Evaluating Health Projects
Lessons from the Literature

Susan Stout
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with substantial contributions from
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Foreword

From a modest start 25 years ago, the World Bank has become the world’s largest lender in the health, nutrition, and population (HNP) sectors, and the Bank now plays a leading role as an advisor on national health policies, often advocating reforms to promote efficiency, cost-effectiveness, and responsiveness to emerging health problems. At the same time, the Bank is seeking ever greater evidence that its work produces results on the ground.

Morbidity, mortality, and fertility are determined by a complex array of factors in addition to health services. The most important are income, nutritional status, education, and the quality of the environment—particularly access to safe water and sanitation. The complexity of these relationships makes analysis of development effectiveness in the health sector particularly challenging. Data gaps further complicate the learning process.

This paper reviews lessons from the literature on approaches to the evaluation of health programs and policies. An important lesson of the review is that there are major gaps in our understanding of how to measure the effectiveness of health care systems. While progress has been made in the development of methods for the economic appraisal of investments in the sector, much has yet to be learned about how externally funded activities interact with the institutional and socioeconomic environment to improve health policies and outcomes.

Against this background, the paper describes how an assessment of the Bank’s experience in the sector might be undertaken. The underlying thesis is that changes in health policy and improved health outcomes depend on the institutional incentives that drive health care system performance and on the demand for health services.

We hope that this paper will stimulate further work on development effectiveness in HNP by our development partners in donor and nongovernmental agencies, the research community, and borrowing country governments.

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Director General
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David de Ferranti
Director and Chair
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Abstract

The paper reviews the literature on the causes of observed changes in health and fertility levels, the evaluation of policies, and programs designed to accelerate these changes and presents the findings of earlier assessments of the Bank’s work in subsectors of HNP. A framework delineating the relationships between Bank activities in the sector, the characteristics of the health care system, household behavior, and changes in health outcomes is presented, and four evaluative criteria for assessing the performance of health care systems are identified. Broadly, the approach anticipates that Bank activities are more successful, as measured by their influence on system performance, when they achieve an appropriate fit between the institutional incentives which determine the supply of health goods and services, the nature of those goods and services, and consumer demand. This paper ends with a description of a strategy for assessing the development effectiveness of the Bank’s work in the health, population, and nutrition (HNP) sectors.
### Abbreviations and Acronyms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>BESD</td>
<td>Bank Economic and Social Database</td>
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<tr>
<td>CAS</td>
<td>Country Assistance Strategy</td>
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<tr>
<td>CBD</td>
<td>Community-based Distribution</td>
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<td>CBR</td>
<td>Crude Birth Rate</td>
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<tr>
<td>CEM</td>
<td>Country Economic Memorandum</td>
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<tr>
<td>DALY</td>
<td>Disability-adjusted life-year</td>
</tr>
<tr>
<td>ESW</td>
<td>Economic Sector Work</td>
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<tr>
<td>FPPI</td>
<td>Family Planning Performance Index</td>
</tr>
<tr>
<td>ICB</td>
<td>International Competitive Banking</td>
</tr>
<tr>
<td>IEC</td>
<td>Information, education, and communication</td>
</tr>
<tr>
<td>IMR</td>
<td>Infant Mortality Rate</td>
</tr>
<tr>
<td>HNP</td>
<td>Health, Nutrition, and Population</td>
</tr>
<tr>
<td>MIS</td>
<td>Management Information System</td>
</tr>
<tr>
<td>NGO</td>
<td>Nongovernmental organization</td>
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<tr>
<td>OECD</td>
<td>Organization for Economic Cooperation and Development</td>
</tr>
<tr>
<td>OPS</td>
<td>Operational Policy Staff</td>
</tr>
<tr>
<td>PCR</td>
<td>Project Completion Report</td>
</tr>
<tr>
<td>PER</td>
<td>Public Expenditure Review</td>
</tr>
<tr>
<td>PHC</td>
<td>Primary Health Care</td>
</tr>
<tr>
<td>PPF</td>
<td>Project Preparation Facility</td>
</tr>
<tr>
<td>SAR</td>
<td>Staff Appraisal Report</td>
</tr>
<tr>
<td>STD</td>
<td>Sexually transmitted disease</td>
</tr>
<tr>
<td>SW</td>
<td>Staff Weeks</td>
</tr>
<tr>
<td>TFR</td>
<td>Total Fertility Rate</td>
</tr>
<tr>
<td>USAID</td>
<td>U.S. Agency for International Development</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
<tr>
<td>WID</td>
<td>Women in Development</td>
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Acknowledgments

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1. Introduction and Overview

This paper outlines the background of the Bank’s work in the health, nutrition, and population (HNP) sector and elaborates a strategy for the assessment of its effectiveness. The Bank has been active in HNP since 1970; by the close of fiscal 1995, it had committed nearly US$10 billion to lending in the health sector and had initiated activities in eighty-nine countries. The pace of growth in the sector has accelerated significantly in the last six years, and it thus appears timely to launch an assessment of the effectiveness of these efforts.

As background to the presentation of a proposal of how best to approach such an assessment, which is presented in chapter 5, we will present an exploration of the literature on the causes of the changes that have been observed in health and fertility levels, the lessons learned from previous evaluations of policies and programs designed to accelerate these changes, and the findings of earlier assessments of the Bank’s work in subsectors of HNP. The aim is to identify information that will be helpful in the identification of benchmarks of sectoral performance and effectiveness.

The next chapter presents a summary review of the trends in health and fertility and what is known about the causes of these changes. This serves as the basis for the proposed evaluation of policy and programs. Trends in mortality and fertility are, of course, determined by a complex interaction of deliberate programs as well as changes in income, education, and a range of other variables. Understanding the lessons of previous efforts to explain trends in mortality and fertility will provide a context for considering two questions: how much and what kind of health gains might occur because of changes exogenous to deliberate HNP policies? Also, are the gains achieved from any intervention more or less than they might have been in the absence of the programs?

The discussion begins with a brief recitation of the remarkable changes in both fertility and mortality during the last century; an effort is then made to consider the likely explanations for these changes—first in fertility, and second in mortality. Fertility and mortality are the major engines of overall population change. Falling death rates are generally followed—after a predictable lag—by changes in birth rates. The differences in the pace of change between these variables is a population’s rate of natural increase. The chapter does not include the many different views of the social or economic consequences of ill health or high fertility beyond the recognition that mitigation of these consequences is the fundamental rationale for HNP policies and programs.

Changes in mortality and fertility are influenced by programs and policies, as well as by broader social and economic change. Determining how policy effects changes in these outcomes is the core evaluative problem in the HNP sector. Chapter 3 reviews the variety of approaches and methods that have been used to address this problem. The primary objective is to present an overview of the tools and methods that can be employed to evaluate population and health policies and to draw attention to the principle findings of this research. The purpose is to identify

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1. The term health sector is used to include activities in each of the three major subsectors (health, nutrition, and population).
the kinds of evaluative tools that might be used to assess the development effectiveness of the Bank's HNP work.

The chapter begins with an overview of the evaluation tools and methods that have been used to assess the effectiveness of family planning programs, the primary instrument in population policy. A discussion of experiences in the evaluation of health programs follows the discussion of family planning program evaluation. The programs are dealt with in this order because fertility is a less complex variable, with fewer, and largely known, determinants, and because population policy concerns largely preceded the focus on health outcomes that is now prevalent in development policy.

In general, the chapter demonstrates that the literature on the evaluation of family planning programs is wider and more tractable than the information on health and disease control programs. Evaluation literature in the health field is dominated by studies of the effectiveness of specific interventions (for example, programs to improve the treatment of a particular disease, such as tuberculosis or AIDS) rather than evaluations of the performance of the sector as a whole. That mortality is the outcome of a large number of diseases and their preceding risk factors (particularly poor nutritional status) further complicates the health program evaluation literature. A further constraint on evaluation in the health sector derives from the paucity of reliable local estimates of health outcomes. Nevertheless, significant work has been completed in recent years to identify ways to overcome the difficulties inherent in using mortality data (when it is available) and to develop the necessary conceptual tools to enable the application of economic analysis in setting health priorities. These methods are also briefly introduced, although it is noted that these are of limited utility for ex post evaluation of the effectiveness of health programs.

A summary of the history of the Bank’s involvement in the sector and the evolution of its principal policy recommendations are presented in chapter 4. Starting from an initial focus on population policy and the reduction of high fertility, the Bank’s focus in the sector has broadened over the past twenty-five years to encompass the health sector as a whole. This evolution is reflected in a steadily growing portfolio of activities focused on an increasingly broad set of objectives. The paper summarizes the findings of a number of reviews of the Bank’s HNP experiences and identifies principal lessons for the future.

Chapter 5 draws out the implications of the findings of chapters 2 through 4 and presents the design of a study that will help to answer the question of how to measure and assess the development effectiveness of the Bank’s work in HNP. The chapter presents a framework delineating the relationships between Bank activities in the sector, the characteristics of the health care system, household behavior, and changes in health outcomes (morbidity, mortality, and fertility). Four evaluative criteria for assessing the performance of health care systems are identified: clinical/epidemiological effectiveness, accessibility and the distribution of services, consumer satisfaction, and economic efficiency. An approach to assessing the effectiveness of Bank activities relative to changes in the performance of health care systems, and to the degree possible changes in health outcomes, is presented.
2. Trends in Fertility and Mortality

Improved trends in mortality and fertility are, of course, the intended outcomes of population and health policies and programs. Yet, these trends beyond the policies and programs are determined by a complex interaction of changes in income, education, and a range of other variables. Understanding the lessons of previous efforts to explain trends in mortality and fertility provides a context for considering two questions. First, how much and what kind of health gains might occur because of changes exogenous to deliberate HNP nutrition policies? Second, are the gains achieved from any intervention more or less than they might have been in the absence of the programs?

Remarkable changes in both fertility and mortality have taken place during the past century. Falling death rates are generally followed, after a lag, by changes in birth rates—the difference the pace of change between these variables is the rate of natural increase. Mortality and fertility are interrelated. High fertility has implications for mortality because it is associated with closer spacing of children and greater risks of child and maternal mortality. High infant mortality is connected to demand for larger families to replace lost children. These linkages are examined in depth in a broad array of literature (Caldwell and others 1990; Bongaarts 1994).

Fertility

The past 200 years have witnessed the most remarkable change in human demographic patterns yet recorded—a shift from high, relatively uncontrolled fertility to low, controlled fertility throughout large parts of the world. The fertility transition started in Europe in the early nineteenth century and was followed in countries of European settlement in the second half of the century. The transition in fertility spread rapidly, particularly following the invention and diffusion of modern contraceptive technology in the 1960s. The transition is largely completed in most of East Asia, well under way in Southeast Asia, and is proceeding, although more slowly, in South and West Asia. Fertility in parts of India (Kerala, areas in Tamil Nadu) and Sri Lanka is at remarkably low levels. Although slower to start, the Middle East now has a downward trend in fertility; more recently, fertility began to diminish in Sub-Saharan Africa. Overall, the total fertility rate (TFR) in developing countries has fallen from 6.1 to 3.9 births for each woman since 1960. Fertility levels are lowest in East Asia (average about 2.4) and highest in Sub-Saharan Africa (6.6) (Ross and Frankenberg 1993). Contraceptive use has risen from about 10 percent to about 50 percent of all couples in the developing world (it averages about 70 percent in the Western industrial countries). There are major variations in fertility levels within countries as well.

Mortality

Mortality began to decline in Europe and North America about two centuries ago, although the descent was initially slow. In the United States, life expectancy in 1890 was approximately forty-nine years, and child mortality was about 180 for each 1,000 live births. Improvements accelerated significantly only in the first half of this century, and they have progressed more in the past forty years than in all of previous human history. In developing countries, life expectancy has increased from about forty to sixty-three years, and child mortality
has fallen from about 280 to 106 for every 1,000 live births. Today, life expectancy in a high-income country is seventy-five years or more, while in Sub-Saharan Africa, where progress has been slowest, it is about fifty years (World Bank 1993) (see Table 2.1). As in fertility, declines in mortality have accelerated over the past thirty years. Data for developing countries show annual declines in child mortality of about 2 percent during the 1960s, about 3 percent during the 1970s, and more than 5 percent in the 1980s.

| Table 2.1: Crude Death Rate and Life Expectancy at Birth, by Region, 1950–85 |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|
|                                 | Crude death rate (deaths per 1,000 persons annually) | Life expectancy at birth (years) |
| Sub-Saharan Africa              | 29.3 | 22.8 | 17.7 | 15.3    | —       | 51.5    |
| Middle East and North Africa    | 24.0 | 18.1 | 12.6 | 10.9    | —       | 59.0    |
| South Asia                      | 28.8 | 20.6 | 14.5 | 12.2    | 38.9    | 55.8    |
| East Asia (excluding China)     | 27.1 | 16.3 | 10.5 | 7.3     | 67.9    | 67.9    |
| China                           | 27.3 | 16.0 | 7.9  | 6.7     | 40.8    | 69.0    |
| Latin America and the Caribbean | 16.6 | 11.7 | 8.5  | 7.2     | 66.6    | 66.6    |
| Developing countries            |      |      |      |         | 41.1    | 59.1    |
| Industrial countries            | 10.5 | 9.6  | 9.1  | 9.3     | 65.8    | 73.1    |

— Not available.

Source: Birdsall 1995.

As in fertility, there are significant geographic and subregional differences in the levels and pace of change in mortality. Overall, China and other Asian countries have recorded the most rapid improvements, followed by the Middle East and Latin America. Sub-Saharan Africa has shown the least improvement, with a life expectancy that increased from about forty years in the early 1950s to about fifty-two today, although this pace is still faster than the rate of change experienced in parts of Europe in the nineteenth century. In both developing and high-income countries the bulk of the declines in mortality have been realized through the control of communicable diseases, particularly those of childhood, and the reduction of maternal and perinatal death.

Explaining Fertility and Health Transitions

Recent efforts to take stock of analytic progress (Caldwell 1990; Jamison and others 1993; World Bank 1993; Rashad and others 1995) provide a useful starting point for assembling observations about the nature and causes of transitions in fertility and health status. The findings presented here indicate areas of consensus among a wide range of theoretical and empirical studies.

Understanding Changes in Fertility

The most significant early attempt to explain trends in fertility was the construction of the so-called theory of the demographic transition. Briefly, this construction postulates that every society tends “to keep its vital processes in a state of balance such that population will replenish losses from death and grow to an extent deemed desirable by collective norms. These norms are
flexible and readjust rather promptly to changes in the ability of the economy to support population” (Bogue 1969). Originally developed to explain the conditions that led to the significant acceleration in the pace of population growth that began in the 1930s, transition theory suggests that in societies where death rates are high, there is little need to regulate fertility, except to address the desires of individual couples, because high fertility is required to offset high mortality. In technologically advanced societies where death rates have been brought to a very low level, high birthrates come to be seen as dysfunctional, and the regulation of fertility and family size is increasingly identified as a collective good. Declines in fertility lag behind declines in mortality, resulting in a period of rapid population growth. The length of this period varies greatly among societies, depending on a combination of circumstances that will be unique in each case.

The strategies to predict fertility decline that emerged from this effort focused on two kinds of questions: classification of countries into groups according to the likely timing and pace of their demographic transition, and understanding the processes that translate declines in mortality into altered household behaviors, declines in desired family size, and, ultimately, the need or demand for family planning services. Work to address the first question led to a variety of schemes to identify the likelihood of a fertility decline in a given country and to anticipate the external finance and programmatic activity that would facilitate more rapid declines in fertility (see, for example, Berelson 1978).

Work to address the second question quickly overcame progress on the first with the introduction of the systematic application of household economic theory. The theory was systematically applied to achieve an understanding of the demand for children and work at both macroeconomic and microeconomic levels and to understand the influence of social and economic factors on fertility. At the macroeconomic level, the study of differential fertility patterns, based primarily on cross-sectional survey data, focuses on the relationship of educational attainment, particularly for girls, higher income, and urbanization with a decline in family size (see Cochrane 1979 for an early review of this literature). The Bank’s 1984 World Development Report (Population and Development) provides a comprehensive assessment of this research.

At the microeconomic level, work by Bongaarts (1978) led to the development of a simple and validated model of the basic proximate determinants of fertility. The model demonstrates that four variables determine levels of fertility: age at marriage, duration of breastfeeding, use of contraception, and abortion. (It is worth noting that each of these variables has significant consequences for morbidity and mortality.) Socioeconomic and institutional variables affect fertility patterns through their influence on one or more of these determinants, as documented and elaborated through most of the subsequent research. As recently summarized by Gertler and Molyneaux (1994, p. 34):

The most frequently observed fertility-reducing factors are those which apparently increase the cost of children by increasing the value of women’s time (typically female “wages and education”) and reducing contraceptive costs (prices and travel time to suppliers).

Two observations about this development are of interest. First, there is consensus within the field of fertility research on the validity of the proximate determinants model and, consequently, agreement that analyses of the effects of programmatic and policy measures on
fertility need to specify how the action or activity translates into an influence on one or more of the proximate determinants. Although the relative importance of “development” and contraception as determinants is subject to continuing debate (see Gertler and Molyneaux 1994; Pritchett 1994; and Bongaarts 1995 for the latest elaborations of this issue), there is little question that any influence on fertility must operate through one of the four proximate determinants. This means that accurate modeling of the fertility transition is highly dependent on accurate historical data on both the levels and trends of socioeconomic change and the availability of family planning program inputs for the setting under study.

This leads to the second observation: efforts that adequately account for macroeconomic and microeconomic sources of variance in the evaluation of the impact of population policy and programs are few in number. Such studies have been possible only in the few national settings where sufficient time series of both socioeconomic and programmatic data are available.

Current Fertility Status

Despite the considerable progress that has been made in achieving fertility reductions throughout the developing world, high fertility continues to exert upward pressure on population growth rates in many countries. Excluding China, total fertility rates for the developing world, although lower than in 1960, are sufficiently high to double population growth in the next three decades (Bulatao 1993). More salient in today’s policy environment, high fertility and sustained high levels of “unmet need” for contraception (measured as the proportion of couples who state a desire for no more children but are not actively using contraception), in combination with limited access to essential obstetric services, continue to pose threats to reproductive health. Although deliberate programs to increase access to contraception have significantly accelerated fertility decline in the past thirty years, much remains to be done. Fortunately, as detailed below, the considerable body of knowledge developed through evaluative studies of the performance of family planning programs offers several suggestions of how family planning programs can be made more effective and sustainable, even in resource-constrained environments.

Understanding Changes in Mortality and Health Status

Although there are few “easy” generalizations about the determinants of fertility change, there are even fewer about the determinants and future trends in mortality. In part, this is because fertility reflects a single, clearly defined biological event (birth), whereas death occurs through a multiplicity of socioeconomic and biological paths, making it difficult to meaningfully classify or measure “proximate” causes. Nevertheless, three elements are clearly crucial to the transition in mortality: income growth, which allows people to buy more food, better housing, and more health care; improvements in medical technology, most notably the introduction of antibacterial drugs and new vaccines in the 1930s (and measles vaccine in the 1980s); and the introduction and diffusion of public health measures (particularly clean water, sanitation, and food regulation) and, especially important, the diffusion of knowledge on the causes of poor health and what to do if a health-related problem develops. In general, better-educated individuals and families with educated mothers experience significantly lower mortality than others. As in the case of fertility,

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2. Mosley and Chen (1984), however, do attempt to define proximate determinants for mortality, concentrating on structural explanations, including improvements in maternal education, income, and urbanization.
efforts to improve education, particularly the education of girls, have major positive payoffs in the reduction of mortality.

Although change in income is a particularly strong structural correlate of mortality, the relationship between income growth and mortality decline is not monotonic. As summarized by Kunitz and Engerman (1992), several social and economic factors mitigate against a direct relationship between income and health, which makes it unrealistic to presume that “wealth will lead to health.” Epidemiological factors, such as the association between prenatal and early childhood health status and adult mortality, create cohort effects that weaken the relationship between income and mortality. Sociological factors, including differences in attitudes and practices that affect women’s status and education, work independently of income.

Several countries and subnational populations have experienced faster and more widespread declines in mortality than would be predicted by income alone. A series of papers sponsored by the Rockefeller Foundation (Halstead and others 1985) provide detailed documentation of experience in China; Costa Rica; Sri Lanka; and Kerala, India. In each of these cases, mortality has fallen radically below what might have been anticipated on the basis of changes in income. In-depth analysis of the factors that underlie these exceptional experiences suggests that social, political, and cultural factors contributed to the accelerated achievement of lower mortality in these low-income settings. Reviewing this set of sociopolitical experiences and the accompanying health service delivery systems, Caldwell (1986, p. 208) concludes:

Unusually low mortality will be achieved if the following conditions hold: (1) sufficient female autonomy; (2) considerable inputs into both health services and education, both essentially of the modern or Western model, and with female schooling levels equaling or being close to male levels; (3) health services accessible to all no matter how remote, poor, or socially inferior to those providing them; (4) ensuring that the health services work efficiently, usually because of popular pressure (and, in addition, disciplining rural health workers by having a physician in charge); (5) providing either a nutritional floor or distributing food in some kind of egalitarian fashion; (6) achieving universal immunization; and (7) concentrating on the period before and after birth, usually by providing antenatal and postnatal health services and having deliveries performed by persons fully trained for this purpose, and often by health visitors calling on households so frequently that they not only provide advice and services but also play a decision making role in treatment.

The role of sociopolitical influences in enabling these populations to overcome the constraints of low income and limited “modernization” suggests that it is unlikely that any single “model PHC program” will fit the institutional and social environment of all settings. The consequences for public policy are significant, suggesting that progress in solving the health problems of the poor—including limited access to even the most basic health care and continuing threats from communicable disease—is significantly constrained by political influences on decisions regarding resource allocation, the structure of service delivery systems, and disease priorities. Building country-level capacity to define and evaluate possible approaches to achieve these “breakthrough conditions” may be a necessary first step to establishing more widespread progress in mortality decline.
The Epidemiological Transition and Future Trends

Recent research on mortality has been directed toward identifying patterns or mixes of causes of death across and within population groups and projecting probable future changes in the pattern of disease as an ingredient in anticipating health system needs and priorities. As summarized in background work for the 1993 World Development Report, health patterns, particularly those in the developing world, will be strongly influenced by recent and projected future declines in fertility and mortality as countries pass through the demographic transition (Jamison and others 1993). As fertility declines, the population ages, and the cause structure of death shifts to produce a transition in the nature and form of disease risks in what has become known as the epidemiological transition. Socioeconomic changes amplify the effects of population aging on patterns of risk. The shift from rural to urban living, for example, carries greater increased risks of injury related to motor vehicles, industrial accidents, and toxic chemicals. Chronic conditions such as cardiovascular diseases, cancer, and chronic obstructive pulmonary disease are also associated with increases in economic status and associated increases in the incidence of smoking, alcohol abuse, unhealthy diets, and sedentary lifestyles.

Because economic growth is neither steady nor even across population groups, the epidemiological transition does not occur evenly across a population. As a consequence, developing countries increasingly face epidemiological polarization—meaning that their health systems must develop the capacity to deal with the high incidence of communicable diseases, primarily among rural and poor groups, as well as significant increases in adult health problems and noncommunicable diseases among more urban and wealthier populations. The epidemiologic transition brings not only polarization, but also prompts an important shift in the burden of disease as the population continues to grow (based on built-in momentum, which maintains growth despite declines in fertility) and as noncommunicable diseases become dominant in the health profile of the country. The combination of these shifts requires corresponding shifts in the services delivered through the health care system. These changes in health technology can exert strong upward pressures on health care costs. In addition, as education improves, accessibility to information on health conditions increases, and the threshold at which health needs are translated into active demands on the health system is lowered, increasing the demand for health services (Jamison and others 1993).

Current Health Status in Developing Countries

Despite significant progress in recent decades, mortality risks remain high throughout the developing world. Table 2.2 summarizes recent data on the cause of death in industrial and developing countries in 1985 and as projected for 2015. Two points are noteworthy. First, the developing countries continue to face a significant burden of communicable disease and maternal and child health risks, which account for about 36 percent of all deaths, compared with about 9 percent in industrial countries. Second, current projections suggest that the burden of disease will shift toward a greater proportion of chronic and noncommunicable disease by the year 2015.
Table 2.2: Major Causes of Death in Industrial and Developing Countries, 1985 and 2015 (percent)

<table>
<thead>
<tr>
<th>Cause of death</th>
<th>Industrial countries</th>
<th>Developing countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infections</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Neoplasms</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>Circulatory problems</td>
<td>50</td>
<td>53</td>
</tr>
<tr>
<td>Pregnancy-related deaths</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Perinatal problems</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Injuries</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td>Total number of deaths (millions)</td>
<td>12.0</td>
<td>14.5</td>
</tr>
</tbody>
</table>


Implications for Evaluation

Several of the findings of this review are relevant to development effectiveness in the HNP sector. First, it is clear that both socioeconomic change and deliberate policies and programs matter in determining outcomes. Paths to lower fertility and mortality vary among and between countries, but it is clear that levels and trends in female educational status, income, urbanization, and modern communication play a role in bringing about favorable shifts in population dynamics.

Second, although the fertility transition is under way throughout most of the developing world and is not likely to be reversed, high fertility continues to be an issue in many settings, particularly for health outcomes. Mortality is also declining, but changing age structures (another result of the fertility decline) and differential paces of socioeconomic development within and between countries contribute to a complex epidemiological mix. Many societies, particularly middle-income countries, now face the dual challenge of continuing to make progress against communicable diseases and dealing with persistent maternal and child health challenges, while also facing rapid growth in noncommunicable and chronic diseases that affect older and aging populations. These forces will exert growing pressures on already strained health budgets. Third, the shift in disease burden is not independent of income—the poor, and poor subgroups, experience the epidemiological transition more slowly than more well-off populations, largely because they are prey to poor information, limited access to educational opportunity, and limited basic health services.

Accordingly, assessments of performance in the HNP sector need to explicitly consider the context in assessing the outcome of a project or activity; particular attention must be given to the epidemiological and demographic status of each setting. Rather than seeking to generalize findings across all countries, or even across all projects in the portfolio, it is necessary to examine programmatic experience in a range of countries selected to represent varied positions along the epidemiological transition and the path of socioeconomic development.

Judgments on the relevance of particular investments must also focus on the distributional questions raised by inequities in health status. It is important not only to assess the degree of accuracy in identification of inequity in health status, but also to determine whether and how the resulting knowledge has shaped policy and project design.
3. Evaluating Programs to Influence Fertility and Health Outcomes

Changes in mortality and fertility are influenced by programs and policies, as well as by broader social and economic change. Determining how policy effects changes in these outcomes is the core evaluative problem in the HNP sector. This chapter provides an overview of the variety of approaches and methods that have been employed to address this problem. The primary objective is to present an overview of the tools and methods for evaluating population and health policies and to draw attention to the principal findings of this research.

The first task is to review the kinds of evaluative tools and methods that have been used to assess the effectiveness of family planning programs, the primary instrument in population policy. In general, the literature on the evaluation of family planning programs is wider and more tractable than the information available on health and disease control programs. There are two major reasons for this disparity: fertility is a less complex variable, with fewer and largely known determinants, and population policy concerns generally preceded the current focus on health outcomes in policy discussions of health sector priorities.

Next, attention turns to a discussion of the evaluation of health programs. In general, the evaluation literature in the health field is dominated by studies of the effectiveness of discrete interventions (for example, programs to improve the treatment of a particular disease, such as tuberculosis or AIDS) rather than of the performance of the sector as a whole. Mortality is an outcome of a large number of diseases and risk factors that are present before a morbid or disease condition, which creates greater complexity within the health program evaluation literature. A further constraint on evaluation in the health sector derives from the paucity of reliable local estimates of health outcomes. Nevertheless, significant work has been completed in recent years to identify ways to overcome the difficulties inherent in using mortality data (when it is available) and to develop the necessary conceptual tools to enable the application of economic analysis to the setting of health priorities. These methods are also briefly introduced, although it is noted that they are of limited utility for ex post evaluation of the effectiveness of health programs.

A concluding section of the chapter attempts to identify the major implications of the evaluation literature in defining and measuring the effectiveness of the Bank's HNP work, a topic that is treated in greater depth in chapter 5.

Measuring Family Planning Program Performance

The extensive literature evaluating family planning programs and chronicling the methods used dates from the initiation of the first large-scale national programs in the 1960s. For instance, the Taichung Experiment in Taiwan, China (Freedman and Takeshita 1969) used a true experimental design to assess the impact of family planning availability at the initiation of the Taiwan family planning program. Beyond establishing that family planning influenced contraceptive use in Taiwan, this study became a classic in the general impact evaluation literature and continues to be cited as an example of the application of experimental methods to social policy questions in developing countries. Many other forms of evaluation applicable to family planning have emerged in recent years. A compilation (Buckner and others 1995) of the large body of evaluation research in family planning classifies the many studies that have been
completed into three major groups: process evaluations, the family planning performance index, and outcome evaluations.

**Process Evaluation in Family Planning**

*Process evaluations* of family planning programs focus on program implementation and the intermediate steps that determine how program inputs are transformed into outputs (contraceptive use) linked to the ultimate outcome of interest (decreased fertility). Two major kinds of methods have been used in this work: operations research and, more recently, field-based situation analysis.

*Operations research* studies apply formal analytic techniques, usually in small-scale settings, to examine the influence of particular elements of program activity (operations) on program outputs. Methods employed vary widely, from purely qualitative to randomized experiments. Over the years, operations research has contributed to the evolution of a number of differentiated program strategies (Ross and Frankenberg 1993), including:

- **Clinic-based services.** Services are offered at a fixed service delivery point, such as a maternity or health center.
- **Outreach and community-based distribution programs.** These programs are intended to contact populations beyond the reach of fixed clinics and health centers.
- **Social marketing.** This program distributes contraceptives (and in recent years other basic health inputs, such as iodized salts, vitamin A supplements, condoms for AIDS prevention, and the like) at subsidized prices through existing retail markets.
- **Postpartum programs.** These activities focus on the provision of family planning information and services to women during their prenatal visits and within one month to six weeks following delivery.

The mix, scale, and objectives of these basic strategies take different forms across various settings. Operations research has been useful in assessing relative effectiveness, although the limitations of method and scale (few large-scale programs are subject to systematic process observation) limit the generalizability of results and findings. At the same time, however, the wide dissemination of operations research efforts (primarily through externally financed grants and technical assistance) has been a major vehicle for building skills in program analysis in a number of settings (see Wawer and others 1991 for a review of experience in Sub-Saharan Africa).

In recent years, *situation analysis* methods have been developed to provide direct, comprehensive, and objective measures of program input and output at the level of individual service delivery points (such as the health center or family planning clinic). Situation analysis studies combine quantitative and qualitative methods, including direct observation, focus groups, interviews, sampling techniques, and small surveys to collect and analyze data on indicators measuring the availability and use of training and information, education, and communication programs; the level and functional quality of each of these systems; and the quality of services delivered by providers and clients’ perceptions of this quality. Reflecting the growing interest in the application of managerial innovations such as “total quality management” to the health and family planning fields, considerable effort has been given to the development and dissemination of guidelines for “situation analysis” (see Fisher and others 1992) and their use to enhance client orientation and involvement in the quality of service at the country level. Recent applications have been useful in revealing how gaps in basic elements of service quality (unsympathetic
provider attitude, absence of aseptic technique in clinical settings, missing commodities and equipment, and so forth) contribute to low service utilization and the failure to accept family planning services (see Mensch and others 1994).³

There are advantages and disadvantages to the use of these methods to study program process. Neither operations research nor situation analyses can be used to assess the effectiveness of a family planning program, and they often fail to identify or address the institutional or political variables that influence the quality of program implementation. At the same time, both methods are useful devices for engendering a “learning culture” within family planning implementation agencies, and the results of situation analyses have been important to an understanding of the significant role that service quality plays in influencing service utilization. Moreover, the collaborative style used in implementing such studies has enhanced the utilization of field observations in the formulation of program plans and policies. In Zimbabwe, for example, a situation analysis of rural health posts and their staff members revealed that most family planning service providers lacked sufficient counseling skills and demonstrated inadequate knowledge of several major forms of contraceptives. Study findings, prepared by a team including staff members from the family planning agency, were directly incorporated into a revision of the national family planning strategy upon study completion (World Bank, forthcoming).

**Family Planning Performance Index**

Interest in cross-national comparisons of population policy and programs developed early in the history of family planning research. In 1972, Lapham and Mauldin suggested that fifteen key items could be used to compare country experiences and they presented data on these indicators for twenty countries. In 1976 these items were used by Berelson and Freedman in a study that included an additional twenty-three countries,⁴ and in 1978 they were used by Mauldin and Berelson to analyze the fertility decline in ninety-four countries in 1965–75. Partially in response to the research needs of the 1984 *World Development Report*, the list of items was revised and the data updated to 1982 (Mauldin and Lapham 1983). The index that emerged from these efforts is known as the *family planning program performance index* (FPPI). It has since been updated twice, in 1989 and 1994 (Mauldin and Ross 1991; Mauldin 1995). The index characterizes program effort according to *policy and stage-setting activities*, or the activities that government and private agencies might undertake to affect the organization and implementation of a program; *service and service-related activities*, including the steps taken to make it easy for households to obtain and use a variety of family planning methods; *record-keeping and evaluation*; and the *availability and accessibility* of fertility control supplies and services, made possible by the first three components.

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³. A recent methodological response to increasing demands for more timely feedback on program implementation is the development of methods for “Rapid Epidemiological Assessment” and “Rapid Anthropological Assessment” (see Smith 1989 and Scrimshaw and Hurtado 1987 for an overview of proposed methods). No reports on the application of these methods in field settings have yet been formally published.

⁴. This round of scoring was used to analyze the performance of the Bank in the population field by an External Advisory Panel in the mid-1970s.
Outcome Evaluation

Outcome evaluations of family planning programs examine the programs' influence on contraceptive prevalence (percentage of married women of reproductive age using contraception) and on their long-term impact on fertility. Such an evaluation requires that researchers establish how fertility would have changed in the absence of programs, or to differentiate the effects of socioeconomic changes on fertility from those attributable to programs.

Cross-national data for such evaluations have been available only since the late 1970s and early 1980s. Nevertheless, small-scale outcome evaluation efforts using experimental models were conducted and contributed to the development of programs as early as the mid-1970s. For example, the Narangwal Project, a large field experiment conducted in India between 1969 and 1974, showed the effectiveness of family planning services that are integrated with basic health care (Kielman and others 1983; Taylor and others 1983). The Narangwal Project also produced several important methodological innovations, including methods that allow researchers to account for the amount of time field workers spend on particular forms of service delivery and to estimate service contact coverage rates by category of service. In Bangladesh, the Matlab Demonstration Project was designed as a field experiment to evaluate the effects of improved availability, quality, and access in family planning services in a "low demand" social setting (Bhatia and others 1980). This project demonstrated that intensive family planning programs can effectively increase contraceptive prevalence in settings of low socioeconomic status where large families are desired. Just as significantly, the Matlab Project established one of the few experimental settings and sites in the world for prospective, longitudinal measurement of household status, program characteristics, and demographic responses.

Field experiments in several other settings, including the Danfa Project in rural Ghana and the Jamkhed Project in Maharashtra State in India, added to the growing body of evidence that family planning programs contributed to fertility decline. Reviews of the results of these projects served to strengthen arguments for increasing governmental and donor support for family planning and primary health care programs (see Cuca and Pierce 1977; Gwatkin and others 1980; Faruque 1982; and Boulier 1985). But differences in methodology and the design of “treatment” interventions, combined with the concern that the process of developing and supervising an intensive demonstration project might create upward bias in results through a “halo” effect, made it difficult to generalize from the results.

A large body of cross-national studies that examine the effectiveness of family planning programs complement the experimental literature. Studies of this kind became feasible following the development and implementation of a major comparative study of world fertility and with the later development of the demographic and health status surveys. These data, combined with the

5. Formally, contraceptive prevalence is an output, and fertility the outcome, of interest. Fertility data, however, are rarely collected on a routine basis at local levels through vital registration. As a consequence, many monitoring and evaluation systems, and much research, tend to treat contraceptive prevalence as an outcome variable. Srinivasan (1993) forcefully argues that this tendency undermines the validity of family planning measurements. A recent demonstration project in Indonesia shows that using actual birth data to target programs and focus community participation can increase the visibility, acceptance, and effectiveness of child health as well as family planning interventions.

6. These large-scale surveys produced comparable data sets on family planning, immunization, and maternal and child health care beginning in the early 1980s. Data are now available for fifty-one countries. Repeat surveys have been conducted at three- and five-year intervals in nineteen countries.
FPPI, enabled the development of a series of cross-national regression analyses of the relationships among socioeconomic changes, family planning programs, and fertility effects. A review of these studies conducted as background to the 1984 World Development Report on Population and Development (World Bank 1984a) concluded that improvements in the performance of family planning programs are associated with greater declines in fertility. The review also estimated the effect of family planning programs net of fertility reductions attributable to earlier trends in fertility and socioeconomic changes. The report concluded that between 1965 and 1975, “for a hypothetical country experiencing the average increases in literacy, urbanization, life expectancy and income per capita over the decade” and attaining an average score on family planning level of effort in the early 1970s, “33 percent of the fertility decline is attributable to fertility reduction prior to 1965, only 27 percent to the direct effects of socioeconomic change, and fully 40 percent to family planning effort” (Boulier 1983).

The conclusion that family planning contributes to fertility decline has not gone undisputed. In a particularly influential reexamination of much of the same data that led others to this positive conclusion, Pritchett (1994) concluded that “the level of ‘unmet need’ and other measures of contraceptive access are not empirically important determinants of fertility.” He argued that unmet need does not reflect only women who want contraceptives, but also those who require motivation to want what they need. A large portion of measured unmet need also represents women who are currently pregnant or otherwise infecund, and a substantial number of women who wish to alter the spacing of their births rather than to limit overall family size. Pritchett’s critique has encouraged a reexamination of the concept of unmet need and has created renewed interest in the determinants of demand side variables, including desired family size and marriage age (influenced by socioeconomic elements such as the level of women’s education).

Studies of Efficiency and Cost-Effectiveness

Although family planning programs have been subjected to voluminous evaluation, few evaluations include the data on program costs required for an analysis of the cost-effectiveness of particular program elements. There is considerable agreement on the validity of the FPPI, but very little work has been done to disaggregate the relative effectiveness of each of the indicators of program strength in the index or to estimate the costs of strengthening individual elements of program performance in selected settings. In part, these difficulties stem from the problems of assembling standardized cost data for family planning programs across sites and studies (Buckner and others 1995). Some studies have been done, however, including an examination of the impact and cost-effectiveness of contraceptive methods in Colombia (Janowitz and Bratt 1994); an assessment of the effectiveness and cost-effectiveness of postpartum family planning service provision (the IUD) in Peru (Foreit and others 1993); a study of the cost-effectiveness of five alternative service delivery methods for providing voluntary surgical contraception in Guatemala (McBride and others 1987); a cost-benefit analysis of the family planning program in Mexico (Nortman and others 1986); a study of the cost-effectiveness of the Family Planning Health Services Project in Matlab, Bangladesh (Simmons and others 1991); and an examination of the cost-effectiveness and financial efficiency of the PROFAMILIA Female Sterilization Program in Colombia (Williams and others 1990). All of the studies highlight the importance of the frequency and quality of client-provider relations in the success of a program (see box 3.1), but none enables a more generalized estimate of the marginal costs of introducing particular program elements in a given setting.
Box 3.1: Elements of Effective Family Planning Programs

A recent World Bank paper on family planning programs reviewed the large and growing body of results to identify what makes programs effective (Bulatao 1993). Several central elements of effectiveness were identified:

**Accessibility**
Successful programs provide access to a wide range of contraceptive methods and facilitate their continued use. An important associated element that affects program success is the availability of a variety of methods to meet the needs of women and families at different stages of their reproductive lives.

**Assuring quality**
Successful programs provide counseling and information on the potential side effects of the contraceptives considered and demonstrate respect for client social and religious sensibilities. Sharp social, religious, or class differences between provider and consumer reduce consumer satisfaction and can lead to high dropout rates and less effective programs.

**Promotional activities**
(Also referred to as information, education, and communication, or IEC)
Promotional activities play a major role in the delivery of family planning services, although it has been difficult to develop empirical evidence of the effectiveness of particular approaches and campaigns. Both mass media and face-to-face methods have been successfully employed, but face-to-face methods appear to be the most potent.

**Effective program management**
This element focuses on ensuring that contraceptive distribution and logistics systems are functional, that staff are well trained in the clinical aspects of service delivery and client relations, and that resources are available and managed at the appropriate levels of the delivery system. Decentralized managerial structures enhance accountability and responsiveness to consumer demand at the local level.

Assessing Family Planning Evaluation Literature

The evaluative literature on the effectiveness of family planning programs is relatively dense. In-depth analyses based on experimental, national, and cross-national surveys provide substantial evidence that deliberate family planning programs contribute to reduced fertility, although the pace and degree of progress is influenced by a variety of socioeconomic factors. The methods employed to develop this evidence appear to be broadly appropriate, although the FPPI is based on subjective judgments developed by a small number of expert observers. Estimation of the levels and trends in contraceptive prevalence and total fertility rates is based on data collected through well-designed and carefully implemented national surveys that have been subjected to rigorous methodological review before implementation. Although uncertainties remain about the magnitude of their contribution, there is strong evidence that family planning programs do contribute to reduced fertility. Considerable consensus on the elements of successful family planning programs has emerged from a growing body of process studies of program implementation. This literature has been particularly useful in highlighting the importance of service quality in determining participation levels and continued use of contraceptive methods. Evaluations of the relative strengths and weaknesses of alternative
organizational and managerial structures for service delivery are less frequent, and their findings less convincing. The suggestion that organizational structures match the local institutional and managerial environments is a useful generalization that can be gleaned from this literature.

Evaluating Health Policies and Programs

A large body of theoretical and empirical work addresses the evaluation of health policies and programs. Relevant studies cover a wide array of issues, ranging from evaluations of the clinical efficacy of drugs and medical procedures to analyses of the impact of macroeconomic adjustment on public health services. The literature evaluating programs and policies in developing countries, while extensive, is seriously constrained by the limited availability of timely and reliable measures of mortality and morbidity in the majority of developing countries. Not surprisingly, given these conditions, the materials reviewed for this study were found to be long on theoretical and methodological prescription and short on field-level implementation and empirical results.

This section concentrates on studies that have actually been undertaken and only indirectly refers to theoretical discussions of potentially useful methods for program evaluation. The review covers four major groups of studies: evaluations of the effectiveness of specific interventions; evaluations of the effectiveness of large-scale programs or delivery systems as a whole; studies of the mortality impact of health interventions; and studies on the relative cost-effectiveness of health interventions. Studies conducted to establish the biological or clinical efficacy of particular procedures (such as vaccines and specific contraceptive methods) are not covered. These would be more appropriately considered in the context of an evaluation of health research.

Disease-Specific Interventions

The first major class of evaluation studies assess the impact of specific interventions on a given disease or condition. Most of the studies employ a combination of methods but ideally are randomized, controlled field trials examining the incidence of an intervention on mortality, case-fatality rates, and the incidence and prevalence of the disease in a selected population. Where clinical trials assess biological efficacy at the individual level, these studies try to assess epidemiological efficacy for a population. The effectiveness of particular interventions is not always easy to establish because other influences, such as method of delivery, can intrude. Oral rehydration therapy administered by trained staff in carefully controlled field trials, for example, may prove more effective than the same therapy administered by mothers. Moreover, cost and ethical considerations often result in the introduction of multiple interventions in a single setting, further complicating efforts to interpret the findings. These considerations render the literature

7. Coverage for vital statistics (based on civil registration of births, deaths, and marriages) on crude birth is about 99 percent in developed countries and Eastern Europe, but less than 1 percent in Sub-Saharan Africa, 22 percent in the Middle East and North Africa, 43 percent in Latin America, and 10 percent in Asia. India and China both have limited systems for sample registration (covering about 10 million households in China and only representative at the district level and above in India). The absence of adequate vital data is the most fundamental constraint on the development of systems to monitor and evaluate health outcomes, but this problem has never been addressed in Bank lending in the sector.

8. Nevertheless, as articulated in a recent report (Commission on Health Research for Development 1990), expenditures on such studies can be considered a public good, and gaps in capacity to conduct such research in developing countries need to be addressed.
on the major interventions generally included in the concept of "primary health care" large and complex.

The World Bank's preparations for Investing in Health, the 1993 World Development Report, included a compilation of data from the epidemiological literature on the effectiveness of fifty of the most important public health and clinical health interventions (see Jamison and others 1993). The work was completed as a necessary first step in the completion of the Bank's analysis of disease control priorities and includes comprehensive reviews of the effectiveness literature for a wide range of disease-specific interventions. Table 3.1 summarizes the results of a cost-effectiveness analysis for two groups of interventions. Public health interventions are directed to or sought by entire populations or population subgroups, whereas clinical interventions are usually directed to individuals in health centers and large hospitals.

The studies have produced two noteworthy findings that have affected thinking on the design and delivery of health care systems. First, clinical and public health interventions are often relatively inexpensive, which suggests that both should be made available in local settings to get the greatest return for the money spent—a dramatic shift from the long-held assumption that community-based primary care services could be effective, even in the absence of clinical services. Second, many of the most cost-effective interventions require significant behavioral changes at the household level (such as breastfeeding, condom use, smoking cessation, and use of iodized salt). This suggests that many of the most cost-effective health interventions are more a matter of promotion and communication than medical care, which has clear implications for the design of delivery systems. Traditional medical models of health status change may not always be adequate and must be revamped to incorporate efforts to change the way consumers (and providers) think and behave. Included in the paradigm will be information about the determinants of disease and health-seeking behaviors.

**Evaluation of Impact of Health Programs**

Assessing the effectiveness of a single, disease-specific intervention is relatively straightforward because the data—for example, on the incidence of the disease and its mortality rate—are not difficult to distinguish. Few programs can afford to address a single specific condition to the exclusion of other health problems, however, and many health problems are likely to benefit from multiple interventions. Assessing the effectiveness of such a program is difficult. For instance, an initiative to prevent diarrheal disease is likely to employ a combination

9. Rashad, Gray, and Boerma (1995) also provide a compendium of analyses of the impact of particular disease interventions. Since most of the findings are more detailed expositions of those presented in Jamison and others (1993), these materials are not reviewed here.

10. Readers are referred to the disease-specific chapters in Jamison and others (1993) for a more in-depth discussion of the evidence on costs and effectiveness for each intervention.
<table>
<thead>
<tr>
<th>Potential intervention</th>
<th>Strategy</th>
<th>Objective application</th>
<th>Potential</th>
<th>Age group</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>$25 per DALY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breastfeeding promotion</td>
<td>Public health: Behavior change</td>
<td>Secondary prevention</td>
<td>Moderate</td>
<td>Childhood</td>
</tr>
<tr>
<td>Diphtheria-pertussis-tetanus plus polio immunization</td>
<td>Public health: Immunization</td>
<td>Primary prevention</td>
<td>Substantial</td>
<td>Childhood</td>
</tr>
<tr>
<td>Measles immunization</td>
<td>Public health: Immunization</td>
<td>Primary prevention</td>
<td>Substantial</td>
<td>Childhood</td>
</tr>
<tr>
<td>Tuberculosis immunization</td>
<td>Public health: Immunization</td>
<td>Primary prevention</td>
<td>Moderate</td>
<td>Childhood</td>
</tr>
<tr>
<td>Iodization of salt</td>
<td>Public health: Mass chemoprophylaxis</td>
<td>Secondary prevention</td>
<td>Substantial</td>
<td>All ages</td>
</tr>
<tr>
<td>Fortification of sugar with vitamin A</td>
<td>Public health: Mass chemoprophylaxis</td>
<td>Secondary prevention</td>
<td>Substantial</td>
<td>Childhood</td>
</tr>
<tr>
<td>Semianual mass dose of vitamin A</td>
<td>Public health: Mass chemoprophylaxis</td>
<td>Secondary prevention</td>
<td>Substantial</td>
<td>Childhood</td>
</tr>
<tr>
<td>Rotavirus immunization</td>
<td>Public health: Immunization</td>
<td>Primary prevention</td>
<td>Limited</td>
<td>Childhood</td>
</tr>
<tr>
<td>Hepatitis B immunization</td>
<td>Public health: Immunization</td>
<td>Primary prevention</td>
<td>Substantial</td>
<td>Childhood</td>
</tr>
<tr>
<td>Medical treatment of measles with vitamin A</td>
<td>Clinical: Primary care</td>
<td>Cure</td>
<td>Limited</td>
<td>Childhood</td>
</tr>
<tr>
<td>Medical treatment of acute respiratory infections with antibiotics</td>
<td>Clinical: Primary care</td>
<td>Cure</td>
<td>Moderate</td>
<td>Childhood</td>
</tr>
<tr>
<td>Use of ophthalmic ointment at birth to prevent gonococcal infection</td>
<td>Clinical: Primary care</td>
<td>Primary prevention</td>
<td>Substantial</td>
<td>Childhood</td>
</tr>
<tr>
<td>Targeted mass anthelmintics</td>
<td>Public health: Mass chemoprophylaxis</td>
<td>Secondary prevention</td>
<td>Substantial</td>
<td>School age</td>
</tr>
<tr>
<td>Antituberculosis chemotherapy with short-course hospitalization</td>
<td>Clinical: District hospital</td>
<td>Cure</td>
<td>Substantial</td>
<td>All ages</td>
</tr>
<tr>
<td>Smoking prevention or cessation programs</td>
<td>Public health: Behavior change</td>
<td>Primary prevention plus secondary prevention</td>
<td>Substantial</td>
<td>Adults</td>
</tr>
<tr>
<td>Use of condoms to prevent excess births and sexually transmitted diseases</td>
<td>Public health: Behavior change</td>
<td>Primary prevention</td>
<td>Limited</td>
<td>Adults</td>
</tr>
<tr>
<td>Blood screening for HIV</td>
<td>Clinical: District hospital, referral hospital</td>
<td>Primary prevention</td>
<td>Limited</td>
<td>Adults</td>
</tr>
<tr>
<td>Iodine injections for pregnant women</td>
<td>Public health: Mass chemoprophylaxis</td>
<td>Secondary prevention</td>
<td>Substantial</td>
<td>Adults</td>
</tr>
<tr>
<td>Daily oral iron for pregnant women</td>
<td>Public health: Mass chemoprophylaxis</td>
<td>Secondary prevention</td>
<td>Limited</td>
<td>Adults</td>
</tr>
<tr>
<td>Cataract removal</td>
<td>Clinical: District hospital</td>
<td>Cure</td>
<td>Substantial</td>
<td>Elderly</td>
</tr>
<tr>
<td>Medical treatment of leprosy</td>
<td>Clinical: Primary care</td>
<td>Cure</td>
<td>Moderate</td>
<td>Adults</td>
</tr>
<tr>
<td>Malaria control with chemical pesticides</td>
<td>Clinical: Primary care</td>
<td>Primary prevention</td>
<td>Moderate</td>
<td>All ages</td>
</tr>
<tr>
<td><strong>$25-$75 per DALY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Pneumococcal immunization</td>
<td>Public health: Immunization</td>
<td>Primary prevention</td>
<td>Moderate</td>
<td>All ages</td>
</tr>
<tr>
<td>Use of oral rehydration solutions</td>
<td>Public health: Behavior change</td>
<td>Secondary prevention</td>
<td>Substantial</td>
<td>School age</td>
</tr>
<tr>
<td>Improved weaning practices</td>
<td>Public health: Behavior change</td>
<td>Secondary prevention</td>
<td>Moderate</td>
<td>Childhood</td>
</tr>
<tr>
<td>Food supplements for children</td>
<td>Public health: Mass chemoprophylaxis</td>
<td>Secondary prevention</td>
<td>Limited</td>
<td>School age</td>
</tr>
<tr>
<td>Food supplements for pregnant women</td>
<td>Public health: Mass chemoprophylaxis</td>
<td>Secondary prevention</td>
<td>Limited</td>
<td>Adults</td>
</tr>
<tr>
<td>Improved antenatal care by upgrading facilities and providing family planning</td>
<td>Clinical: Primary care, district hospital, referral hospital</td>
<td>Primary prevention</td>
<td>Limited</td>
<td>Adults</td>
</tr>
<tr>
<td><strong>$75-$250 per DALY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Medical treatment of tetanus</td>
<td>Clinical: District hospital</td>
<td>Cure</td>
<td>Limited</td>
<td>Childhood</td>
</tr>
<tr>
<td>Cholera immunization</td>
<td>Public health: Immunization</td>
<td>Primary prevention</td>
<td>Limited</td>
<td>Childhood</td>
</tr>
</tbody>
</table>
### Table 3.1 (Continued)

<table>
<thead>
<tr>
<th>Potential intervention</th>
<th>Strategy</th>
<th>Objective application</th>
<th>Potential</th>
<th>Age group¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaria control with passive case finding and chemical pesticides with treatment</td>
<td>Clinical: Primary care, public health,</td>
<td>Primary prevention plus cure</td>
<td>Moderate</td>
<td>All ages</td>
</tr>
<tr>
<td>Medical and surgical treatment of leprosy complications</td>
<td>Clinical: Primary care, district hospital</td>
<td>Rehabilitation plus palliation</td>
<td>Limited</td>
<td>All ages</td>
</tr>
<tr>
<td>Antibiotic prophylaxis for children with history of streptococcal infections</td>
<td>Clinical: Primary care</td>
<td>Secondary prevention</td>
<td>Limited</td>
<td>Childhood</td>
</tr>
<tr>
<td>Public preventive package for most cardiovascular risk factors</td>
<td>Public health: Behavior change</td>
<td>Primary prevention plus secondary prevention</td>
<td>Moderate</td>
<td>Adults</td>
</tr>
<tr>
<td>Insulin therapy for non–insulin-dependent diabetic individuals</td>
<td>Clinical: Primary care</td>
<td>Secondary prevention</td>
<td>Limited</td>
<td>Adults, elderly</td>
</tr>
<tr>
<td>Management of stable angina with medication</td>
<td>Clinical: Primary care</td>
<td>Rehabilitation plus secondary prevention</td>
<td>Limited</td>
<td>Adults, elderly</td>
</tr>
<tr>
<td>Management of post-myocardial infarction or post-stroke patients</td>
<td>Clinical: Primary care, public health,</td>
<td>Secondary prevention</td>
<td>Moderate</td>
<td>Adults, elderly</td>
</tr>
<tr>
<td>Low-cost medical management of unstable or myocardial infarction</td>
<td>Clinical: District hospital</td>
<td>Rehabilitation plus secondary prevention</td>
<td>Limited</td>
<td>Adults, elderly</td>
</tr>
<tr>
<td>Cancer pain management</td>
<td>Clinical: Primary care</td>
<td>Palliation</td>
<td>Substantial</td>
<td>All ages</td>
</tr>
<tr>
<td>Schizophrenia or manic-depressive illness treatment with medication</td>
<td>Clinical: Primary care</td>
<td>Primary prevention</td>
<td>Moderate</td>
<td>All ages</td>
</tr>
<tr>
<td></td>
<td>Public health: Environmental</td>
<td>Rehabilitation</td>
<td>Moderate</td>
<td>Adults</td>
</tr>
<tr>
<td>Dengue control with chemical pesticides, with or without improved case management</td>
<td>Public health: Environmental</td>
<td>Primary prevention</td>
<td>Limited</td>
<td>All ages</td>
</tr>
<tr>
<td>Medical and surgical management of chronic obstructive pulmonary disease</td>
<td>Clinical: Referral hospital</td>
<td>Rehabilitation plus palliation</td>
<td>Limited</td>
<td>Adults, elderly</td>
</tr>
<tr>
<td>Surgery for rheumatic heart disease</td>
<td>Clinical: Referral hospital</td>
<td>Rehabilitation plus secondary prevention</td>
<td>Limited</td>
<td>Adults</td>
</tr>
<tr>
<td>Management of moderate hypertension with medication</td>
<td>Clinical: Primary care</td>
<td>Secondary prevention</td>
<td>Moderate</td>
<td>Adults, elderly</td>
</tr>
<tr>
<td>Management of hypercholesterolemia with medication</td>
<td>Clinical: Primary care</td>
<td>Secondary prevention</td>
<td>Limited</td>
<td>Adults, elderly</td>
</tr>
<tr>
<td>High-cost management of myocardial infarction or unstable angina</td>
<td>Clinical: District hospital</td>
<td>Secondary prevention</td>
<td>Limited</td>
<td>Adults, elderly</td>
</tr>
<tr>
<td>Management of coronary artery disease with surgery</td>
<td>Clinical: Referral hospital</td>
<td>Rehabilitation plus secondary prevention</td>
<td>Limited</td>
<td>Adults, elderly</td>
</tr>
<tr>
<td>Medical and surgical management of cancers</td>
<td>Clinical: Referral hospital</td>
<td>Cure plus palliation</td>
<td>Limited</td>
<td>All ages</td>
</tr>
<tr>
<td>Dengue control with chemical pesticides, with or without improved case management</td>
<td>Clinical: Referral hospital</td>
<td>Primary prevention</td>
<td>Moderate</td>
<td>All ages</td>
</tr>
<tr>
<td>Management of stable angina with medication</td>
<td>Clinical: Primary care</td>
<td>Rehabilitation plus secondary prevention</td>
<td>Limited</td>
<td>Adults, elderly</td>
</tr>
<tr>
<td>Management of post-myocardial infarction or post-stroke patients</td>
<td>Clinical: Primary care, public health,</td>
<td>Secondary prevention</td>
<td>Moderate</td>
<td>Adults, elderly</td>
</tr>
<tr>
<td>Low-cost medical management of unstable or myocardial infarction</td>
<td>Clinical: District hospital</td>
<td>Rehabilitation plus secondary prevention</td>
<td>Limited</td>
<td>Adults, elderly</td>
</tr>
<tr>
<td>Cancer pain management</td>
<td>Clinical: Primary care</td>
<td>Palliation</td>
<td>Substantial</td>
<td>All ages</td>
</tr>
<tr>
<td>Schizophrenia or manic-depressive illness treatment with medication</td>
<td>Clinical: Primary care</td>
<td>Primary prevention</td>
<td>Moderate</td>
<td>All ages</td>
</tr>
<tr>
<td></td>
<td>Public health: Environmental</td>
<td>Rehabilitation</td>
<td>Moderate</td>
<td>Adults</td>
</tr>
<tr>
<td>Dengue control by drainage and land management, with or without improved case management</td>
<td>Public health: Environmental</td>
<td>Primary prevention</td>
<td>Limited</td>
<td>All ages</td>
</tr>
</tbody>
</table>

¹Age groups are defined as follows: childhood = age 0 to 4; school age = age 5 to 14; adults = age 15 to 59; elderly = age 60 plus. Most interventions will be useful for a range of age groups; the principal age group served by an intervention is indicated.

DALY = disability-adjusted life-year.

Source: Jamison and others (1993).
of interventions, including the promotion of sanitation, clean water supplies, and oral rehydration therapy. These evaluations must then determine the contribution of each intervention to the program's overall success.

The process is further complicated by the lack of agreement on a single best measure or index of health status. While mortality may immediately seem the most obvious indicator, mortality at different ages and among varied social groups has differing social and individual welfare weights. Mortality data, which do not indicate changes in morbidity or disability, are not a feasible measure for many programs, for several reasons. First, assembling reliable baseline information on mortality status requires special surveys because few countries have reliable or generalizable vital registration systems. Experience with such survey methods has not been encouraging. Among the tools needed, retrospective autopsies are expensive, and retrospective reports of mortality at the household level are subject to measurement error. In addition, controlling for secular trends in mortality can be problematic, and sample size requirements for estimating change in mortality (a rare event) can be prohibitively expensive, even when they are accurately estimated. Experimental approaches require costly administrative controls and supervision. In the Narangwal Project (Taylor and others 1983), one of the few large-scale multi-intervention field experiments, the costs to establish and maintain the data for the experiment amounted to about 40 percent of the costs of service delivery (Faruqee 1985).

Measuring the Burden of Disease

*Investing in Health* (World Bank 1993) responded to this challenge with the concept of a disability-adjusted life-year (DALY). The DALY is an indicator of the time lived with a disability and the time lost to premature mortality. The duration of time lost is calculated using estimates of life expectancy, and streams of time are discounted at 3 percent (Murray and others 1994). Unhealthy life-years are given lower weights than healthy years, depending on degree of disability. The effectiveness of interventions to address morbidity or disability can then be compared with interventions to avert mortality (Jamison and others 1993). Use of the DALY has clear advantages over using mortality alone. It explicitly accounts for age differences in mortality, and it includes disability, and thus morbidity or illness, in its definition. It also adds a time dimension to the measurement of death. Analysis of the distribution of DALYs in a population, which can be done by estimating causes of death, morbidity, and age and sex characteristics, enable estimation of the burden of disease which can therefore be treated as the outcome of interest. The major advantage of using DALYs to estimate the burden of disease is that they provide an integrated, comprehensive method of capturing the average amount of ill health (morbidity and mortality) that will be experienced over a lifetime and serve as a common measure for evaluating priorities among a large number of causes of death and disability (Murray and others 1994). Despite this step forward, estimating the burden of disease at the country level is an onerous, data-intensive task, and such estimates are only now being prepared. These estimates are not yet sufficiently robust to enable impact evaluation of health programs. As national capacity to estimate the burden of disease is developed, it may become feasible to use burden-of-disease data as a basis for assessing program impact, but this will not be possible within the next five to ten years.

11. If the baseline infant mortality rate is, for example, 140 per 1,000 live births, and the intervention is expected to reduce mortality by 10 percent, baseline and follow-up surveys would need to cover 14,450 live births to provide an 80 percent chance of finding a significant difference at the 95 percent level (Rashad and others 1995). The situation for assessing changes in the maternal mortality ratio, typically estimated in developing countries at 4.5 per 1,000 live births, is, of course, even more demanding.
Not surprisingly, satisfactory evaluation designs for the measurement of the effectiveness of large-scale programs are rare. While it is possible to establish the efficacy of a single intervention in small-scale, tightly controlled settings, it is methodologically difficult to evaluate the effectiveness of large-scale, multi-intervention programs. Establishing longitudinal surveillance systems and experimental sites analogous to the Matlab Project in Bangladesh may be one solution (the World Bank is currently funding such a project in Indonesia). It may also be worth considering whether large, multi-intervention programs should be replaced with a series of more manageable and deliberately designed learning efforts.

**Delivery Systems**

In response to the difficulties inherent in evaluating health services by measuring outcomes, much of the literature focuses on measuring particular health outputs. Many output measures are used in evaluation, depending on the intervention or range of interventions to be assessed (for instance, the number of immunizations in a program to expand immunizations, or the number of case-years of protection for a parasitic disease control program). But output measures specific to each intervention cannot be used to compare different interventions or to estimate the overall effectiveness of a program of interventions.

**Service Utilization.** One alternative that has attracted considerable attention is a more general measure of output, such as the utilization rate of a given service. Utilization reviews are not equivalent to a study of an intervention’s impact—a service can be heavily used with little or no measurable effect on mortality or morbidity. While utilization studies can disguise important dimensions of effectiveness, such as service quality, they can also reveal whether the necessary inputs are reaching the intended target group and offer useful insights into the demand for services.

A recent exercise to determine health policy research priorities emphasized the importance of further examinations of service utilization as a measure of need, equity, and resource allocation issues in developing countries (Gish 1995). Reviews of the effects of quality and demand in health programs further reinforces the potential usefulness of utilization as an indicator of program effectiveness.

**The Role of Quality.** Another approach to evaluating the delivery of health services probes the elements that lead to consumer satisfaction with service provision and quality. For instance, interviews with heads of household in two rural villages in Sri Lanka examined the use and evaluation (satisfaction) of health care services. The study found that in one village members of female-headed households used services more frequently than members of families headed by males. The study found that characteristics such as age, marital status, and education affected women’s use and evaluation of health services. Education was not associated with securing immunizations by the majority of families (Wickrama and Keith 1990).

Process studies have also been used to identify ways to improve the utilization of services. For example, in the Idjwi district of Zaire, where health centers are supported by the sale of drugs but have had low utilization rates and high costs, the cost of visits was reduced by stabilizing the price of drugs and prescriptions. The study showed that despite a real price decrease of 20 percent, utilization of medical care did not improve, and the reduction in revenues led to deficits in most centers. The study hypothesized that the price decrease may not have been sufficient to produce changes in utilization, and that not enough time had elapsed (eight months) for any changes to become noticeable. In a neighboring area where the drugs are subsidized
through donor assistance, utilization rates for curative care were twice as high as in Idjwi. “Therefore, if drugs are less expensive, the use of health services does improve” (Courtois and Dumoulin 1995, p. 185).

In Sri Lanka, an analysis of data for health facilities in four districts focused on costs in the public and private sectors. The study found, not surprisingly, that unit costs are extremely sensitive to utilization, and that unit costs for inpatient services in basic facilities are considerably higher than in complex facilities. The private sector provides a substantially different product than the public sector in both physical amenities (more floor space) and level of inputs (more personnel per patient, with a different mix of providers). At the level of the basic hospital, the private sector delivers these amenities at a lower cost than the public sector. The payoff for introducing innovations in the public sector to reduce costs, increase the quality of inpatient services, and manage overcrowding in some heavily used facilities is potentially high. As the study concludes, “there are clear opportunities for more effective use of resources, especially through consolidating and rethinking the delivery of basic hospital and outpatient services in this country” (Griffin and others 1994, p. 5).

User Charges and Demand for Services. Other tools have been developed to study service delivery. Studies of the demand for services analyze the potential for introducing user charges to recover the costs of services. A recent review of these studies identified the following consistencies across a number of studies (Makinen and Raney 1994):

- Price influences the sick person’s decision to use a health service, but not a great deal.
- Price influences the choice of provider more than the decision of whether to use services at all.
- Nonprice costs of using services (such as time and transportation) borne by consumers influence both the decision to use services and the choice of provider.
- People’s perceptions of the quality of services (especially the availability of drugs) influence both the decision to use services and the choice of provider.
- Poor people often spend 5 percent or more of their incomes on health services.

The review also identified some inconsistent findings:

- Poor people are more sensitive to prices than their wealthier neighbors when choosing whether to use health services.
- Nonprice costs borne by consumers are more important than prices in choosing whether and what provider to use.

Whether households benefit from government expenditures on health care depends on the quality of the services delivered and how households respond to that quality. Recent research by Alderman and Lavy (1996), based on household surveys, show that consumers, even those in low-income households, are willing to pay fees for better health care if the fees translate into improved access and reliability. The paper confirms that quality factors (such as availability of drugs, number of nurses and doctors, existence of electricity, and water) have large and significant effects on demand; part of the change reflects shifts from the private sector to the public sector, and part represents a shift from self-care to the modern health sector. The results strongly suggest that if prices for public health services were raised and the revenues used to increase the quality of care, the use of both public and modern health care in general might in fact increase.
In addition to these studies, there are numerous country-level reports measuring the outputs of particular interventions. Advice and comparative discussions concerning particular programs—for instance, immunization programs or alternative approaches to the treatment of tuberculosis—are available but are of limited use in examining the performance of a health system as a whole. (The FPPI, discussed earlier, is the most highly developed of these schemes.) Suggestions and proposed methods for measuring outputs vary with the intervention and are most highly developed in the field of immunization, where there is considerable agreement on ideal immunization schedules, well-defined target age groups, and an increasingly adaptable technology (the thirty-household cluster survey) for estimating coverage rates in small populations. Unfortunately, at both international and national levels, advocates of individual interventions tend to reject output measurement systems that are useful for tracking a group of interventions, undermining efforts to target and track coverage of a broader package of health care interventions.

**Value for Money in Health**

Measures of cost-effectiveness, such as the DALY and accurate estimates of the total burden of disease at regional and national levels, provide a framework for more rational health planning. Various operational units of the Bank are currently working to incorporate these tools into the economic analysis of proposed projects. For example, Ravicz and others (1996) recently employed a participatory approach to estimating the burden of disease in Tanzania, Uganda, Kenya, Eritrea, and Uganda and to engage local policymakers in a review of the cost-effectiveness of their health expenditures. But such a method, while useful in stimulating dialogue about the relative effectiveness of health measures, is less useful in the consideration of larger questions of sectoral policy, such as the relative roles of government and the private sector in financing and providing even the most cost-effective package of interventions. These questions require a mix of institutional analysis and understanding of public choice issues which are beyond the scope of epidemiological and demographic methods.

There are additional limits to the use of cost-effectiveness to evaluate health policy choices. Interventions vary in their specificity (the proportion of recipients who will benefit, assuming that the intervention is applied exactly as it should be to all who should receive it), the degree to which they can be targeted to populations at risk, the variance in risk patterns across populations, and the level of compliance that can be expected with the “regimen” of the treatment (alternatively, in demand when a service is not epidemiologically or medically necessary). Because each of these variables is subject to economic, cultural, and managerial factors unrelated to the intervention itself, the cost effectiveness of the same intervention can vary (sometimes quite widely) within and between settings and population groups. Cost-effectiveness recommendations need to be filtered through analyses of the context and performance of specific delivery systems.

Unfortunately, one finds little in the literature that enables a broad characterization of the performance of the health care delivery system that is roughly analogous to the FPPI. Comparative studies of health systems are few and largely indeterminate, as described by Schieber (1995) for Organization for Economic Cooperation and Development (OECD) countries. The data requirements for making comparative judgments are enormous. Even policymakers who are able to agree on the most cost-effective package of services at the national level face the complex question of determining how best to ensure that the interventions are delivered.
Elements of Effective Health Service Delivery Programs

Given the complexities of measuring the effectiveness of health service delivery programs, it is perhaps not surprising that no body of literature or widely accepted measurement tool is available and that little empirical evidence on effective delivery systems can be found. Nevertheless, a considerable body of normative literature on the characteristics of effective delivery systems has recently become available. The World Bank’s Investing in Health (1993) reviewed much of the prescriptive literature on how best to deliver both public health and clinical interventions. The report makes two broad suggestions for health policy that are of direct relevance to the design and potential effectiveness of alternative service delivery systems. First, it identifies the most cost-effective public health interventions:

- expanded immunization programs, defined to include micronutrient supplementation;
- school health programs to treat worm infections and micronutrient deficiencies and to provide health education;
- programs to increase public knowledge about family planning, nutrition, self-treatments, cues to seek care, and vector control and disease surveillance activities;
- programs to reduce consumption of tobacco, alcohol, and drugs;
- AIDS prevention programs with a strong component on sexually transmitted diseases (STDs).

Second, the report lists the most cost-effective clinical interventions, which it recommends as the “minimum package of essential clinical services” for which governments everywhere should ensure access and ensure efficient delivery. The list included the following:

- short-course chemotherapy for tuberculosis;
- management of the sick child;
- prenatal and delivery care;
- family planning;
- treatment of STDs;
- limited curative care (assessment, advice, alleviation of pain, and treatment of infection and minor trauma) and treatment of more complicated conditions as resources permit.

The report notes that governments can select from a group of instruments to ensure access and improve the efficiency of the program. It also identifies government actions that can be taken with regard to clinical services outside the essential package. The “minimum basic package” is remarkably similar to the list of interventions that have traditionally been identified with primary health care strategy.

The report suggests three strategies to make delivery systems more effective. First, it recommends a structure for service delivery: “a well-functioning district health system consisting of health posts and health centers as the first point of contact and district hospitals as referral facilities, with the two levels linked by emergency transport.” Second, the report comments on the advantages and disadvantages of four alternative sources of finance for services—two private sources (out-of-pocket expenditures and voluntary insurance) and two public sources (compulsory insurance and government revenue). Third, the report discusses the advantages and disadvantages of three different forms of ownership—public, private, and nonprofit (the last two represent nongovernmental organizations, NGOs). Finally, the report
builds on these elements to produce a set of suggested policies that governments could employ to improve the delivery of services (see table 3.2).

Table 3.2: Rationales and Directions for Government Action in the Finance and Delivery of Clinical Services

<table>
<thead>
<tr>
<th>Area</th>
<th>Conditions that may call for government action: market failure and poverty</th>
<th>Directions for government action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential clinical services</td>
<td>Failure to treat, for example, tuberculosis and STDs creates risks for the general population. Public financing can help offset the additional external costs to society. Poor people have limited ability to save or borrow to meet unexpected and uninsured health expenses. Families, including children, can fall into poverty because of ill health.</td>
<td>Finance essential clinical services by reallocating current government spending. In low-income countries this may mean increasing public expenditures for health. Require through legislation that social insurance or mandated private insurance cover an essential package. Encourage more private and NGO provision of essential services, through appropriate legislation and targeted public subsidies.</td>
</tr>
<tr>
<td>Clinical services outside the essential package</td>
<td>In insurance markets, selection bias leads to lack of coverage for high-risk groups. &quot;Moral hazard,&quot; by insulating patient and provider from the cost implications of their decisions, results in overuse of services. The asymmetry of information between patient and provider can cause suppliers to induce excess demand.</td>
<td>Reduce or eliminate subsidization of clinical services outside the essential package. Subsidies for public provision of services at less than cost and tax relief for employer and employee health insurance payments often cover services with low cost-effectiveness and primarily benefit the wealthy. Legislate compulsory social insurance or mandated private insurance or define the national essential package comprehensively. Limit government involvement in delivery of nonessential services and encourage competition in service delivery among government, NGOs, and the private sector. Regulate private insurance by, for example, requiring community risk rating and forbidding the rejection of high-risk consumers. Define the exact content of prepaid packages of care to serve as the products bought and sold in the insurance market. Encourage the use of prepayment or salary-based approaches to provider compensation. Foster improvements in the quality of private provision by encouraging self-regulation of hospitals, medical schools, and physicians and by disseminating performance indicators.</td>
</tr>
</tbody>
</table>


These suggestions, however, are not based on empirical reviews of the combinations of structure, ownership, and financing that are the most efficient or effective, nor do they provide guidance in managing transitions between one form of delivery and another. A more recent Bank policy study (Musgrove 1996) provides a more in-depth theoretical discussion of appropriate public and private roles in health and presents empirical information on how countries organize health financing and delivery and how these decision relate to a population’s health status, the level of expenditure on health, and the consequences of these decisions for consumer satisfaction and medical and financial equity. The study concludes with a set of recommendations for what governments should and should not do to ensure equity and efficiency in the health market. A general observation that emerges is that governments have demonstrated a tendency to undervalue certain instruments (such as the capacity to mandate and regulate aspects of the
market) and to rely excessively on the direct provision of services in response to health needs. The report provides an important normative basis for analyzing the likely effects of health sector reform initiatives. These policy suggestions have become central to the current discussions of health sector reform in the projected HNP portfolio.

**Implications for Evaluation**

What lessons can be gleaned from this diverse literature to add to our understanding of development effectiveness in the HNP sector and contribute to the design of HNP evaluations?

First, there is considerably greater clarity in the evaluation of family planning programs than there is in the evaluation of health policies and programs. One reason for this disparity is that family planning is a single “health intervention.” There is much empirical work that can serve as the basis for more efficient and effective programs. Defining development effectiveness for a family planning program is relatively straightforward, although achieving it may not be.

The situation is much less clear in the case of health programs, largely because of the multidimensional nature of the outcome. Even if one overlooks the measurement difficulties, including secular trends in mortality and socioeconomic status, it is difficult to estimate the direct effects of health services on mortality because of the large number of programs that may be included within “health services.” Recent efforts to refine definitions of outcome through the use of the DALY suffer from many of the same problems that damaged the “old” measurement of mortality. DALYs are equally difficult to measure and document, particularly with the lack of reliable systems for reporting birth and death that is typical of most developing countries. Improvements in *ex ante* decisionmaking on service priorities may indeed result from more widespread use of cost-effectiveness analysis in choosing the mix of interventions (health services), but they will be of limited utility in *ex post* evaluation for the same reasons that mortality is an inadequate tool.

Utilization and demand studies are useful in describing output patterns in the service delivery systems but do little to describe the systems themselves. They have not yet been employed in a comparative framework to test the empirical validity of recent assumptions on the most efficient and effective delivery systems (that is, combinations of source of finance, ownership, and structure) to reach selected subgroups, such as the rural and urban poor, in particular country settings.

Further work to define development effectiveness in the sector requires an effort to collect information on “who is using what provider for what service” to bear on the question of choices among alternative delivery systems. This would suggest that evaluation of HNP programs should start with an analysis of the relevance of delivery system design (covering structure and functional characteristics, financing, and forms of ownership) and comparisons of the utilization of services among delivery systems in order to assess relative efficiency and effectiveness.
4. Evaluations of HNP in the Bank

Twenty-five Years of Experience

The Bank’s first initiatives in the HNP sector emerged in the late 1960s in response to the growing recognition of the challenge to economic development represented by rapid population growth. This concern, and international consensus that private and public sector family planning programs could influence fertility trends, led to the establishment of the Population Projects Department in 1969 and the development of World Bank research and analyses of population policy (King and others 1974 presents the Bank’s first published population research and policy recommendations). The Population Projects Department led the preparation and appraisal of twenty-two loans to address the issue of population in South and East Asia and Latin America and four nutrition projects in Latin America. The population program was seen as an important element of the Bank’s commitment to meeting basic human needs.

At the same time, the Bank was becoming increasingly concerned with mitigation of the negative health impact of investments in other sectors (for example, preventing the spread of schistosomiasis in areas altered by large-scale dam and irrigation projects). Work in this area was led and monitored by an Office of Environment and Health, which was also active in developing health components to complement rural development, agriculture, and infrastructure projects. Health policy had also begun to receive greater attention at the international level. In 1977, the World Health Organization (WHO) sponsored the Conference on Health for All by the Year 2000. This gathering served to formalize the consensus that health status in developing countries could and should be improved through the provision of low-cost primary health care services. The Bank was responsive to this interest. Following an initial statement of health sector policy in 1975 that included a determination not to lend directly for health, the Bank altered its policy in 1980 and initiated lending in the health sector. To accommodate this mandate, the Office of Environment and Health, with its health and nutrition specialists, and the Population Projects Department were merged to form the new Health, Nutrition, and Population Projects Department. Direct lending in the health sector was initiated.

Policy

In an initial attempt to set out a rationale for activity in the health sector, the Bank produced a Health Sector Policy Paper in 1975. The paper presented the justification for the decision not to lend directly for basic health services, but instead to concentrate on improving the health service components and limiting the potentially negative health consequences of projects in other sectors. Projects would continue to be justified by objectives other than health improvements alone. The rationale demonstrated the belief that health programs should not be isolated efforts, but part of a broad program of socioeconomic development designed to reduce mortality and fertility. It also reflected concerns about the feasibility of low-cost health care systems, the lack of political will to institute significant reforms, and uncertainties about the Bank’s proper role in the health sector, especially in its relationship with the WHO.
Despite the decision to limit Bank operations in health to components of other projects, the 1975 report raised a number of concerns about the state of health service delivery in developing countries and the inefficiency and inequity of government spending for health. The paper argued that to increase the effectiveness of official health services and ensure more equitable access to care, governments must curtail their expenditures on hospitals and highly trained personnel. Greater gains in health would be realized by improving health service delivery at the community level by extending the coverage and responsiveness of the primary health care system and extending primary care into the community. Despite the importance of this agenda, the paper advised against direct lending for basic health services, largely because the Bank’s role in health was uncertain, borrower governments appeared to lack the political commitment to reform, and such lending could imply a shift in emphasis away from family planning and population goals.

From 1975 through 1978, the Bank provided technical and financial assistance to forty-four countries for seventy health components of projects in other sectors. In addition, the Bank prepared seven health sector studies and several population sector studies and established working relationships with the WHO and other major agencies working in the health sector. This experience formed the basis for a significant change in the Bank’s health policy stance in 1980.

Direct Lending for Basic Health Services

The 1980 Health Sector Policy Paper committed the Bank to direct lending in the health sector. The paper identified activities for possible inclusion in health projects and outlined a policy that emphasized improvement in the context and circumstances of basic health care delivery. The major elements of the policy included the development of basic health infrastructure, the training of community health workers and paraprofessional staff, the strengthening of logistics and the supply of essential drugs, the provision of maternal and child health care, and improved family planning and disease control.

The change in policy was justified by four noteworthy points. First, the Bank possessed a capacity for programming and sectoral analysis that could be harnessed to support extension of national health care coverage, particularly primary health care, in developing countries. Second, a broader policy of lending for health was seen as an essential element of the Bank’s commitment to alleviating poverty. Third, direct lending for health projects was viewed as necessary to complement and rationalize Bank activities in the health sector. And fourth, direct lending in health could serve as a vehicle for discussions of population issues and support of family planning services delivered through the health care system.

In 1975 the Bank had been very uncertain of its role in the health sector. By 1980 a new confidence had emerged with the commitment to improve and extend the coverage of basic health services in developing countries. The question of political commitment on the part of borrower countries remained, however, and the policy paper set out a number of criteria to inform Bank selection of countries and projects to be financed. These criteria included the willingness of a country to develop sectoral planning capacity and prepare long-term plans for more accessible basic services; the financial and institutional feasibility, cost-effectiveness, and replicability of the project; the social acceptance of the activities to be funded; the reliability and effectiveness of service delivery systems; and the capacity of government and the implementing institutions to absorb external assistance and finance recurrent costs following implementation of the project.
The Role of Government

In both the 1975 and 1980 documents, the rationale for government action in health, and for Bank support, was the prevalence of market failures in the provision and financing of health care and the need for more equitable distribution of services. The impetus for an expanded program in support of health within the Bank was the desire to create a basis of greater involvement to spur discussions of national health policies and programs and to permit the Bank to initiate considerations of the role of health in overall development. Initial operations were expected to stress the development of planning and management skills and the establishment of organizational structures and procedures for administration of health care systems.

Both the 1975 and 1980 policy papers critiqued public spending for health in developing countries; both documents also held that the most effective strategy to improve health was the revision of the administrative allocation of resources, with particular emphasis on the provision of services for the poorest groups in society. This generally meant direct delivery of services through facilities owned or operated by government and financed by general government revenues. While the role of private financing for health was duly acknowledged, the policy papers focused their attention on strategies for improving the effectiveness of government spending.

The central role of government action in reducing mortality and fertility was further reinforced in the 1984 World Development Report, Population and Development. The report presented a threefold policy message. First, rapid population growth is a development problem, inextricably bound up with questions of macroeconomic and sectoral stability. Second, public policy can play a role in reducing fertility. And third, experience shows that policy makes a difference.

A central theme presented in the report is the importance of public policy in encouraging people to have fewer children. The justification for government action is two fold. First, there is a gap between the private rewards and the social gains of having many children. It is considered appropriate for government to “narrow the gap between private and social perceptions . . . [and] act as custodians of society.” Governments interested in social welfare “are meant to have longer time horizons than their individual constituents, and to weigh the interests of future generations against those of the present” (World Bank 1984a, p. 54). By developing a social contract, the government frees each individual couple from its “isolation paradox”; that is, from the need to decide on their own to have more children than they would want if there were a socially accepted policy in place limiting family size.

The second justification for government action to reduce fertility is the problem of “myopia” and lack of information. Without information, individuals and families make decisions about family size that fail to reflect changing societal conditions and preferences. By providing information on changing mortality and the health benefits of fertility control, government can encourage parents in their desire to have fewer children. “Government’s role in developing and enhancing a social contract to lower fertility provides the basis for public subsidies to family planning” (World Bank 1984a, p. 56).
**Reassessing the Role of Government**

The 1987 policy study *Financing Health Services in Developing Countries: An Agenda for Reform* (World Bank 1987a) tackled one of the central policy themes identified in 1975 and 1980—inefficient and inequitable public spending in health and the ongoing problem of financing recurrent costs—but approached the issue from a very different starting point. The slow economic growth and record budget deficits in the 1980s dramatically affected public spending, prompting questions about the feasibility of increased public spending in health and possible alternative approaches to financing health care for future generations. The study argued that even in the absence of severe budget constraints, new approaches to the financing of health care are required in order to improve both the efficiency and the equity of health care. Four policies to reform government financing of health care were proposed: implementation of user charges at government health facilities, especially for drugs and curative care; introduction of insurance or other risk coverage to help mobilize resources for health while protecting households from large financial losses; more effective utilization of nongovernment resources, including nonprofit groups, private physicians, pharmacies, and other health practitioners; and introduction of decentralized planning, budgeting, and purchasing for government health services, particularly interventions that offer private benefits in exchange for a fee. While focusing on the prospects for improvements in the internal efficiency of health spending, these reforms also offered an opportunity for greater cooperation between the public and private sectors in providing and financing health care, particularly by making more effective use of the private sector to provide health services that extend essentially private benefits to the recipients.

The main implication of the 1987 study for the Bank’s work in health lay in the nature and content of its policy dialogue with borrower governments. The report noted that “the Bank is now broadening that dialogue, both with borrowers and other lending agencies, to encourage consideration of new financing approaches to rethink prevailing strategies and the concepts on which they are based” (World Bank 1987a, p. 49). This broadening of the dialogue introduced questions not only about ways of improving the efficiency of financing arrangements in health but also about more fundamental considerations of the proper role for government in the health sector. Where the study stopped short was in providing the analytic tools needed to assess the appropriate role of government in the variety of fiscal and epidemiological contexts confronted in the developing world. In addition, little attention is given to the reasons for the current allocations of spending in the health sector and the institutional and incentive mechanisms that create a disparity between the actual distribution of resources and the expected configuration.

**The Political Economy of Health**

Two policy working papers, by Birdsall (1989) and Birdsall and James (1990), focused explicitly on the issue of public choice in health policy. They argued that the degree of efficiency and redistribution in public policymaking is endogenous and politically determined. Unlike the earlier “welfarist” models of government, these presentations argue that the political economy of public choice makes the inefficiencies and inequities of health services financed and provided by government inevitable. Drawing on the broader views of public choice theory, Birdsall argued that, in addition to the inadequacy of public resources in the majority of developing countries to address the growing complexity of biomedical realities, public officials inevitably serve their own interests more readily than the broader public interest. Political interest groups exert significant influence in the actual distribution of resources in the health sector. Power is ceded to such groups because of information asymmetries and uncertainty among policymakers,
providers, and beneficiaries and the presence of bureaucratic management and financing systems with low accountability. While improvements to public management and financial systems are critical, it is argued that the only way to affect long-term health outcomes in developing countries—particularly for the poorest citizens—is to fundamentally reform financing and ownership structures, with an emphasis on increased use of material incentives, markets, and competition as mechanisms to allocate health resources.

Although not representing any formal statement of policy in the health sector, this cluster of studies reflected two very important developments in Bank thinking. First, there was an explicit questioning of the welfarist model of government and traditional assumptions about its role in improving health outcomes. Second, there has been a shift away from concern with the delivery of basic and primary health care to an interest in identifying and promoting major structural reform in the health sector.

The Current Policy Agenda

The World Development Report 1993: Investing in Health looked explicitly at the role of government and the market in health and examines the most appropriate ownership and financing arrangements to address the linked goals of improving health outcomes, reaching the poorest, and containing costs. The report stressed a three-pronged approach to achieve these goals. First, governments should foster an environment that enables households to improve health. Second, government health spending should be made more effective by reducing expenditures on the less cost-effective interventions and expanding basic public health programs and essential clinical services. Third, diversity and competition in the provision of health services and insurance should be promoted through, inter alia, encouraging social or private insurance for clinical services outside the essential package and by promoting competition among suppliers.

The emphasis on achieving the optimal mix of public and private financing and delivery of health services is also a theme pursued in a recent paper by Musgrove (1996). The paper classifies health care activities into three domains—public goods, low-cost private interventions, and high-cost private goods. These domains are constructed by classifying health-related activities according to their ability to generate externalities and their cost. Musgrove argues that each of these domains is subject to market failure, and each domain generates a distinct reason for the state to intervene in the market for care. In the first domain, government should finance public goods and health services with substantial externalities. In this domain, the issue of market failure is independent of costs. The second and third domains are subject to market failure only in services that are costly enough to be financed by insurance; poverty, or the inability to buy even low-cost services, is a distinct reason for public intervention. For example, in the second domain, government should regulate private health insurance or finance insurance publicly to ensure efficient and equitable access to services. In the third domain, the government should subsidize the poor by financing some minimum level of care, either directly or by financing private providers.

Nevertheless, identifying positive areas for government action does not constitute clarification of the public role in the health sector. To respond to this challenge, Musgrove developed a checklist of what government should and should not do in health. The prohibitions include: using the tax system or any system of public fees to force the poor to subsidize health care for the rich; tying public finance to public provision; and paying for health care through fee-
for-service, especially when financing private providers, without other mechanisms to control expenditures. The encouraged government actions include: regulating private activity when providing information is not enough; delivering services when it is not possible to finance private providers equitably; stimulating competition in the provision of health care; and using regulation, mandates, training, and other interventions to help the private sector to function better.

The debate about the proper role for government, quasi-markets, and the private sector in health has become the basis for a new focus in Bank policy dialogue and lending for health sector reform. The agenda is closely linked to larger issues of fiscal decentralization, privatization, and improvement in the effectiveness of public sector management. This focus has increased emphasis within the Bank on economic and financial analysis in the identification of priorities for health sector reform and in selecting cost-effective health interventions. These are important developments. What is less clear is if support is being given to borrowing countries to evaluate complex policy choices and carry out major policy reforms.

Lending

Bank activities in the health sector grew rapidly after the initial policy commitment. It is useful to consider the evolution of lending in three phases. During the first period, from 1970 to 1980, the Bank approved twenty-two population projects valued at US$422 million and two nutrition projects valued at US$35 million; in 1980 it initiated its first health project in Indonesia.12 These projects primarily focused on the development of the facilities and skills required to implement large-scale family planning programs managed by the government. As might be expected of the first efforts in a new sector, the projects had mixed results—about 59 percent of the population projects were rated as satisfactory in OED audits.

The Bank’s HNP portfolio continued to grow from 1980 through 1987. From 1981 to 1987 the Bank approved sixteen population projects, twenty-six health projects, and three stand-alone nutrition projects. Total commitments in HNP grew from about US$500 million in the first decade of experience to about US$1 billion from 1981 to 1987. The performance of the population projects improved during this period, with average performance ratings of 75 percent satisfactory. Slightly more than half (sixteen of twenty-seven) of the health projects approved during this period have been completed. Figure 4.1 displays the performance ratings for all HNP projects by year of approval through fiscal 1985 compared with all projects and programs in education. (The volatility of the results is a function of the overall number of completed projects in each year.) Overall, 63 percent of completed HNP projects received satisfactory ratings, compared with 81 percent of the education projects and 73 percent of all human resources projects.

12. These figures are based on project classifications recorded in the MIS. As will be discussed in the second stage of the study, classification of projects as population-, health-, or nutrition-related is somewhat arbitrary, since most population projects include substantial investments in health infrastructure, and most health projects include efforts to strengthen family planning services (see World Bank 1991b, and HNP Annual Sector Reviews for fiscal 1988, fiscal 1990, and fiscal 1991 for more detailed discussions).
Figure 4.1: HNP Project Performance Ratings Compared with All Projects and Education Projects, by Year of Approval

Note: This graph is based on an average of three projects annually from 1970 to 1982 (compared with twelve yearly in education). The one project in approval year 1975 was rated as unsatisfactory.

The reorganization of the Bank in 1987 and the later intensification of the Bank’s commitment to HNP brought about by Mr. Conable’s 1989 decision to double HNP lending resulted in rapid increases in the pace and volume of lending. This pace continues today and is reflected in figure 4.2. Since 1988 the Bank has approved ninety health projects, thirty-three population projects, and nine nutrition-related projects, representing a total loan commitment of US$1.6 billion. Projects approved since 1987 are considerably larger in scope and complexity than the programs implemented in the first fifteen years of lending in the sector. The current phase of lending demonstrates an increasing concern with major sectoral reform and efforts to address emerging health conditions, particularly the rapid increase in the prevalence of HIV infection. Project design has also become increasingly diversified. There is significant experimentation with the use of social funds and integration of health concerns into larger poverty alleviation efforts, particularly in the Latin America and Caribbean region.
Figure 4.2: Evolution of HNP Lending, by Period

Table 4.1 provides a breakdown of all HNP lending activities from fiscal 1970 through the completion of fiscal 1996.\textsuperscript{13} The table makes it clear that lending for health outweighs total lending for population in both total number of projects and total volume and is more evenly spread across regions, although there is a noticeable concentration in Africa and East Asia. The high volume in East Asia reflects the greater number and large size of individual loans to China. Latin America, led by Brazil (the second highest borrower in volume) is also very active in the health sector. The volume of population lending is clearly greatest in India and other countries of South Asia, although Africa is also active in the sector. Nutrition is a much less active area for stand-alone lending, although many health projects include substantial efforts to strengthen nutrition education and micronutrient supplementation. Moreover, the table does not include projects that focus on issues of food security and distribution. Overall, the Bank has committed about US$10 billion for health, population, and nutrition activities worldwide.

\textsuperscript{13} The data presented are based on information from the MIS, and subsectoral characterization of a project is based on data provided by operational units. In many cases, the assignment of a project to one or another category can be quite arbitrary—for example, some units might classify a "family health" project as a population project, others might classify it as a health project. We maintain the MIS classifications in this presentation, pending the possible development of a more refined typology for project classification during Phase II of the study.
Table 4.1: Regional Distribution of HNP Lending, by Subsector, Fiscal 1970–95

<table>
<thead>
<tr>
<th>Area</th>
<th>Health Number</th>
<th>Population</th>
<th>Nutrition</th>
<th>Other</th>
<th>All sectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>48</td>
<td>18</td>
<td>2</td>
<td>7</td>
<td>75</td>
</tr>
<tr>
<td>Volume</td>
<td>1,181</td>
<td>476</td>
<td>40</td>
<td>140</td>
<td>1,836</td>
</tr>
<tr>
<td>East Asia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>19</td>
<td>12</td>
<td>2</td>
<td>0</td>
<td>33</td>
</tr>
<tr>
<td>Volume</td>
<td>1,182</td>
<td>380</td>
<td>46.4</td>
<td>0</td>
<td>1,608</td>
</tr>
<tr>
<td>Eastern Europe and Central Asia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Volume</td>
<td>666</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>666</td>
</tr>
<tr>
<td>Latin America</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Number</td>
<td>26</td>
<td>13</td>
<td>5</td>
<td>1</td>
<td>45</td>
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<tr>
<td>Volume</td>
<td>1,630</td>
<td>311</td>
<td>193</td>
<td>200</td>
<td>2,154</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>13</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>23</td>
</tr>
<tr>
<td>Volume</td>
<td>481</td>
<td>102</td>
<td>12</td>
<td>167</td>
<td>761</td>
</tr>
<tr>
<td>South Asia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>10</td>
<td>17</td>
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<tr>
<td>Volume</td>
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<td>All regions</td>
<td>124</td>
<td>66</td>
<td>14</td>
<td>10</td>
<td>215</td>
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<tr>
<td>Total volume</td>
<td>6,115</td>
<td>2,837</td>
<td>681</td>
<td>326</td>
<td>9,959</td>
</tr>
</tbody>
</table>

Source: Author’s calculations based on OPRMIS data.

Distribution by Social Setting and Family Planning Program Effort

Table 4.2 shows the distribution of HNP lending by social setting, an indicator fashioned from measures of income, educational attainment, literacy, and urbanization (see Mauldin and Ross 1991, for details). Each group received a score on the most recently collected FPPI (ranked from strong to very weak/none), which serves as a proxy for the programmatic context in which a Bank project was or will be implemented. The two indicators together provide a picture of the distribution of HNP lending by social environment and family planning program performance. The latter can also be interpreted as an indicator of the performance of the health sector in basic care. Overall, the number of projects is evenly spread by social setting. About 43 percent of all projects are committed in countries classified as high or upper-middle in social setting and about 57 percent in areas with lower-middle and low social settings. It can be seen that 42 percent of HNP projects take place in settings with weak or very weak programs, 29 percent in settings with medium scores on family planning performance, and 29 percent in settings with strong programs.
Table 4.2: Number of HNP Projects in All Sectors, by Social Setting and Family Planning Program Effort Score

<table>
<thead>
<tr>
<th>Social setting</th>
<th>Strong</th>
<th>Medium</th>
<th>Weak</th>
<th>Very weak/none</th>
<th>Total</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>4</td>
<td>17</td>
<td>14</td>
<td>0</td>
<td>35</td>
<td>18.3</td>
<td></td>
</tr>
<tr>
<td>Upper-middle</td>
<td>28</td>
<td>17</td>
<td>3</td>
<td>0</td>
<td>48</td>
<td>25.1</td>
<td></td>
</tr>
<tr>
<td>Lower-middle</td>
<td>19</td>
<td>20</td>
<td>25</td>
<td>2</td>
<td>66</td>
<td>34.6</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>5</td>
<td>1</td>
<td>29</td>
<td>7</td>
<td>42</td>
<td>22.0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
<td>55</td>
<td>71</td>
<td>9</td>
<td>191</td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>


Continued rapid—even explosive—growth in HNP lending is planned. The pipeline for the next four years contains ninety-two projects, and projected lending is over $7 billion—equivalent to 75 percent of all past lending. This absolute growth is reflected in the increased importance of HNP lending in overall Bank lending. HNP lending is expected to amount to 8.7 percent of total lending between fiscal 1995 and fiscal 1997—up from 5.5 percent in fiscal 1992-94 and 1.5 percent in fiscal 1986-88. The Bank is currently the largest source of international finance for the development and reform of health systems.

Reviews of HNP Work

OED Experience

OED has conducted twenty-four audits in HNP. These examinations covered eighteen population projects; fourteen of these were closed by fiscal 1984, and the most recent was closed in fiscal 1988. Four health projects, two in Malawi and two in Indonesia, were more recently audited; one nutrition project (in Colombia) was audited and one (the Tamil Nadu Integrated Nutrition Project) was subject to impact evaluation. OED has reviewed thirty-six project completion reports (PCRs) in the sector, yielding a total portfolio of sixty project evaluations (see Annex for details). Most of the early audits have little direct bearing on current health lending; they concern single-purpose family planning programs and reflect experience before the Bank’s full involvement in the health sector. The completed audits have employed standard OED audit methodology. At this point, the number of active projects outnumbers the completed projects by 3 to 1, and the number of active projects outnumbers those audited by more than 10 to 1. There is clearly room for a more deliberate effort to learn from experience in this sector.

Lessons from PCRs/ICRs and PARs

A review of PCRs and PARs conducted for this paper found a number of common themes and lessons from completed projects. Although two-thirds of the projects were rated as satisfactory, a substantial majority concluded that project design had been too complex, undermining implementation and effectiveness (see Annex 2). The percentage of projects citing this problem does not vary significantly over time, indicating either that task managers have not absorbed this lesson or that incentives within the Bank continue to encourage the design of
excessively complex projects. It may also indicate a lack of a clear *a priori* definition as to what constitutes project complexity. Second, a majority also cited insufficient or inadequate supervision as undermining project implementation, particularly for projects involving significant institutional reform or rural outreach. Lack of sector specialists in Resident Missions was periodic concern, particularly for sector reform programs. A few PCRs report that implementation improved when the task manager was relocated to a Resident Mission. A significant number specifically stated in the "lessons" section that current Bank arrangements for supervision were inappropriate for HNP projects.

Although nearly all completed projects include capacity building or institutional development objectives, these components experience the most difficulty and have the poorest implementation records. Problems with "software" components are noted throughout the completed portfolio and in other reviews of HNP projects. Inadequate analysis of institutional arrangements and incentives during project design and appraisal, along with inadequate supervision, were the most commonly cited reasons. Also in keeping with general Bank experience, a majority of PCRs emphasize the contribution of borrower ownership and commitment to project success, often noting that projects failed to achieve adequate ownership. Recent projects seem to indicate an increased awareness of the importance of "ownership" by Bank task teams, but even projects initiated within the past six years report problems or even cancellation because of low ownership.

Insufficient flexibility in design and implementation constrain achievement of objectives in about one-third of completed Bank projects. Several PCR report that no significant changes in design or implementation arrangements were made even in the face of highly critical supervision reports or mid-term evaluations. Conversely, a number of projects record substantial improvements in implementation following major restructuring, often resulting from negative evaluations. Finally, a large and disturbing majority report that monitoring and evaluation is either inadequate or nonexistent, making it impossible to conclude if the projects' goals are achieved. Blame for this situation was shared between Bank staff and borrower officials, usually due to a lack of interest and follow through. Most striking was that several "pilot" projects purporting to demonstrate the efficacy of a reform or new delivery system collected no evaluation data and therefore could not demonstrate whether the approach was effective.

**External Reviews**

Although OED has not yet conducted a major study of the effectiveness or insights gained in the Bank's work in the HNP sector, the topic has received considerable attention in a series of external and internal reviews. These studies provide an interesting overview of the questions that have concerned those responsible for the development and management of the HNP work and closely related aspects of the Bank's work in the social sectors. We provide a detailed synopsis of these studies to indicate the kinds of issues that have been addressed through assessment of the Bank's experience and to provide a basis for identifying methodological lessons and gaps in topical coverage.

Two major external reviews of Bank performance in population were commissioned. The Berelson Report (published internally in 1977) urged the Bank to focus its lending on support to large-scale family planning programs among demographically significant borrowers. The second review was completed during the reorganization of the Bank in 1987 (Simmons and Maru 1987).
The Berelson Report (1976)

Five years after the Bank began lending for population projects, an external advisory panel of population experts, led by Bernard Berelson, then President of the Population Council, was asked to provide counsel on how the World Bank could best assist member countries to lower their levels of fertility. The mandate for this major review was broad: to examine the Bank's strategies, policies, and programs, taking into consideration the Bank's role in the international community; its overall analytic and programming capacities; the strengths and weaknesses of the traditional project approach; and the political, socioeconomic, and operational conditions in developing countries. In the course of its work, the panel reviewed Bank documents; interviewed staff members working in population and other sectors, in operations and research, and in regional and country offices; and held discussions with other donors. It reviewed and appraised five of the eleven population projects, four with field visits. The panel drew on accepted views of the determinants of fertility decline in making its evaluation.

In the report to the Board, the panel organized its findings and recommendations into three major subject areas. In reviewing the first area, "The Bank's Population Policy within Development," the panel made clear its basic assumption that the Bank could equal or surpass its current achievements in bringing about fertility declines by influencing the demand for family planning through support for supply of the needed services. In the panel's view, the Bank, as the foremost general development agency, had the potential to make a major contribution in the field of population, but it had failed to utilize its comparative advantage. The panel recommended that the Bank launch an effort to realize this advantage through lending in sectors that were known to contribute to fertility decline, statements of policy by Bank leaders, policy dialogue with member countries; by incorporating population in economic reports; and by directing research toward identifying the links between population and development and making these links more relevant to operations.

The panel was less than enthusiastic about the record of "The Bank's Population Projects," the second area of the report. It found that Bank projects spent too much for staff to prepare and supervise projects and too little for the actual work of the project; and that the Bank was insufficiently flexible in design, overly ambitious in demographic objectives, and of marginal significance in the context of overall donor assistance. Yet the Berelson Report recommended continued lending, recognizing that the Bank's lending legitimated population as an area of development importance and that its support for "hardware" fulfilled a need that had not been addressed by other donors. It also acknowledged the constraints inherent in loans. The panel argued for Bank consideration of population lending focused on "key" countries. Such countries would be identified by population size, acceptance of population and family planning policies, and degree of socioeconomic advancement. It also recommended overt lending for health in programs that included family planning, arguing that the insistence on demographic targets as criteria for lending resulted in lost opportunities for broad-based health programs with likely demographic consequences. It further recommended the incorporation of family planning into other sector lending, particularly the Bank's rural development projects.

The panel found both attitudinal and organizational barriers to effective population work in its analysis of "The Bank's Population Management," the last area of its report. It proposed more training, more coordination with other population agencies, and, above all, better relationships within the Bank—first between population operations and population research, and then between the population units and the country program departments. It also recommended
the appointment of a senior official to oversee these activities to ensure that population was fully incorporated into Bank activities.

Two years after publication of the first Berelson Report, two of its authors were invited to review the Bank's progress in implementing its recommendations. On the whole, they found commendable progress. On the integration of family planning into projects in other sectors, they reversed their previous recommendation, finding that it was difficult to achieve, costly in personnel, and possibly counterproductive. Instead they recommended "simultaneity" of population projects and other social sector operations.

Simmons and Maru (1988)

This second major review of the Bank's work in population was commissioned by the HNP Department in 1985 and was undertaken by two external consultants under the general direction of the Bank's senior population adviser. It was the third of three subsectoral reviews to examine performance following the integration of HNP activities in 1980. Implementation of the recommendations of this review was never monitored—partly because the report was overtaken by the 1987 reorganization and partly because HNP management never officially endorsed the review's findings. The reviewers' mandate was confined to evaluation of lending and sector activities (sector reports and research and policy dialogue), with reference to Bank organization and procedures only as they related to project performance. Consideration of staffing and skill issues was not part of the terms of reference. The team performed its evaluation through discussions with staff working in the population area, field visits, and a review of Bank documents. The team based its evaluation on a comparison of Bank performance with a theoretical framework of the factors that lead to successful population activities rather than a detailed analysis of individual projects.

The review rated overall performance as "commendable." It found that policy dialogue linking population issues with other aspects of development "perhaps the single most effective element in the Bank's work on population." The HNP Department had devoted considerable resources to sector work since its establishment in 1980, but for countries with mature programs the report recommended that sector work move from broad sectoral reviews to in-depth analysis of selected policy or program effectiveness issues, the role of NGOs, and community perspectives. Like the Berelson Report, this review also recommended a more operational focus for Bank population research.

Project performance received a mixed review in the report. The increased volume of lending, greater number of projects, and wider geographic coverage following the establishment of the HNP Department were recognized. At the same time, the reviewers found that there had been a concentration on "key" countries, and that this was useful. The team warned that the association of the Bank's population programs with health lending and the resulting reliance on generally weak ministries of health constrained population programs, and it recommended diversification to other ministries. Commenting on the heavy support for civil works and other hardware components, which averaged about 50 percent of project costs, the team recognized the importance and appropriateness of the Bank's role, given the availability of grant support for "soft" components and the greater willingness of governments to borrow for "hard" components. Nevertheless, it warned against the tendency for supervision of this component to dominate other elements of the programs. In general, the team argued for smaller, less complex projects. It advocated better design in institutional development components, more attention to delivering
services at the periphery, greater involvement of NGOs, better IEC, and more effective evaluation of projects. Consideration of the use of specialists in the resident missions to provide ongoing technical assistance was also recommended.

Internal Reviews

*Population and the World Bank: Implications from Eight Case Studies (OED 1992)*

OED's study of the Bank’s population work in eight countries is the only evaluation based on detailed analysis of country experience. To prepare the eight case studies, independent, recognized population policy experts were asked to review documents that described both lending and nonlending activities in the Bank's HNP portfolio for each country. In addition, the consultants visited each country to interview representatives of government, other donor agencies, and NGOs active in the field. The countries examined provide a cross-section of Bank involvement: Brazil, Mexico, and Colombia, where Bank population activities were minimal; Senegal, where the Bank’s efforts concentrated on helping the government to develop a population policy rather than extending family planning services; Indonesia and India, where the Bank largely provided financial support for the countries’ own national objectives and programs; and Bangladesh and Kenya, where the Bank played a more active role. Some 80 percent of the Bank’s population lending has been applied in support of programs in the last four countries.

The report’s conclusions strongly endorse calls for more emphasis in the Bank’s population work on programs to influence demand through interventions that produce the conditions for fertility decline. The report confirms that fertility decline can be initiated by programs that provide contraceptive supplies, services, and associated information and that progress is more rapid when programs offer strong outreach and high-quality services designed to meet clients’ perceptions of their needs. To implement such programs, first-rate field supervision, training, and motivation are required, elements that are difficult to develop in poor, rural areas. To achieve sustained fertility declines that continue until the replacement level is reached requires a variety of strategies. The Bank might have achieved more had it searched for selective interventions in development that changed the implicit benefits and costs of large families. The reorganization of the Bank was seen to offer the possibility of more effective and purposive action in this effort.

Within traditional population projects and components, there are several suggested lines of improvement. The emphasis on “hardware” was justified by the expectation that governments or other donors would provide the “software” elements, often involving recurrent costs. This expectation was shown to be overly optimistic in several of the countries studied, and a fuller array of project inputs is needed to ensure successful implementation. In addition, the tendency for a project to grow beyond the size originally planned and to take on funding of an increasing share of recurrent costs needs to be examined. The country’s absorptive capacity, concerns about efficiency, and long-term sustainability must be considered. The report found that the ability of the Bank and the recipient country to assess project and program effectiveness is poor. Until project components associated with monitoring, evaluation, and research capacity are given attention, this will not change.

One of the lessons drawn from the case studies is that efforts in the population field only begin to show results after an extended period—about fifteen years. This suggests that projects
should be seen as part of a broader program, and that objectives and evaluation criteria should be tailored accordingly. Nonproject activities—sector work, policy dialogue, efforts to improve organizational arrangements, more collaboration with other donors—are very important, and the Bank needs to support and reward these activities. In line with its emphasis on the importance of demand factors and the limitations imposed by absorptive capacity, the report concludes that “we find no evidence that more financial resources would have made much difference.” Reorientation of activities—more nonproject activities and more lending in mutually reinforcing social sectors—would be a better use of resources.

*Strengthening the Bank’s Population Work in the Nineties (Sinding 1991)*

Written by the Bank’s second population adviser, Steven Sinding, this strategy paper drew on the conclusions of the previous reviews and a nearly completed OED study (see above) in making its recommendations. Although it was the first major look at population work in the Bank after the reorganization and the formation of country-based population and human resource divisions, it dealt almost exclusively with population and family planning issues. The paper was based on a review of levels and trends in lending, selective document review, and staff interviews.

After presenting the reasons that the Bank should continue involvement in population, Sinding concluded that there are countries where the macroeconomic consequences of population growth are sufficiently threatening to development to warrant attention to population issues. In most countries, he noted, family planning serves primarily to improve the lives of individuals, most notably their health. He then presented a conceptual framework, similar to that proposed by the Berelson Panel, but more fully developed over time, for deciding on appropriate strategies, given the degree of program effort and a country’s level of socioeconomic development (their “social setting”). Sinding argued that the most critical elements for successful Bank population projects are government commitment; the strengthening of existing institutions rather than the creation of new ones; a greater involvement of the private sector and enhanced quality through training, transport, and logistics; adequate management information; and a suitable and reliable contraceptive supply. His main conclusion, however, was that it is difficult to evaluate the effectiveness of Bank population work because no coherent, sustained effort has been made to develop the necessary indicators.

*Review of HNP Lending for Health (Measham 1985)*

This review of the HNP Department’s first five years of experience dealt with health projects and the health components of combined HNP projects. It looked at the level of effort in sector work and lending and adherence to the directions enumerated in the 1980 *Health Policy Paper*. The paper was based on a detailed content analysis of documentation of ongoing sector work and lending operations (at various stages of development). The study did not include explicit objective indicators of performance, but instead relied on the author’s assessment of the relevance and potential effectiveness of these operations.

The review endorsed the attention given to sector work that preceded HNP projects in all but a handful of countries with projects under supervision or in preparation. Sector work was found to have led to increased staff effectiveness, greater Bank credibility with borrowing countries and with the Bank’s country program departments, changes in policy in several
countries, and increased lending. The majority of sector reports were broad reviews, appropriate to a new area of lending. While the findings concerning sector work confirmed the statements in the 1980 document about the importance of primary health care and the imbalance in health expenditure allocations in most countries, they also identified several significant areas not treated in the policy paper that are important to an understanding of country conditions and the selection of appropriate interventions. Chief among these were of health costs and financing, "an area of strength in HNP sector work" and an area of major comparative advantage for the Bank; the hospital sector, which consumes most health resources and must be understood in order to achieve some reallocation; urban health problems; chronic diseases; and health support systems.

The major recommendations included increased sector work that concentrates on in-depth analysis of one issue and more sharply focused "second-generation" projects. Greater national involvement in sector work should be sought, and HNP should seek greater participation in public investment reviews. The report urged that projects develop cost-effective models of health care delivery, with greater attention to NGOs and the private sector. There should be more effort to incorporate methods to evaluate projects; employment of process indicators as quantifiable targets was seen as generally inappropriate. The report advocated increased understanding of service delivery at the periphery—to groups underserved by reason of geography or poverty. It recommended that studies of demand and utilization patterns be included in sector work and project preparation to aid in effective design. No documentation of the degree of adoption of this recommendation is available.

*Nutrition Review (Skolnik and others 1987)*

This review largely focused on operational experience and brought together the lessons of the four free-standing nutrition projects approved since 1975; to a lesser extent, it included nutrition components in HNP projects and other sector projects. Skolnik and others found that the projects had been too complex and had tried to deal with too many of the causes of malnutrition. They were nonetheless largely successful in bringing about nutritional improvement in environments that had experienced little increase in income. Lack of a single responsible entity within a country hampered the management of nutrition projects; attention must be given to institution building. Targeting had been shown to be a practical and cost-effective way of providing food and services with maximum impact, and the projects were important in attracting policy attention and resources to the problems of malnutrition.

The report recommended greater attention to nutrition in population and health projects, given the potential of nutrition projects and components to contribute to primary health care and family planning programs. It suggested three kinds of projects, defined by content: (a) nutrition projects to improve infant and child health; (b) nutrition to improve human capital formation and labor productivity through increased availability of food for a household; and (c) control of the major micronutrient deficiency diseases. While recommendations (a) and (c) fell within the purview of the HNP Department, expertise in the area of recommendation (b) involved food subsidy programs, institutional feeding projects, and improved efficiency in the food marketing system and would have to be developed slowly. The report identified Bank research as having played an important role in advancing the understanding of costs and cost-effectiveness in nutrition programs.
Reaching the Poor: HNP Performance at the Periphery (Heaver 1988)

Although not conducted as a formal review, this working paper focused on the ability of HNP projects to make a difference “on the ground.” The author compared the characteristics of client populations at the periphery with the standard government health care system and found them mismatched. He argued that HNP service delivery systems must be adapted to local conditions to maximize service utilization.

This review, again based on content analysis of documents for ongoing projects, indicated that the vast majority of projects had included extension of coverage and/or the quality of HNP services to poorly served populations among their objectives. No less than 69 percent of projects used community health workers to deliver services and provide education. IEC was included in 85 percent of the projects, and over half involved the mobilization of community support groups to encourage the acceptance of IEC or health services. Nevertheless, the report found that the Bank’s knowledge of the determinants of the behavior of both clients and service providers was too scanty to ensure that outreach systems and IEC services were designed to accommodate the needs and circumstances of the client population. The review also found that the Bank had not done enough to target project-financed services to priority clients, particularly the most disadvantaged groups at the periphery.

Heaver made detailed recommendations for sector work, lending, policy, and research to remedy this lack—including greater efforts to understand and accommodate the clients’ perspective in the design of outreach and IEC components; increased use of alternative modes of delivery such as NGOs and the private sector; more comprehensive identification of client groups; and the development of appropriate output and process targets. He points out that while in the private sector a firm that fails to be responsive to its customers goes bankrupt, a public health care clinic that fails to meet its clients’ needs can survive indefinitely with low levels of utilization.

Analyses of Human Development: Supporting Human Development—Progress and Challenges

The Population and Human Resources Department prepared this review of Bank experience in the human development sector—defined as education, training, health, nutrition, population, employment, and the socioeconomic role of women—at the request of the Board. The paper described the situation before the Bank’s 1987 reorganization in broad terms—the expanding rationales for involvement, the increase in lending, and the entry into new areas based on research and sector work, allied with increased flexibility in lending instruments.

Nevertheless, the paper came to the overall conclusion that “the early lending focus on the implementation of specific interventions often resulted in weak links with country assistance strategies,” especially in the health, nutrition, and population sectors, which were centralized in the Operational Policy Staff (OPS) vice-presidency. The organizational separation of units on education, HNP, and WID virtually precluded the formulation of coordinated human development strategies as an integral part of country assistance strategies. This hampered the ability of the Bank to deal effectively with the social impact of adjustment programs, and to design coherent strategies for poverty alleviation and technological capacity-building.

The reorganization increased the visibility and centrality of human development in the country dialogue and provided a framework for the exploitation of the complementarities and
synergies among the different elements. It did this by integrating operational responsibility for human development programs in a single division in each country department, supported by a division in each regional technical department, and by concentrating research and policy work in a central department. Thus, it created the conditions for rapid evolution of the Bank's role in the sector through integrating human development in country assistance strategies; expanding the lending program; broadening lending objectives; increasing the use of diverse lending instruments; strengthening quality and operational focus of research and policy analyses on human development, and collaborating with a broad range of partners in program design and implementation.

Lessons learned in the sector reinforce the importance of the conditions detailed above. Most important, a well-designed policy and institutional framework can provide wide access to basic human development services, even in low-income countries. Without such a framework, increases in GNP alone often do not improve the lives of the poor. Experience has shown that project-specific investment loans do not always yield desired policy change, and that sectoral reform must be approached as more than the sum of individual investments. Bank support has been most effective when based on sector-wide programs of reform and development; in-depth analysis of sectoral issues; building national capacity for program design and implementation; continuous attention to implementation, and systematic monitoring of outcomes.

Reviewers' Comments on the Bank's Measurement of Project Performance

In addition to the broad studies of population programs, the Bank also commissioned a study of the use of targets and indicators in population projects, a relevant topic given the emphasis on the problems of weak monitoring and evaluation detailed in studies of Bank experience. The most comprehensive look at targets and indicators was undertaken by Baldwin (1992), who brought the benefit of his years of experience in operations to the evaluation of the Bank's performance in setting targets in population projects and its measurement of impact. He first distinguished between input and output measures and then subdivided each category. Input indicators include measures of project implementation and process; output indicators include measures of performance and ultimate impact. While the two input variables are both project-related, Baldwin argued that measurement of output variables is generally only feasible at the program level. At the project level, measurement of outputs can only be done where it is possible to separate the project catchment area from the national program. He is therefore critical of suggestions (for example, Simmons and Maru 1988; World Bank 1991b) that the Bank be more rigorous in establishing output targets and indicators for projects. He found these statements generally platitudinous and not "actionable." His recommendation was to pay attention to input indicators at the project level, and to output indicators at the program level. (In this respect, he noted that the OED study ends by recommending output indicators that measure progress toward sectoral goals.) Baldwin was also more in favor of using output indicators than targets—looking for trends in the right direction rather than deciding if a specific goal has been achieved. Monitoring trends involves comparison: to a target, if one has been set, or to a country's past performance, or to the performance of other countries.

In reviewing the Bank instruments used to evaluate projects, Baldwin found the most to praise in the staff appraisal reports (SARs) of follow-on projects. He noted that they are a rich source of information on past program and project performance. He was most critical of OED performance audit reports (PARs). Of the Malaysia audit report, Baldwin wrote that "OED reviews and judgments deserve a high place on the agenda of professional discussion about how
to assess the worthwhileness of Bank population projects—but no more. They do not deserve any extraordinary deference simply because they represent the Bank’s ‘judgment of last resort’ in a sequence of formal procedures. Whether or not PARs add significantly to the data and insights of PCRs is a separate, important issue. My own view, based solely on my reading of the 18 population PARs done to date, is that the cost of conducting PARs far outweighs their benefits.” He goes on to recommend devoting these resources to operational research on specific topics and to general reviews of national programs.

In detailing the distinction between indicators appropriate to projects and those appropriate to programs and in his recommendation that output indicators emphasize program achievements, Baldwin echoes the broad conclusions of the Berelson Panel. They found: “As for the more specific targets, in fertility rates of one kind or another, they seem ill-attached to the project, unrealistic, fitted to too short a time period, and in any case difficult perhaps impossible of reliable measurement and attribution to the project in the current state of the art” (Berelson and Freedman 1976, p. 39).

Simmons and Maru (1988) were more critical of Bank performance in this area. They quoted with approval an OED audit criticizing the lack of a specific framework in the project under review “on the basis of which causal relationships can be established between the project’s stated objectives on the one hand and project activities on the other. As a result, there is no hard ‘causal’ evidence as to the extent that ‘micro’ project activities contributed to the ‘macro’ project activities.” Beyond recommending that Bank staff familiarize themselves with UN papers that outline alternative approaches, however, the report made no specific recommendations.

Sinding (1991) was similarly critical. Rather than accepting that it has been difficult to assess the effectiveness of Bank projects to reduce fertility because of the problems of distinguishing among project, program, and other development interventions, he argued that: “It is not easy to attribute fertility decline, or even increased contraceptive prevalence, to a single project, but if the project represents a substantial element of a country’s population program, it is not unreasonable to infer that a substantial share of any observed change is attributable to the project.” The question of time lags was not raised. Sinding was also rather general in his recommendation that the Bank begin to think more consistently about population objectives, calling for explicit population objectives, consistent with those of the country in question; careful provision for data collection and analysis, through service statistics and periodic surveys, for example; and inclusion of an impact evaluation component in projects to assure greater attention to basic objectives.

The only major review of health lending (Measham 1986), however, contains recommendations that are more in line with those of the later Baldwin report. Measham commented that “verifying the achievement of mortality targets is difficult, especially in the case of maternal mortality. But even for infant and child mortality, which are in principle easier to measure reliably, few countries have the capability to mount area-specific baseline and post-project surveys of these parameters. Except in the exceptional case where the capability clearly exists, it seems preferable not to rely on quantified mortality reductions to measure project impact” (pp. 27–28). Measham recommended, as did Baldwin, the use of process or activity data that can be used to estimate impact where other parameters are known—use of immunization coverage where disease-specific mortality rates are known, for example. Other important indicators of health care coverage—for example, antenatal care—are less easily translated into
outcome measures. Nevertheless, they represent the most practical set of indicators for use as the basis of judgments about the success of health projects in improving health status.

In sum, reviewers who provided concrete advice on the use of targets and indicators in Bank projects were most likely to recommend careful accounting of Bank project funds through measurement of input indicators, with output indicators measured at the national or program level through surveys or data systems independent of service statistics.

**Key Performance Indicators for HNP**

Review of a random sample of completion and audit reports for complete HNP projects reveals gaps in monitoring and evaluation systems. As summarized in Table 4.3, problems include from the failure to design an adequate monitoring system, a tendency for M&E systems to focus on inputs rather than outputs or impacts, unreliable reports from the systems that are established, and failure to specify procedures to enhance the use of monitoring information in making decisions at either the project or sectoral context.

Work to strengthen monitoring and evaluation in the HNP sector received renewed attention following the production of the Wapenhans report. To assist Bank staff to identify and use indicators to improve the monitoring and evaluation of projects the Health, Nutrition, and Population Department prepared an analysis of HNP indicators in 1995 (World Bank 1995d). The paper recommends indicators to assess project inputs, processes, outputs, and outcomes. The paper notes that because of the diversity of project objectives and the benefits of country specificity, it is not possible to identify a single set of indicators that can be used across all HNP lending operations. Rather, the paper presents a list of indicators to measure service output of a range of specific intervention categories and suggests that project preparation teams select from this list. The list of also includes indicators of the organizational and managerial characteristics of particular program structures, but does not propose criteria for evaluating health care system performance.

The paper recommends that careful specification of project objectives and planning for collection of baseline data during preparation and appraisal would facilitate evaluation of program impact. The paper does not report on past experience with the implementation of these recommendations, but notes that capacity for monitoring and evaluation among borrower agencies is often limited. The paper further notes that borrower and stakeholder participation in the specification of objectives can be a useful device for strengthening ownership and understanding of project objectives. The paper does not address questions concerning how to evaluate progress in strengthening sectoral capacity as a whole, the specification of indicators of institutional change within the sector, nor the evaluation of multi-intervention programs.
### Table 4.3: Comments on Monitoring and Evaluation from PCR/ICR and/or Audit Reports

<table>
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<tr>
<th>Country, Project Title, Loan/Credit Number</th>
<th>Comments</th>
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<tr>
<td>Burkina Faso: Health Services Development Project (1986-1994) C1607</td>
<td>&quot;...the lack of a monitoring system and of monitorable indicators makes it particularly difficult to measure project impact.&quot; (p. iv)</td>
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<tr>
<td>Colombia: Health Services Integration Project (1985-1993) L2611</td>
<td>Borrower's comments: “The program design did not make any provision for the use of specific instruments, variables, or indicators to be used in monitoring and evaluating the project and assessing its benefits to the Government, in particular to the health sector. Only in the last stage, when actions were focusing on Law 10 and its implementation, were a few M&amp;E instruments available, both for the various project processes and for the expected results.” (p. 14-15) &quot;The Bank's system of project monitoring and control was not apparent.&quot; General recommendations for other projects: &quot;The Bank should endeavor to systematize its monitoring and supervision procedures and to ensure their constant application.&quot; (p. 17-18)</td>
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<tr>
<td>The Gambia: National Health Development Project (1987-1995) C1760</td>
<td>&quot;Key indicators for project operation were neither contained in the SAR or the DCA, nor were they elaborated during project life.” (p. 18) Lessons learned: “Efforts should be made to compile reliable baseline data in order to set realistic and clear targets and to define easily measurable indicators.” (p. 10)</td>
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<tr>
<td>India: Fourth Population Project (1985-1994) C1623</td>
<td>&quot;A series of surveys and research reports, including baseline, mid-term, and end-of-project surveys were carried out with project support...There has been little appreciation of the potential usefulness of research results in the India population projects. The attitude of managers in West Bengal was different; many improvements in program implementation can be traced directly to research findings.&quot; (p. 6)</td>
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<tr>
<td>Indonesia: Provincial Health Project (1983-1989) L2235</td>
<td>“The evaluation data presented as of the Closing Date is unreliable as it is under-reported and possibly inconsistent. Although data was collected for the Monitoring and Evaluation Indicators established for the project, they have not been systematically collected or analyzed, given the delays in the commissioning of the facilities, and, consequently, delays in acquiring data. Further some of the indicators established during the appraisal are also unrealistic. Borrower performance: “The lack of full time staff has resulted in reporting, recording and monitoring and evaluation systems established that are less than adequate.” (p. 8) &quot;Impact, coverage and health status indicators were developed for monitoring and evaluation of the project, but the system is not yet fully operational due to delays in the commissioning of the facilities, and inconsistent reporting from the field.” (p. 5) “In both projects [this one and the Nutrition and Community Health project] most quantifiable and monitorable indicators are for input, very few, such as number of persons trained, for output, and basically none for monitoring or evaluating effects.” (Audit, p. 14)</td>
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<tr>
<td>Indonesia: Second Nutrition and Community Health Project (1985-1991) L2636</td>
<td>“Although no quantitative target [sic] were set against which to assess effects, the project did a study of Posyandu utilization which was also useful for this audit.” (Audit, p. 14) “In both projects [this one and the Provincial health project] most quantifiable and monitorable indicators are for input, very few, such as number of persons trained, for output, and basically none for monitoring or evaluating effects.” (Audit, p. 14)</td>
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<tr>
<td>Malawi: Second Family Health Project (1987-1993) C1768</td>
<td>“Quantifying project impact is not possible because no baseline data was available to compare with; the lack of clearly identified monitoring indicators in the project documents also contribute to quantifying difficulties.” (p. 1) “It is not possible to quantify the impact of the project because no surveys were carried out before the start, or at the end. of the project. Difficulty in quantifying results can also be ascribed to the lack of clearly identified monitoring indicators in project documents, lack of institutional memory, and reports which appear to conflict with evidence in the field.” (p. 6)</td>
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Table 4.3 (Continued)

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<tr>
<th>Country, Project Title, Loan/Credit Number</th>
<th>Description</th>
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<tr>
<td>Mali: Health Development Project (1983-1991) C1422</td>
<td>“The SAR did not precisely identify what the project hoped to achieve at the village level; specifically, it did not identify measurable indicators or a process which might be monitored and modified. The monitoring, research, and evaluation component indicated nothing about an information feedback loop.” (p. 9) “Belgian technicians developed planning and coordination activities for a monitoring and evaluation system: their design involved monitoring at the central level without feedback; the information collected was not immediately utilized.” (p. iii)</td>
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<tr>
<td>Rwanda: Family Health Project (1986-1993) C1678</td>
<td>“...most of the performance indicators in the SAR were exceeded. However, it should be noted that they were not systematically monitored during project supervision and were not included in the progress reports.” (p. 8)</td>
</tr>
<tr>
<td>Senegal: Rural Health Project (1982-1991) C1310</td>
<td>“In the end, the capacities of the Ministry were strengthened, particularly with respect to decentralized planning, personnel management and project evaluation.” (p. 7) No further information provided.</td>
</tr>
<tr>
<td>Tunisia: Health and Population Project (1981-1989) L2005</td>
<td>“The lack of a functioning [MIS] system meant that baseline project indicators were never updated as planned and the project monitoring database was poor, making determinations of health service outreach and attainment of specific project goals difficult to measure.” (p. 9) “...the impact of the project is difficult to measure as the MIS, which was supposed to monitor specific project indicators, never functioned as planned and no results are available about the project’s goals of increased coverage, reduction in IMR, CBR, and morbidity.” (Audit, p. 35)</td>
</tr>
<tr>
<td>Yemen, Republic of : Second Health Development Project (1988-95) C1972</td>
<td>“Monitoring Outcomes. Since most civil works activities were not completed until the last year of project implementation, it was difficult to measure their impact on the achievement of project objectives.” (p. 7) All facilities constructed were reported to be staffed and operational. “In terms of their effectiveness as a means to expand access to PHC services, the number of patients being treated per day at the primary health care units (PHCU) varies from 2 to 20, which suggests that more people now have access to primary services. However, a survey of the catchment population found that, on average, 60 percent of the people thought that the services provided by the PHCUs were insufficient to meet their basic needs and the facilities were found to be providing about half of the services which they were expected to provide. Source: ‘Project Assessment Study’, March 1996. The survey is not representative of the population therefore the results are only indicative.” (pp. 2-3) No monitoring and evaluation indicators mentioned in the ICR.</td>
</tr>
<tr>
<td>Zimbabwe: Family Health Project (1986-1993) L2744</td>
<td>A baseline survey was carried out at the start of the project, as well as a mid-term review, and end-of-project survey, and an independent district management survey in the third year. These surveys were not particularly well done, although considerable effort was put into them but many useful data were collected. The data at appraisal and PCR are not perfectly comparable because the indicators have been defined differently for the different stages.</td>
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Implications for Evaluation

Although the HNP portfolio has not been subject to intensive audit work and coverage of health projects is particularly scanty, previous reviews do provide suggestions for considerations of development effectiveness in the sector. Three themes raised throughout these reviews appear particularly noteworthy.
First, there is recognition throughout the reviews that the Bank must be concerned with the demand for HNP services as well as their supply. This was raised most explicitly as part of the effort to define the Bank's appropriate role in population policy and emerges again in OED's own evaluation of population projects. The more limited reviews of health programs fail to make an issue of demand questions, although there is evidence in the evaluation literature that these variables are important elements in choice of service provider. Much of the current thinking about the health sector and the advantages and disadvantages of alternative delivery systems, however, appears to assume that demand, particularly for the "minimum essential package of services," exists, and the question is merely how best to meet it. The increasing recognition that many public health and clinical health interventions require "behavior change" suggests that HNP activities must be more cognizant of factors that affect family health-seeking behaviors, particularly patterns influencing choice of provider. Most reviews are relatively silent on just how such demand-side variables should be accommodated in the design of delivery systems, which suggests that an ex post review of actual utilization patterns could be useful in developing guidance in this area.

One theme, most explicitly treated in the human development strategy documents, implies that both supply and demand questions are best managed at the macroeconomic level by ensuring a close fit between HNP activities and other elements of the country assistance strategy. The paper argues that the 1987 reorganization provided the opportunity to overcome many of the constraints that had been shown to limit effectiveness by encouraging greater country specificity in the design of activities. Analyses of development effectiveness could fruitfully ask how such a broad sectoral approach could be operationalized. Has the shift to country specificity produced a shift in the content, level, and form of lending instruments? What is the relationship between these shifts and the emerging consensus on the need for sector reform projects?

The tensions between the Bank's apparent focus on the provision of "hardware" through its project lending and the need at the country level for "improved software" are also repeated in several reviews. Interpreting the concept of "software" to refer to some combination of borrower decisions on what services to provide and determinations of how to provide them suggests that assessment of the Bank's performance in the provision of software will require consideration of the processes it uses to identify how decisions are made in a given country as well as its influence on the outcome of these decisions.

It is clear that the HNP field has not suffered from a lack of voices arguing for new and better methods of monitoring and evaluation. As OED's studies of monitoring and evaluation document, HNP compares well with other sectoral groups in the Bank in the incorporation of appropriate monitoring and evaluation systems in project appraisal reports. Conversely, HNP has been no more successful than others in solving the problem of building institutional capacity for monitoring and evaluation among its borrowers.
5. Assessing Development Effectiveness in HNP

From a modest start 25 years ago, the World Bank has become the world’s largest lender in the health, nutrition, and population sectors. Today, the Bank also plays a leading role as an advisor on national health policies, often advocating reforms to promote efficiency, cost-effectiveness, and attention to emerging health problems, including the HIV epidemic. In parallel, the Bank has reduced its emphasis on project lending for public family planning and basic health services and increased its support for projects aimed at sector reform, especially projects that seek to redress inter- and intrasectoral imbalances in health expenditures and change the balance between public and private roles in the sector. These shifts are occurring rapidly and in a health portfolio that is increasing in volume and complexity. Despite the rapid expansion of its lending and the breadth and depth of its analytic work in HNP, the Bank has not yet attempted a review of the effectiveness of its activities in the sector. Thus, an evaluation of the development effectiveness of the Bank’s HNP activities is timely. This chapter outlines the elements of such an assessment and how it might be undertaken, drawing on the literature reviewed in earlier chapters on health and fertility transitions, previous efforts to evaluate health programs and policies, and assessments of the Bank’s experience in HNP.

Lessons for Evaluation. The previous chapters suggest two major challenges for an evaluation of HNP. First, health outcomes are determined by a complex array of influences in addition to health services. The most important are income, nutritional status, education, and the quality of the environment—particularly access to safe water and sanitation. The provision of health services is but one of the variables that influence health, fertility, and nutrition outcomes. It is therefore difficult to establish clear causal links between specific health interventions and improvements in health outcomes.

Second, although there has been considerable evaluative research on specific disease interventions, the literature provides little guidance on how to assess the performance of health care systems as a whole. The behavior of individuals is the primary determinant of health status and fertility. In contrast, health programs and projects operate by altering the health care system rather than individual behaviors. Even projects targeted at specific diseases, nutritional deficiencies, and high fertility usually operate through increasing country capacity to meet these challenges through the health system.

Figure 5.1 shows two major paths through which health outcomes (fertility, mortality, nutritional status) might change. First, individual or household characteristics can affect health outcomes both directly and indirectly. People’s knowledge, attitudes, and behavior can have a direct influence on health status, independent of the formal health care system. In addition, changes in individual or household characteristics can alter the demand for health goods and services, independent of any changes in the health system itself. Second, health care systems affect health outcomes directly by affecting the mix, quality, supply, and private costs of health care services, and indirectly by promoting consumer demand for health care services and by encouraging healthy behavior.
Figure 5.1 also shows that the structure and institutional capacity of the health care system influences the accessibility, efficiency, quality, and effectiveness of services. The quality and availability of health services (from both public and private providers) not only affect the effectiveness of treatment or prevention of disease, but also influence demand. If consumer satisfaction is low, services will not be used even if they are accessible and clinically effective.

Economics, politics and national "governance" guide health expenditures and financing arrangements which help determine system performance. Each country's health care system is shaped by the size and character of private sector providers and interests, the size and placement of voluntary agencies, and the efficiency and effectiveness of public sector management. Ongoing work in the "new institutional economics" suggests that the institutional environment influences success in providing goods of different types. Public goods, for instance, may be more effectively delivered in less hierarchical settings (Picciotto 1995). Although empirical tests of these relationships are only now being developed, governance and macroeconomic performance must be considered in assessing and comparing project performance over time and across countries.

The socioeconomic environment strongly influences household behavior. For example, changes in income, education, or access to transport and communications can alter attitudes toward specific health behaviors (e.g., breastfeeding, smoking, and diet and exercise routines) and thereby influence health outcomes even in the absence of deliberate programs. Furthermore, changes in the environment can influence changes in the demand for health goods and services independent of any change in the health care system itself. Determining the strength of these
influences, relative to changes attributable to the health care system itself, is an important research question which remains unanswered in most countries.\(^\text{14}\)

Bank policy advice and projects, therefore, can influence health outcomes through two complex pathways. First, Bank policy advice and investments could change health outcomes by improving socioeconomic well-being, increasing family income and access to food, education, and clean water. Second, policy advice and projects could influence health outcomes through strengthening the "health care system" by expanding facilities; adjusting the role of public, private, and voluntary providers; improving the skills of health providers; or through adjusting the institutions that contribute to health system performance.

There are two important implications for the evaluation of the Bank’s HNP activities that follow from these interactions. First, although non-health Bank interventions clearly affect health outcomes through improved socioeconomic well-being, analyzing such links is well beyond the scope of this study (though analysis of the degree to which project selection and design recognize such links is not). Second, although improved health outcomes are the ultimate measure of Bank effectiveness, Bank health lending and policy dialogue are mediated through the health care system. Thus, an evaluation must focus primarily on how the Bank has influenced health systems through HNP lending and policy advice, taking account of both the supply and demand for health services.\(^\text{15}\)

Three other considerations also justify concentrating on systems rather than outcomes. First, as noted in Chapter 4, the explosion in Bank lending for HNP in the past decade means that the majority of Bank HNP projects and funds are invested in ongoing projects. These projects are too important and numerous not to be assessed, but are too recent to have affected health outcomes. Second, most of this “new generation” of projects aim to improve the health care system, rather than simply expand services. Third, although an assessment of the interaction between the health care system and outcomes would be ideal, most completed HNP projects failed to collect data on project impact and thus provide no basis for linking projects to outcomes (see Table 4.3).

The remainder of this chapter is organized into four parts. First, an evaluative framework for studying health systems is outlined. Second, plans for a cross-country analysis of Bank lending throughout the HNP sector to provide an overview of current and past Bank activities in HNP are laid out. Third, a series of country sector impact studies that constitute the heart of the evaluation are described. Fourth and last, expected results and outputs are described.

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\(^{14}\) Gertler and Molyneaux (1994) recently developed an analysis of Indonesia’s fertility transition employing a model roughly analogous to what would be required for this level of analysis. The data available, however, did not allow an analysis of the health transition, despite Indonesia’s relatively rich stock of useable data. Gathering the data to test such a model is well beyond the resources available to most studies. Moreover, such analyses are likely to confirm that health services account for only a small portion of the variance in health outcomes. Thus, they would provide little direct information on how to improve efficiency, effectiveness or quality within the bounds of the existing institutional apparatus.

\(^{15}\) One important dimension along which projects vary is the degree to which they specifically aim to achieve changes in health outcome. Specific disease control efforts, for instance to control malaria or HIV infections, may be expected to result in specific identifiable changes in outcome. Other projects aim to strengthen particular aspects of health system performance and may or may not anticipate changes in health outcomes. Still others aim at a mix of system improvement and disease control and prevention, suggesting that many projects cannot be assessed relative to change in health outcome.
Toward an Evaluation Framework

Although it is difficult to quantify how much a country's health care system contributes to the healthiness of its citizens, some health systems are recognizably better than others. And most observers, including the World Bank, continue to believe that improving the performance of a country's health care system is an important policy objective. Two features of national health care systems provide the major channel through which policy choices and changes in incentives influence the performance of the system. First, the structure of service delivery, that is the number and type of health facilities, the number and type of staff, and their distribution among public, private, or voluntary agencies, determines the degree to which the goods and services produced do or do not respond to consumer demand. Second, each system's institutional capacity governs the flow of resources (providers, consumers, equipment, and supplies) in and out of these facilities and their associated service outputs. It is useful to consider the relevance of these two elements of the system to an analysis of how the Bank does, or might influence the performance of the system.

The health sector in most countries is not managed by any single, monolithic agency. It usually includes a number of governmental agencies, such as Ministries of Health, Ministries of Social Welfare, various levels of local administration, nongovernmental organizations, and of course, private providers and various groups representing the interests of professional or consumer groups. Efforts to improve sectoral policy, whether targeted on the implementation of a disease-specific programs or on broader issues such as reform of health financing, must recognize the complexity of the decision making environment in which they are to take place. Most Bank policy and lending activities often involve changing decisions or practices across a number of agencies. To be effective, they need to encompasses formal and informal procedures that reinforce accountability, systems for gathering and interpreting information about services and their use by consumer populations, and other "rules of the game." For example, improving access to services in outlying areas requires not only training providers in the necessary clinical skills but also adjusting the incentives that govern providers' decisions to locate in rural areas. To take another example, clinical effectiveness depends on the quality of medical education, which in turn depends on the institutional and incentive structures facing universities and secondary schools. Efforts to enhance institutional capacity in this broad sense rely heavily on detailed analysis of incentives, institutions, and on a careful political analysis of organizations and interest groups.

The demand-responsiveness of the structure of service delivery is important because, to be effective, health goods and services must be consumed. A critical issue for health policy (especially where market signals are absent) is to ensure that the production of health goods and services is consistent with the demand for them, or where there are information failures that public policy and actions stimulate demand for goods and services that can make a difference in health outcomes. In other words, analyses or suggestions on how best to organize the structure of health services must be grounded in an analysis of the basic demand conditions that health services must address.

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16. The term institutional capacity relates primarily to managerial practices and procedures that govern the transfer of information, finance, and staff among organizations, including planning and budgeting systems.

17. Recent analyses of the demand for health care (Alderman and Levy 1996; Shaw and Griffin 1994), show that consumers are highly responsive to the characteristics of service delivery, including the perceived quality of the
**Attentiveness to demand** in health care entails not only responding to demand, but changing the demand for both private and public goods. To be effective, health systems therefore need to seek to alter demand through the provision of information, education, and communication efforts designed to change health-related behaviors. A review of the health goods and services that would be included in a list of health priorities for most developing countries shows that most of these interventions require significant changes in target population belief patterns and behaviors, changes induced not by clinical/medical work, but by effective communication, education and promotional efforts.

If the key levers for influencing the performance of the health system are its service delivery structure and its institutional capacity, what are appropriate ways of assessing how well a system is performing? Four evaluative criteria are suggested:

1. **Clinical/Epidemiological Effectiveness** reflects how effectively and how appropriately health care providers administer medical or preventive procedures and advice. For example, at the individual level, providing a nutritional supplement to a patient who is well nourished is clearly inappropriate and will have little biological or clinical effect. Or, at the level of a system, the provision of a chloroquine regimen in areas in which resistant strains of malaria prevail would be clinically ineffective. Determining clinical effectiveness requires a diagnosis of the underlying biological constraints to good health based on thorough analysis of available epidemiological and demographic data. As discussed in Chapter 3, clinical effectiveness is hard to measure because of the difficulties of measuring health outcomes even for a single intervention and is especially difficult for multiple interventions.

2. **Accessibility and Equity** reflect how often the population and its subgroups utilize the health system. Access can be defined in numerous ways including physical accessibility, financial affordability, realized access (utilization), or in terms of equality of health outcomes. Equity is generally defined in terms of the progressivity of the contributions (i.e., taxes, premiums, out-of-pocket payments) to finance health care or in terms of access by different population subgroups. Some access indicators can be obtained from available population data, but in general, there is no more than modest information about utilization by income class.
3. **Quality and Consumer Satisfaction** are measured through formal standards and procedures (e.g., facility accreditation, certification and licensing procedures, etc.) and as perceived by consumers. Consumer satisfaction can be measured by surveys and by revealed preference in service utilization data (when available).

4. **Economic Efficiency** measures how efficiently the nation mobilizes and expends resources for health care. Sectoral or external efficiency refers to the total amount spent on health care and its likely implications for health outcomes. Microeconomic or internal efficiency refers to the efficiency with which services are delivered by individual institutions to individual consumers. It has a number of dimensions, including the efficiency of the system comprising all such facilities (e.g., all health centers), and the efficiency with which different services are substituted for each other. One common method used to measure efficiency is to compare unit costs across facilities holding the level and mix of patient cases constant.

Recently, a measure of health outcome has been developed which combines clinical effectiveness and economic efficiency into a measure based on the disability adjusted life year, or DALY (WDR 1993; Bobadilla and others 1994). This measure scores the number of years and quality of life lost as a result of ill-health, using a 3 percent discount rate to compute the present value of years of life gained through mitigation or prevention of disease. The resulting estimates of the costs of specific interventions can then be used to rank interventions according to the cost at which they deliver a DALY. While an important step forward, DALYs do not allow for the inevitable geographic, institutional, and temporal variation in the cost-effectiveness of various medical interventions. The effectiveness of treatments might vary, for instance, by facility, by the level of subnational government administering the system, or by whether the treatment is provided by the public or private sector. Cost-effectiveness also depends on the preferences and behavior of patients and consumers, including the biological and social characteristics of the target group for any intervention, as well as on temporal changes in demand for services. In other words, at present there exists no single measure for the overall performance of health care systems; evaluations must pursue all four evaluative criteria mentioned in the last paragraph.

In past decades policymakers in developing countries generally emphasized the first and second criteria, equal access and clinical effectiveness, over the third and fourth criteria, consumer satisfaction and economic efficiency. As in other sectors of the economy, central planning was used to allocate capital investment in the health sector at a time when building national institutions in the public sector was the dominant creed. Problems surfaced in national health systems, however, as a consequence of overlooking economic efficiency and consumer satisfaction. Health interventions failed to reach their target populations, for instance, because the lack of drugs and unmotivated providers at clinics kept patients away, or because they provided services for which little consumer demand existed. Ignoring the importance of economic efficiency and consumer satisfaction also undermined the performance of health systems in the two dimensions that the planners sought to improve: equal access to low quality services led those who could to choose the private over the public sector; and poor incentives for providers negatively affected clinical effectiveness.

**Evaluation of the Effectiveness of the Bank's Work in HNP**

The previous section identified two elements or levers which influence the performance of health systems: institutional capacity and the demand-responsiveness of the structure of
service delivery. That section also suggested four evaluative criteria against which to measure the performance of health systems, and which, in turn, determine the degree to which a health system directly influences changes in health outcomes. Building on this evaluative framework, this section further examines the pathways through which the Bank can influence health systems and health outcomes and discusses the methods to be used to evaluate the development effectiveness of the Bank’s activities in the HNP sector.

The Bank is capable of influencing health systems and health outcomes through each of its three main activities—sector work and policy dialogue, investment, and evaluation. Sector work and policy dialogue can provide a diagnosis of a health system and its needs which can have a positive influence on the allocation of resources to the sector, project design, and project performance. The selection and appraisal of investments, as well as supervision, is the major activity through which the Bank directly affects health systems and health outcomes. The Bank’s investment decisions with its clients encompass both direct investments in the structure or institutional capacity of a health system and those that work indirectly through changing socioeconomic status and household level demand for services. Last, the Bank’s evaluation of its investments and lesson learning through monitoring project implementation and performance also contribute to improving its understanding of health systems and health outcomes.

The evaluation will span all three areas of World Bank work: policy dialogue and sector work, appraisal and supervision, and evaluation. The proposed study is divided into two distinct parts: (i) a broad and comparative assessment of the Bank’s entire lending portfolio in HNP, and (ii) country sector impact studies that examine the World Bank’s HNP relationship to several countries in detail. The rationale and methods for both parts follow.

**Cross-country Analysis of Bank Lending**

The evaluation will analyze the Bank’s lending portfolio in HNP to provide a broad perspective on the Bank’s activities and development effectiveness in the sector. Since most of the HNP portfolio consists of ongoing projects, the major component will be a comprehensive content analysis of Staff Appraisal Reports (SARs). This review of over 240 projects in 80 countries, covering FY80 to FY95, will examine the links between the quality of project design and likely development effectiveness. SARs will be evaluated on how they planned to strengthen institutional capacity and improve attentiveness to demand for the health system and their intended (implied) influence on system performance (clinical effectiveness, accessibility and equity, quality and consumer satisfaction, and economic efficiency). A focus on institutional capacity and attentiveness to consumer demand is unavoidable in this cross-country analysis, because on-going projects make up the bulk of the Bank’s current HNP portfolio, and it is too early to judge their outcome. The review of SARs will also collect information on project content and design characteristics to provide a description of how Bank priorities and activities have evolved with time, stated project objectives, project components, and project costs.

Among the questions to be examined are the following:

- *What has been the scope of the Bank’s project assistance? How have the objectives of HNP investments varied across country settings?*

20. Annex 5 presents the coding sheet to be used for coding the content of SARs for all completed and ongoing projects from FY80 to FY95.
• What mechanisms do HNP projects employ to build flexibility into project implementation?

• What is the balance between efforts to establish or extend the health infrastructure and efforts to make the infrastructure effective in HNP project designs?

• Is complexity a necessary characteristic of HNP project design?

• What methods have projects employed to reach institutional development goals?

• How do HNP projects incorporate consumer views in the design of intervention programs?

• How well do HNP projects define and monitor the delivery of services to defined target populations?

• How is success defined?

• What mechanisms has the Bank employed to assure that it, and its Borrowers, are learning from the experience?

For the quarter of the portfolio consisting of completed projects (n=60), the cross-country review will be supplemented by a review of how well the Bank has done in terms of development effectiveness, using, insofar as possible, the four criteria of (i) clinical effectiveness; (ii) accessibility and equity; (iii) consumer satisfaction; and (iv) economic efficiency. This review will be based on the Project Completion/Implementation Reports (PCRs and ICRs) supplemented by interviews with task managers.

To aid in the analysis, a database of socioeconomic indicators for the countries concerned will be constructed. This database will cover all 84 countries spanning the period FY80 to FY95 and contain country indicators representing both the health system as well as health status (life expectancy, total fertility rate (TFR), population per physician, etc.); social statistics (female and total secondary gross enrollment rates, female labor force as percent of total labor force, etc.); economic indicators (GDP per capita, annual domestic inflation, etc.); and governance indicators (political stability, bureaucratic delay, degree of corruption, etc.). This data will be extracted from the Bank’s Economic and Social Database (BESD) for the years 1980-95, and will be supplemented by data on governance available in OED. This database will enable country level comparative analysis across income groups, health status, and by various macroeconomic indicators.

The cross-country analysis will also utilize information from the sixty completed projects to analyze implementation (supervision ratings, R₁) and outcomes (OED ratings, R₂) in relation to Bank inputs. These two ratings (R₁ and R₂), which will serve as dependent variables, will be predicted using as independent variables project characteristics such as design quality (D, indexed from the SAR data), project inputs (I, Bank and Borrower effort, staff weeks, and project costs), and societal determinants (S, including GDP and GDP growth, freedom from corruption, and other macroeconomic variables). The following equation will be estimated:

\[ R_n = f(D, I, S) \]
The results from this reduced form equation, estimated separately for supervision ratings and project outcomes, are intended to offer insights into several issues: whether effective project implementation (and outcome) depends mainly on vectors measuring societal factors (S) beyond the reach of the project itself; whether it depends, to the contrary, on particular features of project design (D), which tend to be the focus of attention within the sector; and/or whether it depends on inputs such as Bank and Borrower effort (I) which might complement or negate the effects of good design.

Country Sector Impact Studies

As argued above, development is effective in health care only if it makes people healthier; but because the data on mortality and morbidity rates in the developing world are inadequate and because the causes of good health are not fully understood, attributing changes in health status to specific World Bank interventions would not be credible. Rather, in evaluating development effectiveness, plausible links must be established across the sequence of development interventions. A cross-country analysis is not suited to such a task. Instead, in depth examinations of individual countries are needed. These country studies will examine the effects of projects and non-lending interventions on health system institutional capacity, the demand-responsiveness of the structure of service delivery, and changed patterns of demand. They will then look for plausible connections between changes in health care delivery systems as a result of Bank interventions and changes in the four measures of health system performance: (i) clinical/epidemiological effectiveness; (ii) accessibility and equity; (iii) perceived quality and consumer satisfaction; and iv) economic efficiency. The data for measuring development effectiveness along these four dimensions will not always be complete or comparable, nor will it be easy to isolate the effect of the World Bank’s work from the activities of governments and other donors.

Even in countries with advanced health care systems, clinical/epidemiological effectiveness is notoriously difficult to define and to measure. The country studies will not attempt direct assessment (which would at a minimum require detailed outcome data) but will focus on the clinical appropriateness (according to current standards of medical care and epidemiological effectiveness) of the menu of goods and services provided by the health care system. An assessment will be made of how up-to-date and locally appropriate available goods and services are for a number of health conditions, especially those of greatest epidemiological significance in the country studied. The degree to which health providers (private as well as public) are properly trained and equipped to provide appropriate care will also be assessed. To the extent possible, this assessment will be both current and retrospective, to see whether Bank advice and Bank projects have improved the menu of goods and services and the ability to provide them. Some information will come from available reviews of health care and status in the particular country, such as previous Bank sector reviews, and additional information will be obtained in interviews or from focus groups of providers, medical educators, and public and private health officials.

Standards of care vary considerably within most developing countries, and questions of access and equity therefore require careful attention. A variety of measures of access should exist in most countries, such as numbers of facilities and providers per capita, and utilization rates of specific health services in the public, private, and traditional sectors. Breaking these data down according to income class, geographic location, gender, and ethnic group will provide measures of equity. To supplement these data and better describe the current situation, both on
the access and equity sides, a questionnaire on service availability and utilization (Annex 2) will be administered to knowledgeable government officials and health services staff, small groups of private providers, representatives of NGOs and to Bank staff and other donor staff in each country studied.

A second important approach to questions of equity and access will be the analysis of survey data on household health-related experiences and behavior. Such data are available in a few countries from surveys, such as the Living Standard Measurement Survey (LSMS) and the Demographic and Health Status Survey (DHS). The main questions to be tackled in using these data will be how access to and utilization of services vary cross-sectionally and how and why the pattern has changed over time and, wherever possible, an examination of possible links to particular project activities. These data will be supplemented by review of reports of service utilization from ongoing service statistics and monitoring and evaluation (M&E) systems where these data are available and sufficiently reliable to allow analysis.

Household surveys may also provide measures of perceived quality and consumer satisfaction. Other available polls, surveys, and beneficiary assessments will also be consulted. Where possible, new surveys or focus groups involving actual and intended beneficiaries of Bank projects will be conducted. These inquiries will cover actual beneficiary utilization of services (from all sources—traditional, private, and public); beneficiaries’ appraisals of providers, facilities, and the treatment they received; their judgments about how services have changed; and their recommendations for improving services.

Evaluations of the economic efficiency of the health care system will not be precise because the systematic use of cost-effectiveness and other forms of economic analysis in the sector is relatively new. Nevertheless, reviews of sector work, public expenditure reviews, and other documents and interviews with key officials should help provide answers to questions such as the following:

- Did World Bank policy dialogue and lending direct government attention to areas with substantial public goods or externalities?

- Were the funded projects high on a list of the most cost-effective interventions? Was any cost-effectiveness analysis completed during project preparation?

- Did World Bank activities promote the most efficient provider-reimbursement systems available in the countries? Did they encourage regulation of the insurance market to redress market failures?

- Did World Bank sectoral reform efforts promote taxation for health care services and medical user fees in the most efficiency-enhancing and equitable manner, given the countries’ political and institutional situation?

The standards against which health projects can be judged have changed over time (in fact, are currently very much a matter of debate), in response to changes in medical and public health technology (or state of the art), as well as in response to much recent analysis in such areas as the cost-effectiveness of different interventions, and emerging views on the role of public finance in the health sector. Assessing past Bank efforts against current standards, building on recent work
completed by HDD (Preker, Brenzel, and Atta 1996) should help to find ways in which the Bank can improve its work.

The assessment of health care system performance using the four criteria given will be supplemented by an assessment of the Bank’s effects on the health system’s institutional capacity and demand sensitivity. Beyond an inventory of facilities, staff and programs, this will require a look behind the scenes at such things as the information and planning system, the incentive system for providers, political support for health care, and other “rules of the game” that determine what resources the health care system can command and how they are deployed. Existing documents and interviews with key officials and Bank staff will be the main sources of information, to be supplemented with a questionnaire for the key informants themselves on institutional development and sustainability issues.

In sum, the country studies will rely on a review of previous Bank reports and other documents on the health system and assembly of health data from household surveys and other sources and some re-analysis of such data where appropriate. In addition, the studies will employ beneficiary surveys or focus groups where feasible, interviews and focus groups involving health providers, health officials, Bank staff, and other donor staff, and questionnaires for some of these key informants to assess performance of the health system. Wherever reliable trend data on health outcomes can be identified, such as data on particular disease conditions, or particular forms of mortality targeted by a Bank project, these too will be utilized with a view to delineating the counterfactual: How would the health system have performed in the absence of Bank intervention?

The working hypothesis underlying these studies is that incentive structures and the other elements of the economic organization of health delivery systems, particularly their institutional capacity and their attentiveness to demand, are the critical pathways through which World Bank interventions can best improve the performance of health systems. In other words, where Bank project designs and supervision missions utilize carefully developed analyses of institutional capacity, health care systems will exhibit the most improvement when measured by the four nominated evaluative criteria. To test this hypothesis, each country study will also characterize the institutional capacity and the institutional development of the countries’ health care systems.21

Country Selection

Because the studies will be complex descriptive accounts in which statistical comparisons will not be complete or decisive, a random sample of countries would probably obscure more information than it revealed. Rather, the countries will be purposively in accord with specific criteria.

First, all or most of the countries should have had substantial interaction with the World Bank in the health care sector. The direct goal of the study is to evaluate the development

21. A questionnaire on institutional development has been prepared based on the work of Bernhardt (1992). Questions cover (i) planning (epidemiological knowledge, estimates of demand, targets or goals, monitoring, and budgeting); (ii) client orientation (utilization, consumer feedback, and consumer satisfaction); (iii) staffing issues (incentives, skill development, and evaluation of performance); (iv) management (data and logistics); (v) field supervision; (vi) management’s ability to determine and control costs; and (vii) problem solving ability (see Annex 3).
effectiveness of the Bank's work in the field, not simply to identify best practice strategies. This requires countries where the World Bank has played a substantial role. These countries might be those with a substantial volume of borrowing (India, Indonesia, Brazil), with a record of borrowing and/or policy dialogue that spans most of the decade and a half of World Bank involvement in HNP (India, Indonesia), or in which the ratio of Bank lending to country expenditures in the sector is relatively high (Zimbabwe, Uganda, Côte d'Ivoire).

Second, the countries selected should span one or more stages of the “epidemiological transition.” A number of developing countries are moving from an epidemiological profile with high rates of communicable disease transmission, infant mortality, and fertility to a profile in which the leading causes of death will soon be non-communicable, such as heart disease, cancer, and accidents (Chile, Malaysia). Other countries are still far from that transition (Bolivia, Nepal), and several are sharply dual, with an industrialized country profile in the cities alongside high prevalence of communicable diseases and infant mortality among rural populations and urban slum dwellers (Mexico, India). Countries at different stages of this transition encounter distinct sets of problems and demand different kinds of interventions.

Third, the countries should exhibit variation in the characteristics of their health care delivery systems, including variation in the mode of health care delivery. Some countries have systems that emphasize expensive clinical care in large urban hospitals (Zambia), and others focus on public health concerns and primary care (the Gambia). Some countries have centralized systems (Indonesia), and others have devolved authority to localities or provinces (Chile). The private sector is widely utilized in some countries, either in the form of modern for-profit physicians (Thailand) or traditional healers and households (Sudan), and in others the public sector dominates health care (Nicaragua). Comparing countries across these axes of variation may permit the institutional structures most conducive to successful interventions to be identified.

Fourth, at least two, and perhaps most, of the countries chosen should have had experience with both disease-specific projects and World Bank-assisted sectoral reform. The balance of Bank lending and sectoral strategy in recent years has shifted from disease-specific interventions and the construction of new facilities to the reform of policymaking institutions in health care. Examining countries with both kinds of “projects” will permit an evaluation of the relative benefits of the two strategies and the factors associated with their performance.

Finally, the set of countries should be balanced across regions and should not focus exclusively on either large or small countries. Focusing on one or two regions might lead to mistaking the historical experiences of one or two sets of countries or of one or two departments of the World Bank, for that matter, for general lessons. Including both large and small countries is also important because the size of a country might be inversely related to the extent of the World Bank’s influence on their HNP policies, one of the study’s chief areas of concern.

Annex 4 lists demographic, health system, and project characteristics for all countries that have borrowed in the HNP sector. From that universe, those countries that have had substantial interaction with the World Bank measured by the relative volume of their borrowing, the absolute volume of their borrowing, or the length of their policy dialogue, and those with both disease-specific and systemic reform projects—in other words, countries that satisfy criteria one and four above—have been selected and are listed separately in Table 5.1. Table 5.1 also characterizes the broad epidemiological status of the countries (based on the data in Annex 4),
used in criterion two, and the dominant subsector in the area of health care (based on relative expenditures), an element of criterion three. Although the structure and function of the countries’ health delivery systems are also interesting axes of variation, the degree of decentralization in a country’s medical system and the emphasis it places on primary care is too complex to capture in the table. These are traits intimately connected to the particular history of each country, and each country sector impact study will find informative variation in those areas.

Three country clusters have been identified based on these criteria: Cluster 1: Jamaica, Indonesia, India, Zimbabwe, and Malawi; Cluster 2: Colombia, Indonesia, India, Zimbabwe, and Mali; and Cluster 3: Brazil, Zimbabwe, China, India, and Uganda. Five countries will finally be selected from these clusters.

Table 5.1: Traits of Countries with Substantial Interaction with the World Bank in both Disease-specific Projects and Health Policy Reform

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*Source: Author’s calculations.*
Summary

This chapter has presented the elements of a proposed assessment of the development effectiveness of the Bank's HNP activities. The design of this evaluation draws on the findings presented in chapters 1-4 which reviewed the literature on health and fertility transitions, previous efforts to evaluate health policies and programs, as well as existing assessments of the Bank's experience in HNP. An evaluative framework for studying health systems has been outlined which suggests that the study focus on an assessment of the Bank's experiences in influencing the demand responsiveness of service delivery structures and institutional capacity in borrower settings and the development effectiveness of these efforts measured against four criteria: clinical effectiveness, accessibility and equity, economic efficiency, and the degree of consumer satisfaction with health care services.

The evaluation will span all three areas of World Bank work: policy dialogue and sector work, investment, and evaluation. The proposed study method has two parts: country studies and a cross-country comparative analysis.

The combination of the country impact studies and the cross-country analysis will yield insights as to the factors important for health system performance, potentially suggesting various ways of increasing the impact of projects and improving development effectiveness. This study will also initiate a new discussion of the significance for development effectiveness. The study will also initiate a new discussion of the significance for development of HNP projects. Health has often been considered a paramount good, and attempts to improve it seem self-evidently worthwhile. But the increasing financial burden of health care systems and the growing possibilities for improving health outcomes at relatively low cost suggest that more critical evaluations could be of considerable benefit.
References


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———. “Joint Country Report: Community Based Survey on Health Services Utilization and Coverage.” Antigua.


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Annex 1: OED Evaluated Projects and Ratings (Fiscal 1970–94), by Type, Closing Year, and Ratings

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B. PCRs

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<td>1993 SAS</td>
<td>India</td>
<td></td>
<td>Third population (Kerala and Karnataka)</td>
<td>PCR</td>
<td>3/31/92</td>
<td>Sat</td>
<td>UNC</td>
</tr>
<tr>
<td>L2447</td>
<td>1993 LAC</td>
<td>Brazil</td>
<td></td>
<td>Sao Paulo Basic Health Care</td>
<td>PCR</td>
<td>6/30/92</td>
<td>Unsat</td>
<td>UNL</td>
</tr>
<tr>
<td>C1649</td>
<td>1993 SAS</td>
<td>Bangladesh</td>
<td>Third population and family health</td>
<td>PCR</td>
<td>6/30/92</td>
<td>Sat</td>
<td>LIK</td>
<td>SUB</td>
</tr>
<tr>
<td>C1585</td>
<td>1994 AFR</td>
<td>Lesotho</td>
<td></td>
<td>Health and population project</td>
<td>PCR</td>
<td>12/31/92</td>
<td>Sat</td>
<td>LIK</td>
</tr>
<tr>
<td>L2529</td>
<td>1993 EAP</td>
<td>Indonesia</td>
<td>Fourth population project</td>
<td>PCR</td>
<td>12/31/92</td>
<td>Sat</td>
<td>LIK</td>
<td>MOD</td>
</tr>
<tr>
<td>L2542</td>
<td>1994 EAP</td>
<td>Indonesia</td>
<td>Second health (manpower development)</td>
<td>PCR</td>
<td>3/31/93</td>
<td>Unsat</td>
<td>LIK</td>
<td>MOD</td>
</tr>
<tr>
<td>L2503</td>
<td>1994 AFR</td>
<td>Nigeria</td>
<td></td>
<td>Sokoto health project</td>
<td>PCR</td>
<td>5/31/93</td>
<td>Sat</td>
<td>UNC</td>
</tr>
<tr>
<td>L2531</td>
<td>1994 MNA</td>
<td>Jordan</td>
<td></td>
<td>Primary health care project</td>
<td>PCR</td>
<td>5/31/93</td>
<td>Sat</td>
<td>LIK</td>
</tr>
<tr>
<td>C1768</td>
<td>1994 AFR</td>
<td>Malawi</td>
<td></td>
<td>Second family health project</td>
<td>PCR</td>
<td>6/30/93</td>
<td>Sat</td>
<td>LIK</td>
</tr>
<tr>
<td>L2611</td>
<td>1994 LAC</td>
<td>Colombia</td>
<td></td>
<td>Health services integration project</td>
<td>PCR</td>
<td>6/30/93</td>
<td>Unsat</td>
<td>UNL</td>
</tr>
<tr>
<td>L2744</td>
<td>1994 AFR</td>
<td>Zimbabwe</td>
<td></td>
<td>Family health project</td>
<td>PCR</td>
<td>9/30/93</td>
<td>Sat</td>
<td>LIK</td>
</tr>
<tr>
<td>L3306</td>
<td>1994 MNA</td>
<td>Jordan</td>
<td></td>
<td>Emergency recovery project</td>
<td>PCR</td>
<td>10/31/93</td>
<td>Sat</td>
<td>LIK</td>
</tr>
<tr>
<td>C1678</td>
<td>1994 AFR</td>
<td>Rwanda</td>
<td></td>
<td>Family health project</td>
<td>PCR</td>
<td>12/31/93</td>
<td>Sat</td>
<td>UNS</td>
</tr>
<tr>
<td>C1623</td>
<td>1994 SAS</td>
<td>India</td>
<td></td>
<td>Fourth population project</td>
<td>PCR</td>
<td>3/31/94</td>
<td>Sat</td>
<td>UNC</td>
</tr>
</tbody>
</table>

Source: OED Database.
Annex 2: Questionnaire on Health Care Services

This is the first part of a two-part questionnaire about health care services. This part is meant to provide indicators that allow health services provided to be compared across countries. The second part, which you will fill out on the computer, will focus on management and organization and provide some feedback based on your responses. The questions here concern your assessments of current service availability and utilization. (You may take mid-1996 as the reference date.) If you have strong doubts about any estimate you make or answer you give, you may add a question mark (?) after it.

Please return completed questionnaire to Susan Stout, G7-051, within one week.

Please indicate the country you are rating:

Name of rater: ____________________________
Phone no.: ______________________________
Date: _________________________________

1. Does the country have a major, currently active program in each area below—a program recognized as a major initiative in the health sector or a distinct entity on organizational charts?

**PLEASE CIRCLE THE NUMBER REPRESENTING YOUR ANSWER.**

<table>
<thead>
<tr>
<th>Area</th>
<th>Has active program</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Immunization (EPI)</td>
<td>2</td>
</tr>
<tr>
<td>Oral rehydration therapy (ORT)</td>
<td>2</td>
</tr>
<tr>
<td>Acute respiratory infections (ARI)</td>
<td>2</td>
</tr>
<tr>
<td>Nutrition</td>
<td>2</td>
</tr>
<tr>
<td>Malaria control</td>
<td>2</td>
</tr>
<tr>
<td>Safe motherhood/maternity care</td>
<td>2</td>
</tr>
<tr>
<td>Family planning</td>
<td>2</td>
</tr>
<tr>
<td>STD/HIV</td>
<td>2</td>
</tr>
<tr>
<td>Tuberculosis control</td>
<td>2</td>
</tr>
<tr>
<td>Tobacco control</td>
<td>2</td>
</tr>
<tr>
<td>School health</td>
<td>2</td>
</tr>
</tbody>
</table>

2. What percent of urban and rural households have easy access to adequate public health services, and to the other general types of services listed below? (Easy access means that reaching a source for the service—which may be either public or private—requires less than two hours, and the cost is not burdensome.)

<table>
<thead>
<tr>
<th>Service</th>
<th>Percent with easy access among urban households</th>
<th>Percent with easy access among rural households</th>
</tr>
</thead>
<tbody>
<tr>
<td>General medical services</td>
<td>&lt;10 25 50 75 90+</td>
<td>&lt;10 25 50 75 90+</td>
</tr>
<tr>
<td>Contraceptive services or supplies</td>
<td>&lt;10 25 50 75 90+</td>
<td>&lt;10 25 50 75 90+</td>
</tr>
<tr>
<td>Antenatal care</td>
<td>&lt;10 25 50 75 90+</td>
<td>&lt;10 25 50 75 90+</td>
</tr>
</tbody>
</table>
3. Below is a more detailed list of services. Could you estimate the percent of households with easy access to each.

<table>
<thead>
<tr>
<th>Service</th>
<th>Percent with easy access among urban households</th>
<th>Percent with easy access among rural households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immunization services</td>
<td>&lt;10, 25, 50, 75, 90+</td>
<td>&lt;10, 25, 50, 75, 90+</td>
</tr>
<tr>
<td>Oral rehydration therapy (ORT) services</td>
<td>&lt;10, 25, 50, 75, 90+</td>
<td>&lt;10, 25, 50, 75, 90+</td>
</tr>
<tr>
<td>Providers who can properly diagnose and treat acute respiratory infections (ARI)</td>
<td>&lt;10, 25, 50, 75, 90+</td>
<td>&lt;10, 25, 50, 75, 90+</td>
</tr>
<tr>
<td>Prevention and treatment of protein-energy malnutrition</td>
<td>&lt;10, 25, 50, 75, 90+</td>
<td>&lt;10, 25, 50, 75, 90+</td>
</tr>
<tr>
<td>Treatment for malaria</td>
<td>&lt;10, 25, 50, 75, 90+</td>
<td>&lt;10, 25, 50, 75, 90+</td>
</tr>
<tr>
<td>Emergency obstetric care</td>
<td>&lt;10, 25, 50, 75, 90+</td>
<td>&lt;10, 25, 50, 75, 90+</td>
</tr>
<tr>
<td>Abortion</td>
<td>&lt;10, 25, 50, 75, 90+</td>
<td>&lt;10, 25, 50, 75, 90+</td>
</tr>
<tr>
<td>Syphilis screening and treatment</td>
<td>&lt;10, 25, 50, 75, 90+</td>
<td>&lt;10, 25, 50, 75, 90+</td>
</tr>
<tr>
<td>Dental services</td>
<td>&lt;10, 25, 50, 75, 90+</td>
<td>&lt;10, 25, 50, 75, 90+</td>
</tr>
</tbody>
</table>

4. Consider the typical urban health center. (Leave out the best 25% of health centers and the worst 25%.) How often would a typical center have sufficient supplies of the following commodities? Make a similar estimate for the typical rural health center.

<table>
<thead>
<tr>
<th>Supplies and commodities in stock</th>
<th>Typical urban health center</th>
<th>Typical rural health center</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>At all times</td>
<td>Quite often</td>
</tr>
<tr>
<td>Vaccines, syringes, and needles for immunization</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Oral rehydration salts (ORS)</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>The antibiotics for acute lower-respiratory infections (ALRI)</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>recommended in standard guidelines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Micronutrients (e.g., vitamin A, iron, iodine) as locally appropriate</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Chloroquine</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Tetanus toxoid vaccine</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Oxytocics and anticonvulsants</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Oral contraceptive pills</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Condoms</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Antibiotics recommended for STD treatment</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Aspirin</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Anthelmintics (anti-worm drugs such as mebendazole)</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

5. In the typical urban or rural health center, how often you would expect to find the facilities below?

<table>
<thead>
<tr>
<th>Facility</th>
<th>Typical urban health center</th>
<th>Typical rural health center</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>At all times</td>
<td>Quite often</td>
</tr>
<tr>
<td>Clean running water</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Electricity</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>A working refrigerator</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>A working X-ray machine</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>A sanitary toilet</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>A working sterilizer</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>
6. Please indicate if each of the following statements about the typical health center is generally true or generally false in urban and rural areas.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Typical urban health center</th>
<th>Typical rural health center</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>The typical health center sees clients at least 30 hours a week.</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>The typical health center has a qualified nurse regularly and a physician at least once a week.</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Staff in the typical health center have a lot of extra time on their hands.</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Most patients in the typical health center are seen by a nurse or doctor within two hours of arrival.</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>The typical health center has enough staff to handle the daily client load.</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>The typical health center is visited by a supervisor, or by anyone from the district office or a higher level, at least once in six months.</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>The typical health center collects some fees from at least 20 percent of all clients.</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

7. List what you consider the three most important health problems for the population at large. In your judgment, is the health care system adequately addressing each problem?

<table>
<thead>
<tr>
<th>Problem</th>
<th>Is problem being addressed?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes, adequately</td>
</tr>
<tr>
<td>1st.</td>
<td>4</td>
</tr>
<tr>
<td>2nd.</td>
<td>4</td>
</tr>
<tr>
<td>3rd.</td>
<td>4</td>
</tr>
</tbody>
</table>

8. Are there public-sector workers whose primary task is to visit targeted, hard-to-reach women in their homes to provide child health or family planning services?

Yes: 2 | No: 1 → (Skip to Q. 12)

9. What percent of the urban and the rural population is covered by such home-visiting workers?

<table>
<thead>
<tr>
<th>Area</th>
<th>Percent of population covered by home visitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban areas</td>
<td>&lt;10 25 50 75 90+</td>
</tr>
<tr>
<td>Rural areas</td>
<td>&lt;10 25 50 75 90+</td>
</tr>
</tbody>
</table>
10. How many households is the average home-visiting worker responsible for, and how many households does he or she visit per month?

<table>
<thead>
<tr>
<th>Area</th>
<th>Fewer than 500 households</th>
<th>500 to 2,000 households</th>
<th>More than 2,000 households</th>
<th>Fewer than 20 households</th>
<th>20 to 40 households</th>
<th>More than 40 households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban areas</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Rural areas</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

11. Do any home-visiting workers provide the following health services, whether exclusively or as part of other duties?

<table>
<thead>
<tr>
<th>Service</th>
<th>Provided by home visitors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Promotion of immunization services</td>
<td>2</td>
</tr>
<tr>
<td>Promotion of oral rehydration therapy</td>
<td>2</td>
</tr>
<tr>
<td>Diagnosis and treatment of acute respiratory infections</td>
<td>2</td>
</tr>
<tr>
<td>Prevention and treatment of malnutrition</td>
<td>2</td>
</tr>
<tr>
<td>Malaria control</td>
<td>2</td>
</tr>
<tr>
<td>Promotion of safe motherhood</td>
<td>2</td>
</tr>
<tr>
<td>Contraceptive counseling</td>
<td>2</td>
</tr>
<tr>
<td>Promotion of safe sex and STD/HIV testing</td>
<td>2</td>
</tr>
</tbody>
</table>

12. Consider the richest 10% of the population, and the poorest 25%. In developing countries, per capita income in the richest group is anywhere from 5 to 50 times per capita income in the poorest group. For the country you are rating, would you say this ratio is closer to 5 times or to 50 times, or somewhere in between?

<table>
<thead>
<tr>
<th>Per capita income of richest 10% is x times per capita income of the poorest 25%</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 times</td>
</tr>
</tbody>
</table>

13. How easy or difficult would it be for the richest 10% and the poorest 25% to obtain the following health care services, if they were needed or desired?

<table>
<thead>
<tr>
<th>Service</th>
<th>For richest 10%</th>
<th>For poorest 25%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Impossible</td>
<td>Very difficult</td>
</tr>
<tr>
<td>A chest X-ray</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>An open-heart operation</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Reliable advice about appropriate contraceptives and how to use them</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Treatment for a broken arm</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Chemotherapy for tuberculosis</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>A safe Caesarean section</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Surgical repair of a hernia</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Appendicitis surgery</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

14. Are the following health services available anywhere in the country outside the capital city and its suburbs?
### Services Available outside capital city and its suburbs

<table>
<thead>
<tr>
<th>Services</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>An EKG machine</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>A kidney dialysis machine</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>A computerized database on clinic clients</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>A magnetic resonance imaging (MRI) machine</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>An incubator for premature infants</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>A mammography machine</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

15. In comparison to government health services in various developing-country regions, where would you rank the government health services in this country?

<table>
<thead>
<tr>
<th>In comparison to government health services in developing countries in:</th>
<th>Government health services in this country are:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Better than most</td>
</tr>
<tr>
<td>Latin America</td>
<td>4</td>
</tr>
<tr>
<td>Asia</td>
<td>4</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>4</td>
</tr>
<tr>
<td>The Middle East and North Africa</td>
<td>4</td>
</tr>
</tbody>
</table>

16. What proportion of the following facilities are managed by nonprofit or private agencies?

<table>
<thead>
<tr>
<th>Facilities</th>
<th>Percent managed by nonprofits or private agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternity centers</td>
<td>&lt;10 25 50 75 90+</td>
</tr>
<tr>
<td>Hospitals with more than 20 beds</td>
<td>&lt;10 25 50 75 90+</td>
</tr>
</tbody>
</table>

17. Please estimate the proportion of all doctors and nurses in the country who fall in each category below.

<table>
<thead>
<tr>
<th>Category</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctors who work for the government, whether full-time or part-time</td>
<td>&lt;10 25 50 75 90+</td>
</tr>
<tr>
<td>Nurses who work for the government, whether full-time or part-time</td>
<td>&lt;10 25 50 75 90+</td>
</tr>
<tr>
<td>Doctors who are foreign nationals</td>
<td>&lt;10 25 50 75 90+</td>
</tr>
<tr>
<td>Nurses who are foreign nationals</td>
<td>&lt;10 25 50 75 90+</td>
</tr>
<tr>
<td>Doctors who are female</td>
<td>&lt;10 25 50 75 90+</td>
</tr>
</tbody>
</table>

18. What proportion of the urban and rural population would have access to and would be willing to pay for a private doctor in these emergencies:

<table>
<thead>
<tr>
<th>Emergency</th>
<th>URBAN percent with access and willing to pay a private doctor</th>
<th>RURAL percent with access and willing to pay a private doctor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A child's sudden and serious illness</td>
<td>&lt;10 25 50 75 90+</td>
<td>&lt;10 25 50 75 90+</td>
</tr>
<tr>
<td>An accident to an adult male that could mean loss of a limb</td>
<td>&lt;10 25 50 75 90+</td>
<td>&lt;10 25 50 75 90+</td>
</tr>
</tbody>
</table>
19. Is it easier or harder for the typical rural resident to obtain adequate health care from any source, in comparison to the typical rural resident in other countries?

| In comparison to the typical rural resident in developing countries in: | Obtaining adequate health care is: |
|---|---|---|---|---|
| | Much easier | Somewhat easier | Somewhat harder | Much harder |
| Latin America | 4 | 3 | 2 | 1 |
| Asia | 4 | 3 | 2 | 1 |
| Sub-Saharan Africa | 4 | 3 | 2 | 1 |
| The Middle East and North Africa | 4 | 3 | 2 | 1 |

Please provide us some guidance about obtaining further information.

20. Are there any accessible studies, surveys, or collections of national health statistics that would throw further light on service availability and utilization? Please indicate where they can be obtained.

<table>
<thead>
<tr>
<th>Studies, surveys, or collections of national statistics</th>
<th>Available where?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
</tbody>
</table>

21. Is there anyone else, in the World Bank or otherwise easily approachable, who in your estimation could give particularly reliable answers on this questionnaire?

<table>
<thead>
<tr>
<th>Other possible, knowledgeable respondents</th>
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Here are some final questions regarding your experience in this country.

22. What were the dates of your most recent and your first mission to this country?

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<tr>
<td>First mission:</td>
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23. Could you estimate the number of missions you have had to this country? No. of missions: _______________________

24. Have you authored, coauthored, or commissioned a sector report on the country’s health care system or some aspect of it?

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25. Your current job title ____________________________________________
Annex 3: Questionnaire on Institutional Capacity

Evaluating Health Projects

Institutional Capacity: An interactive assessment program

The following questions are included in an interactive assessment program designed to tap opinions on the institutional capacity of the health system in a particular country. The program is available in electronic form in a Windows 3.1 compatible format, and is designed to be completed by individual respondents on diskette, and then submitted to the study team. This annex lists the questions included in the program. The program is self-scoring, enabling rapid analysis of data. The questionnaire was prepared for OED by Dr. Michael Bernhart.

This program, with only a few exceptions, will ask you to answer Yes or No [or Don't Know where that applies] to a series of questions that evaluate the sustainability of a health organization. After you have entered your answers, the sustainability of the organization will be rated on ten dimensions along with some sparse interpretation of the long term viability of the organization you have assessed.

The procedure should be fairly self-evident; place the pointer on the "button" that corresponds to your answer and click the mouse.

A. Before realistic planning can begin, information on the population to be served must be known. Does the organization or program you are assessing have reliable and current [collected within the last three years] information on the following...

A.1 The size of the under five age group
   By health district or region
   By health facility catchment area

A.2 The number of women of reproductive age
   By health district or region
   By health facility catchment area

A.3 Has the incidence of the most common diseases of children under five years of age and pregnant women been documented?
A.3.1 What is the source of that information on diseases of under fives or pregnant women?
   Survey
   Hospital and clinic records
   Mainly hospital records
   Anecdotes
A.4 Of importance in planning a maternal-child health program is information on the incidence of targeted diseases. Is the incidence of the following reliably known [reliability as used here would typically mean survey data or accurate service statistics from all health facilities]:
   Acute lower respiratory infections
   Diarrhoeal disease [are there disease specific mortality data or an indicator of severity such as hospital admissions for rehydration]
   Low birth weight [less than 2500g]
   Acute malnutrition [Gomez classification 2 or 3]
   Immunizable diseases

A.5 Is contraceptive prevalence reliably known?

B At a minimum, planning involves using estimates of demand to project the need for supplies.

B.1 Have the diarrhoeal disease incidence data been used by the program to project demand for oral rehydration salts (ORS)?

B.2 Have the data on contraceptive prevalence and targeted increase in coverage been used by the program to project demand for contraceptives?

B.3 Have the targets for immunization been used by the program to project demand for:
   Vaccines
   Cold chain equipment
   Syringes and needles

C Plans typically state targets or goals. Are there numerical impact targets for reducing morbidity and mortality of the under fives and pregnant women?

C.1 You answered that such targets exist. Has a date for reaching those targets, or at least many of them, been established?

C.2 Still on numerical targets or goals . . . Is there a method of monitoring progress toward them?

C.3 Of special relevance to a maternal-child health program, have quantitative and dated targets been set for:
   C.3.1 ALRI mortality reduction
   C.3.2 Diarrhoeal disease expressed as either a reduction in disease severity or reduction in mortality
   C.3.3 Incidence of low birth rate
   C.3.4 Contraceptive prevalence
   C.3.5 Reduction in acute malnutrition
C.3.6 A final set of questions on targets or goal setting: Are there numerical targets for
immunization coverage that are expressed in accordance with international guidelines [e.g.,
“80% of children will receive measles during the calendar year when between the ages of 10
and 13 months”]:
   For BCG
   For DPT
   For polio
   For measles
   For tetanus toxoid

D Whether the program has set explicit targets or not, presumably there is interest in achieving
some end. These ends may be articulated as concrete targets or as a vague interest in better
health; however, both are only expressions of hope in the absence of a monitoring system,
either accurate service statistics or periodic surveys, that presents to program management
the degree to which health improvement goals have been achieved. Does such a system exist
that produces reliable data within twelve months of the end of the planning period?

D.1 ALRI mortality reduction
D.2 Diarrhoeal disease expressed as either a reduction in disease severity or reduction in ortality
D.3 Incidence of low birth rate [less than 2500 grams]
D.4 Contraceptive prevalence
D.5 Reduction in acute malnutrition
D.6 Does this monitoring system capture immunization coverage [to include whether the
vaccination occurred in accordance with international guidelines regarding the timing and
number of vaccinations]:
   For BCG
   For DPT
   For polio
   For measles
   For tetanus toxoid

E Another general, and good, indicator of the seriousness of the planning effort appears in the
detail and distribution of budgets. Does the organization prepare its own annual budget?

E.1 Is the budget broken down by program [e.g., EPI, malaria, etc.]?
E.1.1 In that case, do program directors receive their budgets?

E.2 Is the budget broken down by health district or region?
E.2.1 In that case, do the directors of these areas actually receive their budgets?

E.3 Is the budget broken down by hospitals and major clinics?
E.3.1 Do the directors of these facilities receive their budgets?

E.4 Are actual financial results posted against the budget [does the accounting department record
actual expenditures against budgeted expenditures]?
E.4.1 How often are the results posted, at least quarterly?
E.4.2 In that case, are the results posted monthly?
E.5 Are financial results posted at all lower levels [program, project, region, facility] for which budgets are prepared?

E.6 Are budget performance results distributed to all managers of units or programs for which budget performance is evaluated?

You have just completed the section on planning [with questions germane to other areas embedded as well] and are one-fourth of the way through the assessment. The following questions assess the client orientation of the organization. Primary in a focus on the program’s clients is knowledge of those clients. What information does the program collect, and have at its disposal, on the needs and dispositions of the target clients? Answer Yes if the information is available and is known to senior program managers.

A.1 Is the extent of use of ORS [oral rehydration salts] known by senior managers?
   A.1.1 Beyond the extent of client use of ORS, do senior managers know the extent of client acceptance of ORS [they use it or they would use it if they could get it]?
   A.1.2 Going one step further, is client knowledge of how to use ORS known?

A.2 Is the extent of breastfeeding known?

A.3 Is vaccination coverage known for
   BCG
   DPT
   Polio
   Measles
   Tetanus toxoid

B A second indicator of client orientation is the existence of formal mechanisms through which clients can make their wishes and disappointments known.

B.1 Do at least half of the field supervisors contact patients in their homes or at the health facility and ask them questions about the accessibility and quality of health services?

B.2 If there are health committees at the local level, do program staff contact the majority of these committees at least quarterly for information?

B.3 When a client fails to appear for a scheduled appointment, does a staff member attempt to contact the client
   B.3.1 If the missed appointment is for family planning
   B.3.2 If the missed appointment is for vaccination
   B.3.3 If the missed appointment is for growth monitoring of an underweight child

B.4 Is there a complaint mechanism by which patients can express their lack of satisfaction to a manager or supervisor?

C A third indicator of a focus on clients is the existence of a system to monitor client satisfaction.
C.1 Are surveys of patient satisfaction with the service conducted at least every two years?

C.2 Are the following measures of factors that would affect client satisfaction taken on a biannual, or more frequent, basis?
C.2.1 Average waiting time for service in outpatient facilities
C.2.2 The number of patients per facility per day that are unable to receive outpatient service [that are turned away]
C.2.3 The percentage of patients that receive prescribed drugs and supplies [antibiotics, food supplements] at the service facility where the prescription is written

Obviously no quality program will be sustained if there is little attention given to preparing, motivating, and retaining staff.

A Looking first at basic incentives . . .

A.1 Is the total package of salary and benefits roughly equivalent to what service delivery personnel could obtain in other secure employment?
A.1.1 Are staff paid on time?
A.1.2 Do staff employed in the following vertical programs receive the same compensation package [not more] as other employees at the same level within the organization?
   Vaccination
   Family planning

A.2 Do service delivery personnel advance within the program, receiving either larger salaries, more responsibility, or more status, in accordance with a formal plan?
A.2.1 Is that advancement based on either performance or seniority [that is, it is not based in the average case on caprice, connections, purchase of position, etc.]?

A.3 Will the following result, in the average case, in dismissal of a physician?
   Repeated unexcused absences from work
   Theft of program supplies
   Clear evidence of technical incompetence

A.4 Which of the following indicators are tracked by the program:
   Annual turnover rate of personnel
   Comparable private sector salaries
   Staff absenteeism

B Skill development is obviously central to program success.

B.1 As a benchmark, indicate whether the majority of the following staff attend any formal training at least every two years.
   Physicians
   Other medical service delivery personnel
   Program managers
   Field supervisors
   Administrative/clerical personnel
B.2 Has the organization within the last two years undertaken or contracted for an evaluation of the skills needed at any technical [medical] or managerial level?
B.2.1 Has the organization offered a training course on either of the following during the past two years?
   Accounting and financial analysis
   Management information collection and processing
B.2.2 When such courses have been given [accounting or information collection and processing], did the program pay for at least half of the direct costs out of its own budget?
B.3 Is there an established training program for new health personnel in the following areas:
   Breast feeding
   Vaccination
   Family planning
   Oral rehydration therapy
   Management of ALRI (acute lower respiratory infection]
   Growth monitoring
   Prenatal care
B.3.1 When these courses have been held, has the program paid for at least half of the direct costs out of its own budget?
B.3.2 Have these courses [breastfeeding, ALRI, ORT, family planning, etc.] been offered through the same training institute[s] that serve other training requirements of the organization?
C The following two sets of questions deal with the evaluation of individual performance. In the absence of at least a rudimentary system to evaluate personnel it will be difficult to reward individual performance or correct errors.
C.1 Is there a formal periodic review mechanism for individuals in the following categories:
   Physicians
   Nurses
   Other health care providers
   Field supervisors
   Administrative and clerical staff
   Program managers
C.2 For those categories of personnel for whom this performance evaluation system exists, in the average case is the review performed and are the results shared by the reviewer with the individual who has been evaluated?
   For physicians
   For nurses
   For health care providers other than physicians and nurses
   For field supervisors
   For administrative and clerical staff
   For program managers
Logistics is quickly equated with management and the calibre of the logistics system is often a bellwether for other management functions. The questions in this section deal primarily with whether program management has equipped itself with the basic information and systems required to manage supplies.

A.1 Has a formulary or essential drugs list been created or adopted?
A.1.1 Are any drugs not on that list purchased centrally by the program?

A.2 Has a standard treatment protocol [specifying drugs and dosages] been developed or adopted for ALRI?

A.3 Do program managers have the following information available to them:
A.3.1 Draw down or use rates of
  Vaccines
  Oral rehydration salts
  Contraceptives
  The antibiotic recommended for pneumonia in children [i.e., cotrimoxazole, ampicillin, penicillin, etc.]
  Food supplements
A.3.2 Monthly stock levels of essential drugs in
  The central warehouse
  Regional warehouses
  Health facilities
A.3.3 Duration of stockouts if they occur

A.4 Are the supplies for the following maternal-child health interventions administered by the same system as other program supplies?
  Family planning
  Vaccines
  Cold chain equipment
  Oral rehydration salts

A.5 Does the host program pay at least half of the cost of the following supplies from funds not derived from donors [i.e., own budget, patient fees]?
  Contraceptives
  Oral rehydration salts
  Vaccines
  Cold chain equipment
  The antibiotic recommended for pneumonia in children [i.e., cotrimoxazole, ampicillin, etc.]
  Food supplements

B.1 Have the diarrhoeal disease incidence data been used by the program [with minimal external assistance] to project demand for oral rehydration salts?

B.2 Have the data on contraceptive prevalence and targeted increase in coverage been used by the program [with minimal external assistance] to project demand for contraceptives?
B.3 Have the targets for immunization been used by the program to project demand for:
- vaccines
- cold chain equipment
- syringes and needles

Many would argue that field supervision is the cornerstone of any primary health care program and the following questions take up this topic.

A.1 What is the ratio of supervisors to primary care facilities to be supervised?
   - Each field supervisor is responsible for
     - 1-10 facilities
     - 11-20 facilities
     - Over 20 facilities

A.1.1 Are there supervisors dedicated exclusively to vertical programs?
A.1.2 For the following two vertical programs, are the salaries of the supervisors for these programs fully covered by funds not provided by a donor?
   - Family planning
   - Vaccination

A.2 To reach the facilities to be supervised what provision for transport is made for a field supervisor?
   - Has official vehicle
   - Shares official car with others
   - Is paid to use own vehicle
   - Has money for public transport
   - Has no transport

A.2.1 Do the supervisors for the family planning activities have the same access to transport, neither better nor worse, as do other field supervisors in the organization?
A.2.2 Do the supervisors for the vaccination program have the same access to transport to field facilities as do other field supervisors in the organization?

A.3 Do supervisors have an explicit guide to standards of care and patient counseling for
   - Breast feeding
   - Vaccination
   - Family planning
   - Management of diarrhoea
   - Growth monitoring
   - Management of acute lower respiratory infections
   - Prenatal care

A.4 Has the supervisor been provided with or developed quantitative targets for each supervised facility for
   - Breast feeding
   - Vaccination
   - Family planning
   - Growth monitoring
   - Prenatal care
A.5 In the average case the supervisor checks field personnel for:
   Their technical skills in maternal-child health areas
   Record keeping
   Achievement of performance targets

A.5.1 Does the supervisor, in the average case, provide performance feedback to supervisees?

A.5.2 The supervisor, on average, meets with supervisees how often?
   Monthly
   Bi-monthly
   Semi-annually
   Less often

A.6 Do field supervisors prepare reports on their visits to health facilities that are sent to program management?

A.6.1 Does program management provide supervisors with a written or verbal response to these reports?

Questions in earlier sections tapped the budget process; the following deal principally with management’s ability to determine and control costs.

A Cost accounting. Managers cannot make prudent decisions on the cost-effectiveness of activities and programs without cost information.

A.1 Has the program conducted an analysis of project or activity costs within the past year [i.e., cost per procedure, cost per client, cost of pharmaceuticals per client, etc.]?

A.2 Are expenses recorded in such a way that they may be assigned to projects or activities?

A.2.1 Are expenses then, in fact, assigned to programs, project, or activities?

B Control. Can managers verify that funds have been applied to their intended uses?

B.1 Are posted expenses based on actual expenditures [usually supported by receipts, vouchers, etc.] and not on presumed expenses?

B.2 Are the accounts updated at least monthly?

B.3 Do the monthly, or periodic, reports show budgetary expenditures, encumbrances, and results?

B.3.1 Do the reports also show variances from budgeted amounts?

C Managerial flexibility. A budget is a fine planning and control tool; it should not be a strait jacket.

C.1 Does senior management have the discretion to move limited amounts [for example, ten percent of the budgeted amount] from one budget category to another without seeking higher level approval?

C.2 Do program and facility managers have a small amount of discretionary funding to cover contingencies which they can spend without higher level approval?
There is no disagreement that the ability of management to resolve problems underlies its success; there is, however, disagreement over how to measure this elusive quality. The following questions concern concrete evidence of problem solving ability.

A Creativity in problem solving. The absence of innovation in problem solving is easy to detect: endless complaining about the impossibility of resolving the problem. Innovative responses are those that go beyond conventional bureaucratic fixes and are remarked on as departures from the norm by program managers other than those who devised the responses. Can you identify at least one instance in the past 12 months when management implemented an innovative response to a problem in each of the following areas?

- Staff incentives
- External political opposition
- Internal opposition to changes
- Lack of resources

B Recognition of problem solving capability. There is evidence that a development organization earns autonomy through demonstrated managerial competence.

B.1 Does the program prepare its own budgets?
B.1.1 Are those budgets approved without significant modification [deletion of programs, reductions in support]?

B.2 Can the organization dispose of revenues it generates [within broad guidelines]?

B.3 Can the organization establish its own structure?

C Visible evidence of problem solving capacity is the organization's responsiveness to requests from other organizations [donors, other ministries].

C.1 When the organization receives a request for information already in hand, does it provide that information in less than one week?

C.2 Does the organization respond to requests on the status of administrative processes [i.e., status of a study, training course, etc.] within two days?

C.3 Does the organization respond to requests for decisions within two weeks?
## Annex 4: Demographic, Health System, and Project Characteristics of Borrowers in HNP

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Note: The table contains data on population, mortality, fertility, and health expenditures for various countries in different regions. The data includes rates, per capita values, and project statuses along with project names and funding information.
1. Did the SAR justify this project among the universe of possible interventions in the sector, as well as in related sectors? (SARJustification)
   - 0: not at all
   - 1: considered/discussed the costs and effectiveness of this intervention
   - 2: compared costs and effectiveness of this intervention to others in the sector
   - 3: compared costs and effectiveness of this intervention to others in the sector, as well as to interventions in other sectors that might address the same needs

2. Did the SAR consider demand for the proposed interventions? (SARDemand)
   - 0: not at all
   - 1: Considered alternatives available to households
   - Included evidence concerning demand for proposed services
   - 2: for some components
   - 3: for most components
   - Made rough estimates of net effect of proposed intervention
   - 4: for some components
   - 5: for most components

3. How much beneficiary involvement was there in project design? (BenefInvolvement)
   - 0: not mentioned
   - 1: design responds to perceived consumer concerns
   - 2: consumers interviewed or surveyed by Bank or others
   - 3: consumers given decision making power

4. Did the SAR justify public sector involvement for the projects in question? (PubSectInvolvement)
   - 0: not at all
   - 1: mentioned market failures, public goods, or externalities
   - 2: identified market failures in the country and sector in question
   - 3: described and weighed both market failure and potential government failure

5. Did the SAR present an account of the future of the HNP sector in the country if the project were not implemented? (Futurew/oImplementation)
   - 0: not at all
   - 1: assumed without argument that current trends will continue
   - 2: estimated output or outcome data in absence of project
   - 3: compared estimates of both outputs and outcomes both with and without the project

6. Did the SAR estimate the supply of health inputs in the absence of the proposed project? (SupplyHealthInputs)
   - 0: not at all
   - 1: provided data on public and private providers
   - 2: developed hypotheses concerning relative magnitudes of supply elasticities, e.g., potential crowding out or “in”
   - 3: considered both crowding out (“in”) and potential effect of public-private competition

For NA: Leave Blank
7. Did the SAR analyze the fiscal impact of the proposed project? *(FiscalImpact)*
   0: not at all
   1: estimated recurrent burden of project for government
   2: discussed recurrent burden in context of total tax burden and public debt
   3: also analyzed impact of expenditures on labor markets

8. If project involved health facility construction, what criteria was used to determine location? *(LocationCriteria)*
   0: not discussed
   1: average population per facility
   2: statistics identifying underserved population, including private providers
   3: all of the above, including consultation with local authorities and beneficiaries

9. Did the SAR identify the health needs of the country? *(HealthNeeds)*
   0: not at all
   1: described the country’s epidemiological profile
   2: ranked the needs on the basis of analyses of burden of disease or other method
   3: the ranking method also included input from consumers on relative importance

10. Did the SAR include a cost-benefit, cost-utility, or cost-effectiveness analysis? *(CBCUCEAnalysis)*
    0: not at all
    1: claimed that the project would be cost-effective
    2: included data on the unit costs of the interventions
    3: included a formal CB, CU, or CE analysis

11. Did the SAR include a risk analysis for the proposed project? *(RiskAnalysis)*
    0: not at all
    1: described institutional, economic, environmental, or other risks
    2: assigned weights or ranks to the various risks
    3: included a formal risk analysis

12. Did the SAR discuss strategies to benefit the poor? *(BenefitPoor)*
    0: not at all
    1: asserted that the poor will benefit
    2: discussed alternative strategies for increasing benefits to the poor, or for increasing the numbers of poor who will benefit
    3: weighed the poverty benefits and administrative costs of alternative targeting strategies

13. Did the SAR discuss user fees/cost recovery? (check all that apply)
    - no mention *(UserFeesNoMention)*
    - a system of user fees exists in the country *(UserFeesExists)*
    - plans in project to study fees (consumers’ willingness to pay/private out-of-pocket expenses on health) *(UserFeesStudyPlans)*
    - plans by project/government to introduce or strengthen user fees (may include self-financing health insurance, e.g., pre-payment schemes) *(UserFeesPlansIntroduce)*

For NA: Leave Blank
Institutional and political analysis

14. What was the level of national (or, for federal countries, provincial) government involvement in project design or preparation? \((\text{NatlGovtInvolvement})\)
   0: not mentioned
   1: government officials interviewed/consulted
   2: government officials designed some components of project
   3: government designed most of project

15. What was the level of provincial (or, for federal countries, municipal) government involvement in project design or preparation? \((\text{ProvGovtInvolvement})\)
   0: not mentioned
   1: government officials interviewed/consulted
   2: government officials designed some components of project
   3: government designed most of project

16. What evidence did the SAR provide of government commitment? \((\text{GovtCommitment})\)
   0: not mentioned
   1: asserted that government is committed
   2: cited government’s actions to facilitate the project prior to appraisal
   3: cited government’s passage of a law to facilitate the project prior to appraisal

17. Did the SAR analyze the institutional obstacles to the project? \((\text{InstitutionalObstacles})\)
   0: not at all
   1: discussed commitment to project
   2: analyzed incentive structures of central government officials, local government officials, bureaucrats, or service providers
   3: analyzed incentive structures of all of the above

18. Did the SAR consider the potential negative consequences of the project on borrower institutions? \((\text{NegativeConsequences})\)
   0: no
   1: yes

19. If the project sought to decentralize authority for public health care, did the SAR address incentives at the local or regional levels? \((\text{DecentralizIncentives})\)
   0: not at all
   1: addressed the legal or political independence of municipal or provincial leaders from center
   2: addressed local leaders’ independence from center as well their relationships to service providers
   3: addressed potential conflicts between consumer demands on local leaders and political demands from other groups

20. Did the SAR include an analysis of the political economy of the sector? \((\text{PoliticalEconomy})\)
   0: not at all
   1: asserted potential resistance on the part of bureaucrats, providers, suppliers or others
   2: analyzed the nature of the interest group influence on the executive, legislature, or other government body
   3: proposed strategies to counter influence and resistance

For NA: Leave Blank
21. For which of the following dimensions did the SAR assess the implementing agencies?
- regulatory and legal framework (AgenciesRegulatory)
- targets or goals (for health, utilization, institutional performance) (AgenciesTargets)
- expenditure and financial controls (AgenciesControls)
- planning and budgeting systems (AgenciesSystems)
- consumer and service information (AgenciesInformation)
- monitoring (health, consumer satisfaction, employees) (AgenciesMonitoring)
- staff development (AgenciesStaff)
- logistics (AgenciesLogistics)
- incentives (for government officials and providers) (AgenciesIncentives)

Performance indicators and evaluation

22. If the project sought to improve health status, did the SAR present indicators to assess health status outcomes? (StatusOutcomes)
   0: not at all
   1: mentioned indicators related to the project
   2: provided baseline indicators and projected values after successful implementation
   3: projected values based on analysis of causal links between project components and indicators

23. If the project sought to improve health status, did the SAR present indicators to assess intermediate outcomes (e.g., utilization, vaccination)? (IntermediateOutcomes)
   0: not at all
   1: mentioned indicators related to the project
   2: provided baseline indicators and projected values after successful implementation
   3: projected values based on analysis of causal links between project components and indicators

24. If the project sought to improve health status, did the SAR present indicators to assess project outputs (numbers of doctors trained, clinics built, etc.)? (ProjectOutputs)
   0: no
   1: some components
   2: most components

25. If the project sought to improve system performance, did the SAR present indicators to assess system performance (efficiency, equity, etc.)? (SystemPerformance)
   0: no
   1: some components
   2: most components

26. Did project propose to collect data on who actually benefited? (DataCollectionBenef)
   0: no
   1: some components
   2: most components

For NA: Leave Blank
27. Did the SAR discuss data collection regarding outcomes and its management? *(DataCollectionOutcomes)*
   0: not at all
   1: plans to develop and collect data regarding outcomes/outputs
   2: specified unit and described methodology
   3: specified unit, methodology, and discussed feedback of data into project

28. Did the SAR analyze borrower incentives and capacity for collecting monitoring and evaluation data? *(BorrIncentivesM&E)*
   0: no
   1: yes

29. Did the SAR plan to obtain feedback from beneficiaries? *(BenefFeedback)*
   0: no mention
   1: feedback through project staff
   2: feedback through surveys
   3: feedback using participatory evaluation methods

30. If the project attempted to increase demand for HNP interventions (IEC), did the SAR include: _ none *(DemandIECNone)_
    _ market research to evaluate IEC materials *(DemandIECMktResearch)_
    _ planned assessments of IEC impact *(DemandIECImpact)_
    _ planned client/beneficiary feedback on IEC *(DemandIECFeedback)_

**Project management**

31. Did the project include experimentation through a pilot component? *(PilotComponent)*
   0: no
   1: project included pilot component
   2: entire project was considered a pilot/demonstration effort

32. Did the SAR identify the agency primarily responsible for donor coordination? *(DonorCoordination)*
   0: no mention
   1: World Bank primarily responsible
   2: other donors or group of donors responsible (may include Bank)
   3: borrower government primarily responsible

33. Did the project attempt to build in flexibility or learning-by-doing? *(Flexibility)*
   0: not discussed
   1: possible need for changes or alternatives noted
   2: plans for periodic assessment and adaptation

34. How was the project implemented? (check all those that apply)
   - integrated into line ministries *(ImplementLineMinistry)_
   - through PIU/PMU *(ImplementPIU/PMU)_
   - through an NGO or parastatal *(ImplementNGO/Parastatal)_
   - a PCU or a steering committee established *(ImplementPCU/Committee)_

For NA: Leave Blank
35. How many different government ministries were involved in the project? (GovtMinistries)
   1: one
   2: two
   3: three
   4: four
   5: more than four

Objectives and Components

36. What kind of project did the SAR propose? (check all those that apply)
   1. outcome-oriented
      a. disease control (TypeOutcomeDisease)
      b. nutrition (TypeOutcomeNutrition)
      c. family planning/reproductive health (TypeOutcomeFP)
   2. capacity-strengthening/reform
      d. basic health service strengthening (TypeCapacityBasic)
      e. inputs/critical provision, e.g., pharmaceuticals (TypeCapacityInputs)
      f. public sector capacity strengthening (TypeCapacityPubSector)
      g. organizational change (decentralization, etc.) (TypeCapacityOrgChange)
      h. insurance plan/reimbursement system reform (TypeCapacityInsReimb)

37. How did the project attempt to develop institutions or build capacity? (check all that apply)
   _ better skills (InstDevSkills)
   _ more resources (InstDevResources)
   _ improved incentives or regulations (InstDevIncentives)
   _ improved information, monitoring, and evaluation (InstDevInfoM&E)
   _ payment schemes and insurance efficiency (InstDevPayment)
   _ decentralization, devolution, etc. (InstDevDecentralization)
   _ improved transparency, reduced corruption (InstDevCorruption)
   _ improved coordination within/among institutions (InstDevCoordination)
   _ increased role for private sector (InstDevPrivSector)
   _ changes in organizational structure (InstDevOrgStructure)
   _ improved planning or budgeting (InstDevPlanorBudget)
   _ improved policy analysis (InstDevPolicyAnal)
   _ other (InstDevOther)
   _ specify: (InstDevOtherField)

38. Did the project finance NGO participation? (NGOParticipation)
   0: no
   1: yes

39. Did the project attempt to mobilize local community support for project goals? (LocalCommunity)
   0: no
   1: yes

40. If the project included system reform, did the project include an effort to build consensus? (ConsensusBuilding)
   0: no discussion
   1: among government entities
   2: among government entities, private sector, and civil society
   For NA: Leave Blank
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