns of the industrial world. Arguing that collective action on health research is a public good and is needed to address global health and development challenges, the committee proposed a broader framework of health research priorities, organized around

four main challenges, including the type of health systems research presented here:

1. The unfinished agenda for control of childhood illness, undernutrition, and excess fertility
2. The challenge of changing and emerging major microbial threats
3. The emergence of neglected epidemics of noncommunicable disease and injury
4. The inefficiency and inequality in health systems

The Global Forum for Health Research (2000) further highlighted the need to build research capacity in developing countries, to correct what it called "the 10/90 gap": only 10 percent of the health research funding is allocated to 90 percent of the disease burden facing the world. In developing systems to track resource flows into health research, the forum refined its taxonomy of health research into five categories (Global Forum for Health Research 2001):

1. Nonoriented, fundamental research
2. Health conditions (classified by disease)
3. Exposures and risk factors that affect health (determinants)
4. Health systems research
5. Research capacity building

The studies in this volume would be classified as health systems research (category 4), particularly because the research deals with health policy and planning and health services delivery. But such classifications involve some overlap and ambiguity, as the research in this volume is also related to other categories. For example, many of the factors studied in this volume, such as the allocation of health resources or the quality of care, can also be considered as risk factors that affect health (category 3). Although not examined directly in this volume, health systems research is also concerned

with health conditions, as these are the eventual outcomes of health systems.

The intention of the research in this volume was also to develop research and policy capacity in local institutions through involvement in the selection, design, conduct, and application of health systems research (category 5). Interestingly, none of the researchers was solicited through a competitive process. This was partly because only a limited number of local agencies are capable of doing such work, and partly because of the time constraints imposed on the research project by both policymakers and funding agencies. However, in the long term, as more institutions become capable of undertaking research and as the type of research methods change to more experimental and longitudinal approaches, there will be greater tension between the desirability of competitive means for soliciting research and the need to encourage greater collaboration among researchers.

Given that this research is intended to examine health systems, it is useful to have a common understanding of what is meant by a health system. Numerous definitions and frameworks have recently been offered as descriptions of health systems (Berman 1995; Cassels 1995; Frenk 1994; OECD 1992; Roemer 1991; WHO 2000). They all involve a purpose for the health sector (for example, improving people's health status), a set of actors on the demand side (for example, individuals, households) and the supply side (service providers, financiers), intermediating actors (regulators, institutional purchasers), and functions of a health system (service delivery, financing, human resources, and other inputs). Since the research in this volume is particularly interested in the application of research to policy, it is useful to examine what Roberts and others (2003) have described as five sometimes overlapping control knobs that policymakers use to improve the performance of a health system.

**1. Financing.** Financing interventions include all the mechanisms used to raise money for health sector activities, including taxes, insurance premiums, and direct out-of-pocket payments by patients. Each of the six chapters in this book dealing with equity and expenditure

analysis (chapters 3–8) addresses financing concerns. Their common findings are that public financing levels are low and inequitable and that there is a high level of dependence on direct private payments from individuals, which is greatest in India and lowest in Sri Lanka.

**2. Payment.** The payment control knob involves the mechanisms that are used to pay health care providers, including doctors, paramedical workers, and hospitals and other health institutions. The main ways to pay individual providers are through fee-for-service, salary, and capitation payments, while institutions are generally paid through budgets, grants, or service payments. Providers respond to the different incentive systems these mechanisms create. Studies in this volume provide evidence of low efficiency of public facilities in Bangladesh based on their fixed budgets and rigid staffing norms (see chapter 8); yet fee-for-service payment mechanisms result in overproduction of services in the private sector (chapters 9–11).

**3. Organization.** This control knob involves determining which organizations will be able to perform which functions (for example, deliver certain health services, enforce regulations, or provide insurance), as well as how they are able to perform these tasks (for example, the type of staff involved) and how they are rewarded. Studies in this volume demonstrate how public and private providers share responsibilities (chapters 9–11) and how equitable and efficient they are (chapters 3–5 and 8).

**4. Regulation.** These are the instruments by which the state places requirements on enterprises, citizens, and government itself. One aspect involves writing laws, orders, and other rules; another involves implementation through enforcement. Regulation covers all the state's efforts to influence the behavior of those in the health system, including providers, insurance companies, and patients.

**5. Persuasion.** This policy control knob applies to efforts to change the behavior of the public and providers. The research in

this volume does not analyze the main channels of communication used to persuade people, such as the mass media or encouragement of peers, but it does look at how involvement of various stakeholders can influence policy (chapter 14) and how parts of the legal system can be used (chapter 12). In chapters 13 and 14, the researchers also point out the role of consumer groups in providing information on health practices as a means of improving quality. The research in this volume is intended to provide information that will persuade policymakers to improve how health systems perform.

Although health systems research is intended to influence how these policy control knobs are used, in practice such research has often fallen short in delivering changes (Getting Research into Policy and Practice 2003). Public policy is frequently rooted in political values and is often based upon expert opinion and the collective judgment of lawmakers and officials. Research may be discarded because it is seen as irrelevant, too complex, untimely, or anathema to the ideologies of policymakers or to the policy processes. We believe policy should be informed as much as possible by evidence, such as that provided by the researchers in this volume. Following the findings of Crewe and Young (2002), we argue that quality research, local involvement of researchers and policymakers, and effective use of communication channels are important determinants of whether research will influence policymaking.

Many of the research studies in this volume were generated out of locally defined priorities. Public discussions with key stakeholders identified each topic as a priority. Many of the research projects involved collaboration with national policymakers and interested local and international agencies during the design and dissemination phases; researchers were often brought together for consultations during the analysis, design, and dissemination phases. According to Landry, Amara, and Lamari (1999), the biggest hurdle in utilizing research knowledge is the failure of researchers to transmit their findings. Local institutions can improve policy decisions by providing timely and relevant evidence from researchers who are on the spot and, thus, can communicate directly with local policymakers

and other stakeholders. We hope that the local nature of this research makes it relevant not only to local stakeholders, but also to international development agencies. International agencies can play an important role in supporting such research by encouraging more local engagement in conducting research and transmitting findings. International agencies can also bring together people, ideas, and experience from a broad range of countries in a collaborative approach that supports the legitimacy of research and policy networks of developing countries, rather than simply pursuing externally driven research agendas. The research presented in this book will contribute to health sector development by providing more opportunity to transmit the findings of locally relevant quality research to policymakers in South Asia.

Having pointed out the selective nature of the health systems research of this volume and the intention to build research capacity to strengthen evidence-based policymaking, it is also important to recognize the areas that require further study in South Asia. Further research in health financing is sorely needed. With high dependence on out-of-pocket payments in South Asia, developing mechanisms to pool risks is clearly a priority area for future research. The studies in this volume address only a small part of the issues related to persuasion and regulation. Much more work is needed on the use of these mechanisms to influence the behavior of providers and consumers of health services.

Further study is also needed in the area of testing different mechanisms for paying providers. Indeed, understanding and manipulating incentives for health service providers is a largely neglected area. Given that health services are an intensely human resource–based activity, much further work in human resources is merited.

Organizational issues that deserve additional attention include a better understanding of the private health sector and how to use the tools to influence private providers' behavior (Mills and others 2002; Waters, Hatt, and Peters 2003). This is particularly challenging in a South Asian context, where many of the private providers are not formally recognized and operate in a gray economy. At the

same time, it is also important to build on the studies that examine how to improve the efficiency and accountability of the public sector and to look for new ways to reduce the rigid and bureaucratic approaches to delivering health services in the public sector.

It is also imperative to further develop the research methods used in health systems research in South Asia. The studies in this volume are descriptive in nature, with analysis based on careful observation of current and past situations. We hope that future research will test experimental or quasi-experimental methodologies based on insights gained from the types of research found in this volume. For example, studies that examine strategies to influence the private sector through randomized community trials would provide much-needed evidence about what can work to reform a sector that is critical to health care in South Asia (Waters, Hatt, and Peters 2003). Such research will not only provide more robust evidence about the effectiveness of health strategies, but also will build a broader base of experience with the various actors and interventions. By encouraging local researchers and networks with policymakers, by pursuing the neglected issues that are important to the development of health systems in South Asia, and by building on the methods of research represented in this volume to more experimental approaches, it is our intention to improve the quality of health policies and decisions so that health systems will be better equipped to enhance the health and welfare of the citizens of South Asia.

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SECTION II

# Analysis of Inequality

CHAPTER 3

# The Distribution of Public Health Subsidies in India

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## Abstract

The chapter assesses the distribution in India of public subsidies for health care across different groups, classified by per capita expenditure, using the benefit incidence analysis method. First, the analysis finds that health subsidies are not particularly well targeted to the poor in India, especially among those living in rural areas and in the poorer states. Second, the distribution of health subsidies is primarily driven by the magnitude of subsidies and utilization patterns related to hospital-based care. The distribution of subsidies for primary care and for several services associated with maternal and child health (pre- and postnatal care, immunizations, and the like) is targeted more effectively than curative care. Third, the unequal distribution of subsidies for inpatient stays may be consistent with the public sector performing a key role of insuring poorer patients against expensive illness episodes. This is suggested by the observation that poorer patients and poorer states use relatively more of publicly provided hospital services than private hospital services, compared with their

richer counterparts. However, meeting the insurance objectives appears to involve a tradeoff: although there is greater insurance coverage for the poor, large amounts of public subsidies go to the rich, especially those living in rural areas. The findings of this chapter lend further empirical weight to the association of the distribution of public subsidies for health care with the problem of physical access to care. Distance seems to disproportionately affect the utilization behavior of the poor in India, as suggested by the distribution of inpatient days in public hospitals among residents of rural areas and the much more equitable allocation of subsidies among urban respondents. Availability of private care also appears to influence the distribution of subsidies.

## Introduction

In India, government spending on health is somewhat lower than the world average but is still quite significant, accounting for 0.9 percent of gross domestic product (GDP) in 1999–2000. In 1995–96, the last year in which a detailed survey of household health care spending was undertaken, government spending accounted for less than 20 percent of all health spending, both public and private. Nearly 90 percent of public spending is routed through the state governments, because the Indian Constitution specifies that a large number of health-related activities should be run by the states (India 1996; Reddy and Selvaraju 1994). The central government spends most of the rest while a small portion is spent by local bodies (World Bank 1995a).

Various key policy documents over the years have expressed concern about the equity of health care provision in India. For instance, a Government of India committee report of 1946 recommended that "no individual should fail to secure adequate medical care because of the inability to pay for it" (Lok Sabha 1985, p. 3).

India is also a signatory to the Alma Ata Declaration of 1978, which aspired to the goal of "Health for *All*" (our italics) by the year 2000 (Lok Sabha 1985, pp. 1–2). The government's 1983 National Health Policy document for India supported "planned efforts . . . to provide adequate care and treatment to those entitled to free care . . . to remove existing regional imbalances and to provide services within the reach of all, whether residing in the rural or urban areas" (Lok Sabha 1985, p. 41). Finally, the Indian Constitution, both in its Preamble and in its enunciation of Fundamental Rights and Directive Principles, repeatedly emphasizes the need to create a more equal society (India 1996).

Given the obvious importance of the equitable allocation of health facilities in government policy in India, it is necessary to evaluate the extent to which government programs are achieving this goal. There are two additional reasons for carrying out such an assessment. First, evidence from other countries that have reached a level of economic development similar to India's suggests that government participation in the financing and provision of health care does not always promote the objectives of equity (Castro-Leal and others 1999; Meesook 1984; van de Walle 1992). Second, such an analysis might yield some insights into what policy changes might be needed. For instance, if the analysis were to show that spending on preventive care is more equally distributed than spending on curative care, it might be appropriate to reassign some resources from the latter to the former, especially if preventive expenditures are cost-effective. Furthermore, if the analysis were to show that the poor rely more on subsidized, public curative care than on privately provided care but that the nonpoor benefit disproportionately from public subsidies, this would indicate the need for better targeting of publicly funded care.

In line with the rationale above, this chapter analyzes the distribution of public sector health spending in India, net of user charge revenues, using an approach referred to as benefit incidence analysis (BIA) (Selden and Wasylenko 1992). Because we focus on public expenditures, we will not examine the equity implications of how

these expenditures are financed, because that would require an entire separate study. Only about 20 percent of tax revenues in India are raised through direct taxes, with the balance coming from indirect taxes such as sales taxes and excise and customs duties, which are more likely to be paid by less well-off sections of society (India 1999).

## Methodology and Data

This section covers four topics: benefit incidence analysis, the household survey data used, the unit cost calculation, and the construction of inequality indexes.

### *Benefit Incidence Analysis*

BIA involves four steps. The first is to rank all individuals according to an appropriate measure of their socioeconomic status, such as current income per capita or consumption expenditure per capita. The particular measure that analysts use for the ranking depends on which measure policymakers regard as most important. Planners and policymakers in India have put a high priority on raising incomes and reducing poverty, so these were natural candidates for our ranking devices (India 1993, 1999). The second step is to match each individual with the amount of public health services that individual uses. The third step is to estimate the net per-unit cost of service provision to the government and to multiply it by the number of units of publicly provided care each individual uses. The standard approach taken in the literature is to use the average cost per unit of providing the service minus any fees paid to the government for that service (Castro-Leal and others 1999). Using the average cost per unit of service also enables us to carry out a full analysis of how all the health subsidies provided by the government are allocated to people across the socioeconomic spectrum. The final step is to analyze the distribution of net government health spending by the socioeconomic categories of the beneficiaries.

Organizing a BIA involves a number of conceptual issues. They include choosing between individuals and households as the unit of analysis, choosing between income per capita and expenditure per capita as the indicator of socioeconomic status, and interpreting the welfare implications of the results (Selden and Wasylenko 1992). In this chapter, we use per capita expenditures as the ranking device and the individual as the unit of analysis.

***Household Health Survey Data***

BIA relies on two major sources of data—utilization of health services and out-of-pocket spending on health care. Both kinds of data are usually available from household surveys in developing countries. A major source of our data was the 52nd round of the National Sample Survey (NSS) in India that was fielded in 1995–96, the most recent year for which health-related data are available for a sufficiently large sample of Indian households. The survey sampled nearly 121,000 households—71,300 in rural areas and 49,700 in urban areas. The sample was selected from 7,663 villages and 4,991 urban blocks that together represented all of the states and union territories of India.

We used the survey data to obtain information on a number of key variables at the individual level. These included illness patterns, consumption expenditures, out-of-pocket spending on health, hospitalizations in the year prior to the survey, outpatient treatments over a reference period of two weeks, immunizations received by children, care received at the time of childbirth, and pre- and postnatal visits to clinics by women who had given birth in the previous year.

The sampling process by which data were collected is described in detail in the National Sample Survey Organisation's *Survey on Health Care, July 1995–June 1996* (NSSO 1998). The survey had a two-stage stratification procedure that assigned weights to each household, with the weight being the inverse of the probability of that specific household being selected as part of the sample. We used the inverse probability weights to derive the parameter estimates reported in this chapter.

### *Unit Costs of Service Provision*

Perhaps the most satisfactory way to allocate public spending on health is to divide it up by type of service provided and then allocate the (gross) cost per unit of the service used among individuals. If certain expenditures cannot be allocated, then one can either omit them altogether or use some rule of thumb to distribute them across various groups. For the purposes of this study, we estimated the (gross) cost per unit of care from two sources—from available facility cost studies in India and from data on government expenditures on health during 1995–96.

Three methods are commonly used to obtain the cost per unit of a health service. First, one can estimate the average costs per unit of a specific service based on some allocation rule, along the lines of Drummond and others (1997). There are few reliable facility-cost studies in India that directly estimate the cost per unit of service in this manner. The only work with which we are familiar that provides such estimates is a detailed time-and-motion study for different types of hospitals and for a limited set of primary-care facilities in the state of Andhra Pradesh (World Bank 1997b). Data on total expenditures by facility—hospital or primary health care center—were more readily available. In terms of hospital costs, a key source of information for us was a survey by Sanyal and Tulasidhar (1995) of health care use and spending patterns in about 80 secondary and tertiary public hospitals. The survey covered hospitals in 14 states and 3 union territories. The published version of the study presented data aggregated at the level of the state, and we were unable to obtain information at the hospital level. In addition, we obtained information on the total expenditures of two hospitals run by the Bombay Municipal Corporation, two maternity hospitals in Hyderabad, and a nonprofit hospital in Chennai (Mahal and others 2000). This information was supplemented by information from several different studies on the total expenditures of a few primary health care centers (IHSD 1996; Muraleedharan and others 1998; World Bank 1995b). Because of a lack of data on specific services, we used a second method that relied on assumptions about case

equivalence together with information on inpatient days, outpatient visits, and total facility expenditures to obtain the unit costs of a day of inpatient care and of a single outpatient visit.

While useful, these two methods of estimating unit costs are essentially ad hoc ways of getting around a conceptual problem that typically arises whenever goods and services (in our case, health services) are jointly produced. It is difficult to talk meaningfully of *average costs*. The more appropriate notion is *marginal costs* or an average marginal cost for a service. Estimating marginal costs requires data on health facility cost functions, which were not readily available to us. However, we were able to estimate a rudimentary hospital services cost function using expenditure data from the Sanyal and Tulasidhar (1995) study of public hospitals, even though it was aggregated at the state level. We have brought together all information on the cost of an outpatient visit and of an inpatient day of care at a public hospital from each of the methods in table 3.1.

**Table 3.1** Unit Cost Estimates from Facility-Level Data in India (1995/96 rupees)

| STUDY | COST PER INPATIENT DAY | COST PER OUTPATIENT VISIT | STATES COVERED | SAMPLE SIZE |
|---|---|---|---|---|
| *Primary care* | | | | |
| Muraleedharan and others 1998 | 310–2,147 | 13–17 | Tamil Nadu | 2 |
| World Bank 1997a | 73 | 8–10 | Andhra Pradesh | n.a. |
| *Public hospitals* | | | | |
| World Bank 1997a | 134–187 | 34–46 | Andhra Pradesh | 2 |
| | >117–121 | 28–83 | Andhra Pradesh | 8 |
| Based on data in Duggal and Nandraj 1994 | 366–414 | 70–91 | Maharashtra | 1 |
| Sanyal and Tulasidhar 1995 | 168–205 | 34–42 | Maharashtra | 1 |
| Gupta and others 1992 | 245–290 | 43–54 | All India | State-level |
| | 150 | 25 | Tamil Nadu | 1 |
| *Immunization programs, pre- and postnatal care* | | | | |
| World Bank 1995a | n.a. | >11.75 | n.a. | n.a. |
| IHSD 1996 | n.a. | 20–25 | Orissa | n.a. |

n.a. = Not available/not applicable.
*Source:* Mahal and others 2000.

Table 3.1 also presents costs per unit of service data for primary health centers using both the estimates from the time-and-motion study and from a case-equivalence approach. As table 3.1 shows, facility-level data for costing primary-level services (curative and preventive) were even less available than data for hospitals.

In view of the limited quantity of facility-level costing data, we supplemented our findings with a BIA that used the average cost of providing health care services from a fourth source—government expenditures on health services. Our primary objective was to identify elements of government health spending that could easily be allocated to those curative and preventive services for which we had utilization data from the household survey. We then divided the total government expenditures on each of these services by the number of units of services that were used under the relevant category (for example, "inpatient in a hospital" or "outpatient in a hospital"). The results that we obtained under this method were essentially similar to those that we obtained from direct facility costing studies; for that reason, we omitted them from the discussion in this chapter. (Interested readers can refer to Mahal and others 2000 for additional details.)

### *Constructing Inequality Indexes*

As discussed previously, one key indicator of economic status that we used in this study was annual per capita consumption expenditure. We obtained these data for each individual by dividing the relevant household consumption expenditure per month by household size, then multiplying the result by 12. We then assigned each individual their household weights—first by rural or urban areas in each state and then rural-urban combined—and divided the sample into quintile groups. We constructed national-level quintile groups by pooling the various individuals across states in terms of their annual per capita consumption expenditures, accounting for their household weights by rural or urban areas and then rural-urban combined.[1]

To capture inequality in the use of public services or in the allocation of public subsidies, we used the concentration index (C) measure (Kakwani, Wagstaff, and van Doorslaer 1997; van

Doorslaer and others 2000) constructed from grouped socioeconomic status data. This index indicates the degree to which the poor and the nonpoor use services or benefit disproportionately from subsidies. A negative value for the use of outpatient services, for example, indicates that the poor use these services more than the nonpoor, while a positive value indicates the opposite. The more unequal the distribution across income groups, the larger (in absolute size) the concentration of service use. Higher use of these services by the poor may be considered equitable if the poor have a greater need for them than the nonpoor. Ignoring the element of need in inequality calculations assumes that need is invariant with socioeconomic status, which is typical in benefit incidence analyses. We follow this approach with one notable exception—in the way we treat the use of public services linked to reproductive and child health. Here we take the number of children in the appropriate socioeconomic group as an indicator of need. We measure inequity by the difference between inequality in utilization and inequality in need; if inequality in utilization is less than inequality in need, then our measure of inequity is positive, indicating that the inequity favors the nonpoor (van Doorslaer and others 2000).

## Main Findings

### *Utilization of Public Health Services*

*Inpatient Days*. The three inpatient care columns in table 3.2 indicate the distribution of hospitalizations or, more precisely, inpatient days in public facilities, by patients' socioeconomic status—in our case indicated by per capita expenditure. The table distinguishes between rural and urban areas and covers the estimated 88.5 million inpatient days spent in public facilities across India in the mid-1990s. Our summary measure is the concentration index of inpatient use of public facilities.

Three key findings emerge from an examination of the inpatient columns of table 3.2. First, even if we ignore rural-urban differentials, there are considerable interstate differences in the utilization

**Table 3.2** Distribution of Health Care Services in Public Health Facilities by Type of Service, State/Region, and Socioeconomic Status, 1995/96 (concentration indexes)

| STATE/ REGION | INPATIENT CARE | | | OUTPATIENT CARE | | | IMMUNIZATIONS | | | CHILDBIRTH (INPATIENT DAYS) | | | PRENATAL CARE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | RURAL | URBAN | ALL | RURAL | URBAN | ALL | RURAL | URBAN | ALL | RURAL | URBAN | ALL | RURAL | URBAN | ALL |
| Andhra P. | 0.320 | –0.019 | 0.264 | –0.038 | –0.159 | –0.04 | –0.002 | –0.067 | –0.038 | 0.041 | –0.050 | –0.071 | –0.031 | –0.137 | –0.046 |
| Bihar | 0.401 | 0.331 | 0.538 | 0.254 | 0.126 | 0.319 | 0.051 | –0.018 | 0.061 | 0.286 | 0.136 | 0.408 | 0.391 | 0.018 | 0.440 |
| Gujarat | 0.256 | 0.113 | 0.107 | 0.014 | –0.341 | –0.143 | –0.038 | –0.061 | –0.056 | 0.154 | –0.044 | 0.146 | 0.031 | –0.030 | 0.055 |
| Haryana | 0.333 | 0.358 | 0.333 | 0.134 | 0.036 | 0.137 | 0.029 | –0.064 | 0.011 | 0.484 | 0.228 | 0.445 | 0.075 | 0.095 | 0.059 |
| Himachal P. | 0.387 | 0.279[a] | 0.390 | 0.256 | 0.163 | 0.212 | 0.102 | –0.030 | 0.104 | 0.649 | 0.232 | 0.613 | 0.119 | –0.003 | 0.122 |
| Karnataka | 0.400 | 0.071 | 0.319 | 0.097 | –0.056 | 0.087 | 0.053 | –0.086 | 0.006 | 0.297 | 0.029 | 0.176 | 0.134 | –0.035 | 0.105 |
| Kerala | 0.068 | –0.058 | 0.043 | –0.053 | –0.046 | –0.081 | –0.099 | –0.214 | –0.128 | –0.069 | –0.132 | –0.083 | –0.075 | –0.127 | –0.096 |
| Madhya P. | 0.430 | 0.169 | 0.428 | 0.239 | 0.055 | 0.183 | 0.048 | 0.026 | 0.051 | 0.353 | 0.016 | 0.307 | 0.145 | 0.025 | 0.230 |
| Maharashtra | 0.193 | –0.059 | 0.163 | 0.032 | –0.115 | –0.047 | –0.010 | –0.120 | –0.078 | 0.047 | –0.018 | 0.157 | –0.007 | –0.011 | 0.072 |
| Northeast | 0.288 | 0.280 | 0.321 | 0.038 | 0.041 | 0.010 | 0.091 | 0.000 | 0.096 | 0.266 | 0.244 | 0.392 | 0.091 | 0.041 | 0.103 |
| Orissa | 0.492 | 0.178[a] | 0.384 | 0.065 | 0.205 | 0.103 | 0.038 | 0.048 | 0.056 | 0.339 | 0.150 | 0.412 | 0.348 | –0.002 | 0.338 |
| Punjab | 0.420 | 0.247[a] | 0.407 | 0.216 | 0.080 | 0.157 | 0.011 | –0.030 | –0.016 | 0.098 | 0.208 | 0.150 | –0.013 | 0.005 | –0.003 |
| Rajasthan | 0.398 | 0.451 | 0.446 | 0.251 | 0.274 | 0.281 | 0.040 | 0.006 | 0.056 | 0.210 | 0.200 | 0.349 | 0.044 | 0.190 | 0.149 |
| Tamil Nadu | 0.158 | 0.058 | 0.156 | 0.097 | 0.044 | 0.062 | –0.037 | –0.102 | –0.073 | 0.071 | –0.062 | 0.052 | 0.131 | –0.010 | 0.106 |
| Uttar P. | 0.462 | 0.403 | 0.397 | 0.077 | 0.161 | 0.156 | 0.038 | 0.019 | 0.063 | 0.653 | 0.218 | 0.634 | 0.084 | 0.105 | 0.180 |
| West Bengal | 0.240 | –0.039 | 0.221 | 0.062 | –0.053 | 0.048 | 0.053 | –0.017 | 0.025 | 0.195 | 0.008 | 0.226 | 0.142 | –0.017 | 0.137 |
| All India | 0.364 | 0.092 | 0.314 | 0.146 | –0.004 | 0.104 | 0.039 | –0.045 | 0.005 | 0.265 | 0.058 | 0.287 | 0.135 | 0.024 | 0.153 |

*Note:* P = Pradesh. Public health facilities include hospitals, primary health centers, and dispensaries. Pre- and postnatal care provided by auxiliary nurse midwives (ANMs) is excluded. Concentration indexes are constructed from per capita expenditure quintile shares in utilization of the relevant public health service as reported in Mahal and others 2000. For the construction of concentration indexes for immunizations, delivery, and prenatal care, an additional indicator of "need" was also considered. The index of need was constructed from per capita quintile shares in the total number of children between birth and 24 months (Mahal and others 2000).
[a]Refers to estimates after removing outlying observations from the survey.

of inpatient days in public facilities across per capita expenditure classes.[2] The states in the south and west of India (Kerala, Tamil Nadu, Gujarat, and Maharashtra) have considerably lower values of the concentration index (which indicates a larger share of poorer socioeconomic groups) than the collection of poor states known as BIMARU (Bihar, Madhya Pradesh, Rajasthan, and Uttar Pradesh). Punjab and Haryana also have large concentration indexes, suggesting that the rich use public inpatient facilities more than the poor, relative to their shares of the population in these rich states of north India.

Looking at patterns by rural-urban residence, the distribution of public sector inpatient days across socioeconomic groups is more biased against poorer people in rural areas than in urban areas. As before, there are considerable interstate variations in the distribution of inpatient days across socioeconomic groups, even when we consider the data for rural and urban residents separately.

The previous discussion might lead one to suspect that the public health system in India is unable to offer much financial security to the poorest in society. This would be the case if the fewer hospitalizations reported by the poor either reflect discouraged dropouts from public facilities or substituted outpatient for inpatient care. However, if we suppose that needy cases are hospitalized, even among the poor, then information about which facility they use for that purpose is obviously of interest in terms of the financial protection offered by the public system.

The inpatient columns in table 3.3 provide information on the distribution of hospital inpatient days for the top and bottom expenditure quintiles of the sample population, divided between public and all other sources of care (labeled as "private"), by state, by rural or urban residence, and by socioeconomic group. Overall, the poor tend to rely on the public sector for inpatient care while the rich rely mostly on private care, measured in terms of their respective proportions of inpatient days. Public facilities accounted for nearly 60 percent of all inpatient days utilized by the poorest 20 percent of the population, compared with 40 percent used by the wealthiest 20 percent. There is considerable variation across states, with the poorest

**Table 3.3** Distribution of Use of Services by Public and Private Facilities by Type of Service, State/Region, and Per Capita Expenditure Quintile, 1995/96 (percent share)

| STATE/ REGION | INPATIENT CARE | | OUTPATIENT CARE | | IMMUNIZATIONS | | DELIVERY (INPATIENT DAYS) | | PRENATAL CARE | |
|---|---|---|---|---|---|---|---|---|---|---|
| | POOREST | RICHEST | POOREST | RICHEST | POOREST | RICHEST | POOREST | RICHEST | POOREST | RICHEST |
| Andhra P. | 61.9 | 28.5 | 20.8 | 7.9 | 95.7 | 76.2 | 57.7 | 13.3 | 75.8 | 17.3 |
| Bihar | 19.3 | 39.2 | 4.0 | 7.8 | 86.5 | 65.5 | 30.1 | 22.7 | 58.8 | 21.3 |
| Gujarat | 43.3 | 25.4 | 37.1 | 12.3 | 98.9 | 76.2 | 52.2 | 14.3 | 66.4 | 29.3 |
| Haryana | 63.5 | 21.6 | 11.6 | 16.4 | 93.4 | 87.2 | 53.4 | 39.2 | 85.9 | 54.2 |
| Himachal P. | 100 | 89.6 | 34.0 | 36.7 | 97.8 | 99.8 | 100 | 96.4 | 100 | 96.4 |
| Karnataka | 70.1 | 44.2 | 20.2 | 20.8 | 96.4 | 66.0 | 50.4 | 25.1 | 68.3 | 31.8 |
| Kerala | 58.5 | 41.5 | 48.2 | 22.6 | 80.6 | 44.9 | 64.1 | 22.3 | 55.4 | 20.0 |
| Madhya P. | 44.8 | 63.1 | 23.2 | 21.9 | 97.9 | 90.0 | 94.4 | 54.6 | 95.1 | 58.0 |
| Maharashtra | 69.7 | 22.3 | 22.5 | 7.9 | 98.6 | 53.2 | 66.5 | 22.0 | 79.2 | 20.6 |
| Northeast | 36.0 | 80.5 | 41.8 | 29.7 | 96.6 | 92.3 | 79.2 | 81.0 | 89.9 | 72.2 |
| Orissa | 94.9 | 85.0 | 43.7 | 33.7 | 95.6 | 98.6 | 100 | 66.6 | 99.8 | 75.9 |
| Punjab | 26.5 | 28.6 | 8.8 | 10.1 | 94.1 | 75.6 | 48.8 | 11.8 | 92.2 | 29.6 |
| Rajasthan | 83.8 | 76.5 | 16.9 | 56.5 | 98.9 | 94.3 | 95.1 | 77.3 | 97.6 | 83.7 |
| Tamil Nadu | 72.3 | 27.1 | 45.1 | 20.8 | 88.5 | 59.0 | 72.5 | 26.0 | 67.4 | 31.9 |
| Uttar P. | 64.2 | 49.7 | 6.0 | 7.7 | 90.6 | 82.0 | 73.9 | 60.4 | 97.7 | 56.8 |
| West Bengal | 93.6 | 67.3 | 20.7 | 10.8 | 98.2 | 67.2 | 98.5 | 49.0 | 84.5 | 42.8 |
| All India | 59.9 | 40.5 | 20.9 | 15.1 | 93.9 | 73.7 | 69.9 | 37.4 | 81.6 | 37.6 |

*Note:* Public facilities include hospitals, primary health centers, and dispensaries. Private facilities include privately owned hospitals, clinics, non-profits, and all others not subsumed under the category "public." The per capita quintile shares are for rural and urban residents combined.

20 percent in less well-off states (such as Bihar, Madhya Pradesh, and the northeast region) relying less than the richest 20 percent on public care for inpatient stays, at least as measured by the public share in total inpatient stays. More generally, however, the pattern of the poor relying more on public facilities than the nonpoor persists even at the state level. This finding is sometimes diluted in the state-level data by the fact that, in rich states such as Punjab and Haryana, all groups tend to use private care, whereas in some extremely poor states such as Orissa and Rajasthan, there is much more use of public care across all socioeconomic groups.

*Outpatient Treatments*. Outpatient treatments are distributed much more in favor of the poorer socioeconomic groups than inpatient days (table 3.2). This is certainly true at the national level, where the concentration index for treatments at public facilities is 0.104, much lower than the 0.314 for inpatient days. The pattern at the national level is also repeated at the state level. Presumably this reflects the fact that outpatient services in public facilities are more accessible to the poor. It may also reflect some of the unmet need among the poor for inpatient services, which translated into an increased use of outpatient treatment services.

As with inpatient days, there is considerable interstate variation in the concentration index of outpatient treatments at public facilities. Much of this variation is similar to that for inpatient days, but with one key difference—overall, there is less interstate variation in the value of concentration indexes for outpatient treatments than in those for inpatient stays. We believe there are at least two reasons why this is the case. First, services provided by primary health centers and public dispensaries constitute about one-third of all outpatient treatments at public facilities (Mahal and others 2000). This contrasts with their small share in days of inpatient stays in public facilities—barely 5 percent at the national level. This fact matters in rural areas, because outpatient treatment is now accessible even to poor people, as many primary health care centers have recently been opened in rural areas. Second, the poor may be substituting outpatient treatment for inpatient days more frequently

precisely in those states where it is relatively difficult to gain access to inpatient services at public facilities.

Another contrast between the distribution of inpatient days and outpatient treatments by public and private care is apparent from the information on the share of outpatient treatments provided in public facilities (see table 3.3). Nearly 80 percent of all treatments received by the poorest 20 percent of the population were provided in the private sector, compared with 85 percent received by the top quintile. These are significantly greater shares than for inpatient days. This trend is also evident at the state level, but there are significant interstate variations in the role of the private sector in outpatient care.

*Immunizations*. We also had information on the immunization status of children from birth to four (full) years old. Information had been collected on the total number of diptheria-pertussis-tetanus (DPT) doses (including booster doses, if any), oral poliovirus vaccine (OPV) doses (including booster doses), and Bacillus Calmette Guerin (BCG) and measles vaccinations that they received. Except in the case of measles, respondents were also asked whether they had received the dose at a government or private facility. In our analysis, we exclude measles and look specifically at immunizations among children from birth to 24 months old at the time of the survey. We did this for two reasons. First, some of the immunization doses, such as booster shots for OPV and DPT, are given when the child is more than one year old. Thus, focusing only on children under one year of age would have yielded a downward-biased estimate of total immunizations received by children in the previous year (NSSO 1995b).[3] Second, focusing only on currently living children who were more than one year old but less than 24 months old would also have yielded downward-biased results, since it would have excluded children who might have been immunized during their first two years of life but who died in the previous year.[4] Another potential source of bias was that the database from the 52nd round of the NSS has far fewer children ages 12 to 24 months than from birth to 12 months old. On the other hand, including both groups in our calculations would have biased the result for the

total number of immunizations received during the previous year in an upward direction, balanced by the fact that we do not include measles vaccinations.

The numbers in table 3.2 are the differences between the concentration index for publicly provided immunization doses and the concentration index for need, as measured by the proportion of children between birth and 24 months in each group. (There are quite significant differences in the latter across groups, with more of these children among the poor.) The data indicate that the immunization doses provided by the government are fairly equitably distributed, with concentration indexes hovering around zero. A few remarks are in order, however. Although immunization doses are not directly comparable with outpatient treatments and inpatient stays in view of the different concentration indexes used, the distribution of immunization doses appears to be fairer in terms of its allocation to poorer groups than outpatient treatments and inpatient stays. In fact, if we did not adjust for the greater proportion of children belonging to the poorer groups, the distribution of utilization would favor them even more.

In most states, poorer groups receive a significant share of total government immunizations. However, in Gujarat, Kerala, Maharashtra, and Tamil Nadu, the poor receive much higher shares of public sector immunizations than in the other states, a pattern that was also true for outpatient treatments and inpatient stays.

Table 3.3 also provides information on the proportion of total immunizations that was provided by the public sector to children under 24 months of age. More than 90 percent of all immunizations given to children in the poorest expenditure quintile came from the government. For the top quintile, the share of the public sector was somewhat smaller but still quite significant, at 74 percent. Overall, the government provided the bulk of the immunization services—89 percent of all doses of DPT, OPV, and BCG received by children for whom our table has information. Moreover, the public sector provided a higher proportion of all immunization doses in rural areas than in urban areas—93 percent and 78 percent, respectively (Mahal and others 2000).

*Childbirth*. Indians also use public facilities for childbirth, relying on inpatient days and other forms of care. The 52nd round of the NSS specifically distinguished hospitalization for this purpose from inpatient days for other illnesses for households with a child between birth and one year of age at the time of the survey (NSSO 1995a, 1995b, 1998).

According to estimates based on NSS data from the 52nd round, childbirth and associated medical factors resulted in nearly 15.95 million inpatient days in public facilities during 1995, the bulk of which were spent in hospitals. Nearly two-fifths of all inpatient days were accounted for by urban residents; within that group, 90 percent stayed in public hospitals (Mahal and others 2000).

The upper expenditure quintiles accounted for a disproportionately large share of these inpatient days, especially in rural areas. This fact is reflected in the magnitudes of the concentration index for rural and urban areas (see table 3.2).[5] Moreover, these rural-urban differences hold true for individual states as well. Another general pattern—which has already been noted in the case of other service utilization categories—is that, in the southern states (Andhra Pradesh, Karnataka, Kerala, and Tamil Nadu) and in Gujarat, Maharashtra, and West Bengal, inpatient days related to childbirth are more evenly distributed among different socioeconomic groups than in Bihar, Orissa, Rajasthan, Uttar Pradesh, and the northeast. Notice also that the concentration indexes for inpatient days related to childbirth are greater than those for outpatient treatments and immunizations, indicating yet again that inpatient days in public facilities are disproportionately used by the rich, irrespective of the cause. Table 3.3 shows that the share of private care increases from the bottom to the top of the socioeconomic ladder as measured by per capita expenditure, although considerable interstate differences persist. Some states, particularly Andhra Pradesh, Gujarat, Karnataka, Kerala, Maharashtra, and Punjab, used more private services than others. The poorer states, such as Madhya Pradesh, Orissa, Rajasthan, and West Bengal, tended to rely on public services.

Although not reported in the tables, auxiliary nurse midwives (ANMs) attended an estimated 1.46 million births in the year pre-

ceding the survey; the overwhelming majority (90 percent) of such births were to rural residents. Women from the lower expenditure quintiles typically accounted for a disproportionate share of the births attended by ANMs, even after accounting for the socioeconomic distribution of the total number of children born during the period in question. Thus, 62 percent of the births attended by ANMs in India were to women in the bottom two quintiles, although their share of the number of children born was 49 percent. This picture is broadly reflected in state-level data as well.

*Prenatal Visits*. Of the estimated 52.5 million visits for prenatal care all over India in the year prior to the survey, about 60 percent (or 30.8 million) were handled by public facilities and the remainder by the private sector. Excluding care provided by ANMs, public hospitals accounted for nearly 56 percent of all prenatal visits in the public sector (Mahal and others 2000).

Table 3.2 presents concentration indexes of the distribution of prenatal visits to all public facilities (including hospitals). As discussed earlier, the socioeconomic distribution of such visits to public hospitals is more unequal than the distribution of visits to other kinds of public facilities, such as primary health centers (PHCs). There are essentially three main findings in this category. First, the distribution of pre- and postnatal visits in rural areas is fairer to the poor than to the nonpoor. Second, there are interstate differences along the lines discussed earlier. Third, the concentration indexes for pre- and postnatal visits are typically lower in magnitude than those for inpatient stays.

Table 3.3 presents the proportion of prenatal visits to public facilities. The data indicate that the public sector was the major provider of such care in most states. The share of total visits to private facilities, however, increased with per capita consumption expenditure; at the national level, people in the top quintiles made more than three times the share of visits to private facilities than those in the lowest quintile. This pattern was also observed among both rural and urban residents when considered separately, as well

as in individual states. Private facilities appeared to be particularly popular in the southern and western Indian states.

In addition to the institutional sources discussed above, ANMs constituted an important provider of prenatal care. ANMs handled an estimated 19.4 million visits, with rural residents accounting for 96 percent of that total. Given that ANMs are likely to be cheaper than other sources, it is not surprising that 60 percent of the total number of visits to ANMs were by people in the bottom 40 percent of the population. The relative importance of this source of care varied substantially from state to state, ranging from a low of 3 percent of all visits (excluding ANM visits) to public facilities in Kerala to 100 percent in the case of Gujarat (Mahal and others 2000).

### *Gross and Net Costs of Health Care Services*

This section provides an additional aspect to the methodology that we used to calculate government subsidies to a specific public health service. To estimate the subsidy, we needed first to estimate the gross per-unit cost to the government of providing a specific service—for example, the cost per inpatient day, per outpatient visit, per immunization received, or per prenatal visit. This information has been provided in table 3.1. We then subtracted any amounts that the government may have recovered through user charges from unit cost estimates to get an estimate of the subsidy received per unit of utilization of a specific service. Thus, this section focuses on user charges. Given that the objective of a BIA is to estimate the net subsidies that accrue to individuals in different socioeconomic groups, the amounts patients paid for the use of health facilities are a key element in these calculations.

We had access to two sources of information about fees paid by users of public facilities. The first was the NSS itself. The database of the 52nd round contained information about charges paid for inpatient care in hospitals and other health facilities. Unfortunately, information about any fees that might have been paid for the use of outpatient facilities was not directly available, as they were subsumed under the general category of "medical expenditures." Nor was any information available about fees that might

have been paid for prenatal care, immunization, and inpatient days related to childbirth. However, the NSS data did include information on immunizations and inpatient stays associated with childbirth that were received free of charge at public facilities.

Our second source of information was government budget documents, which typically include data on actual revenues received in previous years (Selvaraju 2000). We were able to compare the information on revenues presented in those documents with the information reported by respondents in the 52nd round of the NSS. Although the estimates of user fee revenues from the two sources differed, this did not affect the results of our BIA in any significant way (Mahal and others 2000). In this chapter, we use the estimates of user charges derived from the survey data rather than those from the budget documents.

Table 3.4 provides survey-based estimates of the share of user fees paid to public facilities by (a) the richest 40 percent of the population, (b) rural and urban residents separately, and (c) state.

**Table 3.4** Share of Richest 40 Percent of the Population in Total Hospital Charges Paid to Public Health Facilities by State and Region, 1995/96 (percent)

| STATE/REGION | RURAL | URBAN | COMBINED |
|---|---|---|---|
| Andhra Pradesh | 91.6 | 54.5 | 92.8 |
| Bihar | 92.5 | 83.5 | 98.0 |
| Gujarat | 60.4 | 78.3 | 71.6 |
| Haryana | 67.2 | 89.0 | 80.5 |
| Himachal Pradesh | 93.0 | 60.7 | 92.9 |
| Karnataka | 55.4 | 80.7 | 59.5 |
| Kerala | 50.6 | 65.1 | 63.5 |
| Madhya Pradesh | 58.5 | 64.9 | 72.1 |
| Maharashtra | 74.6 | 70.8 | 89.8 |
| Northeast | 84.6 | 80.1 | 90.2 |
| Orissa | 93.7 | 89.8 | 91.3 |
| Punjab | 67.9 | 92.6 | 89.6 |
| Rajasthan | 88.1 | 98.3 | 98.1 |
| Tamil Nadu | 68.4 | 88.1 | 91.8 |
| Uttar Pradesh | 93.6 | 84.0 | 92.1 |
| West Bengal | 92.5 | 80.6 | 90.0 |
| All India | 84.2 | 81.7 | 86.4 |

*Source:* Mahal and others 2000.

These figures indicate that those in the top expenditure quintiles pay an overwhelming proportion of the user charges the government received. In India as a whole, people in the top two expenditure quintiles pay for more than 86 percent of these charges. Even within states, the share of user charges paid by those in the top quintiles is disproportionately high, although the precise share varies widely. For example, the share of hospital fee revenues paid by the top two expenditure quintiles ranged from a low of about 60 percent in Karnataka and Kerala to 98 percent in Rajasthan and Bihar. In most of the poorer states, the top quintiles paid very high proportions of total statewide fee revenue, and this share exceeded the share of inpatient days used by people in these quintiles in all of the states. Assuming that the quality of care received is similar across all socioeconomic groups, then it can be argued that the greater financial burden borne by richer groups makes up to some extent for the bias against the poor in the distribution of public subsidies for inpatient care. When we examined the data by rural and urban respondents separately, we observed a similar picture.

We also found that the distribution of free immunization services closely paralleled the pattern of utilization. This is not surprising, as these services are provided mostly free by the public sector under various initiatives such as the universal immunization program. (Ninety-nine percent of immunization doses were provided free.) We assumed that "free" immunization services were just that—completely subsidized—whereas fees were charged for "nonfree" services sufficient to cover the costs of providing such services. Moreover, each immunization dose received was considered a separate visit for the purposes of our BIA.

The survey also provided us with data on the distribution of inpatient days for childbirth spent in free wards in public facilities. These data could be disaggregated by rural-urban residence, by various indicators of socioeconomic status, and by individual states. A total of 13.3 million inpatient days of care (or roughly four-fifths of all childbirth-related inpatient care at public facilities) were spent in free wards. Our primary finding is that the pattern of how women from various expenditure quintiles gave birth in free wards closely follows the distribution of inpatient care, with a slight bias in favor of poorer

groups and against richer groups. This, generally speaking, is the picture at both the national and the state levels and in both rural and urban areas. Some states—Andhra Pradesh, Haryana, Karnataka, Kerala, Punjab, and West Bengal—had a noticeably fairer distribution of free ward days. Thus, if we assume that there are no hospital charges for inpatient days in free wards, the implication is that public subsidies to inpatient care in free wards is more equitably distributed than public subsidies to inpatient care (for childbirth) in general.

We had to make a few other assumptions before proceeding with the BIA. We assumed that no user fees were charged for outpatient visits. We had two main reasons for making this assumption. First, no direct estimates of revenues from these charges were available because they were subsumed under the category of medical expenditures in the NSS data. Second, and more crucially, the estimates in the NSS data for hospital charge revenues alone exceed the total revenue estimates from user fees reported in state government budgets by a large margin, so we thought it would be prudent not to make any guesses about any additional amounts that might have been raised from outpatient visits. Given the available evidence that any amounts paid by users are likely to have been positively correlated with socioeconomic status (in other words, to have been paid by those most able to afford them), excluding them as we did probably biased the estimated distribution of public health subsidies toward greater inequity.

We treated all visits to ANMs as visits to public facilities, given the substantial numbers of health subcenters that operate at village levels. Moreover, we treated such visits and any assistance received from ANMs in childbirth as being either fully paid for or fully subsidized.

### *Results of Benefit Incidence Analysis*

We used the following common set of unit cost estimates for calculating subsidies based on table 3.1 and additional evidence:

- One inpatient day of curative care or childbirth at a public hospital (270 rupees)
- Outpatient treatment or prenatal visit at a public hospital (50 rupees)

- One inpatient day at a primary care or other health facility (150 rupees)
- Outpatient treatment or pre- or postnatal visit at a PHC or other facility (25 rupees)
- Immunization dose per visit or prenatal visit to an ANM (15 rupees)
- Childbirth attended by an ANM (75 rupees)

The first two estimates are the midpoint of the range of numbers reported in table 3.1 and are close to our estimates of average incremental costs for these services. The estimates for inpatient stay and outpatient visits to PHCs are a modified form of the data in Muraleedharan and others (1998), corrected for the upward bias that results from using low utilization of inpatient beds when calculating unit costs.[6] The cost for a dose of immunization or for a prenatal visit was estimated to be 15 rupees, which is the midpoint of the cost per visit reported in World Bank (1997a) and the upper bound estimates reported in table 3.1. No estimates of the cost of a single childbirth attended by an ANM/lady health volunteer (LHV) were available, but we assumed it to be the cost of half a day of work, or about 75 rupees (see also Muraleedharan and others 1998).

For our analysis, we first allocated user fee revenues to five different socioeconomic groups (per capita expenditure quintiles) based on the distribution in the NSS data and on the assumptions discussed in the previous section.

Table 3.5 presents our results on the distribution of public subsidies on health in India by state and by rural-urban classification using concentration indexes. Elsewhere, we report the results by level of care—public hospitals, primary health facilities and other lower-level care, and immunizations (Mahal and others 2000). These results follow closely the utilization patterns reported earlier in this section, so we have excluded them from our analysis for reasons of space.

Our primary finding is that for the types of care considered here, public health subsidies are disproportionately distributed in favor of the richer groups: some 31 percent of total subsidies go to those in

**Table 3.5** Distribution of Public Subsidies by State/Region and Socioeconomic Status, 1995/96 (concentration indexes)

| STATE/REGION | RURAL | URBAN | COMBINED |
|---|---|---|---|
| Andhra Pradesh | 0.140 | –0.091 | 0.116 |
| Bihar | 0.296 | 0.234 | 0.419 |
| Gujarat | 0.142 | –0.082 | 0.000 |
| Haryana | 0.231 | 0.096 | 0.201 |
| Himachal Pradesh | 0.350 | 0.225 | 0.340 |
| Karnataka | 0.281 | –0.041 | 0.209 |
| Kerala | 0.014 | –0.113 | –0.041 |
| Madhya Pradesh | 0.308 | 0.076 | 0.292 |
| Maharashtra | 0.107 | –0.160 | 0.060 |
| Northeast | 0.178 | 0.196 | 0.219 |
| Orissa | 0.340 | 0.161 | 0.282 |
| Punjab | 0.245 | 0.211 | 0.223 |
| Rajasthan | 0.288 | 0.305 | 0.334 |
| Tamil Nadu | 0.090 | –0.050 | 0.060 |
| Uttar Pradesh | 0.348 | 0.232 | 0.304 |
| West Bengal | 0.164 | –0.075 | 0.157 |
| All India | 0.261 | –0.012 | 0.214 |

*Note:* The formula used to construct concentration indexes from quintile shares in total public health subsidies was reported in Mahal and others 2000.

the highest quintile, while only 10 percent go to those in the lowest quintile. Table 3.5 demonstrates this through a concentration index of the distribution of public subsidies. For India as a whole (both rural and urban), the index is positive—0.214—which suggests a bias in the distribution of public subsidies toward the richer groups. Moreover, as our discussion about utilization patterns across five different types of services suggests, this result is driven primarily by the distribution of public subsidies on inpatient care. Nevertheless, there are considerable interstate differences. As expected, selected southern states (Andhra Pradesh, Kerala, and Tamil Nadu), Gujarat, Maharashtra, and West Bengal have a distribution of public subsidies that is fairer to poorer groups than do the other states.

Health subsidies are also much more equally distributed among urban residents than among rural residents. Thus, the top quintile of rural residents accounted for about 39 percent of all subsidies in comparison with the bottom quintile's 10 percent, while for urban residents these proportions were 15.7 percent and 16.1 percent,

respectively (Mahal and others 2000). This is primarily because subsidies for public hospitals are much more unequally distributed in favor of the upper quintiles in rural areas than in urban areas. Again, interstate differences show up here along the expected lines. Bihar, Madhya Pradesh, Orissa, Rajasthan, and Uttar Pradesh, which are among the poorest states in India, have the least egalitarian distribution of subsidies, although Himachal Pradesh, a state with a growing economy, also has a highly unequal distribution of subsidies to public health. The reasons clearly need to be analyzed further in the future.

## Policy Implications

The calculations in the previous section suffer from a number of limitations, two of which are particularly significant. First, the fact that we were able to access only a limited number of facility costing studies for India implies that our approach to allocating subsidies failed to account for interstate and interquintile differences in the cost of providing services. Consequently, the distribution of subsidies in our results is biased toward states with poor-quality facilities. Moreover, if it can be assumed that improving the quality of care leads to increased use of public facilities, then the total amount of the subsidies is itself likely to be underestimated. Within any state, the lack of information about the quality of care available to different groups may cause a bias if richer individuals get better-quality care.

The second limitation, obviously, is our use of a case-equivalent approach for estimating unit costs from government expenditure data. In this case, we were able to use state-level data to obtain unit cost information specific to each state, but we were forced to fall back on assumptions about relationships between these costs for different types of care because of the difficulty of obtaining government expenditure data in sufficient detail (Mahal and others 2000). Although the exact implications of these assumptions for the distribution of subsidies are not clear, our analysis points to the need for

a more careful study of government expenditures in individual states in the future.

Even taking these limitations into account, several clear messages emerge from our analysis. First, health subsidies are not particularly well targeted to the poor in India, especially the poor who live in rural areas and in the poorer states. States in the south of India, such as Kerala and Tamil Nadu, do considerably better in this regard than their poorer counterparts in the north, such as Bihar and Uttar Pradesh.

Second, the allocation of subsidies across the different quintiles is driven by the size and distribution of subsidies to hospital-based care. This is unfortunate because the distribution of subsidies for primary care and for inpatient stays related to childbirth are reasonably evenly distributed across different socioeconomic groups. Indeed, programs associated with maternal and child health (such as programs dealing with pre- and postnatal care and immunizations) that are linked to schemes sponsored by the central government appear to be targeted much better, from a distribution perspective, than purely curative care.

Third, the unequal distribution of subsidies for inpatient stays that we have found in our analyses of the NSS data does not necessarily imply that the public sector fails to insure poor patients against expensive episodes of illness. We observed that poorer patients and most of the poor states use more publicly provided hospital services than private hospital services, compared with their richer counterparts. The catch is that meeting the insurance objectives of the poorer sections of society appears to involve a trade-off—in providing insurance for the poor, the public sector is also handing over large amounts of public subsidies to the rich, especially those who live in rural areas.

So what do our findings imply for policy? Richer groups may simply have access to better-quality public health facilities because of their greater bargaining power, a fact that is obvious to anyone who has tried to be admitted to a public hospital in India. However, this lack of access to high-quality care in the public sector may be driven more by the fact that the rural poor tend to live a long

distance from medical facilities and that they must take off of work and lose income if they decide to seek health care (Gertler and van der Gaag 1990). This is suggested by the fact that hospital subsidies are distributed much more evenly among the urban population than among the rural population.

Richer individuals also consume more health care, a natural outcome if such care is considered a normal good. This is well known empirically and internationally, and recent work by Gumber (1997) and Duraisamy (1998), among others, has established that this is also the case in India. This fact alone can have a substantial impact on the distribution of public subsidies.

In light of the above, it is obvious that increasing household income and developing infrastructure that increases access to hospital care would help to improve the allocation of subsidies. This assertion is supported by preliminary analyses that we undertook linking inequalities in the allocation of health subsidies to road densities across the 16 Indian states and regions that we examined in this study. For example, the correlation coefficient between the ratio of the share of the top and bottom expenditure quintiles in public sector immunizations and road density was –0.78; in other words, higher road density (roads per square kilometer) was associated with lower inequality in public health subsidies. Richer states, as measured by per capita expenditure, and states with lower levels of inequality in per capita expenditures also had lower levels of inequality in the allocation of public health subsidies. This observation suggests that there need not be a tradeoff between growth and the allocation of health services to the poor. Further work is necessary to explore these issues fully and to test the robustness of these early findings.

Apart from income growth and infrastructure development, there are other actions that the government could take. Our analysis suggests that one such action would be to improve the quality of care provided at primary care centers. If existing expenditure levels on primary care and the cost of services per unit are anything to go by, simply increasing the share of expenditures may not be the only remedy for a cash-constrained government. Rather, a more effective

approach might be to make care providers at the level of primary care more accountable. This could be accomplished, perhaps, by transferring some of the care provision responsibilities to private providers; by decentralizing control over revenues, expenditures, administration, or all three (see Mahal, Srivastava, and Sanan 2000); or by introducing other kinds of democratic participation in service provision. This approach is supported by the observation that some of the better-performing states (such as Gujarat, Maharashtra, and West Bengal among the poorer states) have also experienced a greater degree of administrative decentralization in the past 30 years.

These suggestions, particularly the suggestion to improve the quality of public sector care, run into the problematic observation made by Besley and Coate (1991) that greater equity can be achieved and insurance for the poor improved if the quality of available public services is not "too high." They argue that the interests of the poor could be served by the public sector if the richer groups start using private care or unsubsidized public facilities such as paid inpatient wards. For this to happen, however, the nonpoor would have to perceive the quality of care in the private, unsubsidized facilities as being better than that of subsidized public services. If this line of reasoning is correct, then the much more even distribution of subsidies in some states in our data may reflect the fact that high-quality private sector options are available to the richer groups in those states. In other states and regions (such as Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh, and the northeast), such options may not be available either because of a general absence of private sector services or a lack of regulatory standards and enforcement. Indeed, these states and regions have close to the smallest bed-to-population ratios among all Indian states, suggesting a lack of options for users and a consequent bias in public health care in favor of the wealthier and more influential groups (Gumber 1997). Poorer states may also have poorer-quality regulatory systems that, in turn, may promote a low quality of care. In these circumstances, there may be a case for developing additional government facilities in these states and regions and for improving the regulatory regime that oversees the provision of health care.

## Notes

1. Constructing national quintiles and joint rural-urban quintiles requires making the uncomfortable assumption that consumption expenditure levels are comparable across regions and rural-urban residences, despite the fact that the consumption baskets we used in constructing indexes for individual states differed.

2. We have not distinguished between public hospitals and facilities such as primary health care centers in our analysis of inpatient days. Although the distribution of inpatient days in primary health care centers is much more egalitarian than the distribution of public hospital inpatient days, it accounts for only a very small proportion of all inpatient days spent in public facilities (Mahal and others 2000).

3. This is also true for the measles vaccine.

4. This problem exists even if we focus on children between birth and 12 months of age, although obviously to a lesser degree.

5. The proportion of children from birth to 12 months old in each socioeconomic group is our indicator of need.

6. Specifically, we calculated unit costs on the assumption that inpatient beds were fully utilized, and thus, we scaled up the inpatient day numbers reported in Muraleedharan and others (1998) for this purpose. We used a case-equivalent methodology of six outpatient visits being equal to one inpatient visit in terms of cost to obtain our estimates.

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CHAPTER 4

# Equity in Financing and Delivery of Health Services in Bangladesh, Nepal, and Sri Lanka

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## Abstract

Using a national health accounts (NHA) approach, existing data sources were used to assess the equity in distribution of financing and health system resources in Bangladesh, Nepal, and Sri Lanka. Simple tables of incidence by decile, Lorenz curves, Kakwani indexes, Suits indexes, and concentration indexes were used for the analysis. NHAs already existed in official form for Bangladesh and Sri Lanka, but not for Nepal. All three countries have health systems in which the predominant sources of financing are taxes and direct out-of-pocket payments by households. Despite the overall similarity in financing and provision systems, significant differences are observed in actual performance between Bangladesh and Sri Lanka. In Sri Lanka, both tax and out-of-pocket payments were progressive means of financing, and government health care expenditures were pro-poor in their distribution. In Bangladesh, the same financing mechanisms were modestly regressive, and the distribution of government health expenditures was not pro-poor. This difference in national

performance appears to be due to (a) the fact that poor people in Bangladesh are less likely than the nonpoor to recognize and to respond to their own episodes of illness, and (b) a lack of any consumer-level differences in quality between the private and the public sectors, which encourages the rich to prefer to use private services instead of public ones. Sri Lanka's experience suggests that increasing equity in Bangladesh would require increasing health awareness among the Bangladeshi poor, substantially increasing their access to modern medical services, and improving the progressiveness of taxation in general.[1]

## Introduction

Equity in the design and operation of health care systems is an important system goal for nations. The notion of fairness in financing as recently proposed by the World Health Organization (WHO 2000) is only one component of equity out of many that are of concern to governments. Equity in access to and use of health services is commonly an important goal for policymakers in countries in the Southeast Asia region (SEAR) and elsewhere. Alleviating poverty through the redistributive effect of public health spending can be another important welfare goal for development planners in many countries. However, realistic assessments of the extent to which these goals are achieved by the health system have been rare outside the industrial world until recently. Current WHO efforts to measure fairness in financing as defined by WHO's Evidence and Information for Policy may be a useful contribution to the understanding of health systems, but they do not address the equity concerns of policymakers.

There is little dispute that, from the perspective of improving overall health status, equity in access to health care or in provision within a health system is an important intermediate objective, because inequalities in such access have an important impact on the overall health status of any national population. Nevertheless,

equity in access is an important objective in its own right for most countries (van Doorslaer, Wagstaff, and Rutten 1993). In the context of the poorer SEAR countries, equity in access to public health services is also an important objective for alleviating poverty. For example, it has been argued that provision of basic health services in Malaysia and Sri Lanka has been an important mechanism for mitigating the impact of poverty in rural areas (Alailima and Mohideen 1983; Meerman 1979). It is also sometimes argued that public financing and provision of health services is desirable as an indirect means of redistributing material resources within a society. So in addition to the objectives of equal health outcomes and equal access, policymakers can be concerned with the redistributive impact of government health expenditures. This connects to the related interest of policymakers in the equity of the financing mechanisms for health care. Health systems and their reforms are often judged not only in terms of their implications for the distribution of access and outcomes, but also in terms of the distributive burden of financing. The evaluation of equity in financing is not only an important objective in its own right, but is intimately connected with the evaluation of the provision and supply side of health care systems.

Much of the pattern of equity found in a particular health system is a function of the existing patterns of social and economic equity outside the health system itself. Nevertheless, it is generally assumed that the structure and organization of the delivery and financing of health care can play a significant role in determining the equity in financing and access to and use of health services. However, with the exception of the one study in Organisation for Economic Co-operation and Development (OECD) countries, there has been little systematic analysis in developing countries of the equity characteristics of alternative national health care financing and delivery systems (van Doorslaer, Wagstaff, and Rutten 1993).

Despite the importance that SEAR policymakers give to equity as a goal, there has been little empirical analysis of how equitably overall health financing and delivery strategies in each country perform or of how individual financing mechanisms compare with one

another within the same country. Although many examples of individual health programs or projects are being evaluated in terms of their impact on equity, these evaluations do not tell policymakers much about the performance of overall national health systems or strategies. Moreover, because changes in one part of a health system can often have secondary, and unintended, consequences for the operation of other parts of the health system, focusing on single components of the health system in isolation may not reveal the full equity implications of any program. For example, shifting a segment of the population to health care funded by social insurance might reduce critical political support for maintaining the level of general revenue funding for publicly funded health services. On the other hand, encouraging private provision of health care may contribute to equitable provision if it is successfully combined with targeting public expenditures to the poor. This type of linkage between different elements of the health care system implies that we must examine not only the health system as a whole but also the financing and provision sides in combination.

In recent years, the WHO has been in the forefront of emphasizing the importance of these aspects of equity as policy criteria when reforming health care systems, especially when attention has been focused too much on efficiency considerations. For example, publications by the WHO examining the experience with user fees in the 1980s have reminded policymakers and donors of the importance of taking potential negative equity effects into account (Creese and Kutzin 1995). In Europe, the WHO made equity in health services a central goal in the attempt to achieve health for all in the year 2000 (Whitehead 1990). In the Americas, the Pan American Health Organization (PAHO) has stressed the importance of the concept of equity in both health status and the distribution of health services in its work in the region (Shaw 2002). The WHO's own framework for assessing health sector financing reform options has emphasized the importance of collecting adequate and systematic data on the equity of health care systems (Kutzin 1995).

Research, such as the European Concerted Action Programme on Quality Assurance study that examined equity in the health care systems of several industrial countries, led to many debates about

national differences in the financing of health systems and their policy implications. At the Asia Pacific Health Economics Network (APHEN) conference in Bangkok in April 1997, the representatives of several countries expressed considerable interest in collaborating on similar work in the Asian region, partly to strengthen intraregional research collaboration and partly to provide a geographic contrast to the studies being carried out in other regions. Countries expressing strong interest in collaborating on a regional Asian study included Bangladesh, Nepal, Sri Lanka, and Thailand. This study is the initial outcome of that collaborative interest.

Given the interests of SEAR member states, the general importance attached to the equity goal in health care by the WHO, and the opportunity for comparing this analysis with several other equity studies outside SEAR, this study was designed with the following objectives:

- To the extent possible using existing data, document empirically equity in delivery of health care services in three SEAR countries (Bangladesh, Nepal, and Sri Lanka) using a national health accounts (NHA) framework—in other words, by examining both public and private delivery systems and, to the extent possible, by addressing vertical and horizontal equity issues raised by the analysis.

- To the extent possible using existing data, evaluate equity in the financing of health care services in the three countries, including both government and private methods of payment.

- Compare the performance of the existing health care systems and policies in achieving equity in the three countries and draw appropriate lessons about the major health financing mechanisms for other SEAR countries.

- Determine the feasibility of this type of system assessment in the data-scarce environments of SEAR countries.

Given data and funding constraints, this study focuses on Bangladesh and Sri Lanka. Only limited resources were available for the Nepalese component of the study, and the lack of an existing NHA

in Nepal prevented any significant new analysis. However, some important work was done to identify the future steps for establishing NHAs in Nepal and to analyze public sector expenditures on health.

There is no agreed-upon definition of what constitutes equity with respect to health systems. This lack of a consistent definition stems from underlying differences in philosophical approaches and notions of justice. Distributional objectives in health care can stem from two sources: equity or social justice on the one hand and altruism or caring on the other. In general in health care equity studies, equity objectives have been analyzed independently of any distributional objectives that are motivated by altruism. Two theories of social justice have tended to dominate discussions about equity. The libertarian view holds that analysts should focus on the extent to which people are free to purchase the health care that they want. State involvement should be minimal and limited to providing a minimum standard of care for the poor. However, in practice, most countries' policymakers are concerned with the alternative egalitarian approach to equity. Egalitarians focus on ensuring equality in access to health care and tend to favor a strong role for the state in the financing and provision of health care. In many countries, health care is financed and delivered by a mixture of systems, and there are traces of both ideologies in policymaking, with the emphasis often changing with changes of government (van Doorslaer and Wagstaff 1998).

A variant on the egalitarian approach is one whose concern is not with the distribution of health services itself, but with the distribution of income within society. In this variant, a reduction in the inequality of final incomes is regarded as the equity goal. Van Doorslaer, Wagstaff, and Rutten (1993) contended that in industrial countries, this type of equity goal is rarely used in arguments about health services. However, it may be more important in developing countries, where public spending is more constrained and where alleviating poverty may be a higher priority than other social objectives (Rannan-Eliya and others 1999).

This study empirically evaluates the distribution of health services, the distribution of the burden of financing of those services,

and their net redistributive impact. It thus relates to the concerns of the egalitarian approach for equality of access as well as to the concerns about the distribution of income within a society. In contrast to other studies, it also places this analysis within the context of an overall analysis of the health financing system using an NHA approach.

## Country Situations

Although all three countries in this study are in South Asia and are low-income economies, they are dissimilar in terms of both their health and socioeconomic indicators (table 4.1). Bangladesh and Nepal are among the poorest low-income countries, while Sri Lanka was on the verge of graduating to lower-middle-income status in 1997. Nepal is a largely mountainous, landlocked country; Bangladesh's territory consists for the most part of a large delta; and Sri Lanka is an island. A more important difference is that Sri Lanka has health indicators that are more akin to those of an upper-middle-income economy than to a developing country, while Bangladesh and Nepal continue to experience health conditions typical of countries at their income level. All three countries are densely populated.

Health conditions are relatively poor in Bangladesh; life expectancy was 58 years at birth in 1997, and the infant mortality rate was 90 per 1,000 live births in 1997. Health conditions in Nepal are similar, with a life expectancy of 58 years in 1998 and an infant mortality rate of 93 per 1,000 live births in 1996. In both countries, major public health problems include disorders related to reproductive health and pregnancy, childhood diarrhea, malaria, tuberculosis, and acute respiratory infections. There are significant gender and regional differences in disease prevalence and incidence. By contrast, Sri Lanka has achieved both low mortality and low fertility rates. By 1997, despite an income level of less than US$800 per capita, Sri Lanka had reduced its infant mortality rate to 15, its child mortality rate to 18, and its total fertility rate to

**Table 4.1** General Indicators for Bangladesh, Nepal, and Sri Lanka, 1997

| INDICATOR | BANGLADESH | NEPAL | SRI LANKA |
|---|---|---|---|
| *Socioeconomic* | | | |
| Population (millions) | 124 | 23 | 18 |
| Area (thousand $km^2$) | 130 | 143 | 66 |
| GDP per capita (US$) | 265 | 213 | 773 |
| GNP per capita (US$) | 270 | 210 | 800 |
| GNP per capita (PPP$) | 1,050 | 1,090 | 2,460 |
| Gini index | 33.6 | 36.7 | 30.1 |
| Ratio of population living below poverty level (%) | 43 | 42 | 25 |
| Rural population (%) | 81 | 88 | 78 |
| Rate of illiteracy of women (%) | 71 | 72.4 | 13 |
| *Health status* | | | |
| Life expectancy at birth of males (years) | 58 | 58 | 71 |
| Life expectancy at birth of females (years) | 59 | 57 | 75 |
| IMR[a] | 90 | 93 | 15 |
| Maternal mortality rate[b] | 35 | 54 | 8 |
| *Population* | | | |
| Total fertility rate[c] | 3.1 | 4.4 | 2.0 |
| Crude birth rate[d] | 21 | 36.9 | 19 |
| Crude death rate[e] | 5.5 | 11.6 | 6 |

*Notes:* GDP = Gross domestic product. GNP = Gross national product. PPP$ = Purchasing power parity dollars.
[a]Deaths under age 12 months per 1,000 live births.
[b]Deaths per 10,000 live births.
[c]Births per woman age 15–49 years.
[d]Births per 1,000 people.
[e]Deaths per 1,000 people.
*Sources:* Central Bank of Sri Lanka, *Annual Report 1998*; World Bank, *World Development Indicators 2000* database.

below the replacement level of 2.0, and raised its life expectancy at birth to 75 years for women and 71 years for men. Variations in health status between different subgroups of the population are not great, with minimal differences between the urban and rural populations. This performance, notably, has been achieved without expending a higher proportion of its national resources on its health care system than other countries in the region.

The national health systems and national health strategies of the three countries are superficially quite similar. All three place government-financed care, with public provision of medical services, at the center of overall national policy. Government services

are generally tax financed, with no significant involvement of social insurance and very limited public sector user fees. At the same time, all three countries permit private sector financing and provision of medical services, and the general government attitude to the private sector is one of laissez-faire. In all three countries, the private sector accounts for a substantial share of overall ambulatory health care provision plus a smaller share of inpatient provision. In general, Sri Lanka is characterized by a greater degree of state involvement in both financing and provision than Bangladesh and Nepal. Table 4.2 provides a brief overview of each country's health system.

## Methods

The tri-country study's primary goal was to examine the overall distribution of financing burden and health care expenditures in each country, paying specific attention to each financing and provision mechanism, while using NHAs as the estimating and synthesizing basis. NHAs were constraining mainly in the analysis of the role of

**Table 4.2** Background Information on National Health Systems of Bangladesh, Nepal, and Sri Lanka

| HEALTH SYSTEM INFORMATION | BANGLADESH (1997) | NEPAL (1995) | SRI LANKA (1997) |
|---|---|---|---|
| *Health spending* | | | |
| Total health expenditure (US$ millions, 1997) | 313.18 | 228.92 | 481.25 |
| Total health expenditure (% of GDP) | 3.9 | 5.45 | 3.19 |
| Public health expenditure (% of GDP) | 1.3 | | 1.58 |
| Total health expenditure per capita (US$, 1997) | 10.6 | 11.5 | 26 |
| *Composition of total health expenditure* | | | |
| Public (%) | 34 | 23 | 50 |
| Private (%) | 64 | 77 | 50 |
| *Health sector facility provision and service utilization* | | | |
| Public sector beds per 1,000 capita | 0.24 | 0.15 | 3.08 |
| Private sector beds per 1,000 capita | 0.06 | 0.07 | 0.13 |
| Admissions per 100 capita in public sector | <1 | <1 | 18 |
| Physician contacts per capita per year | 2.0 | <2.0 | 4.5 |

*Sources:* Bangladesh Bureau of Statistics 1998; Central Bank of Sri Lanka, *Annual Report 1998;* Government of Sri Lanka and the Institute of Policy Studies (IPS) 2001; Hotchkiss and others 1998.

household spending, while providing additional detail necessary for the systematic examination of government spending. In effect, the purpose of the study was to determine the distribution of the expenditure aggregates already identified in the NHAs of each country and thus to extend the use of each country's NHAs to analyze equity characteristics.

As explained below, Bangladesh and Sri Lanka had most of the data that we needed, but only Sri Lanka had all of the necessary data. We modified our framework for Nepal to accommodate data inadequacies. However, not all objectives of the study were achievable for Nepal, also because, in part, our resources did not enable us to do a more detailed analysis of the available data. Our analysis explored equity issues in the financing and distribution of health spending across the dimensions of income, gender, urban and rural location, and geographic regions.

### *Data: Variables and Assumptions*

*National Health Accounts*. NHA estimates for 1997 are the main source of data used in this study for Bangladesh and Sri Lanka. The year 1997 is the most recent year for which reasonably reliable NHA estimates are available for both countries. In each case, NHA estimates had been compiled from several data sources, ranging from audited expenditure records of the government to survey data from private health care providers and pharmaceutical companies. Other reports gave detailed information on the compilation and structure of NHA in the two countries (Data International 1998; IPS 2001).

In this study, we attributed to specific beneficiaries all expenditures for services provided by each category of provider groups. In addition, the NHA estimates provided expenditures by geographic regions (provinces in Sri Lanka and divisions in Bangladesh). The distribution of government subsidies was thus calculated at a regional level and then aggregated using population weights to obtain the national distribution.

Since a complete set of NHAs was not available for Nepal, government expenditure data were obtained directly from the audited

accounts of the Ministry of Health (MOH). Although the Ministries of Defense, Home, Education, and Finance contribute roughly 10–12 percent of total health spending, no disaggregated data were available on their expenditures. Survey data on expenditures by private providers either did not exist or could not be made available for analysis in this study. Given these data restrictions, the Nepal component of this study examines only the distribution of MOH resources.

*Facility Cost Studies*. It was necessary to carry out facility cost studies to disaggregate budgetary expenditures at the facility level in the public sector between inpatient and outpatient care. In Sri Lanka, this information was provided by the IPS Public Facility Survey 1997, which collected data on a national sample of more than 210 government medical facilities (Somanathan and others 2000). In Bangladesh, the Health Economics Unit/Data International (HEU/DI) Public Facility Survey 1997 was a very similar survey based on the Sri Lankan design, which collected almost identical information from a national sample of 121 government medical facilities (Rannan-Eliya and Somanathan 1999).

*Household Surveys*. Two types of survey were used. General-purpose consumption surveys were used to estimate tax incidence and, in the case of Nepal and Sri Lanka, the distribution of health expenditures, utilization rates, and health status. Special household health surveys were also used in Bangladesh to obtain data on the utilization of health care facilities and household health expenditures.

A description of the household surveys used in each country follows in table 4.3. In each case, the following types of information were extracted for analysis in the study:

- Total incomes and expenditures of households by income level
- Total and disaggregated expenditures by households on medical care
- Perceived illnesses or chronic conditions
- Type of care sought, type of provider, and frequency of visits

**Table 4.3** Overview of Survey Data Used in the Study

| SURVEY | YEAR | SAMPLE (HOUSEHOLDS) | RECALL PERIOD | TYPE | INFORMATION OBTAINED |
|---|---|---|---|---|---|
| *Bangladesh* | | | | | |
| MHSS | 1997 | 11,126 | 14 days and 90 days for sickness and expenditure | Single-topic health survey | Sickness and health care utilization and expenditure |
| DHS | 1996/97 | 8,682 | 14 days for sickness | DHS | IMR by income level |
| HES | 1995/96 | 7,420 | 1 month for nonfood expenditure | National consumption survey | Household expenditures |
| *Nepal* | | | | | |
| Nepal Living Standards Survey | 1995/96 | 3,338 | 1 month for sickness and expenditure | National consumption survey | Sickness, health care utilization, and household expenditures |
| DHS | 1996 | 8,082 | 14 days for sickness | DHS | IMR by income level |
| *Sri Lanka* | | | | | |
| CSD HIES | 1995/96 | 21,220 | Various (1–4 weeks) | National consumption survey | Used to estimate tax incidence |
| CB CFS | 1996/97 | 8,880 | 14 days in health module | National consumption survey with health module | Sickness and health care utilization |
| DHS | 1993 | 9,230 | 14 days for sickness | DHS | Data on IMR inequalities |

*Note:* CB CFS = Central Bank of Sri Lanka Consumer Finance Survey. CSD = Census and Statistics Department. DHS = Demographic and health surveys. HES = Household expenditure survey. HIES = Household income and expenditure survey. IMR = infant mortality rate. MHSS = Morbidity and health status survey.

### *Method of Analysis*

*Estimating the Distribution of Need.* The only reliable mortality data by socioeconomic status that we have is for child and infant mortality rates as measured by DHSs in the three countries. Unfortu-

nately, we do not have estimates of mortality differences by income level from the Sri Lankan DHS data. Consequently, the recent analyses of DHS data by Gwatkin and others (2000) at the World Bank to estimate inequalities in health status by socioeconomic status are available only for Bangladesh and Nepal.

*Estimating the Distribution of Health Care Expenditures*. We examined inequalities in the utilization of services simply by looking at the distribution of use of different types of services across the beneficiary groups. We assessed the distribution of health care resources, in particular that of public subsidies, by distributing national health expenditures as estimated in the NHAs across the beneficiary groups.

Our analysis estimates the distribution of public subsidies taking regional differences into account. Sri Lanka's NHA system disaggregates all expenditures by province. The distribution of expenditures by provincial councils is straightforward. For support services provided by the central ministry, we imputed expenditures using secondary data. Bangladesh's NHA as originally developed does not provide regional breakdowns of spending. However, we used internal administrative data to allocate all program expenditures to specific divisions for this study.

Each program expenditure total was allocated to the relevant type of facility. Data from the facility costing studies were then used to allocate these facility-level expenditures into inpatient and outpatient services. We then used survey data to distribute expenditures of individual public programs or activities across population subgroups, making use of information on relative levels of utilization.

We used utilization data from the household surveys to allocate total amounts for each program at the regional level among individuals in the household data set according to their reported levels of utilization of the specific services. This assumes that each unit of service utilized within a region involved the same resource intensity. The units of service used for the analysis were outpatient visits and inpatient admissions.

No regional-level analysis was done for distributing expenditures across demographic and rural-urban sector groups. Public expenditures on each program were distributed across each beneficiary group using the utilization levels of each of the groups at a national level as reported in the relevant household survey.

The totals for private expenditures were derived from the NHAs and distributed according to information available from the household surveys.

## Results

### *Distribution of Health Status and Need*

As discussed above, we were forced to use data on inequalities in mortality risk as proxied by child mortality rates to infer underlying differences in health status and in the need for health services. Tables 4.4 and 4.5 show the extent of inequalities by socioeco-

**Table 4.4** Infant and Under-Five Mortality Rates by Income Quintile of Equivalent Consumption for Bangladesh, Nepal, and Sri Lanka

| INCOME QUINTILES | BANGLADESH (1997) | NEPAL (1996) | SRI LANKA (1993) |
|---|---|---|---|
| *Infant mortality rate* | | | |
| 1 | 96 | 96 | |
| 2 | 99 | 107 | |
| 3 | 97 | 104 | |
| 4 | 89 | 85 | |
| 5 | 57 | 64 | |
| Overall | 90 | 93 | 25 |
| *Under-five mortality rate* | | | |
| 1 | 141 | 156 | |
| 2 | 147 | 164 | |
| 3 | 135 | 155 | |
| 4 | 122 | 118 | |
| 5 | 76 | 83 | |
| Overall | 128 | 139 | 7 |

*Note:* Estimates by income quintile are not available for Sri Lanka.
*Sources:* Gwatkin and others 2000. Sri Lanka DHS 1993.

**Table 4.5** Infant and Under-Five Mortality Rates by Education of Mother and Place of Residence for Bangladesh, Nepal, and Sri Lanka

| INDICATOR | BANGLADESH | NEPAL | SRI LANKA |
|---|---|---|---|
| *Infant mortality rate* | | | |
| Education of mother | | | |
| None | 98 | 97 | 45 |
| Primary | 82 | 80 | 33 |
| Secondary or higher | 65 | 53 | 22 |
| Urban-rural residence | | | |
| Urban | 73 | 61 | 21 |
| Rural | 91 | 95 | 24 |
| Estate | | | (61) |
| *Under-five mortality rate* | | | |
| Education of mother | | | |
| None | 145 | 149 | 62 |
| Primary | 112 | 99 | 42 |
| Secondary or higher | 78 | 61 | 27 |
| Urban-rural residence | | | |
| Urban | 96 | 82 | 26 |
| Rural | 131 | 143 | 30 |
| Estate | | | (84) |

*Note:* Estate mortality rates are estimated from very small samples and thus are not reliable.
*Sources:* Bangladesh DHS 1997; Nepal DHS 1996; Sri Lanka DHS 1993.

nomic status in infant and under-five mortality rates in the three countries.

As the tables show, overall health status is worse in Bangladesh and Nepal than in Sri Lanka. Within each country, there are clear socioeconomic differences in mortality. In Bangladesh and Nepal, infant and child mortality rates are generally 40 percent less in the richest quintile than in the poorest quintile. We do not have the equivalent data for Sri Lanka, but the general picture is that mortality rates become lower with increasing socioeconomic status, both in terms of income and educational level. Children whose mothers have secondary education or higher in all three countries experience only half the mortality risks of children whose mothers have no education. However, note that children in Sri Lanka whose mothers have no education still experience lower mortality risks

than mothers with secondary education or higher in Bangladesh and Nepal, and than mothers in the richest quintile in both of the other countries. Because the incomes of households in the highest quintiles in both Bangladesh and Nepal are probably higher than the incomes of Sri Lanka households whose mothers have no education, it is likely that children of poor women in Sri Lanka have other environmental advantages. In general, these data confirm that health status is worst in the lower socioeconomic groups and among the most disadvantaged, and that, correspondingly, the need for health services is greatest among these groups.

As discussed above, we decided not to use reported sickness as a direct measure of actual need for health care as we expected self-report health status to be a poor proxy for actual health status. This assumption was confirmed in the household data for our three countries.

In all three countries, contrary to the evidence that mortality rates are worse for those at lower socioeconomic levels, reported sickness rates are no higher in the poorer income deciles than in the richest deciles. In Bangladesh, reported sickness rates are relatively equal across the income range, while they increase modestly with increasing income in both Nepal and Sri Lanka. To varying extents, higher socioeconomic status in all three countries is associated with a higher propensity to report sickness and presumably to be aware of having an actual illness. This runs completely counter to the objective evidence of worse health status at lower socioeconomic levels.

The second notable feature of these data is that reported sickness across the three countries varies in the opposite direction to mortality rates. Sri Lankans with mortality rates close to those of European nations are twice as likely to report being sick as Bangladeshis at all income levels. Taking into account the fact that the Nepal survey used a 1-month recall period in contrast to the 14-day recall periods used in the Bangladesh and Sri Lanka surveys, the likelihood of a respondent reporting an episode of illness in any given time period in Nepal is probably lower than in Bangladesh.

The differences in reported sickness by age are not the same in Bangladesh and Sri Lanka. While the reported sickness rates in Sri Lanka are lowest among older children and young adults, as one would expect, reported morbidity rates are generally the same across all adult age groups in Bangladesh.

There may be a common link between these patterns. The health transition is generally associated with increasing awareness of and sensitivity to illness. Sri Lanka, with its low mortality rates, is the most advanced of the three countries in its health transition and thus has the most illness-sensitive population. Sri Lankans report more sickness than Bangladeshis or Nepalese. At the same time, the health transition is an ongoing phenomenon. Younger Bangladeshis may simply be more sickness-sensitive than older Bangladeshis because they have benefited more from recent cultural shifts favoring increased consciousness of illness, which may be countering the likely higher underlying morbidity in the older adult age groups. Similarly, in Sri Lanka, the existence of higher sickness rates at higher income levels is an indicator that significant socioeconomic differences remain in the sensitivity to illness.

### *Distribution of Health Services and Resources*

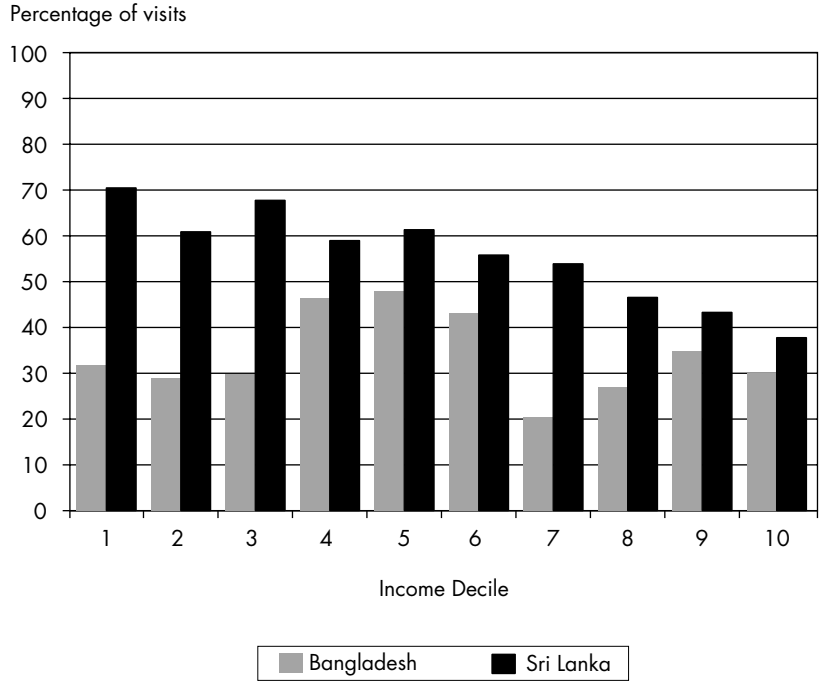
*Inequalities in Utilization of Services*. In Bangladesh and Sri Lanka, there are no substantial differences between the poor and the rich in terms of their likelihood of seeking outside treatment if they have reported being sick. In Sri Lanka, however, because richer individuals are more likely to report being sick, the overall utilization of outside treatment increases with income.

There are significant differences in the pattern of use when treatment outside the home is sought. In Sri Lanka, 87–92 percent of all care is sought from modern qualified providers, with no difference between income levels, compared with only 15–42 percent in Bangladesh. In Bangladesh, most people from all income deciles seek care from nonmodern or nonqualified providers, and there is a significant socioeconomic difference, with higher-income individuals being more likely to use modern qualified providers and much

more likely to use inpatient services. Although making direct comparisons of the levels of utilization is hazardous given different levels of recall bias in each survey, the data also show the much lower rate of utilization of inpatient services by Bangladeshis at all income levels. This is consistent with administrative data showing that admission rates per capita in Sri Lanka are approximately 10 times higher than in Bangladesh.

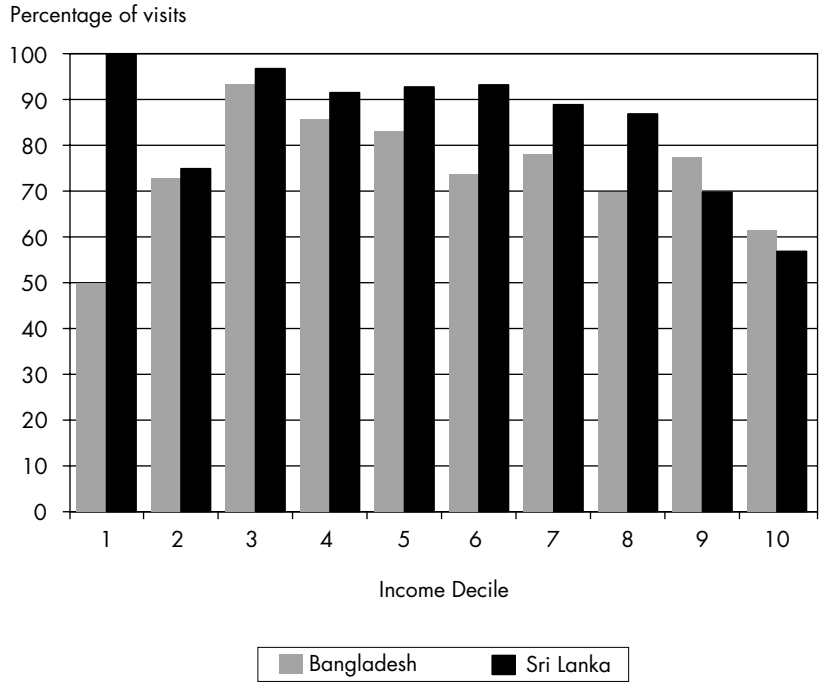
Figures 4.1 and 4.2 illustrate the patterns in use of public sector providers by sick people who resort to use of modern qualified providers. Sri Lankans in all income deciles are more likely to use public providers than are those in the corresponding deciles in Bangladesh, whether for outpatient or inpatient services. In Sri Lanka, poor respondents are more likely than better-off people to

**Figure 4.1** Use of Public Outpatient Providers in Bangladesh and Sri Lanka




*Sources:* Bangladesh Bureau of Statistics MHSS 1997; CB CFS 1996/97.

**Figure 4.2** Use of Public Inpatient Providers in Bangladesh and Sri Lanka




*Sources:* Bangladesh Bureau of Statistics MHSS 1997; CB CFS 1996/97.

rely on public provision. This distinction is not evident in Bangladesh. In both countries, public providers are more likely to be used for inpatient care than for outpatient care, while in Sri Lanka, people in the poorest deciles rely almost wholly on public providers for inpatient services.

*Inequalities in the Distribution of Benefits.* Table 4.6 shows the estimated incidence of government subsidies by decile. We estimated them by using the distributional information in the household surveys to allocate the distribution of subsidies. In distributing subsidies for outpatient services, we assumed that the average subsidy per visit was identical for all public sector visits in a given province or division. Similarly, we distributed subsidies for inpatient services

**Table 4.6** Distribution of the Benefits of Government Expenditures on Personal Medical Services in Bangladesh and Sri Lanka (percent)

| | OUTPATIENT SERVICES | | INPATIENT SERVICES | |
|---|---|---|---|---|
| INCOME DECILES | BANGLADESH | SRI LANKA | BANGLADESH | SRI LANKA |
| 1 | 9.1 | 10.1 | 5.1 | 9.2 |
| 2 | 9.9 | 9.5 | 6.4 | 10.4 |
| 3 | 9.8 | 10.4 | 9.6 | 11.6 |
| 4 | 10.7 | 10.9 | 8.6 | 6.9 |
| 5 | 10.3 | 11.7 | 7.7 | 9.1 |
| 6 | 10.3 | 9.7 | 11.2 | 10.4 |
| 7 | 10.2 | 10.7 | 10.2 | 11.4 |
| 8 | 10.3 | 8.9 | 9.3 | 12.0 |
| 9 | 9.9 | 9.3 | 15.7 | 9.9 |
| 10 | 9.5 | 8.9 | 16.3 | 9.0 |
| Overall amount | Tk. 5.2 billion | Rs. 2.7 billion | Tk. 8.4 billion | Rs. 5.9 billion |
| Concentration index | –0.00022 | –0.0732 | 0.1633 | –0.0506 |

*Note:* Tk. = Takas. Rs. = Rupees.
*Sources:* Bangladesh Bureau of Statistics MHSS 1997, CB CFS 1996/97.

by decile on the assumption that the average subsidy per admission was identical within a given province or division.

As discussed above, Sri Lankans are more likely than Bangladeshis to report sickness, to use modern providers, and, when doing so, to use public providers. In addition, there is a clear socioeconomic distinction in terms of who chooses to use public providers, with the poor making more use of them than the rich do, especially in the case of outpatient services. This trend in using public health care services runs opposite to the trend in reported sickness in Sri Lanka. Consequently, the distribution of the benefits of government spending on health is relatively equal across all income deciles in Sri Lanka for both inpatient and outpatient services. However, the incidence in the case of outpatient subsidies is slightly more pro-poor than for inpatient services, and is reflected in a slightly more negative concentration index for outpatient services than for inpatient services.[2] This probably reflects the fact that middle-income and rich people in Sri Lanka have fewer options to switch to private provision in the case of inpatient services than in the case of outpatient services.

In Bangladesh, the lack of any such socioeconomic distinctions in the choice between public and private providers means that people in all income deciles benefit equally from public outpatient service subsidies, but that the rich benefit much more than those in lower income deciles in the case of inpatient services. The latter pattern can be related to the extensive use of all modern providers and of all inpatient services by the rich. In contrast to Sri Lanka, the rich in Bangladesh do not tend to use private inpatient services, so their high overall utilization rate means that the rich benefit more from government spending than people in lower income deciles, which results in positive values for both of the concentration indexes.

Table 4.7 gives the overall incidence of all government subsidies in both countries and the related concentration indexes. The concentration index for all services is 0.0544 in Bangladesh, which indicates that the overall distribution of benefits favors the rich.

**Table 4.7** Distribution of the Benefits of Government Expenditures on Collective Services and on All Services in Bangladesh and Sri Lanka (percent)

| | COLLECTIVE SERVICES | | ALL SERVICES | |
|---|---|---|---|---|
| INCOME DECILES | BANGLADESH | SRI LANKA | BANGLADESH | SRI LANKA |
| 1 | 10.0 | 10.4 | 7.4 | 9.8 |
| 2 | 10.0 | 10.4 | 8.3 | 10.2 |
| 3 | 10.0 | 11.4 | 9.7 | 11.3 |
| 4 | 10.0 | 9.8 | 9.6 | 8.7 |
| 5 | 10.0 | 10.2 | 9.0 | 10.0 |
| 6 | 10.0 | 9.7 | 10.6 | 10.0 |
| 7 | 10.0 | 10.4 | 10.2 | 10.9 |
| 8 | 10.0 | 9.7 | 9.7 | 10.6 |
| 9 | 10.0 | 9.1 | 12.6 | 9.5 |
| 10 | 10.0 | 8.8 | 12.8 | 8.9 |
| Overall amount | Tk. 4.0 billion | Rs. 2.5 billion | Tk. 17.6 billion | Rs. 11.1 billion |
| Concentration index | 0.0000 | –0.0771 | 0.0544 | –0.0670 |

*Note:* Tk. = takas. Rs. = rupees. The distribution of collective services is estimated at the national level for Bangladesh and at the provincial level for Sri Lanka.
*Sources:* Bangladesh Bureau of Statistics MHSS 1997, CB CFS 1996/97.

For Sri Lanka, the index is –0.0670, indicating a pro-poor distribution of all patient subsidies.

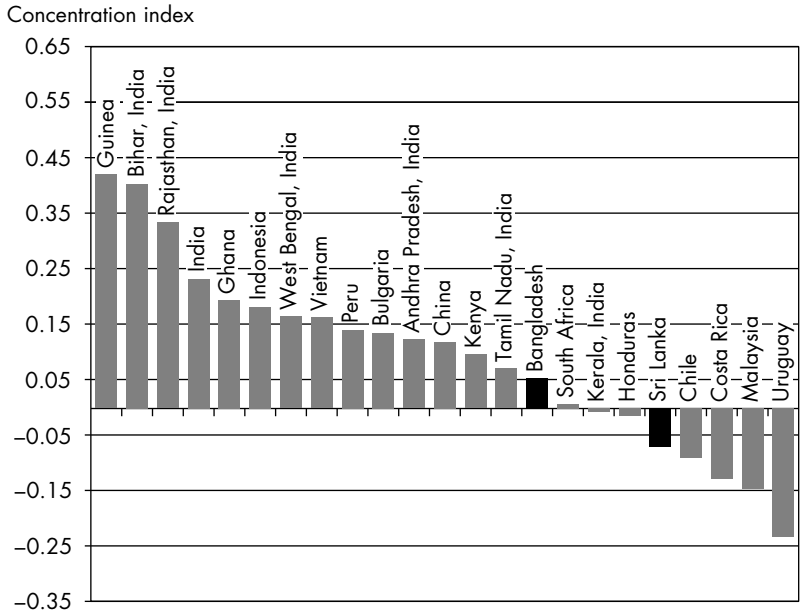
The available data did not enable us to analyze the distribution of subsidies by income level in Nepal. However, it was possible to estimate the relative incidence of government health spending in all three countries by region. These results are given in table 4.8. In all three countries, government health expenditures are highest in the region containing the capital city. However, a notable feature is the extent of variation between regions. In Bangladesh and Sri Lanka, funding varies from –20 percent to +40 percent of the national average of all regions. However, in Nepal the funding levels in the peripheral regions are only one-tenth the level of funding in the capital region. The cause of this great disparity appears to be the concentration of national and teaching facilities in the capital city of Nepal, which is not balanced by any other investment in other areas.

Overall, the distribution of health subsidies in Sri Lanka is pro-poor, whereas in Bangladesh and Nepal it is pro-rich. Figure 4.3 contrasts the estimated concentration indexes for Bangladesh and Sri Lanka with those of some other countries and a selection of states within India. The majority of developing countries for which estimates are available are characterized by pro-rich distributions of government health subsidies. Bangladesh is typical in this respect, and in fact its pro-rich bias is less marked than in many other developing economies, in India as a whole, and in its neigh-

**Table 4.8** Variations in Government Expenditures on Health by Region

| BANGLADESH DIVISION (TK. PER CAPITA, 1996/97) | | NEPAL DEVELOPMENT REGION (RS. PER CAPITA, 1998/99) | | SRI LANKA PROVINCE (RS. PER CAPITA, 1997) | |
|---|---|---|---|---|---|
| Khulna | 113 | Western | 7 | Northwestern | 432 |
| Sylhet | 117 | Midwestern | 10 | Uva | 447 |
| Rajshahi | 117 | Far Western | 10 | Sabaragamuwa | 474 |
| Chittagong | 120 | Eastern | 57 | North-Central | 547 |
| Barisal | 126 | Central | 198 | Southern | 547 |
| Dhaka | 196 | | | Northern-Eastern | 550 |
| | | | | Central | 553 |
| | | | | Western | 804 |

**Figure 4.3** Benefit Incidence of Government Health Expenditures—International Comparisons




*Source:* Based on chart provided by Anil Gumber using data compiled by David Peters of the World Bank. The Bangladesh and Sri Lanka data are from this study.

boring Indian state of West Bengal. Sri Lanka, on the other hand, appears to be one of a small group of countries, such as Costa Rica, Honduras, Malaysia, and Chile, and the state of Kerala in India, with a pro-poor incidence of government health subsidies.

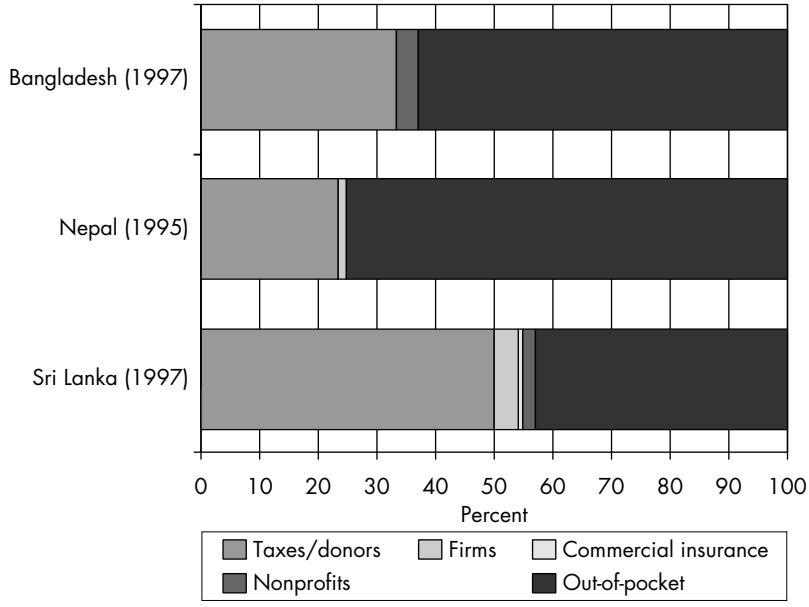
Most of the latter group of countries are usually identified as superior health performers, with health indexes that are better than expected given their national income levels. This is almost certainly not coincidental. All the latter group of countries in the chart have mixed public-private provision and financing of health care. With the exception of Chile, none explicitly targets its government health expenditures to the poor, emphasizing instead universal access to government-funded health services. Targeting in Malaysia, Costa Rica, and Kerala appears to similar to that in Sri Lanka—the rich are encouraged to use private services, thus reserving public services

for poorer individuals. The resulting distribution of government subsidies remains pro-poor because the poor are as likely to use modern health services as the rich, as in Sri Lanka. This is not the case in Bangladesh, where the poor are less likely than the rich to think of themselves as sick and, when seeking medical care, are less likely to seek out modern qualified medical providers.

### *Distribution of Payments for the Financing of Health Services*

Figure 4.4 shows the sources of funding used in each health system. All three countries rely primarily on government financing and out-of-pocket spending. There is no significant social insurance financing in any of the three countries, and private insurance is all but negligible except in Sri Lanka. Even in Sri Lanka, private insurance accounts for less than 2 percent of total health care

**Figure 4.4** Sources of Funding in the National Health Systems of Bangladesh, Nepal, and Sri Lanka




*Sources:* Data International 1998; Hotchkiss and others 1998; IPS 2001.

financing. Sri Lanka relies mostly on government financing, with household spending accounting for less than half of total health care financing. In Bangladesh and Nepal, household spending finances most health care expenditures.

In both Bangladesh and Sri Lanka, private insurance typically reimburses patients' out-of-pocket expenditures, so the distribution of household payments in the survey data includes such payments. Consequently, to examine the overall distribution of payments for health care, it is sufficient to analyze the distribution of payments by households in the form of tax payments and out-of-pocket expenditures for health.

The distribution of payments in the form of households' out-of-pocket spending on health care was relatively easy to derive from the available household survey data. The incidence of tax payments across households was more difficult to estimate, but we attempted it partially for both Bangladesh and Sri Lanka. The difficulty arose because of the large share of overall taxes in each country that are not direct taxes such as income or retail consumption taxes. The Sri Lankan analysis is based on an analysis of data from the Census and Statistics Department Household Income and Expenditure Survey (CSD HIES) 1995/96, while the Bangladeshi estimates are derived from results published in Ensor, Hossain, and Miller (2001). Their results are based on analysis of household survey data for 1984/85, but we assumed that there has been little change in the indexes since then, because the tax structure has remained substantially unchanged.

*Distribution of Payments in Sri Lanka*. Table 4.9 gives the estimated distribution of household payments for health care, in the form of both out-of-pocket payments and taxes, for Bangladesh and Sri Lanka. The distributions of tax payments and out-of-pocket spending are relatively similar in Sri Lanka. Overall, both mechanisms are, in fact, progressive in Sri Lanka, with richer households contributing more than their share of total household consumption. The top quintile makes more than 50 percent of overall payments to the health care system, while the bottom quintile makes less than 5 percent of overall payments.

**Table 4.9** Distribution of Payments for Health Care for Each Source in Bangladesh and Sri Lanka by Income Decile (percent)

| | BANGLADESH | | SRI LANKA | |
|---|---|---|---|---|
| INCOME DECILES | TAXES | OUT-OF-POCKET | TAXES | OUT-OF-POCKET |
| 1 | 4 | 5 | 2 | 2 |
| 2 | 6 | 6 | 3 | 2 |
| 3 | 6 | 6 | 4 | 4 |
| 4 | 7 | 7 | 5 | 5 |
| 5 | 8 | 8 | 6 | 6 |
| 6 | 9 | 9 | 7 | 7 |
| 7 | 10 | 10 | 9 | 9 |
| 8 | 12 | 11 | 11 | 11 |
| 9 | 14 | 15 | 15 | 17 |
| 10 | 25 | 23 | 36 | 38 |
| Overall amount | Tk. 18.7 billion | Tk. 34.4 billion | Rs. 14.05 billion | Rs. 13.9 billion |
| Share of national funding (%) | 34 | 64 | 50 | 48 |

*Note:* Tk. = takas. Rs. = rupees. Taxes as a share of national funding refers to both taxes and donor contributions. Four percent of national health expenditures are accounted for by nonprofits and firms in Sri Lanka that are not included above.
*Sources:* Data International 1998; IPS 2001.

Table 4.10 gives the estimated Kakwani and Suits indexes for each mechanism. A positive Kakwani index indicates a progressive payment with redistribution, while a negative index indicates the opposite. Only tobacco taxes are estimated to have negative Kakwani and Suits indexes (Kakwani 1977). This finding points to a potential conflict between the goal of progressive financing of health care and the goal of improving health status through discouraging tobacco use. Increasing tobacco taxes is desirable from the perspective of reducing tobacco consumption, but these taxes are regressive in practice. This fact suggests that a policy of increasing taxes on tobacco should be accompanied by more concerted efforts to change smoking behavior in the poorest households if it is not to have regressive tax implications.

An important feature of the two main financing mechanisms in Sri Lanka is that out-of-pocket payments are more progressive

**Table 4.10** Kakwani and Suits Indexes for Different Payment Mechanisms for Health Care in Sri Lanka

| PAYMENT MECHANISM | KAKWANI INDEX | SUITS INDEX |
|---|---|---|
| Income tax | 0.53 | 0.77 |
| Capital taxes | 0.46 | 0.67 |
| Sales taxes | 0.05 | 0.07 |
| Petrol tax | 0.50 | 0.74 |
| Liquor tax | 0.15 | 0.21 |
| Tobacco tax | –0.03 | –0.05 |
| All taxes | 0.091 | 0.134 |
| Out-of-pocket spending | 0.548 | 0.803 |
| All payments | 0.099 | 0.145 |

*Note:* The Kakwani index for overall payments was estimated by assuming that the incidence of remaining taxes was similar to that of those for which estimates had already been made.
*Source:* Sri Lanka HIES 1995/96.

than tax payments. However, the data on utilization patterns suggest that this is not due to the inherent progressivity of out-of-pocket financing. Rather, it is the outcome of a general reliance by the poor on subsidized, mostly free health care provision by the government and the switch to unsubsidized private provision by people in the higher-income deciles. Public and private provision combine in Sri Lanka to produce a system in which voluntary private payments for health care are largely progressive. The overall Kakwani index for the health care system is 0.099, which indicates progressivity in overall payments for health care.

*Distribution of Payments in Bangladesh*. As shown in table 4.9, in Bangladesh the general distribution of tax payments is quite similar to that of out-of-pocket payments for health care. This finding reflects the general fiscal reliance on indirect and consumption taxes, as in Sri Lanka. However, the distribution is not as skewed toward payments by the rich as in Sri Lanka. For example, those in the top quintile make less than 39 percent of both tax payments and out-of-pocket payments for health care, in contrast to the more than 51 percent paid by those in the top quintile in Sri Lanka.

Unlike in Sri Lanka, out-of-pocket spending is more regressive than tax funding. This reflects the fact that the rich do not necessarily use private providers, as is the case in Sri Lanka. Poor people in Bangladesh are just as likely to use private providers as rich people and, as a consequence, pay a higher proportion of overall private financing than in Sri Lanka. The overall Kakwani index for Bangladesh is –0.072, indicating that the health care financing system as a whole is regressive.

### *Redistributive Impact of Government Financing of Health Services*

Tax financing is progressive in Sri Lanka but seems to be slightly regressive in Bangladesh. The same can be said about government provision: government subsidies in Sri Lanka benefit the poor as much as the rich, whereas in Bangladesh they benefit the rich slightly more than the poor. To the extent that health status is worse among the poor in both countries, health spending is clearly not equitable in relation to need in Bangladesh and almost certainly not so in Sri Lanka (see tables 4.11 and 4.12).

**Table 4.11** Redistributive Impact of Government Taxation and Financing of Health Care Services in Sri Lanka, 1995/96 (by income decile)

| | SHARE OF TAXES AND BENEFITS (%) | | NET BENEFITS | |
|---|---|---|---|---|
| INCOME DECILES | TAXES | BENEFITS | RS. MILLIONS | AS PERCENTAGE OF HOUSEHOLD EXPENDITURE |
| 1 | 2.5 | 9.8 | 1,026 | 4.88 |
| 2 | 3.5 | 10 | 909 | 3.07 |
| 3 | 4.5 | 10.9 | 908 | 2.68 |
| 4 | 5.2 | 8.8 | 512 | 1.32 |
| 5 | 6.1 | 9.9 | 546 | 1.24 |
| 6 | 7.3 | 9.7 | 329 | 0.64 |
| 7 | 8.7 | 10.6 | 271 | 0.44 |
| 8 | 11.2 | 10.7 | –77 | –0.10 |
| 9 | 15.0 | 10.1 | –699 | –0.73 |
| 10 | 36.0 | 9.5 | –3,725 | –1.96 |
| Overall | 100 | 100 | 0.0 | 0.0 |

*Sources:* Estimated from CSD HIES 1995/96 (tax payments); CB CFS 1996/97 (subsidies).

**Table 4.12** Redistributive Impact of Government Taxation and Financing of Health Care Services in Bangladesh, 1996/97 (by income decile)

| | SHARE OF TAXES AND BENEFITS (%) | | NET BENEFITS | |
|---|---|---|---|---|
| INCOME DECILES | TAXES | BENEFITS | TK. MILLIONS | AS PERCENTAGE OF HOUSEHOLD EXPENDITURE |
| 1 | 4.5 | 7.4 | 515 | 1.25 |
| 2 | 5.6 | 8.3 | 471 | 0.77 |
| 3 | 6.2 | 9.7 | 626 | 0.84 |
| 4 | 6.7 | 9.6 | 502 | 0.57 |
| 5 | 7.7 | 9.0 | 220 | 0.21 |
| 6 | 8.5 | 10.6 | 373 | 0.31 |
| 7 | 10.0 | 10.2 | 34 | 0.03 |
| 8 | 12.1 | 9.7 | –424 | –0.26 |
| 9 | 13.9 | 12.6 | –227 | –0.11 |
| 10 | 24.7 | 12.8 | –2,090 | –0.49 |
| Overall | 100 | 100 | 0.0 | 0.0 |

*Source:* Estimated from CSD HIES 1995/96 (tax payments); CB CFS 1996/97 (subsidies).

Nevertheless, government financing and provision of health care in Sri Lanka has a net redistributive impact. Those in the poorest decile pay less than 3 percent of total taxes but capture almost 10 percent of total government spending on health care services. In contrast, those in the richest decile pay 36 percent of total taxes but receive less than 10 percent of total government health subsidies. The net gain for the poorest households from government financing and provision is significant, equivalent to 5 percent of their gross household consumption before receipt of subsidies.

## Conclusions

This study has attempted to assess equity in the distribution of financing, health care expenditures, and health status in three countries within an NHA framework. Because of data limitations, we were able to carry out the full analysis for only two: Bangladesh and Sri Lanka. Although a lack of resources prevented us from carrying out a full analysis for Nepal, we did determine that sufficient data exist in that country both to construct NHAs in the future and

to conduct the empirical analyses that we carried out for the other two countries.

We used the existing NHAs for Bangladesh and Sri Lanka to estimate the overall distribution of health care expenditures. Methods developed elsewhere for analyzing equity in the financing and delivery of health care services can be easily adapted to an NHA framework. NHAs can, in general and with few new data requirements, be extended to analyze the distributional aspects of health system financing. As this can provide a more rigorous comparison of private and public expenditures than other methods, it also allows for a more reliable assessment of the overall equity of the health system and more consistent comparisons of different financing and provision mechanisms.

The study confirmed our original expectation that household survey data on self-reported health status do not provide a reliable measure of underlying need. In all three countries, the poor suffer from higher mortality rates yet are less likely than the nonpoor to report suffering from any sickness in surveys. Controlling for self-reported ill health is thus not, in itself, sufficient to determine whether the distribution of health expenditures is meeting the underlying need for services. Therefore, we did not attempt to standardize health care expenditures directly according to any measure of underlying health status. Nevertheless, the weak but reasonable assumption that the poor are in worse health than the nonpoor is sufficient to support the conclusion that overall health care resources are not equitably distributed in relation to need in any of the countries we studied.

Socioeconomic differences in perceived sickness appear to be a major contributor to differences in the amount of health care households use. The poor in all three countries appear to be less likely than the nonpoor to report episodes of illness, although less so in Sri Lanka. Not acknowledging sickness means that the poor use less medical care than they may actually need. In Sri Lanka, there is no difference between the poor and the nonpoor in their readiness to seek care from qualified modern medical providers when reporting themselves sick, but such a difference does exist in

Bangladesh. The poor in Bangladesh are less likely than the rich to use a modern medical provider when they report being sick, and, when they do so, they are no more likely to choose public providers than the rich. In Sri Lanka, although rates of utilization of all modern providers (both public and private) are more or less equal among people of all income levels, the poor are more likely than the nonpoor to choose public providers. Consequently, government subsidies favor the poor in Sri Lanka but not in Bangladesh. Using concentration indexes as a numerical measure to compare the pro-poor incidence of government health spending across countries reveals that that the pro-rich incidence of subsidies in Bangladesh is not unusual; in fact, it is less pro-rich than in many Indian states. However, some countries, including Sri Lanka, and some Indian states, such as Kerala, do manage to achieve a pro-poor distribution of government subsidies, indicating that there is room for improvement in Bangladesh.

Examining the differences in government expenditures by region revealed some inequalities. In all three countries, subsidy expenditures are highest in the region that contains the capital city; this is largely due to a higher concentration of teaching and national specialist hospitals in the capital cities. However, it is notable that the disparity in government expenditures between the capital region and other regions is much greater in Nepal than the other two countries. In Bangladesh and Sri Lanka, the peripheral regions all receive at least 80 percent of the national average, but in Nepal, some districts receive only one-tenth of the per capita subsidies received by other districts. The large geographical disparities in subsidy levels in Nepal are probably associated with a much greater pro-rich bias in overall government spending than in Bangladesh.

In the three countries, the health care systems are all essentially financed through just two mechanisms: (a) general revenue taxation, which is used to fund mostly free, government health care services, and (b) out-of-pocket payments by households, which are mostly used to purchase medical care from the private sector. The extent of state financing and provision varies among the countries, and is highest in Sri Lanka, lowest in Nepal.

In Bangladesh and Sri Lanka, the rich make greater payments through both mechanisms than the poor. In Sri Lanka, payments by the rich are greater for both mechanisms than their share of household consumption, making both mechanisms progressive in their impact. Overall, out-of-pocket payments are somewhat more progressive in Sri Lanka than taxation. However, this is a consequence of the availability of free government services funded through taxation and used predominantly by poorer groups, with richer individuals voluntarily choosing to use private providers. Most taxes in Sri Lanka appear to be progressive, but tobacco taxes are regressive. The poor pay more in tobacco taxes than their share of overall household consumption. This points to potential conflicts between different health policy goals.

In Bangladesh, the distribution of payments through both taxation and household out-of-pocket spending is similar to the distribution in Sri Lanka, but the rich make smaller payments in relation to their ability to pay or their overall consumption than the poor. Consequently, both tax payments and household out-of-pocket financing are regressive financing mechanisms in Bangladesh. In contrast to Sri Lanka, out-of-pocket payments are more regressive than tax payments. This reflects the lack of any sorting between public and private provision by income level.

Although taxation is generally regressive in Bangladesh, this does not imply that the overall fiscal impact of government health spending on the poor is negative. Since government health subsidies are less unequally distributed than tax payments, the net impact of tax financing of health care is to redistribute income in favor of the poor. In Bangladesh, those in the poorest quintile receive a net fiscal gain equivalent to 1 percent of their presubsidy household consumption through the combined impact of taxes and government health subsidies. In Sri Lanka, where the overall distribution of government health subsidies is actually pro-poor and taxation is progressive, the net fiscal gain for those in the poorest quintiles is much greater. The poorest quintile receives a gain of 45 percent of gross household consumption. At least in the Sri Lanka context, government financing of health care does con-

tribute significantly to overall poverty reduction and income redistribution.

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2. A value of zero for the concentration index denotes an equal distribution of benefits across all people. A negative index denotes a distribution that favors the poor, and a positive index denotes a distribution that favors the rich.

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CHAPTER 5

# Geographic Resource Allocation in Bangladesh

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## Abstract

One of the core objectives of the Health and Population Sector Program of Bangladesh is to improve the health status of the most vulnerable groups—particularly the poor, women, and children. The current system of geographic resource allocation may be an impediment to attaining this goal. Resources are currently allocated to localities largely according to the size of inpatient facilities and number of staff in those areas. This practice leads to wide differences in per capita allocations across districts for both the revenue and development budgets. Analysis suggests that the allocations have no significant positive relationship to health needs and may even be inversely related to the general deprivation of an area. Low-, middle-, and high-income countries around the world with centrally managed public health care systems attempt to adjust simple per capita allocations by the age-sex structure of the local population and aggregate measures of health, such as infant and standardized mortality rates.

Three basic principles emerge from the literature on these international efforts:

- Measures of need are of necessity selective and approximate.
- The allocation method and variables representing need should be transparent.
- Allocation targets may be defined by an objective principle, but the speed at which the targets are approached is a political choice.

Existing statistics could be used in introducing a system of needs-based resource allocation in Bangladesh. Simple preliminary simulations suggest that resources would be moved to areas where mortality is highest. These simulations are mainly illustrative; a final formula could be developed only through a consultative process that determines which statistical proxies are most suitable for measuring the health needs of the vulnerable groups for which the Health and Population Sector Program was ultimately designed.

## Introduction

The Government of Bangladesh, through its Health and Population Sector Program (HPSP), is aiming to improve the health status and health care access of the most vulnerable groups in society, particularly women, children, and the poor (MOHFW 1998b). To achieve its goal, the government has created an Essential Services Package consisting of services known to be most needed by the vulnerable groups, and it has been increasing the resources devoted to these services and the facilities through which they are delivered.

At the end of the first two years of its operation, the HPSP can claim some success, having increased the proportion of public spending going into essential services to 60–70 percent in fiscal 2000 (MOHFW 2000). Yet surveys continue to show that the poor

still find it difficult to obtain high-quality essential services (CIET-Canada 2000).

Many factors affect the extent to which large national allocations for essential health services reach vulnerable groups. One factor, the subject of this paper, is how well the allocations are targeted to those most in need.[1] If the spending is not well targeted—that is, if allocations to different areas of the country are not in relation to the need and the size of vulnerable groups—then the failure of such spending to improve the condition of vulnerable groups will not be surprising.

Indeed, government health spending in Bangladesh is allocated on the basis of the existing capacity for service delivery and norms, rather than on measures of health status and vulnerability. The allocation system is thus not well suited to efforts to improve the status of particular groups. This paper begins by describing the current system of resource allocation and its effect on spending at district and *upazila* (subdistrict) levels. The second half of the paper gives examples of resource allocation methods that are more closely related to health need.

## Allocation of Government Health Spending in Bangladesh

Budgets for most categories of regular government expenditure, including health, are determined centrally. The system can best be characterized as one of line budgets based on capacity and historically determined norms, that is, on physical capacity—as measured by the number of facilities, staff, or beds (see table 5.1)—and on funding provided to the same facilities in previous years. Historic patient flows are taken into account in setting the budgets for food.

The use of line budgets means that resources are allocated for specific line items (such as food, medicines, and medical supplies), and a transfer between lines, whether by those at the top or the bottom of the administrative structure, is not possible, unless it is within the same broad economic code (for example, within the staff pay and allowance category or within the supplies category).

**Table 5.1** Allocation of Funding to Public Facilities

| ITEM | ALLOCATION BASIS | DESTINATION | | | SOURCE OF FINANCIAL AND MANAGEMENT AUTHORITY |
|---|---|---|---|---|---|
| | | DISTRICT | UPAZILA | UNION | |
| *Operations* | | | | | |
| Food | Per bed-day | Tk. 30 | Tk. 30 | n.a. | Civil surgeon supervises local tender |
| MSR[a] | • Per bed/per facility<br>• Top-down decision from DG | Tk. 22,000 | Tk. 15,000 | Tk. 75,000 | Civil surgeon supervises local tender |
| Maintenance, fuel, other costing less than Tk. 1,000 | • Historical spending<br>• Vehicle capacity<br>• Utilization pattern<br>• Political importance | Tk. 40,000 | Tk. 25,000 | n.a. | Civil surgeon supervises use of budget |
| Staff | Per facility | 11 doctors, 27 nurses, 30 other staff | 9 doctors, 10 nurses, 23 other staff | 4 other staff | Director general |
| *Capital* (equipment, construction, renovation) | Submissions | Less than contingency fund (about Tk. 2,000) | Less than contingency fund (about Tk. 2,000) | n.a. | Civil surgeon, when met from the contingency fund; otherwise, director general, CMMU, and PWD |

n.a. = Not applicable.
a. More than 70 percent drugs; the balance includes surgical instruments, bandages, reagents, linens, and gas.
*Note:* CMMU = Construction Management and Maintenance Unit. PWD = Public Works Department. DG = Director General.

### *Current Methods of Allocation*

The budget-setting process begins in August. Civil surgeons submit a list of requirements to the director general's office. (For the basis of the civil surgeons' calculations, see table 5.1.) Budgets are consolidated by the director general's office and sent to the Ministry of Health and Family Welfare (MOHFW) and the Ministry of Finance for approval. Ultimate ratification is by Parliament in the first week in June, when the consolidated budget for the entire government is presented.

Thus, districts have little flexibility over the use of funds. The constraints extend to a requirement that 70 percent of the listed drugs be procured from the Essential Drugs Company, a government-owned institution. The only real flexibility is in the use of the maintenance budget, from which the civil surgeon may spend up to Tk. 5,000 for vehicles and up to Tk. 1,500 for building repairs using local contractors. Maintenance expenditures exceeding these amounts are managed by other administrative units.

### *Total Budget Allocations for Districts and Upazilas*

Facilities are distributed nearly equally across administrative areas according to a norm of 31 beds for upazila health complexes and 50, 100, or 200 beds for district hospitals. Given the unevenness of population across administrative areas, the near-equal distribution of facilities means that the distribution of beds per capita is highly unequal. Moreover, although district and upazila facilities provide both inpatient and outpatient care, the allocation is determined solely by reference to the numbers of beds, bed-days, and staff and takes no account of the outpatient load.

The distribution of beds and staff essentially determines the level of revenue funding for each area (table 5.1). In fiscal 2000, a 50-bed district hospital might have received an allocation of around Tk. 7 million and an upazila facility Tk. 3.5 million to 5 million (table 5.2). More than two-thirds of this allocation is for staffing. On average, the government funds one clinic (a union health and family welfare center [UHFWC]) for every three

**Table 5.2** Typical Budgets for a District Hospital and an Upazila Health Complex

| ITEM | UNIT COST | UNITS (TAKA) | TOTAL COST (TAKA) | PERCENT OF FACILITY BUDGET |
|---|---|---|---|---|
| *District hospital (50 beds)* | | | | |
| Staff (annual salary) | | | | |
| Doctors | 104,000 | 11 | 1,144,000 | 16.4 |
| Nurses | 74,000 | 27 | 1,998,000 | 28.6 |
| Other | 42,000 | 30 | 1,260,000 | 18.0 |
| Staff total | n.a. | n.a. | 4,402,000 | 63.0 |
| Supplies | | | | |
| Food (per bed-day) | 30 | 18,250 | 547,500 | 7.8 |
| MSR (per bed) | 22,000 | 50 | 1,100,000 | 15.7 |
| Maintenance (per year) | 40,000 | 1 | 40,000 | 0.6 |
| Other (per year) | 900,000 | 1 | 900,000 | 12.9 |
| Supplies total | n.a. | n.a. | 2,587,500 | 37.0 |
| Total | n.a. | n.a. | 6,989,500 | 100 |
| *Upazila health complex (31 beds)* | | | | |
| Staff (annual salary) | | | | |
| Doctors | 104,000 | 9 | 936,000 | 25.9 |
| Nurses | 73,000 | 10 | 730,000 | 20.2 |
| Other | 40,000 | 23 | 920,000 | 25.4 |
| Staff total | n.a. | n.a. | 2,586,000 | 71.5 |
| Supplies | | | | |
| Food (per bed-day) | 30 | 11,315 | 339,450 | 9.4 |
| MSR (per bed) | 15,000 | 31 | 465,000 | 12.9 |
| Maintenance (per year) | 25,000 | 1 | 25,000 | 0.7 |
| Other (per year) | 200,000 | 1 | 200,000 | 5.5 |
| Supplies total | n.a. | n.a. | 1,029,450 | 28.5 |
| Total | n.a. | | 3,615,450 | 100 |

n.a. = Not applicable.
*Note:* Hospitals assumed to be operating at full capacity with all posts filled.
*Source:* For salaries, Quayyum and Howlader 2000.

unions, at around Tk. 240,000 per clinic, which is mostly for the salaries of the support staff and four paramedics. In addition, the government funds another six or seven field staff health workers in each union.[2] Finally, each district's civil surgeon's office, which provides administrative support for the entire district and also delivers a public health function, costs an average of approximately Tk. 7.5 million. For the average district, with 6 upazilas and 24 unions, these allocations total roughly Tk. 52 million (table 5.3).

**Table 5.3** Distribution of Spending on Public Health in an Average District by Type of Facility

| TYPE OF FACILITY | UNIT COST (TAKA) | UNITS | COST (TAKA) | PERCENT OF DISTRICT SPENDING |
|---|---|---|---|---|
| District hospital | 6,989,500 | 1 | 6,989,500 | 13.4 |
| Civil surgeon's office[a] | 7,500,000 | 1 | 7,500,000 | 14.4 |
| Upazila health complex | 3,615,450 | 6 | 21,692,700 | 41.7 |
| UHFWC[b] | 88,200 | 18 | 1,587,600 | 3.1 |
| Field staff | 39,600 | 360 | 14,256,000 | 27.4 |
| Total | | | 52,025,800 | 100 |

*Note:* Average district contains 6 upazilas and 24 unions. UHC is upazila health complex; UHFWC is union health and family welfare center.
a. Average budget allocation for district with five to seven upazilas (*Bangladesh Health Bulletin* 1997).
b. MSR allocation of Tk. 75,000 plus four staff.

The result of the current allocation process is that, in principle, budgets and expenditures bear little relation to either the size of the population or the number of patients treated (as measured by the number of admissions and outpatient consultations). If, for example, the occupancy levels were to fall to only 50 percent, the budgetary allocations would, again in principle, fall by only around 3 percent, and most of that decline would reflect lower food requirements. In practice, the director general does have some flexibility through the selective filling of vacancies, and vacancies of doctor positions of 35 percent or more exist in many facilities (Quayyum and Howlader 2000). The vacancy rate may exaggerate the degree of flexibility available, however, because many areas, particularly upazilas, are unattractive to doctors and nurses, who generally prefer to work in urban facilities.

*District Allocations*. Just as the number of beds per capita varies enormously across administrative areas, so does the spending: apart from Dhaka, it ranged in fiscal 2000 from Tk. 54 in Gazipur to Tk. 256 in Bandarban. At more than Tk. 426, spending per capita in Dhaka is the highest, but Dhaka provides much of the specialist care for the whole country.

Variations in spending are apparent both within and between divisions (table 5.4). Within divisions, spending tends to be higher in districts with medical college hospitals. The higher spending reflects the training function of these institutions and the fact that they serve patients from surrounding districts. Yet even outside such districts, substantive variations persist; the maximum allocation to a district exceeds the minimum by about 50–70 percent in most divisions and by more than 300 percent in Chittagong.[3]

Assessing the fairness of health spending relative to the many dimensions of need is a complex task. One way to analyze the question is to compare current spending patterns with summary measures of health outcomes. A simple correlation between a district's infant mortality rate (IMR) and its expenditures yielded no significant posi-

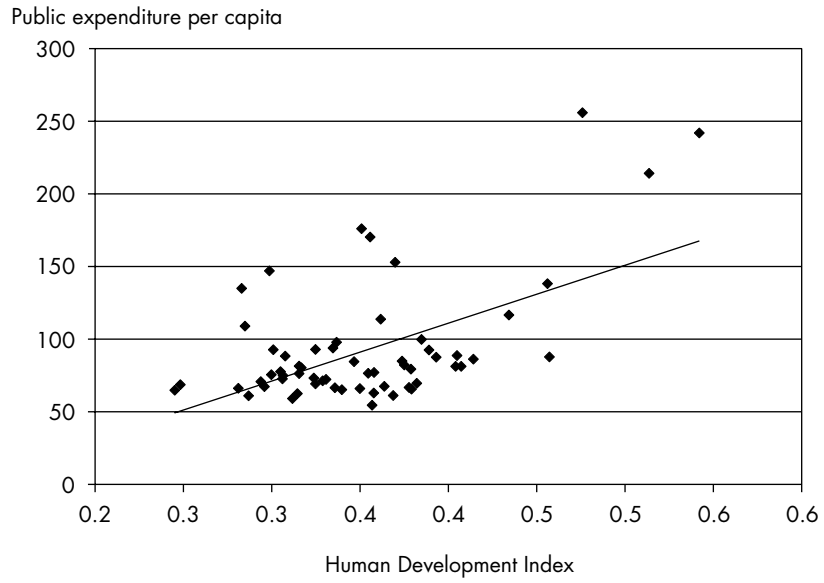
**Table 5.4** Range of Public Health Spending per Capita across Districts by Division and Presence of a Medical College Hospital (MCH), Fiscal 2000 (Taka)

| DIVISION AND DISTRICT GROUP | AVERAGE | MINIMUM | MAXIMUM |
|---|---|---|---|
| *Rajshahi* | | | |
| All | 89.34 | 66.52 | 176.12 |
| Without an MCH | 78.79 | 66.52 | 113.99 |
| *Khulna* | | | |
| All | 85.76 | 67.03 | 138.70 |
| Without an MCH | 79.87 | 67.03 | 97.74 |
| *Barisal* | | | |
| All | 90.73 | 61.25 | 153.18 |
| Without an MCH | 78.24 | 61.25 | 87.63 |
| *Dhaka (excluding Dhaka district)* | | | |
| All | 83.14 | 54.50 | 170.36 |
| Without an MCH | 75.05 | 54.50 | 92.95 |
| *Chittagong* | | | |
| All | 121.69 | 59.17 | 255.73 |
| Without an MCH | 122.21 | 59.17 | 255.73 |
| *Sylhet* | | | |
| All | 86.67 | 62.12 | 147.24 |
| Without an MCH | 66.48 | 62.12 | 71.10 |
| Total | 90.13 | 54.50 | 255.73 |

tive association ($r^2$ = 0.03). A similar correlation with the age-gender standardized mortality rate also was not significant ($r^2$ < 0.01).

The human development index generated by the United Nations Development Programme (UNDP) offers a more sophisticated measure of general development by combining per capita measures of infant mortality, literacy, and gross domestic product (GDP) in a single index (in which 1 represents the highest level of development, 0 the lowest). A computation of the index for each district of the country (UNDP 1996) suggests that districts at a lower level of development receive lower funding (figure 5.1). The picture is slightly more complex, however. Those districts with the highest rating (above 0.43) receive the highest allocation per capita (an average of Tk. 118). Districts with the lowest rating (less than 0.3) receive around Tk. 93, and the middle districts receive Tk. 83.

**Figure 5.1** The Relationship between the U.N. Human Development Index and Public Spending per Capita in Bangladesh, 1996



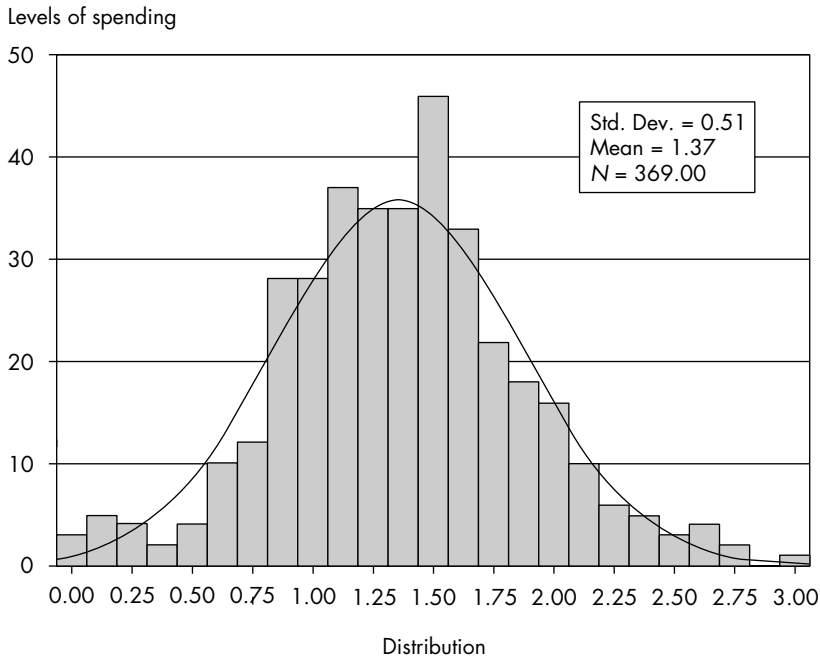

*Source:* UNDP 1996.

The overall conclusion is that, when measured against broad indicators of health outcome and general human development, patterns of health spending at the district level do not appear to reflect need.

*Allocations to Upazilas*. At the upazila level, resources are allocated to inpatient facilities, outpatient care, and community services. Among the 369 upazilas outside large urban areas, we find that total allocations in fiscal 2000 averaged Tk. 13.7 million per upazila (figure 5.2).

The size of the allocation an upazila receives depends primarily on the number of staff, because that is the explicit basis for the allocation formula. But much of the variation is also attributable to the size of the upazila's population, probably because allocations, particularly under the development budget, reflect a calculation of

**Figure 5.2** Distribution of Total Public Spending on Health by Upazila, 1999/2000



local health need, which in turn is related to population. The positive relationship of allocation to population, at least at the subdistrict level (per capita allocations vary more widely at the district level) is an encouraging finding; it suggests that any move toward a formula based in part on population, as we propose below, would not be too out of line with current practice.[4]

## A Needs-Based Allocation Formula

Here we present a formula for allocating resources according to measures of need. The scenarios are illustrative; in practice, any formula would require substantial consultation and development. Moreover, at least two issues would require careful consideration before the adoption of any particular formula—maintaining fiscal discipline and treating the distinction between the revenue budget and the development budget appropriately.

The issue of fiscal discipline arises because a needs-based allocation system would not use norms based on line items, a move that would seem to threaten financial control and accountability. To preserve sound budgetary planning and financial reporting under a needs-based system, each district should still submit its plans for spending by line item at the budget-planning stage. Once the budget has been adopted and the fiscal year has begun, large deviations from a line item might be allowed, but only if adequately explained.

The preparation of district budgets in this way is closely related to the development of local-level planning now being piloted in a number of districts. Skills in local planning can be considered a prerequisite to the successful development of a needs-based allocation system.

A second issue is the current division in allocations between the revenue budget and the development budget. Logical reasons exist for treating recurrent and capital spending differently when undertaking resource allocation, but maintaining the distinction in both the revenue budget and the development budget complicates the creation of needs-based formulas. One option would be to develop

three budgets: one for revenue, another for the recurrent portion of the development budget, and a third for capital.

### *Background to the Use of Allocation Formulas*

Allocating resources for public health care according to historic convention and capacity-based norms is common to many centrally managed public health services. A small but growing international literature has focused on ways of reorienting resource allocation so that systems become more responsive to local health needs. Countries as diverse as Canada, South Africa, Zambia, the United Kingdom, and Australia now allocate resources on the basis of need as defined by the size and characteristics of the population (Birch and Chambers 1993; Bourne and others 1990; Gilbert, Gibbeerd, and Stewart 1992; Lake 2000; Mays 1995).

Although the details of each formula are different, a number of common guiding principles emerge from the literature.

*Measures of Need Are Necessarily Selective and Approximate.* A formula can only partially capture the complex pattern of local circumstances that determine health status and health service needs in a particular area. Unlike simple measures of capacity, needs formulas are indirect measures. Any method for allocating resources is inevitably an estimate, but a formula more obviously attempts to measure the whole by way of its parts. Therefore, a formula is more open to question and debate than, say, a simple measure of capacity.

Need should be measured using accepted general criteria based on statistics that are regularly collected for each district, and the allocation formula should produce results that are consistent with the need measures. In this paper we offer some examples of how resources might be allocated in Bangladesh using common methods of measuring health need. Ultimately, however, the variables chosen should be subject to open debate on their suitability in representing need before they are formally adopted.

*The Allocation Method and Variables Representing Need Should Be Transparent.* Because a new method of calculation is certain to be

disputed, as it will lead to some significant changes in resource allocation patterns, it must be as simple and transparent as possible.

A strategy that several countries, including Zambia and the United Kingdom, have adopted is to introduce a relatively simple formula and later increase its sophistication as data and experience develop. More sophistication can help account for complex socioeconomic and health-related determinants of demand for services. But care must be taken because sophistication is also likely to mean that fewer will understand and critique the methodology.

A more subtle problem arises when apparent sophistication covers up less objective criteria for choices. In the United Kingdom, an initially clear and transparent formula introduced during the 1970s was complicated during the 1980s when an apparently sophisticated statistical method was introduced to adjust for relative differences in morbidity between areas (Carr-Hill 1990). The new formula had the effect of shifting resources to those areas most supportive of the government and led to charges that the changes were politically inspired. The methods used were later shown to be scientifically flawed. A simple but transparent formula may have much greater chance of winning general acceptance and reduces the chance that flawed methods will be obscured by complexity.

*Allocation Targets May Be Defined by an Objective Principle, but the Speed at Which the Targets Are Approached Is a Political Choice.* The method of final allocation can be determined by a formula that is as objective as possible; in contrast, the introduction of such a formula and the speed of its implementation is mostly a political, not a scientific, choice. The transition can be made quickly (within a few years) or extended over a longer period. An immediate transition is probably not advisable as local services will take time to adapt to smaller or larger allocations.

### *Toward a Needs-Based Formula for the Geographic Allocation of Resources*

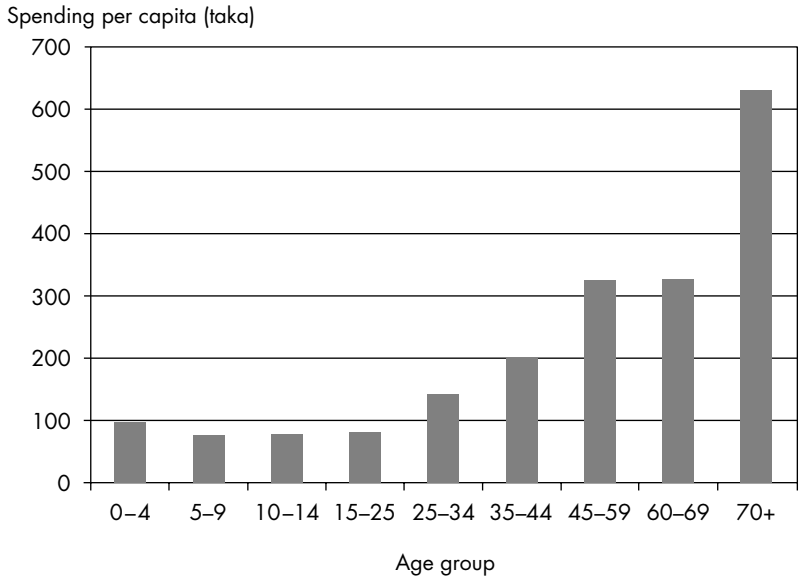
The factors affecting the need for health services in a particular area can be divided into two components: (a) those explained by

the size and structure of the population and (b) those explained by other health and socioeconomic factors.[5]

*Size and Structure of the Population*. The most important factor determining the need for health service in an area probably is the size of the population. The age and gender structures of the population are, together, perhaps the second most important factor. In most countries, including Bangladesh, the need for health services tends to be highest for the very young (less than one year old), women of childbearing age, and the elderly. Public spending by age group partly illustrates these tendencies (figure 5.3), but utilization may reflect need more accurately. These demographic factors vary little across districts.

*Other Health and Socioeconomic Factors*. Differential health needs also exist within individual age-gender groups. Some groups are more

**Figure 5.3** Public Spending on Health by Age Group in Bangladesh, 1998




*Source:* MOHFW 1998a.

vulnerable to disease. A strong link is frequently found between poverty and inequality on the one hand and mortality and morbidity on the other. Locational factors, such as proximity to rivers, also may also predispose certain groups to higher levels of diseases such as malaria.

Identifying a suitable indicator of disease that can be used to weight resource allocations is not an easy task. One way would be to compare differential patterns of morbidity within given age-gender groups. The problem with this method is that statistics can record only those episodes of illness that are reported to the health system. Most reporting systems are biased in this respect. The use of hospital statistics, for example, biases the results toward those with access to hospitals. Household surveys can yield information on actual disease prevalence, but the sample is often not sufficiently large or wide to provide a guide to differences between districts and subdistricts.

A good proxy for morbidity that is less likely to be biased, used in both the United Kingdom and South Africa, is the standardized mortality rate (SMR).[6] The recording of mortality should be relatively free of bias in that a statistical system is required to record all deaths. For populations of more than 100,000, the SMR is often a good predictor of actual morbidity (Carr-Hill 1990).

One study has questioned the reliability of Bangladesh's mortality statistics and has suggested that deaths in the country are underreported (Streatfield 2000). For the purposes of an allocation formula, the consistency of reporting across areas is more important than whether such reporting is accurate in an absolute sense. Nonetheless, for Bangladesh, the infant mortality rate (IMR) may be a more reliable mortality indicator than the SMR; hence, calculations based on the IMR are also provided here. Although the IMR emphasizes infant deaths rather than the general burden of disease, much of the general mortality rate in fact consists of infant and maternal deaths. Given that current health policy concentrates on improving infant and maternal health, the bias of the IMR may be acceptable.

*The Costs of Care*. The cost of providing services to a defined population may vary from area to area. The factors determining these costs are complex and include regional differences in staffing costs, differential transport costs, and variations in prices of basic foods.[7] Ideally, all these factors should be included in a medical price index that can be used to adjust allocations. Bangladesh does not have such an index (nor do many other countries).

One factor affecting cost is location. Per capita costs of care tend to rise in sparsely populated areas because of increased transport costs and treatment times. Part of this cost may be borne by patients through longer journeys to health facilities and part by the health system through the provision of smaller facilities scattered across the area.

To represent the location effect, and in the absence of other local measures of cost, population density has been used to construct an index for cost. Although density captures part of the cost differential, it fails to account for other cost drivers, such as variations between areas in salary levels or costs of supplies. One justification for the use of population density is that national pay scales and central procurement of many supplies mean that costs of inputs are broadly similar across the country. Some further work is required to indicate whether these costs are indeed similar.

***Resource Allocations***

Allocations for each area are obtained by using the mortality rate (indicator of need) and population density (indicator of location-related costs) to adjust the population of each district up or down. The adjusted population is then used as a basis for proportional allocations. A higher mortality rate and lower density than average each will cause the population to be adjusted upward and will result in larger proportional allocations. The converse occurs for districts with lower-than-average needs and costs. For any district *i*, the total target allocation is given as the product of need and cost factors, as follows:

$$Allocation_i = PerCap \times POP_i \times (1 + a_i) \times (1 + n_i) \times (1 + c)$$

where *PerCap* is the national budget (excluding Dhaka City) divided by the total national population, $POP_i$ is the population of district *i*, *a* is the district age-gender adjustment, *n* is the needs adjustment, and *c* is the cost adjustment.[8] For the country as a whole, each of these factors is zero by definition. The sign on each indicator denotes whether its value is above (+) or below (–) the national average.

Adjusted populations and corresponding allocations were calculated using the above formula and available data. For the district of Madaripur, for example, the adjusted allocation becomes:

$$Allocation_{Madaripur} = PerCap \times POP_{Madaripur} \times 1.09 \times 0.69 \times 0.96$$

These values indicate that the district has an above-average proportion of the very young and very old, but a below-average SMR and index of cost (higher population density).

For the purposes of the simulations below, Dhaka district is excluded. The per capita allocation to Dhaka is several times larger than that to the next largest district. In addition, many travel to Dhaka from other districts to receive treatment for diseases requiring specialized inpatient care (see section on cross-boundary flows below).

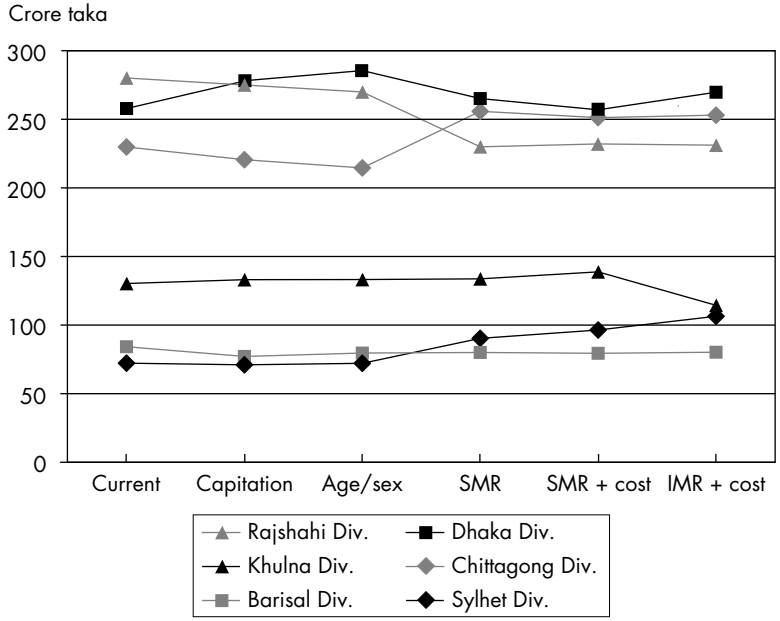
Using both the SMR and IMR as indicators of need, the simulations lead to significant increases in allocations to Chittagong (10 percent increase) and Sylhet (47 percent increase) (figure 5.4). In contrast, the target allocation for Rajshahi declines about 18 percent. No significant change is recorded for Dhaka (not including Dhaka district) and Khulna. All divisions, however, contain some significant gainers and losers.

### *Cross-Boundary Use of Services*

An objection to the needs-based formula is that it does not take account of "cross-boundary flow"—that is, care provided in some districts, especially those with medical college hospitals or tertiary facilities, to residents of other districts.

To investigate the magnitude of cross-boundary flows, we surveyed approximately 1,100 inpatients and outpatients in five medical

**Figure 5.4** Cumulative Effect of Weighting on Fiscal 2000 Division Allocations for Health in Bangladesh by Weighting Factor




*Note:* SMR = Standardized mortality rate. IMR = Infant mortality rate. 1 crore = 10 million.

facilities—three district hospitals and two medical college hospitals. The patients were receiving care across a range of specialties.

The results suggest that, with the exception of the Dhaka medical college hospital, these facilities are predominantly used by those residing in the hospital's district (table 5.5). More than 90 percent of both inpatients and outpatients came from the same district for the three hospitals surveyed. Indeed, between 60 percent and 80 percent of outpatients and between 20 percent and 50 percent of inpatients came from the upazila in which the hospital is located.

The use of the Mymensingh medical college hospital is similar to that of the district hospitals, with more than 75 percent of inpatients and almost 100 percent of outpatients coming from the Mymensingh district. More than 50 percent of inpatients at the hospital came from the Sadar upazila.

**Table 5.5** Inpatient and Outpatient Use of District Hospital (DH) and Medical College Hospital (MCH) Facilities, by Selected District and Proximity of Patient Residence to Facility (percent)

| PATIENT STATUS AND RESIDENCE RELATIVE TO FACILITY | CHITTAGONG DH | DHAKA MCH | KISHORJANJ DH | MANIKGANJ DH | MYMENSINGH MCH | TOTAL |
|---|---|---|---|---|---|---|
| *Inpatients* | | | | | | |
| Sadar (city) | 20.0 | 15.3 | 38.5 | 52.0 | 50.0 | 32.7 |
| In district | 94.4 | 41.8 | 96.2 | 98.0 | 75.0 | 72.6 |
| In adjacent districts | 3.3 | 22.0 | 3.8 | 0.0 | 22.0 | 14.5 |
| Other | 2.2 | 36.2 | 0.0 | 2.0 | 3.0 | 12.9 |
| Number of inpatients | 90 | 177 | 78 | 50 | 164 | 559 |
| *Outpatients* | | | | | | |
| Sadar (city) | 59.0 | 41.9 | 77.1 | 68.3 | 79.3 | 62.1 |
| In district | 95.1 | 81.9 | 99.0 | 98.4 | 98.9 | 92.6 |
| In adjacent districts | 0.0 | 9.7 | 1.0 | 1.6 | 1.1 | 3.9 |
| Other | 4.9 | 8.4 | 0.0 | 0.0 | 0.0 | 3.5 |
| Number of outpatients | 61 | 155 | 96 | 63 | 87 | 462 |

The Dhaka medical college hospital is used relatively widely by patients from outside Dhaka district, especially inpatients. Only about 40 percent of inpatients and about 80 percent of outpatients come from the Dhaka district. More than half the inpatients coming from outside Dhaka district (36 percent of all outpatients) come from districts beyond those adjacent to Dhaka, particularly for urology services.

The survey is indicative rather than representative, and further work would be required to investigate whether these patterns are repeated elsewhere in the country. If they are representative, then they suggest that little need exists for significant financial compensation for treating cross-border patients except for the Dhaka facility and perhaps other medical college hospitals, the Mymensingh results notwithstanding. (Perhaps that facility was surveyed at an unusual time.)

A prerequisite to adjusting for cross-boundary flows, then, is to adequately measure them in an ongoing way by, for example, adding district of residence to the data collected on patients in the

hospital's management information system. With information on the size of cross-boundary flows, the issue could be tackled in several ways. One way would be to make a greater national allocation to districts offering such services. Another way, given that facilities tend to be used by patients from the same division, is to allocate resources to each division on the basis of weighted capitation and then permit divisions themselves to make an adjustment for cross-boundary flows by reallocating some of the resources from each district to the division-level facilities (mostly medical college hospitals).

Another important aspect of cross-boundary flow is the influence of major roads on the case mix and volume of activity in certain hospitals. Casual observation indicates that some district and upazila facilities situated close to main roads are frequently crowded, predominantly with trauma cases resulting from traffic accidents. Many of these accident victims are from outside the area. Some allowance for this factor will be required when refining the formula, and doing so would again be aided by adding relevant information to hospital admissions data, especially the particular cause of admission.

### *Formula versus Special-Needs Allocations*

One potential disadvantage of a formulaic approach is that it does not take into account needs in certain areas that are not reflected in the regular statistical reporting—for example, the effects of periodic excessive flooding or of epidemic or endemic diseases. Although special allocations for particular vertical programs are probably not to be encouraged, especially in the context of a sector-wide approach, an argument could be made for reserving part of the annual allocation for disbursements apart from those calculated by the main formula. Taken further, a separate formula could be devised for allocating specific elements of the budget. This is indeed the approach in the United Kingdom, where separate formulas are used to allocate funding for acute care, care for the mentally ill, and community health services (Peacock and Smith 1995).

In summary, to attain the objective of transparency, it is suggested that one formula be used for the majority of the allocation. If special allocations are desired, then a small part of the budget should be retained for allocation outside the formula.

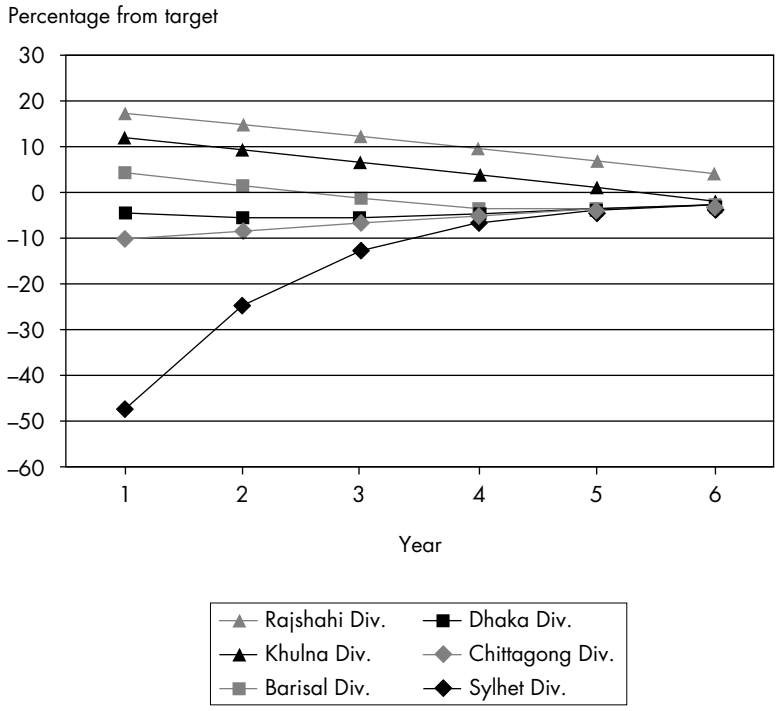
### *Introducing Needs-Based Allocations*

A weighted needs-based allocation formula along the lines of the one described above could not completely replace current methods overnight. In the United Kingdom, for example, moving all allocations to within a few percent of the weighted targets took about 15 years. Services need a transition period to adapt to the prospect of increased or reduced allocations. The actual length of the transition period is a political decision.

One method of phasing in a resource allocation formula is through the allocation of real (that is, inflation-adjusted) budget growth. In this method, the needs-based allocation to any division or district would be based on the historic allocation, with additional funding from real budgetary growth for areas that lag behind their needs-based per capita targets. The speed of the change would depend on the rate of economic growth. If, for example, the health budget grows at a real rate of 3 percent per year, all divisions could be within 5 percent of the target weighted allocations within five years (figure 5.5). Within divisions, adjustment would take longer unless real reductions were made in some district allocations to permit intradivision reallocations of funding. This method shifts that *share* of the total budget. The gradual implementation and the reallocation of real as opposed to nominal growth in the budget permit allocations to continue to rise in all divisions, but with varying rates of increase.

Practical implementation of a needs-based budget can take a number of forms, depending on the level of local decentralization. Both options described below require reallocations to be planned in advance, preferably over a three- to five-year period. The forecasting could be modeled within the framework of a medium-term financial strategy for the health sector.

**Figure 5.5** Potential Transition of Actual Spending to Needs-Based Health Spending Targets in Bangladesh by Division




*Option 1. Normative Budgeting within Needs-Based Allocations—District and Upazila Levels.* Under this approach, the MOHFW, in collaboration with the Ministry of Finance, allocates funds to districts on the basis of a needs analysis similar to the one proposed above. District and upazila budgets would then be composed using normative methods, but within the overall limits of the needs-based allocation.[9] The normative methods could be dropped sooner in divisions with a longer transition to needs-based district allocations. Limitations on transfers between line items could continue as a way of ensuring administrative control.

This option may be the most feasible for the short or medium term given the lack of delegated financial powers or decentralized management decisionmaking.

*Option 2. Local-Level Planned Budgets.* A more sophisticated option is for the district to be notified of its needs-based budget in advance, but for district and upazila managers to decide on what activities and services should be financed. The planning process would not be strictly constrained by norms, but instead would follow a justification based on the needs of the community. Financial control during the year would still be strictly imposed, and local-level planners would have to spend within the budgeted line items. The system could be integrated with the local-level planning process already started in a number of districts.

In fact, both approaches—local budgeting and normative budgeting within needs-based allocations—could be developed simultaneously. Some districts could plan their own budget structure, while spending in others could be determined at the national level. But spending under each approach would be constrained by overall district-based resources.

### *Allocation of Capital*

An important objection to a standard formula based on current population health care needs is that it does not adequately account for past excesses or deficiencies of investment in the health sector in a particular area. Allocations to one area that are greater than the needs-based allocation might be justified now on the grounds that they would make up for deficient levels of resources allocated historically. An answer to this objection is that the resource allocation formula described above is aimed at the allocation of the recurrent elements of the budget, for both revenue and development. The allocation of funding for capital development is a more complicated issue precisely because explicit account must be taken of past levels of investment. Doing so would require the assessment and valuation of facilities, and future allocations would take into account the capital stock and investments made in priority areas. Capital allocation is a complex task, and further work would be needed should the current system be regarded as unsatisfactory.

In the meantime, however, a system based on need is less likely, rather than more likely, to perpetuate inequalities of historic

investments. Historic norms tend to base recurrent allocations on the current size of facilities. This automatic link to the past is broken in moving toward a needs-based system.

## Summary

The level of public finance for health care provided to each geographic area in Bangladesh is largely determined by the size of facilities and employment of staff, rather than by health status or socioeconomic need of the population. Such a situation is common to many centrally managed and publicly funded health care systems.

This historical approach to budgeting has two fundamental weaknesses. First, it tends to thwart the objective of allocating resources to the most vulnerable population groups and may prevent national equity objectives from being carried down to the local level. Second, because allocations are not related to the level of activity in the facilities but rather to their capacity, it does nothing to reward a greater level of efficiency. The system can, therefore, be both inequitable and inefficient.

The advent of the sector-wide approach to budgeting provides an ideal opportunity to begin changing the system of allocation. Under the previous project-oriented approach, changing the allocation system would have meant changing dozens of separate budget allocations with specific purposes. The gradual unification of allocations under the revenue and development budgets allows the allocation of resources through a small number of channels in a more equitable way.

The local-level planning initiative provides a further opportunity to develop needs-based allocations. The initiative requires districts and, later, upazilas to decide priorities according to local needs. The process is not likely to increase the need to decentralize budget decisionmaking because it will increase the effectiveness of the local-level planning and prioritization process. The process is also likely to draw attention to apparent inequities of the current funding system.

Reforming the system of geographic resource allocation could profoundly improve the effectiveness of resource use by channeling more resources to needy areas and reducing the incentive to preserve capacity at the expense of addressing local needs.

## Notes

1. Another factor is the efficiency with which services are delivered at the local level, an important subject for future investigation.

2. Most of the staff under the Directorate General of Family Planning are excluded because they were funded under the development budget during 1999/2000. Beginning with 2000/01, these workers fell under the revenue budget.

3. In most districts, the government's development allocations closely match the allocations made under the revenue budget (correlation coefficient of +0.89, $p < 0.01$). The development budget includes donor funding through the government but not direct program aid. Information on the latter is not available by district.

4. Our analysis also suggests that, holding population and other factors constant, upazilas in Syhlet division generally receive lower allocations than upazilas in other divisions.

5. The data used in this section were those readily available from sample surveys, the 1991 census, and regular management information system reports from hospitals.

6. Mortality rates can be standardized by comparing the observed rate in an area with the rate that would be expected given the local age structure and national age-gender specific mortality rates. Use of unadjusted mortality rates is inaccurate because a district may record a higher mortality rate as a result, for example, of a larger elderly population, a condition which itself indicates a relatively successful health care system rather than relative deprivation.

7. In Bangladesh, as in other centrally planned systems, it could be argued that, because items such as staff wages are nationally determined, local variation does not occur. This is true in terms of the impact on expenditures. However, a hidden cost appears in

remoter areas, where staff are reluctant to work and positions are often not filled. In the end the cost is borne by patients, in terms of lower quality care, rather than the health system.

8. This formula is replicated from Peacock and Smith (1995).

9. Some norms may need to be relaxed to stay within a needs-based allocation. For example, a district facing a reduced allocation may not have the resources to fill the entire complement of posts required by the facility normative.

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SECTION III

# Expenditure Analysis

CHAPTER 6

# Public Expenditure Review of the Health and Population Sector Program in Bangladesh

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## Abstract

The chapter summarizes findings from a public expenditure review of the health sector for the 1999/2000 financial year, which marked the second year of the Health and Population Sector Program (HPSP) for Bangladesh. The review examines the extent to which the program was consistent in size and breakdowns with planned budgets and priorities. During the first two years of the HPSP, spending on health fell significantly short of approved budgets. Restoring real per capita funding to 1996 levels would require a 12.4 percent increase in spending during 2000/01. Spending on the Essential Services Package (ESP) in 1999/2000 was between 60 and 70 percent of total spending—28 percent on family planning, 35.5 percent on child health, 12.5 percent on limited curative care, 3.4 percent on communicable disease control, and 13.2 percent on

maternal care. The distribution of public spending differed significantly by geographic region, but these differences do not seem to reflect differences in need. In fact, there appears to be a negative correlation between health and socioeconomic need and public spending allocations. ESP services are used predominantly by low-income groups. This reflects the fact that most of the HPSP's services are provided in rural areas in health complexes and family welfare centers. Men and boys appear to use nonreproductive primary level services more than women and girls. Estimates suggest that over the next five years, resources for the health sector will continue to come mainly from taxation and development agencies. User charges may become an important source of revenue at the local level, but their overall contribution will remain small. Insurance may have some potential to provide additional funding, mostly through the gradual coverage of the informal sector.

## Introduction

The Health and Population Sector Program (HPSP) for Bangladesh completed its second year of a five-year program at the end of June 2000. This chapter looks back at the financial allocations for core HPSP activities over that fiscal year.

The HPSP places a strong emphasis on the Essential Services Package (ESP) as a way of delivering cost-effective health care, particularly to vulnerable groups. For convenience, the ESP has been defined as all primary care interventions delivered at thana levels and below. On this basis, between 60 and 70 percent of funding under the HPSP is now provided for ESP services (see table 6.1). However, as has been observed in previous public expenditure reviews (PERs), it is important to be aware that ESP services are also delivered in hospitals, particularly district hospitals.[1] It is also likely that many of the resources spent at the thana level and below

**Table 6.1** Financial Indicators of the HPSP

| INDICATOR | BASE LEVEL 1997 (%) | FINAL LEVEL 2003 (%) | 1998/99 (%) | 1999/2000 (%) |
|---|---|---|---|---|
| Total spending on the ESP (delivery and support) as a proportion of total health sector spending | 60 | 65 | 65 | 60–70 |
| Proportion of health sector recurrent expenditure going to important nonsalary components (especially medicine, maintenance) versus to salary component | 23 | 30 | 43 | 51 |
| Proportion of health sector expenditure for recurrent rather than capital expenditure | 75 | 80 | 85 | 91 |

*Note:* The definitions of the second and third indicators have both changed since the original baselines were set. This means that comparison of the current indicator with the baseline is somewhat misleading. The indicators may, however, be useful in their own right in monitoring the input composition of HPSP spending.

are not used effectively. The financial definition of ESP must, therefore, be treated with caution.

In addition to ESP services, the HPSP provides funding for a range of other activities, including the development of better approaches to the management of hospitals and changes to the way in which medical staff are trained. Although it is not yet possible to measure the impact of these interventions, in the future they should increase the efficiency of the public sector through quality and cost enhancements.

This is the fifth PER conducted by the Health Economics Unit, and for the year 2000 it is produced jointly with the Management Accounting Unit. In addition to carrying out a national review of spending under the HPSP, the report focuses in depth on the question of equity, particularly the allocation of funding by geography,

gender, and income. The final section of the report examines the question of what future resources will be available for the health sector in Bangladesh through some projections of funding from the public budget, health insurance, and user charges.

## National Expenditure Review of the HPSP

For the 1999/2000 financial year, the Ministry of Health was originally allocated 2,441 crore[2] taka as the revenue and development budget for the HPSP. This represented 6.6 percent of the total government budget, nearly equal to the total allocation to the health sector of just over 7 percent, as specified by the fifth five-year plan.

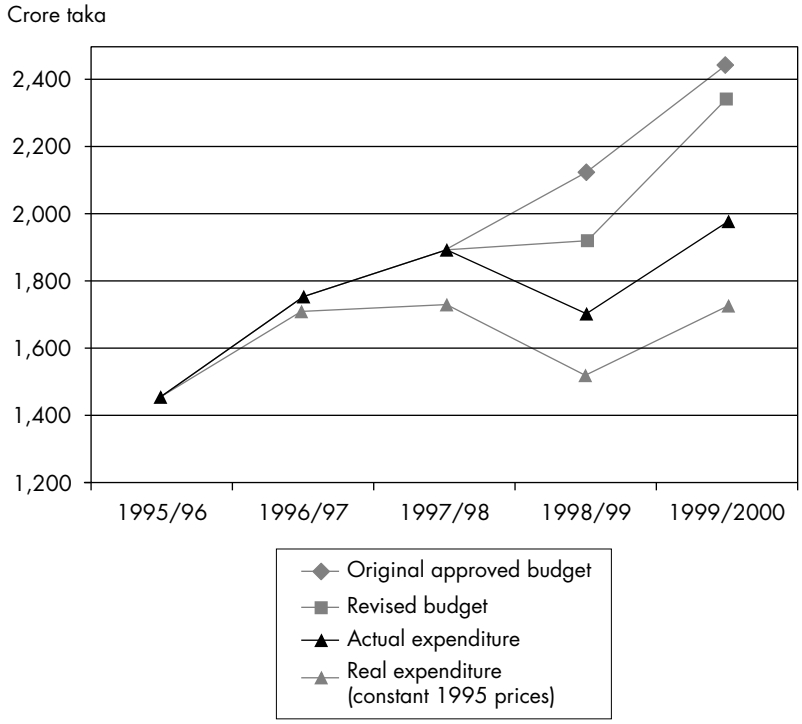
Total spending on the HPSP was 1,984 crore taka, according to the statements of expenditure of line directors and project reports from the Project Financing Cell. While this represents an increase of 3.7 percent over the previous year's spending in real terms, it is only 85 percent of the original approved budget (figure 6.1).

During the two years of the HPSP, total annual spending has declined slightly in real terms by about 0.1 percent, compared to an increase of 18 percent in real terms in the two years prior to the start of the HPSP.

In per capita terms, spending rose between 1998 and 1999; in 1999/2000, it has risen slightly from 135 taka (Tk.) to Tk. 143 per person. This is a small increase in real spending but still means that public (HPSP) health care spending per capita remains below 1996 levels. Public spending in 1999/2000 accounted for 1.1 percent of gross domestic product (GDP), the lowest share since 1992, although this rises to 1.22 percent if an estimate of health spending by other ministries is included.[3]

Two main reasons have been cited for the significant shortfalls in spending this year. The first reason is a general and continuing lack of understanding about procedures involved in procurement. This is exacerbated by a lack of procurement capacity, caused by an acute shortage of trained procurement experts. The second is that

**Figure 6.1** Revenue and Development Spending on the HPSP 1995–2000, Original and Revised Budgets




*Note*: The *original approved budget* is the budget approved at the start of the financial year. The budget is revised halfway through the year based on expenditures during the first six months. This new budget is referred to as the *revised budget*. *Actual expenditure* is based on reports of line directors for the year ending in June 2000.

the guidelines for procurement of supplies and services have been criticized as being cumbersome and time-consuming. Both of these factors appear to have persisted more than two years into the HPSP, despite significant investment in procurement training provided through the program.

Most of the shortfall in actual spending relative to the budget is due to lower-than-anticipated development expenditure. Direct development spending by development partners (direct program

assistance) was more than 86 percent of planned spending, while reimbursable program aid was more than 76 percent of planned spending. Development spending through the government was around 70 percent of the budgeted amount.

The main shortfall was in the other reimbursable program assistance provided through the donor pool administered by the World Bank. This was just over a quarter of what was planned. This underspending on pool funding accounts for more than 47 percent of the total shortfall in spending for the year. The underspending of reimbursable program assistance is chiefly due to the procurement procedures, which continue to be misunderstood, are underresourced, and lead to long delays in obtaining services.

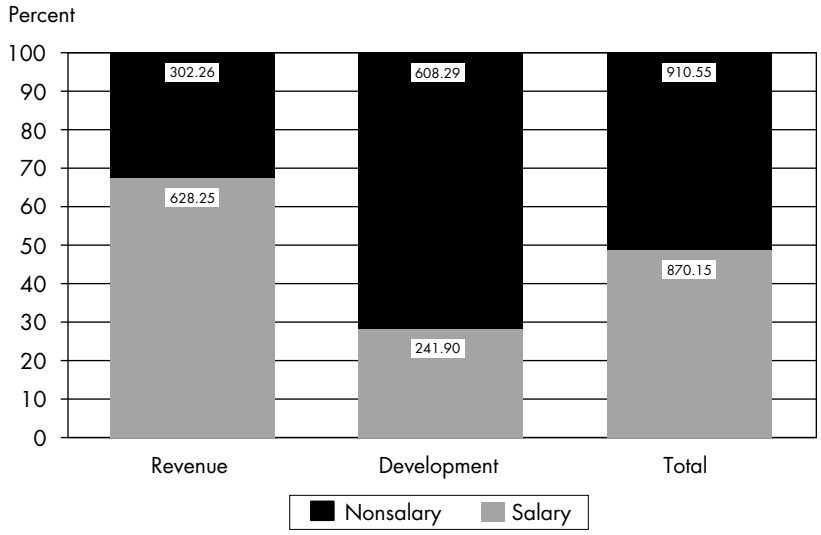
It has been suggested that some of the shortfall, particularly on the direct program assistance funding, may be due to underreporting by line directors because bilateral funding is not always properly reflected in operational plans. The problem merits further investigation.

Total program aid accounted for just under 37 percent of total HPSP spending. This is the highest level since the beginning of the 1990s, although the ratio has varied little during this time. It should be noted, however, that the planned proportion of spending from program aid was 42 percent, and the lower proportion mostly reflects the underspending on the development budget.

There is an additional argument that much of the donor funding that is currently reflected in total health spending was not fully included before the advent of the HPSP. Therefore, the apparent increase in donor share may simply reflect better reporting. The conclusion, perhaps, is that while it is too early to start worrying much about the government being too dependent on donor funding, the situation needs to be monitored in future years, particularly as the goal of financial sustainability requires that more recurrent items currently funded by donors be transferred to the government's revenue budget.

Spending on nonsalary items was 51 percent of total spending in 1999/2000, an increase over the previous year's share of 43 percent (figure 6.2). This is explained by the greater share of development

**Figure 6.2** The Distribution of Recurrent Expenditure by Salary and Nonsalary Items (by percentage and crore taka)




spending in 1999/2000, which was largely used for nonsalary items such as commodities and equipment. It is difficult to say what share of spending constitutes a reasonable level for salaries. Internationally, ratios for salary spending to total spending vary widely, from 20 to 30 percent in some Central Asian countries to more than 70 percent in some Organisation for Economic Co-operation and Development (OECD) and African countries (Barnum and Kutzin 1993).[4]

The main question, at least at the macroeconomic level, is whether the proportion devoted to supplies is sufficient for the existing staff to do their jobs satisfactorily, while at the same time providing them with adequate remuneration to ensure that they work effectively. Presently, around 0.35 percent of GDP (the salary component of the revenue budget) finances approximately 75,000 health workers, who constitute more than 1.2 percent of the formal workforce. This raises important human resource questions, including whether this funding is sufficient to motivate the workforce and

whether the workforce has the right balance of skills to deliver the planned HPSP services.

An additional point is that the plan to transfer the family planning staff from the development budget to the revenue budget is not budget-neutral, because staff paid from the revenue side enjoy pension benefits and enhanced pay scales. These increases must be factored into the estimates of required revenue funding in future years.

Capital spending, much of which was investment in community clinics, accounted for 9.6 percent of total HPSP spending in 1999/2000. Spending was lower than in 1998/99.

Most capital spending is financed from the government-funded part of the development budget. Capital funding for ESP was 75 percent financed by the government, and more than half was used to finance the building of the first wave of community clinics. The remaining 25 percent largely financed the construction of the Institute of Mother and Child Health at Azimpur.

Given that considerable investment activity is planned during the early stages of the HPSP, the amount spent on capital appears to be low.

### *Spending on the Essential Services Package*

To allocate spending to ESP and non-ESP items, expenditure on the operational plan subcomponents was allocated into three categories—ESP, non-ESP, and overhead. The overhead category was included because of the need for substantial expenditure on activities and infrastructure that support both ESP and non-ESP activities, such as research and training activities, management information systems (MIS), and procurement.

To maintain consistency with the Project Implementation Plan and with the previous year's estimates, ESP continues to be defined as those services delivered at the thana level and below. However, this excludes any ESP services that are provided in hospitals. It also assumes that all spending at the thana level and below is on essential services, which may not necessarily be the case.

When overhead expenditures are excluded and only direct ESP service expenditures are included, then the proportion of total spending that went to ESP services is estimated to be just more than 60 percent (figure 6.3). Assuming that overhead expenditures are about the same proportion as direct service expenditures, this suggests that around 70 percent of HPSP spending is on the ESP (figure 6.4).

Therefore, based on the assumptions above, total ESP spending was between 60 and 70 percent for the financial year 1999/2000.

### *Spending by Component*

Five main operational plans are partly or wholly involved in directly delivering ESP services: ESP-Health, ESP-Reproductive Health, Behavior Change Communications (BCC), Nutrition, and Construction (including the construction of community clinics).

**Figure 6.3** ESP, Non-ESP, and "Super Overhead" Expenditures, 1999/2000 (proportion of total revenue and development spending and crore taka)

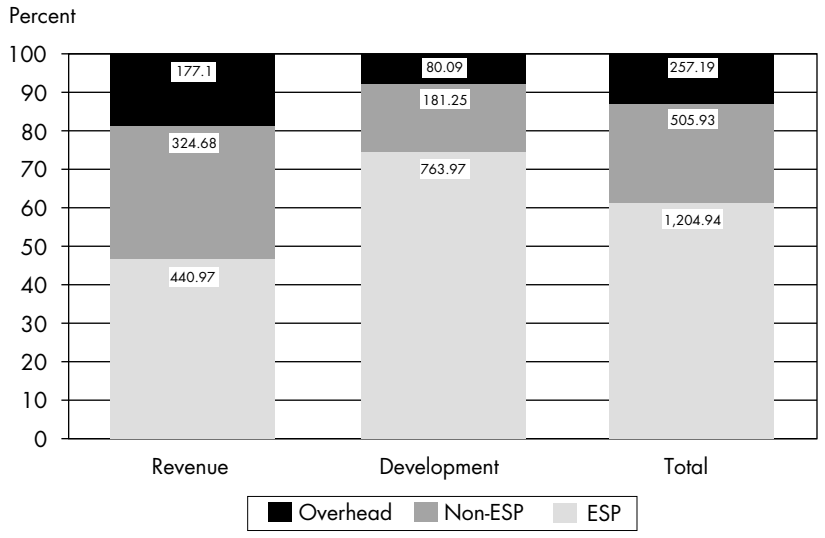
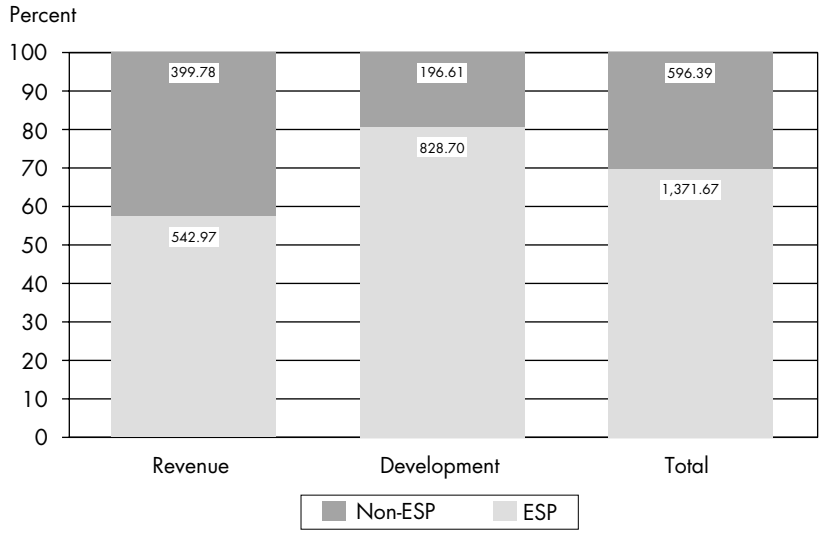


**Figure 6.4** ESP and Non-ESP Spending in the HPSP Assuming Proportionate Overhead Allocation, 1999/2000 (proportion of total spending and crore taka)




Other plans are indirectly involved through shared overheads. We analyzed these five plans in order to examine the distribution of expenditure by ESP subcomponent. We excluded Bangladesh Integrated Nutrition Project spending because it proved difficult to allocate these expenditures among ESP subcomponents.

The level-three national accounting classification codes make disaggregating the main operational plans by ESP subcomponent relatively straightforward. The main difficulty is in allocating the shared direct costs of constructing community clinics and of renovating other thana-level facilities, which represent a significant share of the government-financed development budget.

Analysis of spending by ESP component in the development budget shows that it is dominated by expenditures on family planning and construction; family planning, for example, accounted for 69 percent of the development budget. In the case of funding by development partners through direct program assistance and other reimbursable program assistance, spending is more evenly distrib-

uted, although it is still dominated by family planning and, to a lesser extent, maternal and child health.

There are two main problems with this approach. First, we did not include the revenue budget in our calculations because it is not coded in the same level-three format as development budget activities. Second, the ESP–Reproductive Health Plan (development budget) includes the salaries of staff who work both on family planning and other reproductive health care and ESP components. In the case of ESP–Reproductive Health, staff costs account for more than 45 percent of development spending, whereas for ESP–Health Services they are less than 5 percent. This imbalance tends to exaggerate the level of funding devoted to family planning services.

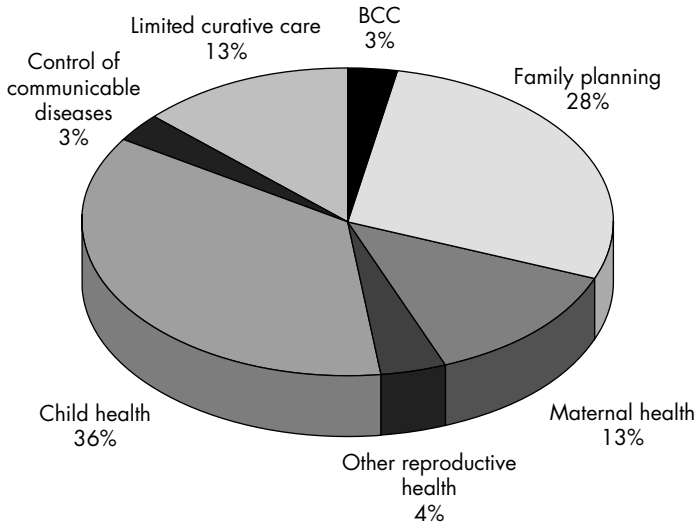
In order to adjust for both factors, we used survey data from a recent study on the costs of ESP care. The survey obtained information on the use and costs of the time spent by both clinical and field staff on each ESP subcomponent at the thana level and below. Then we used the proportionate allocation to distribute the staff portion of both the revenue and the development budget among ESP subcomponents. This gives a more accurate picture of how the spending was actually distributed among components (figure 6.5).

The allocations indicate a much wider distribution of funding than is suggested by development spending alone. Family planning spending still constitutes a substantial proportion of the total, but our work pattern analysis suggested that, at the clinical (nonfield) level, staff spent most time on child health. Maternal health received the third largest share of spending—13 percent—equal to the share of spending on limited curative care.

It is difficult from these figures to judge whether this amount is adequate. The *World Development Report* suggests that on average, 31 percent of a low-income country's health package (US$3.80 per capita out of US$12 per capita) should be spent on prenatal and delivery care (World Bank 1993).

Another way to measure relative spending is to compare actual expenditures with the budget estimates (annualized) provided in

**Figure 6.5** The Distribution of Revenue and Development Spending by ESP Component (Salary Spending Allocated According to Work Pattern Analysis)—Provisional Estimates, 1999/2000




*Note*: Construction costs are allocated in proportion to time distribution. BCC is also included as a hidden activity in each component, so the figure is probably an underestimate.
*Sources*: Management Accounting Unit and ESP cost survey, Health Economics Unit, and Institute for Economic and Private Sector Development.

the Project Implementation Plan (PIP). Although this approach assumes that the pattern of staffing is appropriate for the services being delivered, it provides a reasonable estimate of the equipment and supplies required to provide the ESP, based on quite detailed calculations of need. The comparison suggests that, while spending on child health and family planning is close to target, there was underspending in other categories of expenditure, notably maternal health, where there was a shortfall of nearly 60 percent. Many of the reasons for this underspending can be traced back to the procurement issues mentioned earlier. These trends will have to be monitored closely in future years to see whether these shortfalls are being made up.

## The Distribution of Public Expenditure

A central objective of the HPSP is to target public services to the most vulnerable: women, young children, and the poor. It is important to assess the extent to which this is actually taking place through the allocation of public subsidies as indicated by these target groups' use of services.

Analyzing public expenditures by activity and line item provides an aggregate picture of how public funds are allocated. To examine how funding is used in practice, it is necessary to map the flow of funds through the system to the final beneficiary of service using disaggregated data on spending and users. There are two key equity requirements:

- *That public services be distributed according to need.* In the case of the HPSP, the needy groups are defined as women of reproductive age (particularly around the time of pregnancy), children under the age of five, and the poor. Access to services can be measured by the number of people in each of these groups who are receiving appropriate, high-quality medical attention.
- *That services be financed according to income (ability to pay).* Financing includes both tax revenues and out-of-pocket expenditures.

The new management information system makes it possible to disaggregate to some extent admission and consultation rates by level of facility and gender. It does not, however, make it possible to disaggregate the data by income group for each ESP category. To enable us to further disaggregate utilization rates and expenditures by categories of beneficiary and service, we carried out a benefit incidence analysis (BIA) survey to complement the MIS data. A total of 1,100 patients were surveyed across nine districts at thana and union levels. Thus, with the benefit of these data, in the next three subsections we analyze equity from three perspectives: geography, gender, and poverty.

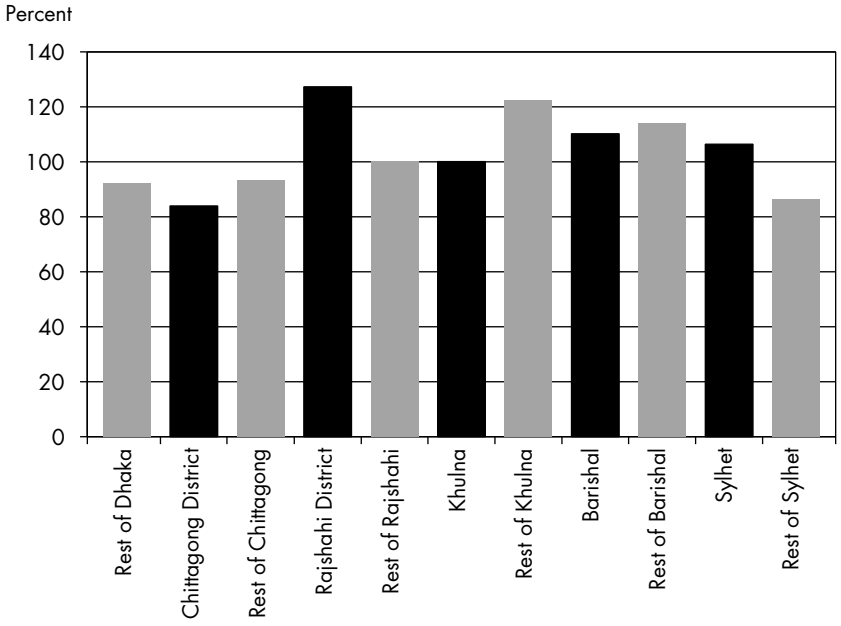
### *Geographical Analysis of Public Health Spending*

Our analysis of public expenditures by district indicates that there are significant geographical variations.[5]

The Dhaka District, with per capita expenditures exceeding Tk. 400, is excluded from the analysis because Dhaka has the largest concentration of public tertiary facilities, which are used by residents from all parts of the country. The same is true, to a lesser extent, for division capital districts such as Chittagong and Rajshahi. In all divisions, with the exception of Chittagong, the capital district has higher per capita expenditures than elsewhere in the division, reflecting its higher concentration of facilities. In Chittagong, the districts of Rangamati, Bhandarban, and Cox's Bazaar all have higher expenditures than Chittagong itself, largely because of the additional allocations given to the hill tract areas.

In order to correct for these variations within divisions, we separated towns and districts into two groups: the main division districts and all others. In the absence of other data, we assume that the intention is to equalize expenditures among all of the districts. Currently, some are above average and some are below average (see figure 6.6).

**Figure 6.6** The Distance from Equal per Capita Targets (Division and All Other Districts), 1999/2000



Only in Chittagong are per capita expenditures below target for both the main division district and all other districts. This holds true despite the fact that hill tract districts receive a preferential allocation. Khulna is right on target, while Barisal exceeds the target in both urban and rural areas.

These targets are mostly illustrative. They show what would happen if per capita allocations were equalized across the country with all other things being equal. An important qualification is that other things may not be equal. In particular, differential per capita need and patterns of facility use that cross district boundaries may mean that equal per capita allocations are not appropriate.

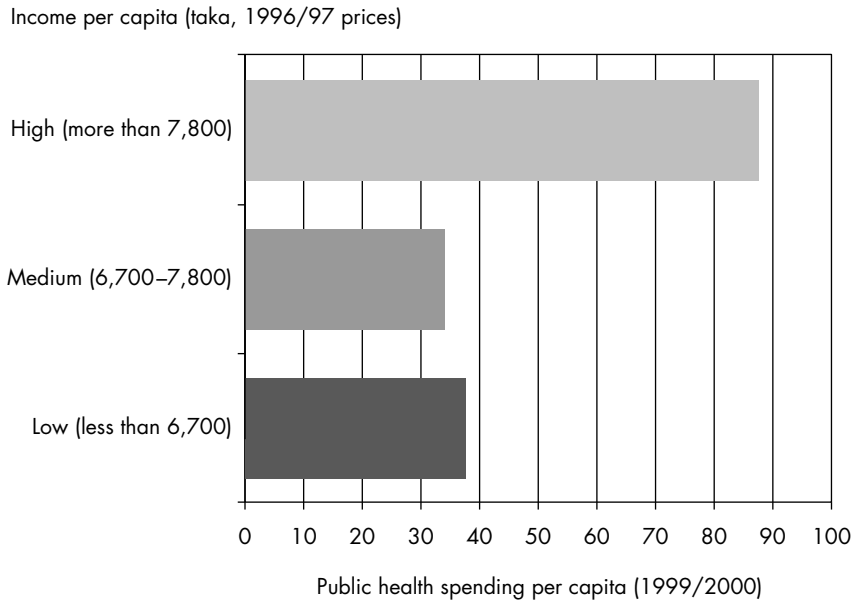
*Need.* An ideal resource allocation formula will account for the needs of the district. Per capita expenditures account for only one aspect of need—the size of the population. Other indicators of need include health status—more spending for districts with poorer health indicators—and income—more public funding for poorer areas with little capacity to finance care out-of-pocket.

One proxy of health need that is robust in many circumstances and is used in several countries is the standardized (adjusted for age and gender) mortality rate. It can be considered to be a proxy for the extent of illness in the population. Data on these rates are not readily available by district, but this approach will be considered in further analysis when data do become available.

Some information on income per capita in the 21 former districts was available. Grouping these districts into three categories, excluding the Dhaka (new) District, suggests that current allocations are not inversely related to income and, in fact, that the richest six districts are allocated more funding per capita than the poorest six districts (see figure 6.7).

*Cross-Boundary Flows.* A key claim, made in many countries, is that more resources per capita are required in urban areas to support the concentration of secondary and tertiary services used by citizens of both urban and rural areas. This is an important point because it is clearly not possible or economical to position specialist services in areas with relatively low population density.

**Figure 6.7** Per Capita Public Health Expenditures by Income of District




*Note*: Data exclude Dhaka district.
*Source*: Management Accounts Unit, Ministry of Health and Family Welfare (MOHFW), 1999/2000

In many countries, both rich and poor, evidence has demonstrated that urban citizens use such services more than rural residents do. There are two reasons for this. The first is location, as urban citizens live closer to these facilities than rural residents do. Second, urban citizens often use secondary and tertiary facilities for their primary care needs. This means that patients are using relatively expensive facilities when they should be using lower-level facilities. One reason is that urban primary care is often relatively underdeveloped.

In Bangladesh, little information is available about where those who use urban facilities and types of services live. It is important that such information be collected in order to examine whether facilities in these areas can justify the relatively higher public funding that they receive. Patient surveys that collect data on what

treatment patients receive and where they live would provide such information.

*Conclusion*. The absence of district-level health status information and information on cross-boundary flows means that the conclusions of this analysis must remain tentative. A first analysis suggests that the largely hospital bed–based criterion for allocations among districts means that there are considerable differences in per capita allocations. This holds even when the need for greater expenditures in urban areas to finance the supply of secondary and tertiary facilities is taken into account.

There are clearly differences in need, as reflected in health status indicators and per capita incomes, that may modify the aim of distributing resources equally. For this exercise, detailed district-level health data were not available. Data on per capita income and the HDI suggest that resources are not inversely distributed according to incomes—the opposite appears to be closer to the truth. More sophisticated analyses will be possible once data on health status, particularly standardized mortality rates, become available. Dhaka City has deliberately been left out of consideration because it distorts the analysis so significantly. It could indeed be argued that Dhaka is a special case because it serves the entire country with sophisticated services. This assumption should itself be tested by examining the case mix and district of residence of those using the facilities.

### *Public Health Spending on Vulnerable Groups*

*Services Distributed According to Need: Gender Use of Services*. Based on district MIS data, women have a higher rate of consultation and hospital admission than men. Men, however, account for 17 percent more bed-days than women. This is probably partly accounted for by the type of admission (case mix). Many of the female admissions are probably for childbirth, which usually involves only a short stay. In contrast, many of the male admissions are probably for lifestyle diseases such as cardiovascular disease and trauma. The

difference may also be a product of social-cultural factors that mean that men spend longer as inpatients than women.

At the primary level (thana and below), a similar pattern prevails, with women accounting for a higher proportion of admissions and men accounting for a higher proportion of bed-days.

In terms of per capita expenditures, there is much variation among districts. In the majority of districts (53 percent), per capita expenditures on women exceed those on men, which can be accounted for by childbirth and other reproductive services. In a significant minority of cases (47 percent), expenditures are actually higher for men despite the greater need for health care among women.

Based on our expenditure analysis above together with the benefit incidence analysis in this section, it is possible to make a tentative analysis of the distribution of expenditure by gender and by ESP service. It is assumed that family planning services benefit both men and women proportionately to their share of the population, although women obtain the most services.

In a number of cases, it was difficult to assign patients to one of the ESP categories for a variety of reasons. One was that the consultation found nothing wrong. Another was that the patient reported having a general symptom such as headache or diarrhea, but the consultation did not yield any definite diagnosis that was shared with the patient. In a large number of these cases, medicines were prescribed. Men and boys accounted for a higher percentage of the use of health facilities in cases where no diagnosis was provided.

We found some differences in expenditures by gender. Total attendance at health facilities was slightly higher for women than for men. However, if the use of reproductive services is excluded, then use is actually higher for men than for women. If the patterns of use found in this survey were reflected throughout the country, this would suggest that the majority of nonreproductive health spending is directed toward men and boys (55 percent). Males seem to receive more care in the categories of child health (those under the age of five) and communicable diseases than females did.

For limited curative care where a diagnosis was possible, use was slightly greater for women than for men (table 6.2).

Further work is required to determine whether the rates of admission and consultation among women are sufficient to meet their generally greater needs for health care, particularly reproductive health services. We found that around 14 percent of total ESP spending was devoted to maternal health, compared, for example, to 26 percent for family planning. Given that the HPSP assigns particular priority to reducing maternal mortality, further work is required to estimate an adequate level of spending related to needs. The full cost of providing key obstetric services such as essential obstetric care should be investigated.

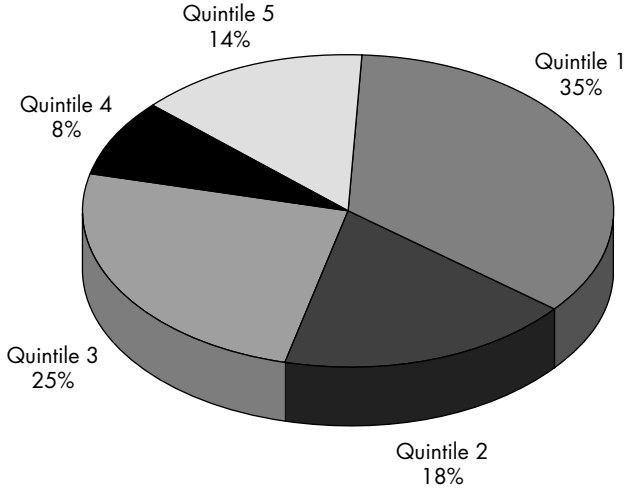
*Use of Services by the Poor*. We analyzed the use of services by the poor by dividing the BIA sample into income quintiles per figure 6.8 based on national data on rural income distribution. The quintiles were based on total household consumption rather than income. This is because estimates of consumption proved to be easier to obtain than estimates of income where there is a multiplicity of overlapping sources.[6] Using these quintiles, we discovered that public primary care facilities are primarily used by lower-income groups. Quintile 1 (lowest household consumption) accounts for

**Table 6.2** Public Expenditure Allocation of Benefits by Gender and Type of Service (crore taka)

| BENEFIT | MALE | FEMALE | TOTAL | % |
|---|---|---|---|---|
| Reproductive health | | | | |
| Family planning | 165.65 | 155.61 | 321.26 | 29.0 |
| Maternal health | n.a. | 151.17 | 151.17 | 13.6 |
| Other reproductive health | 26.15 | 23.80 | 49.95 | 4.5 |
| Child health | 226.06 | 178.83 | 404.89 | 36.5 |
| Control of communicable diseases | 24.68 | 14.02 | 38.70 | 3.5 |
| Limited curative care | 68.81 | 74.33 | 143.14 | 12.9 |
| Total | 511.35 | 597.8 | 1,109 | 100.0 |
| Percentage | 46.1 | 53.9 | | |
| Total (Nonreproductive health) | 319.6 | 267.2 | 586.73 | |
| Percentage | 55 | 45 | | |

n.a. = Not applicable.

**Figure 6.8** Use of Services by Income Quintile




*Note:* Quintile 1 represents the group with the lowest household consumption, while quintile 5 represents the group with the highest household consumption.
*Source*: BIA, Bangladesh, 2000.

more than 35 percent of visits, while quintile 5 (highest household consumption) accounts for only 14 percent (figure 6.8).

Once at the health facility, patients have different experiences. For example, those in the richest quartile have to wait a shorter time than others before being seen by a health professional.

*Paying for Services*. There is also some evidence of inequity in payment for services. For outpatient services, the survey suggested that on average, people from different income groups pay about the same—a total of about Tk. 16 per visit. Just under one-third of patients reported making a payment. Equal payments by income group imply unequal proportionate spending. One visit to a public facility costs a poor household about 19 percent of per capita household income, compared with 4 percent for households in the richest quartile.

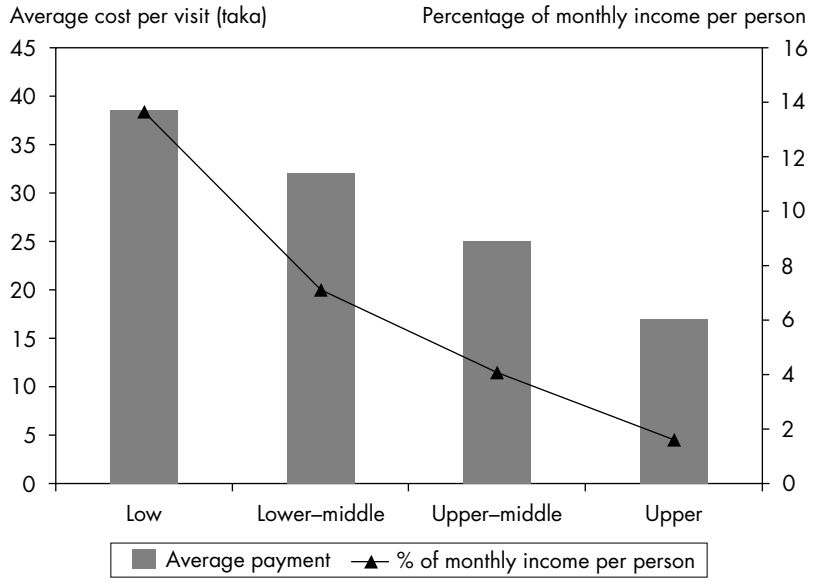
In the case of inpatient services provided by thana health complexes, the average payment made by the poorest income group

rises. For all patients using facilities, the amount is nearly Tk. 40 (13 percent of per capita monthly income), compared with about Tk. 17 for the richest group (less than 2 percent of per capita monthly income; see figure 6.9). If only those who made a payment are included, the amount rises to around 49 percent of per capita household income for the poorest households.

Some differences in per capita spending were also found between men and women. On average, men paid more for treatment than women. As outpatients men paid an average of Tk. 22, compared with Tk. 9.5 for women. As either inpatients or outpatients, men paid Tk. 51, compared with Tk. 17 for women.

Payments varied considerably by the type of service provided. The largest payments were for communicable diseases (an average of Tk. 73) and for limited curative care (Tk. 41). We found low payment rates for maternal care and family planning (less than Tk. 12 on average). A cause for concern is that the poorest group

**Figure 6.9** Average Patient Cost per Visit (percentage of per capita monthly income)



paid higher amounts for communicable diseases than any other income group (table 6.3).

The reasons for these payment patterns are complex and require more extensive investigation, as does the fact that these patterns probably create barriers to access, especially for the poor. It is clear, however, that most spending (more than 56 percent) is on medicines and other medical supplies required for treatment (figure 6.10). Around 10 percent of these payments were "unofficial" payments to doctors and other medical staff.

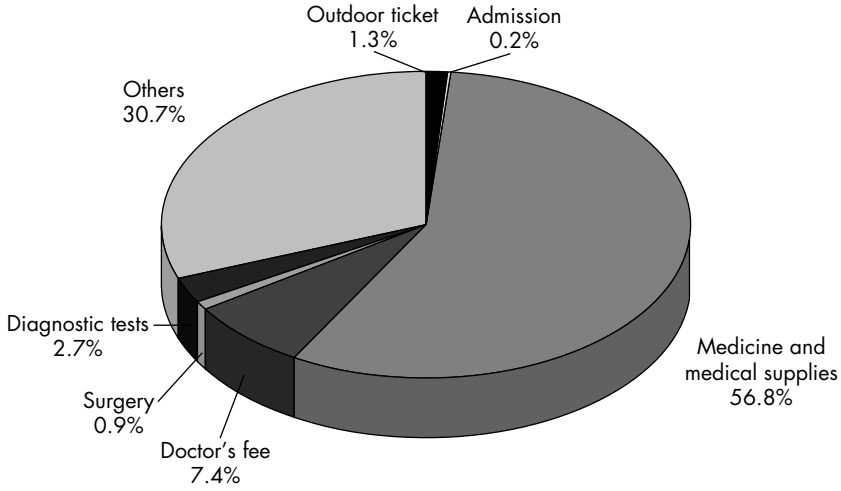
We examined the prescribing practices of providers in some detail. In many cases, we found the medicines that they prescribed were inappropriate for the symptom or illness, and the medicines were prescribed in the wrong dosage or were given to the patient with inappropriate advice. In total, more than 91 percent of patients were prescribed some medicine as a result of their consultation, and 7 percent of the prescriptions were antibiotics. These general findings are confirmed by other surveys. A recent survey, for example, found that antibiotics are routinely prescribed for a

**Table 6.3** Average Payments per User by Income Group and ESP Category (taka)

| PROGRAM CATEGORY | LOW | LOW-MIDDLE | UPPER-MIDDLE | UPPER | TOTAL |
|---|---|---|---|---|---|
| Reproductive health | | | | | |
| Family planning | 23.00 | — | 0.33 | 2.00 | 12.53 |
| Maternal health | 1.44 | 9.40 | 3.00 | — | 4.20 |
| Other | 0.38 | 125.10 | 34.75 | 60.00 | 63.04 |
| Control of communicable diseases | 79.29 | 109.67 | 24.75 | 1.40 | 73.05 |
| Child health (under five) | 2.19 | 56.77 | 12.73 | 3.29 | 13.77 |
| Limited curative care | 59.37 | 15.30 | 13.50 | 6.24 | 41.28 |
| Symptoms only | | | | | |
| Medicines prescribed | 33.74 | 12.11 | 38.64 | 28.27 | 29.10 |
| Medicines not prescribed | 1.55 | — | — | 13.00 | 1.58 |
| Further tests/hospitalization required | 21.29 | 21.60 | 9.00 | 2.00 | 17.30 |

— Not available.

**Figure 6.10** Composition of Patients' Payments for Public Medical Treatment




*Source:* Bangladesh 2000.

high proportion of disorders based on extremely short consultations (Ahmed and others 2000).

### *Key Findings*

Tentative conclusions that arise from this analysis can be summarized as follows:

- There appears to be some inequality in the use of nonreproductive health services. Males make up about 51 percent of the population yet consume about 58 percent of public spending. The difference is particularly marked in the case of communicable disease control, where males constitute 64 percent of users. Whether this difference constitutes inequity depends upon whether males have a greater need for these types of services.
- The poor make most use of services at the thana level and below, as measured by the number of patients presenting themselves at public facilities.

There is some evidence that the rich and the poor are treated differently once they arrive at the health facility and during their treatment. The poor wait longer than the rich for treatment. They also pay considerably more for services, both in relative and absolute terms. Payments for communicable diseases are high and, given the large externalities involved, are of particular concern. More investigation of the process of obtaining key services such as tuberculosis care is required to increase access to care.

There is little evidence that public subsidies favor poorer areas. Indeed, the reverse appears to be true. Further work is required to devise methods for allocating resources by geographical region.

## Medium-Term Resource Projections

According to the 1996/97 national health accounts, Bangladesh spends almost US$11 per capita on health care (Heath Economics Unit and Data International 1998). More than two-thirds of this spending is out-of-pocket. There is evidence that considerable out-of-pocket spending is on ineffective drugs. In addition, several studies have shown that people pay considerable sums to receive public services on an unofficial basis. Also, a variety of reports have pointed to the need for systems of risk-pooling that protect people from the high costs of unexpected illness. While total spending on health will increase mainly when national income itself increases, it may be possible to redirect some existing spending to make it more effective.

Two key additional sources of funding that could increase the effectiveness of the health care system are formal user charges and health insurance. It should be emphasized that both these tools have objectives that are wider than revenue generation. User charges, if retained by health facilities, have the potential to generate significant improvements in the quality of basic services (Khan and Quayyum 2000; Routh and others 2000). Insurance would extend social protection by pooling risk to protect against the costs of catastrophic illness and would act as a catalyst to make providers more efficient.

***Assumptions***

In this section, we make some crude projections of the resources that will be available to the public sector from the four main sources: the government's own revenue, donor financing, user charges, and health insurance. These projections are made on the basis of a series of assumptions, which are set out below.

*The Government's Own Revenue*. Total government revenue is assumed to increase with the growth of the economy (currently 3.5 to 4 percent, rising to 5 percent by 2005). The existing efficiency of tax collection is assumed to improve slightly over the course of five years, with the proportion of GDP (market prices) collected by the government rising from the current level of 8.9 percent to 11 percent by 2005. The projections assume that the government deficit rises to just over 6 percent in 2000/01, but declines to 4.5 percent by 2005. The proportion going to the health sector is assumed to remain constant at just over 7 percent of GDP.

*Donor Funding*. Projecting funding by Bangladesh's development partners is complicated by the fact that, during the two years of the HPSP, the donor development budget has far exceeded actual spending. This has mostly been due to problems of procurement. It is assumed that during the next financial year these problems will decline and that funding will rise to 75 percent and then 80 percent of the budget. (In 1999/2000, spending was around 65 percent of budget.)

*User Charges*. It is assumed that the current submission to the Ministry of Finance for the return of user fee revenue in the next financial year will be successful (Dave Sen and others 2000). The simulations assume that a user fee initially will be tried out in about 10 percent of facilities, then extended to the majority of facilities by 2005. We assume that charges initially will be set at the current official admission ticket levels but that, in addition, charges will be introduced for outpatient treatment and inpatient admissions based on existing evidence of what people are willing to pay. Substantial

exemptions for the poor and vulnerable are assumed, ranging from 60 percent of cases in primary care to 20 percent of cases at the tertiary level. Also, we assume that no exemptions are given for entrance tickets.

*Health Insurance*. It is assumed that insurance is developed in two ways. For the formal industrial sector, representing about 6 percent of the population, this will be in the form of payroll-based social health insurance (Ensor 2000). Coverage will be extended first to civil servants by transferring part of their monthly medical allowances to a health fund (Killingsworth 1999) and later to the formal private sector. Over a five-year period, coverage is assumed to rise to 50 percent of the formal industrial sector.

It is assumed that voluntary community insurance then will be developed through multiple schemes for the 35 percent of the population who are employed in the informal sector. Premiums are assumed to be set at a level similar to those of existing nongovernmental organization–based schemes (Desmet, Chowdhury, and Islam 1999). Coverage is assumed to rise to 5 percent of this sector in five years.

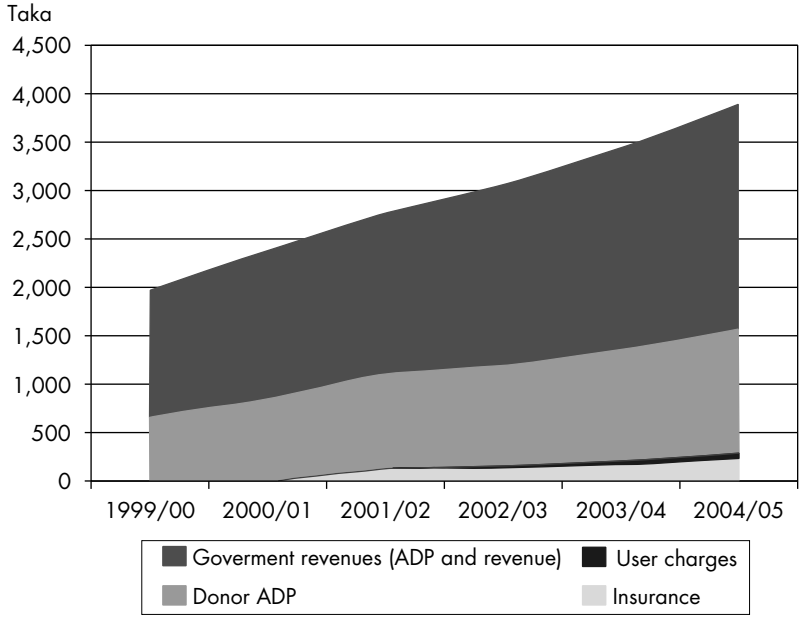
### *Projections*

Figure 6.11 shows the evolution of the revenue available for the public health sector over a five-year period until 2005. Figures are given in nominal terms and assume a constant 5.5 percent inflation rate.

The most notable aspect of the projections is the continued dominance of government and development partner funding even once insurance and user charges begin to be implemented.

The projections show that available resources will grow by 92 percent over the five years (50 percent in real terms). Government revenue and development partner funding will remain the dominant sources, accounting for 93 percent of financing. Insurance will account for 6.1 percent and user fees for 1.4 percent by 2005. Without the new sources of funding, resources would grow by about 82 percent (40 percent in real terms).

**Figure 6.11** Finance Available for Publicly Funded Health Care, 1999–2005




*Note:* ADP = Annual Development Plan.

### *Alternative Scenarios*

There are clearly many points of uncertainty in these estimates, and so the scope for sensitivity analysis is potentially wide. Thus, we investigated two further scenarios. In what we will call scenario 2 (taking the projections outlined above as scenario 1), we assume that macroeconomic variables remain the same. However, revenue from insurance would increase as a result of the following:

- Wider community insurance coverage—rising to 15 percent of the target population
- A larger formal sector—rising to 12 percent of the population
- A larger community contribution—increasing from Tk. 50 to 100 per person per year (in constant prices)

In scenario 3, again we assume that the macroeconomic variables remain the same. However, revenue from user fees would increase as a result of the following:

- Inpatient fees rising to Tk. 1,000 for tertiary and Tk. 150 for district hospital admissions by 2005
- Outpatient treatment charges rising to Tk. 70 (average) at tertiary and Tk. 30 at district hospitals

Revenue projections under each scenario are shown in table 6.4. A notable feature is that, even with relatively high user charges, overall revenue generation from this source remains small. Revenue could be increased if exemptions were reduced, but much care would have to be exercised to ensure that doing so did not adversely affect access for vulnerable groups.

Insurance has the potential to contribute a significant amount of revenue to the health sector. The qualification here is that increasing coverage, even to the modest levels suggested in the scenarios, may prove difficult within the time frame of the scenarios.

**Table 6.4** Revenue Projections under Different Assumptions (crore taka)

| | 2001 (BASELINE) | 2005 (S1) | 2005 (S2) | 2005 (S3) |
|---|---|---|---|---|
| Insurance | — | 236 | 536 | 236 |
| User charges | 12 | 55 | 55 | 76 |
| Donor ADP | 837 | 1,285 | 1,285 | 1,285 |
| Government revenues (ADP and revenue) | 1,543 | 2,315 | 2,315 | 2,315 |
| Total | 2,393 | 3,891 | 4,192 | 3,912 |
| *Percentage shares* | | | | |
| Insurance | 0.0 | 6.1 | 12.8 | 6.0 |
| User charges | 0.5 | 1.4 | 1.3 | 1.9 |
| Donor ADP | 35.0 | 33.0 | 30.6 | 32.8 |
| Government revenues (ADP and revenue) | 64.5 | 59.5 | 55.2 | 59.2 |
| Increase in revenue | | 97.0 | 112.0 | 98.0 |
| Increase in real revenue | | 51.0 | 62.0 | 52.0 |

*Note:* ADP = Annual Development Plan. S1 = Scenario 1; S2 = Scenario 2; S3 = Scenario 3.
— Not available.

A second important qualification is that obtaining insurance contributions, particularly on a voluntary basis in the case of community insurance, requires that those who are insured receive valued and significant benefits. Often these benefits involve high-cost hospital treatment. Therefore, it may not be possible to use much of this revenue to improve essential care as currently defined by the ESP.

An important question is whether the revenue projections are sufficient to cover the long-term sustainable costs of the ESP and other government services. To answer this question comprehensively, it is necessary to obtain an accurate, full-cost estimate of high-quality ESP services that take into account the necessary recurrent costs of the package together with the ongoing replacement costs of equipment purchased under the HPSP. The ESP study mentioned earlier would have provided some of this information, but the final analysis was not available at the time of writing this chapter. A more detailed analysis will be produced later.

## Conclusion

### *Macroeconomic Overview of Spending*

As much as two-thirds of HPSP financing is being channeled into the Essential Services Package. On the development side, the ESP is dominated by spending on family planning, child health, and general investments in infrastructure. When the revenue budget is included, substantial resources in terms of staff time are spent on family planning, child health, limited curative care, and, to a lesser extent, maternal health.

However, in terms of patient load, patients who fit into the child health, limited curative care, and symptoms-only categories make up the majority of users. These two different pictures are not necessarily incompatible, though. Most of the symptoms-only and limited curative care patients receive little in terms of staff time and clinic resources, although most are advised to purchase medicines. Nevertheless, an interesting aspect of the attempt to prioritize services

through the HPSP is that most patients using the ESP-level facilities are not actually demanding the ESP services that receive the most development funding.

### *Equity Analysis*

Those in the lowest income groups are the ones demanding ESP-level services. Most patients presenting themselves for treatment are from the lower-income groups, a fact that lends credence to the view that reasonably effective pro-poor targeting can be achieved by directing general subsidies to primary care facilities.

This judgement must, however, be qualified by the observation that there are inequalities in the process of obtaining care, as indicated by factors such as waiting times and patient payments. Geographical targeting of needy areas also appears to be weak, although the lack of district-level data on direct program assistance funding means that this conclusion is only tentative.

Although services and expenditure flows appear to be reasonably equally divided by gender, some potential inequities are apparent. When reproductive health care is excluded, men and boys appear to use more child health, communicable disease, and uncategorized primary-level services than women and girls.

### *Resource Envelope*

The estimates of what future resources will be available for public services in Bangladesh indicate that the main sources of funding will continue to be overwhelmingly taxes and donors. User charges may become an important source of additional revenue for local facilities, but for the country as a whole, the percentage will remain small in the medium term. Insurance does have the potential to provide significant additional funding, mostly through gradually increasing coverage of the formal sector. User charges and insurance are also ways of channeling existing out-of-pocket spending in a more effective way.

## Notes

1. For example, a recent study carried out by the Institute of Health Economics at Dhaka University found that, in two district hospitals, up to 30 percent of the outpatient caseload could be categorized as ESP services.

2. One crore equals ten million.

3. The 1997 national health accounts suggested that other line ministries, together with local government, account for about 7.5 percent of public spending (around 0.12 percent of GDP). The main ministries that spend money on health services, mostly for their own employees, are Home Affairs, Defence, Railways, and Local Government. For fiscal 1999/2000, these health costs are estimated to increase public health spending to about Tk. 169 per person (Tk. 127 at constant 1993 prices), or 1.22 percent of GDP.

4. The high ratios are for different reasons. In OECD countries, high proportionate spending on staff is the result of relatively high salaries. In contrast, in low-income countries, while salaries are often low relative to average incomes, the level of spending is also so low that spending on medical supplies gets "crowded out."

5. This analysis is based on expenditures through the government, including the revenue budget, the government-funded development budget, and reimbursable donor aid provided through the government. Figures for donor aid given directly to districts were not available at the time this report was prepared.

6. Note, however, that national data suggest that on average the poorest groups consume up to 50 percent more than their income, while the rich consume around 8 percent less. The effect is to dampen any perceived income effect.

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CHAPTER 7

# Sri Lanka's National Health Accounts: National Health Expenditures 1990–1999

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## Abstract

The chapter provides estimates of national health expenditures by source, by functional use, and by provider on an aggregate basis for 1990 to 1997 and on a preliminary basis for 1998 to 1999. Total health expenditures were equivalent to 3.2 percent of gross domestic product (GDP) in 1997, while total health expenditures per capita were 1,530 rupees (Rs.). These expenditures were equivalent to US$26 in 1997, up from US$16 in 1990. Government and private sources each accounted for approximately 50 percent of total financing throughout the decade. Government expenditures came almost exclusively from the central government's general revenues or from donor assistance. Private financing was mostly out-of-pocket spending by households, with employer spending accounting for one-tenth and commercial insurance and expenditures of nongovernmental organizations accounting for only 1 to 3 percent each. Expenditures were in the range of 3.1 to 3.5 percent

of GDP throughout the 1990s. Government expenditures initially fell as a percentage of GDP and then rose, but at the end of the decade they were no higher than the 1.7 percent of GDP they had reached in 1990. Government expenditures increased less than was expected given the growth in the economy. Private expenditures remained relatively constant as a share of GDP. The three largest components of spending by function were inpatient care services, outpatient care services, and purchases of medicines in the private sector. Inpatient care services rose from 19 percent to 23 percent of total spending by function. Inpatient care was mostly funded by government sources, and as a share of government spending, it increased from 29 percent to 37 percent. This percentage is lower than in most demographically advanced, industrial democracies. Most funding for outpatient care was from private sources. However, public facilities delivered a much greater proportion of actual services. Preventive and public health services fell from 11 percent to 6 percent of total spending as government allocations to these services fell. Health administration accounted for only 2 to 3 percent of total spending—very low by international standards. The central government share of public spending increased throughout the decade. The Western province had the highest level of expenditures, driven largely by its concentration of centrally funded facilities, and the highest level of private spending.

## Introduction

This chapter summarizes the first estimates of the Sri Lanka national health accounts (SLNHAs), developed by the Institute of Policy Studies (IPS) working under the direction of the Department of Planning, the Ministry of Health (MOH), and the MOH Health Expenditure Survey Committee. It provides estimates of

national health expenditures by source, by functional use, and by provider on an aggregate basis for 1990 to 1997 and on a preliminary basis for 1998 to 1999. It also presents estimates of aggregate spending on a per-person basis and by province.

The conceptual basis and definitions used to measure health expenditures in this chapter are based on the SLNHA Conceptual Framework.[1] This framework is based on the System of Health Accounts (SHA) published by the Organisation for Economic Co-operation and Development (OECD 2000), modified to meet national requirements. The definition of national health spending we adopted corresponds to the OECD definition but with the explicit inclusion of expenditures on medical services and goods provided by unregistered and non-Western medical providers.[2] To make international comparison possible, we also provide a duplicate set of estimates of aggregate spending using only the OECD classifications.

The tables in this chapter express expenditure in nominal terms and, where indicated, in constant prices. We have used the Central Bank gross domestic product (GDP) deflator throughout for deriving expenditures in constant terms. In the absence of a recent national census covering the whole island, the population statistics we used were IPS staff estimates, and they refer to the de facto resident population of the country and its provinces. The estimates of total government spending for 1990 to 1997 are based on the audited financial accounts of the government and other public bodies and can be considered definitive. The estimates for 1998 to 1999 are preliminary, as they are based on the nonaudited statistics of final government spending and so remain subject to revision. Therefore, our the estimates of health expenditures in 1998 and 1999 are provisional. Our figures for private expenditures are necessarily estimates, compiled mostly from survey sources. Like any such estimates, they are subject to error. However, the estimates of the level of private-source spending are accurate to within plus or minus 0.35 percent of GDP, so the estimates of total national expenditures must be subject to the same degree of absolute error.

The SLNHAs are the product of a collaborative effort over two years by many government agencies and private sector institutions in the country. While the SLNHAs meet the latest international standards, they were developed solely by Sri Lankan institutions and experts without any foreign technical input at any stage. Indeed, Sri Lanka is the first non-OECD country to produce estimates compatible with the OECD SHA 2000 standard.

The SLNHA system and the information in this chapter are a good basis from which to assess and understand trends and levels of health spending in the country. Such data provide important information to the public, to policymakers, and to researchers for evaluating health expenditure–related policies and the performance of the national health system over time.

This chapter presents only the main findings of the SLNHA findings. Detailed tables, a description of the conceptual framework, and a description of methods and data sources can be found in the full report, *Sri Lanka National Health Accounts* (Sri Lanka MOH and IPS 2001).

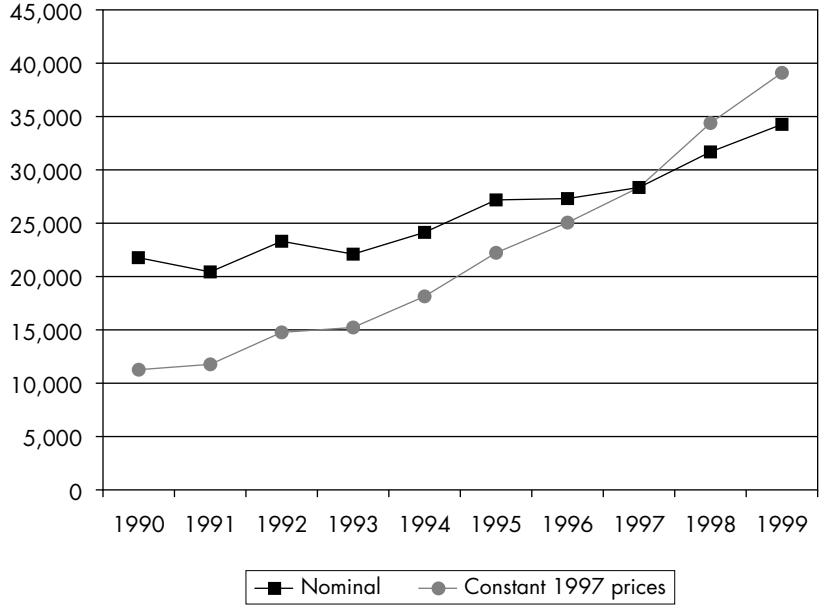
## Total Expenditures on Health

Sri Lanka's total expenditures on health were estimated to be Rs. 28.3 billion in 1997, with per capita spending at Rs. 1,530. In real terms, total expenditures on health increased by 31 percent, from Rs. 21.7 billion in 1990 to Rs. 28.4 billion in 1997. Nominal and real trends in total expenditures on health are shown in figure 7.1.

Health spending as a share of GDP ranged between 3.1 and 3.5 percent during the 1990s. There was no definite trend during this period (table 7.1). The ratio fell to 3.2 percent by 1997, but provisional estimates for 1998 and 1999 suggest that there were larger increases in those two years.

Per capita spending was US$26 in 1997, up from US$16 in 1990. Overall, per capita spending on health increased at an average annual rate of 5 percent between 1990 and 1997, compared with an average annual increase in real GDP per capita of 5 percent (table 7.2).

**Figure 7.1** Trends in Total Expenditures on Health (TEH) for Sri Lanka, 1990–99 (in million rupees)




*Source:* Sri Lanka MOH and IPS 2001.

## Expenditures by Sources of Financing

The responsibility for funding health services in Sri Lanka is shared among all levels of government as well as the nongovernment sectors. Public expenditures at current market prices rose from Rs. 5.6 billion in 1990 to Rs. 14.0 billion in 1997. Private expenditures rose from an estimated Rs. 5.6 billion to Rs. 14.3 billion during the same period (table 7.3).

Government and private sources each accounted for approximately 50 percent of total financing throughout the decade, or about 1.7 percent of GDP each (figure 7.2). The differences between them in any one year are within the margin of error, so neither can be said to be greater than the other with any certainty.

During our study period, government expenditures initially fell as a percentage of GDP and then rose. At the end of the decade,

**Table 7.1** Total Expenditures on Health (TEH), 1990–99

| EXPENDITURE | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| *At current market prices* | | | | | | | | | | |
| TEH (Rs. million) | 11,196 | 11,742 | 14,591 | 15,276 | 18,194 | 22,288 | 25,068 | 28,389 | 34,608 | 39,177 |
| Annual increase in TEH (%) | | 5 | 24 | 5 | 19 | 22 | 12 | 13 | 22 | 13 |
| GDP (Rs. million) | 321,784 | 372,345 | 425,283 | 499,565 | 579,084 | 667,772 | 768,128 | 890,272 | 1,017,986 | 1,110,653 |
| Annual increase in GDP (%) | | 16 | 14 | 17 | 16 | 15 | 15 | 16 | 14 | 9 |
| *At constant 1997 rupees* | | | | | | | | | | |
| TEH (Rs. million) | 21,659 | 20,467 | 23,126 | 22,116 | 24,090 | 27,215 | 27,307 | 28,389 | 31,798 | 34,293 |
| Annual increase in TEH (%) | | –6 | 13 | –4 | 9 | 13 | 0 | 4 | 12 | 8 |
| GDP (Rs. million) | 622,488 | 649,018 | 674,049 | 723,275 | 766,707 | 815,395 | 836,722 | 890,272 | 935,315 | 972,196 |
| Annual increase in GDP (%) | | 4 | 4 | 7 | 6 | 6 | 3 | 6 | 5 | 4 |
| Health as a proportion of GDP (%) | 3.48 | 3.15 | 3.43 | 3.06 | 3.14 | 3.34 | 3.26 | 3.19 | 3.40 | 3.53 |

*Source:* Sri Lanka MOH and IPS 2001.

**Table 7.2** Per Capita Health Expenditures, 1990–99

| EXPENDITURE | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| *At current market prices* | | | | | | | | | | |
| TEH per capita (Rs.) | 659 | 681 | 838 | 867 | 1,018 | 1,231 | 1,369 | 1,530 | 1,843 | 2,068 |
| *At constant 1997 rupees* | | | | | | | | | | |
| TEH per capita (Rs.) | 1,275 | 1,187 | 1,329 | 1,255 | 1,348 | 1,503 | 1,491 | 1,530 | 1,694 | 1,810 |
| Annual change in TEH per capita (%) | | –7 | 12 | –6 | 7 | 11 | –1 | 3 | 11 | 7 |
| GDP per capita (Rs.) | 36,632 | 37,631 | 38,727 | 41,051 | 42,917 | 45,020 | 45,685 | 47,988 | 49,820 | 51,322 |
| Annual increase in GDP per capita (%) | | 3 | 3 | 6 | 5 | 5 | 1 | 5 | 4 | 3 |
| TEH per capita (US$) | 16 | 16 | 19 | 18 | 21 | 24 | 25 | 26 | 29 | 29 |

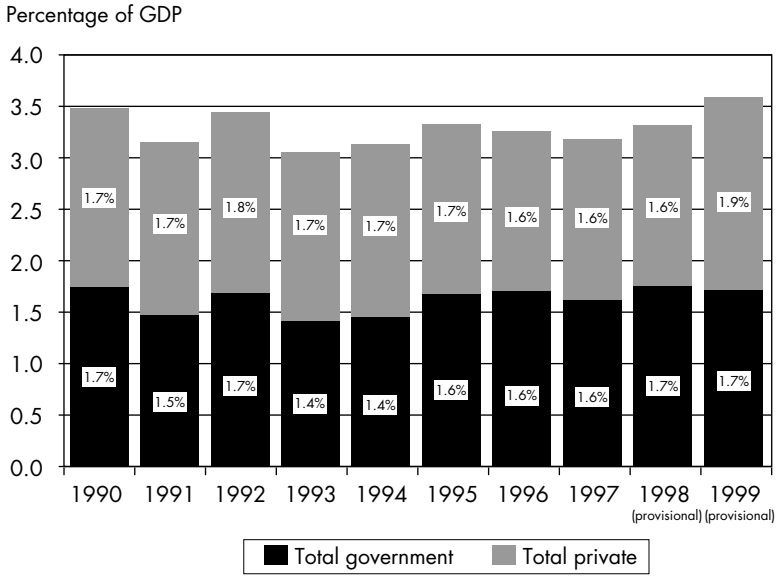
*Source:* Sri Lanka MOH and IPS 2001.

**Table 7.3** Total Expenditures on Health at Current Market Prices, 1990–99

| EXPENDITURE | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| Total public sources (Rs. billion) | 5.6 | 5.5 | 7.1 | 6.9 | 8.4 | 10.8 | 12.5 | 14.0 | 17.7 | 19.2 |
| Total private sources (Rs. billion) | 5.6 | 6.3 | 7.5 | 8.3 | 9.8 | 11.5 | 12.6 | 14.3 | 16.9 | 20.0 |
| Total national expenditures (Rs. billion) | 11.2 | 11.7 | 14.6 | 15.3 | 18.2 | 22.3 | 25.1 | 28.4 | 34.6 | 39.2 |

*Source:* Sri Lanka MOH and IPS 2001.

**Figure 7.2** National Health Expenditures by Source as Percentage of GDP, 1990–99




*Source:* Sri Lanka MOH and IPS 2001.

they were no higher than the 1.7 percent of GDP they had reached in 1990. Real incomes rose significantly during the decade, and the general tendency in any country is for government health expenditures to rise faster than income. Therefore, government expenditures increased less than would be expected given the growth in the Sri Lankan economy.

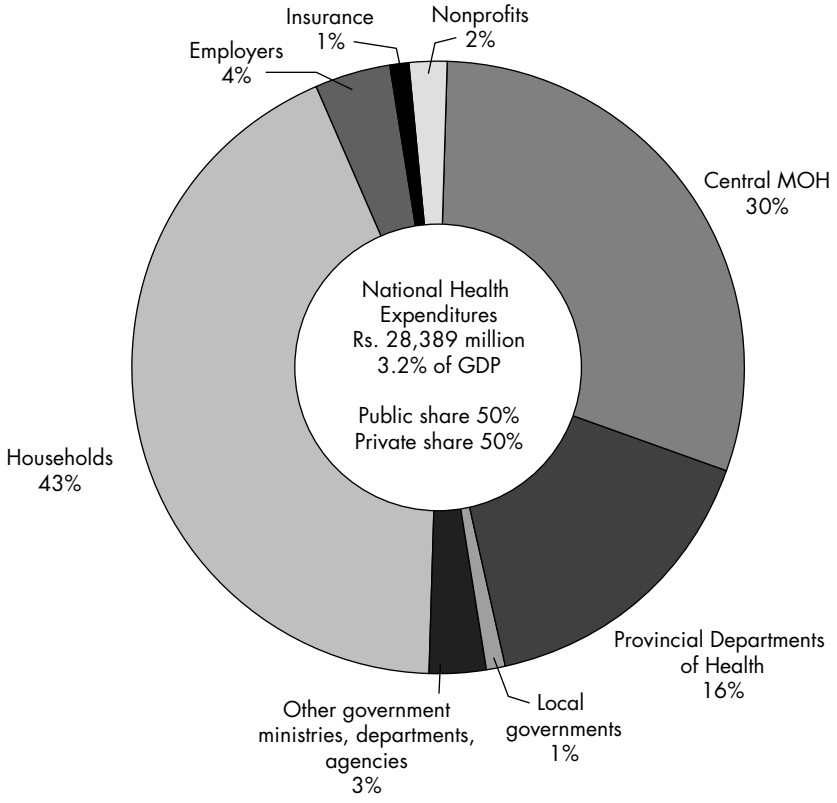
Private expenditures remained relatively constant as a share of GDP despite a substantial increase in some areas of private spending, such as spending at private hospitals and by commercial insurance companies.[3] The constant private expenditure share is explained by a compensating decrease in household spending on traditional medicine, continuing a trend that had been observed in the Central Bank's Consumer Finance Surveys since the 1960s.

Government expenditures come almost exclusively from the central government's general revenues or from donor assistance, which amounts to less than 10 percent of total public sector spending.

Other sources, such as the Employees Provident Fund and provincial councils' own revenues, fund a very small amount. Private financing mostly consists of out-of-pocket spending by households, with employer spending accounting for one-tenth and commercial insurance and nongovernmental organization (NGO) expenditures accounting for only 1 to 3 percent each. Household spending accounted for 43 percent of total expenditures in 1997 (figure 7.3).

Central government ministries and departments accounted for a growing share of total public sector expenditures during the decade, with the provincial councils' share declining to 31 percent

**Figure 7.3** National Health Expenditure by Source, 1997



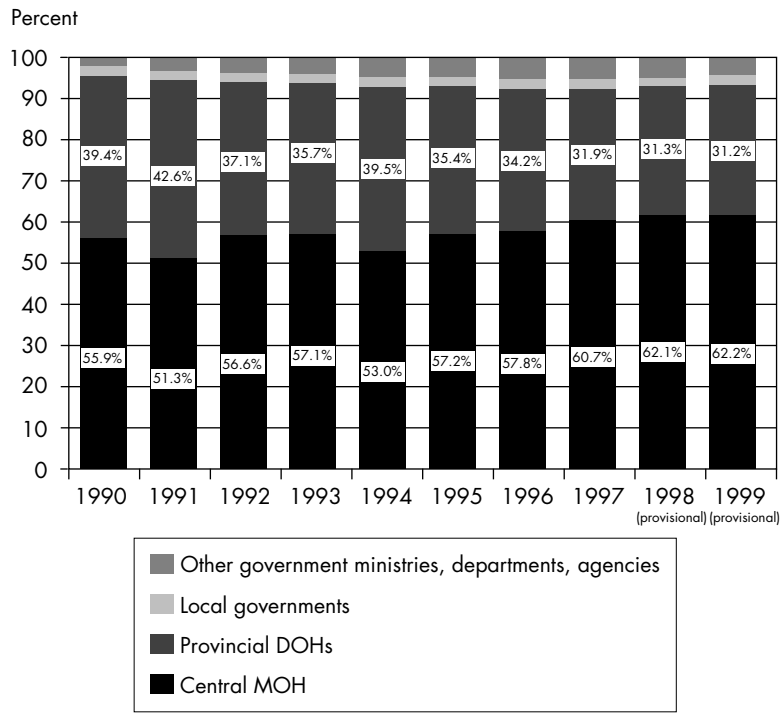

*Source:* Sri Lanka MOH and IPS 2001.

(figure 7.4). The bulk of central government expenditures were from the Ministry of Health, with a small, relatively constant proportion from other ministries, such as the Ministries of Social Services, Labour, and Defence. Local governments consist of both municipal councils and urban councils. Local government expenditures as a share of total government expenditures fell from 2.9 percent in 1991 to 2.3 percent in 1997.

## Expenditures by Function

Expenditures in the SLNHAs are classified according to the five-digit SLNHA Functional Classification system, which is based on

**Figure 7.4** Government Spending by Administrative Level, 1990–99




*Source:* Sri Lanka MOH and IPS 2001.

the OECD International Classification of Health Accounts (ICHA) system. Developing estimates of the functional breakdown of expenditures using the ICHA system required considerable effort and represented the major part of the work involved in establishing the SLNHA system. For policymaking use in Sri Lanka, the ICHA system was modified into the SLNHA Functional Classification system, principally by adding more detailed subcategories to several of the ICHA categories. This adaptation was done in such a way that all SLNHA results can be easily mapped back into the ICHA categories, thus facilitating easy reporting of all results using the international standard. The overall experience is that the ICHA represents a feasible and sufficiently adaptable classification system for making functional disaggregations in developing country NHA systems.

The largest share of total national spending, averaging about 78 percent annually, went to personal health services. Preventive and public health services accounted for about 2 percent of the total. Capital investment ranged from 9 percent to 15 percent, with the higher figures being driven by investments by private hospitals in recent years (table 7.4).

An important feature of expenditures in Sri Lanka is that inpatient services account for a relatively high and growing share of national expenditures. Inpatient care services rose from 10 percent to 19 percent of total spending by function during the 1990s. This share is probably high by developing country standards but is low compared with most OECD economies, where inpatient spending accounts for about 35 to 45 percent of total spending.

There is a clear distinction between how public and private expenditures are allocated. Table 7.5 compares public and private expenditures by function for 1997, when total public and private expenditures were approximately equal. As is evident, private spending was used mostly for ambulatory care and purchases of medicines, while government spending was used mostly to fund inpatient services, public health services, and capital investment. Figures 7.5 and 7.6 show the components of public and private expenditures in 1997.

**Table 7.4** Total Expenditures by Function, 1990–99

| FUNCTION | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| Services of curative care (%) | 41 | 44 | 42 | 45 | 48 | 49 | 50 | 51 | 47 | 47 |
| Inpatient care (%) | 19 | 20 | 19 | 20 | 23 | 24 | 24 | 25 | 23 | 23 |
| Ambulatory care (%) | 22 | 24 | 23 | 25 | 26 | 25 | 26 | 26 | 24 | 24 |
| Services of rehabilitative care (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ancillary services to medical care (%) | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Medical goods dispensed to outpatients (%) | 26 | 28 | 28 | 28 | 28 | 27 | 25 | 25 | 24 | 26 |
| Preventive and public health services (%) | 11 | 10 | 9 | 10 | 8 | 7 | 7 | 6 | 6 | 6 |
| Health program administration and insurance (%) | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Capital formation (%) | 15 | 10 | 14 | 9 | 8 | 10 | 12 | 10 | 17 | 13 |
| TEH (Rs. million) | 11,196 | 11,742 | 14,591 | 15,276 | 18,194 | 22,288 | 25,068 | 28,389 | 34,608 | 39,177 |
| TEH per capita (Rs.) | 659 | 681 | 838 | 867 | 1,018 | 1,231 | 1,369 | 1,530 | 1,843 | 2,068 |
| *Memorandum items* | | | | | | | | | | |
| Other health related functions (% of all expenditures) | 3 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Total health expenditures including health-related expenditures (Rs. million) | 11,507 | 12,321 | 15,220 | 16,011 | 19,183 | 23,473 | 26,398 | 29,861 | 36,239 | 41,072 |

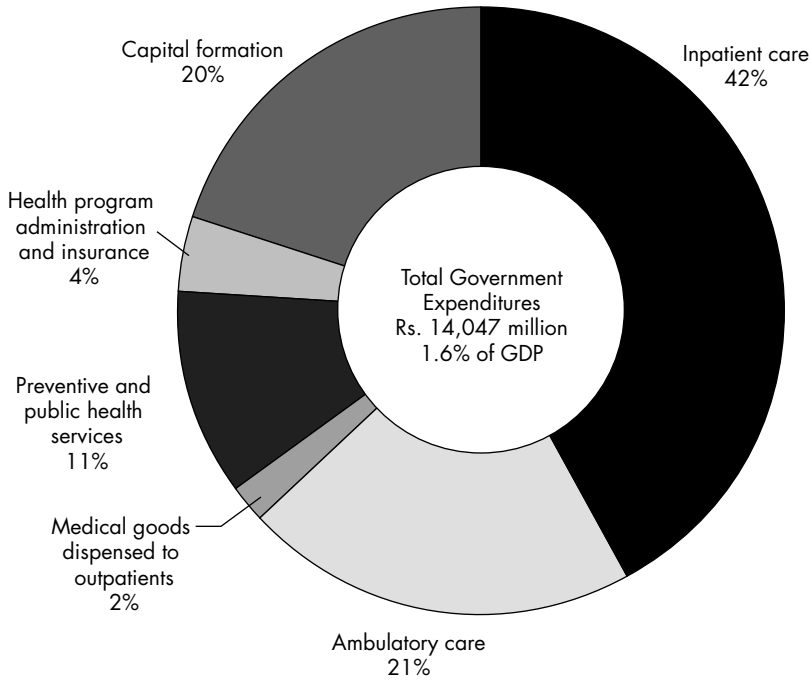
*Source:* Sri Lanka MOH and IPS 2001.

**Table 7.5** Relative Share of Funding by Public and Private Expenditures to Selected Functional Categories in 1997

| FUNCTION | PUBLIC (%) | PRIVATE (%) |
|---|---|---|
| Hospital services | 81 | 19 |
| Ambulatory care services | 39 | 61 |
| Medical goods dispensed | 5 | 95 |
| Preventive and public health services | 87 | 13 |
| Capital expenditures | 99 | 1 |

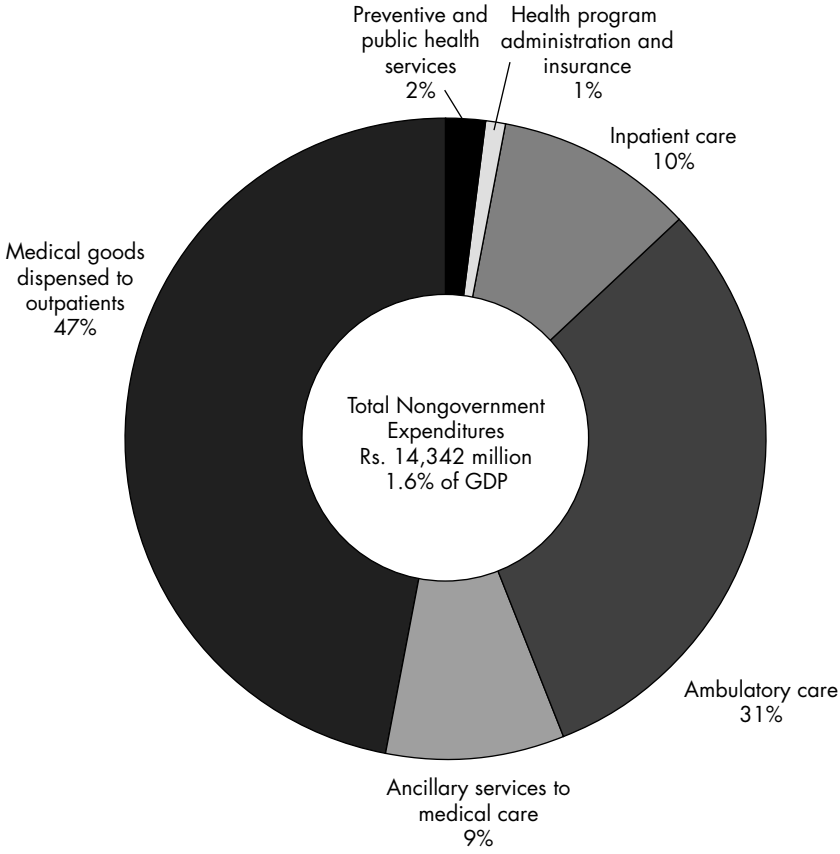
*Source:* Sri Lanka MOH and IPS 2001.

**Figure 7.5** Total Government Expenditures by Function, 1997




*Note:* Total government expenditures for services of rehabilitative care and ancillary services to medical care were 0 percent.
*Source:* Sri Lanka MOH and IPS 2001.

**Figure 7.6** Total Nongovernment Expenditures by Function, 1997




*Note:* Total nongovernment expenditures for services of rehabilitative care were 0 percent.
*Source:* Sri Lanka MOH and IPS 2001.

The three administrative levels of government—central, provincial, and local—also had distinctive expenditure patterns. More than two-thirds of hospital and ambulatory care expenditures and nearly all expenditures on medical goods were incurred at the central government level (table 7.6). Provincial councils were responsible for about one-third of hospital and ambulatory care expenditures. Preventive and public health services were distributed across the three levels, with provincial councils spending more than half and local governments the least. Note that the largest

**Table 7.6** Relative Share of Funding by Central, Provincial, and Local Governments to Selected Functional Categories in 1997

| FUNCTION | CENTRAL GOVERNMENT (%) | PROVINCIAL COUNCIL (%) | LOCAL GOVERNMENT (%) |
|---|---|---|---|
| Hospital services | 69 | 31 | 0 |
| Ambulatory care services | 64 | 33 | 3 |
| Medical goods dispensed | 98 | 0 | 2 |
| Preventive and public health services | 37 | 56 | 7 |
| Capital expenditures | 74 | 24 | 2 |

*Source:* Sri Lanka MOH and IPS 2001.

proportion of local government expenditures in this area was allocated to health-related expenditures such as environmental health, especially sanitation, which are not included in the SLNHA estimate of total expenditures on health.

Inpatient care as a share of government spending increased from 13 percent in 1990 to 28 percent in 1997 (table 7.7). This percentage is lower than in most demographically advanced, industrial democracies. Most funding for outpatient care was from private sources (table 7.8). However, public facilities delivered a much higher proportion of actual services. Spending on preventive and public health services fell from 11 percent to 6 percent of total spending as government allocations to these services fell. Health administration accounted for only 2 to 3 percent of total spending—very low by international standards (in the United States, this proportion is 10 percent).

## Expenditures by Provider

The largest proportion of government expenditures was incurred at hospitals, while almost all private expenditures (96 percent in 1997) were spent at private health care facilities that include both hospital and outpatient centers, as well as retail distributors of medicines (tables 7.9 to 7.11 and figures 7.7 and 7.8).

Government and private hospitals accounted for 38 percent of total expenditures on health. Central government hospitals

*(text continues on p. 183)*

**Table 7.7** Total Government Expenditures by Function, 1990–99

| FUNCTION | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| Services of curative care (%) | 45 | 52 | 49 | 54 | 61 | 61 | 59 | 62 | 53 | 56 |
| Inpatient care (%) | 29 | 34 | 32 | 35 | 40 | 40 | 39 | 41 | 35 | 37 |
| Ambulatory care (%) | 16 | 18 | 17 | 19 | 21 | 21 | 20 | 21 | 18 | 19 |
| Services of rehabilitative care (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ancillary services to medical care (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Medical goods dispensed to outpatients (%) | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Preventive and public health services (%) | 20 | 21 | 17 | 20 | 15 | 13 | 13 | 11 | 10 | 11 |
| Health program administration and insurance (%) | 4 | 4 | 4 | 3 | 4 | 3 | 4 | 4 | 3 | 4 |
| Capital formation (%) | 30 | 22 | 28 | 20 | 18 | 20 | 23 | 20 | 32 | 27 |
| TEH (Rs. million) | 5,619 | 5,450 | 7,063 | 6,935 | 8,359 | 10,800 | 12,507 | 14,047 | 17,739 | 19,191 |
| TEH per capita (Rs.) | 331 | 316 | 406 | 394 | 468 | 596 | 683 | 757 | 945 | 1,013 |
| *Memorandum items* | | | | | | | | | | |
| Other health-related functions (% of all expenditures) | 4 | 9 | 7 | 9 | 10 | 9 | 9 | 9 | 8 | 8 |
| Total health expenditures including health-related expenditures (Rs. million) | 5,882 | 5,973 | 7,628 | 7,595 | 9,260 | 11,885 | 13,721 | 15,385 | 19,207 | 20,909 |

*Source:* Sri Lanka MOH and IPS 2001.

**Table 7.8** Total Nongovernment Expenditures by Function, 1990–99

| FUNCTION | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| Services of curative care (%) | 36 | 38 | 36 | 38 | 38 | 38 | 41 | 41 | 40 | 37 |
| Inpatient care (%) | 8 | 8 | 8 | 9 | 8 | 9 | 9 | 9 | 10 | 9 |
| Ambulatory care (%) | 28 | 30 | 28 | 30 | 30 | 29 | 31 | 31 | 31 | 28 |
| Services of rehabilitative care (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ancillary services to medical care (%) | 10 | 9 | 10 | 10 | 10 | 10 | 10 | 9 | 10 | 10 |
| Medical goods dispensed to outpatients (%) | 52 | 51 | 52 | 50 | 50 | 50 | 47 | 47 | 47 | 50 |
| Preventive and public health services (%) | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 2 | 2 |
| Health program administration and insurance (%) | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Capital formation (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TEH (Rs. million) | 5,577 | 6,291 | 7,528 | 8,340 | 9,836 | 11,488 | 12,562 | 14,342 | 16,870 | 19,986 |
| TEH per capita (Rs.) | 328 | 365 | 432 | 473 | 551 | 634 | 686 | 773 | 899 | 1,055 |
| *Memorandum items* | | | | | | | | | | |
| Other health-related functions (% of all expenditures) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Total health expenditures including health-related expenditures (Rs. million) | 5,625 | 6,348 | 7,592 | 8,416 | 9,923 | 11,588 | 12,678 | 14,476 | 17,033 | 20,164 |

*Source:* Sri Lanka MOH and IPS 2001.

**Table 7.9** Total National Expenditures by Type of Provider, 1990–99

| PROVIDER | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| Central government hospitals (%) | 21 | 16 | 21 | 19 | 20 | 19 | 20 | 21 | 21 | 21 |
| Provincial hospitals (%) | 13 | 13 | 12 | 11 | 12 | 14 | 13 | 13 | 14 | 12 |
| Local government hospitals (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nursing home and residential facilities (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nonhospital medical service facilities (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Provincial nonhospital medical service facilities (%) | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 |
| Local government nonhospital facilities (%) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Public/community health services (%) | 7 | 8 | 7 | 7 | 5 | 6 | 6 | 6 | 6 | 4 |
| Government health administration (%) | 4 | 5 | 4 | 3 | 3 | 4 | 5 | 5 | 7 | 8 |
| Government entities providing health care as secondary care (%) | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 1 |
| Nonprofit institutions (%) | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 |
| Insurers (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private health care providers (%) | 48 | 52 | 50 | 53 | 52 | 50 | 48 | 49 | 47 | 49 |
| Other entities (%) | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Foreign entities (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TEH (Rs. million) | 11,196 | 11,742 | 14,591 | 15,276 | 18,194 | 22,288 | 25,068 | 28,389 | 34,608 | 39,177 |
| TEH per capita (Rs.) | 659 | 681 | 838 | 867 | 1,018 | 1,231 | 1,369 | 1,530 | 1,843 | 2,068 |

*Source:* Sri Lanka MOH and IPS 2001.

**Table 7.10** Total Government Expenditures by Type of Provider, 1990–99

| PROVIDER | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| Central government hospitals (%) | 41 | 34 | 43 | 42 | 42 | 38 | 40 | 41 | 39 | 41 |
| Provincial hospitals (%) | 26 | 28 | 24 | 24 | 26 | 29 | 27 | 27 | 27 | 24 |
| Local government hospitals (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nursing home and residential facilities (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nonhospital medical service facilities (%) | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Provincial nonhospital medical service facilities (%) | 5 | 6 | 5 | 6 | 6 | 5 | 4 | 3 | 3 | 4 |
| Local government nonhospital facilities (%) | 1 | 2 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 |
| Public/community health services (%) | 13 | 16 | 14 | 15 | 12 | 12 | 11 | 12 | 11 | 8 |
| Government health administration (%) | 8 | 10 | 8 | 7 | 7 | 9 | 10 | 9 | 13 | 16 |
| Government entities providing health care as secondary care (%) | 4 | 2 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 3 |
| Nonprofit institutions (%) | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Insurers (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private health care providers (%) | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| Other entities (%) | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 |
| Foreign entities (%) | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| TEH (Rs. million) | 5,619 | 5,450 | 7,063 | 6,935 | 8,359 | 10,800 | 12,507 | 14,047 | 17,739 | 19,191 |
| TEH per capita (Rs.) | 331 | 316 | 406 | 394 | 468 | 596 | 683 | 757 | 945 | 1,013 |

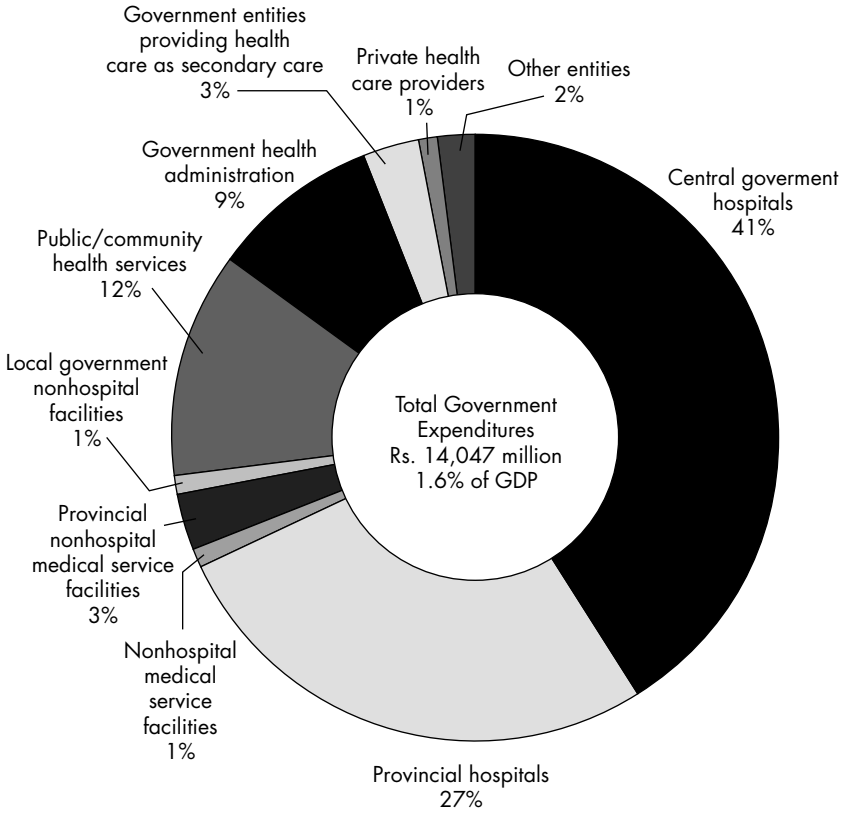
*Source:* Sri Lanka MOH and IPS 2001.

**Table 7.11** Total Nongovernment Expenditures by Type of Provider, 1990–99

| PROVIDER | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| Central government hospitals (%) | 0.77 | 0.88 | 0.85 | 0.78 | 0.86 | 0.91 | 0.95 | 1.06 | 1.26 | 1.42 |
| Provincial hospitals (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local government hospitals (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nursing home and residential facilities (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nonhospital medical service facilities (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Provincial nonhospital medical service facilities (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local government nonhospital facilities (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Public/community health services (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Government health administration (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Government entities providing health care as secondary care (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nonprofit institutions (%) | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Insurers (%) | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Private health care providers (%) | 97 | 97 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 |
| Other entities (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Foreign entities (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TEH (Rs. million) | 5,577 | 6,291 | 7,528 | 8,340 | 9,836 | 11,488 | 12,562 | 14,342 | 16,870 | 19,986 |
| TEH per capita (Rs.) | 328 | 365 | 432 | 473 | 551 | 634 | 686 | 773 | 899 | 1,055 |

*Source:* Sri Lanka MOH and IPS 2001.

**Figure 7.7** Total Government Expenditures by Provider, 1997

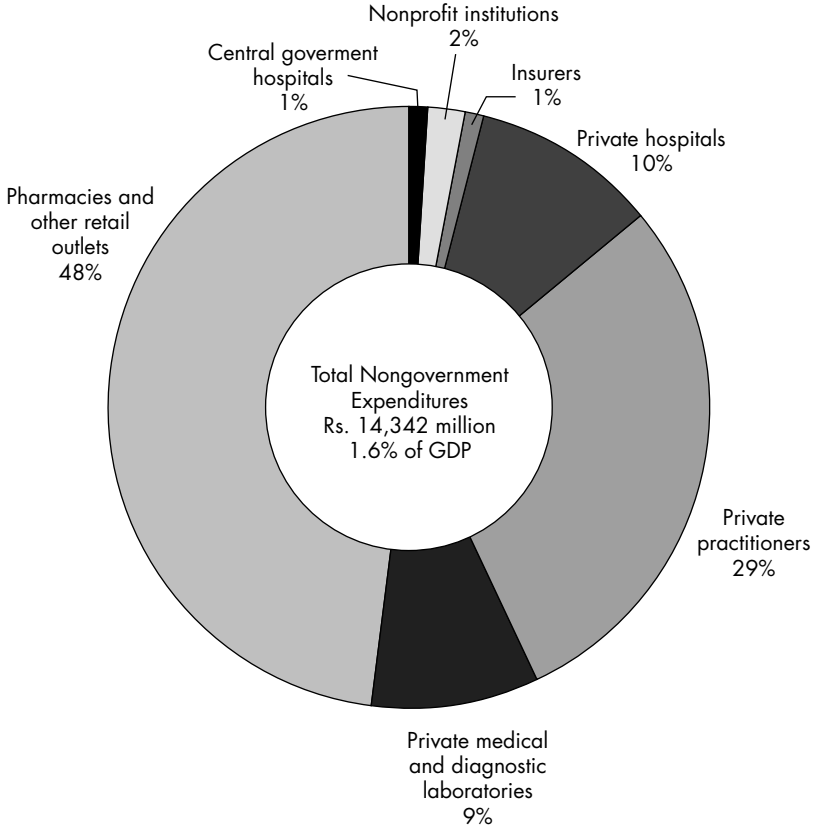



*Note:* Total government expenditures at local government hospitals and nursing home residential facilities were 0 percent.
*Source:* Sri Lanka MOH and IPS 2001.

accounted for two-thirds of government expenditures and private hospitals for more than 95 percent of private expenditures on hospitals. Of all expenditures on hospitals, private hospitals accounted for 13 percent, in contrast with the approximately 5 percent of total inpatient admissions that they provide nationally. Nonprofit institutions accounted for less than 1 percent of all expenditures.

Most private expenditures were made at pharmacies and other retail outlets. Purchases of medicines and medical supplies accounted for most of these expenditures. The other significant

**Figure 7.8** Total Nongovernment Expenditures by Provider, 1997




*Source:* Sri Lanka MOH and IPS 2001.

element of private expenditures was on private practitioners, who accounted for 29 percent of all private spending on health.

## Expenditures by Province

Tables 7.12 to 7.15 summarize trends in spending by province. The figures refer to all expenditures that can be directly attributed to a province by location, whether the spending was by provincial councils, local governments, central ministries, or households.

**Table 7.12** Per Capita Expenditures by Source, 1997 (in million rupees)

| PROVINCE | CENTRAL GOVERNMENT | PROVINCIAL COUNCIL & LOCAL GOVERNMENT | OTHER GOVERNMENT | TOTAL GOVERNMENT | NONGOVERNMENT | TOTAL |
|---|---|---|---|---|---|---|
| Central | 289 | 266 | 7 | 562 | 643 | 1,205 |
| North-Central | 122 | 424 | 0 | 546 | 732 | 1,278 |
| North-Eastern | 208 | 346 | 6 | 560 | 379 | 940 |
| North-Western | 181 | 249 | 0 | 430 | 578 | 1,008 |
| Sabragamuwa | 245 | 228 | 2 | 474 | 724 | 1,199 |
| Southern | 255 | 289 | 0 | 544 | 672 | 1,215 |
| Uva | 83 | 364 | 0 | 446 | 484 | 930 |
| Western | 593 | 196 | 30 | 820 | 1,337 | 2,157 |

*Source:* Sri Lanka MOH and IPS 2001.



**Table 7.13** Per Capita Expenditures by Central Government, 1990–99 (in constant 1997 rupees)

| PROVINCE | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| Central | 121 | 149 | 167 | 180 | 237 | 303 | 286 | 289 | 298 | 342 |
| North-Central | 21 | 39 | 25 | 26 | 23 | 107 | 107 | 122 | 270 | 266 |
| North-Eastern | 46 | 66 | 59 | 72 | 116 | 202 | 199 | 208 | 322 | 346 |
| North-Western | 17 | 29 | 20 | 21 | 18 | 76 | 81 | 181 | 184 | 249 |
| Sabragamuwa | 11 | 22 | 13 | 14 | 13 | 84 | 148 | 245 | 255 | 289 |
| Southern | 82 | 96 | 92 | 129 | 140 | 216 | 225 | 255 | 279 | 373 |
| Uva | 15 | 32 | 18 | 20 | 18 | 96 | 90 | 83 | 179 | 190 |
| Western | 312 | 336 | 399 | 423 | 526 | 623 | 591 | 593 | 529 | 596 |

*Source:* Sri Lanka MOH and IPS 2001.

**Table 7.14** Per Capita Expenditures by Provincial Council and Local Government, 1990–99 (in constant 1997 rupees)

| PROVINCE | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| Central | 282 | 265 | 268 | 209 | 264 | 296 | 271 | 266 | 276 | 275 |
| North-Central | 469 | 429 | 417 | 356 | 447 | 492 | 483 | 424 | 567 | 614 |
| North-Eastern | 233 | 222 | 249 | 219 | 230 | 262 | 329 | 346 | 380 | 382 |
| North-Western | 317 | 290 | 304 | 244 | 305 | 313 | 309 | 249 | 298 | 314 |
| Sabragamuwa | 274 | 251 | 255 | 210 | 292 | 386 | 305 | 228 | 250 | 242 |
| Southern | 273 | 262 | 260 | 213 | 268 | 259 | 263 | 289 | 295 | 278 |
| Uva | 388 | 356 | 368 | 303 | 391 | 392 | 386 | 364 | 431 | 432 |
| Western | 176 | 177 | 183 | 183 | 194 | 204 | 202 | 196 | 209 | 219 |

*Source:* Sri Lanka MOH and IPS 2001.



**Table 7.15** Total Expenditure on Health per Capita Not Directly Attributable to Any Province, 1990–99 (in constant 1997 rupees)

| SERVICE | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| National collective services | 87 | 81 | 85 | 84 | 75 | 93 | 98 | 114 | 107 | 93 |
| Islandwide medical services | 163 | 79 | 155 | 99 | 81 | 89 | 104 | 84 | 152 | 119 |

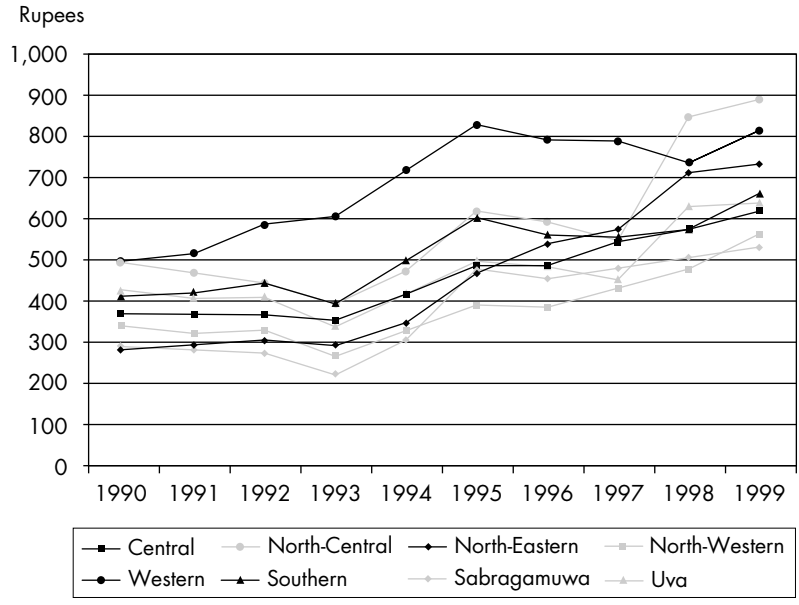
*Source:* Sri Lanka MOH and IPS 2001.

Expenditures that are excluded under this definition include countrywide medical services that cannot be attributed directly to any specific province, such as medical services for prisoners or the armed forces, and national collective services that are of national benefit, such as HIV/AIDS prevention, malaria control, and the regulation of pharmaceutical products.

The share of central government in public spending increased throughout the decade. From 1990 to 1994, provincial council spending fluctuated between 36 percent and 42 percent of total government health spending. From 1994 onward, provincial councils' share of spending dropped sharply, from 40 percent to 31 percent.

Government expenditures by province vary almost twofold in per capita terms. The range of expenditure levels has typically been 75 percent to 150 percent of the median province (figure 7.9). The

**Figure 7.9** Total Government Expenditures per Capita by Province (in constant 1997 rupees)




*Source:* Sri Lanka MOH and IPS 2001.

Western province had the highest level of expenditures, driven largely by its concentration of centrally funded facilities, and the highest level of private spending.

## International Comparisons

Much of the policy contribution of reliable national health expenditure data in OECD countries is related to the implications arising from comparisons between countries. Similarly, much of the interest of policymakers in developing countries in such data is related to knowing how their expenditures compare with those of similar countries. This section discusses some of the technical issues that have bedeviled such comparisons and how this approach addresses these issues, before turning to some comparisons.

### *Data Comparison Issues*

International comparison of health expenditures should be undertaken with caution because there was no uniform standard for measuring and reporting health expenditures prior to the development of the OECD System of Health Accounts (SHA) (OECD 2000). Statistics for national expenditures on health, particularly for developing countries, are rarely comparable, owing to differences in the concepts and boundaries that define health spending, in accounting methodologies, and in classifications. These problems are greatest when comparing private expenditures among countries. This situation should gradually improve in the coming years thanks to the new OECD SHA and other efforts to enhance the international comparability of health expenditure statistics both in developing countries and in the Asia-Pacific region. Since the SLNHAs are based on the OECD SHA framework, estimates will be comparable with the new SHA-compatible estimates of national health expenditures that should become available for both industrial and developing countries in the next few years.

There is currently no reliable database of national health expenditures covering both industrial and developing countries. The only database of any reliability is OECD Health Data, compiled and maintained by the OECD Secretariat for member states. Other compendiums of health expenditure data published by the World Bank (1993) and by the World Health Organization (WHO 2000) are not useful for making international comparisons, as most of the national data are either imputed or of questionable reliability. In the absence of reliable international statistics, we have based our comparisons in this section on OECD Health Data and on data reported by members of the Asia-Pacific National Health Accounts Network (APNHAN).

No comparison of health expenditures among countries can show whether a particular level of expenditure is either appropriate or effective. However, comparisons are useful in that they point to certain general patterns in spending and because they may point up differences between one country and another that may be important under specific circumstances.

### *Levels of Expenditure*

From a global perspective, health expenditures in Sri Lanka are low both as a percentage of GDP and on a per capita basis (table 7.16). Health spending increases as a country's per capita income increases, so expenditure levels in Sri Lanka are not very different from those of countries at a similar level of economic development. However, as a share of GDP, expenditures in Sri Lanka (at 3.2 percent) are lower than those of most low-middle income or low-income developing countries for which estimates are available. Table 7.16 presents some comparisons.

### *Expenditures by Source*

Unlike the advanced capitalist economies of the OECD, Sri Lanka funds a large share of its overall health expenditures from private sources. A 50 percent share for spending by the public sector is significantly less than the typical 85 to 95 percent in most OECD

**Table 7.16** National Health Expenditures in Selected Asia-Pacific and Organisation for Economic Co-operation and Development Countries and Economies

| COUNTRY/ECONOMY | YEAR | PER CAPITA INCOME (PPP$) | HEALTH EXPENDITURE PER CAPITA (PPP$) | HEALTH EXPENDITURE AS % GDP |
|---|---|---|---|---|
| Bangladesh | 1997 | 1,090 | 43 | 3.9 |
| Sri Lanka | 1997 | 2,460 | 79 | 3.2 |
| Indonesia | 1995 | 3,050 | 59 | 1.9 |
| China | 1997 | 3,070 | 138 | 4.5 |
| Philippines | 1997 | 3,670 | 131 | 3.6 |
| Thailand | 1996 | 6,650 | 247 | 3.7 |
| Korea, Republic of | 1997 | 13,430 | 674 | 5.0 |
| New Zealand | 1997 | 15,780 | 1,199 | 7.6 |
| Taiwan, China | 1997 | 16,000 | 843 | 5.3 |
| Australia | 1997 | 19,510 | 1,619 | 8.3 |
| Sweden | 1997 | 20,429 | 1,757 | 8.6 |
| United Kingdom | 1997 | 20,430 | 1,389 | 6.8 |
| France | 1997 | 21,294 | 2,044 | 9.6 |
| Germany | 1997 | 22,081 | 2,363 | 10.7 |
| Netherlands | 1997 | 22,639 | 1,924 | 8.5 |
| Canada | 1997 | 23,745 | 2,185 | 9.2 |
| Hong Kong, China | 1996 | 23,950 | 1,102 | 4.6 |
| Japan | 1997 | 24,400 | 1,830 | 7.5 |
| Switzerland | 1997 | 26,007 | 2,601 | 10.0 |
| United States | 1997 | 29,401 | 4,087 | 13.9 |

*Sources:* OECD health data, APNHAN sources, and national publications.

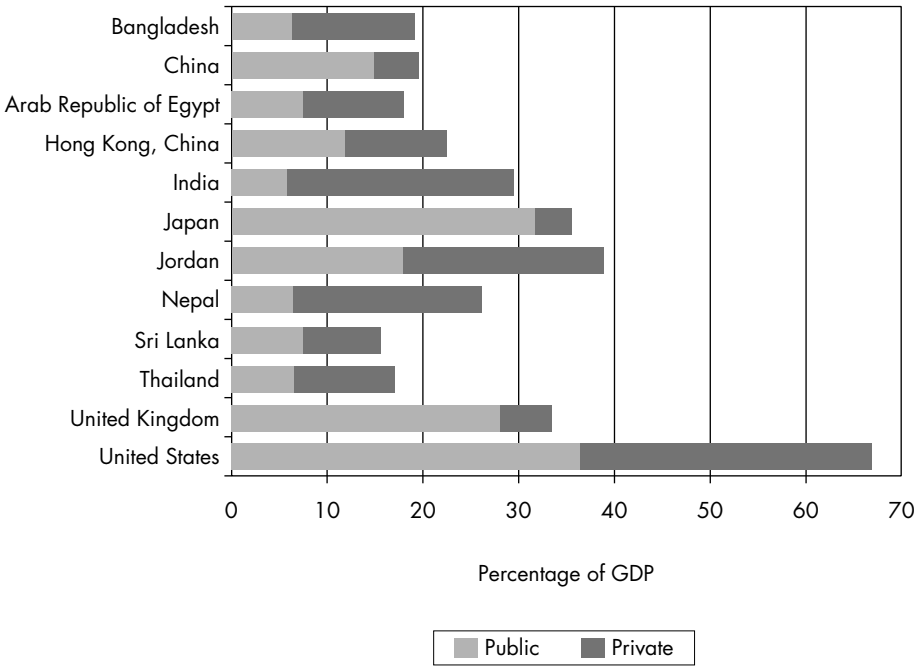
economies. (Switzerland and the United States are the only two exceptions.) Low levels of public sector spending on health are in fact characteristic of developing countries in general. However, compared with most Asian countries, the public sector in Sri Lanka finances a below-average share of total national health expenditures, while households finance an above-average share (table 7.17 and figure 7.10). The limited data that exist suggest that this is true partly because of an increasing level of government involvement in health care expenditures during the 1990s in many Asian economies (including economies as diverse as Bangladesh; Hong Kong, China; Japan; the Republic of Korea; the Philippines; Taiwan, China; and Thailand), while public sector expenditures in Sri Lanka sustained a level of only 1.7 percent of GDP. The

**Table 7.17** International Comparison of Expenditures by Source (percentage)

| SOURCE | HONG KONG, CHINA 1996–97 | SRI LANKA 1997 | TAIWAN, CHINA 1998 | UNITED STATES 1998 |
|---|---|---|---|---|
| Government | 54 | 48 | 7 | 33 |
| Social insurance | 0 | 0 | 52 | 19 |
| Private sector | 7 | 1 | 4 | 4 |
| Private insurance | 2 | 1 | 10 | 33 |
| Households | 37 | 51 | 27 | 11 |
| Total | 100 | 100 | 100 | 100 |

*Sources:* OECD health data; APNHAN sources.

**Figure 7.10** National Health Expenditures by Source as Percentage of Gross Domestic Product




*Sources:* OECD health data; APNHAN sources.

increasing dominance of governments in financing health care in Asian market economies does not necessarily mean that Sri Lanka should increase public spending, but it does suggest that this area needs further analysis.

## Notes

1. The SLNHA system and estimates were developed at the direction of Dr. K. C. S. Dalpatadu, deputy director general planning, Department of Health Services, Ministry of Health, and the MOH Health Expenditure Survey Committee. The Health Expenditure Survey Committee consists of representatives of the Ministry of Health (Department of Health Services, Accounting Office), Ministry of Finance (Departments of National Planning and Census and Statistics), and the Central Bank of Sri Lanka. The Health Expenditure Survey Committee was responsible for supervising and monitoring the development of the SLNHAs.

The Institute of Policy Studies (IPS) Health Policy Programme was primarily responsible for the technical design and compilation of the SLNHAs. The team at IPS consisted of Ravi P. Rannan-Eliya, Aparnaa Somanathan, G. D. Dayaratne, Varuni Sumathiratne, and Shermal Karunaratne. The study team is indebted to the large number of individuals and agencies in both the government and private sectors who provided information and advice and gave generously of their time to assist with the compilation of the SLNHAs. The names of people and organizations who were consulted or who provided assistance are numerous. We would like to thank them all for their assistance and contributions. In particular, we thank Dr. S. M. Samarage at the Department of Health Services (Planning), MOH; Dr. W. Karandagoda, formerly of the Department of Health Services (Planning), MOH; T. G. Jayasinghe and A. Chandrasiri of the Finance Commission; A. G. W. Nanayakkara, director general, and Yasantha Fernando of the Department of Census and Statistics; Soma Mahaweva of the Finance Ministry;

D. F. C. Hanwella of the University Grants Commission; M. Balasubramaniam of IMS-Health, Sri Lanka; M. Kanapathipillai of the Insurance Controllers Division, Ministry of Finance and Planning; and Hema Wijeratne of Insurance Services International Ltd.

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2. Although OECD (1997, 1998, 2000) definitions implicitly exclude such expenditures, this was not deliberate.

3. The official publication gives full details of the methods used to estimate private expenditures. However, it should be noted that in contrast to many health expenditure studies in developing countries, SLNHA estimates of household out-of-pocket spending that makes up the bulk of private expenditures were not derived primarily from household survey data. The primary method of estimation was modification of production-side data; this is similar to the way these expenditures are estimated in U.S. national health accounts and in those of many other industrialized economies, where national income accountants typically estimate private consumption.

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CHAPTER 8

# The Bangladesh Health Facility Efficiency Study

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## Abstract

The Bangladesh Health Facility Efficiency Study surveyed a nationally representative, stratified sample of 122 Ministry of Health and Family Welfare (MOHFW) facilities. From these data covering 1997, we estimated service indicators and recurrent unit costs for outpatient and inpatient services in four kinds of facilities: (a) thana health complexes (THCs), (b) district and general hospitals (DH/GHs), (c) medical college hospitals (MCHs), and (d) specialized hospitals. We found that all facilities have generally high levels of utilization. Occupancy rates are high, close to an optimal level of 80 to 85 percent or even higher, and stays are generally short. Because facility budgets are generally fixed according to norms, high utilization rates translate into low unit costs for services. DH/GHs have the lowest unit costs of all facilities, and THCs had unit costs as high as those of MCHs, even though MCHs offer more

sophisticated services and treat more severe cases than do THCs. The high costs of THCs are due to greater staffing levels than at higher-level facilities, coupled with lower utilization rates. In most countries, doctor-bed ratios are lowest in basic-level facilities, but Bangladesh is unusual in having its highest doctor-bed ratios in its lowest, primary-level facilities. We present evidence that strongly indicates that the current pattern of staffing and infrastructure at lower-level facilities in Bangladesh is suboptimal. We conclude that increasing the number of beds at THCs would make them more efficient, as the main problem seems to be undercapacity rather than oversupply. Also, increasing the ratio of nurses to doctors and reducing the numbers of Class 4 employees in THCs might lower average costs in delivering health services in Bangladesh. There is little evidence of systematic differences in unit costs between facilities in different divisions, except for some evidence that facilities in Barisal and Sylhet have below-average levels of equipment and staffing, particularly doctors, which may partly explain the lower levels of utilization at facilities in these divisions.

## Introduction

The government of Bangladesh faces significant resource constraints in funding the proposed Essential Services Package (ESP). Previous reports have found that the potential for mobilizing additional resources is limited and have suggested that improving the internal efficiency of the health services delivered by the Ministry of Health and Family Welfare (MOHFW) is an essential component of the effort to provide the ESP to the whole population. This study was conceived to provide the basic data required to develop a strategy for increasing the efficiency of all facilities—particularly the thana health complexes (THCs) and district hospitals (DHs) of

Bangladesh—to provide baseline data on the performance of MOHFW facilities before the start of the Fifth Population and Health Project, and to demonstrate the feasibility of survey methods to collect the necessary information to calculate the unit costs and assess the efficiency of health facilities.

At the beginning of this study, data on actual unit costs of delivering services at the thana and division level were extremely limited. This made it difficult to estimate the likely cost of the ESP and impossible to quantify the likely costs of existing inefficiencies. The absence of detailed facility cost data made it impossible to assess the scope for improving the efficiency of facilities.

In the first phase of the Facility Efficiency Study, survey questionnaires were developed and used to gather data on a sample of facilities. This phase has already demonstrated that rapid collection of data on unit costs is feasible and inexpensive. A survey of 100 facilities or more can produce division-level cost information in addition to national aggregates. It may be useful to carry out repeat surveys to monitor changes in the efficiency of the facilities. More sophisticated methods of analysis are required to fully examine the determinants of efficiency in these facilities, but these were beyond the scope of this initial study.

In this report, we present our findings for this sample of facilities and discuss some preliminary implications, which must, however, be subjected to further analysis and investigation.

## Approach and Methods

Phase I of the Bangladesh Facility Efficiency Study (BGFES98) collected data from a representative national sample of MOHFW inpatient health facilities. The study collected data on expenditures, levels of staffing, the availability of drugs and equipment, structural quality indicators, service volumes, and other indicators for calendar year 1997. The data set was designed to permit the estimation of recurrent unit costs in delivering services. The total

sample consisted of 80 THCs, 18 DHs, 12 medical college hospitals (MCHs), and 12 specialized facilities.

### *Development of the Methodology*

The methodology used was based on that developed for the Sri Lanka Public Facility Study 1998 (SLPFS98) by the Institute of Policy Studies of Sri Lanka, which in turn was based on the methodology developed for the Health Facility Survey conducted for the 1992 Sri Lanka Health Strategy and Financing Study by the Ministry of Health and the International Development Association (Akin and Samarasinghe 1994). The survey questionnaire was based closely on the initial draft questionnaire prepared for the SLPFS98, with appropriate modifications for Bangladesh.

### *Data*

The BGFES98 collected data from a national sample of MOHFW inpatient facilities. A survey team collected the data by administering a paper questionnaire at each facility.

After the questionnaire had been adapted from the one then being developed for SLPFS98 and reviewed by a group of MOHFW hospital directors, it was pilot-tested at six THCs and DHs that were not to be included in the final sample. Based on feedback from this pilot and on the results of the simultaneous piloting of the SLPFS98 instrument in Sri Lanka, the authors made appropriate revisions to the questionnaire in consultation with the Health Economics Unit (HEU). The SLPFS98 instrument was later revised to keep it close in structure to that of BGFES98. This was done to enable comparison of the results of the two surveys at a later date.

While they were developing the Bangladesh survey, the designers decided that cost and activity data would be collected only on the health activities of inpatient facilities. Many facilities also provide reproductive services that have a separate budget and are administered by the Family Planning Division of the Ministry of

Health. They were excluded from the data collection and analysis for reasons of simplicity and cost.

However, it was also decided to expand the survey to cover MCHs and specialized hospitals. The questionnaire was modified accordingly and was piloted at two MCHs, then revised to produce a second version to be used in MCHs and specialized hospitals.

The final questionnaire was printed in English and was administered by two-person field survey teams from Data International. The teams collected the data by interviewing the staff of the facility and by extracting information from administrative records. In some cases, the field collection of data was supplemented by data from central MOHFW records. The fieldwork was conducted in two rounds: the first covering THCs and DHs, and the second covering MCHs and specialized hospitals.

### *Sampling*

The sampling frame consisted of all MOHFW health facilities with inpatient beds. The sample was selected using a stratified multistage probability design. The population was divided into two strata: (a) district and general hospitals ($N = 60$), and (b) thana health complexes ($N = 395$). Each stratum was then divided into six groups according to administrative divisions ($N = 6$).

*District Hospitals.* It was decided that a minimum of two facilities would be drawn from each division and that sampling would be proportionate to the share of the overall MOHFW budget allocated to each division. In some cases, this would have led to the selection of one DH in a division. Given the available budget, the survey team decided to increase the sample size in the smallest division (Sylhet) by one DH to guarantee a minimum of two DHs per division. This yielded a desired sample size of 20 DHs (step 1).

For this study, we reviewed the BGFES98 data for expenditures, admissions, and sanctioned beds for each facility for 1996. Total facility expenditures are driven by total sanctioned bed numbers because of budgeting norms, and they vary little among facilities.

Expenditures per admission are, therefore, largely a function of admission rates and will approximate the final unit costs for admissions to be calculated in the survey. The survey team calculated the ratio of total expenditures per admission for all DHs and then ranked all hospitals in each division according to the level of this ratio. After this ranking, they divided each divisional list into equally sized strata; the number of these strata was based on the number of facilities determined in step 1. The survey team then selected one facility randomly from each stratum (step 2). It made sense to use budget data to order the sample because the ultimate objective was to obtain nationally representative cost estimates, and in Bangladesh, where hospital nonbudgetary revenues are limited, costs are driven by budgets.

*Thana Health Complexes*. There is only a limited amount of information on the use of services at THCs. The number of beds per THC is fixed, and budgets are tied closely to sanctioned bed numbers. Given the absence of recent comprehensive data on THCs in a usable format, the survey team chose the THCs for our sample randomly (random sampling without replacement) from the thanas that were also listed in the Bangladesh Bureau of Statistics (BBS) sampling frame for the Health and Demographics Survey (HDS). They chose two THCs in every district where the DH selected in step 2 was being surveyed and one THC each from every other district. The BBS HDS was a household survey that had collected population-level data on households by thanas. The survey team did this because they believed it was necessary to have household data to match against the data from each facility during subsequent analyses of efficiency and performance. There were three reasons why they chose two THCs from each district where a DH was being sampled: (a) it reduced their travel costs, (b) having a sample of two facilities would make it possible for analysts to estimate standard deviations in the future, and (c) they hypothesized that how lower-level THCs refer patients to other facilities may influence demand at DHs. This procedure yielded a sample of 85 THCs.

*Medical College Hospitals and Specialized Hospitals*. The team randomly selected two separate samples of MCHs and specialized hospitals from the lists of such facilities. In total, they selected 8 MCHs from a national total of 13 facilities and 9 specialized hospitals from a national total of 28 facilities. The distribution of hospitals included in each sample was as follows (the actual number in each division is given in parentheses):

- Medical college hospitals

  Barisal: 1 (1)
  Chittagong: 1 (2)
  Dhaka: 3 (4)
  Khulna: 0 (1)
  Rajshahi: 2 (4)
  Sylhet: 1 (1)

- Specialized hospitals

  Barisal: 0 (1)
  Chittagong: 0 (4)
  Dhaka: 8 (10)
  Khulna: 0 (3)
  Rajshahi: 1 (7)
  Sylhet: 0 (3)

***Response Rates***

To ensure full cooperation, the survey team sent all of the facilities copies of the questionnaire in advance. The MOHFW in Dhaka also wrote officially to all facilities, seeking their cooperation. If staff were not available in a facility to complete questionnaires, field investigators were required to return to the facility at a later date.

Two THCs were dropped from the survey and counted as nonresponses because a flood made transport to the facilities unavailable. All other facilities responded satisfactorily. The response rates were 100 percent for DHs, MCHs, and specialized hospitals and 98 percent for THCs.

## Estimations

The survey had categorized the facilities into four types:

- Thana health complexes
- District/general hospitals
- Medical college hospitals
- Specialized hospitals

The survey team put general hospitals (GHs) into the same category as DHs because, in practice, there is little to distinguish them and they are similar in both scale and function. General and district hospitals are essentially facilities that offer only basic services and are, therefore, also similar to THCs. However, they differ from THCs by virtue of their size and staffing norms. Therefore, we treated them as a separate category for the purposes of our initial analysis. Also, DH/GHs are regarded officially as secondary-level facilities, while THCs are regarded as primary-level facilities.

We calculated the average unit costs of services for the inpatient and outpatient services each facility provided. The data set contains information on the total recurrent expenditures of each facility in 1997 by major line items, such as personnel, supplies, utilities, and drugs. We allocated all recurrent costs to either inpatient or outpatient services using a step-down procedure.

For each facility, we allocated personnel costs, consisting of salaries and all allowances, to either outpatient or inpatient use. We used facility-specific data on the allocation of staff time to inpatient and outpatient duties by different grades of nurses and doctors to allocate their personnel costs by grade (see table 8.1).

We distributed drug costs into the inpatient and outpatient categories based on an estimate of the value of drugs actually distributed from facilities' stores. We acquired information on the allocation of drugs to wards and outpatient departments by examining the records kept at facilities' pharmacies for a sample of months during 1997. We allocated other medical supply costs as indirect costs, using the distribution of staff and drug costs as the

**Table 8.1** Allocation of Recurrent Costs to Inpatient and Outpatient Services

| STAFF CATEGORY | BASIS OF ESTIMATION |
|---|---|
| Doctors | According to reported allocation of time between outpatient and inpatient duties |
| Nurses | According to reported allocation of time between outpatient and inpatient duties |
| Pharmacists, medical technologists (pharmacy), storekeepers | Prorated according to percentage value of drugs used by inpatient and outpatient services |
| Physiotherapists, occupational therapists | 30% to inpatient (ratio estimated by Begum 1998) |
| Pathologists | 32% to inpatient (ratio estimated by Begum 1998) |
| Radiology technicians | 48% to inpatient (ratio estimated by Begum 1998) |
| Rent controllers, ward masters, ward boys, laundry staff, cooks, stretcher boys | 100% to inpatient |
| Sweepers | 75% to inpatient (ratio estimated by Begum 1998) |
| Other staff | Allocated as overhead cost using distribution of all other salary costs |

allocation ratio. Laundry and diet costs were allocated 100 percent to inpatient use. All other costs (excluding laundry and diet costs) were treated as overheads and allocated on a pro-rata basis according to the distribution of other costs.

We replaced selected missing data with imputed values. Missing data on staff time allocations to inpatient and outpatient use were imputed using the observed averages for the relevant type of facility (in other words, by THCs, DH/GHs, or MCHs). We used a similar procedure for missing data on the size of the MSR budget (for medical supplies), staff numbers, and laundry costs. Where data were imputed, the missing data accounted for less than 10 percent of all records with respect to the variable concerned. We analyzed the data using the computer software package Stata (version 5.0).

We calculated unit costs by dividing total estimated recurrent inpatient or outpatient costs by the number of inpatient services

delivered. These unit costs were calculated for outpatient visits, admissions, bed-days, available bed-days, and beds. Lack of additional data prevented us from doing a more detailed desegregation of unit costs by type of ward or medical department. We did not analyze or report on the parts of the data set relating to management and other structural quality indicators.

## Results

In this section, we present the results of our analysis of the data from the Bangladesh Health Facility Efficiency Survey.

### *Distribution of Facilities*

No facilities refused to cooperate with the survey, but two facilities were not surveyed because of logistical difficulties. Overall completion rates were high for all of the items in the questionnaire. The geographical distribution of facilities in the final sample is shown in table 8.2.

### *Hospital Characteristics*

The facilities in the THC and DH/GH categories seem to be very similar. Table 8.3 summarizes key statistics as reported by each category of facility.

**Table 8.2** Distribution of Sampled Facilities in Survey by Type and Division

| DIVISION | THANA HEALTH COMPLEXES | DISTRICT/ GENERAL HOSPITALS | MEDICAL COLLEGE HOSPITALS | SPECIALIZED HOSPITALS | TOTAL |
|---|---|---|---|---|---|
| Barisal | 8 | 2 | 1 | 0 | 11 |
| Chittagong | 12 | 3 | 1 | 0 | 16 |
| Dhaka | 17 | 6 | 3 | 8 | 34 |
| Khulna | 12 | 4 | 0 | 0 | 16 |
| Rajshahi | 28 | 4 | 2 | 1 | 35 |
| Sylhet | 6 | 2 | 1 | 0 | 9 |
| Total | 83 | 21 | 8 | 9 | 121 |

**Table 8.3** Key Statistics by Category of Facility

| DIVISION | THANA HEALTH COMPLEXES | DISTRICT/ GENERAL HOSPITALS | MEDICAL COLLEGE HOSPITALS | SPECIALIZED HOSPITALS |
|---|---|---|---|---|
| Beds | 31.2 (2.9) | 90.5 (29.3) | 781.2 (216.6) | 258.9 (283.4) |
| Outpatients (000s) per year | 50.0 (68.0) | 68.7 (25.7) | 296.6 (109.2) | 34.5 (21.5) |
| Admissions (000s) per year | 2.3 (1.0) | 7.6 (3.8) | 34.3 (14.5) | 3.1 (4.0) |
| Bed occupancy (%) | 74.8 (28.7) | 94.6 (47.3) | 109.9 (28.3) | 76.0 (21.1) |
| Operations performed per year | 200.0 (525.3) | 1,296.8 (2,541.6) | 9,827.0 (3,385.5) | 809.4 (975.1) |
| Number of doctors | 5.5 (1.3) | 10.0 (2.6) | 60.7 (13.8) | 9.1 (5.0) |
| Number of nurses | 5.9 (1.2) | 26.2 (17.7) | 203.5 (68.8) | 60.0 (54.8) |
| Number of Class 3/Class 4 employees | 31.0 (9.2) | 33.2 (19.4) | 480.5 (308.0) | 95.2 (97.5) |
| Recurrent expenditures (taka millions) | 6.2 (1.9) | 8.1 (3.1) | 115.8 (64.5) | 25.2 (16.3) |

*Note:* Mean values in sample with standard deviation in parentheses.

The typical thana health complex has an average of 31 beds (in a range of 15 to 50) and is staffed by 5 doctors (in a range of 2 to 9), 6 nurses (range 2 to 8), and 31 other staff. With an average recurrent budget of 6.2 million taka (Tk.), the typical THC has 50,000 outpatient visits, 2,300 inpatient admissions, and 200 operations a year. THCs deliver only very basic medical services and carry out few operative interventions. They seem to be quite homogeneous in their basic characteristics, reflecting the fact that they operate according to fixed norms.

District and general hospitals (24 and 48 percent of the sample, respectively) are larger facilities, typically with 50 or 100 beds. A few district and general hospitals have more beds, up to a maximum of 150. The typical 100-bed DH is staffed by 10 doctors (in a range of 5 to 14), 26 nurses, and 33 other staff. With an average recurrent budget of Tk. 8.1 million (range Tk. 6 million to 14 million), DHs

provide an average of 68,000 outpatient visits, 7,000 inpatient admissions, and 1,200 operations a year.

Medical college hospitals are larger inpatient medical facilities that provide a range of different services, including specialties. They have from 540 to 1,100 beds, 40 to 90 doctors, and 140 to 370 nurses. Their budgets are much larger than those of the other kinds of facilities, an average of Tk. 115 million.

### *General Facilities, Equipment, Hours of Operation, and Services Offered*

*Utilities and Equipment*. As we expected, the amount and range of equipment provided increase with the level of facility (table 8.4). All facilities have laboratories and operating theaters, although the laboratories in 12 percent of THCs are not functional. Only half of THCs have been provided with functioning X-ray machines. All DH/GHs and MCHs have functional X-ray machines. Electrocardiogram (ECG) equipment is not available in THCs and is available in only 43 percent of DH/GHs. Cardiac monitors, ultrasound scanners, and intensive care facilities are found only in MCHs. Only two THCs and just over half of all DH/GHs reported having blood banks, while all MCHs had them.

Generally, all facilities have basic utilities, such as electricity, piped or deep-tube well water, and refrigerators (table 8.5). Four percent of THCs reported having no telephone. Surprisingly, 98 percent of THCs reported having freezers, but only 24 percent of DH/GHs did so. The reason for this is unclear but may be related to the distribution of freezers to THCs through the expanded program of immunization.

*Availability of Services*. The regular hours of operation are similar at all levels. Facilities offer routine outpatient services for eight hours a day, five days a week, and are open for emergencies on a 24-hour, seven-day-a-week basis.

MCHs provide all major types of services, such as obstetric, gynecological, pediatric, medical, and major surgical care. THCs

**Table 8.4** Available Equipment at Facilities

| | THANA HEALTH COMPLEXES | | DISTRICT AND GENERAL HOSPITALS | | MEDICAL COLLEGE HOSPITALS | |
|---|---|---|---|---|---|---|
| EQUIPMENT | AVAILABLE (%) | FUNCTIONAL (%) | AVAILABLE (%) | FUNCTIONAL (%) | AVAILABLE (%) | FUNCTIONAL (%) |
| Laundry | 1 | 1 | 9 | 9 | 75 | 75 |
| Laboratory | 100 | 88 | 100 | 100 | 100 | 100 |
| Operating theater | 100 | 99 | 100 | 100 | 100 | 100 |
| Blood bank | 2 | 2 | 57 | 57 | 100 | 100 |
| Intensive care unit | 0 | 0 | 0 | 0 | 75 | 75 |
| X-ray machine | 53 | 52 | 100 | 100 | 100 | 100 |
| Ultrasound scanner | 0 | 0 | 0 | 0 | 25 | 25 |
| ECG equipment | 0 | 0 | 43 | 43 | 100 | 100 |
| Cardiac monitor | 0 | 0 | 0 | 0 | 100 | 87 |



**Table 8.5** Available Utilities at Facilities

| | THANA HEALTH COMPLEXES | | DISTRICT AND GENERAL HOSPITALS | | MEDICAL COLLEGE HOSPITALS | |
|---|---|---|---|---|---|---|
| UTILITY | AVAILABLE (%) | FUNCTIONAL (%) | AVAILABLE (%) | FUNCTIONAL (%) | AVAILABLE (%) | FUNCTIONAL (%) |
| Refrigerator | 96 | 93 | 95 | 95 | 100 | 100 |
| Freezer | 98 | 98 | 29 | 24 | 75 | 63 |
| Toilets | 100 | 100 | 100 | 100 | 100 | 100 |
| Piped water/deep-tube well water | 100 | 96 | 100 | 91 | 100 | 100 |
| Electricity/generator | 100 | 100 | 100 | 100 | 100 | 100 |
| Telephone | 96 | 95 | 100 | 100 | 100 | 100 |

and DH/GHs are similar in the services that they actually provide, with more than 85 percent of facilities in each category providing obstetric, gynecological, pediatric, and minor surgical services. This is notable because only 80 percent of THCs are designated to provide obstetric services and 24 percent of THCs are designated to provide pediatric services. Major surgery is generally available only at the DH/GH level and above. A large proportion (24 percent) of THCs is designated to provide dental services but do not actually provide them.

### *Staffing and Allocation of Staff Time*

MCHs have more staff than DH/GHs, which have more staff than THCs (table 8.6). DH/GHs have twice as many doctors as THCs and two to four times the number of nurses. However, both categories have similar numbers of Class 3 and Class 4 employees. DH/GHs have fewer Class 3 employees than THCs and have correspondingly more Class 4 employees.

The staff mix varies across different categories of facility. The nurse-doctor ratio is higher in higher-level facilities, while the ratio of Class 3/Class 4 staff to doctors and nurses is lower. Although the number of skilled staff (doctors and nurses) in relation to beds is more or less similar at facilities of all levels, the number of total staff per bed is higher in THCs than in other facilities. The higher

**Table 8.6** Staffing Indicators and Ratios

| STAFF | THANA HEALTH COMPLEXES | DISTRICT/ GENERAL HOSPITALS | MEDICAL COLLEGE HOSPITALS | SPECIALIZED HOSPITALS |
|---|---|---|---|---|
| Doctors | 5.5 | 10.1 | 60.7 | 9.1 |
| Nurses | 5.9 | 26.2 | 203.5 | 60.0 |
| Class 3 | 15.0 | 9.6 | 96.4 | 27.2 |
| Class 4 | 16.0 | 23.6 | 384.1 | 68.0 |
| Nurse/doctor ratio | 1.2 | 2.8 | 3.3 | 10.2 |
| Class 3/4 doctor/nurse ratio | 2.8 | 1.1 | 1.8 | 1.1 |
| Bed/doctor ratio | 6.2 | 9.3 | 13.1 | 55.9 |
| (Nurses + doctors)/bed ratio | 0.37 | 0.43 | 0.35 | 0.39 |
| Staff/bed ratio | 1.4 | 0.9 | 0.9 | 0.9 |

ratio of staff to beds at THCs is due to their relatively higher numbers of Class 3/Class 4 staff. The reason why THCs have relatively more staff than any other level of facility is not apparent. In the case of doctors, the ratio of doctors per bed is actually lower in the more sophisticated facilities than in lower-level facilities. Whether this counterintuitive finding reflects an optimal staffing pattern is worth exploring.

Generally, doctors allocate 40 to 50 percent of their time to inpatient duties in all types of facilities, while other categories of staff allocate higher proportions of their time to inpatient duties (table 8.7). This is consistent with the fact that the duties of some staff (such as ward boys, laundry staff, and cooks) are limited to providing services for patients in inpatient wards.

### *Utilization and Performance*

*General Patient Load.* All facilities provide both outpatient and inpatient services. The service mix at THCs is geared more toward outpatients than the mix at higher-level facilities. The ratio of outpatient visits to admissions at the THC level is 22, compared with approximately 9 at higher-level facilities. The overall patient load at MCHs is approximately five times greater than at DH/GHs. The type of care provided is more sophisticated at the MCH level—proportionately more patients at that level are given laboratory, radiology, and other tests. However, the number of immunizations provided is lower in the more sophisticated types of facility than in the less sophisticated types (table 8.8).

**Table 8.7** Allocation of Staff Time to Inpatient Care

| STAFF | THANA HEALTH COMPLEXES (%) | DISTRICT/ GENERAL HOSPITALS (%) | MEDICAL COLLEGE HOSPITALS (%) | SPECIALIZED HOSPITALS (%) |
|---|---|---|---|---|
| Doctors | 41 | 41 | 43 | 49 |
| Nursing staff | 94 | 86 | 95 | 99 |
| Class 3 | 71 | 56 | 54 | 66 |
| Class 4 | 76 | 78 | 56 | 93 |

**Table 8.8** Average Annual Number of Outpatient Services and Tests by Category and Type of Facility

| SERVICE | THANA HEALTH COMPLEXES | DISTRICT/ GENERAL HOSPITALS | MEDICAL COLLEGE HOSPITALS | SPECIALIZED HOSPITALS |
|---|---|---|---|---|
| Outpatient department visits[a] | 50,024 | 68,744 | 296,619 | 34,557 |
| Dental visits | 451 | 4,712 | 17,689 | 0 |
| Laboratory tests | 3,736 | 7,039 | 53,987 | 23,972 |
| Radiology examinations | 580 | 3,217 | 30,781 | 9,855 |
| Immunizations | 51,096 | 22,842 | 6,135 | 0 |

[a]Includes dental visits.

*Inpatient Services*. Most facilities reported high levels of occupancy, admission rates, and turnover rates. The highest occupancy rates are at MCHs (110 percent). DH/GHs were 95 percent occupied during 1997, compared with 75 percent occupancy at THCs. The higher rate at higher-level facilities is comparable with admission patterns in many other developing countries, including those in the South Asia region. It probably reflects patients' preference for the better care provided by higher-level facilities. The average length of stay is quite short—3.9 days at THCs and 4.5 days at DH/GHs. This fact, coupled with the high occupancy rates, suggests that most of these primary-level facilities are operating close to their capacity. The longer average stay at MCHs (11.0 days) is consistent with the fact that they have more seriously ill patients than other facilities.

All facilities other than specialized hospitals have a broad mix of inpatients. They are roughly equally distributed across surgical and medical specialties at both DH/GH and MCH levels. THCs maintain only general wards, but responses by THC personnel to the survey questions about which services they provide suggest that THCs probably have a diagnostic mix of patients similar to that of DH/GHs. Cabin inpatients represent 3 to 4 percent of all patients at DH/GHs and MCHs; THCs do not have cabins.

The number of inpatients admitted increases as the facility level becomes more sophisticated (table 8.9). At the MCH level, 32 percent of inpatients undergo surgical interventions, compared with

**Table 8.9** Inpatient Service Statistics

| CATEGORY | THANA HEALTH COMPLEXES | DISTRICT/ GENERAL HOSPITALS | MEDICAL COLLEGE HOSPITALS | SPECIALIZED HOSPITALS |
|---|---|---|---|---|
| Admissions per year | 2,301 | 7,656 | 34,288 | 3,119 |
| Operative intervention rate (%) | 8.7 | 15.8 | 31.6 | 29.9 |
| Mortality rate (%) | 1.8 | 4.6 | 10.2 | 6.2 |
| Deliveries per year | 95 | 488 | 5,105 | 0 |
| Cesarean section rate (%) | 0.9 | 12.9 | 35.9 | n.a. |
| Ratio of outpatient visits to admissions | 21.7 | 9.0 | 8.7 | 11.1 |

n.a. = Not applicable.

16 percent at the DH/GH level and 9 percent at the THC level. The fact that patients in higher-level facilities stay longer and are more seriously ill is also consistent with the fact that mortality rates are higher at higher levels, ranging from 2 percent at the THC level to 10 percent at the MCH level.

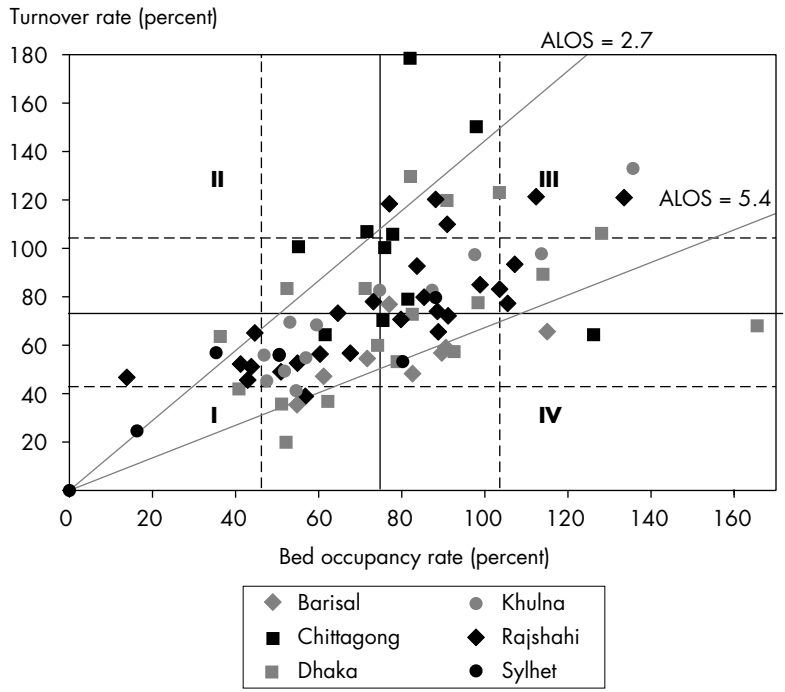
The proportion of babies delivered by cesarean section is significantly higher at the MCH level than at the DH/GH level. Respondents for the THCs reported doing very few cesarean sections. Under normal circumstances with optimal care, one would expect fewer than 10 percent of babies to be delivered by cesarean section; for example, teaching hospital units in Sri Lanka generally report cesarean section rates of less than 12 percent of all births. Whether the much higher rates of 36 percent reported at MCHs and 13 percent at DH/GHs in Bangladesh reflect the admission of women with high-risk pregnancies or a high rate of unnecessary cesarean sections cannot be determined from these data. As a rate of 36 percent can be considered high from a clinical perspective, this question should be explored further.

*Comparing Facilities' Performance Using Service Indicators*. Performance indicators can be used to conduct a preliminary assessment of facilities' relative performance (Barnum and Kutzin 1993). We used Lasso's (1986) method to summarize data on bed occupancy and turnover rate (and, therefore, implicitly average length of stay

[ALOS]) in a large sample of facilities. Figure 8.1 presents the data on bed occupancy and turnover rates for the sample of THCs. The solid vertical and horizontal lines indicate the mean values for bed occupancy and turnover rates respectively, while the dotted lines are one standard deviation each from the respective means. The rays from the origin represent points whose ALOS is either one standard deviation below the mean or one standard deviation above the mean.

The four quadrants represent different groups of facilities. Those in quadrant I have below-average turnover rates and bed occupancy. These facilities have the capacity to admit more cases without reducing ALOS. There are a large number of facilities in this quadrant, suggesting that many have the capacity to admit more patients.

**Figure 8.1** Performance Indicators for THCs by Division, Bangladesh, 1997




*Note:* ALOS = Average length of stay.

Facilities in quadrant II have below-average occupancy rates and above-average turnover rates. These facilities have an ALOS below the mean, perhaps because they admit predominantly minor cases. Facilities in quadrant III have above-average turnover rates and bed occupancy. These facilities have occupancy rates close to 100 percent or higher, indicating considerable overcrowding. A large percentage of THCs fall into this quadrant. Since for most THCs, ALOS is less than five days, there seems to be little room for improving output by reducing ALOS, which confirms that these facilities have insufficient capacity to meet demand.

Our examination of the distribution of facilities by division revealed no systematic pattern. There are many outliers in each quadrant, and their exceptional performance may warrant further detailed examination.

### *Costs*

Detailed information was collected on costs at each facility. We used these data, as described above, to estimate unit costs for services. These cost estimations are for recurrent costs only, and therefore, they underestimate full costs. In addition, we did not consider the costs of the services administered and funded by the Family Planning Division.

Table 8.10 gives the overall distribution of costs by category in each group of facilities. Personnel costs account for 84 percent of total recurrent costs at THCs. The proportion is lower at DH/GHs and MCHs, where spending on drugs and other medical supplies is relatively higher.

**Table 8.10** Distribution of Recurrent Costs by Category of Cost

| COST CATEGORY | THANA HEALTH COMPLEXES (%) | DISTRICT/ GENERAL HOSPITALS (%) | MEDICAL COLLEGE HOSPITALS (%) | SPECIALIZED HOSPITALS (%) |
|---|---|---|---|---|
| Personnel | 84 | 61 | 54 | 57 |
| Drugs | 5 | 14 | 16 | 16 |
| Medical supplies | 3 | 8 | 13 | 8 |
| Other | 8 | 17 | 17 | 19 |

Within facilities, inpatient services account for the greatest share of all costs (table 8.11). Surprisingly, despite the relatively greater outpatient load at THCs, the proportion of overall costs accounted for by inpatient services is similar at THCs (63 percent) and at DH/GHs (62 percent). The cost mix for outpatient services is similar to that for inpatient services in all facilities, except that drug costs are higher for outpatient services (tables 8.12 and 8.13).

**Table 8.11** Share of Recurrent Costs Accounted for by Inpatient Use

| COST CATEGORY | THANA HEALTH COMPLEXES (%) | DISTRICT/ GENERAL HOSPITALS (%) | MEDICAL COLLEGE HOSPITALS (%) | SPECIALIZED HOSPITALS (%) |
|---|---|---|---|---|
| Personnel | 64 | 66 | 78 | 80 |
| Drugs | 26 | 32 | 65 | 64 |
| All inpatient costs | 63 | 62 | 77 | 77 |

**Table 8.12** Breakdown of Recurrent Costs in Providing Inpatient Services

| CATEGORY | THANA HEALTH COMPLEXES | DISTRICT/ GENERAL HOSPITALS | MEDICAL COLLEGE HOSPITALS | SPECIALIZED HOSPITALS |
|---|---|---|---|---|
| Share of facility costs (%) | 63 | 62 | 77 | 77 |
| Cost per admission (taka) | 1,957 | 843 | 3,249 | 11,872 |
| *Percentage of costs* | | | | |
| Staff | 85 | 63 | 54 | 60 |
| Drugs | 3 | 7 | 13 | 11 |
| Medical supplies | 3 | 8 | 13 | 8 |
| Other | 9 | 22 | 20 | 21 |

**Table 8.13** Breakdown of Recurrent Costs in Providing Outpatient Services

| CATEGORY | THANA HEALTH COMPLEXES | DISTRICT/ GENERAL HOSPITALS | MEDICAL COLLEGE HOSPITALS | SPECIALIZED HOSPITALS |
|---|---|---|---|---|
| Share of facility costs (%) | 37 | 38 | 23 | 23 |
| Cost per outpatient visit (taka) | 66 | 55 | 102 | 283 |
| *Percentage of costs* | | | | |
| Staff | 82 | 52 | 53 | 58 |
| Drugs | 10 | 24 | 24 | 22 |
| Medical supplies | 3 | 7 | 13 | 8 |
| Other | 5 | 17 | 10 | 12 |

*Inpatient Unit Costs*. We estimated three indicators of inpatient costs:

- Annual cost per available bed
- Cost per bed-day occupied
- Cost per admission

We also estimated the average cost of an outpatient visit. The results are summarized in table 8.14.

THCs appear to be the most costly facilities for the delivery of inpatient services. The cost per available bed and per bed-day occupied is lowest in DH/GHs and highest in THCs. Although the cost per available bed in THCs (Tk. 111,397) is only double that in DH/GHs (Tk. 56,119), the cost per bed-day occupied is almost three times higher (Tk. 521 versus Tk. 188), owing to the higher utilization of DH/GHs. There are several possible explanations for the higher unit costs at THCs. First, THCs have higher staff-to-bed ratios than DH/GHs and MCHs. Second, the staff mix at THCs is more expensive than at DH/GHs because THCs use more nurses per doctor and fewer Class 3/Class 4 employees than DH/GHs. Overall, the ratio of administrative and other support staff to doctors and nurses is highest at THCs, which must add to the cost of delivering their services. Finally, patient demand is higher for the kinds of services offered by DH/GHs than for those

**Table 8.14** Gross Unit Costs for Inpatient and Outpatient Services (taka)

| ITEM | THANA HEALTH COMPLEXES | DISTRICT/ GENERAL HOSPITALS | MEDICAL COLLEGE HOSPITALS | SPECIALIZED HOSPITALS |
|---|---|---|---|---|
| Beds available per year | 111,397 | 56,119 | 110,565 | 117,830 |
| | (46,515) | (14,924) | (31,820) | (71,419) |
| Bed-days occupied | 521 | 188 | 277 | 441 |
| | (325) | (68) | (45) | (260) |
| Admissions | 1,957 | 843 | 3,249 | 11,872 |
| | (1,232) | (603) | (2,896) | (7,673) |
| Outpatient visits | 66 | 55 | 102 | 283 |
| | (45) | (44) | (68) | (516) |

*Note:* Mean values in sample with standard deviation in parentheses.

offered by THCs. An unavoidable conclusion is that THCs are too small to achieve economies of scale.

Although the cost per available bed is similar at MCHs and THCs, the unit cost of an occupied bed-day is almost twice as high at THCs. This must be the result of the almost 50 percent higher occupancy rate at MCHs than at THCs. Cost per admission is lowest again at DH/GHs (Tk. 843) and highest at MCHs (Tk. 3,249), with THC admission costs falling in between at Tk. 1,957. The high admission costs at MCHs reflect the much longer average stay at these facilities and, presumably, the more severely ill patients they admit and the more sophisticated services they provide.

*Outpatient Unit Costs*. Outpatient unit costs are highest at the highest-level facilities, MCHs (Tk. 102). However, surprisingly, they are lowest at DH/GHs (Tk. 55) rather than at THCs, which might have been expected to be the least costly in delivering outpatient services. The high costs of THC outpatient visits again primarily reflect their higher staffing levels with respect to the volume of services delivered.

*Geographical Variations in Unit Costs*. There is little systematic difference in budgets and costs per available bed between facilities in different geographical divisions. This may reflect the standard norms used in allocating budgetary resources and staff to different facilities. In contrast, there are significant differences in the utilization of facilities among divisions. Facilities in Barisal and Sylhet reported significantly lower rates of inpatient and outpatient utilization than facilities in other areas. Facilities in Dhaka and Chittagong had the highest utilization rates. In combination with essentially fixed and relatively equal budgets for each facility, this leaves facilities in Barisal and Sylhet with the highest unit costs, while facilities in Dhaka and Chittagong have the lowest unit costs (tables 8.15 to 8.17).

The variation in unit costs is largely driven by differences in utilization, which might be due to underlying differences in demand

**Table 8.15** Cost per Bed-Day Occupied by Type of Facility and Division (taka)

| DIVISION | THANA HEALTH COMPLEXES | DISTRICT/ GENERAL HOSPITALS | MEDICAL COLLEGE HOSPITALS | SPECIALIZED HOSPITALS |
|---|---|---|---|---|
| Barisal | 439 | 195 | 266 | n.a. |
| | (112) | (26) | [a] | |
| Chittagong | 635 | 149 | 252 | n.a. |
| | (396) | (73) | (0) | |
| Dhaka | 465 | 149 | 325 | 479 |
| | (161) | (36) | (35) | (256) |
| Khulna | 491 | 245 | 238 | n.a. |
| | (137) | (136) | (11) | |
| Rajshahi | 523 | 211 | 238 | 178 |
| | (407) | (2) | (11) | [a] |
| Sylhet | 657 | 236 | 245 | n.a. |
| | (558) | (5) | [a] | |
| Country | 521 | 188 | 277 | 441 |
| | (325) | (68) | (45) | (260) |

n.a. = Not applicable.
*Note:* Mean values in sample with standard deviation in parentheses.
[a]Only one facility in cell.

**Table 8.16** Cost per Admission by Type of Facility and Division (taka)

| DIVISION | THANA HEALTH COMPLEXES | DISTRICT/ GENERAL HOSPITALS | MEDICAL COLLEGE HOSPITALS | SPECIALIZED HOSPITALS |
|---|---|---|---|---|
| Barisal | 2,256 | 895 | 2,390 | n.a. |
| | (405) | (336) | [a] | |
| Chittagong | 2,564 | 506 | 2,082 | n.a. |
| | (2,845) | (71) | [a] | |
| Dhaka | 1,960 | 733 | 5,430 | 9,738 |
| | (975) | (247) | (4,201) | (5,119) |
| Khulna | 1,834 | 1,066 | n.a. | n.a. |
| | (559) | (735) | | |
| Rajshahi | 1,684 | 1,281 | 1,603 | 26,806 |
| | (623) | (1,375) | (355) | [a] |
| Sylhet | 1,968 | 631 | 2,023 | n.a. |
| | (1,232) | (100) | [a] | |
| Country | 1,957 | 843 | 3,249 | 11,872 |
| | (1,232) | (603) | (2,896) | (7,673) |

n.a. = Not applicable.
*Note:* Mean values in sample with standard deviation in parentheses.
[a]Only one facility in cell.

**Table 8.17** Cost per Outpatient Visit by Type of Facility (taka)

| DIVISION | THANA HEALTH COMPLEXES | DISTRICT/ GENERAL HOSPITALS | MEDICAL COLLEGE HOSPITALS | SPECIALIZED HOSPITALS |
|---|---|---|---|---|
| Barisal | 89 | 81 | 49 | n.a. |
| | (28) | (38) | [a] | |
| Chittagong | 85 | 95 | 130 | n.a. |
| | (40) | (103) | [a] | |
| Dhaka | 58 | 47 | 121 | 383 |
| | (30) | (18) | (104) | (708) |
| Khulna | 52 | 36 | n.a. | n.a. |
| | (19) | (4) | | |
| Rajshahi | 57 | 43 | 114 | 198 |
| | (34) | (21) | (47) | [a] |
| Sylhet | 61 | 24 | 49 | n.a. |
| | (50) | (6) | [a] | |
| Country | 66 | 55 | 102 | 283 |
| | (45) | (44) | (68) | (516) |

n.a. = Not applicable.
*Note:* Mean values in sample with standard deviation in parentheses.
[a]Only one facility in cell.

for facility services, differences in the quality of facilities, or a combination of both. Table 8.18 summarizes the differences in the budgeting, staffing, and equipping of THCs by division. Although facilities in all divisions receive similar budgets, facilities in Sylhet have the fewest doctors and nurses in place and have smallest amount of X-ray machines and other basic equipment in functioning order. These differences may partly explain the differences in

**Table 8.18** Indicators of Resource Availability at THCs by Division (means per facility)

| DIVISION | TOTAL RECURRENT EXPENDITURE (TK. MILLIONS) | NUMBER OF DOCTORS IN PLACE | NUMBER OF NURSES IN PLACE | X-RAY MACHINES FUNCTIONAL |
|---|---|---|---|---|
| Barisal | 5.4 | 5.4 | 6.7 | 0.38 |
| Chittagong | 6.9 | 6.3 | 5.4 | 0.58 |
| Dhaka | 6.2 | 5.6 | 5.7 | 0.68 |
| Khulna | 5.5 | 4.9 | 6.6 | 0.42 |
| Rajshahi | 5.7 | 5.6 | 6.0 | 0.52 |
| Sylhet | 5.3 | 4.3 | 4.5 | 0.33 |

utilization, but differences in the propensity of people to seek care at MOHFW facilities cannot be excluded. A useful area of further research might be to analyze the BBS HDS data to investigate this question.

***International Comparison of Costs and Performance Indicators***

Tables 8.19 to 8.21 compare the performance of the sampled MOHFW facilities in 1997 with facilities in various other developing countries for which comparable data are available. The tables distinguish among three levels of hospitals in these countries (Barnum and Kutzin 1993):

- *Level I:* Tertiary-level facilities with the most specialized staff and technical equipment, with highly differentiated clinical service functions
- *Level II:* Facilities lacking the most technically sophisticated services available in Level I hospitals but with some functional differentiation by clinical specialty
- *Level III:* Most basic facilities with few specialists and limited laboratory services; generally referred to as "district" or "first-level referral" hospitals.

MCHs in Bangladesh are comparable with Level I hospitals in other countries, while DH/GHs and THCs are comparable with Level II and Level III hospitals. All tables rank the countries according to the specific indicator being tabulated.

Bangladesh's facilities have high occupancy rates in comparison with those of most other countries, with MCHs having among the highest observed occupancy rates for hospitals of their type. This is because of the relatively long patient stays in MCHs and because of their average bed turnover rates. In the case of THCs and DH/GHs, the high occupancy rates are due to their very high turnover rates and short lengths of stay. Why lower-level MOHFW facilities admit so many short-stay cases is unclear. However, it cannot be explained on the basis of a high per capita admission rate, since these are quite low in Bangladesh compared

**Table 8.19** Comparison of Hospital Services Statistics (Selected Countries)

| OCCUPANCY RATE (OR) (%) | | |
|---|---|---|
| *LEVEL I HOSPITALS* | | |
| COUNTRY | YEAR | OR |
| Ethiopia | 1983–85 | 47 |
| Colombia | 1980 | 73 |
| Indonesia | 1985 | 75 |
| Tunisia | 1989 | 76 |
| Jamaica | 1985 | 79 |
| Papua New Guinea | 1988 | 80 |
| Fiji | 1987 | 83 |
| Niger | 1986–87 | 87 |
| Rwanda | 1984 | 88 |
| Zimbabwe | 1987 | 89 |
| China | 1986 | 94 |
| Sri Lanka | 1991 | 96 |
| Bangladesh | 1997 | 110 |
| Lesotho | 1985 | 125 |
| *LEVEL II AND III HOSPITALS* | | |
| COUNTRY | YEAR | OR |
| Belize | 1985 | 36.3 |
| Fiji | 1987 | 46.0 |
| Indonesia | 1985 | 54.7 |
| Colombia | 1980 | 56.9 |
| Rwanda | 1984 | 58.4 |
| Ethiopia | 1983–85 | 59.0 |
| Sri Lanka | 1991 | 63.9 |
| Jamaica | 1985 | 66.4 |
| Papua New Guinea | 1988 | 66.7 |
| St. Lucia | 1986–87 | 74.0 |
| Bangladesh | 1997 | 78.8 |
| Zimbabwe | 1987 | 79.1 |
| China | 1986 | 89.5 |
| India (AP) | 1990 | 93.1 |
| Malawi | 1987–88 | 116.0 |
| Lesotho | 1985 | 129.0 |

| BED TURNOVER RATE (PER YEAR) | | |
|---|---|---|
| *LEVEL I HOSPITALS* | | |
| COUNTRY | YEAR | TURNOVER |
| China | 1986 | 13.7 |
| Ethiopia | 1983–85 | 14.7 |
| Niger | 1986–87 | 22.5 |
| Tunisia | 1989 | 27.6 |
| Indonesia | 1985 | 29.2 |
| Papua New Guinea | 1988 | 29.4 |
| Jamaica | 1985 | 35.2 |
| Colombia | 1980 | 37.8 |
| Zimbabwe | 1987 | 41.7 |
| Fiji | 1987 | 42.5 |
| Bangladesh | 1997 | 47.3 |
| Lesotho | 1985 | 50.7 |
| Sri Lanka | 1991 | 65.0 |
| *LEVEL II AND III HOSPITALS* | | |
| COUNTRY | YEAR | TURNOVER |
| Papua New Guinea | 1988 | 20.6 |
| China | 1986 | 20.9 |
| Ethiopia | 1983–85 | 29.7 |
| Jamaica | 1985 | 32.0 |
| Indonesia | 1985 | 33.4 |
| Belize | 1985 | 37.8 |
| St. Lucia | 1986–87 | 38.8 |
| Colombia | 1980 | 41.5 |
| Zimbabwe | 1987 | 43.6 |
| Malawi | 1987–88 | 47.4 |
| Fiji | 1987 | 47.9 |
| Lesotho | 1985 | 54.9 |
| India (AP) | 1990 | 56.0 |
| Sri Lanka | 1991 | 57.1 |
| Bangladesh | 1997 | 77.0 |

| AVERAGE LENGTH OF STAY (ALOS) (DAYS) | | |
|---|---|---|
| *LEVEL I HOSPITALS* | | |
| COUNTRY | YEAR | ALOS |
| Sri Lanka | 1991 | 6.9 |
| Colombia | 1980 | 7.2 |
| Fiji | 1987 | 7.2 |
| Zimbabwe | 1987 | 7.8 |
| Jamaica | 1985 | 8.2 |
| Lesotho | 1985 | 9.0 |
| Indonesia | 1985 | 9.4 |
| Papua New Guinea | 1988 | 9.9 |
| Tunisia | 1989 | 10.1 |
| Bangladesh | 1997 | 11.0 |
| Ethiopia | 1983–85 | 11.8 |
| Niger | 1986–87 | 14.1 |
| China | 1986 | 25.1 |
| *LEVEL II AND III HOSPITALS* | | |
| COUNTRY | YEAR | ALOS |
| Belize | 1985 | 3.4 |
| Bangladesh | 1997 | 4.1 |
| Fiji | 1987 | 4.2 |
| Colombia | 1980 | 5.5 |
| Indonesia | 1985 | 6.0 |
| Sri Lanka | 1991 | 6.0 |
| India (AP) | 1990 | 6.3 |
| Zimbabwe | 1987 | 6.7 |
| St. Lucia | 1986–87 | 7.0 |
| Ethiopia | 1983–85 | 7.2 |
| Jamaica | 1985 | 7.6 |
| Lesotho | 1985 | 8.6 |
| Malawi | 1987–88 | 9.0 |
| Papua New Guinea | 1988 | 12.1 |
| China | 1986 | 16.1 |

OR = Occupancy rate. *Sources:* Barnum and Kutzin 1993; Berman and Mahapatra 1994; Institute of Policy Studies database.

**Table 8.20** Comparison of Hospital Unit Costs as a Percentage of Per Capita Gross National Product (Selected Countries)

| UNIT COST PER PATIENT-DAY | | |
|---|---|---|
| *LEVEL I HOSPITALS* | | |
| COUNTRY | YEAR | % |
| Sri Lanka | 1991 | 1.4 |
| Bangladesh | 1997 | 2.2 |
| Niger | 1986–87 | 2.2 |
| Indonesia | 1985 | 2.8 |
| China (Barnum and Kutzin 1993) | 1986 | 3.0 |
| China | 1986 | 3.2 |
| Papua New Guinea | 1988 | 3.3 |
| Colombia | 1978 | 3.4 |
| Jamaica | 1985–86 | 3.7 |
| Zimbabwe | 1987 | 4.3 |
| Rwanda | 1984 | 5.2 |
| *LEVEL II AND III HOSPITALS* | | |
| COUNTRY | YEAR | % |
| Indonesia | 1985 | 1.1 |
| China | 1986 | 1.5 |
| Sri Lanka | 1991 | 1.7 |
| China (Barnum and Kutzin 1993) | 1986 | 1.8 |
| Malawi | 1987–88 | 1.9 |
| Indonesia | 1987 | 2.0 |
| Rwanda | 1984 | 2.6 |
| Jamaica | 1985–86 | 2.7 |
| Zimbabwe | 1987 | 2.7 |
| St. Lucia | 1986–87 | 3.0 |
| Papua New Guinea | 1988 | 3.1 |
| Bangladesh | 1997 | 3.6 |
| Belize | 1985 | 3.7 |

| UNIT COST PER ADMISSION | | |
|---|---|---|
| *LEVEL I HOSPITALS* | | |
| COUNTRY | YEAR | % |
| Sri Lanka | 1991 | 9.3 |
| Colombia | 1978 | 25.0 |
| Bangladesh | 1997 | 26.0 |
| Indonesia | 1985 | 26.0 |
| Niger | 1986–87 | 32.0 |
| Papua New Guinea | 1988 | 33.0 |
| Zimbabwe | 1987 | 33.0 |
| Jamaica | 1985–86 | 40.0 |
| China (Barnum and Kutzin 1993) | 1986 | 76.0 |
| China | 1986 | 90.0 |
| *LEVEL II AND III HOSPITALS* | | |
| COUNTRY | YEAR | % |
| Sri Lanka | 1991 | 5.3 |
| Indonesia | 1985 | 6.6 |
| Belize | 1985 | 12.9 |
| Bangladesh | 1997 | 13.9 |
| Malawi | 1987–88 | 17.0 |
| Zimbabwe | 1987 | 17.0 |
| Jamaica | 1985–86 | 18.3 |
| St. Lucia | 1986–87 | 21.0 |
| China (Barnum and Kutzin 1993) | 1986 | 29.8 |
| China | 1986 | 30.0 |
| Papua New Guinea | 1988 | 38.7 |

| UNIT COST PER BED | | |
|---|---|---|
| *LEVEL I HOSPITALS* | | |
| COUNTRY | YEAR | % |
| Sri Lanka | 1991 | 437.2 |
| Niger | 1986–87 | 710.0 |
| Indonesia | 1985 | 756.0 |
| Bangladesh | 1997 | 884.5 |
| Papua New Guinea | 1988 | 962.0 |
| Colombia | 1978 | 985.0 |
| China (Barnum and Kutzin 1993) | 1986 | 1039.0 |
| China | 1986 | 1119.0 |
| Jamaica | 1985–86 | 1148.0 |
| Zimbabwe | 1987 | 1393.0 |
| Rwanda | 1984 | 1667.0 |
| *LEVEL II AND III HOSPITALS* | | |
| COUNTRY | YEAR | % |
| Sri Lanka | 1991 | 172.3 |
| Indonesia | 1985 | 221.2 |
| China | 1986 | 502.0 |
| Belize | 1985 | 505.9 |
| Rwanda | 1984 | 556.6 |
| China (Barnum and Kutzin 1993) | 1986 | 584.2 |
| Zimbabwe | 1987 | 667.0 |
| Papua New Guinea | 1988 | 734.0 |
| Malawi | 1987–88 | 806.0 |
| St. Lucia | 1986–87 | 808.0 |
| Jamaica | 1985–86 | 812.3 |
| Bangladesh | 1997 | 887.4 |

| UNIT COST PER OUTPATIENT VISIT | | |
|---|---|---|
| *LEVEL I HOSPITALS* | | |
| COUNTRY | YEAR | % |
| Indonesia | 1985 | 0.7 |
| Papua New Guinea | 1988 | 0.7 |
| Bangladesh | 1997 | 0.8 |
| China (Barnum and Kutzin 1993) | 1986 | 0.8 |
| Colombia | 1978 | 0.8 |
| Sri Lanka | 1991 | 1.0 |
| Rwanda | 1984 | 1.3 |
| Jamaica | 1985–86 | 1.5 |
| Zimbabwe | 1987 | 1.6 |
| Niger | 1986–87 | 5.4 |
| *LEVEL II AND III HOSPITALS* | | |
| COUNTRY | YEAR | % |
| Sri Lanka | 1991 | 0.1 |
| Indonesia | 1985 | 0.3 |
| Zimbabwe | 1987 | 0.3 |
| Malawi | 1987–88 | 0.4 |
| Bangladesh | 1997 | 0.5 |
| China (Barnum and Kutzin 1993) | 1986 | 0.5 |
| Papua New Guinea | 1988 | 0.5 |
| Indonesia | 1987 | 0.6 |
| Rwanda | 1984 | 0.6 |
| Jamaica | 1985–86 | 1.1 |
| St. Lucia | 1986–87 | 1.3 |

*Source:* Barnum and Kutzin 1993; Berman and Mahapatra 1994; Institute of Policy Studies database.

**Table 8.21** Comparison of Hospital Staffing Indicators (Selected Countries)

| PHYSICIANS PER BED | | |
|---|---|---|
| *LEVEL I HOSPITALS* | | |
| COUNTRY | YEAR | RATIO |
| Bangladesh | 1997 | 0.1 |
| Niger | 1986–87 | 0.1 |
| Papua New Guinea | 1988 | 0.1 |
| Colombia | 1979 | 0.2 |
| Fiji | 1987 | 0.2 |
| Jamaica | 1985–86 | 0.2 |
| Sri Lanka | 1991 | 0.2 |
| Indonesia | 1985 | 0.6 |
| Dominican Republic | 1989 | 0.9 |
| Indonesia | 1985 | 2.8 |
| *LEVEL II AND III HOSPITALS* | | |
| COUNTRY | YEAR | RATIO |
| Papua New Guinea | 1988 | 0.03 |
| Sri Lanka | 1991 | 0.08 |
| Belize | 1985 | 0.10 |
| Fiji | 1987 | 0.10 |
| Jamaica | 1985–86 | 0.10 |
| Indonesia | 1985 | 0.11 |
| Bangladesh | 1997 | 0.17 |
| China | 1986 | 1.68 |

| NURSES/PARAMEDICAL STAFF PER BED | | |
|---|---|---|
| *LEVEL I HOSPITALS* | | |
| COUNTRY | YEAR | RATIO |
| Niger | 1986–87 | 0.3 |
| Bangladesh | 1997 | 0.4 |
| Papua New Guinea | 1988 | 0.6 |
| Dominican Republic | 1989 | 0.8 |
| Sri Lanka | 1991 | 0.8 |
| Fiji | 1987 | 1.0 |
| Indonesia | 1985 | 1.0 |
| Colombia | 1979 | 1.4 |
| Jamaica | 1985–86 | 1.4 |
| *LEVEL II AND III HOSPITALS* | | |
| COUNTRY | YEAR | RATIO |
| Belize | 1985 | 0.47 |
| Papua New Guinea | 1988 | 0.47 |
| Sri Lanka | 1991 | 0.51 |
| Indonesia | 1985 | 0.61 |
| Bangladesh | 1997 | 0.62 |
| Jamaica | 1985–86 | 0.77 |
| Fiji | 1987 | 0.80 |

| OTHER STAFF PER BED | | |
|---|---|---|
| *LEVEL I HOSPITALS* | | |
| COUNTRY | YEAR | RATIO |
| Fiji | 1987 | 0.1 |
| Papua New Guinea | 1988 | 0.2 |
| Niger | 1986–87 | 0.3 |
| Sri Lanka | 1991 | 0.3 |
| Dominican Republic | 1989 | 0.4 |
| Jamaica | 1985–86 | 0.4 |
| Bangladesh | 1997 | 0.5 |
| Colombia | 1979 | 1.0 |
| Indonesia | 1985 | 1.2 |
| *LEVEL II AND III HOSPITALS* | | |
| COUNTRY | YEAR | RATIO |
| Belize | 1985 | 0.10 |
| Fiji | 1987 | 0.10 |
| Sri Lanka | 1991 | 0.30 |
| Papua New Guinea | 1988 | 0.33 |
| Indonesia | 1985 | 0.42 |
| Bangladesh | 1997 | 0.47 |
| Jamaica | 1985–86 | 0.63 |

**Table 8.21** *(continued)*

| TOTAL STAFF PER BED | | |
|---|---|---|
| *LEVEL I HOSPITALS* | | |
| COUNTRY | YEAR | TOTAL |
| Niger | 1986–87 | 0.7 |
| Bangladesh | 1997 | 0.9 |
| Papua New Guinea | 1988 | 0.9 |
| Fiji | 1987 | 1.4 |
| Sri Lanka | 1991 | 1.4 |
| China | 1986 | 1.9 |
| Jamaica | 1985–86 | 1.9 |
| Dominican Republic | 1989 | 2.1 |
| Colombia | 1979 | 2.6 |
| *LEVEL II AND III HOSPITALS* | | |
| COUNTRY | YEAR | TOTAL |
| Belize | 1985 | 0.59 |
| Sri Lanka | 1991 | 0.89 |
| Papua New Guinea | 1988 | 0.90 |
| Fiji | 1987 | 1.00 |
| Indonesia | 1985 | 1.05 |
| Bangladesh | 1997 | 1.25 |
| Jamaica | 1985–86 | 1.47 |

| BED-DAYS PER STAFF | | |
|---|---|---|
| *LEVEL I HOSPITALS* | | |
| COUNTRY | YEAR | RATIO |
| Indonesia | 1985 | 97.0 |
| Colombia | 1979 | 100.0 |
| Jamaica | 1985–86 | 160.0 |
| China | 1986 | 177.0 |
| Fiji | 1987 | 225.0 |
| Sri Lanka | 1991 | 313.7 |
| Papua New Guinea | 1988 | 328.0 |
| Niger | 1986–87 | 476.0 |
| Bangladesh | 1997 | 506.5 |
| *LEVEL II AND III HOSPITALS* | | |
| COUNTRY | YEAR | RATIO |
| Fiji | 1987 | 176.0 |
| Indonesia | 1985 | 193.2 |
| China | 1986 | 195.3 |
| Jamaica | 1985–86 | 211.3 |
| Belize | 1985 | 224.0 |
| Papua New Guinea | 1988 | 283.3 |
| Bangladesh | 1997 | 289.8 |
| Sri Lanka | 1991 | 323.8 |

*Sources:* Barnum and Kutzin 1993; Institute of Policy Studies database.

with the other countries shown in the tables. One hypothesis is that overall bed capacity is low in Bangladesh relative to potential demand, and therefore, lower-level facilities, in the face of overwhelming demand, act to keep stays short while maintaining high admission rates. Another possible explanation is that doctors choose to admit a large number of patients who might not have been admitted in another context.

The comparison of costs presents a quite different picture. Bangladesh's MCHs have relatively low unit costs for both inpatient and outpatient services in comparison with other countries. In contrast, its lower-level facilities have the highest unit costs for these services in comparison with other countries. The basic difference between Bangladesh and other countries seems to be that in Bangladesh, the average cost per bed in lower-level facilities is the same as in higher-level facilities, while in most countries it is generally lower. This suggests that budgets should be reallocated in favor of higher-level facilities, or that the funds currently allocated to lower-level facilities in Bangladesh should be reduced, or that the size of lower-level facilities should be increased relative to their budget allocations.

The high costs at lower-level facilities are also emphasized by staffing indicators (table 8.21). In comparison with other countries, Bangladesh has fewer doctors per bed in Level I facilities (MCH equivalents), but surprisingly, it has more doctors per bed in Level II and Level III facilities (DH/GH and THC equivalents). We observed the same contrast in the case of nurses, although to a lesser extent. Since overall staffing per bed in Bangladesh is comparable with that in other countries, this suggests that the staffing mix in Bangladesh is at least unusual. In most countries, the number of doctors per bed increases with the level of sophistication of the facility, but Bangladesh chooses to place more doctors in lower-level facilities than in higher levels ones. Although an international comparison cannot be used to draw country-specific lessons, it at least suggests that reducing the number of doctors per bed at lower-level facilities in Bangladesh may be a desirable option to explore. An alternative possibility, of course, would be to increase

the number of beds in lower-level facilities. Taken in combination with other findings in this study, this finding again confirms that lower-level facilities have too few beds relative to their staffing numbers and patient demand.

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SECTION IV

# Private Sector Analysis

CHAPTER 9

# Private Health Care Sector in India—Policy Challenges and Options for Partnership

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## Abstract

This chapter examines what is known about the behavior of the private health sector in India and how the government should intervene in the private sector. The analysis is based on an extensive review of the literature in India and in six of its major states. Focusing on contracting and regulation, the literature points out that the government has limited capacity to regulate private health providers and to monitor contracts. We present several examples in which government collaboration with the private sector has been shown to work or has the potential to work well: (a) cooperating in disease surveillance reporting, (b) contracting for environmental activities in cities, (c) contracting for nonclinical services in large hospitals, (d) collaborating on disseminating public health information, (e) sharing resources for managing drug supplies, and (f) establishing patient referral

mechanisms for such procedures as obstetric complications or cataract operations. The government needs to pursue these types of collaboration because the private sector is already playing a dominant role in curative health care and because the government has an obligation to ensure health services are safe, high quality, and accountable to the public. The government must find ways to increase that access to health services and financial protection for the poor.

## Introduction

The private health care sector in India is very complex and highly heterogeneous. Despite an increasing interest in the sector by analysts in the recent past and the commissioning of several special studies, private health care still remains underresearched and therefore poorly understood. Overall, the health sector in India is characterized by a mixed ownership pattern, many types of providers, and different systems of medicine. Recent government data indicate that there is only one formally qualified registered doctor for every 862 people, one hospital for every 11,744 people, and one hospital bed for every 693 people (Nandraj 2001). In absolute terms, the size of the health care sector appears to be "good enough." Unfortunately, the distribution is lopsided, with the bulk of services located in urban areas and dominated by the private sector.

Policy analysts and policymakers alike face two related issues: (a) Do we have sufficient information about the behavior of the health care market in India? (b) Where and how should the government intervene and collaborate with the private health sector? These two questions will dominate the agenda of both researchers and policymakers for several years to come. In the meantime, we should also ask another crucial question: What kind of role would the private sector like the government to play that will enable delivery of better health care services to the people at large?

In the next section, we provide a brief sketch of the characteristics, size, and distribution of the private health sector in India. It is based

on a review of the data and literature pertaining to the states of Tamil Nadu, Karnataka, Kerala, Gujarat, Maharashtra, and Rajasthan, the southern and northwestern states of India. They are meant not to be representative of the whole of India but to remind readers of the vast variations in the size and characteristics among the states in India. Next, we highlight two major policy challenges—contracting between the private and public sectors and government regulation of the private sector. Obviously, many other challenges exist, but we will not discuss them here. The next section highlights six areas in which it may be possible to forge partnerships between the private sector and the government. They are based largely on experiences in the states mentioned above, and the purpose is to indicate the potential for such collaborative efforts rather than to be exhaustive or authoritative. In the final section, we consider how we can further our understanding of the private health sector and what other challenges remain to be overcome to ensure that policy interventions are effective.

## The Size, Characteristics, Growth, and Distribution of the Private Health Sector

The size of the private sector can be illustrated in terms of the number of beds, the number of private clinics with and without inpatient facilities, the size of the workforce, the private sector's market share (number of inpatients and outpatients), and the assets that it owns. It is also useful to know its rural-urban distribution. One crucial aspect of the private sector is the number of indigenous medical practitioners it includes, and more effort must be made to estimate their number. Viswanathan and Rohde (1990) estimated that there are approximately 1 million unqualified rural medical practitioners, most of whom treat only outpatients. But we also need to know about variations in their practices, the quantity and quality of the services that they provide, and what they charge for those services.

The evidence suggests that about 60 percent of private hospitals are owned by one individual, usually a practicing doctor (Kerala

1996; Muraleedharan 1999b). These are classified as sole-proprietorship hospitals. A substantial number of private hospitals have a partnership model of organization, and a very few belong to the "corporate, public limited" category or the "trust hospital" (equivalent of nonprofit) category. The size of the sole-proprietorship and partnership categories is likely to vary across states, but there are very few corporate, public limited hospitals in any of these states (Muraleedharan 1999b). If we also consider stand-alone clinics that provide only outpatient services, the sole-proprietorship category is likely to constitute more than 80 percent of the private sector. Most sole-proprietorship hospitals, usually called nursing homes, have no more than 10 beds. Their services range from simple treatments to sophisticated operations. The provision of laboratory and diagnostic services and blood banks is usually limited to urban and semiurban areas (Nandraj and Duggal 1996).

In Kerala, a census of hospitals showed that about 13 percent of private allopathic medical institutions have just one physician, and about 42 percent have no more than four physicians (Kerala 1996). Most sole-proprietorship hospitals employ one or two junior-level physicians and often depend on visiting consultants. The survey reveals that there were 12,473 doctors and 15,221 paramedical staff in Kerala in 1986 and 19,963 doctors and 28,641 paramedical staff in 1995. Nearly 50 percent of doctors were employed in allopathic institutions, 30 percent in Ayurvedic hospitals, and 17 percent in homeopathic institutions. Allopathic institutions employed about 88 percent of all paramedical staff (including staff employed at the Ministry of Health) working in all types of institutions.

Data on the workforce in the private sector are hard to come by. In fact, there is very little reliable information even on the total numbers of active medical and other health care professionals in any state. A recent study in Tamil Nadu estimated that, as of December 1997, there were 37,733 allopathic physicians in the state, of whom about 10,000 were employed in government services (Muraleedharan 1999a). This means that about 70 percent of physicians are working in the private sector. We have no estimate

of how they are distributed across rural and urban areas; however, it is not difficult to speculate. In and around Chennai City alone, there are about 10,000 doctors (in both the private and public sectors). Likewise, about 35 percent of an estimated 2,035 dentists in Tamil Nadu are located in and around Chennai City. Thus, current estimates indicate that there is one doctor for every 800 people in Chennai, while the average population coverage per doctor for the whole state is about 1,590. If we exclude medical personnel located in district capitals and other large towns, we find very low population coverage in rural areas.

Data on the volume of work and the performance of private hospitals are perhaps the most difficult to obtain. The Kerala census reveals that about 30 percent of institutions in the state treated fewer than 1,000 patients per year. Only 300 institutions treated more than 25,000 patients per year. Based on this finding, we cannot say whether these institutions are underemployed, but the data suggest that their personnel are underemployed. Muraleedharan's (1999b) study of the private hospital sector in Chennai showed that on average a physician spends 3.11 hours per day in a hospital. The study also showed that most physicians practice medicine in at least two different institutions.

Most hospitals, including many large ones, have no proper patient records or retrieval system. Financial performance data are impossible to obtain. Homan and Thankappan's (1999) study, based on primary data collected from nine private hospitals in the Trivandrum district, showed that those located in Trivandrum Taluk were operating at a high occupancy rate, while those in other *taluks* (a taluk is a subdivision of a district) in the same district were not. The authors' explanation is that these lower-occupancy hospitals were established recently, and the general perception is that better-quality care is available only in large city hospitals. This study revealed some other interesting facts about the private sector. First, the shortest average length of stay tends to be in the private sector. Second, private hospitals tend to order 55 percent more X rays per patient than public hospitals. Third, about 25 percent of

lab tests ordered by public sector doctors are referred to private sector laboratories. In Chennai City, 45 of 72 private hospitals surveyed reported having a contract with one or more diagnostic centers or hospitals for diagnostic purposes. Evidently this is an area that requires further study.

Overall, the Indian scenario can be summarized in the following terms. Recent national surveys have shown that, in both rural and urban areas, dependence on the private sector for both outpatient and inpatient services has substantially increased over the past decade. Data from the 52nd National Sample Survey (NSS) show that the proportion of people treated as outpatients in rural private sector health facilities has increased from 74 percent in 1986/87 to 81 percent in 1995/96; in urban areas it has increased from 72 percent in 1986/87 to 80 percent in 1995/96. In the case of inpatient care, the increases in rural and urban areas over the same period were 40 to 56 percent and 40 to 57 percent, respectively (NSSO 1998). Even more important to note is that the financial burden per episode in both public and private institutions has grown substantially. The average expenditure (at constant 1986/87 prices) for inpatient treatment per episode of illness in public institutions has gone up by 26 percent to 912 rupees (Rs.) (in 1995/96) in rural areas and by 48 percent to Rs. 963 in urban areas. In the private sector, the increase in out-of-pocket expenditure for inpatient treatment per episode is even more alarming: 63 percent in rural areas and 50 percent in urban areas over the same period at 1986/87 prices.[1]

However, not all states have such a large number of private sector facilities. For example, there are very few private providers in Rajasthan. Many studies show a correlation between urbanization and the growth of the formal private health sector (Baru 1998; Kavadi 1998; Nandraj and Duggal 1996). In Rajasthan, as in other states, the growth of private hospitals has been higher in urban areas than in rural areas (Kabra and Malti 1991).

The financing of health services is predominantly private, through out-of-pocket spending by households on a fee-for-service basis. Studies in Maharashtra State reveal that, on average, house-

holds spend Rs. 500 per capita per annum privately on health (Madhiwala, Nandraj, and Sinha 1999; Nandraj and others 1998). Private households spend about four to five times as much as the government on health services (Duggal, Nandraj, and Vadair 1995). This private spending works out to between 4 and 5 percent of gross domestic product (GDP). There is, however, very little documented information available regarding financing, payment, and charging practices in the private health sector. Two studies, one in Mumbai and another in Delhi, documented the earnings of the doctors and hospitals operating in the private health sector. The Delhi study revealed that the average monthly net income of a doctor practicing at a clinic or residence worked out to about Rs. 29,800, and for a doctor running a nursing home to about Rs. 80,000 (Kansal 1992). The Mumbai study revealed that average monthly net income for a successful general practitioner was more than Rs. 18,000 (George 1991). Although this is roughly three times more than the income earned by a doctor working in the government health services, it does not take into account the nonsalary benefits and pensions earned in the public sector or the business risks taken in the private sector.

Various studies have pointed out the poor quality of care provided in the private sector. Stories abound of problems with diagnostic and treatment practices; with inadequate facilities and equipment; and of doctors overprescribing, subjecting patients to unnecessary investigations and interventions, charging patients exorbitantly, using unethical and irrational practices, and failing to provide information to patients. Despite the poor quality of the care, the majority of people still choose to use the private health sector, probably because of its accessibility in terms of distance and timing, private providers' responsiveness to patients, and the poor quality of services in the public sector (Bhat 1999; Nandraj 1994; Nandraj and Duggal 1996; Phadke and others 1995; Uplekar and others 1998; Yesudian 1994).

We now turn to discussing two crucial policy challenges that have direct bearing on the effectiveness not only of the private health system, but of the entire the health sector in the country.

## Policy Challenges

There are several policy challenges regarding the role of private providers in the health sector in India.

### *Contracting*

Contracting has emerged as a new trend in public sector management. In order to increase their efficiency and responsiveness to their users, public sector institutions contract with private sector organizations to perform some of their functions. Advocates of contracting say that it increases efficiency by promoting competition, increasing transparency, providing high-quality services at lower cost, providing accountability for outputs and outcomes, and enhancing accessibility to services. Contracting is defined as a normal market exchange of services that is formalized in advance by issuing a contract binding the buyer and seller to the conditions of the exchange (McPake and Hongoro 1995). The functions of the purchaser and the provider usually are separate. Contracting can take various forms for various aspects of health care services. Some or all services of health facilities or programs can be contracted, including clinical and nonclinical services.

Our discussions with key people have revealed that in India, contracting has occurred in the blindness control program and the AIDS control program and that franchising arrangements have been set up with private providers under the new national tuberculosis control program. The World Bank has made a number of recommendations regarding contracting: that support services at hospitals be contracted out "wherever feasible"; that contracting out of mainstream diagnostic services and clinical services be evaluated; that contracting be used in the delivery of national disease control programs; and that nongovernmental organizations (NGOs) be contracted to provide primary health services in remote rural areas (World Bank 1995, 1996).

Many state governments, especially those with projects currently in the state health system, have contracted out nonclinical services.

In Maharashtra, the contracting out of ancillary services was common, particularly in Mumbai. The Bombay Municipal Corporation has been contracting out services such as catering, laundry, and hospital maintenance. In spite of the importance attached to contracting by funding agencies and the government of India, there has been very little evaluation of its effects on health services. One study that examined the contracting out of catering services by public municipal hospitals in Mumbai found that the contracted-out catering services were significantly cheaper than those provided in-house, but their quality was lower. The authors of the study pointed out that none of the hospitals attempted to monitor the quantity and quality of food provided by the contractor (Bhatia and Mills 1997).

Bennett and Muraleedharan (1998) identified four different contracting arrangements in Tamil Nadu: laundry services, high-tech equipment in public hospitals, equipment maintenance services, and advertisements for the AIDS control program. For laundry services, hospitals advertised in newspapers to invite competitive bids, while for high-tech equipment and maintenance they negotiated directly with providers. For the AIDS advertisements, competitors were short-listed based on their experience and their bids. Thus, a variety of procurement methods have been tried for both nonclinical and clinical services. In all cases, there were very few bidders for the contracts. With one exception, all of the contracting arrangements studied were for new services—they did not involve stopping the direct provision of a service or the retrenchment of staff—so there was no opposition from the trade unions. The only exception was an attempt to contract for laundry services in Coimbatore General Hospital, which ran into opposition from staff. It was not possible to lay off existing staff, the contractor was unwilling to take on government employees, and the government employees were not willing to work for the contractor.

Overall, the study concluded that both internal and external factors constrain the ability of governments to contract for health services. Internally, the central bureaucracy critically affected contracting-out arrangements. Although Chennai has a sizable private sector, which in principle should mean a considerable

number of competitors for contracts, few firms were bidding for contracts for specialized services such as medical equipment maintenance.

Internationally, public partnerships with the private sector in the form of contracts have increased. Evidence from developing countries shows that contracting is contingent upon "government capacity to act as an efficient purchaser, and more specifically to make the appropriate decisions as to whether and when to let contracts, to design efficient contracts, and to monitor effectively contractor compliance. Conversely, lack of this capacity may lead to inefficiency through exploitation by contractors and distorted resource allocation" (Mills and Broomberg 1998, p. 29). Contracting also requires governments to have several generic skills and resources, including planning, economic analysis, contract design and negotiations, and a suitable information system. There is also evidence that contracting capacity is very weak when a government has inadequate financial resources (Mills and Broomberg 1998).

These observations are broadly applicable in the Indian context, as shown in the case study of Tamil Nadu (Bennett and Muraleedharan 2000). However, as yet there has been no evaluation of the limited contracting experience in India to examine savings, transaction costs, quality changes, and equity implications. The literature suggests several generic factors that may affect the capacity of national and state governments to address both the regulation and the contracting issues in the health sector (Bennett and Muraleedharan 2000; Hildebrand and Grindle 1995). First, the private sector is skeptical about government's intention to improve quality of care. The government has low credibility in the eyes of the private sector and of the public in general. To some extent, the government is aware of these constraints. Second, public sector unions further constrain the government's ability to contract out services. Third, the government's capacity to design contracting mechanisms is likely to be weak as long as its administrative and legal system is weak. The effect of the third factor varies from state to state.

In India, contracting out services may not be a solution to the problems plaguing public health facilities and programs. A govern-

ment that fails to deliver quality services because of a lack of basic administrative capacity is unlikely to be able to contract either clinical or nonclinical services effectively. One crucial aspect of contracting is that it is based on the government's capacity to act as a competent and efficient purchaser in designing contracts and monitoring compliance. A lack of capacity leads to inefficiency because it makes the government vulnerable to exploitation by contractors. It is suggested that with the transfer of certain powers from the central government to local jurisdictions under the 73rd and 74th Constitutional Amendments, contracts will be managed better because the supervising authorities will be closer to the sites in question. One justification for contracting out clinical services may be to fill gaps in the public system where there are shortages of staff or facilities, although shortages may occur in places where there is a limited private sector presence. It will be necessary to develop local bodies' capacities to take on such contracts but, in the interim, a local government with limited capacity could perhaps concentrate on contracting out services that are easy to contract and where performance can be readily measured, for example, nonclinical services such as cleaning, laundry, and security. Furthermore, there is a need to strengthen local governments' information systems so that they can effectively monitor the performance of contractors.

### *Regulation*

Regulation occurs when a government exerts control over the activities of individuals and firms (Roemer 1993). More specifically, regulation has been defined as "government action to manipulate prices, quantities, (and distribution), and quality of products" (Maynard 1982). The exact "action" is often described as the regulatory intervention or regulatory mechanism and can be legal controls or incentives. Legal controls are legislated requirements that can lead to punitive action if they are not met. To be effective, regulation requires substantial information and enforcement machinery. The regulatory process involves setting the policy agenda,

designing the legislation, and implementing and enforcing its requirements. Regulation serves to discourage perverse practices and to improve equity.

The studies that we reviewed primarily examined laws and how they have been implemented with respect to individual practitioners and hospitals (Bhat 1996; Jesani 1996; Nandraj 1994). The studies found that the factors that contribute to the poor quality of services offered by the private sector are a lack of monitoring by authorities, outdated and inadequate legislation, and the inability or failure of the government to enforce existing regulations. The respective medical councils in states in India are not enforcing the laws relating to the registration and licensing of individual practitioners. This situation has required the judiciary to intervene in affairs that should have been handled by the medical councils. The studies also indicated that professional bodies, whether sanctioned by government or voluntary medical associations, have not played a significant role in improving the practices of private medicine. One of the studies sought the views of a range of stakeholders in Mumbai on the need for an accreditation system for private hospitals, and the response was overwhelmingly in favor (Nandraj, Khot, and Menon 1999). Presently, efforts are being made in Mumbai to set up an accreditation system consisting of various stakeholders. All of the studies revealed that there is an absence of laws and regulations governing the practices of laboratories, polyclinics, diagnostic centers, and the various types of health care centers related to other systems of medicine. Where laws do exist, they are inadequate and are not being enforced. The current laws do not provide a framework to ensure that private providers are maintaining minimum standards. Furthermore, no laws regulate the geographical distribution of providers, the types of technology to be made available, the way charges are levied, or the prices themselves.

Studies have shown that that there is an abundance of medical equipment and technology in urban areas compared with rural areas, leading to excess capacities. Between 1984 and 1986, more than 60 diagnostic centers entered the market with a total invest-

ment of more than Rs. 2,000 million in sophisticated equipment. Bombay had 13 body scanners; Delhi, 11; Madras, 8; Calcutta, 3; Hyderabad, 2; Pune, 3; and Ahmedabad, 3 (Jesani and Anantharam 1993). Such an influx of technology may have led to irrational use of medical equipment and services, though this has not been systematically analyzed in India. Yet unnecessary investigations, referrals, and hospitalizations inevitably occur where there are known kickbacks between referring practitioners, hospitals, and laboratories. In many hospitals, doctors are under pressure to see that the beds are occupied all the time and the equipment utilized fully. Many hospitals fix the amount of business that a physician or surgeon has to bring in over a certain period. An oversupply of doctors in the private health sector has also created unhealthy competition that has led to unnecessary or excessive medication of otherwise healthy people (Nandraj 1994).

The failure of the government to enact the necessary legislation and strengthen existing laws permits many of these market imperfections to proliferate. In many instances, powerful medical lobbies have opposed the government's efforts to regulate. Many state governments that wanted to enact and implement legislation governing private hospitals found their efforts thwarted. Solo practitioners opposed the Nursing Home Act of Gujarat because it was simply a copy of Delhi's Nursing Home Act of 1953. Similar opposition arose against the Consumer Protection Act, but it was not scuttled, in part because it received overwhelming support from consumers. (A survey of litigation found that more than 50 percent of the cases were brought against solo practitioners [Bhat 1996].) The government's capacity to regulate the private health sector has generally been found to be lacking (Bennett and Muraleedharan 2000; Bhat 1996; Jesani 1996; Nandraj 1994).

The few studies that have been conducted in India and internationally make a strong argument for a minimum set of basic regulations covering the licensing of practitioners and institutions, measures to ensure minimum standards of quality, guidelines regarding pricing, and actions to prevent the oversupply of services (including technology). One important aspect of the need for

legislative regulations is that they can be pursued in the larger context of examining existing laws that are outdated and making appropriate changes or of devising comprehensive legislation that encompasses all aspects of public health, such as licensing, prices, distribution, financing, information, and consumer protection. The Consumer Protection Act is an example of this process.

In India, with its dominant private health sector and relatively weak government oversight, there is a need to develop self-regulatory systems that involve the stakeholders and that are less threatening to providers than government regulation. Self-regulation is gaining acceptance, as revealed in the study conducted in Mumbai. One of the foremost steps for any intervention or involvement would be to develop an appropriate information base on the private health sector. Many governments are handicapped by a lack of information on this dominant sector. Information on private providers could be linked with registration and licensing mechanisms.

Bennett and Muraleedharan (1998) pointed out the poor communication between the Department of Health and the various statutory self-regulatory bodies in India. Improving communication between the various members of regulatory bodies seems to be crucial if the government wishes to improve regulatory performance. Until recently, professional bodies exercised regulatory authority over medical and allied professionals in India. Although several explanations can be given for their lack of control over their members, it cannot be denied that they were also constrained in their performance by a lack of autonomy and certain external factors, such as civic-public interactions, political structures, and preference. However, they also clearly suffered from a lack of motivation and self-interest, which undermined their efficacy. The process of implementing the Private Clinical Establishment Act (1997) in Tamil Nadu offers some insights into factors that limit the government's capacity to address such issues. There is much opposition to this act among several interest groups. This is partly due to (a) a concern among private providers that this act is aimed at promoting rent-seeking behavior by the government, (b) the fact that government hospitals are excluded from the act, (c) a substan-

tial lack of awareness about the act among medical professionals themselves, and (d) disagreement over who constitutes a "competent authority" with powers to inspect and suspend the licensed private hospitals and providers. To gain the confidence of the various stakeholders, particularly of the private health sector, policymakers are now being forced to consider the problems in the public sector as well.

## Options for Partnership

We now briefly explore the potential for the government to collaborate with the private sector in promoting public health goals in primary care. Of the six cases discussed here, the first four are derived from direct experiences in the states; the latter two are proposals that we strongly feel are worth pursuing, based on our own experiences and reflections over a period of time. For each option, we indicate the potential benefits and costs not only to the government but also to the potential partners. The incentives and disincentives must be as clear as possible to all stakeholders. Although for all practical purposes, patients in most instances will remain outside the negotiation process, their interests should be foremost when the government designs partnerships.

Analytically, partnership between public and private sectors in health can be seen as a form of intervention in the overall structure and functioning of the health care system. A series of concerns arise: What options exist for forging partnerships? How should they be implemented? How should they be paced, and how long should they be pursued to establish the stability of reforms and their desired effects? What are the enabling conditions for reforms to have continued positive (and intended) effects? However, there is an overarching question: Does the government have the capacity to intervene and be effective? This is a very fundamental question that state and central governments must address to assess realistically what they can and cannot do lest they become overambitious in setting goals and devising strategies.[2]

### *Partnerships in Disease Surveillance Activities*

It is possible for governments to link up with private hospitals and physicians in solo practice to develop an information system for disease surveillance at the district and even at the village level. The North Arcot District Health Information (NADHI) model popularized by researchers at the Christian Medical College in Vellore (John and others 1998) has proved to be highly replicable and is now being tried in certain districts of Kerala. Under this program, private practitioners and hospitals are asked to report all notifiable diseases that they treat. Specific methods have been worked out in which network members give this information to a central information system. This model has proved to be extremely useful in the management of public health programs, the monitoring of communicable diseases, and the evaluation of disease control programs. The success of the model has been attributed to the "simplicity of reporting procedure, low budget, private-public participation, and personal rapport with people with reporting" (John and others 1998). What are the benefits to the private sector in joining such efforts? It could be given specific incentives that may include funding for continuing medical education or access to the information base for research purposes. The limited experience with the NADHI model has shown that a significant number of private practitioners can be mobilized and can make useful contributions to district-level planning and evaluation of health policies.

### *Partnerships in Public Health Programs*

There are many useful experiments from other sectors, particularly in the field of waste management and environmental conservation. Recently in many large cities, garbage clearing has been contracted out to private firms. It seems likely that this approach could also be adopted in certain public health programs. For example, controlling mosquito breeding could be contracted out, very much like garbage-clearing activities. However, unlike the garbage-clearing

program, the contracts need not be given to large multinational companies. Rather, small, local entrepreneurs may be able to take on this task.

As part of this strategy, contracting out could also be tried for the upkeep of large tertiary hospitals. Typically, large public hospitals have tried to run their own nonclinical services such as catering and laundering, but this has caused many difficulties. Yet not many large tertiary-level public hospitals have attempted to contract out these services.

There are also examples of private-public partnerships in the Tuberculosis Control Program, using the Directly Observed Treatment, Short-Course (DOTS) strategy. Although there are no studies on the impact of such collaborations in the states that we have reviewed here, one ongoing effort offers an example. The Advocacy for Control of Tuberculosis (ACT) Program initiated under the Resource Group for Education and Advocacy for Community Health (REACH) in collaboration with the Tuberculosis Research Centre (TRC) in Chennai now has about 50 private practitioners engaged in DOTS. ACT treated more than 250 patients during 1998/99, with the help of a large number of volunteers who observed follow-up patients during the entire treatment process (REACH 2000). The program began rather ambitiously with about 400 private practitioners showing an interest in participating in DOTS, but slowly many have dropped out of the process.[3] While we do not know what caused them to drop out, the program nevertheless continues in several ways. We are not suggesting that the ACT model of collaborating with the private sector should necessarily be adopted and extended. Rather, such experiments should be carefully analyzed to see whether they are effective and whether it would be useful to try such private-public partnerships in other parts of the health care industry.[4]

### *Partnerships in the Dissemination of Health Information*

There is enormous opportunity for forging partnerships with the private sector in disseminating important health information to the

population, particularly in the field of information, education, and communications activities. To some extent, this has already been tried. For example, advertising campaigns for AIDS control have been contracted out to many private organizations in India. The government providing funding to NGOs to run health education programs aimed at adolescents in urban and rural areas is another example of a public-private partnership of this kind.

***Partnerships with Communities and Businesses***

It is possible to involve local businesses and communities in various health care programs. For example, in Tamil Nadu, several primary health centers, particularly in underdeveloped districts, have been built with the help of local communities that have donated free labor, material, land, and furniture to the centers. Some communities have helped by ensuring water supply to the center, meeting the center's electricity bill, or maintaining its beds or its infrastructure. Such contributions are not uncommon, and in many places, local people participate enthusiastically in these activities.

Many small, medium, and large industrial organizations also have shown interest in contributing resources to the health program in their regions. Several large companies have contributed to the running of primary health centers by providing beds or equipment or by paying the center's utility bills. The potential for these kinds of donations should be explored systematically as a way of augmenting the resources that states have to spend on health programs.

For such collaborations to work, it will be necessary to establish very clear incentives for businesses to make contributions. For example, the government could provide a tax concession to any business for making a financial contribution to a primary health center. Also, it will be vital to ensure that the health center in question is delivering high-quality care to all local people. If local communities and businesses are to make financial or in-kind contributions to the running of the local primary health center, they will expect that care will be available to all whenever it is needed.

### *Partnerships in the Purchase and Supply of Drugs*

The Tamil Nadu State Medical Corporation has gained a considerable reputation for its efficient drug management system within the public sector. It may be worthwhile to consider extending its operations, particularly the drug management system, into the private health sector. Although the details would need to be worked out, we can describe how such a partnership might work. A Drug Supply Corporation in each state would purchase drugs on behalf of many small private hospitals and providers (particularly the nonprofit organizations). Because it would buy the drugs in bulk directly from the manufacturers or distributors, it would be able to buy them at cheaper rates than the market prices and could then sell them to private hospitals and providers. This would considerably reduce the financial burden on those seeking care from the private health sector, because a large proportion of consumers' out-of-pocket expenditures is on the purchase of drugs. It might also encourage small-scale private entrepreneurs to set up pharmaceutical shops in which they could buy drugs from the state's Drug Supply Corporation and sell them at specified low rates. Appropriate checks and balances would have to be worked out to prevent exploitation. One possibility is for these small-scale private entrepreneurs to be given financial assistance (loans) to set up their shops, either by the corporation or by state financial institutions.

This option offers clear advantages to all parties involved. It provides small-scale entrepreneurs with employment opportunities. It makes small-scale providers more competitive than those who are not part of this scheme. It would reduce patients' out-of-pocket expenditures on drugs. The Drug Supply Corporations could make substantial profits if their volume of business is sufficiently high, even with their small profit margins. At present, retail markets in the pharmaceutical sector are riddled with undesirable practices, including kickbacks and incentives from pharmaceutical firms to health providers to prescribe specific drugs.[5] The Drug Supply Corporation option might reduce some of these undesirable practices in this market. There seem to be few disincentives, provided proper checks and monitoring were in place.

### *Partnerships in Managing High-Risk Pregnancies*

Cesarean section deliveries cannot be done in primary health centers. Most often those who depend on the public health care system have to travel a long distance to reach a district hospital to have their babies delivered in this way. Considering that the government is committed to increasing access to hospital deliveries, it is necessary to explore what options are available for managing high-risk pregnancies. One option is to contract with anesthetists and other specialists (such as obstetricians and gynecologists) to perform cesarean sections at community health centers or taluk hospitals. Alternatively, the government could enter into contracts with certain private hospitals wherever possible and necessary. Under this option, certain recognized private hospitals (or specialists on contract) could be paid a fixed amount per operation performed, irrespective of the patient's economic status. The direct benefits to pregnant women from this option would be immense. The benefits to private providers could also be substantial, depending on the volume of services they are able to provide. Strict referral practices could reduce the risk of providers performing unnecessary cesarean deliveries. This option was put into practice in the recent experience of the Blindness Control Program, under which the government of India and state governments have contracts with private providers, who are paid a fixed amount per cataract operation.

## Conclusions

The primary reason why the government should explore partnerships with the private sector is that the private sector is already playing a substantial role in meeting people's demands for curative care. Another legitimate reason is the government's concern for reducing the financial burden on the poor and ensuring that all health services are safe, high quality, and accountable to the public.

We have identified six specific policy options for forging partnerships between the private and public sectors in providing health care. We believe that such partnerships will help to increase access

to care for the poor and needy, reduce the costs of care, increase the overall effectiveness of health programs, and give all partners a sense of ownership in the services being provided. We believe that these policy options are worth exploring, but every effort should be made to rectify the weaknesses in the system to produce better policy outcomes. Clearly, we have not exhausted all possible options. For example, we have not explored the option of collaborating with large corporate hospitals. In the past, the government has given several tax concessions and subsidies to large corporate hospitals located in large cities (Bhat 2000). In return, among other things, the hospitals were expected to provide a portion of their services free of cost to poor patients. In some states, governments have also entered into joint ventures with large hospitals on certain conditions. There has been further demand from these large hospitals for higher concessions. It is necessary to assess the impact of these policies in a systematic manner before extending their coverage. In fact, Bhat (2000) found that the "recent initiatives of providing subsidies to private facilities have not produced any results."

Based on their examination of Tamil Nadu, Bennett and Muraleedharan (1998) have argued that there is little scope for partnerships in clinical services. This is largely due to some of the weaknesses that we have identified, in particular the weak regulatory mechanisms available to monitor the quality of care provided by both the private and public sectors. Also essential for building partnerships are broader social and environmental factors, such as transparency, implementation skills, a strong political will on the part of governments to increase financial allocations to the health sector and to partnership initiatives in particular, and efforts to contain corruption and leakage.

Policymakers must provide adequate resources for evaluating alternative policy options in terms of equity and efficiency. This evaluation should also include the options that we have proposed in this paper. We strongly recommend that specific studies be initiated to:

- Rigorously evaluate the limited experience in contracting and regulation of the private health sector, including the medical

equipment sector. Some states have gone ahead in regulating the private sector, but we have little understanding of the processes that they have gone through in putting these regulatory mechanisms in place.

- Assess the impact of the Consumer Protection Act on both providers and consumers, particularly the extent to which it has enabled consumers to obtain better care.

It is imperative that the government intervene in the private health sector. Its foremost concern should be to articulate and define the roles of the public and private health sectors. The government should provide basic health care services to the population, as the majority of the poor are dependent on it. The government cannot shirk this responsibility. In areas where it is not able to provide services, it should collaborate with the private sector, even though partnerships between the private and public health sectors have certain basic contradictions. The state aims to provide services equitably, while the private sector is driven by the desire to maximize profits. The challenge, therefore, is to develop and evolve partnerships that serve public health goals. The transfer of public resources to the private sector needs to be examined in the context of provision of care to the poor and needy.

There is a general belief that India is an overregulated economy owing to the involvement of the state in many activities. However, Dreze and Sen (1995) have argued convincingly that this applies only to business spheres and that, in the social sectors, the state has had only a limited presence. The government should not shirk its responsibility to regulate. It needs to understand the new roles that it must perform and develop capacities to handle those new roles. The government's roles in policy formulation, monitoring, and evaluation will assume greater importance in the new environment. Effective implementation of these functions will require creative structures. Regulatory capacity requires a considerable degree of decentralization of responsibility and authority to the local level. In addition, sufficient funding and resources must be provided to regulatory bodies to enforce the regulations. The point is not just to

regulate the private sector, but to do so in the context of making health care universally accessible, of high quality, financially fair, and responsive to people's needs.

## Notes

1. These prices are based on data obtained from Charu Garg, a fellow researcher, during her presentation at the National Conference on Health Insurance, held at the India Institute of Management, Ahmedabad, March 15–17, 2000.

2. The question of the government's capacity to address many of these health sector issues requires much more detailed empirical analysis than it has received so far. However, the international literature on this subject in different sectors is growing. See Batley (1999) for a review of recent literature on this subject.

3. This observation is based on a personal discussion with concerned individuals associated with ACT.

4. For more useful literature on private-public partnership in tuberculosis control, see Priya (1997) and Uplekar and others (1997).

5. For a detailed description of their market, see Kamat and Nichter (1997).

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CHAPTER 10

# Private Health Provision in Uttar Pradesh, India

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## Abstract

While the dominance of private health care delivery in India is widely acknowledged, little empirical evidence exists on how it functions. This chapter examines how the private health sector is functioning in Uttar Pradesh (UP), and identifies opportunities for collaboration between public and private sectors. A survey was conducted in three districts in UP among different types of private providers: solo practitioners (allopathic and alternative providers), small and large hospitals, and diagnostic centers. The survey showed that most facilities are established to provide a living or profit to the owner, but do offer numerous financing concessions to their patients. The main constraints private providers face include labor and infrastructure problems. Few quality assurance mechanisms are used, although voluntary accreditation and continuing education programs would be welcomed. Private providers work quite independently from the public sector but would favor further collaboration through training, contracting, and working together on national health programs. This finding suggests that there is considerable potential for public-private collaboration in UP.

## Introduction

Public spending on health care in India is among the lowest in the world, at less than 1 percent of the country's gross domestic product (GDP). Out-of-pocket private spending dominates: 82 percent of all health spending comes from private sources. Despite the fact that such a large share of health care is in the hands of the private sector, relatively little is known about this sector—how it functions, the nature of its clientele, the types of services it provides, the quality and quantity of services it delivers, and the dynamics of the sector as a whole. It is clearly time we knew more about private sector operations in the Indian health sector. This knowledge would be useful in determining how private sector services can fit with those provided by the public sector to offer the people of India more comprehensive and more effective health care.

As a first step, we undertook a short study of the private sector in the state of Uttar Pradesh (UP), India. Our objectives were to learn (a) how national and state health policies can clarify the role of the private sector and how the public sector can interact with different parts of the private sector, (b) what opportunities and constraints enable the private sector to fulfill social goals, and (c) what avenues exist for cooperation between the public and private sectors. More specifically, the study was undertaken in the state of Uttar Pradesh to develop insights into:

- What motivates private providers
- How to influence the quality of care in the private sector
- How to widen access to and increase the affordability of health services in the private sector
- Whether there is any scope to build public-private cooperation

India is a vast country with many sociocultural, socioeconomic, and sociodemographic disparities. No single study would be sufficient to show how the private health sector works in India as a whole. However, UP was a good place to start, as it is often referred to as India in miniature. UP is very diverse economically, socially, culturally, politically, and in terms of the population's health status.

It has a population of approximately 166 million, which is roughly one-sixth of the total population of India.

## Characteristics of Uttar Pradesh

UP has long been the dominant state in India, not only in terms of population but also in Indian politics and culture since independence. It has produced seven of India's ten prime ministers.

### *Socioeconomic and Demographic Profile*

Despite its rich heritage and the vast economic potential, UP remains one of the least-developed states in India. Located in the northern part of the country, UP ranks among the lowest in terms of both literacy and per capita income. However, there is considerable diversity in the different regions of the state. While some regions, notably the western region, are more industrial and more affluent, the eastern part measures up poorly to other regions in the state on different development indicators. Basic demographic indicators for UP and India are provided in table 10.1.

While the compound annual growth rate for the country declined from 2.23 percent between 1971 and 1981 to 2.16 percent between 1981 and 1991, the compound annual growth rate of the population of the state remained unchanged at 2.30 percent during the 20 years from 1971 to 1991.

The urban population has increased from 19.84 percent of the total population of the state in 1991 to 20.78 percent in 2001. The urbanization of the state is well below the national average of 27.78 percent. Nine urban agglomerations, each with a population of more than 500,000, account for 32.6 percent of the urban population of the state. Close to 23 percent of the urban population lives in 32 cities with populations between 100,000 and 500,000, and another nearly 12 percent of the urban population lives in 46 towns with populations between 50,000 and 100,000. The remaining third of the urban population lives in 661 towns with populations of less than 50,000. The rural population of 111.5 million is distributed among 112,539 inhabited villages.

**Table 10.1** Basic Demographic Indicators for Uttar Pradesh and India

| INDICATOR | UTTAR PRADESH | INDIA |
|---|---|---|
| Population (2001) | 166,052,859 | 1,027,015,247 |
| Annual compound growth (1981–2001, %) | 2.27 | 2.14 |
| Population density (2001, per $km^2$) | 689 | 324 |
| Urban population (2001, %) | 20.78 | 27.78 |
| Sex ratio (2001, number of females per 1,000 males[a]) | 898 | 933 |
| Dependency ratio[a] (1981) | 942 | 853 |
| Dependency ratio[a] (1991) | 909 | 800 |
| Scheduled caste (1991, %) | 21.0 | 16.7 |
| Scheduled tribe (1991, %) | 0.2 | 8.0 |
| Literate male (2001, %) | 70.23 | 75.85 |
| Literate female (2001, %) | 42.98 | 54.16 |
| Crude birth rate per 1,000 population (1996) | 33.5 | 27.2 |
| Crude death rate per 1,000 population (1996) | 10.3 | 8.9 |
| Total fertility rate (1995) | 5.1 | 3.5 |
| Infant mortality rate per 1,000 live births (1996) | 85 | 71 |
| Life expectancy male (1996–2001, years) | 61.2 | 62.4 |
| Life expectancy female (1996–2001, years) | 61.1 | 63.4 |
| Couple protection rate (1996) | 40.7 | 46.5 |

[a]The dependency ratio is the number of people in the age groups 0–14 and 60+ per 1,000 people in the age group 15–59.
*Sources:* Census of India 1981, 1991, 2001; Sample Registration System—fertility data: compendium of India's fertility and mortality indicators 1971–97 based on sample registration system.

### *Disability-Adjusted Life-Years Lost*

The estimates of the burden of disease at the state level are shown in table 10.2. Almost 44,450 million disability-adjusted life-years (DALYs) were lost in UP during 1994. Among all the states where estimates are available, UP has the highest rate of DALYs lost per 1,000 people at 273.

### *Health Facilities*

There are a large number of public and private health facilities in the state (see table 10.3). As of December 31, 1997, there were 310 community health centers, 3,808 primary health centers, and 20,153 subcenters in UP. There were 57,227 beds in public sector hospitals, excluding those run by railways, defense services, the employee state insurance company, and others. The breakdown of public sector bed capacity by primary, secondary, and tertiary levels of care is 15,556, 37,030, and 4,641 beds, respectively.

**Table 10.2** The Burden of Disease in Uttar Pradesh, 1994

| POPULATION | DALYS LOST (MILLION) | PERCENTAGE OF DALYS LOST |
|---|---|---|
| Males | 23.315 | 52 |
| Females | 21.177 | 48 |
| Combined | 44.492 | 100 |
| Group I communicable diseases, maternal and perinatal conditions, and nutritional disorders | 27.695 | 62 |
| Group II noncommunicable diseases | 11.468 | 26 |
| Group III injuries and accidents | 5.329 | 12 |

*Source: Burden of Disease and Cost Effectiveness in Uttar Pradesh,* study report for UP Health System prepared by Administrative Staff College of India, Hyderabad, 1999–2002.

**Table 10.3** Estimated Number of Inpatient Institutions and Beds in the Public and Private Sectors in Uttar Pradesh, 2000

| TYPE OF INSTITUTION | NUMBER OF INSTITUTIONS | TOTAL BEDS | PERCENTAGE OF TOTAL BEDS |
|---|---|---|---|
| Primary care (Total) | 3,889 | 15,556 | 15.0 |
| *Public sector* | | | |
| Primary health centers | 3,889 | 15,556 | 15.0 |
| Secondary sector (Total) | 3,103 | 82,289 | 79.5 |
| *Public sector* | | | |
| Community health centers | 329 | 8,678 | 8.4 |
| District/base hospitals | 252 | 28,352 | 27.4 |
| *Private sector* | | | |
| Maternal and child health | 201 | 2,506 | 2.4 |
| General hospitals | 2,321 | 42,753 | 41.3 |
| Tertiary sector (Total) | 121 | 5,651 | 5.5 |
| *Public sector* | | | |
| Medical colleges and specialty hospitals | 51 | 4,641 | 4.5 |
| *Private sector* | | | |
| Specialty hospitals | 70 | 1,010 | 1.1 |
| Total public sector | 4,521 | 57,227 | 55.3 |
| Total private sector | 2,592 | 46,269 | 44.8 |
| Grand total | 7,113 | 103,496 | 100 |

*Source: Project Implementation Plan for Uttar Pradesh Health Systems Development Project* 2000.

A survey of hospitals in the private sector, commissioned by the government of UP, revealed that there are 2,592 private hospitals with total bed capacity of 47,269. There are 2,321 general hospitals that account for 92.4 percent of beds in the private sector, 201 nursing homes with 2,506 beds that offer maternal and child health

services exclusively, and 70 hospitals with 1,010 beds that offer specialty services (Uttar Pradesh Health Systems Development Project Implementation 2000).

### *Use of Health Services*

According to the 52nd round of the National Sample Survey (NSS) (1995/96), the private sector in UP treated 91 percent of outpatients, and 53 percent of rural and 60 percent of urban hospitalizations were in the private sector.

The NSS also indicated that only 55 people per 1,000 in rural areas and 67 people per 1,000 in urban areas received any treatment. The official statistics also revealed that the number of outpatients treated by public sector institutions decreased from 180 per 1,000 in 1992 to 125 per 1,000 in 1994 (NSSO 1998).

## Methodology

In this section, we briefly review the study sampling and the questionnaires used.

### *Sample*

In this study of UP, we used a multistage sampling procedure to select health facilities, personnel, and patients. After dividing the state into three geographic zones, we selected one district at random from each zone. These were Lucknow, Allahabad, and Ghaziabad. These three districts are representative of the three important regions (the central, eastern, and western parts of the state), and each has a large urban population with considerable private sector involvement in health care provision. Brief statistics about these three districts are provided in table 10.4.

Chosen for each district in the study were 4 large hospitals (with 100 or more beds), 22 small hospitals (with 30 or fewer beds), 28 solo practitioners, 54 diagnostic centers, 28 alternative private practitioners (APPs), 40 patients who had just left a large hospital, 220 patients who had just left a small hospital, and 280 patients

**Table 10.4** Brief Statistics of Chosen Districts

| DISTRICT | GEOGRAPHICAL AREA (2001, $KM^2$) | POPULATION (2001, IN LAKHS) | | | SEX RATIO (FEMALES PER 1,000 MALES) | 10-YEAR GROWTH RATE (1991–2001, %) | POP. DENSITY (2001, PER $KM^2$) | LITERACY RATE (2001, %) |
|---|---|---|---|---|---|---|---|---|
| | | URBAN | RURAL | TOTAL | | | | |
| Allahabad | 7,261 | 12.13 | 37.27 | 49.41 | 882 | 26.72 | 911 | 62.89 |
| Lucknow | 2,528 | 23.42 | 13.39 | 36.81 | 891 | 33.25 | 1,456 | 69.39 |
| Ghaziabad | 2,590 | 18.15 | 14.73 | 32.89 | 860 | 47.47 | 1,682 | 70.89 |
| Uttar Pradesh | 236,286 | 345.12 | 131.54 | 1,660.52 | 898 | 25.80 | 689 | 57.36 |
| All India | 3,287,263 | 285.35 | 741.66 | 1,027.01 | 933 | 21.34 | 324 | 65.38 |

*Source:* Census of India 2001.

who had just left the offices of a solo practitioner. We constructed the sampling frames from information given to us by the state professional associations, medical colleges, municipal officials, and the state medical council. We contacted all medical practitioners, pharmacies, and diagnostic centers within a one-hour walking distance of each solo practitioner to construct a list of APPs in the area, and from each list, we then selected 28 APPs at random. For questionnaires involving staff, we interviewed the owner-manager of each health facility along with a random selection of specialist doctors, general practitioners, and nurses. Based on the estimated number of patients seen per day, we chose a systematic random sample of 10 patients per facility to interview upon the completion of their visit to the facility or health practitioner. Table 10.5 gives details about our various samples.

### *Measures*

We administered five types of questionnaires, which yielded information on the structure of the facilities, types and prices of services offered, number of patients treated, quality assurance practices,

**Table 10.5** Number of Samples Taken in Each Study Location

| QUESTIONNAIRE | SMALL | BIG | SOLO | DIAGNOSTIC | APP |
|---|---|---|---|---|---|
| Health Care Institution—Basic Information | 22 | 4 | 28 | 0 | 0 |
| Additional Questionnaire for Owner Managers of Private Health Facilities (hospitals/nursing homes) | 22 | 4 | 28 | 0 | 0 |
| Health Care Diagnostic Facilities Questionnaire | 0 | 0 | 0 | 54 | 0 |
| Questionnaire for Alternative Private Practitioner | 0 | 0 | 0 | 0 | 28 |
| Health Care Professionals—Personal Questionnaire | 0 | 0 | 28 | 0 | 0 |
| (i) Specialists | 22 | 8 | 0 | 0 | 0 |
| (ii) Generalists | 44 | 8 | 28 | 0 | 0 |
| (iii) Nurses | 22 | 8 | 0 | 0 | 0 |
| Patient Interview | 220 | 40 | 280 | 0 | 0 |

opinions about obstacles to working with the public sector, attitudes about work, and patient satisfaction. Table 10.6 presents the respondents, their corresponding questionnaires, and the nature of the information obtained from each questionnaire.

## Findings

We gleaned many useful insights about the private health care sector in UP as a result of a detailed analysis of our data. In this chapter, we look at the motivation for establishing the health facilities,

**Table 10.6** Questionnaire Type, Respondents, and Information Sought

| QUESTIONNAIRE | RESPONDENT | INFORMATION |
|---|---|---|
| Health Care Institution—Basic Information | Manager-owners or office staff | Catchment area; number of beds, facilities, and resources; number of patients and services offered |
| Additional Questionnaire for Owners and Managers of Private Health Facilities | Manager-owners | Experience and opinions concerning infrastructure, utilities, and regulatory environment for private health care institutions |
| Health Care Diagnostic Facilities Questionnaire | Manager-owner | Facilities, resources, number of patients, services offered; experience and opinions concerning infrastructure, utilities, and regulatory environment |
| Health Care Professionals—Personal Questionnaire | Specialists, general-duty doctors, and nurses from each facility | Expectation, motivation, and satisfaction with work |
| Questionnaire for Alternative Private Practitioner | Practitioners of alternative medicine or those providing allopathic (modern) treatment without any formal education | Medical systems followed, cases managed, training received, and treatment practices for common conditions |
| Patient Interview | Patients attending the sample of facilities and practitioners | Satisfaction measures and social, demographic, and economic information |

types of services offered, funding issues, and problems faced by private providers.

### *Motivation for Establishing the Facilities*

The impression we received during our meetings with private facility owners was that their main motivation for setting up their facilities was to earn a profit. (The only exceptions were the couple of establishments set up by charitable trusts.) However, we cannot maintain this position with complete confidence because different owners used different wording to express why they had set up their own facility.

### *Services Offered*

The types of services offered by health care institutions and diagnostic centers are quite different, so we look at them separately.

*Health Care Institutions.* By and large, the services offered by private sector health care institutions comprise (a) obstetrics and gynecology, (b) general medicine, (c) general service, (d) emergency services, (e) family planning services, and (f) prenatal care. Some of the other services that they offer include orthopedics, pediatrics, treatment of tuberculosis, various types of vaccinations, and gastroenterology. The pattern of services is much the same for large and small hospitals. However, large hospitals offer certain additional specialist services, including diabetology, neurology, urology, oncology, and cardiology. Several of these hospitals also offer ear, nose, and throat services and ophthalmic surgery. However, only about 25 percent of the hospitals studied provide traction services for orthopedics, and fewer than 50 percent provide AIDS education.

The services most frequently provided by solo practitioners are vaccination, general medicine, nutritional follow-up, treatment of tuberculosis, and diabetology. These practitioners also treat burns; cardiology problems; gastroenterological cases; and services related to physiotherapy, neurology, and family planning (including laparoscopic sterilization). Only a few of the solo practitioners provide services pertaining to nephrology, neonatology, ophthalmic surgery, and obstetrics-gynecology.

Eight types of diagnostic services provided at private facilities are shown in table 10.7. Few solo practitioners offer these services, although small and large hospitals tend to have pathology laboratories, electrocardiograms, X-ray machines, and ultrasound facilities.

Other services offered by health care institutions include pharmacy, ambulance, and food services. Practically all of the large hospitals provide pharmacy and ambulance services, and 75 percent of them also provide food services. A lower percentage of small hospitals provide food services. However, about 80 percent of small hospitals provide pharmacy and ambulance services. Hardly any solo practitioners provide these services except for a few who provide pharmacy services.

*Diagnostic Centers.* The diagnostic centers provide computerized tomography (CT) scans, gastroscopy, bronchoscopy, and echocardiography in addition to radiology and ultrasound. However, very few diagnostic centers offer these services. Blood bank services also are available in only a very few diagnostic centers.

Overall, private sector facilities commonly offer the following services:

- Obstetrics and gynecology
- General medicine
- Emergency services

**Table 10.7** Diagnostic Services Offered by Health Care Institutions and Solo Practitioners

| SERVICE | SMALL (66) | LARGE (12) | SOLO (84) |
|---|---|---|---|
| Radiology (X rays) | 38 | 12 | 2 |
| Ultrasound | 33 | 12 | 1 |
| CT scan | 2 | 3 | 1 |
| Electrocardiogram | 47 | 12 | 5 |
| Biochemistry laboratory | 31 | 11 | 0 |
| Microbiology laboratory | 20 | 11 | 0 |
| Pathology laboratory | 36 | 12 | 2 |
| Blood bank | 5 | 4 | 0 |

*Note:* Numbers in parentheses indicate the size of the sample.

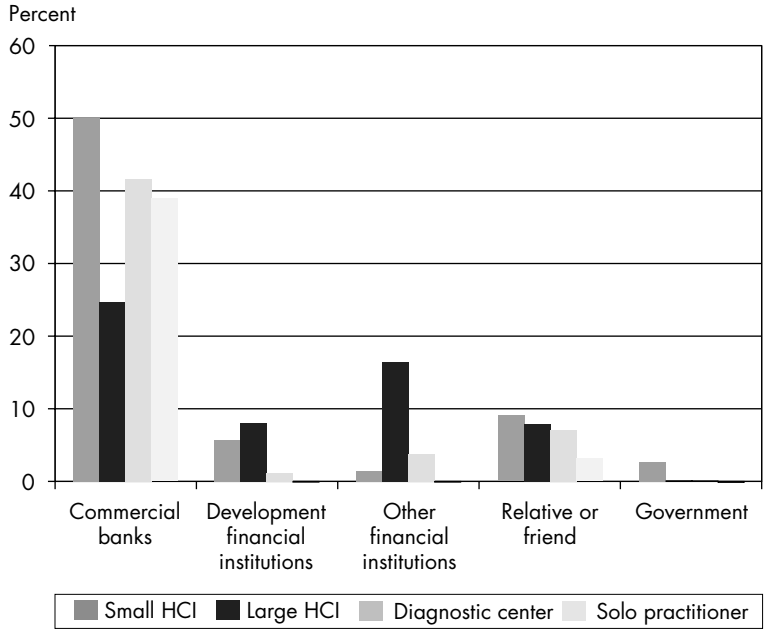
- Family planning services
- Diagnostic services of radiology, ultrasound, and ECG

### *Sources of Funding*

We looked at the sources of funding for health care institutions, including diagnostic centers and solo practitioners. In about half the cases, these institutions took out loans from commercial banks whenever they needed a cash injection. A few (less than 10 percent) received financial help from the owner's relatives or friends, and still fewer took out loans from development financial institutions or other financial institutions. Less than 5 percent sought loans from the government (see figure 10.1).

Almost the only benefit that the facilities received from the government was tax or duty exemptions, although the government did

**Figure 10.1** Percentage Distribution of Sources from Which Loans Were Received by Health Care Institutions (HCIs), Diagnostic Centers, and Solo Practitioners



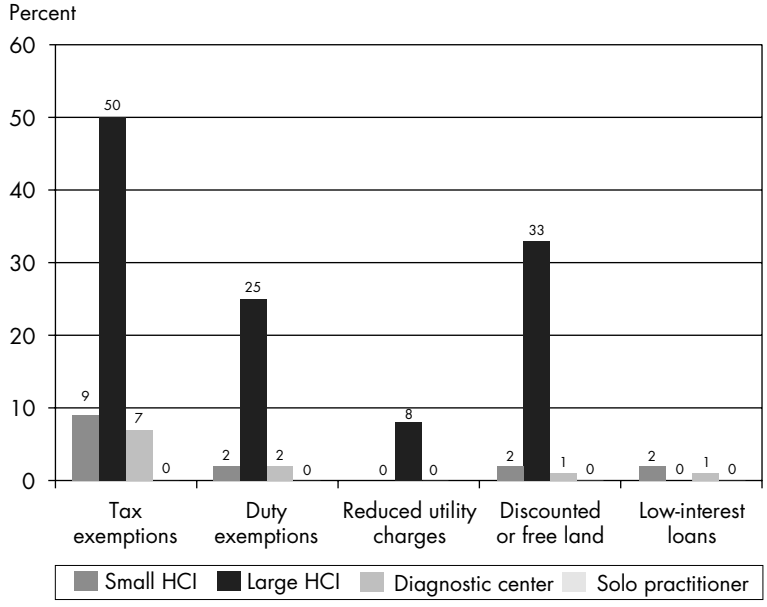
make discounted or free land available to 4 of the 12 large hospitals that we studied (see figure 10.2).

***Problems Faced by Private Sector Institutions***

The problems faced by private sector institutions can be broadly classified in two groups—employee related and infrastructure related. The employee-related problems identified by hospital owners as occurring "very often" were:

- Trade union activities or restrictions (96 percent)
- Restrictions on laying off workers (87 percent)
- Regulations on working conditions (76 percent)
- Seasonal shortages of skilled labor (75 percent)
- High staff turnover (73 percent)
- Lack of skilled management (71 percent)

**Figure 10.2** Percentage Distribution of Specific Benefits Received from the Government




*Note:* HCI = health care institution.

The problem of lack of skilled management may be a reflection of the owner-manager's ability to manage the facility.

The most common infrastructure-related problems cited as occurring "a lot" were:

- Electricity breakdowns and voltage fluctuations or frequency variation (75 percent)
- Telecommunication breakdowns (50 percent)
- Poor drainage services (29 percent) and inadequate water supply (24 percent)
- Disposal of waste (25 percent)

Although some of the constraints identified above can, and indeed often do, affect the effective functioning of the private sector, growing disenchantment with public sector health services creates demand for private sector services, provided that the private sector is able to live up to the expectations of its users.

Our analysis of various other data collected during the course of the study, in conjunction with what we have already discussed above, yielded the following findings:

1. There has been significant growth in the number of health care institutions in the private sector since 1985.
2. The majority of the institutions appear to have been set up with the primary purpose of making a profit.
3. Nearly all private sector facilities offer their poorer patients free or less expensive care, discount prices, free samples of medicines, deferred payment plans, and payment in-kind (see table 10.8).
4. Labor-related problems seem to be the major operational problem area for many private sector facilities
5. The key infrastructure-related problems are electricity and telecommunication breakdowns, poor drainage, and inadequate waste disposal and water supplies.

**Table 10.8** Nature of Concessions Offered to Poor Patients (percentages)

| NATURE OF SERVICES | HEALTH CARE INSTITUTIONS | | | | |
|---|---|---|---|---|---|
| | SMALL (*N* = 66) | LARGE (*N* = 12) | DIAGNOSTIC (*N* = 162) | APP (*N* = 84) | SOLO (*N* = 84) |
| Free care | 82 | 75 | 76 | 89 | 95 |
| Discount prices | 88 | 92 | 91 | 43 | 19 |
| Deferred payment | 50 | 50 | 28 | 12 | 2 |
| Payment in-kind | 11 | 17 | 2 | 4 | 0 |
| Less expensive care | 53 | 83 | 31 | 12 | 25 |
| Free samples of medicines | 82 | 92 | 12 | 21 | 99 |

6. Services commonly provided by private sector institutions are obstetrics and gynecology, general medicine, emergency services, family planning services, and vaccinations.
7. The diagnostic services commonly provided by the private sector are those related to radiology, ultrasound, and ECG.
8. There is considerable variation in the rates charged for providing services, the maximum variation occurring in childbirth cases (table 10.9).
9. The average bed occupancy in the private sector is approximately 40 percent.
10. Referrals occur between private sector institutions.
11. The majority of private sector facilities seek loans from commercial banks when they need funds. However, they consider the interest rates charged by these banks too high and feel that there is too much paperwork and too many rules associated with getting a loan.
12. Most private health care institutions are in favor of participating in national health programs. The majority, however, participate only in polio campaigns and family planning programs at present.
13. Other actions that respondents thought would be useful for improving the quality of services were adopting continuing education programs for doctors, requiring hospitals and doctors

**Table 10.9** Service Charges at Private Health Care Institutions (rupees)

| TYPE OF CHARGE | SMALL HOSPITAL | BIG HOSPITAL | SOLO | TOTAL |
|---|---|---|---|---|
| *Outpatient generalist consult* | | | | |
| Number | 63 | 11 | 86 | 160 |
| Mean | 54 | 37 | 65 | 59 |
| Minimum | 0 | 0 | 0 | 0 |
| Maximum | 100 | 100 | 150 | 150 |
| Standard error of mean | 3.2 | 8.2 | 2.6 | 2.0 |
| Median | 50 | 30 | 60 | 50 |
| *Outpatient specialist consult* | | | | |
| Number | 62 | 10 | 1 | 73 |
| Mean | 104 | 170 | | 114 |
| Minimum | 0 | 40 | | 0 |
| Maximum | 500 | 500 | | 500 |
| Standard error of mean | 10.3 | 46.4 | | 11.0 |
| Median | 90 | 125 | | 100 |
| *Normal delivery* | | | | |
| Number | 57 | 10 | 1 | 68 |
| Mean | 2,263 | 2,400 | | 2,262 |
| Minimum | 500 | 500 | | 500 |
| Maximum | 15,000 | 5,000 | | 15,000 |
| Standard error of mean | 282.0 | 498.0 | | 247.2 |
| Median | 1,800 | 2,250 | | 1,825 |
| *Cesarean section* | | | | |
| Number | 58 | 11 | 1 | 70 |
| Mean | 7,388 | 5,545 | | 7,021 |
| Minimum | 2,000 | 500 | | 500 |
| Maximum | 25,000 | 15,000 | | 25,000 |
| Standard error of mean | 558.2 | 1,223.7 | | 509.1 |
| Median | 6,000 | 6,000 | | 6,000 |

to be registered, following hospital quality assurance procedures, and introducing accreditation of hospitals by independent nongovernmental organizations.

14. Technical skills and the high quality of physicians seem to be the main strengths of private sector hospitals.

15. Practically all of the patients we interviewed said they were ready to go back to the same private hospital or practitioner when they needed medical care and were willing to recommend those hospitals and practitioners to family members and others (table 10.10).

**Table 10.10** Opinions Expressed by Patients on Exit (percentage)

| PERCENT ANSWERING "YES" TO THE FOLLOWING QUESTION | BIG (*N* = 120) | SMALL (*N* = 672) | SOLO (*N* = 838) |
|---|---|---|---|
| Will you go to the same health facility again, if there is a need? | 98 | 98 | 99 |
| If someone in your house falls ill, will you recommend the same health facility? | 99 | 98 | 100 |

16. The employees of private health care facilities identified these factors as being important in their jobs: good working relationships with colleagues, good physical working conditions, opportunities to improve their skills or to learn new skills, challenging work, and having the necessary tools and materials to use their skills fully and effectively.

17. Two areas that the majority of private sector employees thought could be improved in their current jobs were (a) training opportunities to their improve skills or learn new ones and (b) time for their personal or family lives. In addition to these comments, which were common to both doctors and nurses, the nurses felt that there was a gap between what they want and what they get in terms of their income and employment benefits.

## Inferences and Imperatives

Looking at the findings of this study, a few policy imperatives seem to emerge. As noted earlier, the primary motivation of providers, particularly the owners of facilities, is profitability and income generation. Choices about where to locate their facilities and what types of service to provide appear to be primarily demand driven.

As far as increasing the availability of privately provided or mixed public-private services to the poor in remote areas, the most feasible option seems to be to increase the state's budget for such purposes. Private providers are unlikely to be willing to operate in remote areas where there is little chance of making a profit. The state could spend its health funds by providing services itself or purchasing services from private providers.

As of now, the quality of medical services in UP is not what it should be, and there are very few institutionalized processes to ensure that care is of the highest quality. Quality assurance strategies need to be developed at state, district, and facility levels, building on current efforts by the state to develop clinical and referral norms.

The public and private sectors should explore the feasibility of sharing certain facilities and providing services jointly in an attempt to reduce prices or to develop more equitable payment mechanisms. For example, suitable radiology or pathology testing facilities could be installed in a number of specific health care centers—both private and public—and a variable pricing mechanism established for use by different patient groups. Private sector owners may be prepared to invest in items such as X-ray machines and then to allow public sector providers to refer patients to them when they need X rays, with the fees for these referred patients reduced from those for private sector patients.

To improve public accountability, it is important to involve the local community in decisionmaking about health issues. Lately, the state government has taken steps to increase accountability to the public by issuing a citizens' charter that describes what services are available and how much the patient will pay. District and *tehsil* (subdistrict) committees can be used to address public complaints, to collect information on patient satisfaction, and to assess the performance of health institutions, ideally with the active support and involvement of local communities. Managers of health facilities can be held accountable for results once information and education campaigns have been introduced that stress communities' rights and responsibilities. To begin with, public sector facilities should take these steps to set the trend in motion. It should not be difficult to persuade the private sector to follow suit and to establish the same norms and practices for any provider—whether public or private—for a particular type of service.

APPs seem to provide more treatment for common ailments than any other kind of provider. There have been reports of cases when these practitioners went far beyond the limits of their com-

petencies, either because the people coming to them had faith in their services or because no better service was available nearby. Given the poverty-stricken nature of UP and the substantial shortage of facilities experienced by most citizens of the state, it may be necessary to allow these practitioners to continue to provide a range of services for now. However, it is essential for the state to make village-level registers of these practitioners and to stipulate what services they may and may not provide. People using the services of these practitioners should be informed about their competency and about the services they are not permitted to provide. This information should be given to community leaders and made public.

Before the public and private sectors can begin to collaborate to provide better health services to patients, a few basic questions need to be resolved:

*Information Sharing.* What type of information should be shared between the public and private sectors and by both sectors with the people they serve? How will this information be shared?

*Providing Consultancy Services to the Opposite Sector.* Currently, the two sectors work independently in watertight compartments. For example, in many places in the state, women doctors may not be available in public sector facilities, whereas they may be available in private facilities in the same area or vice versa. Good specialists are available in both sectors, and suitable arrangements should be worked out so these specialists can make themselves available for the benefit of patients.

*Leasing Equipment.* Like the services of professionals, equipment can be shared on a lease or hire basis, depending on the need in a particular sector or location.

*Developing a Protocol for Common Interest, Understanding, and Partnership.* Having the two sectors function in isolation from each other is no longer the most beneficial or appropriate arrangement

from the patient's point of view. Both sectors stand to benefit from forming partnerships in areas of common interests, and in doing so, they will benefit the users of their services.

The legislation governing any arrangements of this kind should cover all establishments, including those that provide radiological, biological, or other diagnostic services. They should also cover solo private practitioners.

## Policy Implications

These findings have certain policy implications, particularly in terms of the need to clarify the role of the private sector and the need for the public sector to interact with different parts of the private sector. First, the government of India should involve the private sector more in the delivery of national health programs, given the willingness of the private sector to participate in such programs. Appropriate mechanisms need to be worked out to take advantage of this opportunity. Second, as bed occupancy rates in private sector hospitals are only around 40 percent, there should be some way to use the extra capacity to the mutual benefit of both sectors. Third, a mechanism should be found for both sectors to use each other's diagnostic facilities and other available equipment to avoid duplication and to provide speedier and probably cheaper services to patients. This collaboration should extend to the purchase and maintenance of such equipment. Fourth, the sectors should develop partnership arrangements to improve the services that they provide to poor patients. Fifth, the rates charged to patients should be rationalized with reference to actual cost figures with the goal of providing cross-support between the sectors to keep costs low. This can be done by the private sector providing its cheaper staff to the public sector, or by the public sector deploying any surplus staff in the private sector, or in any other ways that cut operational costs and increase the efficiency of health services as a whole. Sixth, continuing medical education programs are available to staff in many large public sector hospitals; they should be

opened to private sector staff (through appropriate arrangements) to give professionals in the private sector access to them.

There are many other possibilities for public-private sector cooperation in addition to the few listed here. Our point is that the findings of this study are only the beginning. The time is ripe for this kind of collaboration, as many states in India are currently in the process of implementing their respective health system development projects. We hope they will pay attention to studies like this one so that they can improve the quality of the health services they deliver to the citizens of India, especially to less privileged citizens whose needs are currently not being met. Whether this happens through policy interventions or by working out suitable operational mechanisms is a question best left to policymakers.

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CHAPTER 11

# Private Primary Care Practitioners in Sri Lanka

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## Abstract

Policy recommendations are frequently made in recognition of the predominant role that private providers play in health care in developing countries. Yet it is hard to obtain either empirical or regulatory data on their actual organization and potential. The major difficulty is in collecting data from providers, and Sri Lanka is typical. Despite this, a nationally representative survey of private family practitioners was successfully implemented in 2000. The study found that there are between 600 and 650 private practices in Sri Lanka employing about 1,200 physicians and providing 11 million to 12 million consultations per year, or 15 percent of the national total. Of the private practices, 76 percent are solo practices, and 95 percent dispense medicines. The typical practitioner sees 13,600 patients a year, works 45 to 50 hours a week, and averages 5.5 minutes per consultation.

The average fee is Rs. 80 (US$0.83). Comparison with previous studies indicates that the workforce of providers is aging but is becoming more professional, with 54 percent having at least one postgraduate qualification relevant to family practice. Seventy-eight percent of visits are by patients previously seen by the practitioner, and 31 percent of visits are repeat visits for the same condition. Most patients present with acute, self-limiting conditions; visits to obtain preventive services are only a small minority. Only 5 percent of visits result in referrals to other providers. There are 25 million prescriptions each year, 3 percent of these being injectables. A mean of 2.6 items (and a median of 3) are prescribed per visit. Sixty percent of items prescribed are generic, which is high by international standards. The mean cost per prescription at retail prices is Rs. 72. Certain medications, such as paracetamol and vitamins, are prescribed frequently. Private practitioners in Sri Lanka provide a substantial volume of relatively high-quality clinical care, reducing the burden on government services. Major concerns of practitioners are a lack of vocational training, a lack of referral mechanisms between the public and private sectors, and a lack of financing methods to ensure that future doctors will have incentives to go into private practice.

## Introduction

In most developing countries, private practitioners provide a substantial proportion of medical services (Berman and Rose 1996). In the majority of countries, the private sector's contribution is greatest in providing ambulatory care, or what might be described as primary care. South Asia is no exception; private practitioners provide the bulk of primary care delivery in all countries except Sri Lanka and Maldives. However, even in Sri Lanka, the private sector provides 45 percent of outpatient care (Hsiao and IPS 2001).

Because private providers play this major role in the delivery of primary care, many analysts have called for the private sector to become more involved in the provision of all kinds of health care (Bennett, McPake, and Mills 1997). However, the organization and dynamics of private primary care markets are poorly understood, and in most countries very few reliable empirical data are available on the sector (Bhat 1999; Brugha and Zwi 1998). Therefore, those who call for expanding the role of the private sector usually base their argument on an assumption of public sector failure, with an inadequate understanding of the potential for private market failure. This has led to an increased interest in developing better methods for understanding the private sector's role in providing health care. However, as admitted in most of the literature on developing country health policy, it has been very difficult to obtain reliable data on the private health sector, especially in the case of ambulatory care. In particular, there have been problems in collecting representative data from unregulated private providers, in ensuring respondents' cooperation, and in assessing quality beyond simple measures of the structural quality of facilities (Preker and Harding 2002).

Nonetheless, collecting and analyzing data from the private primary care sector in member countries of the Organisation for Economic Co-operation and Development (OECD) is both feasible and appropriate for routine statistical information systems. Examples of such surveys include the annual National Ambulatory Medical Care Survey (NAMCS) in the United States and the Bettering the Evaluation and Care of Health (BEACH) survey in Australia (Australian Institute of Health and Welfare 2001). Unfortunately, there is no equivalent of such systems in any developing country. In addition, while the family medicine literature, written mostly by clinical researchers for clinical researchers, pays considerable attention to the quality of clinical management in the primary care sector, this literature is rarely mentioned in the international health policy and economics literature. In general, it appears that practical difficulties in engaging in research of the private primary care sector have prevented a comparable strand of research and routine data collection in developing countries.

## Setting

Sri Lanka's health system consists of parallel public and private sectors. The public sector is predominantly hospital based, providing both free outpatient and inpatient services. Government doctors have the right to have a private practice, and private care is provided both by these government doctors working in their free time and by full-time private practitioners. The private sector contributes most at the primary care level, with only a limited role in the provision of inpatient services. The public and private sectors provide both modern and traditional medical services, although the proportion of traditional care has been gradually declining since the 1950s and now accounts for less than 10 percent of all doctor-patient contacts. Private services are funded by out-of-pocket fees; the role of health insurance is small, except in the case of private hospital financing in urban areas. Generally, richer households are more likely to use private outpatient care. The public sector accounts for more than two-thirds of the primary care sought by those in the poorest quintile but for less than one-third of the contacts in the richest decile (Data International Ltd., Nepal Health Economics Association, and IPS 2001; Hsiao and IPS 2001).

Overall, the health system in Sri Lanka performs well. Despite its low per capita gross domestic product (GDP) (US$837 in 2001), Sri Lanka's health indicators were similar to those of several European countries. Life expectancy at birth was 73 years in 2000, and the infant mortality rate was 15.4 per 1,000 live births in 1998. These good health indicators were associated with levels and distribution of utilization of modern medical services similar to those in OECD nations and much higher than those in comparable low- and low-middle-income economies. The number of contacts that patients have with qualified physicians averages four to five per annum, and the rate of inpatient admission is approximately 20 to 21 for every 100 people. Given that almost half of all outpatient contacts occur in the private sector and that public sector doctors working in their private time provide the bulk of private medical care, a better understanding of the dynamics and contribution of

this kind of provision is crucial for developing effective health policies. In the Sri Lankan context, the most relevant questions that need to be examined include the extent to which private provision can contribute to improving health care in the future, what problems there are in the quality and coverage of private primary care, and what options exist for managing the interaction between the public and private sectors.

The government of Sri Lanka has encouraged private medical practice since 1977, largely by permitting government medical officers to provide private medical services outside their official hours of duty and by taking a laissez-faire attitude toward the private primary care sector. There is no effective monitoring of or intervention in the private primary care sector by the government, no attempt to collect routine statistics even on the number of private physicians, and no official efforts to affect quality in the private sector. There is also no official system for making referrals between the public and private sectors. What official interest there is in the private sector has largely been concentrated on supporting the private provision of hospital services through tax subsidies and occasionally relying on the private sector to employ new medical graduates whom the state cannot afford to employ. It is fair to say that the private primary care sector, despite its substantial role in providing outpatient care in particular, has been of little interest to either national policymakers or Sri Lanka's international partners, including the World Bank—in contrast to their attitude toward private hospital provision. An illustration of this is the 2001 Poverty Reduction Strategy Paper (PRSP) for Sri Lanka. Even though private hospital services remain largely the preserve of the wealthiest households, the PRSP sees expansion of private hospital services as a main plank in the country's poverty-reducing health strategy but presents no policy for supporting the private primary care sector, which is used by the majority of Sri Lankans. One factor behind this not-unusual neglect may be that primary care doctors have less political influence within the medical profession and in the wider political system than hospital-based specialists and private hospital investors. Another contributory cause may be the lack of systematic data on the amorphous private primary

care sector, which would make more difficult any policy debate on options related to this sector.

## Research Questions

The Institute of Policy Studies Private Clinic Study 2000 (IPS PCS 2000) had the following objectives:[1]

- To obtain reliable, nationally representative, descriptive data on the private general practitioner market and on medical practices in Sri Lanka
- To identify emerging policy issues in the area of the private provision of primary care
- To demonstrate the feasibility of using international best-practice methods in assessing private provision of primary care in Sri Lanka

These research questions were selected because answering them would expand the base of evidence on which to develop health policy in Sri Lanka. They were also selected in the belief on the part of the investigators that collecting more information on the private primary care sector might encourage policymakers to think of the private sector as a key provider of primary care, not just of hospital-based care.

## Methodology

### *Sampling and Fieldwork*

The primary way in which data were collected in the IPS PCS 2000 study was through a nationally representative survey of (a) clinics run by wholly private sector medical practitioners registered under the Medical Ordinance and (b) visits made by patients to such clinics. This method deliberately excluded clinics run by gov-

ernment doctors engaged in private practice, those run by full-time medical specialists, and those run by unregistered or traditional providers. The category of unregistered and traditional providers accounts for only a small share of overall outpatient visits (less than 9 percent) in Sri Lanka. Clinics run by government medical officers engaged in private practice were excluded only because of budgetary constraints—including them would have required developing a second sampling frame.

The major challenge in conducting a nationally representative survey of this type of clinic population involves developing an appropriate sampling frame and ensuring that a substantial percentage of respondents cooperate. The government does not give annual licenses to private clinics and does not keep records on their number or location. In addition, the decentralization of responsibility for private sector regulation to Sri Lanka's provinces in the late 1980s further weakened what little regulatory capacity did exist (Russell and Attanayake 1997). In the absence of a national listing of such clinics, the survey team developed a multiphase sampling procedure based on the method used earlier by Aloysius and others (1987). A master list of private clinics in Sri Lanka was compiled by merging information from the marketing department of a pharmaceutical firm (Glaxo Wellcome Ceylon Ltd.), the membership lists of the College of General Practitioners of Sri Lanka (CGPSL) and the Independent Medical Practitioners Association (IMPA), and the names of clinics from public telephone directories and published medical directories.

The fieldwork was conducted in two phases between February and November 2000. In the first phase, a multistage probability sample design was used to select 110 practices, with administrative districts being the primary sampling unit (PSU) and a fixed quota of practices being recruited within each PSU. Clinics were replaced if they did not meet the eligibility criteria for the survey or if the doctor concerned could not be located at the indicated address, had migrated, had retired, or was dead. All respondents were physicians with authority to answer for their respective practices. In the first phase, a respondent at each surveyed practice was

shown the list of clinics that were identified in the master list as operating in their district or town and asked to update the list with the names and addresses of any omitted practices. Any new practices identified in this way were added to the master list. In the second phase, a second sample of 40 clinics was drawn in a similar manner, except that the probabilities of selection were weighted to ensure that both the original clinics and the newly identified clinics would have an equal probability of being selected in both phases.

If a clinic was judged to be eligible to participate, then the survey team mailed it a practice questionnaire in advance, accompanied by signed letters of endorsement from the heads of the CGPSL and IMPA in order to encourage respondents to cooperate. A field team then visited each practice and completed the questionnaire on-site. The field teams consisted of recently qualified medical graduates in order to make the survey more acceptable to the respondents. An honorarium of Rs. 1,000 (US$10.40 in 2001) was offered to each participating practice, with the option to donate it to a charity of its choice. The field teams sampled patient visits to these clinics by observing all visits that occurred during one half-day session at each practice. If the number of patients in a session was expected to be more than 30, data were collected only on a systematic sample of such visits. The teams recorded the data on these sampled visits using a patient encounter record (PER) form. The PERs were completed either by the physician or by a member of the field team sitting in as an observer during the consultations.

The efforts to encourage respondent cooperation were successful, with 98 percent of eligible clinics agreeing to participate. From the total sample of 153 clinic practices, 145 practice questionnaires and 2,100 PERs were completed, containing information on 5,100 prescribed items. Only one practice completed only the general practitioner (GP) record and returned no PERs, and eight practices provided PERs but no GP record. The survey covered practices in all provinces and districts of Sri Lanka except the three districts of the Northern Province. No clinics were included from the latter province because no practices could be identified when the original master list was being compiled. Continuous insurgency

since the early 1980s and the hostility of the Liberation Tigers of Tamil Eelam to private medical services threatened the development of private practices in these areas.

***Research Instruments***

Two types of structured questionnaires were used in the survey. One was the practice questionnaire, or GP record, which collected information about the physicians, and the other was a PER, which collected data on patients who visited the physician.

*Practice Questionnaire.* The practice questionnaire included questions about the physician's qualifications, the practice's workload, its costs and revenues, its referral patterns, and the doctor's opinions on selected policy issues. So that respondents were likely to cooperate, questions relating to the income of the practice were clearly marked as being optional, as these questions were expected to be sensitive. In addition, full confidentiality was guaranteed, with individual practices being identified in the survey only by a code number known to the research team.

*Patient Encounter Record.* The PER collected information on the demographic characteristics of the patient, on the symptom or reason that brought the patient to the clinic, on the physician's diagnosis and actions including making referrals and ordering tests, and on the drugs prescribed and dispensed. A maximum of three reasons for encounter, three physician diagnoses, and six prescribed medicines could be recorded on each PER. Following a review of the PERs used in the Australian BEACH study and in the U.S. NAMCS, the survey team developed the PER to facilitate comparisons with research in Australia, the United States, and other countries using similar methods. A literature review revealed no other standardized PER forms that had been used in developing country settings to collect systematically classified and internationally comparable data on the nature of presenting complaints, physician diagnoses, and clinical actions.

### *Data Entry and Analysis*

The survey team coded "reasons for encounter" and the diagnoses using the latest version of the International Classification of Primary Care, ICPC-2E, which is designed to facilitate electronic coding in primary care (ICPC 2 PLUS). ICPC is a biaxial classification with 17 chapters on one axis and 7 components on the other. Chapters are based on body (organ) systems. Each chapter is divided into seven components. Thus terms in primary care are classified as rubrics under the relevant chapter in the relevant component (Okkes and others 2000; WONCA 1998).

IMS-Health Sri Lanka, a specialized pharmaceutical market research firm, entered the data on prescribed items, adding the retail price and generic name for each prescribed item and coding each item using the World Health Organization (WHO) Anatomic, Therapeutic, Chemical (ATC) classification. Finally, the data were analyzed using Stata 7.0.

Through preliminary analysis of the data in the practice questionnaires and the original and final master lists of practices, the survey team was able to estimate the numbers of private practices in each district of the country and the numbers of visits made to each practice in 2000. Using this information, they generated appropriate sampling weights for both the practice questionnaires and the PERs in order to provide representative estimates applicable at the national level.

For those practices that participated, overall response rates per item were high—95 percent or more. The only questionnaire items for which response rates were significantly lower were those relating to income and expenditures of practices, where response rates were typically 30 to 35 percent.

## Findings

The survey data permit analysis from a number of different perspectives. National findings on the broad level and analyses of the clinics and practices, physician characteristics, patient characteris-

tics, patients' visit characteristics, prescribing patterns, and clinical management are summarized here.

### *National Findings*

There were an estimated 600 to 650 private primary care practices in Sri Lanka in 2000, operated by 700 to 750 partners and with a total medical practitioner workforce of 1,150 to 1,200 physicians. This compares with an estimate of 550 general practitioners in 1984/85 (Aloysius and others 1987) and 362 general practitioners in 1972 (Sivagnanasundram and Samawickrama 1977). These practices provided an estimated 10 to 11 million outpatient consultations in 2000, or about 58 visits per 100 people.

The geographical distribution of private GPs is quite skewed. Forty-six percent work in the Colombo district and 68 percent in the Western Province, where Colombo is located. Comparing these figures with data in Aloysius and others (1987) suggests that, while the number of private GPs has increased slightly, this increase has been associated with more, rather than less, geographical concentration (see table 11.1). The only province in which there has been a net reduction in overall numbers is the Northern Province, as a consequence of the difficult conditions created by violence there over the past two decades.

**Table 11.1** Geographical Distribution of General Practitioners, 1984–2000

| | NUMBER OF GPS | | PERCENTAGE OF NATIONAL TOTAL | | PRIVATE GPS PER 100,000 CAPITA |
|---|---|---|---|---|---|
| PROVINCE | 1984 | 2000 | 1984 | 2000 | 2000 |
| Central | 36 | 59 | 9.0 | 8.5 | 2 |
| Eastern | 16 | 30 | 4.0 | 4.3 | 2 |
| North-Central | 7 | 17 | 1.8 | 2.4 | 2 |
| Northern | 25 | 0 | 6.3 | 0.0 | 0 |
| North-Western | 33 | 54 | 8.3 | 7.8 | 3 |
| Sabaragamuwa | 14 | 16 | 3.5 | 2.3 | 1 |
| Southern | 35 | 34 | 8.8 | 4.9 | 1 |
| Uva | 7 | 12 | 1.8 | 1.7 | 1 |
| Western | 227 | 472 | 56.8 | 68.0 | 9 |

### *Practice Characteristics*

Seventy-six percent of private primary care practices in Sri Lanka are run by a single partner, some of whom contract with one or more practitioners as employees. The remaining group practices are more likely to hire employee practitioners. Employee practitioners are usually government medical officers engaged in private practice, but the survey did not collect any information to confirm this. Thirty-five percent of practices operate from premises located within the physician's own home.

Practices are typically open for two to three sessions per day, six or seven days a week, for a mean total of 64 hours per week. (The individual practitioners work a mean of 45 hours per week.) The mean workload per practice is 321 visits per week, supplemented by an additional 15 other consultations consisting mainly of home visits and night calls. Comparing these figures with data in Aloysius and others (1987) indicates that a declining number of GPs make home visits (43 percent, down from 60 percent), which is also the trend in OECD countries. The average number of patients seen by a private GP is 13,600 per year, which is substantially higher than in countries such as the United States, the United Kingdom, and Australia, but is similar to the number seen by clinic doctors in several places with good health indicators, such as Japan; Hong Kong, China; and Malaysia.

Most Sri Lankan private practices (95 percent) dispense drugs, and 90 percent charge a single combined fee that includes the cost of the consultation and the medicines dispensed. The average consultation fee is Rs. 80 (US$0.83). Most practices charge supplementary fees for special tests or procedures.

The response rates for direct questions relating to practice income in the questionnaire were less than 35 percent. However, it was possible to make an indirect estimate of the overall revenues of practices by multiplying the average fee charged times the estimated annual number of consultations. Comparing both the direct and indirect estimates provides some evidence of the underreporting of overall incomes in the direct questions. Self-declared mean

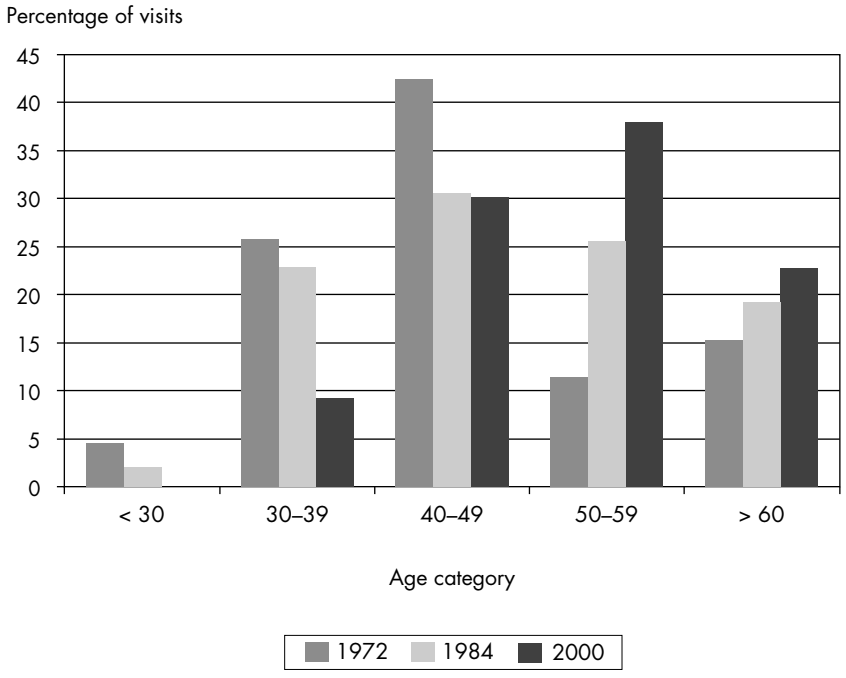
practice revenues are Rs. 65,000 to 70,000 per month, compared with indirect estimates of Rs. 95,000 to 110,000 per month.

The mean operating costs for practices are Rs. 1 million per year. Approximately one-third are accounted for by purchases of drugs and supplies; one-third by salaries; and one-third by utilities, taxes, rent, and capital formation.

### *Physicians' Characteristics*

Private general practitioners are predominantly male (85 percent), and they tend to be relatively old (median age 52 years). Comparison with previous studies indicates that the private GP workforce is becoming older, with fewer than 10 percent of partners under 40 years of age in 2000 (see figure 11.1).

**Figure 11.1** Age Distribution of Private General Practitioners, 1972–2000



By virtue of the eligibility criteria for the respondents, all of the respondents are qualified medical graduates. A significant proportion hold postgraduate qualifications relevant to family medicine—54 percent in 2000 compared with 29 percent reported in 1984. Such qualifications include the Member of the College of General Practitioners of Sri Lanka (MCGP), Diploma in Family Medicine (DFM), Diploma in Child Health (DCH), and Fellow of the College of General Practitioners of Sri Lanka (FCGP). Most private GPs have some prior government work experience, with a median of 9.2 years.

### *Patients' Characteristics*

The demographics of the patient population are consistent with those of primary care patients worldwide, with a slight predominance of females (52.4 percent). In comparison with the national age distribution, the private practice patient population tends to have relatively fewer older patients (see table 11.2). Given that older people generally have higher medical utilization rates, this suggests that the older population is more likely to use public outpatient services than private GPs.

### *Visit Characteristics*

Seventy-eight percent of visits are by patients who had previously been seen by the practitioner, while 31 percent of visits are repeat

**Table 11.2** Age and Sex Distribution of Private Practice Patients, 2000

| | PROPORTION OF NATIONAL POPULATION (%) | | PROPORTION OF PRIVATE PRACTICE PATIENTS (%) | |
|---|---|---|---|---|
| AGE GROUP | FEMALE | MALE | FEMALE | MALE |
| 0–5 | 4.8 | 5.0 | 7.7 | 8.4 |
| 6–10 | 4.1 | 4.2 | 3.8 | 6.3 |
| 11–20 | 9.1 | 9.1 | 7.1 | 7.4 |
| 21–45 | 20.0 | 19.6 | 21.1 | 16.9 |
| 46–60 | 7.6 | 7.2 | 8.4 | 5.1 |
| 61–70 | 2.8 | 2.7 | 3.3 | 2.5 |
| 71 + | 2.0 | 1.9 | 1.2 | 1.1 |
| Total | 50.3 | 49.7 | 52.4 | 47.6 |

visits for the same condition. This indicates significant continuity of care in private general practice. This contrasts with the public sector, where patients in general outpatient department clinics are not assigned to any specific physician and must see whoever is available on a given day. The mean length of a patient consultation is 5.5 minutes, and in 43 percent of visits, the GP makes no written record of the consultation. This reflects the relatively high turnover of patients in these clinics and the lack of time for physicians to maintain a record system.

Most patients present with acute, self-limiting conditions; only a small minority come for preventive services. The average number of "reasons for encounter" per visit is 1.6. Fifty-two percent of encounters are associated with one reason, 34 percent with two reasons, and 14 percent with three or more. The most common reasons for encounter fall into the following ICPC chapter categories: respiratory (24 percent), general and unspecified (23 percent), and digestive (14 percent). By individual ICPC rubric, the top five reasons for encounter are fever (16 percent), cough (13 percent), headache (4 percent), runny nose (4 percent), and abdominal pain (4 percent). The five most frequently diagnosed problems by ICPC rubric are viral fever (13 percent), asthma (6 percent), upper respiratory tract infection (5 percent), hypertension (4 percent), and respiratory infection (4 percent).

Only 5 percent of visits result in the practitioner referring the patient to other providers. This is substantially lower than the referral rates in the outpatient departments of government hospitals in Sri Lanka (Varnam 1987), indicating that GPs contribute to reducing pressure on inpatient and specialist services. Ninety percent of referrals by private GPs are for outpatient consultations (75 percent in the public sector), and 30 percent are for inpatient admissions (98 percent in the public sector). Referrals for outpatient consultations and inpatient admissions do not add up to 100 percent because some patients are referred both to a specialist (whether government or private) and for admission to a hospital (whether government or private).

### *Prescribing Patterns*

Virtually all Sri Lanka GPs dispense drugs from their own practices. In Western medical cultures, dispensing by physicians is often considered unethical; but in many Asian cultures (including China; Brunei Darussalam; Hong Kong, China; Japan; Korea; Malaysia; and Thailand; and as well as Sri Lanka), especially those influenced historically by Buddhism or Ayurvedic traditions, dispensing is considered normal.

In the literature on health policy and the rational use of drugs, the presumption is that dispensing practices have an incentive to overprescribe in terms both of numbers of items and overall cost. The Sri Lankan results confirm that a high number of items are prescribed in a typical patient consultation in Sri Lanka, although the costs are not comparatively high. The mean number of items prescribed per doctor-patient encounter in 2000 is 2.7, compared with 0.9 in Australia and 1.3 in the United States. Only 14 percent of encounters in Sri Lanka result in no medications being prescribed, compared with 40 percent in Australia and 34 percent in the United States. This confirms the assumption of polypharmacy in Sri Lankan private practices. This finding holds even when we consider the demographic structure and composition of conditions in presenting patients. For equivalent patients presenting with comparable reasons for encounter and conditions, Sri Lanka physicians in this sample prescribe more items than U.S. and Australian physicians.

However, the overall cost of prescriptions is relatively low. The mean retail price per prescription in 2000 is Rs. 72. Sri Lankan GPs prescribe a very high rate of generic drugs; in fact, 61 percent of all prescriptions are for generics, which is higher than the rate in primary care in the United States and in most European nations. The high generic prescribing rate is partly a consequence of the incentives created by the Sri Lankan market. Private GPs generally charge fixed consultation and dispensation fees, so the incentive is to reduce the cost of prescribed medicines by using generics and eschewing brand-name products. Moreover, there tends to be equal pressure to prescribe generic drugs when the physicians themselves are not dispensing the medications. The generic prescribing rate for

nondispensed items (60.7 percent) is not significantly different from that for dispensed items (60.4 percent), and the overall price difference is not significant either (Rs. 71 versus Rs. 74).

Table 11.3 presents data on the most frequently prescribed medications in Sri Lanka in 2000, compared with survey data from Australia and the United States for the same year. Two points are to be noted. First, the top four prescribed items in Sri Lanka consist of very cheap and relatively nontoxic medications or vitamins: paracetamol, chlorpheniramine, ascorbic acid (vitamin C), and a vitamin B mixture. They account for a total of 39 percent of all prescribed items in Sri Lanka and are prescribed at significantly higher rates than in the other two countries. Second, when other items lower in the list are examined, no significant evidence of overprescribing can be detected in comparison with prescribing patterns in Australia and the United States once national idiosyncrasies are taken into account. For example, amoxicillin and related combinations are prescribed in relatively similar rates in all three countries. As might be expected, U.S. physicians are more likely to prescribe lifestyle drugs such as lipid-lowering compounds, while both Australian and U.S. physicians are more likely to prescribe second- and third-generation cephalosporins. Sri Lankan primary

**Table 11.3** Most Frequently Prescribed Drugs in GP Practices in Sri Lanka, Australia, and the United States, 2000

| SRI LANKA | | AUSTRALIA | | UNITED STATES | |
|---|---|---|---|---|---|
| DRUG | (%) | DRUG | (%) | DRUG | (%) |
| Paracetamol | 16.4 | Paracetamol | 4.2 | Acetaminophen | 3.2 |
| Chlorpheniramine | 10.3 | Amoxicillin | 3.5 | Amoxicillin | 2.6 |
| Ascorbic acid | 7.2 | Cephalexin | 2.4 | Hydrochlorothiazide | 1.8 |
| Vit. B mixture | 5.1 | Paracetamol/Codeine | 2.4 | Estrogens | 1.7 |
| Salbutamol | 4.7 | Celecoxib | 2.3 | Levothyroxine | 1.6 |
| Amoxicillin | 3.7 | Salbutamol | 2.3 | Albuterol | 1.5 |
| Ibuprofen | 2.8 | Augmentin | 1.8 | Ibuprofen | 1.4 |
| Diazepam | 2.4 | Cefaclor monohydrate | 1.8 | Loratidine | 1.4 |
| Prednisolone | 2.1 | Roxithromycin | 1.7 | Atovastatin calcium | 1.3 |
| Diclofenac sodium | 1.7 | Influenza vaccine | 1.6 | Guanifenesin | 1.2 |

Sources: Australian figures from Australian Institute of Health and Welfare 2001; U.S. figures from National Center for Health Statistics 2002.

care physicians prescribe more items per encounter than Australian and U.S. physicians, but the larger number is almost wholly accounted for by a small number of relatively noniatrogenic compounds to most patients, regardless of their presenting condition.

These two findings suggest a relatively benign interpretation for the apparent polypharmacy in Sri Lankan primary care, and one that is consistent with the general opinion of practicing physicians in Sri Lanka. Culturally, Sri Lankan patients expect to receive medications when consulting a physician, and polypharmacy is essentially a response to this expectation. These norms probably can be linked to the earlier influence of Ayurvedic medicine, in which the prescribing of substances was central. That financial incentives are not the main explanation is further supported by the fact that government outpatient doctors also prescribe a relatively high number of items per encounter, despite having no financial incentive to do so (Varnam 1987). However, the potentially negative consequences of this are low, as the typical Sri Lankan physician prescribes mostly harmless and cheap compounds, essentially as placebos, because in most cases drugs are not indicated by the presenting condition. Once these "placebo" medications are taken into account, Sri Lankan physicians may be no more likely to engage in polypharmacy than doctors in countries where dispensing is not the norm.

### *The Quality of Clinical Management*

The methods used in this study lend themselves to evaluating clinical quality. For several health conditions that occurred with high frequency, such as asthma and hypertension, it was possible to assess the quality of actions taken by physicians and to compare them with the behavior of Australian doctors as reported in BEACH. For example, the pattern and appropriateness of drugs prescribed, the type and number of interventions, and the overall level of referrals can be assessed with these data, although we do not report on any specific examples here. Nevertheless, the data do suggest that clinical quality is relatively high in private practice

clinics in Sri Lanka, comparable to that in Australian clinics. For example, in patients presenting with asthma, the frequency of prescribing steroids or other appropriate medications is comparable in both countries.

One other significant finding is that very few injectables are prescribed in Sri Lankan primary care. Unlike in India and the rest of South Asia, where the literature reports that injectables are prescribed in 20 to 80 percent of all primary care encounters with physicians (Bhatia and Cleland 2001), less than 3 percent of encounters in Sri Lanka result in the physician giving any injections.

## Policy Relevance

The findings from IPS PCS 2000 have three broad sets of policy implications. The first is its implications for increasing the understanding of private sector medical provision, the second relates to policy issues in Sri Lanka, and the third relates to wider regional and global implications.

### *Implications for Policy Research*

Although there are continuing calls to enhance or optimize the role of private sector provision in the health care systems of developing countries, the development of appropriate policies and policy tools has been handicapped by the absence of a sophisticated analysis of the dynamics and organization of the private sector. Researchers and policymakers simply lack reliable empirical data on the effectiveness, clinical quality, and magnitude of private services in most developing countries. These problems are most severe in the case of ambulatory services, which are usually only lightly regulated and tend to be diverse in organizational structure and performance. Yet, it is precisely in the ambulatory sector (where a lack of functioning insurance markets means a corresponding lack of constraints) where the private sector has its greatest impact in developing countries.

From a methodological perspective, the IPS PCS 2000 successfully demonstrates the feasibility of:

- Conducting high-quality, nationally representative surveys of private primary medical practitioners and their patients without the existence of a prior sampling frame
- Using best-practice methods developed in OECD economies to monitor primary care in low- and lower-middle-income countries, such as Sri Lanka
- Using internationally comparable instruments and data classification systems (ICPC-2E) to make comparative assessments of clinical management and outpatient morbidity
- Using survey-based methods to assess the quality of clinical care in the unregulated private sector

In the case of Sri Lanka, the IPS PCS 2000 demonstrates that with adequate care an appropriate process can be developed that would ensure sufficient levels of cooperation from private practitioners to establish primary care monitoring systems similar to BEACH in Australia or NAMCS in the United States. Sixty percent of respondents in the practice survey indicated that they would be willing to participate in a national panel survey. A permanent system might involve annual surveys of physicians' practices and a systematic sample of their encounters with patients. There are no technical reasons why such a system could not be extended to cover the private practices of government medical officers and the outpatient departments of government hospitals. Such a system, collecting more data than this first study, would provide nationally representative and comprehensive data on outpatient morbidity trends in the country and would make it possible, as in Australia, to monitor trends in primary care management. Including the other segments of the ambulatory care market would also make it possible to do an empirical analysis of any differences in quality and process among the various sectors.

### *Implications for Sri Lankan Health Policy*

The private family practitioners of Sri Lanka deliver 11 million to 12 million outpatient consultations a year, or approximately 15 percent of total outpatient volume in the country. The rest consists of services delivered by government medical officers in government hospitals, outpatient facilities, and their private practices. Although the fully private practitioner sector is essentially unregulated, the limited data suggest that it provides care of a comparable quality. The quality of services may be comparable not with the rest of South Asia but with primary care practices in OECD economies. This is supported by the prescribing and clinical management behavior of private GPs in Sri Lanka, which is similar to that of Australian doctors; by high rates of prescribing generic drugs; and by widespread provision of services such as prenatal and postnatal care, immunizations, and health education.

This study does not provide the necessary information to explain this high quality. However, there are several likely explanations. There is a strong trend toward the professionalization of family medicine in Sri Lanka, indicated by the existence of the CGPSL and by the increasing proportion of private physicians who have postgraduate qualifications in family medicine. Virtually all Sri Lankan private practitioners received their initial medical training, as well as a significant number of years of postinternship practical experience, in the public sector. A high standard of clinical care and an emphasis on generic prescribing is likely to have been inculcated in them during their public sector apprenticeships. Although dispensing is often frowned upon in health policy circles, in the Sri Lankan context it may create financial incentives for doctors to reduce the cost of prescriptions to patients and to increase generic prescribing.

The fact that we can only speculate about the factors behind the quality of private primary health services indicates the need for public policymakers in Sri Lanka to provide more effective and organized training for private family practice, which currently is not provided by the public sector. This is particularly important

because under current policy trends, it is likely that large numbers of recent medical graduates may be encouraged to enter private practice in the coming decade, but without the formal training in family medicine and long experience in the public sector that characterize the current cohort of private physicians. It also indicates the importance of exploring the symbiotic relationship between the public and private sectors, as the public sector may have an important role to play in ensuring high-quality care in the private sector other than through direct regulation.

Although the quality of service in the private sector appears to be high, there are reasons to be concerned about the future supply of such services. The private practitioner workforce is aging, and very few physicians appear to have entered private practice in recent years. Part of the reason for this may be the relatively low income of private practitioners—a mean gross revenue of Rs. 100,000 per month before subtracting the expenses of the practice. This suggests that full-time private practitioners generally earn less than government specialists who also have a private practice. Any future expansion of private general practice in Sri Lanka may critically depend on increasing the financial attractiveness of such a career, and this may not be possible without introducing methods of financing other than the current system of household out-of-pocket fees for service.

### *Implications for International Health Policy*

The finding that private primary care in Sri Lanka is of relatively high quality adds another detail to the explanation of why countries with good health indicators such as Sri Lanka have been able to achieve positive health outcomes at low cost. Private providers in Sri Lanka account for a significant share of overall primary care provision, and it is likely that that they have played a significant role in contributing to the country's satisfactory health outcomes.

Sri Lanka's private sector is essentially unregulated, and there is a total absence of public financing of private primary care. Yet Sri Lanka's private primary care sector provides good-quality care at

relatively low cost. This suggests that policymakers need to consider whether the public sector has an indirect role to play in the early training and the professionalization of private physicians. The various tools that have been suggested in South Asia for regulating the private sector, such as consumer protection legislation, public financing of private services, and more effective regulation by the government, require high levels of state administrative capacity. Sri Lanka, like most developing countries, lacks the capacity to be the direct regulator of the private sector (Russell and Attanayake 1997). For the public sector to manage and regulate the private sector first requires a commitment to build public sector capabilities, or the government must rethink how the public sector can best influence private practice.

## Note

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SECTION V

# Consumer and Provider Perspectives

CHAPTER 12

# Consumer Redress in the Health Sector in India

*Bejon Misra, Consumer VOICE, Delhi*

## Abstract

Despite the passage of the Consumer Protection Act of 1986 in India, very little is known about how the public is able to seek redress in the health sector. This chapter involves a survey of 81 hospitals and participants from 86 cases brought before consumer forums in Delhi, Lucknow, and Hyderabad. The purpose of the survey was to see how patient redress mechanisms are actually working in the health sector in India. Most complaints at hospitals involved nonclinical issues, such as problems with sanitation, utilities, and billing procedures. Yet most hospitals in both the public and private sectors lacked standardized procedures to handle complaints, with smaller hospitals having more informal approaches. The unresponsive attitude of hospital authorities was one of the main factors that prompted consumers to take their grievances to the courts. Access to the consumer forums was not equitable, as most cases involved educated males, with very little representation from scheduled castes or women. The cases seen at consumer forums usually involved physical harm to the

claimant. There was considerable dissatisfaction with the consumer forums by both claimants and defendants, largely because of the prolonged litigation involved. Ninety percent of cases went beyond the stipulated period of 90 days, with most lasting between one and five years. Recommendations are offered on how to improve redress at hospitals—using such measures as patient charters and other mechanisms to improve communications between patients and doctors—and to improve the infrastructure of consumer forums and public awareness on consumer issues.

## Introduction

Despite many reports in the popular press in India about the plight of health care consumers and the implementation of the Consumer Protection Act of 1986, until recently there was very little information about the current system of redress in the health sector in India. In 1999, the government of India's Ministry of Health and Family Welfare and the World Bank commissioned an in-depth study of the functioning of the patient redress systems in both the public and private sectors. One of the leading consumer organizations in India, Consumer VOICE, was selected to conduct the study, as it had been working on these issues on behalf of Indian user groups since 1984 and had also been networking globally on health care–related issues as a member of Consumers International.

A large communication gap had been created between health service providers and patients in India by the enactment of the Consumer Protection Act in 1986 and its implementation in the health services sector. Consumer organizations in India initiated a national campaign to convince public services to publish charters for their users. The government of India subsequently directed all government utilities to draw up such charters in consultation with their users and with consumer groups. In Delhi, two of the government hospitals published their charters but could not get them implemented owing to several barriers.

The main aim of the Consumer VOICE study was to gather up-to-date information on the existing redress mechanisms in the health sector, on the kinds of cases that had been brought to consumer forums on medical negligence, and on how those cases had been resolved. We believed that such information would help define the various dimensions of quality in the health care services in both the public and private sectors in India.

## Background

The subject of the study was determined in consultations with all the stakeholders in 1999. They felt that developing mechanisms to increase the voice of communities in the management of health services was of the utmost importance. A participatory approach to health administration requires instituting a system whereby those who benefit from the services play an active role in ensuring that the system is functioning efficiently. An effective redress mechanism gives consumers a platform for complaining when the system does not work as it should, with the power to rectify inefficiencies and mistakes.

Unlike in industrial countries, where the mechanisms of consumer redress are an integral part of the civic rights tradition, the subject of consumer redress is a relatively new concept in India, particularly in the health sector. The passage of the Consumer Protection Act of 1986 was a first step toward establishing such a tradition in India, in that the legislation empowered consumers to question and challenge the quality of the services they received. However, the deterioration of health care services coupled with a general lack of accountability of providers toward consumers brought home to policymakers the need to build a permanent system of redress in the health sector. The judgment by the State Commission of Orissa in *Smt. Sukanti Behera v. Dr. Sashi Bhusan Rath* (1993) upholding the rights of patients to challenge the quality of health care services was a landmark in the history of consumer redress in India. Until then, the medical profession had generally resisted acknowledging that

medical services came within the purview of the broader provisions of the Consumer Protection Act. The judgment by the Supreme Court in the *Indian Medical Association v. V. P. Shantha* (1995) settled the matter by explicitly including medical services in the protections embodied by the Consumer Protection Act.

Payments for health care services within the country in both the public and the private sectors can be classified into three broad categories:

1. Services rendered free of charge to everyone who receives them
2. Services that everyone is supposed to pay for
3. Services that everyone is supposed to pay for, but that certain categories of people who cannot afford to pay receive free of charge

In accordance with the judgment delivered in *Indian Medical Association v. V. P. Shantha*, the right to challenge the quality of health care services extends to (a) all patients who pay for services (those in the second category), and (b) all patients who receive free services from institutions that otherwise charge for their services (those in the third category). The Supreme Court ruling excluded the first category from the purview of the Consumer Protection Act of 1986.

The Supreme Court judgment made it clear that losses or damages caused by a deliberate act of negligence, unfair trade practices, or a substandard quality of service provided free in India either by the government or by the private sector cannot be challenged under the Consumer Protection Act. This judgment worried consumer organizations because it meant that the poor and disadvantaged consumers who received free health care were open to exploitation and to substandard services without having any mechanism for seeking redress. According to the judgment, the only consumers who had a right to seek redress and compensation were those who had paid for their health services. To circumvent this ruling and make all citizens eligible for redress, health care user groups decided to introduce user fees for all health care services in

India but to offer free or subsidized services to poor and disadvantaged consumers.

## Objectives and Methodology

The Consumer VOICE study addressed three key questions:

- What is the current state of patient redress mechanisms in place at different types of health facilities, both in the public and private sectors?
- What is the current situation regarding the adjudication of problems between consumers and medical providers in various consumer forums established under the Consumer Protection Act?
- What are the legal and administrative impediments to providing speedy, credible, and inexpensive redress to aggrieved patients, and what options are available to improve the situation?

For conceptual clarity, the study chose to review the current system from essentially three viewpoints: (a) the institutional view at the hospital level, (b) the legal view from the consumer forums, and (c) the personal view of the consumer. The study examined the procedures that had been adopted at health care facilities to respond to consumers' concerns and complaints. It also assessed the utility and effectiveness of different forums established under the Consumer Protection Act to pay compensation to aggrieved consumers for deliberate acts of negligence that had caused loss or damage to the patient. It took into consideration the perspectives of the consumers, the providers, and the law and reviewed the outcomes of medical negligence cases in legal and statutory (medical councils) systems.

The field survey was conducted in three major cities in India: Delhi and Lucknow in the north and Hyderabad in the south. The exercise was divided into two parts. The first dealt with consumer redress at the hospital level (table 12.1), and the second dealt with medical negligence cases filed in consumer forums (table 12.2).

**Table 12.1** Distribution of Samples Covered in the Hospital Sector

| | PRIVATE | | | | PUBLIC | | | | GRAND |
|---|---|---|---|---|---|---|---|---|---|
| CITY | LARGE | MEDIUM | SMALL | TOTAL | TERTIARY | DISTRICT | PHC | TOTAL | TOTAL |
| Delhi | 3 | 5 | 10 | 18 | 1 | 3 | 5 | 9 | 27 |
| Lucknow | 2 | 6 | 10 | 18 | 1 | 3 | 5 | 9 | 27 |
| Hyderabad | 3 | 5 | 10 | 18 | 1 | 3 | 5 | 9 | 27 |

*Note:* PHC = Primary health center.

**Table 12.2** Distribution of Samples Covered in the Consumer Sector

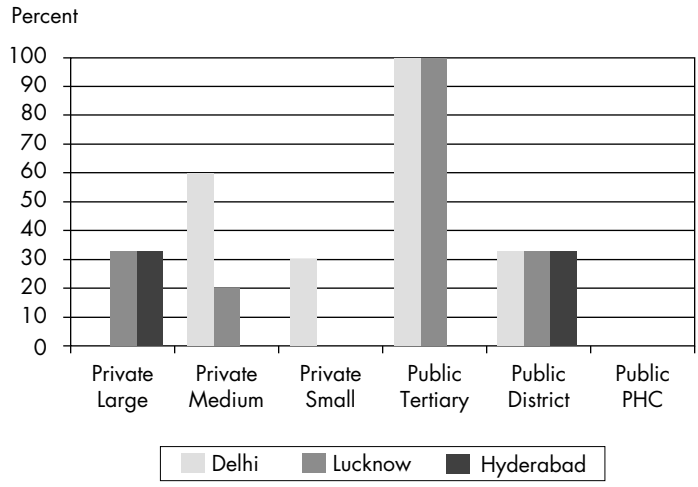
| | CASE TYPE | |
|---|---|---|
| CITY | PENDING | CLOSED |
| Delhi | 16 | 16 |
| Lucknow | 16 | 16 |
| Hyderabad | 14 | 8 |

## Findings

### *In-House Complaint Procedures*

The study surveyed 81 hospitals and found that most of them lacked a standardized procedure to handle complaints. It also found some slackness in offering prompt redress for consumers' complaints. Despite the fact that the provisions of the Consumer Protection Act clearly require all complaints to be made in written form, only 38 of the 81 hospitals (47 percent) admitted to having received complaints in writing. This shortcoming in the redress system was more apparent when the survey revealed that only 12 hospitals (15 percent) had a written manual for receiving and processing complaints. Few of the private hospitals had documented complaint procedures, and none of the three large private hospitals in Delhi had any established procedures for handling complaints. While the large and medium-size hospitals in both the private and the public sectors tended to have specific units to resolve consumer disputes, the smaller facilities tended to fall back on informal systems or had no systems at all (figure 12.1). Tables 12.3 and 12.4 show the mechanisms of redress that were available to patients in the surveyed hospitals.

**Figure 12.1** Percentage of Facilities with an Office Procedure to Deal with Complaints




*Note:* PHC = Primary health center.

In the private sector, the survey revealed that the smaller the hospital, the more informal its complaint redress mechanism. While all 8 of the large private hospitals had relatively formal systems for dispute settlement, only 13 out of 30 smaller hospitals (43 percent) had such mechanisms. In the public sector, two-thirds of the hospitals at each level had designated individuals responsible for settling disputes. A similar trend was discernible in the availability of complaint boxes and books. All three of the tertiary-level hospitals had complaint boxes or books. However, only 6 primary health centers (PHCs) out of the 15 surveyed had such facilities. In the private sector, 6 out of the 8 large hospitals had complaint boxes or books, and only 10 out of 30 small hospitals had any such facilities.

The survey's review of facilities confirmed that management tends to be inattentive to consumers' concerns. Although many units in both the public and private sectors claimed to have complaint boxes or books, the survey team was able to locate complaint boxes in only 11 out of 41 units (27 percent) that claimed to have

**Table 12.3** Distribution of Facilities Surveyed by Availability of Patient Redress System

| | PRIVATE | | | | PUBLIC | | | | GRAND TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| | LARGE *N* (%) | MEDIUM *N* (%) | SMALL *N* (%) | TOTAL *N* (%) | TERTIARY *N* (%) | DISTRICT *N* (%) | PHC *N* (%) | *N* (%) | *N* (%) |
| Facilities covered | 8 | 16 | 30 | 54 | 3 | 9 | 15 | 27 | 81 |
| Facilities with a procedure manual or guidelines for receiving and processing complaints | 2 (25) | 4 (25) | 3 (10) | 9 (17) | 2 (67) | 2 (22) | 0 (0) | 4 (11) | 13 (15) |
| Facilities with a unit or individual responsible for settling disputes | 8 (100) | 11 (69) | 13 (43) | 32 (59) | 2 (67) | 6 (67) | 10 (67) | 18 (67) | 50 (62) |
| Facilities with complaint box/book | 6 (75) | 11 (69) | 10 (33) | 27 (50) | 3 (100) | 5 (56) | 6 (40) | 14 (52) | 41 (51) |

*Note:* PHC = Primary health center.

**Table 12.4** Distribution of Facilities with Some Consumer Redress Systems by Frequency of Review

| | PRIVATE | | PUBLIC | |
|---|---|---|---|---|
| FREQUENCY (DAYS) | *N* | % | *N* | % |
| < 1 | 18 | 67 | 7 | 50 |
| 1–7 | 5 | 19 | 3 | 21 |
| > 7 | 4 | 14 | 4 | 29 |

them (table 12.5). In the private sector, all 6 large hospitals that claimed to have complaint boxes or books actually had them, but only 2 out of 11 of the medium-size hospitals and only 1 out of 10 small units actually did.

An inquiry into the nature of complaints lodged revealed that there were surprisingly few complaints relating to clinical services (table 12.6). In the private sector, the largest number of complaints (43 percent) was related to sanitation, followed by complaints about hospital utilities (41 percent) and billing (28 percent). In the public sector, sanitation was again the most frequent reason for complaint (41 percent), followed by hospital utilities (30 percent) and medical care (26 percent). In the private sector, only six units (11 percent) acknowledged receiving complaints about medical care, compared with seven (26 percent) in the public sector. The fact that so few complaints related to the quality of clinical services in both the public and the private sectors may have reflected consumers' limited knowledge, low expectations of the quality of health services, or management's denial of clinical problems.

The private sector appears to be more adept than its public counterpart in terms of how it handles complaints. While all eight large hospitals in the private sector had personnel whose particular job it was to look into consumer complaints, only 69 percent of the medium-size hospitals had a specific unit or individual responsible for settling disputes, and only 43 percent of small hospitals had such designated personnel (table 12.3). The time taken to resolve clinical cases varied, ranging between 1 and 20 days (table 12.7).

**Table 12.5** Distribution of Complaint Boxes/Books Claimed and Observed

| | PRIVATE | | | | PUBLIC | | | | GRAND TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| | LARGE *N* (%) | MEDIUM *N* (%) | SMALL *N* (%) | TOTAL *N* (%) | TERTIARY *N* (%) | DISTRICT *N* (%) | PHC *N* (%) | TOTAL *N* (%) | *N* (%) |
| Facilities covered | 8 | 16 | 30 | 54 | 3 | 9 | 15 | 27 | 81 |
| Facilities claiming to have complaint box/book | 6 (75) | 11 (69) | 10 (33) | 27 (50) | 3 (100) | 5 (56) | 6 (40) | 14 (52) | 41 (51) |
| Facilities that actually had complaint box/book | 6 (100) | 2 (18) | 1 (10) | 9 (33) | 1 (33) | 1 (20) | 0 (0) | 2 (22) | 11 (27) |

*Note:* PHC = Primary health center.

**Table 12.6** Distribution of Types of Complaints Commonly Received According to Type of Facility

| | PRIVATE | | | | PUBLIC | | | |
|---|---|---|---|---|---|---|---|---|
| | LARGE (8) *N* (%) | MEDIUM (16) *N* (%) | SMALL (30) *N* (%) | TOTAL (54) *N* (%) | TERTIARY (3) *N* (%) | DISTRICT (9) *N* (%) | PHC (15) *N* (%) | TOTAL (27) *N* (%) |
| Medical care | 1 | 3 | 2 | 6 | 1 | 3 | 3 | 7 |
| | (13) | (19) | (7) | (11) | (33) | (33) | (20) | (26) |
| Nursing care | 2 | 6 | 4 | 12 | 1 | 1 | 2 | 4 |
| | (25) | (38) | (13) | (22) | (33) | (11) | (13) | (15) |
| Sanitation | 5 | 11 | 7 | 23 | 3 | 4 | 4 | 11 |
| | (63) | (69) | (23) | (43) | (100) | (44) | (27) | (41) |
| Hospital utilities | 6 | 7 | 9 | 22 | 1 | 4 | 3 | 8 |
| | (75) | (44) | (30) | (41) | (33) | (44) | (20) | (30) |
| Security | 3 | 3 | 3 | 9 | 2 | 0 | 0 | 2 |
| | (38) | (19) | (10) | (17) | (67) | (0) | (0) | (7) |
| Billing | 5 | 5 | 5 | 15 | 0 | 1 | 0 | 1 |
| | (63) | (31) | (17) | (28) | (0) | (11) | (0) | (4) |
| Waiting room | 2 | 4 | 3 | 9 | 1 | 5 | 0 | 5 |
| | (25) | (25) | (10) | (17) | (33) | (44) | (0) | (19) |
| Report | 4 | 1 | 0 | 5 | 1 | 0 | 0 | 1 |
| | (50) | (6) | (0) | (9) | (33) | (0) | (0) | (4) |
| No complaints | 0 | 0 | 8 | 8 | 0 | 1 | 4 | 5 |
| | (0) | (0) | (27) | (15) | (0) | (11) | (27) | (19) |

*Note:* PHC = Primary health center.

**Table 12.7** Time Taken to Respond to Complaints in Private and Public Hospitals

| | PRIVATE | | PUBLIC | |
|---|---|---|---|---|
| TIME TO RESPOND TO COMPLAINT | *N* | % | *N* | % |
| < 1 day | 15 | 28 | 4 | 15 |
| 1–7 days | 28 | 52 | 13 | 48 |
| > 7 days | 0 | 0 | 2 | 7 |
| No complaints | 11 | 20 | 8 | 30 |
| Total | 54 | 100 | 27 | 100 |

### *Litigation under the Consumer Protection Act*

An interesting point that came to the fore during the survey was that only 7 percent of all of the surveyed facilities claimed to have had a medical negligence case brought against them in the previous 12 months. Five of these six facilities were in the private sector, and only one, a tertiary-level hospital in Lucknow, in the public sector. Nearly half of the facilities, mostly in the private sector, took advance measures to protect themselves from legal action. Seven of the eight large private hospitals were covered under professional indemnity insurance. In addition, 12 out of 30 small hospitals (40 percent) and 13 out of 16 medium-size units (80 percent) in the private sector were either covered by insurance or had lawyers on retainer.

In accordance with the provisions of the Consumer Protection Act, every district of the country should have a Consumer Court, referred to as the District Forum, and every state capital should have a State Commission. A National Commission functions as the countrywide body. The courts are arranged in a hierarchical order (district, state, national), with the Supreme Court of India holding the final authority to adjudicate all appeals arising in consumer cases.

The redress system in health care is still in a very embryonic state. Medical cases make up a very small percentage of the total number of cases heard by consumer forums. The data showed that the number of cases on medical negligence filed in the State Commission and District Forums in Delhi, Uttar Pradesh, and Andhra

Pradesh were only 0.1 percent to 2 percent of the total cases heard in the various Consumer Courts of the surveyed cities in those areas.

As part of the study, 86 medical negligence cases were randomly selected from the District Forums in the three surveyed cities and examined closely. Of these 86 cases, 40 were closed and 46 were still pending (table 12.2). A demographic profile of the complainants revealed certain interesting findings about the variables that govern consumer behavior. For example, nearly 60 percent of the complainants had a graduate or a postgraduate education and were mostly employed in formal sector occupations. The profile also revealed that people with regular incomes used the forums more often than those without a steady source of income. It became clear that vulnerable groups in society have yet to benefit fully from the consumer redress mechanisms established in India, as only 3 cases (3 percent) were brought by people belonging to the lower-caste population and only 30 cases (35 percent) were brought by women. All of the 86 complaints of medical negligence involved a patient being wrongly diagnosed and treated, leading to suffering or even death. Table 12.8 presents the nature of the claims made in the 46 pending cases.

Out of the 86 complainants, 50 percent claimed to have approached the hospital authorities first. The main reason why these 43 consumers approached the consumer forums was because they were dissatisfied with the redress mechanisms at the hospital level, particularly the denial of a proper hearing and the fact that hospital authorities did not take their complaints seriously. More

**Table 12.8** Distribution of Pending Cases by Reasons for Claims

| NATURE OF CLAIM | NUMBER | % |
|---|---|---|
| Wrongful death—Patient dying because of wrong treatment | 7 | 15 |
| Physical loss of function—Patient losing physical function such as eyesight, ability to walk, etc., because of wrong diagnosis and treatment | 10 | 22 |
| Other kinds of damage—Patient suffering due to operative or other treatment procedures without the loss of physical function or death | 29 | 63 |

than half (57 percent) of the sampled consumers claimed to have approached the consumer forums on their own; only 4 percent acknowledged seeking the help of consumer groups. The media had played a role in influencing 7 percent of complainants, as these consumers were made aware about their rights through frequent media coverage of such issues. Most of the complainants (80 percent) were aware of the consequences if their complaints were found to be frivolous.

The review of the 46 pending cases in Delhi, Lucknow, and Hyderabad yielded several interesting facts. Whereas 18 out of the 46 cases (39 percent) had been filed within the previous year, 22 (48 percent) of the cases were filed one to five years earlier, and 7 (15 percent) had been filed more than five years earlier. In terms of the status of the pending cases, only 12 (26 percent) were found to be in their final stages. In 21 (46 percent) others, the court was waiting for evidence requested from the defense, while in 13 cases (28 percent), the court was waiting for an initial reply from the complainant. There were no obvious reasons for the delay from the complainants' perspective. Twenty-seven percent of them blamed the consumer forums for the delay, and 19 percent blamed the uncooperative attitude of the hospital authorities. In defense of their assignment of blame, both sides cited the tendency of the forums to give repeated adjournments every time the hospital authorities failed to appear. While 5 people (11 percent) remained indifferent toward the working of the consumer forums, 23 (50 percent) expressed unhappiness with them, and only 18 (39 percent) claimed to be generally satisfied with them (figure 12.2).

Similar trends were found among the 40 completed cases. Only 15 (38 percent) were satisfied with the procedures, whereas 24 (60 percent) expressed dissatisfaction. The delay in the proceedings was a major problem. In 37 of the cases (93 percent), the time taken to reach judgment was longer than the stipulated period of 90 days. Only 5 percent of the cases had been resolved within a year, 80 percent had taken between one and five years, and 15 percent had taken more than five years (figure 12.3).

**Figure 12.2** Percentage of Consumers Satisfied with the Consumer Redress Mechanisms in Pending Cases

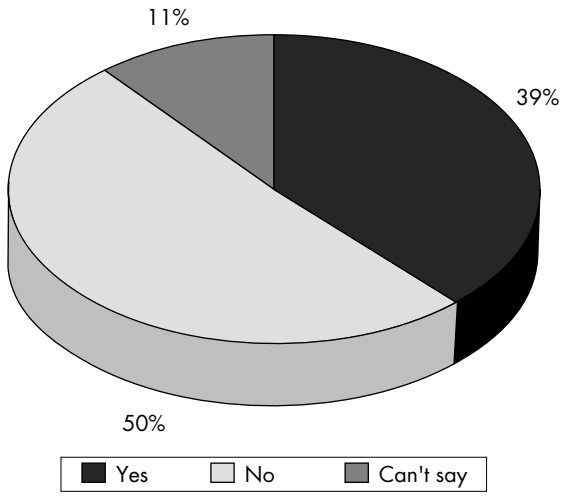
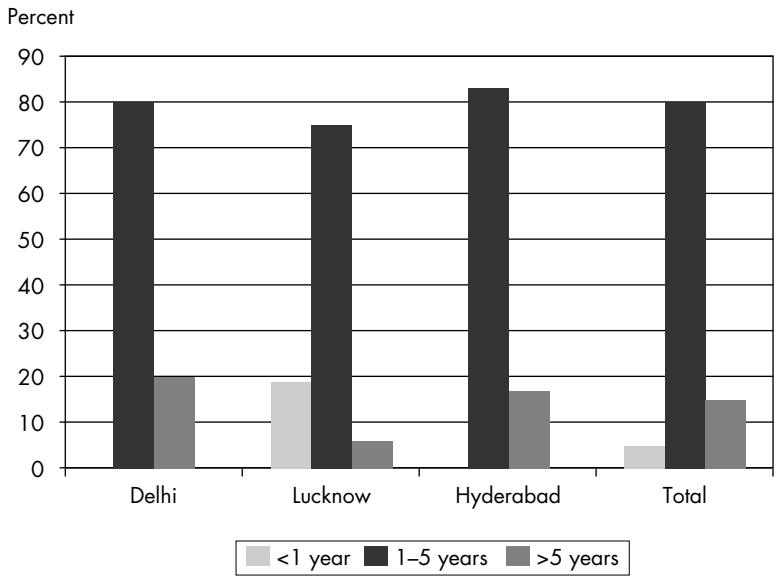



**Figure 12.3** Time Taken to Reach Final Judgment



Just over half of the complainants (56 percent) were unhappy with the decisions of the courts at the end of the litigation. One-fifth of the complainants found the decision to be "one-sided," while one-quarter felt that the complexities associated with medical negligence had not been adequately explored.

In terms of outcomes, of the 40 completed cases, 33 percent were dismissed; in 42 percent of the cases, the provider was asked to pay compensation to the consumer; and in 25 percent of cases, the consumer was required to pay the provider. Compensation to the consumer was usually equivalent to the principal amount paid by the consumer for the medical services, though at times extra sums were awarded. In almost half of these 17 cases (47 percent), the compensation was less than Rs. 10,000 (around US$200). In two cases (12 percent), more than Rs. 100,000 was awarded as compensation; another two (12 percent) were awarded between Rs. 50,000 and Rs. 100,000; and five (29 percent) were awarded between Rs. 10,000 and Rs. 50,000. In 10 out of these 17 cases, the complainants felt that the compensation was inadequate. However, the costs to the complainants were modest. In 7 of the cases (22 percent), the complainants had spent less than Rs. 1,000; in 17 cases (53 percent), they had spent between Rs. 1,000 and Rs. 5,000; and in 8 cases (25 percent), they had spent more than Rs. 5,000. Of the complainants in all of the completed cases, 40 percent were unhappy that they had been unable to recover all the money they had spent in bringing their case.

In cases where the complainant was required to pay the defendant, the charges leveled against the provider could not be proven. The compensation amounts in such cases were small, generally between Rs. 2,000 and Rs. 5,000.

### *Satisfaction with the System*

Only 11 of the 40 complainants (28 percent) decided to appeal the decision of the District Forum to a higher court. Considering the number of person-days spent and the money involved, most complainants were averse to spending more money, time, and energy

on pursuing an appeal. They cited reasons such as "lack of time," "no money to waste," and "justice may not be done" in support of their decision not to contest the order.

The providers' point of view was quite different from that of the consumers. While 50 percent of complainants claimed to have first approached the health facility with their complaint, only 3 percent of the providers that were interviewed said that the patients had approached them before going to the consumer forum. Conflicting accounts such as this make it clear that the present system of redress has inevitably led to a great deal of mistrust between the consumers and the providers. The survey team found both parties to be generally reluctant to make accurate information available.

Respondents from both large and small hospitals expressed a preference for resolving all disputes at the hospital level. More than half of the defendants in the 46 pending cases (54 percent) claimed to have special procedures in place for handling consumer complaints. They specifically mentioned the existence of complaint boxes and books on the premises and of particular staff members to whom complaints could be addressed. Smaller units preferred consumers to contact them personally so that they could look into the complaints immediately.

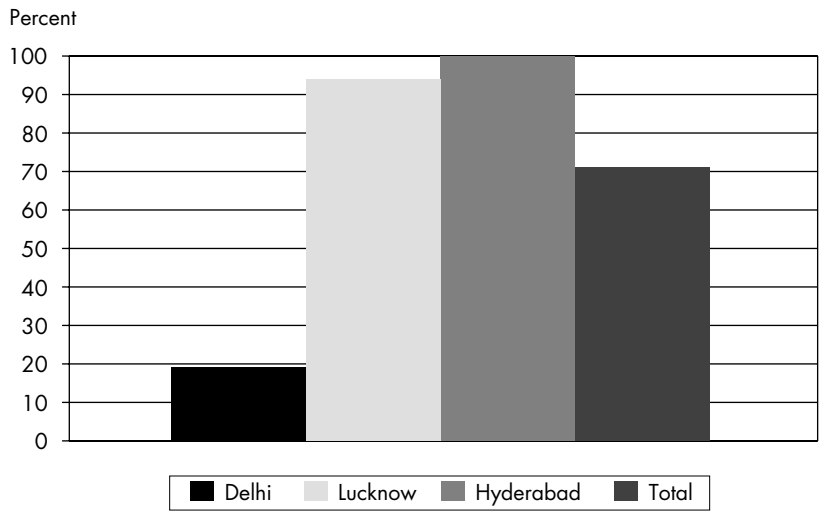
A quarter of the 46 providers in the pending cases believed that the Consumer Protection Act was biased in favor of consumers, giving them carte blanche to drag medical institutions to court. However, only 15 percent of the providers felt that consumers misused the act. Another 17 percent of the providers felt that the act was largely discriminatory because it excluded the public sector, thus putting the private sector at a disadvantage: doctors working in government hospitals were secure, whereas doctors working in the private sector always had the threat of a possible court case hanging over them.

Nearly one-quarter of providers (24 percent) blamed the heavy backlog of complaints and the failure of complainants to produce concrete evidence to back up their claims for the delay in resolving cases. Another 19 percent of providers felt that the consumer forums were lax in issuing judgments and did not have the technical

competence to investigate cases of medical negligence in depth. One-fifth said that they were now very cautious in how they dealt with complaints and had tightened their own monitoring systems to try to prevent lawsuits.

Given their institutional status, providers were generally found to be well equipped legally to face the challenges of prolonged litigation. Seventy percent of the providers had engaged lawyers, while some hospitals had lawyers actually on their staff to manage their cases. In Delhi, only 3 of the defendants in the pending cases (19 percent) had engaged lawyers; in Lucknow, 15 (94 percent) had engaged lawyers; and in Hyderabad, all of the defendants had engaged lawyers (figure 12.4 and table 12.2). The difference between Delhi on the one hand and Hyderabad and Lucknow on the other may be due to a lack of in-house legal resources in hospitals in the latter two areas. The difference may also be due to the fact that providers in Delhi are very aware of the Consumer Protection Act, which allows defendants to appear before the consumer forums in person rather than having to engage outside counsel.

**Figure 12.4** Percentage of Defendants Who Engaged a Lawyer



Finally, 65 percent of the providers in the 40 closed cases expressed satisfaction with the final judgments that were given, and the remaining 35 percent were dissatisfied. Only 25 percent of the providers expressed a desire to go on to the next level of appeal.

The survey team interviewed 71 lawyers for the study. The lawyers, like the consumers and the providers, were divided into two main categories: those whose cases were pending, and those whose cases had been completed. In the pending cases, 30 of the 39 lawyers interviewed (77 percent) said they were working on behalf of consumers, while 9 (23 percent) were representing providers. Out of the 39, 17 (44 percent) claimed to be working on more than 50 consumer cases at a time.

More than one-quarter of the 39 lawyers with pending cases (28 percent) felt that the heavy volume of cases before the courts was the prime reason for any delays, as the infrastructure of the consumer forums was inadequate for handling such a large volume of cases. Staff shortages coupled with a lack of experienced members on the consumer forums put extra pressure on existing staff and members. In these circumstances, the entire process of consumer redress became slow and late, and as a result, very few of the clients expressed any desire to appeal to a higher court for redress.

Lawyers were hired in 32 of the 40 closed cases. Out of these 32 cases, only 37 percent of the lawyers were asked by their clients to file an appeal at a higher level. Most of the lawyers (87 percent) expressed the view that specific reforms were needed in the consumer redress system. Some of the measures that they advocated are shown in table 12.9.

The survey team interviewed 19 consumer forum members, who are part of the process of delivering judgments on the complaint cases, in the course of the study. More than three-quarters (79 percent) of them agreed that medical negligence cases were usually not disposed of within the stipulated period of 90 days. Five members felt that the heavy caseload was primarily responsible for the slow processing of medical cases. According to four members, the complexities of the cases were the main reason for delay, as they made it nearly impossible—as well as inadvisable—to

**Table 12.9** Lawyers' Recommendations for Increasing the Efficiency of Consumer Forums

| RECOMMENDATION | *N* | % |
|---|---|---|
| Increase both the staff and the number of consumer forums per district | 12 | 35 |
| Make the period for responding and producing evidence time bound | 6 | 17 |
| National Commission should formulate clear procedures for consumer forums | 3 | 9 |
| Reduce the scope for political intervention in the working of consumer forums | 3 | 9 |
| Let the affected person be physically present if possible | 2 | 6 |
| Put one person in charge of the forum instead of the present three members | 2 | 6 |

give a quick judgment within the stipulated time frame. Four other members felt that the infrastructure of the consumer forums was inadequate to deal with these cases and that this was the prime reason for the delays.

Most members (84 percent) were of the opinion that the present system, however imperfect, had given both women and the poor a chance to voice their concerns and seek redress for the poor delivery of health care services. The same proportion also felt that, since government hospitals were financed by the taxpayers' money, it was important that they also be brought under the purview of the Consumer Protection Act.

## Conclusions and Recommendations

The survey at the hospitals and the accompanying review of medical negligence cases heard at consumer forums have confirmed that there is an urgent and immediate need to reform the present system of consumer redress in the health sector. The findings revealed a disturbing trend of ad hoc practices in the management of consumer complaints in the majority of hospitals. Whereas large and medium-size hospitals in both the public and private sectors

have established mechanisms for settling disputes, smaller hospitals resolve disputes primarily through informal means. However, in both large and small hospitals, the present system offers no concrete guarantees to the complainants that the authorities would actually address their problems within a specified time frame. The absence of a fixed period for resolving disputes inevitably meant that most cases were either resolved almost immediately or were left unresolved. It is significant that consumers found the unresponsive attitude of the hospital authorities to be one of the main factors that prompted them to take their grievances to the courts.

Concerning the functioning of consumer forums, it is noteworthy that the majority of both consumers and providers described their experiences as largely negative. Prolonged litigation due to recurring delays was cited as one of the major shortcomings of the process. Most felt that the present infrastructure for consumer redress was highly inadequate—"too few forums for the number of cases." In 90 percent of the cases, the time taken to resolve the conflict went well beyond the stipulated period of 90 days. Most complainants named this long waiting period as the most trying aspect of the litigation process.

Another negative aspect of the current system is its overdependence on lawyers. The providers were better equipped legally than the consumers in that they had their own legal staff to fight their cases, but the majority of consumers also engaged lawyers to help them.

A third aspect of the functioning of courts relates to the subject of compensation. At present, there are no guidelines that govern the sums to be awarded, which means in practice that most compensation is limited to the price of the medical service provided. However, in cases of medical negligence where a severe disability or even death is the main focus, awarding only enough to cover the costs of the patient's medical services is likely to leave the complainant feeling highly dissatisfied. In order to restore credibility to the system, the compensation policy needs to be reviewed.

Even more important than compensation is the question of access. As the survey revealed, access to Consumer Courts is

largely restricted to people who have a regular source of income. The rural and urban poor, scheduled castes and tribes, and women are underrepresented among complainants and consequently have little effective voice in the management of health services throughout the country.

The study recommends the gradual and steady incorporation of certain measures into the existing system of consumer redress in the Indian health sector in the near future. It recommends the development and adoption of a mandatory Citizen's Charter for all hospitals that clearly highlights the rights of patients vis-à-vis the hospital authorities in the delivery of health services. This charter must be made available to all patients at all times and in the language in which they normally communicate, with special emphasis on illiterate and disadvantaged consumers.

The study suggests that the service provider in question should handle complaints within the health care sector professionally. In both private and public health facilities, management should be able to deal with customer complaints more effectively by providing a written manual that gives specific directions for filing a complaint and a time frame for such action to consumers who want to make a complaint. The names of the personnel who handle complaints should be prominently displayed to ensure that they are accountable to the consumers. Government should provide resources to fund skill development programs to train these personnel in customer care and effective communication. At the moment, very little attention is given to human resource development in either the public or the private sectors.

The government of India also needs to improve the infrastructure of the consumer forums. Most of the cases filed in the Consumer Courts take more than the stipulated 90 days to be resolved. To reduce the pressure on individual courts and ensure a speedy trial to consumers, it is absolutely necessary to increase the number of District Forums and State Commissions throughout the country, proportionate to the regions' populations. Every two to three years, the Ministry of Consumer Affairs should make a standard assessment of whether the District Forums are functioning effec-

tively to buttress the system's credibility and to ensure that redress is being provided promptly.

The need to increase public awareness of consumer issues is another key recommendation. Consumer redress in the health sector in India, as elsewhere, is intrinsically influenced by overall consumer awareness. However, the fact that only 7 percent of those who approached the courts had been influenced by consumer organizations and only 2 percent by the media shows that both consumer organizations and the media must focus more on generating awareness of the redress system. Having this information will empower consumers, which in turn will lead them to demand high-quality health care services.

As pointed out above, the survey highlighted the overwhelming level of consumer dependence on lawyers in the consumer forum system. Many of the lawyers interviewed claimed to be working on more than 50 consumer cases at a time. Such a high level of dependence not only makes the whole procedure of redress expensive, but it also significantly reduces the contribution of the consumer in the redress process. The Consumer Protection Act of 1986 has already gone through two amendments to make it more effective and pro-consumer. This study recommends that the Consumer Protection Act and the Indian Medical Council (IMC) Act of 1956 be amended to bring all medical practitioners and health care services, whether in the public or the private sectors, within the purview of the accountability and compensation aspects of the law. This would definitely benefit the average Indian consumer. A large number of poor people visit government hospitals, and the present legal situation in effect prevents them from challenging the quality of health care services they receive. The Constitution of India guarantees equality to all citizens, yet the present Consumer Protection Act actually introduces an element of inequality among patients, because private patients are covered by the act while public patients are not. A more serious concern is that this restriction also reduces the general accountability of hospitals to their patients and, since the poor depend on government hospitals for inpatient services, in effect prevents the poor from having full basic citizenship rights.

Every citizen should have access to high-quality health care services and be able to claim compensation for deliberate acts of negligence or for unfair trade practices. The laws should also cover doctors working in government hospitals and charitable institutions. The Consumer Protection (Amendment) Bill, which is currently awaiting parliamentary approval, will cover services such as health and medical services and also mandatory services provided by central and state governments.

Consumer complainants have tended to find themselves in a disadvantageous position compared with doctors. While doctors are always well equipped with all the documentary evidence that they need from the hospital records, the complainants often find it difficult to muster the necessary evidence to prove their cases. Therefore, in many past cases, the complainants were not able to prove medical negligence beyond a reasonable doubt. This is one of the reasons why the IMC Act has been inadequate in dealing with medical negligence and why the consumer forums have become more popular. Moreover, doctors are generally reluctant to give evidence against their professional colleagues, even in instances of genuine malpractice, in cases involving the IMC. This has prompted some consumer advocates to recommend ways to improve the IMC Act.

Ensuring consumer redress for medical mistakes and malpractice is an important component of a larger push toward democratizing health management. As consumers' awareness of their rights increases, this provides a fertile ground in which to plant the seeds of a broader consumer movement in the health sector in India.

This study has brought to light how existing structures for handling complaints work in both private and public sector health care institutions and has suggested various possible solutions for building a strong and dependable infrastructure in the health sector in India. If providers were to benchmark the quality of services that they provide and improve the existing system of health care management, they might avoid much dissatisfaction and many complaints from consumers. Policymakers would have to develop such an initiative in consultation with service providers, users, consumer

groups, and the government agencies that deal with health care delivery.

However, not all of the signs are negative. The existing legal framework for protecting and compensating consumers in the health sector has some encouraging aspects. It has established the fact that well-designed legislation can build awareness among consumers and generate demand for high-quality services, although in the area of medical care there is a long way to go. Civil society in India will not soon forget the uproar made by medical practitioners when the Supreme Court of India brought doctors under the provisions of the Consumer Protection Act, thus making them accountable to patients.

The liberalization and reforms in the health care sector started by the government of India are encouraging steps, and Indian consumer groups have always advocated competition in the marketplace with good regulatory mechanisms. We are sure that studies like this will help ensure the delivery of high-quality services in the health care sector and make the providers accountable to consumers.

CHAPTER 13

# Quality Health Care in Private and Public Health Care Institutions

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## Abstract

Quality of care delivered by health care institutions is a matter of public concern. Any differences in quality of services by ownership of health care institutions have significant policy implications. Evidence from health-seeking behavior studies suggests that people who can afford to tend to use private health care institutions. It is assumed that the private health care institutions must be providing better quality of services. Otherwise, why would the rich and middle class access the private health care sector? Such an argument relies on the observed pattern of utilization as a proxy measure of quality of care. Instead, it would be desirable to rely on more direct measures of quality of health care services. But the concept of quality health care tends to have different meanings depending on one's viewpoint. This chapter first discusses the concept of quality in health care and presents a framework for assessing health care quality. Evidence is then presented on the quality of care in the private sector in India.

This is followed by findings about structural and process quality issues from a study in Andhra Pradesh to illustrate the structure and dynamics of the private health care sector. Finally, some opinions are presented about quality-of-care measures obtained from owner-managers of private health care institutions in Andhra Pradesh.

## A Framework for Assessing Health Care Quality

Quality-of-health-care concepts emerge from our understanding of goals of health care. The World Health Organization (WHO) framework (table 13.1) for health system performance assessment (Murray and Frenk 2000; WHO 2000) provides one view of health system goals and a measurement strategy. The defining goal of any health care service is to improve the health of the recipient. Health includes survival and quality of life. Responsiveness is about the interpersonal aspects of care. It refers to client orientation and respect for persons. The health-enhancing aspects of care have been referred to as technical quality of health care, and the responsiveness dimension has been referred to as interpersonal quality of care (Newbrander and Rosenthal 1997). Fairness of financial contribution refers to the equity aspect of the health system. Newbrander and Rosenthal (1997) refer to these dimensions as the social aspects of quality, efficiency, and access. I believe that quality of care is widely perceived to refer to the health-enhancing aspects and responsiveness of the health care institution (HCI).

**Table 13.1** Health System Goals According to a WHO Framework, 2000

| GOAL | LEVEL | DISTRIBUTION |
|---|---|---|
| Health (survival + quality of life) | ✓ | ✓ |
| Responsiveness | ✓ | ✓ |
| Fairness of financial contribution | | ✓ |
| | Quality | Equity |

*Source:* Based on Murray and Frenk 2000.

Quality of care is a multidimensional concept consisting of objective and subjective elements. Hence, it is inferred from a variety of sources. The "structure, process, and output" framework for assessment of quality of care originally recommended by Donabedian (1985) is widely followed (Acquilina 1992; Newbrander and Rosenthal 1997). Structure refers to provider characteristics assumed to be prerequisites for good-quality medical care: credentials, accreditation, license to practice, and so on. The probability of good-quality nursing care is assumed to be higher in an HCI that employs enough nurses according to staffing norms compared with an HCI that does not have enough nurses. Similarly, between two HCIs employing a similar number of nurses, the one employing only formally trained nurses is assumed more likely to provide better nursing care than the one employing untrained nurses. Standards determine what constitutes an adequate number of professionals and their qualifications. For example, in the United States, the Joint Commission on Accreditation of Health Care Organizations (JCAHO) develops and periodically revises standards of physical plant, staffing norms, health care professional selection procedures, and so on. The hospital licensing boards of each state also prescribe structural standards, including, for example, building standards. Each structural characteristic of an HCI may also affect the interpersonal aspect of care. For example, the number of telephone lines will influence ease of access to the health care facility. Provision of a waiting area and sign postings can smooth the process of outpatient consultation.

Process of care refers to what is done to the patient. These processes are usually achieved through protocols established by the HCI to deal with technical and interpersonal aspects of health care. Adherence to evidence-based protocols contributes to improved patient outcomes. For example, a study by Kahn and others (1990) developed explicit process criteria for patients hospitalized with congestive heart failure, myocardial infarction, pneumonia, and cerebrovascular accident. A better process criterion was found to be associated with lower mortality rates 30 days after admission.

For another example, the JCAHO accreditation requires that health care organizations follow certain minimum procedures to

ascertain the suitability of professional staff. The procedures are designed to reduce the chance of giving hospital privileges to physicians with a known history of medical malpractice. This process is expected to improve the level of professional competence among physicians and thereby contribute to better patient outcomes. The JCAHO developed a set of Indicator Measurement Systems (IMS) to improve objectivity in measuring health care process quality (Nadzam and others 1993). Practice guidelines are another example of defining the process of care and hence are potential tools for enhancing quality assurance (Woolf 1992). The Institute of Medicine (1990, p. 38) defines clinical practice guidelines as "systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances." Implementation of clinical practice guidelines is an important tool for improving the technical quality of health care. However, practice guidelines can be useful only if there is an environment for systematic development, implementation, and evaluation of practice guidelines. For example, Lomas and others (1989) studied the knowledge, attitude, and practices of obstetricians before and after release of a consensus statement recommending a decrease in the use of cesarean sections. They observed that clinical practice guidelines may predispose physicians to consider changing their behavior, but actual change in physician behavior depends on the overall incentives system and practice environment.

Outcome refers to the change in health status attributable to the health care in question. This is the most important indicator from the public health point of view. The American Medical Association (1986) defined high quality of care as "the care which consistently contributes to improvement or maintenance of the quality and/or duration of life." In other words, patient outcome is viewed as the ultimate measure of quality of medical care. Change in health status refers to improvement in survival as well as the quality of life. The Medical Outcomes Study (MOS) conducted in the United States sought to measure outcomes of medical care (Stewart 1992; Tarlov and others 1989). In this study, risk factors that may have an

effect on patient outcome were measured at the time of patient intake and exit. Patient outcome was measured along multiple dimensions of functioning and well-being. Patient outcomes from different health care institutions were compared after controlling for the risk profile of patients at the time of intake. Note that simple measures of patient outcomes such as hospital death rates were not considered valid indicators of quality. Hospitals that provide good-quality and specialized care tend to attract more serious cases. Thus the hospital death rates would be higher in such institutions. To avoid this pitfall, the MOS controlled for risk factors while comparing patient outcomes. Another problem with using simple death rates is that it does not take into account the quality-of-life improvement resulting from good medical care. To account for quality-of-life improvements, the MOS measured functioning and well-being along multiple dimensions, including physical functioning, mobility, and role functioning.

Comparison of patient outcomes from different types of HCIs is resource intensive. While research studies have shown the feasibility and usefulness of patient outcomes as a measure of quality of care, such approaches have yet to be adopted on a large scale in industrial countries, much less in India or elsewhere in South Asia. A JCAHO article (Iezzoni and Greenberg 1994) reported that about 36 states in the United States had some legislative mandate to examine hospitalization outcomes, primarily mortality.

Outcome of the interpersonal aspects of care is usually assessed by measuring patient or client satisfaction. Interpersonal aspects of care are relatively easily recognized and readily assessed by the patients and their attendants. A series of patient satisfaction questionnaires (PSQs) were developed as a part of the Rand Health Insurance Experiment (Newhouse 1993; Ware 1983) and developed further through the MOS (Wilkin, Hallam, and Doggett 1992). The National Committee for Quality Assurance (NCQA) in the United States is a not-for-profit organization that seeks to improve patient care in partnership with managed care plans (Corrigan and Nielsen 1993). In 1993, the NCQA released a core set of health plan performance measures, titled the Health Plan and

Employer Data and Information Set, version 2.0 (HEDIS 2.0). HEDIS includes a section on patient satisfaction. In India, patient satisfaction has been studied occasionally, either on its own or as part of broader studies on hospital performance (Menon 1990; Sahu 1992). Recently the Andhra Pradesh Vaidya Vidhana Parishad (APVVP) has commissioned studies for systematic measurement of patient satisfaction at regular intervals of time to aid in management of public hospitals (IHS 1999; Mahapatra and others 2001).

Using the WHO framework of health system goals related to quality of care and Donabedian's framework for assessment of the quality of care, I propose an integrated framework for assessing the quality of health care, as shown in table 13.2. Each of the two intrinsic goals, namely an improvement of health and a satisfying interpersonal setting of care, can be assessed by looking at the enabling structural systems, the operating procedures and protocols of care, and the actual outcomes realized by the patients receiving care. Structural systems for achievement of health can exist at many levels. At the least, the HCI should not hurt its patients and should not be a source of risk to public health. For example, the state may create regulations to prevent exposure of patients, attendants, and neighbors to communicable disease attributable to unhealthy disposal of biomedical waste. The state would usually require every health care institution to satisfy some reporting requirements for epidemiological surveillance. For example, the Andhra Pradesh Public Health Act (1939) requires HCIs to report all cases of notifiable diseases they handle. Reporting vital events such as births, deaths, and causes of death may be mandatory. Satisfaction of these requirements would not amount to any positive statement of quality, but nonsatisfaction of such requirements may mean that the HCI could be a source of risk to the public health.

The state may accredit an HCI for purposes of purchasing services for its programs. While this is an improvement over minimalist licensing requirements, official accreditation processes tend to assume a ritualistic character and may lose some of their validity. Voluntary accreditation systems appear to be the best available form of recognizing whether an HCI satisfies appropriate structural and process norms for health care delivery. Voluntary accredi-

**Table 13.2** Integrated Framework for Assessment of the Quality of Health Care

| GOAL FRAMEWORK | OPERATIONAL ALTERNATIVE | SCOPE (ILLUSTRATIVE) |
|---|---|---|
| *Technical quality (health attainment)* | | |
| Structure | Licensing/regulation | • Basic requirement to operate an HCI.<br>• Safe disposal of biomedical waste.<br>• Reporting requirements for surveillance of communicable diseases, vital statistics, cause of death reports, etc. |
| | State licensing | • Quality assurance. Purchase of services by governments. |
| | Voluntary accreditation | • HCIs voluntarily seek accreditation to reassure their clients about the quality of their care. Purchase of services by employers, health insurance plans, public authorities, etc. |
| Process | Practice guidelines | • Evidence-based physician and patient decisionmaking. |
| Outcome | Medical outcomes research | • Provide information about causative linkages of patient outcomes with health care process so that HCIs can adopt appropriate measures to improve patient outcome.<br>• Benchmarks of risk-rated patient outcome. |
| | Laws requiring maintenance of medical records and publication of clinical data | • Enable purchasers dealing with network of HCIs to screen potential foci of poor medical outcome.<br>• Assist bulk purchasers of health care services such as employers and insurance plans in choice of providers.<br>• Educate people about provider choice decisions.<br>• Facilitate medical outcomes research. |
| *Responsiveness (interpersonal quality)* | | |
| Structure | | • Provision of common area and patient conveniences.<br>• Clean facilities. Facilities for attendant. |
| Process | | • Grievance-handling procedures.<br>• Appointment and scheduling procedures. Timeliness norms. |
| Outcome | | • Patient/client satisfaction. |

tation systems tend to respond to changes in technology and client expectations faster than state systems. Under voluntary systems, where the HCI has to pay for accreditation, the quality and validity of such accreditation processes tend to be sustained through competitive mechanisms. Examples of voluntary accreditation systems

in different countries include the JCAHO in the United States, the Canadian Council on Health Care Accreditation, and Quality Health in New Zealand. Accreditation systems usually cover much of the health care production processes in addition to the infrastructure facilities. However, implementation of practice guidelines has yet to form an integral part of the accreditation process. Adoption of practice guidelines by individual physicians and HCIs requires development of national infrastructure for development and dissemination of practice guidelines. For example, the U.S. Agency for Health Care Policy Research (AHCPR) develops practice guidelines and disseminates them to HCIs and patients. The AHCPR was set up by the U.S. Congress to support research, data development, and other activities that will "enhance the quality, appropriateness, and effectiveness of health care services." The AHCPR is charged with developing (a) practice guidelines, (b) medical review criteria, (c) standards of quality, and (4) performance measures.

Use of a risk-rated medical outcomes profile of HCIs as a screening device to identify potential focuses of poor-quality health care has already been discussed. Interpersonal aspects of health care can also be inferred by looking at enabling infrastructure and procedures established by the HCI for this purpose and by measuring patient satisfaction. The infrastructure aspect is usually covered in the conventional accreditation process. Some processes that have a bearing on the interpersonal aspects of care may be covered by the accreditation process, for example, grievance-handling procedures and informed consent procedures. In addition, HCIs may have to develop their own quality norms or look for generic customer satisfaction standards to demonstrate the interpersonal quality of their service. Patient or client satisfaction measurements indicate the outcome of the interpersonal aspects of health care.

## Health Care Quality in Private and Public HCIs in India

The health care quality assessment framework allows us to assess the adequacy of quality subsystems in health care and comparative performance of different HCIs in the quality dimension. We need to

view the findings about quality of care from this and other studies in India against the overall framework of quality assessment described above. We then discover that there is a lack of information about the quality of care in HCIs in India. There is hardly any regulatory framework for quality assurance in the health sector (Bhat 1997). State or municipal laws for licensing of hospitals exist only in a few states. These are (a) the Bombay Nursing Home Registration Act, 1949; (b) the Delhi Nursing Homes Registration Act, 1953; and (c) the Karnataka Private Nursing Homes Act, 1976. However, implementation is lacking in most of these places (Nandraj 1998; Nandraj, Khot, and Menon 1999). The APVVP, which manages the first referral public hospitals in Andhra Pradesh, has developed quite a few standards and is making efforts to implement them (Srilatha 1998). The Bureau of Indian Standards (BIS) generally deals with standards and specifications of medical supplies and biomedical equipment. Structural and process standards developed by the BIS in the area of health care include the following:

- Classification and matrix for various categories of hospitals (IS12377-1988)
- Basic requirement for hospital planning (IS12433-1988)
- Quality management procedures for outpatient departments and other emergency services—guidelines (IS13808-1993)
- Quality management procedures for diagnostic and blood transfusion services—guidelines (IS13809-1993)

Some voluntary efforts have been made to develop structural standards for health care institutions. The Institute of Health Systems (IHS) has been studying the need for accreditation systems (IHS 1996; Mahapatra and Sailaja 1994; Nandraj 1998) and has developed some standards for reproductive health care services (IHS 1998). The Centre for Enquiry into Health and Allied Themes in Mumbai has been studying the need for accreditation (Nandraj, Khot, and Menon 1999) and has developed certain physical standards for private health care institutions based on case studies in Maharashtra (Nandraj and Duggal 1997).

The above efforts to establish standards and quality assurance systems are positive developments. At least some capacity appears to exist. But a sustained country- or statewide health care quality assurance system is still to come. An encouraging development is the rise in awareness about the need for state licensing and accreditation systems. For example, the Andhra Pradesh Legislative Assembly House Committee on corporate hospitals recommended state licensing of private hospitals and nursing homes (Reddy and others 1996). A consensus development workshop on the private health sector in Andhra Pradesh, held in Hyderabad, was attended by key persons from the private and public health sectors (Mahapatra and Nagarjuna 1998). There was a consensus among the workshop participants about the need for a health care quality assurance system.

India has yet to develop any national program for development practice guidelines, medical review criteria, and so on. Research capacity for measurement of medical outcomes and risk-rating of patients is also lacking. Most quality-of-care information in the country concerns the interpersonal aspects of care. Without the integrated framework for assessing health care quality, the information on interpersonal aspects of care appears to be the only information on quality. So an important policy recommendation emerges, even without looking at the available information on interpersonal quality of care. That is the need for systematic development of a quality-of-health-care assessment infrastructure in the country.

Evidence from various studies in India point out the poor quality of care provided in the private sector (Nandraj 2001). The National Family Health Survey, 1998/99 (NFHS-2) asked women who had visited a health facility in the previous year questions to ascertain their perceptions of the quality of care provided. Table 13.3 shows the survey results for Andhra Pradesh and India. Mostly Likert-type category rating scales were used. Table 13.3 shows the perceptions of the ever-married women respondents about the quality of service received by them during their most recent visit to a private or public sector health facility. Almost all respondents

**Table 13.3** Quality of Care Received by Ever-Married Women during Their Most Recent Visit to a Private or Public Sector Health Facility in India, 1998/99

| | ANDHRA PRADESH | | INDIA | |
|---|---|---|---|---|
| QUALITY OF SERVICE INDICATOR | PRIVATE | PUBLIC | PRIVATE | PUBLIC |
| Received the required service (%) | 99.6 | 98.1 | 99.7 | 98.9 |
| Median waiting time (minutes) | 29.3 | 29.6 | 29.0 | 29.3 |
| Staff spent enough time (%) | 97.9 | 93.2 | 97.5 | 90.3 |
| Staff talked nicely (%) | 71.6 | 57.7 | 78.4 | 62.7 |
| Staff respected their need for privacy (%) | 85.2 | 80.2 | 83.9 | 68.2 |
| The facility was very clean (%) | 71.5 | 51.9 | 75.3 | 52.1 |

*Source:* IIPS 2000.

received the care for which they had gone to the HCI, both in the private and public sectors. There was hardly any difference in median waiting time in private and public sector HCIs. Satisfaction with the amount of time spent by the staff was generally high. Private sector HCIs did slightly better than the public sector in the matter of time spent by staff on the patient and also in respecting the patient's need for privacy. The experience of women regarding the interpersonal communication (staff talked nicely) and cleanliness of the facility was much better in the private sector HCIs than in the public sector HCIs.

## Methods: Characteristics of Private and Public HCIs in Andhra Pradesh

Detailed methods for the study of the structure and dynamics of the private health sector in Andhra Pradesh are describe in the main report (IHS 2001). A random sample of private and public HCIs was made in three representative districts in the state and stratified into outpatient clinics (primary health centers or PHCs), small hospitals, and large hospitals using the updated Andhra Pradesh Health Institutions Database (APHIDB) maintained at the IHS. Each of the owner-managers was interviewed at the selected facilities, and a random sample of patients was selected for exit interviews.

The inpatients selected for the exit interviews were people who had been admitted for more than a week, that is, discharged after one week of stay in the hospital. The sample size was 10 patients from each institution. If 10 patients with a minimum stay of one week were not available, the norm was relaxed, so that patient with stays of three days were included in the interview. From clinics, outpatients were chosen for the exit interview.

The PSQ was based on the Client Satisfaction Questionnaire (CSQ) (Attkisson and Zwick 1982; Larsen and others 1979), as described in Wilkin, Hallam, and Doggett (1992). The CSQ is designed to gather assessments by patients of specific health plans and programs. Here we wanted to measure client satisfaction with respect to the immediately preceding encounter. Hence, we reworded the CSQ questions to refer to the encounter. Items that did not apply to the immediately preceding encounter were dropped. Some items from the Quality of Service in Texas (QOST) instruments were also included. To understand socioeconomic status of patients served by different types of HCIs, the instrument included questions about household assets for computation of a standard of living index (SLI), as in the case of the NFHS household questionnaire (IIPS 2000).

The questionnaire was divided into nine sections. Section 1 recorded information about the interview. Section 2 recorded data on the provider institution from which the patient was sampled. Section 3 recorded whether the respondent was the patient or an attendant and, if so, the relationship with the patient. Section 4 identified and gathered demographic information about the patient. Sections 5 and 6 collected socioeconomic data for computation of the standard of living index and were based on the NFHS. In sections 7 to 9, the interviewer asked for the patient's rating of the quality of services provided by the HCI. A five-point rating scale (poor, fair, good, very good, and excellent) was used. The CSQ mentioned above has four response categories. Attkisson and Zwick (1982) deliberately did not use a middle category to avoid neutral responses. The fact that the patient chose the given HCI implies some degree of confidence and preference for that health

care provider. Hence, we included a middle category of "good." As the same categories were used for both public and private HCIs, the choice of label for the middle category would equally affect the responses from patients of both sectors. Arbitrary scores on an increasing scale from 1 to 5 were given to each category of response (5 = excellent, 1 = poor). To convert the questionnaire into Telugu (the local language), the translation and retranslation procedures described by Leplege and Verdier (1995) were used. The questionnaire in English was first translated into Telugu by a team of IHS faculty who are conversant in both languages. Retranslation was done with the help of an external language expert conversant in Telugu and English. The retranslated instrument was compared with the original questionnaire. The Telugu version was accepted for use, since the retranslated questionnaire closely matched the original.

In the patient exit interview, the level of satisfaction was measured by the sum of actual scores across all items in the scale (or subscale) by an average respondent, expressed as a percentage of the maximum potential score. Since the least satisfaction category (poor) was assigned a value of 1, the minimum level of satisfaction in this scale would be 20 percent. The feasible range of the level of satisfaction measure is 20 to 100 percent. If all patients exiting from an HCI rate their satisfaction in respect of each of the 11 items as poor, then the level of satisfaction will be 20 percent. If they rate each of the 11 items as excellent, then the level of satisfaction will be 100 percent. We could have assigned a weight of zero to the satisfaction category labeled as "poor" and four to the category labeled as "excellent," which would have resulted in a satisfaction-level scale with a range of 0 to 100 percent. We did not feel it necessary to adopt a different scale. Patient satisfaction is a relative measure of the gap between expectations and perceived fulfillment. Our purpose was to explore any gaps between expectations and perceived realization between the private and the public sectors and between different categories of HCIs. These comparisons remain unaffected between the two scaling alternatives discussed above.

The survey started in the first week of June 2000. The entire survey took place between June and August. The surveyors consisted of IHS faculty and research assistants who were trained in conducting interviews. They visited the hospitals and explained the purpose of their visit to the concerned authorities. The surveyors interviewed the patients or the attendants, depending upon availability. In the case of minors, the attendants were interviewed. Data entry was done using an application specially developed by IHS for this purpose. The data were verified by making printouts of the filled-in questionnaire and physically checking them with the original forms. The corrections were made on the questionnaire, and the corrected version was updated in the database.

## Results: Structure and Process Quality Characteristics in Andhra Pradesh

### *Premises and Floor Space*

Table 13.4 provides some information about the premises in which the HCIs operate. Most large hospitals (100 percent of the public hospitals and 80 percent of the private hospitals) have their own buildings. The majority (about 75 percent) of small hospitals, both private and public, operate in their own buildings. The majority of PHCs and public dispensaries (72 percent) also operate in their own buildings. Nearly half of private clinics operate in the proprietor's own building, and the other half rent space for the clinic. Those who rent space do so mostly from unrelated persons. The practice of renting space from promoters is not very prevalent. It would appear that where promoters locate the HCI in their own building, they reported the premises as the HCI's own building.

Clearly, the HCIs in the public sector are better endowed with land and floor space. Two plausible explanations may apply. First, public sector HCIs may be overproviding floor space and land area. Second, private HCIs may be providing less than adequate space and land areas. Based on common experience and general knowledge of the situation, I conjecture that the public HCIs are usually

**Table 13.4** Premises Ownership and Scale of Accommodation of Private and Public HCIs

| | PRIVATE | | | | PUBLIC | | |
|---|---|---|---|---|---|---|---|
| PREMISES CHARACTERISTIC | CLINIC (71) | SMALL H (69) | LARGE H (10) | DIAGNOSTIC CENTER (139) | PHC (53) | SMALL H (41) | LARGE H (12) |
| Located in own building (%) | 52 | 71 | 80 | 27 | 68 | 90 | 100 |
| Rented from | | | | | | | |
| Promoters (%) | 3 | 3 | 0 | 14 | 2 | 0 | 0 |
| Unrelated persons (%) | 44 | 25 | 20 | 58 | 19 | 10 | 0 |
| Other arrangements (%) | 1 | 1 | 0 | 1 | 11 | 0 | 0 |
| *Floor space owned or rented (in square feet)* | | | | | | | |
| Mean fl. space/HCI | 639 | 3,784 | 90,904 | 1,066 | 2,198 | 8,755 | 423,436 |
| Median fl. space/HCI | 400 | 2,400 | 20,000 | 600 | 1,129 | 5,384 | 278,348 |
| Min. fl. space/HCI | 60 | 110 | 4,000 | 1 | 1,000 | 1,089 | 15,662 |
| Max. fl. space/HCI | 8,000 | 43,560 | 393,700 | 800 | 14,352 | 27,180 | 2,090,880 |
| Mean fl. space/bed | 233 | 206 | 345 | 24 | 516 | 377 | 1,608 |
| Median fl. space/bed | 120 | 150 | 95 | 4 | 514 | 300 | 771 |
| Min. fl. space/bed | 40 | 3 | 33 | 1 | 176 | 47 | 157 |
| Max. fl. space/bed | 1,333 | 1,452 | 1,312 | 150 | 1,320 | 1,117 | 4,966 |
| *Land (square yards) and FSI (floor space in sq. ft./land in sq. yd.)* | | | | | | | |
| Mean land area/HCI | 402 | 1,348 | 6,816 | 355 | 3,543 | 11,613 | 123,908 |
| Median land area/HCI | 300 | 600 | 4,920 | 210 | 1,000 | 4,840 | 41,140 |
| Min. land/HCI | 33 | 100 | 2,420 | 1 | 34 | 150 | 7,260 |
| Max. land/HCI | 2,420 | 24,200 | 24,200 | 2,400 | 19,360 | 217,800 | 774,400 |
| Median FSI of HCIs | 1.25 | 3.13 | 2.35 | 3 | 1.67 | 1.22 | 8 |
| Min. FSI of HCIs | 0.31 | 0.13 | 1.5 | 0 | 0.1 | 0.09 | 0.28 |
| Max. FSI of HCIs | 16 | 30 | 81.34 | 13 | 112.85 | 34.79 | 54 |

*Note:* H = Hospital. FSI = Floor space index.

well endowed with land. In many cases, future requirements are taken into account while allocating public land for HCIs. Mostly these lands have been reclassified from existing public lands; hence, the immediate budgetary requirement to purchase land would not be a constraint for public HCIs. Except for a few cases where concessional land grants have been given, most private sector HCIs have to provide capital and recurring budget for land and floor space. This may explain the generally smaller floor space and land area endowment of these HCIs. More detailed space audit and comparisons with relevant physical standards will help clarify the

matter and provide some insights for policy interventions on the question of adequacy of floor space and land area of different types of HCIs. For example, if HCI space audits were to consistently show that public HCIs tend to have excessive floor space, then an appropriate policy response would be to identify the types of policy decisions contributing to excess provision of floor space and take remedial measures. Another result from these studies may be questions about the utilization of concessional land grants to private HCIs and their impact on maintenance of floor space and land area standards.

Let us examine the absolute figures of floor space availability. Data on floor space and land area are rough estimates. The survey did not provide for measurement or expert assessment by an engineer or architect. These values are based on the inquiry and estimate by the generalist surveyor. Some HCIs did not provide any help in estimating floor space and land area. Among those that did report, the range of values included some that appear to be very high. This could be a result of inaccurate guesses by the surveyor or erroneous information by the informants. Because estimation of small premises is easier, the maximum end of the range of values may be suspect. Hence, it is difficult to assign a level of confidence to the mean and maximum values of floor space and land area. However, the median and minimum values are likely to be more accurate. Comparative study of minimum and median values of floor space and land area of private and public HCIs gives us some idea about the differences in premises between the two. We resurveyed all the institutions where the values appeared unusually high or low. Although this process improved the validity of these estimates, all figures are rough estimates by generalist surveyors. Estimates from public HCIs are more accurate, as they are based on records maintained by an engineering department.

Instead of comparing the private and public sectors, we seek comparison with some norm. The BIS has published a standard of physical requirements for a 30-bed community hospital (IS12433-1988), which may not be the most appropriate standard for comparison of all categories of private and public hospitals. In fact

there is some evidence that the space norms set by this standard tend toward overprovision (APVVP 1990). Nonetheless, this BIS norm is the only published source in India available to us for comparison. This BIS norm suggests a floor space of 645 square feet (60 square meters) per bed. As seen from the mean and median floor space statistics, most private HCIs appear to fall short of this norm. Based on the maximum floor space data, some private hospitals do exceed this norm. In the public sector, PHCs and the large hospitals appear to be well endowed with floor space. Many of the small hospitals may suffer some shortage of floor space. The gap between the BIS floor space norm and mean or median floor space in small public hospitals is considerably smaller than that in private hospitals of comparable bed strength.

The land norm recommended by the BIS standard is 4,840 square yards (one acre) for a 30-bed hospital. The median land area of small public hospitals included in this study exactly matches this norm. The median land area of small private hospitals included in this study was 600 square yards, much less than the norm. Compare the mean and median land area of private HCIs in all three categories with the BIS norm. Clearly, the private HCIs are located in congested areas, with comparatively less land around them. This is consistent with our commonsense understanding of private HCI locations and the motivations to minimize real estate costs.

### *Practice Guidelines and Medical Records*

Adherence to practice guidelines and maintenance of medical records are important quality-of-care attributes. Institutional mechanisms for development and dissemination of practice guidelines are not widely used in India. However, we included questions on practice guidelines and medical records to gauge the attitude of hospital managers to quality-of-care issues. Table 13.5 shows the responses to quality-of-medical-care issues. The question on medical audits was included in the owner-manager questionnaire, which was administered only to private sector HCIs. Hence, we do not have response to this question from the public sector.

**Table 13.5** Practice Guidelines, Medical Audits, and Medical Records in HCIs

| | PRIVATE | | | | PUBLIC | | | |
|---|---|---|---|---|---|---|---|---|
| PRACTICE | CLINIC (71) | SMALL H (69) | LARGE H (10) | ALL (150) | PHC (53) | SMALL H (41) | LARGE H (12) | ALL (106) |
| Conduct medical audit to review circumstances of death (%) | 20 | 0 | 100 | 40 | n.a. | n.a. | n.a. | n.a. |
| Use written medical protocols/ therapeutic guidelines (%) | 10 | 23 | 50 | 19 | 55 | 61 | 50 | 57 |
| HCIs that maintain medical records (%) | 44 | 84 | 80 | 65 | 92 | 95 | 100 | 94 |
| HCIs that have kept medical records since inception (%) | 13 | 23 | 20 | 18 | 40 | 44 | 33 | 41 |
| Range retention period by those that do not keep forever (years) | 1–20 | 0.5–10 | 5–10 | 0.5–20 | 0.5–10 | 1–10 | 5–20 | 0.5–20 |

n.a. = Not applicable.

All large hospitals in the private sector reported that they conduct medical audits to review circumstances of deaths in the hospital. None of the small hospitals reported such a practice. Only 20 percent of clinics reported doing a medical audit in case of a death in their care. Only 19 percent of private HCIs reported that they use written medical protocols. A little more than half (57 percent) of public HCIs reported that they use written medical protocols. Note that these are all unverified responses; actual practice may differ. However, we can rely on these responses to infer attitudes of managers and medical personnel toward various quality-of-care practices such as medical audit of deaths in hospital, use of written medical protocols, and maintenance of medical records.

While 57 percent of public hospitals and only 19 percent of private HCIs reported that they use written medical protocols and therapeutic guidelines, 50 percent of large hospitals in both the private and public sectors reported doing so. The difference in the extent of the practice in the private and public sectors appears, therefore, largely due to the private clinics and small hospitals. However, the study design did not seek to verify these reports, so they are indeed perceptions of the respondents about their respec-

tive institutions. The perceptions, we assume, are based on their beliefs about their institution and actual experience.

We also asked about retention of medical records. Medical records are basic to standards-based performance measurement. Medical records may also be required by the patient at a later date to inform subsequent medical care. Hence, the maintenance of medical records is an important quality-of-care attribute. Almost all public sector HCIs (94 percent) reported that they keep medical records. Only about 80 percent of small and large private hospitals reported that they do so. Only about 44 precent of private clinics reported maintaining medical records. Some private HCIs said that they have maintained medical records from their inception; most, however, reported retention periods ranging from 6 months to 20 years. The retention periods reported by public hospitals were similar.

## Results: Patient Satisfaction in Private and Public HCIs in Andhra Pradesh

All together 2,216 patients were surveyed (table 13.6), with 53 percent of the patients coming from the private sector and the rest from the public sector. The sample consisted of 53 percent females and 47 percent males. The sex composition of the sample was the same in the private and public sectors, but there were some differences in the categories of hospitals. The patients sampled from small and large private hospitals had more females (61–62 percent). The sample from large public hospitals had more males (62 percent), but the small public hospitals sample had more females (56 percent).

Socioeconomic status of patients served by the private and public sector HCIs can be assessed from the data on caste status and the SLI. The share of scheduled castes (18 percent of patients) and scheduled tribes (15 percent of patients) was comparatively higher in the public sector than in the private sector (10 percent and 6 percent, respectively). About 88 percent of patients in the public sector institutions had a low SLI, compared with 51 percent in the

**Table 13.6** Patient Exit Interview—Place of Interview and Respondent Characteristics

| | PRIVATE | | | | PUBLIC | | | |
|---|---|---|---|---|---|---|---|---|
| ACTIVITY INDICATOR | CLINIC | SMALL H | LARGE H | ALL | PHC | SMALL H | LARGE H | ALL |
| *Interviews* | 554 | 561 | 56 | 1,171 | 521 | 404 | 120 | 1,045 |
| Patient (%) | 69 | 60 | 73 | 64 | 78 | 76 | 73 | 77 |
| Attendant (%) | 31 | 40 | 27 | 36 | 22 | 24 | 27 | 23 |
| *Place of interview* | | | | | | | | |
| At home (%) | 15 | 17 | 0 | 15 | 13 | 11 | 21 | 13 |
| In hospital (%) | 85 | 83 | 100 | 85 | 87 | 89 | 79 | 87 |
| *Gender composition* | | | | | | | | |
| Male (%) | 51 | 38 | 39 | 44 | 46 | 44 | 62 | 47 |
| Female (%) | 49 | 62 | 61 | 56 | 54 | 56 | 38 | 53 |
| *Age group (1991 census data in parentheses)* | | | | | | | | |
| 0–4 years (11%) | 10 | 5 | 5 | 7 | 8 | 5 | 0 | 6 |
| 5–14 years (25%) | 7 | 6 | 4 | 7 | 14 | 11 | 1 | 11 |
| 15–44 years (46%) | 58 | 72 | 61 | 64 | 52 | 60 | 67 | 57 |
| 45–59 years (11%) | 18 | 10 | 21 | 15 | 18 | 14 | 12 | 16 |
| 60+ years (7%) | 7 | 7 | 9 | 7 | 8 | 10 | 20 | 10 |
| *Literacy and years of schooling* | | | | | | | | |
| Illiterate (%) | 40 | 36 | 27 | 37 | 64 | 58 | 44 | 59 |
| 1–4 years (%) | 2 | 2 | 0 | 2 | 5 | 6 | 3 | 5 |
| 5–9 years (%) | 15 | 18 | 22 | 16 | 18 | 15 | 16 | 17 |
| 10–11 years (%) | 21 | 19 | 21 | 20 | 10 | 15 | 18 | 13 |
| 12+ years (%) | 23 | 25 | 30 | 24 | 4 | 5 | 19 | 6 |
| *Caste* | | | | | | | | |
| Scheduled caste (%) | 11 | 9 | 11 | 10 | 20 | 16 | 16 | 18 |
| Scheduled tribe (%) | 5 | 8 | 0 | 6 | 18 | 15 | 5 | 15 |
| Backward castes (%) | 48 | 45 | 59 | 47 | 48 | 47 | 43 | 47 |
| Others (%) | 36 | 38 | 30 | 37 | 14 | 22 | 37 | 20 |
| *State average low, medium, and high SLI households from the NFHS-2 for Andhra Pradesh given in parentheses* | | | | | | | | |
| Low (state: 40.8%) | 46% | 54% | 63% | 51% | 92% | 88.4% | 71% | 88% |
| Medium (state: 44.5%) | 53.6% | 44% | 32% | 48% | 8% | 11.4% | 29% | 11.9% |
| High (state: 14.3%) | 0.4% | 2% | 5% | 1% | 0% | 0.2% | 0% | 0.1% |

*Source:* State average SLIs from IIPS 2002.

private sector. The private sector had a larger share of persons with medium and high SLIs. About 48 percent of private sector patients had a medium SLI. A recent study by Mahal and others (2000) estimated that people belonging to higher expenditure quintiles con-

sumed a disproportionate share of hospital-days at public facilities. Although the data from this study are not directly comparable, they show that for the types of HCIs surveyed, most of the patients had a lower standard of living.

Table 13.7 shows the level of patient satisfaction in various types of HCIs. There is significant room for improvement in both the private and public sectors. Given the construction of the scale and the scoring system followed, its is easy for many HCIs to show a 60 percent level of satisfaction. If all patients rated their satisfaction with respect to each item as "good," the level of satisfaction would be 60 percent. The measured level of satisfaction ranges from 46 percent to 66 percent across all types of HCIs.

There was hardly any difference in level of patient satisfaction between the private and the public sectors. The composite satisfaction score for private HCIs was 58 percent of the maximum possible score, compared with 57 percent in public hospitals. The overall level of satisfaction in private clinics and the public sector health centers was similar. In large hospitals, the overall satisfaction level also was similar in the private and public sectors. Patients from small hospitals in the private sector rated their satisfaction level a little better than the small hospitals in the public sector (60 percent in private hospitals compared with 55 percent in the public hospitals).

Although the composite score of satisfaction was similar for both the private and the public sectors, there were important differences in the service characteristics. For example, patients from private HCIs gave higher ratings to the access, availability, and convenience aspects of the service. The level of satisfaction with access, availability, and convenience in the private sector was 57 percent, compared with 52 percent in the public sector. The difference in access, availability, and convenience was further accentuated comparing private clinics (59 percent) with the PHCs in the public sector (51 percent). This finding is consistent with the common understanding that private clinics offer better appointment scheduling and are generally more accessible. The public sector HCIs received better ratings with respect to technical skill and interpersonal aspects. The higher rating of the public sector in interpersonal aspects is a little surprising.

**Table 13.7** Patient Satisfaction Levels in Private and Public Health Care Institutions

| POTENTIAL | | | | PRIVATE ($N$ = 1,171) | | | | PUBLIC ($N$ = 1,045) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ITEMS[a] | SCORE | MINIMUM SCORE | MAXIMUM ASPECT OF SERVICE | CLINIC | SMALL H | LARGE H | ALL | PHC | SMALL H | LARGE H | ALL |
| 12 | 12 | 60 | Composite score (%) | 56 | 60 | 57 | 58 | 55 | 55 | 58 | 57 |
| 4 | 4 | 20 | Access, availability, and convenience (%) | 59 | 56 | 50 | 57 | 51 | 52 | 56 | 52 |
| 3 | 3 | 15 | Technical skill (%) | 46 | 59 | 61 | 53 | 58 | 58 | 60 | 58 |
| 3 | 3 | 15 | Interpersonal (%) | 48 | 60 | 63 | 54 | 59 | 59 | 60 | 60 |
| 1 | 1 | 5 | Communication (%) | 63 | 60 | 48 | 61 | 57 | 57 | 57 | 57 |
| 1 | 1 | 5 | General comfort (%) | 66 | 64 | 61 | 64 | 60 | 59 | 57 | 59 |

[a]Items are number of items in the questionnaire.

We generally associate better interpersonal skills with the private sector. In this case, the level of satisfaction with respect to interpersonal aspects was 54 percent for the private sector and 60 percent for the public sector HCIs. The private HCIs were rated better in communication and general comfort.

The differences between the private and the public sectors become more visible if we examine responses to each item in the QOS scale. One advantage of examining the items singly is that we do not have to worry about assigning arbitrary weights to different response categories, because there is no need to aggregate the responses across items. Instead, we can examine the frequency of positive satisfaction responses for each item. The frequency of responses to a single item is easier to understand and may provide some additional insights about possible interventions to improve patient satisfaction. Table 13.8 shows the percentage of respondents who rated their satisfaction with respective items as "very good" or "excellent." These are the people who unequivocally rated the performance of the HCI as positive. Recall that the middle category of patient response was assigned a score of 3 for computation of the level of satisfaction in table 13.7. In table 13.8, the responses in the middle category have been dropped. Thus, comparing the satisfaction levels in tables 13.7 and 13.8 should give us some idea about the intensity of patient satisfaction. Comparatively higher frequency of superlative assessment by patients without any difference in the overall satisfaction level would mean that the higher number of superlative assessments given to one category of HCIs is compensated by more average assessments for the other category.

We find that the intensity of satisfaction is comparatively higher for private HCIs. For example, 26 percent of patients from private HCIs rated the overall experience of their visit as "very good" or "excellent," compared with 14 percent in public HCIs. The difference is not much with respect to convenience of location or manner or skill of other staff. Comparatively more private sector patients rated their experience about the manner and skill of doctors, getting

**Table 13.8** Frequency of "Excellent" or "Very Good" Rating by Patients for Each of the 11 Items in the Quality of Service Questionnaire

| | PRIVATE | | | | PUBLIC | | | |
|---|---|---|---|---|---|---|---|---|
| ITEM | CLINIC | SMALL H | LARGE H | ALL | PHC | SMALL H | LARGE H | ALL |
| | 554 | 561 | 56 | 1,171 | 521 | 404 | 120 | 1,045 |
| Getting through for appointment (%) | 22 | 17 | 20 | 20 | 11 | 11 | 17 | 12 |
| Waiting time for appointment (%) | 19 | 11 | 0 | 14 | 6 | 7 | 15 | 7 |
| Convenient location (%) | 18 | 13 | 18 | 15 | 14 | 13 | 13 | 13 |
| Waiting time for care (%) | 19 | 12 | 0 | 15 | 6 | 6 | 16 | 7 |
| Manner of the physician (%) | 47 | 44 | 31 | 45 | 22 | 31 | 29 | 26 |
| Technical skill of the physician (%) | 44 | 42 | 27 | 43 | 23 | 28 | 30 | 26 |
| Manner of the nurse (%) | 6 | 15 | 25 | 11 | 12 | 13 | 17 | 13 |
| Technical skill of the nurse (%) | 5 | 15 | 23 | 11 | 13 | 11 | 16 | 13 |
| Manner of other staff (%) | 11 | 12 | 23 | 12 | 10 | 9 | 14 | 10 |
| Technical skill of other staff (%) | 12 | 12 | 20 | 12 | 10 | 9 | 14 | 10 |
| Explanation about treatment (%) | 20 | 14 | 2 | 16 | 11 | 10 | 10 | 11 |
| Overall visit/stay (%) | 29 | 23 | 29 | 26 | 13 | 15 | 16 | 14 |

an appointment, and waiting time as "very good" or "excellent." Regarding manner and perceived technical skill of nurses, the intensity of patient satisfaction was slightly more in private hospitals than in public hospitals. Private clinics did not do as well in patient rating of nursing care. This is probably due to nonavailability of nurses in most private clinics.

In table 13.9 we give frequency of "excellent" ratings to each item by hospital type. Differences between the responses in tables 13.8 and 13.9 give yet more evidence about the intensity of patient feelings with respect to various aspects of health care services. Clearly the frequency of "excellent" ratings received by public

**Table 13.9** Frequency of "Excellent" Rating by Patients for Each of the 11 Items in the Quality of Service Questionnaire

| | PRIVATE | | | | PUBLIC | | | |
|---|---|---|---|---|---|---|---|---|
| ITEM | CLINIC | SMALL H | LARGE H | ALL | PHC | SMALL H | LARGE H | ALL |
| | 554 | 561 | 56 | 1,171 | 521 | 404 | 120 | 1,045 |
| Getting through for appointment (%) | 11 | 3 | 0 | 7 | 0 | 0 | 16 | 2 |
| Waiting time for appointment (%) | 10 | 3 | 0 | 6 | 0 | 0 | 12 | 1 |
| Convenient location (%) | 10 | 3 | 0 | 6 | 1 | 0 | 6 | 1 |
| Waiting time for care (%) | 10 | 3 | 0 | 6 | 0 | 0 | 8 | 1 |
| Manner of the physician (%) | 13 | 5 | 2 | 9 | 0 | 0 | 17 | 2 |
| Technical skill of the physician (%) | 12 | 4 | 2 | 8 | 0 | 0 | 17 | 2 |
| Manner of the nurse (%) | 3 | 3 | 2 | 3 | 0 | 0 | 16 | 2 |
| Technical skill of nurse (%) | 3 | 3 | 2 | 3 | 0 | 0 | 15 | 2 |
| Manner of other staff (%) | 8 | 3 | 2 | 5 | 0 | 0 | 9 | 1 |
| Technical skill of other staff (%) | 8 | 3 | 2 | 5 | 0 | 0 | 9 | 1 |
| Explanation about treatment (%) | 8 | 3 | 0 | 5 | 0 | 0 | 7 | 1 |
| Overall visit/stay (%) | 9 | 3 | 2 | 6 | 1 | 0 | 8 | 1 |

HCIs is much less (1 to 2 percent) than similar ratings received by the private HCIs (3 to 8 percent). None of the small public hospitals and hardly any of the public sector clinics received an "excellent" rating in any of the items. The public sector clinics received some "excellent" ratings in convenience of location and the overall visit. However, most of the few "excellent" ratings received by the public sector HCIs were earned by the large hospitals with 100 or more beds. Moreover, the public sector big hospitals clearly received more "excellent" ratings than the private big hospitals. The nursing service was more likely to be rated "excellent" by patients in large public hospitals than in the private HCIs. This

finding is consistent with common knowledge that private hospitals usually do not appoint adequately qualified nursing personnel. The comparative status of the private and the public sectors is reversed for clinics and small hospitals. About 8 to 10 percent of private clinic patients rated their satisfaction with various aspects of service as "excellent."

Section 8 of the exit questionnaire asked patients to rate their hospital or clinic on doctors, nurses, equipment, and general comfort (table 13.10). The same rating scale was used. Assignment of weights to various categories and computation of the level of patient satisfaction followed the same principles as used to analyze section 7 data. The satisfaction levels ranged from 45 percent to 68 percent, suggesting that there was much room in both sectors to improve their performance. While overall nursing services in public HCIs were rated better than those in the private sector, this was attributable to the PHCs, which usually have some nursing personnel. Most private clinics (which also include nursing homes with fewer than 10 beds) usually do not have nurses; hence, they got a comparatively poorer rating. The actual level of satisfaction with nursing services was the same for small and large hospitals in both the private and public sectors. The satisfaction level with respect to doctors, equipment, and general comfort was rated better by the private sector patients than by the public sector patients.

In section 9, some miscellaneous questions were posed to the patient to help characterize the health care services provided by various types of HCIs. These questions, listed in table 13.11, were

**Table 13.10** Level of Patient Satisfaction with Respect to Specific Facilities

| | PRIVATE (*N* = 1,171) | | | | PUBLIC (*N* = 1,045 ) | | | |
|---|---|---|---|---|---|---|---|---|
| FACILITY | CLINIC | SMALL H | LARGE H | ALL | PHC | SMALL H | LARGE H | ALL |
| Doctors (%) | 70 | 67 | 65 | 68 | 61 | 63 | 64 | 62 |
| Nurses (%) | 30 | 59 | 63 | 45 | 58 | 58 | 61 | 58 |
| Equipment[a] (%) | 55 | 58 | 57 | 57 | 50 | 53 | 60 | 52 |
| General comfort (%) | 72 | 59 | 60 | 59 | 50 | 53 | 59 | 52 |

[a]Medical, surgical, and diagnostic equipment.

**Table 13.11** Patients Responding "Yes" to Questions about Quality of Services by Respective HCIs (percent)

| | PRIVATE (*N* = 1,171) | | | | PUBLIC (*N* = 1,045 ) | | | |
|---|---|---|---|---|---|---|---|---|
| QUESTION | CLINIC | SMALL H | LARGE H | ALL | PHC | SMALL H | LARGE H | ALL |
| Were you told the diagnosis? | 98 | 98 | 98 | 98 | 96 | 96 | 83 | 92 |
| Did doctor ask for a repeat visit? | 70 | 64 | 59 | 67 | 54 | 64 | 63 | 59 |
| Will you visit the hospital again? | 98 | 97 | 91 | 97 | 99 | 98 | 98 | 99 |
| Will you recommend the hospital? | 95 | 94 | 95 | 94 | 98 | 98 | 81 | 96 |
| Was the billing fair? | 92 | 90 | 70 | 90 | n.a. | n.a. | n.a. | n.a. |

n.a. = Not applicable.

in yes-no format. Two of the questions allow us to deduce patient satisfaction: if the patient will visit the hospital again, and if the patient will recommend the hospital to others. Both public and private sector HCIs fared quite well. About 91 to 99 percent of patients said they will visit again and will recommend the HCI to others. Public HCIs received slightly more favorable responses to these questions. We asked if the doctor asked for a repeat visit. Answers to this questions helped us interpret responses to the question "Will you visit the hospital again?" If the doctor had asked the patient to visit again, then an affirmative answer to the "visit again" question would not say much about the level of satisfaction. In this case, the frequency of positive responses to the "visit again" question was much higher than the frequency of doctor's advice for a repeat visit. Sixty-seven percent of private HCI patients reported that the doctor asked for a repeat visit, and 97 percent said that they would visit the HCI again if there is a need. In the public sector, 59 percent of patients said that the doctor asked them for a repeat visit, and 99 percent said they would visit again if there is a need.

Answers to the question "Were you told the diagnosis?" give us some idea about the quality of communication and interpersonal

aspects of care in various types of HCI. Performance of private and public HCIs is close, with the private HCIs showing slightly better ratings. About 90 percent of the private sector patients perceived that the billing for services they received was fair. However, this figure drops to 70 percent for large private hospitals, suggesting the need for greater transparency in billing practices by these hospitals. Lack of transparency in billing by private hospitals has also been reported in other studies (Baru, Purohit, and Kumar 1999).

There is an impression that patient satisfaction is better in the private sector. Patient satisfaction is an indirect measure of quality of care in various dimensions. There is increasing evidence to suggest that patient satisfaction is usually correlated with effectiveness of treatment (Wilkin, Hallam, and Doggett 1992). Cleary and others (1992) teased out data from a survey of 6,455 discharged adult patients in the United States to assess the impact of different factors on patients' evaluations of hospital quality. They asked about what causes patient satisfaction, looking at both patient factors and the type of care received. They found that the "patient's evaluation of quality is more a function of what is done for the patient than what kind of patient is being treated" (p. 59). Hence, a patient satisfaction survey can be used as a valid measure of quality, particularly of the interpersonal aspects of health care. Note, however, that people's pattern of utilization of services at the time of illness—that is, patients' decisions about which health care institution to go to—is another indicator of people's preference. Various factors may contribute to the pattern of utilization. A patient exit interview measures satisfaction by those who decide in the first instance to access services from that particular institution. That is why PSQs generally produce fairly high satisfaction scores, because choosing the institution for care implies that the patient had a positive disposition (for whatever reasons) to that institution. Nonetheless, patient satisfaction surveys allow us to compare the level of satisfaction between institutions and between groups of institutions. Certain aspects of hospital service, such as the amenities, hygiene, factors of hospital stay, important aspects of patient man-

agement, and choice of therapeutic alternatives by the patient and his or her attendants, can be better assessed by PSQs.

## Results: Owner-Managers' Opinions about Interventions for Improvement of Quality of Care in the Private Sector

We asked the owner-managers of private HCIs about possible interventions to improve the quality of health care services. Table 13.12 shows their responses. There appears to be wide support for measures such as registration of hospitals (licensing), registration of doctors, voluntary accreditation, hospital quality assurance procedures, and continuing education programs for doctors.

## Summary of Evidence about Quality of Services

We have proposed a framework for assessment of health care quality consisting of achievement of health attainment goal (technical quality) and responsiveness goal (interpersonal quality). Both technical quality and responsiveness ought to be measured using structure,

**Table 13.12** Recommendations to Improve Quality of Services in Private HCIs (percent of owner-managers reporting that they find the proposed measure useful or very useful)

| POSSIBLE QUALITY IMPROVEMENT MEASURE | CLINIC (67) | SMALL H (66) | LARGE H (8) | ALL (141) |
|---|---|---|---|---|
| Hospital registration | 85 | 89 | 88 | 87 |
| Renewing hospital registration | 83 | 73 | 88 | 79 |
| Registering doctors | 91 | 92 | 88 | 91 |
| Renewing doctors' registration | 81 | 77 | 88 | 80 |
| Voluntary accreditation by independent NGO | 60 | 61 | 71 | 61 |
| Compulsory accreditation of hospls by government | 58 | 42 | 50 | 50 |
| Hospital quality assurance procedures | 80 | 84 | 88 | 82 |
| Continuing education program for doctors | 91 | 95 | 100 | 93 |

*Note:* NGO = Nongovernmental organization.

process, and outcome criteria. Unfortunately, assessment subsystems for the quality of health care have not yet been developed in India. There are hardly any licensing requirements for HCIs. Health care accreditation systems are yet to be developed. India has no national program for development of practice guidelines, medical review criteria, and so on. Research capacity for measurement of medical outcomes and risk-rating of patients is lacking. Studies in India suggest that technical quality of care may be slightly better in the public sector and interpersonal quality may be slightly better in the private sector. But the more important finding is the poorly developed health care quality practices in both the private and public sectors.

Only some rudimentary information on infrastructure and process of care could be collected in this study. Approximate data on premises collected by this study show that public sector HCIs are generally better endowed with land and floor space. More public HCIs, particularly PHCs and small hospitals, reported that they use written medical protocols and therapeutic guidelines. More than 90 percent of public HCIs reported that they maintain medical records, compared with only 65 percent of private HCIs. Results from the patient exit interviews showed that the level of patient satisfaction was generally low in both private and public HCIs, and the overall level of patient satisfaction was similar in both sectors. However, the private HCIs received better scores on access, availability, convenience, communication, and general comfort. On the other hand, the public HCIs received better scores on the technical skill and interpersonal subscales. The private HCIs received significantly more "very good" and "excellent" ratings on manner of physician, technical skill of physician, getting an appointment, and convenient location. Most of these ratings involve the interpersonal aspects of care. The limited data available from this study suggest that the interpersonal quality of care in private HCIs is better than in public HCIs, with slightly better ratings for infrastructure and technical aspects of care. Most important, the level of patient satisfaction was generally low in both private and public HCIs, suggesting an environment of poor client orientation in the health sector.

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CHAPTER 14

# Voices of Stakeholders in the Health Sector Reform in Bangladesh

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## Abstract

The government of Bangladesh wants the country's health service to be transparent, accountable, sustainable, efficient, and high quality and to meet the needs of the Bangladeshi people. To achieve this objective, the government has specified that all stakeholders—clients (particularly women, adolescents, and the poor) and providers (both public and private)—should be active participants in the health sector reform process that began in 1998. The operating principle of this participation is to build consensus among the various stakeholder groups to promote gender equality and social equity and to facilitate good governance in the health system. The government invited stakeholders to help to prepare the Health and Population Sector Program (HPSP). The stakeholders built a consensus on the prioritization of health needs, identified social and institutional constraints to meeting those needs, and suggested ways to mitigate those constraints. They also suggested ways to safeguard the interests of the poor and other vulnerable groups. The govern-

ment is committed to continuing this participatory process. It has adopted a Patients' Rights Charter and has established a National Steering Committee for stakeholder participation, consisting of government officials and representatives of women's organizations and nongovernmental organizations (NGOs). This committee intends to establish gender-balanced Health Watch Groups (HWGs) in local districts that will monitor local health services, client needs, and satisfaction at the local level, and suggest improvements.

## Introduction

In Bangladesh, the state is responsible for planning and managing national development, not just in terms of fostering economic growth, but also creating an enabling environment for the fullest development of every citizen's potential. The Constitution obligates the state to meet the basic needs of all its citizens, irrespective of their class, gender, or ethnicity. Health is universally recognized as a basic need. The Constitution states that it is a fundamental responsibility of the state to attain economic growth while securing for its citizens "the provision of the basic necessities of life, including food, clothing, shelter, education and medical care" (Article 15) and "the raising of the level of nutrition and the improvement of the public health as among its primary duties" (Article 18.1).

The national commitment to meet health needs and the adoption of a pro-poor and pro-women policy has been reinforced by certain trends at the international level. Bangladesh is a signatory of the Alma Ata declaration and has adopted the slogan "health for all." The need to focus on gender issues and reproductive health was underscored by the International Conference on Population and Development held in Cairo in 1994 and by the 1995 Beijing Conference sponsored by the United Nations.

The government has recognized that it cannot meet such a tremendous challenge alone. Fortunately, a number of organized

civil society organizations, women's organizations, and non-governmental organizations (NGOs) in Bangladesh are actively participating in development-related activities, including social mobilization, family planning, and provision of primary health care at the grassroots level. Drawing on the lessons learned from successful programs that have involved government-NGO collaboration, the government took a participatory approach to preparing the Health and Population Sector Program (HPSP). The government recognizes that the participation of stakeholder groups, especially the poor and women, in all of the phases of the HPSP (planning, implementation, monitoring, and evaluation) is essential for achieving the goal of "health for all."

## Methodology

During the preparation phase of the HPSP, the Ministry of Health and Family Welfare (MOHFW) set up 17 task forces, one of which was the Community and Stakeholder Participation Task Force chaired by a high-ranking official. The key stakeholders of the health and population sector are those affected by the outcome of health and family planning programs (in other words, users—especially women, children, and the poor) and also those who can affect the outcome of the program (in other words, policymakers and service providers). The operating principle behind stakeholder participation is building consensus among the various key stakeholders (such as the government, NGOs, women's organizations, and development agencies) with a view to promoting gender equality and social equity and to facilitating good governance in the health system. The task force identified 34 stakeholder groups and undertook several activities to incorporate their voices into the HPSP. The stakeholder participation activities included consultations using participatory rural appraisal (PRA) methodology in five districts. Involved were users (poor women, men, and young people) and fieldworkers, including family welfare assistants (female community-level maternal and family planning workers), health assistants (male community-level

health workers responsible for immunizations and vitamin A distribution), family welfare visitors (female paramedics based at the Union Family Welfare Center), and family planning inspectors (supervisors of family planning activities at the local level). Also included were 12 district-level workshops (two from each of the country's six divisions) with users and other stakeholders, and an ongoing government-NGO dialogue.

### *Objectives*

The objectives of the stakeholder participation activities were

- To facilitate discussion and consensus on the strategy and reforms for the health sector.
- To assess the perspectives of users and other stakeholders on health and family planning services, particularly on the prioritization of health needs within the Essential Services Package (ESP); the reform, merging, or decentralization of aspects of the public health service system; the participation of communities and NGOs in delivering, implementing, and monitoring services; cost recovery and cost sharing; the health needs of adolescents and elderly people; violence against women; and enhancing the status of women.
- To identify participatory ways to implement and monitor the HPSP to increase accountability and transparency.

### *Selecting the Sample of Villages*

One village in a remote and poor area was randomly selected from each of the five districts. In each area, four to six PRA sessions were conducted with poor male and female groups separately to find out their views on existing health services and their use. The PRA sessions were conducted using health service maps, free listings, priority listing, and focus group discussions.[1]

Apart from the PRA sessions with the representatives of the local community, group exercises were carried out with local

health care and family planning workers to learn what problems exist in providing services at the grassroots level and what solutions they prefer. Through the group exercises, the workers also identified other groups that could help them in carrying out their activities. After doing this exercise, the fieldworkers discussed issues such as cost recovery, decentralization, community participation, monitoring of health services, and violence against women. A separate discussion on the same issues was also held with local paramedics.

***The Different Stakeholder Groups***

Four main groups were involved in the stakeholder discussions: clients (mostly poor rural women), community leaders, fieldworkers and supervisors in health and family planning facilities, and representatives of professional associations.

*Clients*. The client groups, consisting of poor rural women, participated in the consultations with great enthusiasm. The women seemed to be interested in building a partnership with the government for improving the health sector and enhancing their own health and socioeconomic status. The other groups in the discussion welcomed the inclusion of client groups as a necessary way to identify the health needs of the poor and vulnerable groups. The clients themselves felt empowered because they participated in the same workshop as government officials and staff. The clients voiced their opinions frankly and were encouraged by all other groups. All of the district-level officials were present at the concluding session to listen to the clients' recommendations.

*Community Leaders*. This group included local government officials, teachers, imams of local mosques, and social workers. This group wanted full community participation in the health sector, particularly linkage with local government, local-level need-based planning, and participatory implementation and monitoring of the HPSP.

*Fieldworkers and Supervisors.* Both health care and family planning fieldworkers demanded means of transportation (bicycles or motorcycles) or a transport allowance and a hardship allowance. They sought cooperation from local community leaders and local government.

*Representatives of Professional Associations*. Professional associations such as the Bangladesh Medical Association, nursing associations, family planning associations, district bar associations, chambers of commerce and industries, and local press clubs participated in the discussions.

## Summary of Discussions

The stakeholders' discussions yielded the following important insights regarding what they felt was needed from the health sector reform in Bangladesh.

### *Common Health Needs of Women, Children, and the Poor*

There was a remarkable commonality in the health problems mentioned by the participants. In addition to the treatment of diseases, they wanted a continuation of services that were already proving to be beneficial, including (a) an expanded program of immunization (EPI); (b) treatment for acute respiratory infections, night blindness, malnutrition, measles, diarrheal diseases, hepatitis B, and jaundice; (c) treatment of such common diseases as typhoid, rheumatism, peptic and duodenal ulcers, skin diseases, ear-nose-and-throat infections, problems related to eyesight, and intestinal parasites or worms; (d) treatment of pregnancy-related complications and arrangements for safe birth and regular prenatal care; (e) treatment and elimination of tuberculosis, leprosy, and malaria; and (f) treatment and management of emergencies, particularly injuries received in accidents.

The providers agreed with the users regarding the common health needs of women, children, and the poor. In addition, the

providers emphasized the need for continuing all of the health (primary health care, and maternal and child health) and family planning services that are currently being provided by the government. They also stressed the importance of services that are linked to and support health services, such as sanitation and the provision of safe water.

***Priority Services within the Essential Services Package***

A clear majority of all the stakeholders agreed that the Essential Services Package, if efficiently delivered, would cover the essential needs of the clients. When asked to prioritize the different components of the ESP, an overwhelming majority selected the following:

- *Child health*: EPI; diarrhea control; and treatment for acute respiratory infections, malnutrition, vitamin A deficiency, and iodine deficiency
- *Reproductive health*: Maternal health (nutrition awareness and counseling); prenatal care (tetanus vaccinations and regular checks of blood pressure); safe delivery (trained midwife or traditional birth attendant); menstrual regulation and postabortion and miscarriage-related complications (referral and treatment); family planning (raising awareness among men and in-laws, distributing methods, and managing side effects); adolescent health (especially education on reproductive health and complications related to menstruation); and the management, prevention, and control of reproductive tract infection (RTI), sexually transmitted diseases (STDs), and HIV/AIDS
- *Communicable disease control*: Tuberculosis control, elimination of leprosy, malaria control, and intestinal parasite disease control

Several queries were directed to the two remaining components: limited curative care and treatment of medical emergencies, and Behavior Change Communications (BCC). Regarding the first of these components, in most places, the clients emphasized that

"limited" curative care should not be too narrowly defined and the capacity for handling emergencies at the lower tiers of the health sector should be enhanced. About the second component, they emphasized that both providers and clients would have to change their current patterns of behavior to ensure a positive transformation of the system.

### *Additional Components Suggested by Participants*

In addition to prioritizing various components within the ESP, the participants wanted new components to be included within the ESP. For instance, participants everywhere demanded that special health care for elderly people, particularly care for rheumatism, hypertension, diabetes, asthma, and eyesight problems, be included within the ESP. In several workshops, participants wanted special homes and recreation centers for the elderly to be included within the ESP. Health education for children and nutritional information for adults were also high on the list. Another commonly mentioned need was special care for adolescent girls, particularly information about and treatment for irregular menstruation and discharges, and sex education. Treatment for typhoid and hepatitis B or jaundice were also high on the list in almost every place. In addition, participants in seven of the workshops insisted on including the control and treatment of arsenic contamination within the ESP.

Participants in the workshops that were held in the north (Bogra and Nilphamari) wanted treatment of goiters to be included in the ESP. Participants in the Habiganj workshop wanted the ESP to cover circumcision for boys. The management, prevention, and control of RTI/sexually transmitted infection (STI) and HIV/AIDS were mentioned in almost all of the workshops; in the places where the incidence of such diseases is high, they were particularly emphasized. Groups in several areas asked for a pilot program in their area to provide nutritious food to children at school—if not regularly, then at least once a week. One group in Khulna even suggested charging a minimum fee for such a meal.

This demand seemed to be due to the success of the Integrated Nutrition Program, introduced in selected areas, which had attracted people's attention.

### *Awareness about the Services That Are Currently Provided*

The discussions also yielded insights into how much the participants were aware of what existing services were available.

*Knowledge of Centers and Services.* An overwhelming majority of the participants agreed that most of the clients, particularly the rural poor women, did not have adequate information about the health and family planning services currently being provided at various levels. Knowledge about existing health care facilities and types of services varied by income, gender, location of residence, exposure to the services, education, and professional experience or interest in the sector.

The gap in information regarding the various types of services provided at facilities was wide. Rural poor women, representing the majority of the clients, seemed to be aware of only a few services, including antigens for children, tetanus vaccinations, iron tablets for pregnant women, oral rehydration therapy (ORT) and distribution of oral rehydration solution (ORS), vitamin A capsules, and distribution of family planning methods. The community leaders and NGO workers had better knowledge of the services available at centers and other facilities than did clients. Community leaders and NGO workers were familiar with tuberculosis and leprosy awareness and control, malaria control, treatment of iodine deficiencies, training of birth attendants, treatment of acute respiratory infections, referrals for menstrual regulation and complicated and high-risk pregnancies, treatment for STDs and RTI, and deworming.

*Awareness of People's Right to High-Quality Health Services.* For most participants, the idea that people have a right to access high-quality health care was a novel one. As one participant in Khulna said,

"The clients, particularly poor rural women, have no clear idea about available services. How will they even judge the quality of service?" However, the participants were very interested in arriving at a working definition of high-quality service. Clients in Norsingdi pointed out that, at a minimum, this would mean satisfying clients' needs in three respects: (a) ensuring the availability of trained medical people at the local center, (b) ensuring the availability of essential drugs and equipment to meet local needs, and (c) ensuring that providers give necessary treatment and counseling.

However, most participants thought that the existing system should be improved before the right to high-quality care can be established. Surprisingly, many of the local providers agreed with this view. One provider said frankly, "There is no opportunity to provide high-quality service within the present system."

All the participants agreed that increasing awareness about clients' rights is the most important step to be taken on a priority basis. One participant in Sherpur very intelligently pointed out that perhaps providers should also be made aware of this right. As she said, "You ask us about our awareness of this right. I am asking you: Do they [providers] know about our right to quality service?" Some participants went further and said that people are aware of their right. They wanted a minimum of consideration, commitment, and efficiency from the providers, but they were afraid of backlash and were not very confident about how to articulate their demands.

### *Factors Contributing to the Lack of Awareness*

"Why is there such a widespread lack of awareness about health services and people's right to quality services?" The participants asked themselves this question and tried to find answers. Almost all of the health providers, government administrators, and professional and community leaders thought that the high level of illiteracy and the low priority put on seeking health care among the rural poor accounted for the widespread lack of awareness among the majority of clients. The fact that most of the clients appeared to be aware of the preventive health services and family planning services

offered at local facilities or even via door-to-door service lent some credibility to this view. However, this is only part of the truth.

The clients said that the government's information and education campaign does not adequately reach the public. They further said that providers and fieldworkers do not communicate properly with clients. They do not give clients enough time and often do not give them any advice. Many of the providers agreed that this gap in communication should be reduced and vigorous efforts to raise awareness should be launched.

### *How to Increase Awareness of Health Services and Clients' Rights to Health Care*

A majority of participants from all groups believed that an extensive television and radio campaign should be launched to inform people about various health-related issues, including prevention of common and communicable diseases, nutrition, and the importance of seeking health care as soon as the need arises instead of waiting for the condition to become life threatening. Many mentioned the widespread attention given to the live broadcast of the proceedings of Parliament on radio and television, and some referred to the media campaign about family planning. Most believed that a discussion of health issues in the media would raise awareness of them.

A large number of participants wanted signboards with information about available health services and facilities to be placed in prominent public places. Those who are literate would read the signboards, and those who are illiterate would ask literate people to read the boards to them. Many wanted short films with messages to be shown before regular shows in cinemas. Others suggested slide shows, folk songs (audiocassettes), short video films, and street theater to be produced by both the government and NGOs. Many wanted health education to be included in the school curriculum. Some strongly recommended to health providers that they should include women's husbands and in-laws in counseling during their house visits.

Some groups strongly argued for increasing the number of health educators by training community leaders, members of the local government, NGO staff, and currently unemployed young people with some education in basic health care and in the right to access it. They also suggested improving the status of the health services and making providers more aware of their responsibilities. The providers in general agreed with most of these recommendations and even made some suggestions of their own, including creating the position of health educator at the local level. The government providers further emphasized the need to use people from various sectors of the community and from NGOs in health education.

Finally, all groups of participants said that political commitment from the government and the dedication of health providers would be essential for the formulation and establishment of a clients' bill of rights. However, a number of providers also indicated that the proposed bill should set forth the rights of providers as well as the responsibilities of the clients in seeking health care.

## Government Health Services in Rural Areas: Inadequacies and Constraints

The participants unanimously agreed that the health services currently being provided in rural areas are extremely inadequate to meet the health needs of the people who live in these areas. Some services were regarded as more or less adequate, including EPI, ORT and ORS distribution, vitamin A capsule distribution, and distribution of family planning methods. Some services were regarded as inadequate by both providers and clients, including the control of tuberculosis and leprosy, information and education campaigns, prenatal care, safe delivery, postnatal care, management of the side effects of family planning methods and abortion-related complications, referral for all complications, and treatment for emergencies.

***Gaps and Limitations in Health and Family Planning Services: Clients' Views***

The major limitations of the government's service, according to clients, were

- *A lack of commitment and professional ethics in health providers*, which manifests itself in irregular and unpunctual attendance, absence from the area where the health center is located (especially at the union level), neglect of patients (especially poor ones), lack of courtesy to clients, and lack of awareness of the importance of counseling.
- *Inefficiency in management*, manifested in inadequate supplies of medicine, equipment, and personnel to meet local needs; an inadequate number of health centers and a lack of space; a lack of quality control (for example, of contraceptive pills); a lack of transparency, particularly regarding service charges; lax supervision; inattention to the training and skill development of providers at the local level; and a failure to institute a proper system of referral.
- *A lack of coordination among the government, NGOs, and clients at the local level* and no effective mechanism for enabling community members to participate, manifested in a duplication of efforts and the absence of any mechanism for hearing complaints and ensuring follow-up action.
- Above all, *a lack of political will and commitment at the national level*, manifested in the continued insufficiency of management, neglect of needs assessment at the local level, and low priority of facilitating community participation in the planning and implementation of health and population programs.

In all workshops, clients supported their assessments with evidence drawn from personal experience. For instance, one client narrated a very painful memory regarding the problems of referral. One of her cousins was identified as a high-risk pregnancy case and

was referred to a higher-level hospital, which was located very far from her house. An affluent neighbor loaned her husband money for the trip. However, the staff at the hospital allegedly neglected her and made her wait for a long time before attending to her. Eventually, the woman lost the baby and suffered a long period of both psychological depression and physical illness. Many participants mentioned that experiences like this often made poor women reluctant to seek health care at government facilities. This feeling of being neglected because of poverty is compounded by a sense of being abused and cheated when hidden costs are added to services that are supposed to be free. Many clients hinted that a deeply embedded suspicion exists about corruption and malpractice among health care providers. Some said that often when providers do not give a full dose of medicine, the rural poor think that the shortage is due to malpractice.

### *Constraints to Providing Health and Family Planning Services: Providers' Views*

The providers, especially at the field level, on the whole agreed with the clients about the deplorable status of the health service. They listened with interest to the views and experiences of the client group. However, they emphasized that most of the inadequacies are not the result of a deliberate lack of professional ethics or of mindless cruelty. Most of them are aware of their responsibility to their clients and their profession, but some structural constraints impede them from carrying out their duties satisfactorily.

According to the health care providers, the major impediments, especially at the union level, are

- *Overcentralized, top-down planning and allocation*, which results in unrealistic target setting; inadequate allocation of funds; insufficient medicine, equipment, and workers to meet local needs; not enough health centers; and a lack of space in local-level facilities.
- *Inefficient management*, manifested in uncongenial work conditions and lack of incentives, irregular supervision and a lack of proper staff assessment, no system of rewarding good perfor-

mance, little guarantee of promotion on the basis of merit, no provision of safe and convenient housing, no attention to locating the facilities in safe areas, no provision of either transport or a transport allowance to fieldworkers (especially during the monsoon season), no hardship allowance, inadequate salaries, and no referral fee given to fieldworkers.

- *Undesirable outside pressure or influence* exerted by the local elite (politicians, affluent people, or professionals connected with influential people), requiring providers to give additional attention to a specific patient or to bend the rules by, for example, relaxing visiting hours, thus creating considerable annoyance and disturbance among other patients and clients.

The health providers cited examples of these problems from their personal experience. For instance, they claimed that a shortage of necessary medicine and difficult logistics (such as the lack of transport) prevent them from satisfying clients' needs, even when they are willing to do so. Again, a lack of staff at health centers overburdens the few who work there. As a consequence, they are forced to rush from one patient to the next without being able to spend much time with any of them. The providers said that they often feel bad about it, but under the present system, they have no choice. Similarly, the women workers claimed that fear for their personal safety compels them to find safe housing, which is not provided at or near the local facility. Commuting is time consuming, and therefore, they are often not able to report to duty on time and are not available to work at night.

The family planning fieldworkers stressed uncongenial work conditions and lack of job satisfaction, such as lack of job security, lack of a pension or benefits on retirement (because the funds come from the development budget and not the revenue budget), lack of training, lack of transport or a transport allowance, no coordination between the health and family planning programs, discrimination in salary between health and family planning workers of similar rank, and an inadequate and irregular supply of family planning methods. Some of them also mentioned lack of cooperation

from the community and a hostile attitude of conservative elements as constraints. "Trying to overcome these obstacles is like running an uphill race," said one family welfare assistant.

The providers, especially workers at the field level, deplored the absence of an effective mechanism for voicing their complaints and getting prompt follow-up action from their departmental superiors.

## Improving Health and Family Planning Services to Meet Clients' Needs

At all of the workshops, participants agreed that the present system of health and family planning services needs to be improved considerably before it will meet the health needs identified by the clients. The following changes need to be in place without delay:

- Remove inadequacies and constraints.
- Enhance efficiency by reorganizing and unifying services.
- Ensure cost recovery.

### *Removing Inadequacies and Constraints*

The first task that must be undertaken is to remove any constraints to meeting clients' needs.

*Clients' Suggestions*. The clients said (and the community leaders and NGO representatives agreed) that providers must demonstrate a greater work ethic and a greater commitment to providing satisfactory service to clients. Indicators of this would be staff staying at their respective health facilities; regular and punctual attendance; giving more time and attention to individual patients; offering appropriate advice and counseling, particularly to illiterate rural people; and increasing regular house visits. They suggested the prompt introduction of BCC training, the provision of gender-

sensitization training to all health providers, and the introduction of community awards for facilities or workers who provide satisfactory service.

Clients also emphasized the need to increase efficiency in management. They suggested that considerable attention should be given to adequate provision of essential medicine and equipment at each facility according to local needs; provision of transport or a transport allowance to fieldworkers; increasing the number of health centers and personnel in proportion to population; permanent locations (on land donated by the community) for EPI centers; strict and regular supervision; and the appointment of one woman doctor in each health facility and at least one trained birth assistant in each village to improve prenatal care, safe delivery, postnatal care, and health care for adolescent girls.

To remove lingering suspicions about malpractice and to ensure transparency, clients suggested putting up signboards showing the services and medicines available (with the rate of charge included) at every health center. In addition, they requested an effective referral system and the renovation of rural health facilities to enable them to handle emergencies. They suggested building the capacity of local providers, especially the administrators, through management training and skill development. In addition, they emphasized that health status cannot be improved in isolation. Thus, they demanded that vigorous participatory efforts be made to reduce poverty, to increase literacy and the education of rural poor girls and women, and to eradicate gender-discriminatory practices and customs in the allocation of resources. Rural clients and community representatives suggested several areas that would benefit from more effective government-NGO coordination and collaboration. Above all, they wanted a clear demonstration of political will for continuing the participatory approach for the planning, implementation, monitoring, and evaluation of the HPSP. For this purpose, they suggested the formation of Health Watch Groups (HWGs) at all levels, which would include representatives of the government and NGOs, community leaders, professionals, and clients, particularly women and the poor.

*Providers' Suggestions*. The providers endorsed the clients' suggestions. However, drawing on their own experience and needs, the providers emphasized the removal of the constraints that impede them. They particularly recommended strengthening local capacity for delivering services effectively by increasing the number of facilities and personnel and the supply of medicine and equipment in proportion to local populations. They also advocated introducing needs-based training and posting local personnel in places where such training can be used properly. They particularly emphasized devolving more autonomy over both administration and finance to local hospital management.

The providers also stressed the need for more efficient management to enhance their job satisfaction, including the provision of safe and convenient housing, safety and security in the workplace, the provision of transport or a transport allowance, and a hardship allowance for working in remote areas. They wanted an increased salary scale and fair practices of reward, sanction, and promotion to be put in place. A mechanism for receiving complaints and follow-up action within the system is also needed. Family planning workers, especially at the field level, emphasized the need to eliminate discrimination in salary levels between health and family planning workers.

Both providers and clients stressed the need for more interactions among all stakeholders so providers and clients can become more sympathetic to each other's concerns, a critical factor for the health service to meet the needs of clients.

### *Enhancing Efficiency by Reorganizing and Unifying Services*

Is reorganization necessary to increase efficiency? If so, how should it be done? There were differences of opinion and lively discussions on this issue at all of the workshops.

The idea was not familiar to most clients. Most rural poor women said, "We don't care whether the services are provided separately or not. We want high-quality services." However, many clients thought that having to make only one stop for a package of

services would be much more convenient than the present system because it would save both time and money. However, they stressed the need for privacy for female clients if the two facilities (one facility managed by the health directorate and one by the family welfare directorate) merge into one. The community leaders and the NGO representatives held similar views.

The providers, on the other hand, had mixed opinions about reorganization. Some thought that it was not an urgent need. Most of the staff from the health directorate maintained that unification would be a logical step, especially if, in the near future, health and family planning services are offered as an ESP. It would eliminate the present tension between the personnel from the two directorates and decrease unnecessary duplication. Coordination within the ministry would be much easier. However, they did not want any retrenchment to accompany unification. Many of them wanted reorganization to be implemented very gradually, in phases. The personnel from the Directorate of Family Planning had considerable concerns about job security. They opposed unification or reorganization for fear of losing status vis-à-vis their colleagues in the health directorate. Such a loss of status would create bad feelings, heighten the existing tension between medical and nonmedical personnel, and lower the morale of family planning workers. In two of the workshops, the family planning staff demanded a separate, full-fledged ministry for family planning.

### *Ensuring Cost Recovery*

A majority of the participants agreed that, in view of the government's limited resources, effective ways must be found to recover the costs of providing health and family planning services. The present system of providing free but low-quality service should not be continued; the participants favored introducing a minimum fee for health care and medicine. All participants endorsed the introduction of a service charge (at a minimum rate) with enthusiasm. The providers and clients in Habiganj cogently summarized the positive effects of this service charge, over and above the financial

sustainability of the public health system. The providers stated that a service charge would enhance their sense of responsibility for providing high-quality service because the client would be directly sharing the cost of the service. The clients also felt strongly that it would enhance their self-esteem, give them a sense of ownership of the health care system, and make them eager to participate in the implementation and monitoring of the health services.

*Protecting the Poor and Vulnerable*. However, most agreed that a safety net should be in place to serve the poorest of the poor and that equity concerns should not be forgotten in a program that highlights cost recovery. Various groups of participants made suggestions about how to identify the poor and vulnerable, including consulting tax reports, census figures, electoral rolls, and surveys. Almost all groups said that the task of identifying the poor should be given to the local health management committee, which should issue color-coordinated health cards to each household showing the economic class to which it belongs. Every client should pay a consultation fee and other fees (prefixed at a fair rate) on the basis of what they can afford as indicated by their color-coded card. The committee would issue those who are entitled to receive free treatment (the poorest of the poor) with a certificate confirming that they have that right.

*Mobilizing Additional Resources*. The participants also suggested various other means by which public health facilities and municipalities could mobilize resources to fund health care, including:

- Leasing ponds adjacent to the health facilities to groups or individuals
- Leasing land adjacent to the health facilities for horticultural use
- Charging patients for being transported by ambulance
- Increasing seats and cabins at district-level hospitals and charging admission fees
- Eliciting donations from the rich

- Auctioning old furniture and fixtures
- Instituting a health tax
- Charging a fee for the issuance of health cards
- Creating a *zakat* fund for health[2]

*Using Additional Resources*. In all workshops, participants discussed how the additional funds should be used. There was unanimous agreement on two aspects:

- There should be transparency and accountability at every step of the creation and use of the funds. The health facility or municipality should keep complete records and should present them periodically to the local health committee.
- The local health committee should decide how the funds should be disbursed, provided that they meet urgent local needs.

The participants identified the highest-priority needs as follows:

- Providing free treatment to the poor
- Meeting the transportation costs of poor patients who are referred to higher-level facilities for treatment for high-risk pregnancies and other complications
- Procuring blood and essential medicines for treating emergency cases
- Providing special care for elderly people
- Ensuring proper maintenance, especially cleanliness, of health centers
- Ensuring that equipment and utilities are maintained and repaired
- Ensuring the security of the facility, if necessary by hiring additional security personnel
- Paying overtime to fieldworkers

## Participation, Transparency, and Accountability in the Implementation of the HPSP

Almost all participants in all workshops agreed that the present system is not structured to achieve the pro-poor and gender-equitable goals of the HPSP. The inadequacies and limitations arising from the overcentralization of planning, decisionmaking, and management, and the lack of transparency and accountability have to be addressed. They suggested the following measures to ensure participation, transparency, and accountability in the system:

- Decentralization
- Community participation in decisionmaking
- Strengthening government-NGO collaboration

### *Decentralization*

Most of the participants said that they want health services to be decentralized. The providers wanted both administrative and financial autonomy at the district, thana, and union levels. However, there was considerable discussion and debate about the mode and content of decentralization, especially about the role local government should play in the scheme.

The providers, particularly the doctors, voiced several concerns about their job security and career development. While union-level providers and clients wanted doctors to be appointed at the union level, the doctors worried that working at that level might hamper their career development. In addition, they were anxious about conflicts of interest (being asked to show favoritism toward local people) in recruitment and promotion, especially if the local government makes the final decisions. To ensure job security and decrease the likelihood of nepotism, the doctors stated that they would prefer to remain accountable to the MOHFW. They could be deputed to serve under a decentralized authority, but they would prefer that their recruitment, termina-

tion, promotion, training, career path, sanctions, and rewards remain with the MOHFW.

However, the other provider and client groups wanted the local authorities to have more substantive power, especially over local matters. They suggested the establishment of a local-level committee, including government officials, representatives from local government and NGOs, and community leaders. This committee would be responsible for planning, managing, implementing, and monitoring the status of the health service in the area. Targets and action plans would be drawn up locally, the number of facilities and personnel and the amount of medicine and equipment would be commensurate with local needs, and local problems would be solved locally. At a minimum, the local government would be expected to support and cooperate with the central government. Several client groups went further and wanted the local government to coordinate the activities of the local management committee.

### *Community Participation in Decisionmaking*

The participants expressed mixed views about communities' current involvement in the delivery of health services. Many of them thought that involvement is minimal. Most groups mentioned that members of the community help in holding immunization and satellite clinics (mobile health camps in rural areas) in the villages. They also inform health providers about the outbreak of epidemics.

In some places, people, especially women, cooperate with field health and family planning workers. However, in other places, health providers felt that only educated people cooperated with them. In some areas, family planning fieldworkers reported feeling that the community was reserved and suspicious about them. They said that lack of awareness, illiteracy, and religious conservatism and prejudice contributed to this lack of warmth and cooperation in certain communities.

All participants agreed that in the future, for the effective implementation of the HPSP, communities would have to play a much larger and more vigorous role in the delivery of health care.

Participants suggested unanimously that committees representing all of the major stakeholders should be formed at village, ward, union, thana, and district levels to monitor the progress of the HPSP and the status of all health and family planning services. These committees should meet regularly. In several places, it was suggested that personnel at local health centers should submit monthly plans of action, inventories of medicine and equipment, periodic progress reports (detailing activities undertaken and accomplished), and financial reports to these committees.

These committees, to be called Health Watch Groups, should also have the authority to sanction providers for defaulting on their responsibilities. Although provider and client groups defined the composition of the committees differently, a common formula emerged from several of the workshops. According to this formula, 40 percent of the committee's members would be drawn from government administrators and health providers, 20 percent from NGOs and other private practitioners, 20 percent from local elected officials, and 20 percent from the community, including local professionals and representatives of women's organizations and of the poor.

The mandate and the role and responsibility of the major stakeholders need to be clearly set out, because there was no consensus about who would chair these committees. Predictably, while the providers wanted one of their own to hold this powerful position, the client group opted for a public representative. (Frequently the top man of local government was proposed as the chair.) In several workshops, the chief administrator at the local level was the consensus choice as chairperson.

Both clients and providers agreed that the relationship between them would have to improve to ensure meaningful participation and partnership. They felt that community members need to transform their image of themselves from being passive recipients of "favors" granted condescendingly by the providers to being active agents in seeking and maintaining high-quality local health services. In all the workshops, the clients seemed eager to take on their new role by emphasizing their need to receive special training to enable them to

be responsible partners in the implementation and monitoring of a sustainable, transparent, and accountable HPSP.

### *Strengthening Collaboration and Coordination between the Government and NGOs*

An overwhelming majority of the participants were aware of the positive role played by NGOs in the implementation of certain programs. As one focus group member said, "They have done relatively well in preventive care, though their contribution in the curative sector is limited." Most participants held that NGOs have built a good rapport with communities, have a good record for providing door-to-door service, generally demonstrate sympathy and patience to the clients (particularly the poor), communicate effectively, and have raised people's awareness about health and nutrition.

However, the benefits of their services accrue to only a fraction of the population, as the area and scope of operation of each individual NGO is very limited. Some health providers in some areas claimed that NGOs work mostly in urban and suburban areas and not in remote rural areas. Some of the NGOs did not agree with this. Health providers, especially at the district level, also pointed to the fact that the overhead costs of facilities and programs run by NGOs are higher than for those run by local governments. The NGO representatives themselves agreed with this criticism, though they also pointed to the higher level of satisfaction expressed by their clients.

Nevertheless, there was a consensus about the need for better communication and coordination between the government at all levels and NGOs. NGOs and governments need to cooperate in devising a more effective channel of communication and coordination, particularly to avoid any overlap or duplication of their activities.

A majority of participants wanted NGOs to build on their strengths. Almost all the participants wanted to see them play a vigorous role in raising awareness about the ESP, particularly the client's right to high-quality health care. Many wanted NGOs to

facilitate the participation of the community in the implementation and monitoring of the HPSP. The participants expected them to do so by training local people in how to monitor health services and by participating in the local HWGs as active and effective members. Another common expectation was that NGOs would expand the scope of their current services to encompass reproductive health and child health with a special focus on adolescents, disabled people, and the poor living in remote areas. In many sessions, the participants expressed a hope that NGOs would focus on providing service to the elderly, which is not specifically mentioned in the ESP but which all of the client groups emphasized as a priority.

However, many urged caution and stressed the need for more transparency, accountability, and cost-effectiveness within NGOs. Considering the varying degrees of capacity and solvency among NGOs and the current lack of effective mechanism for coordination, much careful thought will have to be given to maximizing the potential of NGOs in implementing and monitoring the HPSP.

## Combating Gender Discrimination and Violence against Women

Two key aspects of health policy are combating gender discrimination and violence against women.

### *Supporting Victims of Violence*

All participants agreed that local health providers can and should play a significant role in supporting female victims of violence. They can do this by simply expanding the present scope of their services and activities. The following measures were most frequently mentioned by all stakeholders:

- Providing *emergency medical care* for victims of physical and sexual violence on a priority basis
- Providing *prompt referral* when necessary, for example, in cases of acid-throwing and severe injuries requiring surgical intervention

- Making house visits to identify victims of family violence, especially *battery* (repeated beating or assault), and encouraging them to seek medical care and legal aid, where available
- Keeping *proper records* about all cases of violence against women, especially rapes
- Helping the women to get legal redress by *promptly examining their injuries*, especially in cases of rape, and issuing the correct certificates
- Informing the *relevant authority* and local HWG about cases of physical and sexual violence against women
- Conferring with the *local Violence Against Women cell*
- Motivating *husbands and in-laws* to refrain from violence against women by facilitating discussions on women's rights

***Enhancing the Status of Women***

There was a high degree of consensus among the stakeholders about the obstacles to enhancing women's status and the need to remove these obstacles:

- Discrimination against women in access to education, health care, food, income, and assets, and in decisionmaking within the family
- Stereotyping in child-rearing
- Strict gender division of labor and no recognition of the importance of women's work
- Various social prejudices against women
- Gender-selective interpretation of religious texts and tradition
- Gender bias in policy formulation and program implementation at the national and local levels
- Gender discrimination in recruitment, training opportunities, promotions, and fringe benefits in the workplace

- Insensitivity about the special needs of women workers, for example, the need for separate toilets, a child care center, and maternity leave
- Sexual harassment by male supervisors and colleagues
- Ineffectual legal protections
- Lack of security

In all of the workshops, the stakeholders suggested the following steps to remove the above obstacles:

- Increase women's access to education and literacy.
- Expand the scope of income generation by women.
- Raise awareness about women's nutrition and reproductive health rights.
- Raise social awareness about nondiscrimination in child-rearing.
- Campaign for recognition of women's work.
- Provide special training for imams to ensure that they interpret religious texts properly.
- Strictly enforce laws designed to deter violence against women.
- Reform discriminatory perusal laws.
- Campaign to stop child marriage and polygamy, and raise awareness of the law prohibiting marriage dowries.[3]

***Changing Health Service Delivery for Women***

To remove the obstacles to enhancement of health care for women, participants proposed the following steps to expand the scope of current services, and to strengthen the capacity and improve the quality of services for women:

- Increase the number of health centers, especially at the local level.
- Increase the number of health providers in each of the local level centers.

- Improve facilities and equipment at the local level.
- Ensure the supply of required medicines and other medical facilities.
- Prioritize women's health needs and required services.
- Strengthen education about reproductive health, STDs, RTI, and nutrition.
- Emphasize the role of men in family planning.
- Train health and family planning providers in gender sensitivity.
- Introduce the registration of all pregnant women.
- Create special funds to finance the treatment of poor women.
- Expand opportunities for involving women clients and various women's organizations in health services delivery.

***Who Should Be Responsible?***

In all workshops, the general consensus was that the social transformation needed to enhance the status of women and to eliminate gender-based violence and discrimination can be achieved only through the combined effort of all of the stakeholders in national development: the government, NGOs, and all members of society. However, the participants also emphasized the need for the government and the relevant authorities and departments in various sectors to initiate actions and provide leadership. They stressed that the planning and implementation of all such actions should be fully participatory, transparent, and accountable. This is attainable if all stakeholders participate fully in the process. Commitment, coordination, and cooperation are vital for achieving this goal.

## Conclusions

The voices of stakeholders have become an integral part of health sector reform in Bangladesh, as the government of Bangladesh and

external donors have begun to realize that providing client-oriented service requires good governance, transparency, and accountability—all of which can be promoted through participation.

Stakeholders identified the following problems in the Bangladeshi health system: inefficiency and duplication in service delivery; low-quality care and a lack of user-oriented service delivery; the underutilization of many public sector health facilities; lack of a referral system; bias against women in the availability, accessibility, delivery, and management of services; and inadequate cooperation and coordination between the public and private sectors.

The stakeholders prioritized reproductive and child health, communicable disease control, and limited curative care as essential services. The consensus was that most public spending on health should be directed toward women and children, as their morbidity and mortality rates are higher than those of men. The stakeholders selected the following services as essential: immunization, diarrhea control, and treatment of acute respiratory infections in children; maternal health, especially family planning and management of side effects; and treatment of tuberculosis, leprosy, and other communicable diseases; and limited curative care for accidents and injuries. They also stressed the importance of environmental health (dealing with arsenic contamination) and health care for adolescents and the elderly.

Stakeholders further emphasized that the poorest and least educated members of society—rural residents and women—benefit less from public spending than other groups. The richest 20 percent of the population are three times as likely as the poorest 20 percent to seek care at a hospital when ill and are four times as likely to be admitted for inpatient care when they visit a hospital.

The stakeholders expressed a wish to see the government improve the well-being of vulnerable groups by using its scarce funds to finance economically justifiable, efficient services and to promote its poverty reduction strategies. Relevant policies included

- Earmarking 65 percent of resources for the ESP, which was designed to treat the diseases of the poor and vulnerable, including services to meet gender-specific health needs.

- Devising a delivery strategy for the ESP to ensure that 65 percent of the total public budget is targeted to rural facilities likely to serve the poor and vulnerable.
- Devising a strategy to create partnerships between clients and providers to encourage people to adopt healthy behavior patterns, and a qualitative and quantitative participatory monitoring strategy, including an annual performance review that involves vulnerable groups and focuses public attention on distributional issues.

Through the participatory process, it became clear that the majority of Bangladeshi citizens are not aware of their rights to access health services, and therefore are not availing themselves of high-quality services. Based on this survey of people's needs, the government adopted a Patients' Rights Charter and established a National Steering Committee for stakeholder participation within the MOHFW, consisting of government officials, women's organizations, and NGOs. This committee intends to establish gender-balanced HWGs in local districts that will include clients, especially poor women, to facilitate continuous stakeholder participation. These HWGs will monitor the quality of health services and client needs and satisfaction at the local level. They will organize an annual dialogue with the government on the status of the health situation and suggest ways to improve it. This process aims to empower the community, particularly women and the poor.

## Notes

1. Health service maps: Participants were asked to map the health care services that were available in their locality.

Free listings: Participants were asked to write down their health needs and concerns and to prioritize them according to the needs of the group as a whole (which is called a priority listing).

Focus group discussions: Participants discussed a topic with the assistance of a facilitator.

2. Zakat is one of the five pillars of Islam. All Muslim individuals have to give 2.5 percent of their accumulated wealth to charity annually. The government of Bangladesh has established a Zakat Fund to which individuals can give their zakat, which the government uses as relief during famine and natural disasters and for other charitable activities.

3. The dowry is the gift that a bride's parents give to the groom. Under Hindu law, daughters do not inherit their parents' property, so usually they receive some gifts, such as ornaments. However, the system has become oppressive, as grooms and their parents demand hefty dowries in cash and other valuable assets in return for marrying the bride. In Islam, the groom has to give *Mehr* (bride money) to the bride's parents. However, the Hindu custom has permeated among Muslims, so these days all grooms ask for large dowries. Even after marriage, the husband often demands more money from his wife with dire consequences if his demands are not met—such as beating, divorce, abandonment, and murder. Recent newspaper reports indicate that about 25,000 women die annually as a result of disputes over dowries. The government of Bangladesh has enacted a law prohibiting dowries, but the majority of people do not know about this law.

# Index

## Health, Nutrition, and Population Series

This series is produced by the Health, Nutrition, and Population Family (HNP) of the World Bank's Human Development Network. It provides a vehicle for publishing polished material on the Bank's work in the HNP Sector, for consolidating previous informal publications, and for improving the standard for quality control, peer review, and dissemination of high-quality analytical work.

The series focuses on publications that expand our knowledge of HNP policy and strategic issues that can improve outcomes for the poor and protect vulnerable populations against the impoverishing effects of illness. Best practice examples of both global and regional relevance are presented through thematic reviews, analytical work, and case studies.

South Asia is a region of contrasts, with impressive technological achievements but also more than 40 percent of the world's poor. These contrasts are evident in the health sector, which demonstrates large variations in health, nutrition, and fertility outcomes.

This book showcases some of the innovative qualitative and quantitative research methodologies being used in South Asia to provide empirical guidance for health sector reform and policy development. The four research areas presented are analysis of inequality, expenditure analysis, private sector analysis, and consumer and provider perspectives.

Salient themes emerge from the 12 health policy research activities reviewed and emphasize the importance of strengthening local capacity and building ownership:

- Governments can and should distribute subsidies in the health sector more efficiently and effectively.
- The private sector, which dominates service delivery in most of South Asia, requires a different set of public sector policy instruments.
- Informed consumers/citizens can and should play an important role in influencing health service delivery.
- Empirical research can and should provide policymakers with some of the tools needed to improve and monitor the performance of the sector.

This book will be of interest to health sector policymakers and analysts, to academics and students in public health and health economics, and to anyone with an interest in the impact of health policy on development.

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