Health Bulletin

A publication of the Population Reference Bureau *Number 1*

Improving the Health of the World's Poorest People

by Dara Carr

PRB POPULATION REFERENCE BUREAU

CELEBRATING 75 YEARS 1929–2004

Population Reference Bureau

Founded in 1929, the Population Reference Bureau is the leader in providing timely and objective information on U.S. and international population trends and their implications. PRB informs policymakers, educators, the media, and concerned citizens working in the public interest around the world through a broad range of activities, including publications, information services, seminars and workshops, and technical support. Our efforts are supported by government contracts, foundation grants, individual and corporate contributions, and the sale of publications. PRB is governed by a Board of Trustees representing diverse community and professional interests.

The *Health Bulletin* provides a user-friendly overview of key issues in international health policy. This publication is distributed to decisionmakers, analysts, program managers, advocates, journalists, librarians, professors, and students. The *Health Bulletin* is supported through a grant to PRB from the Bill & Melinda Gates Foundation to make important research findings more accessible to users worldwide. The initiative also includes training, Internet, and other activities to strengthen health policies and programs.This publication is available from PRB. To become a PRB member or to order PRB materials, contact PRB, 1875 Connecticut Ave., NW, Suite 520, Washington, DC 20009-5728; Tel. (in the United States): 800-877-9881; Fax: 202-328-3937; E-mail: popref@prb.org; Website: www.prb.org.

The suggested citation, if you quote from this publication, is: Dara Carr, "Improving the Health of the World's Poorest People," *Health Bulletin* 1 (Washington, DC: Population Reference Bureau, 2004). For permission to reproduce portions from the *Health Bulletin*, write to PRB, Attn: Permissions.

Editor: Allison Tarmann

Production/Design:
Sharon Hershey Fay/Heather Lilley

Cover photo credits [L to R]:
Shehzad Noorani/White Ribbon Alliance for Safe Motherhood 2001, Sean Sprague, Thassanee Srisawas/UNEP/Peter Arnold, and Sean Sprague/Peter Arnold

Table of Contents

continued on reverse

Table of Contents *continued*

Boxes

Figures

Tables

Improving the Health of the World's Poorest People

Sweeping changes in public health have transformed life over the past century. On average, people live longer, healthier lives than ever before. Even so, this past century's revolution in human health and well-being is incomplete. For people living on less than US$1 per day—and there are more than 1 billion of them[1]—health services and modern medicines are still out of reach. Moreover, many initiatives to improve the health of people in extreme poverty have been unsuccessful.[2]

About the Author

Dara Carr is a technical director for health communication at the Population Reference Bureau. She is the author of a wide range of publications on reproductive and child health and has more than 10 years of experience in managing communication projects in Africa and Asia. Ms. Carr previously worked at the World Bank and the Demographic and Health Surveys Program. At PRB, she oversees efforts to increase the quantity and quality of population and health information available to decisionmakers in less developed countries.

The author gratefully acknowledges the reviewers Mushtaque Chowdhury, Gordon Perkin, Shea Rutstein, and Barbara Starfield for their invaluable comments and suggestions. Special thanks to Davidson Gwatkin, who provided early guidance; to William Newbrander, who answered queries while in Afghanistan; and to Gopi Gopalakrishnan, James Phillips, Laura Raney, and Abu Sayeed, who provided information on different program activities. The author thanks PRB's Allison Tarmann for her editorial guidance; Lori Ashford, Mary Kent, and Nancy Yinger for their suggestions; Zuali Malsawma for her library research; and Carl Haub for his advice on data.

Governments and international organizations have widely recognized the need to improve the health of the poor. In the 1970s, for instance, the World Health Organization led a global effort to achieve "Health for All" by the year 2000. Representatives from more than 130 governments met in 1978 in Alma-Ata (now Almaty, Kazakhstan) and signed a declaration stating that "Inequality in the health status of people, particularly between developed and developing countries as well as within countries, is politically, socially, and economically unacceptable."[3]

More than 25 years after the Alma-Ata Declaration, however, Health for All remains an elusive goal. On average, those living in the world's poorest countries will not live to age 50. In Africa, the leading causes of death still include diseases such as diarrhea, measles, and malaria. Large disparities in health persist both within and between countries. And the health disparities between poor and rich countries are growing.

The human, economic, and societal costs of ill health are immense. Millions of people die prematurely from diseases that are preventable or curable (see Box 1, page 2). At relatively little expense, many of these people could lead longer, healthier, and more productive lives. Mounting evidence also shows that the links between health, poverty reduction, and economic growth are powerful, confirming the popular notion that "health is wealth."[4]

This *Bulletin* examines facets of the poor-rich health divide, factors that play a role in health disparities, and approaches for improving the health of the poor. In recent years, a great deal of new

Box 1

Life and Death in Cambodia

All seemed normal when Sath, a 27-year-old Cambodian woman pregnant for the first time with twins, felt the onset of labor. Then she began to bleed profusely. No doctor was on duty at the nearby clinic—doctors in rural Cambodia make so little money that they often support themselves by practicing on the side—and no one in her village of Phum Dok Po had a phone, so a relative bicycled to the nearest town to secure transport to the hospital. A taxi driver in the town agreed to take Sath the 30 miles to the hospital for US$37—more than one-third of Sath's husband's yearly income. Desperate, her husband borrowed the money from fellow farmers and sent Sath on her way. After a slow and jolting journey along a muddy, difficult road, Sath reached the hospital, but she had lost too much blood. Her first child was born dead, the second survived, but Sath did not. A physician consulted later about her case concluded that the bleeding likely was caused by a tear in the birth tract made worse by anemia, a lack of vitamin A, and other uncomplicated conditions that ought not be fatal in the 21st century.

"People get sick because they are poor," said Dr. Nicole Seguy, medical coordinator in Cambodia for Doctors Without Borders. "And also they get poorer because they are sick." A study by the relief agency Oxfam reports that 45 percent of Cambodian peasants who become landless have been forced to sell their acreage because of illness, making disease the largest single factor in the loss of agrarian livelihood. The first four most frequently reported diseases of those who lost land are malaria, dengue fever, tuberculosis, and typhoid—all preventable or curable diseases.

"Bad health ensures that a country will not be able to break the shackles of poverty," said Jim Tulloch, country representative for the Geneva-based World Health Organization. "Sickly children don't grow into productive workers. Money consumed fighting rearguard actions against disease is money that won't be spent on economic development. A country whose population is chronically ill is a country condemned to remain forever on the edge of the abyss."

Excerpted from "Lives Lost, Cambodia," by Colin Nickerson, *The Boston Globe*, Jan. 26, 2003. Reprinted courtesy of *The Boston Globe.*

research has become available on health inequalities within low-income countries. These studies shed light on how the world's poorest people are faring, demonstrating for the most part the persistence and pervasiveness of inequalities in health.

The Health Divide Between Poor and Rich Countries

Preventable and treatable diseases take an enormous toll on the world's poorest people. In Africa, infectious and parasitic diseases accounted for more than half of all deaths in 2001, compared with 2 percent of deaths in Europe.[5] More than 2.3 million people, primarily in developing countries, die from eight vaccine-preventable diseases annually.[6] Moreover, the gap between rich and poor countries may be growing. For example, under-5 mortality declined by more than 70 percent in high-income countries between 1970 and 2000, compared with a reduction of 40 percent in low-income countries.[7]

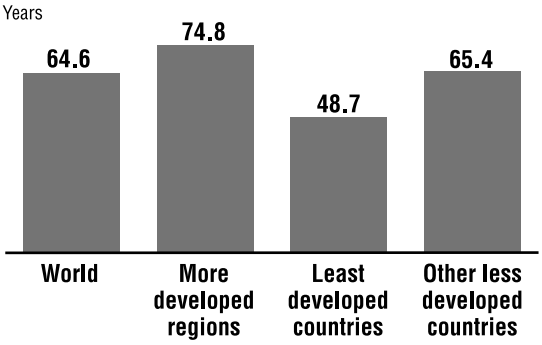
These health differences are reflected in average life spans. In the least developed countries, average life expectancy at birth is around 49 years. By contrast, those in more developed regions such as Europe or North America can expect to reach nearly 75 years of age (see Figure 1).

According to the World Health Organization (WHO), the global poor-rich "health gap" is largely due to a small number of illnesses that disproportionately affect those in developing countries, including HIV/AIDS; malaria; tuberculosis; maternal and perinatal conditions; childhood diseases such as measles, tetanus, diphtheria, acute respiratory infection, and diarrhea; malnutrition; and tobacco-related diseases. These diseases are responsible for the highest number of avoidable or excess deaths among the poor, relative to the better-off.

What factors contribute to the health gap between poor and rich countries? High levels of absolute poverty—per capita income not exceeding US$1 per day, adjusted for purchasing power—make people in poor countries especially vulnerable to disease. Nearly half the people in sub-Saharan Africa live on less than US$1 per day, while in South Asia, 37 percent of the population or 488 million people live in absolute poverty.[8] Those living in extreme poverty typically lack access to safe drinking water, decent housing, adequate sanitation, food, education, professional health care, transportation, safe and secure employment, and health information.

Figure 1

Life Expectancy at Birth, 1995–2000



Note: More developed regions, according to the UN Population Division, include Australia, New Zealand, Europe, North America, and Japan. Less developed regions include Africa, Asia (excluding Japan), and Latin America and the Caribbean; 49 countries within these regions are classified as least developed.
Source: UN Population Division, *World Population Prospects: The 2002 Revision—Highlights* (www.un.org/esa/population/publications/wpp2002/WPP2002-HIGHLIGHTSrev1.PDF, accessed June 17, 2003).

Table 1

Health Spending per Capita, by Country Income Level, 1997

Income group	Total spending on health per person, US$
Least developed countries	11
Other low-income countries (per capita GNP < US$760 in 1998)	23
Lower-middle-income countries (US$761 <per capita GNP < US$3,030 in 1998)	93
Upper-middle-income countries (US$3,031 <per capita GNP < US$9,360 in 1998)	241
High-income countries (per capita GNP > US$9,360 in 1998)	1,907

Note: Income ranges are those specified in the Organisation for Economic Co-Operation and Development, *Development Co-Operation Report, 2000.*
Source: WHO, *Macroeconomics and Health: Investing in Health for Economic Development* (2001): 56.

In the health sector, differences in health care spending, investment in research, capacity, and access to technology and information contribute to global disparities. Globally, WHO estimates that low- and middle-income countries account for 11 percent of health spending. These countries, however, are home to more than 80 percent of the world's population and carry more than 90 percent of the world's disease burden.[9]

In the least developed countries, health spending is about US$11 per person a year (see Table 1). This is well short of the US$30-US$40 per person estimated by WHO to constitute the minimum level of health spending to cover essential interventions.[10] By contrast, health spending in high-income countries is more than US$1,900 per person annually.

The diseases that most commonly affect the poor attract relatively little research and development spending. This type of spending is largely driven by market forces, which are not as favorable for medicines to treat diseases predominantly affecting the global poor. In one study, researchers estimated that annual global research investment on malaria in 1990 was US$65 per fatal case of the disease, compared with US$789 per asthma fatality.[11] Between 1975 and 1997, 13 out of the 1,233 drugs that reached the global market were for tropical infectious diseases of most relevance to the poor in low- and middle-income countries.[12]

In recent years, different initiatives—such as the Global Alliance for Vaccines and Immunization—have stimulated more research and development on diseases that affect the world's poorest people. Even so, the Global Forum for Health Research estimates that only a small fraction of research and development spending is directed toward diseases that account for 90 percent of the world's health problems.[13]

People living in poor countries also have less access to medical technologies than those in better-off countries.[14] Most recently, global attention has focused on the marked disparity in access to life-prolonging AIDS drugs. In more developed countries, antiretrovirals and drugs that prevent and treat opportunistic infections have dramatically reduced deaths among patients. These drugs are generally unavailable in the poorest countries. As a result, AIDS-related mortality rates are soaring, and average life expectancy is declining in the worst-affected poor countries. In eight African countries—Angola, Botswana, Lesotho, Malawi, Mozambique, Rwanda, Zambia, and Zimbabwe—average life expectancy has dropped to age 40 or less.[15]

The Health Divide Within Countries

Health inequalities within countries are pervasive. Even in healthy places such as the Netherlands, Finland, and the United Kingdom, the poor die five to 10 years before the rich. Researchers have found large life expectancy differences by residence in the United States. Moreover, socioeconomic disparities in health are worsening in many countries.[16]

[T]he diseases that account for much of the global divide in health—including parasitic and infectious diseases, nutritional deficiencies, birth complications—are concentrated among the poorest people within the poorest countries.

Still, the diseases that account for much of the global divide in health—including parasitic and infectious diseases, nutritional deficiencies, birth complications—are concentrated among the poorest people within the poorest countries.[17] Increasingly, the poor shoulder a disproportionate triple burden, with high levels of infectious disease; noncommunicable disease; and death and disability due to injury, substance abuse, and violence.[18]

Basic Research Questions

The international health community agrees that improving the health of the world's poorest people is a priority. Addressing the needs of the poor, however, is not a straightforward process. Researchers are grappling with basic questions—starting with who is poor and how to measure health—in examining how the poor fare relative to other groups and how to address disparities.

Identifying the Poor

In many less developed countries, determining who is poor is a challenge. Economists can use income levels to define poverty lines in large, industrialized economies, but in less developed countries, income is not always a reliable or available measure. In many countries, a large portion of the population works outside the formal economy—in subsistence agriculture, for example.

In these settings, researchers might use information on consumption levels or household assets to determine poverty levels. Consumption data provide information on how much people spend for food, housing, health care, education, and other items. Household asset data also reflect socioeconomic status. Some studies suggest that household assets are a strong measure of consumption and economic status.[19]

One of the most extensive studies to date on health inequalities in less developed countries uses household asset, services, and other data from the Demographic and Health Surveys (DHS) program—a survey research project operating in Africa, Asia, and Latin America—as a measure for socioeconomic status. The resulting wealth index is based on measures such as the possession of a refrigerator, television, or radio; the ownership of a car, motorcycle, or bicycle; the household dwelling's construction material, size, and source for drinking water; the type of toilet facilities; and the employment of live-in domestic staff. One of the drawbacks with this approach is that some of the index components, such as access to drinking water, are also determinants of health status.[20]

In the study using DHS data mentioned above, the household wealth index provides a country-specific or relative definition of economic status rather than an absolute definition. Researchers divided the population in each country into five income groups or quintiles based on their relative standing on the household wealth index within each country. Thus, the economic status of the lowest or poorest quintile in Haiti, for instance, is quite different than that of the poorest quintile in Brazil.[21]

For many global research activities, economists use an absolute or universal measure of poverty. This approach attempts to define poverty in terms of a minimal level of income or consumption that is universally applicable and fixed in time. Typically, economists estimate the minimal amount of money needed for food and other essentials across countries. The World Bank's estimate of the international or absolute poverty line in the poorest countries is about US$1 per

day average per capita income, adjusted for differences in purchasing power between countries. By the end of the 1990s, the World Bank estimates that 1.2 billion people lived on less than US$1 per day, down from 1.3 billion in 1990.[22]

Researchers may also use measures such as education, health, language, and residence as rough proxies for economic status. These measures may have the advantage of capturing different facets of poverty, including social and geographic marginalization. As the definition of poverty broadens, researchers may increasingly go beyond the standard income and consumption measures to define who is poor.

The World Bank and others once viewed poverty as largely income-based but now see it as multidimensional.[23] This evolution owes largely to the work of Amartya Sen, 1998 Nobel Laureate in economics. Sen took issue with the standard way of measuring poverty—calculating the share of people whose incomes fall below a predetermined poverty line. "You cannot," he argued, "draw a poverty line and then apply it across the board to everyone in the same way, without taking into account personal characteristics and circumstances."[24] Sen proposed that poverty analysis should focus on an individual's access to opportunities and factors such as health, nutrition, and education that reflect an individual's basic capability to function in society.[25]

Measuring Health

Researchers have different options for measuring health. One option is to rely on self-reported information about health status. This strategy has some drawbacks because of its subjective nature: An individual's perception of his or her health may vary dramatically from the assessment of a trained health professional. The poor, with lower levels of health literacy and understanding, may also be less able to assess and report on their health.

Another option is to use survey data to examine health status and the use of health services. Demographic and Health Surveys gather information on health status indicators such as childhood mortality, fertility, and nutritional status. The fertility and mortality data from the DHS are based on women recounting the number of births they have had and how many of their children have died. In the case of nutritional status, interviewers measure and weigh household members. Increasingly, surveys may conduct blood testing to produce estimates for levels of anemia or HIV infection in the population.[26]

Another strategy is to examine whether people use health services when needed or recommended. The DHS gathers data on vaccination coverage, child health care visits, and use of family planning and maternity-related services. Interviewers ask mothers questions such as when and how many vaccines their children have received; whether they took children with symptoms of diarrhea or fever to health care facilities; whether they have ever used or are currently using a contraceptive method; whether they received prenatal care during their last pregnancy; whether they delivered their last child at a health facility; and whether their delivery was attended by a trained health professional.

Researchers may assess health by examining health facility records and the availability of medical services and personnel. In most countries, researchers derive HIV prevalence estimates from data collected at selected health clinics. To assess a community's health status, analysts may examine the number of hospital beds or trained medical personnel available in a given area. These strategies may be less effective in measuring the health of the poorest people if the poor tend to opt for traditional providers over clinic or hospital care.

Findings: How the Poor Fare Relative to the Better–Off

The poor are disadvantaged in health relative to the better-off within less developed countries. Researchers have found disparities in a number of dimensions of health status, including health risk; care-seeking behavior, diagnosis, and treatment; and incidence of disease, disability, and death.[27] An extensive multicountry study of DHS data spanning 1990 to 2002 demonstrates poor-nonpoor differences in health status and service use across a range of reproductive and child health indicators (see Table 2, pages 6 and 7, for country results). Other multicountry studies have found statistically significant relationships between economic status and

Table 2

Poor–Nonpoor Inequalities in Health, Selected Indicators

Country	Under-5 mortality rate (deaths to children under 5 per 1,000 live births)		Malnutrition among women/mothers (% with Body Mass Index*<18.5 kg/m²)†		Children ages 12 months to 23 months who were fully vaccinated (%)		Women receiving delivery assistance from a doctor or nurse/midwife (%)	
	Poorest quintile	Richest quintile	Poorest quintile	Richest quintile	Poorest quintile	Richest quintile	Poorest quintile	Richest quintile
East Asia, Pacific								
Cambodia, 2000	155	64	24	17	29	68	15	81
Indonesia, 1997	109	29	—	—	43	72	21	89
Philippines, 1998	80	29	—	—	60	87	21	92
Vietnam, 1997	63	23	—	—	42	60	49	99
Vietnam, 2000	53	16	—	—	44	92	58	100
Europe, Central Asia								
Armenia, 2000	61	30	3	4	66	(68)	93	100
Kazakhstan, 1995	48	40	11	7	21	(34)	99	100
Kazakhstan, 1999	82	45	7	9	69	(62)	99	99
Kyrgyz Republic, 1997	96	49	7	7	69	73	96	100
Turkey, 1993	125	27	3	3	41	82	43	99
Turkey, 1998	85	33	2	2	28	70	53	98
Turkmenistan, 2000	106	70	11	10	86	89	97	98
Uzbekistan, 1996	70	50	12	8	81	78	92	100
Latin America and the Caribbean								
Bolivia, 1998	147	32	0.5	2	22	31	20	98
Brazil, 1996	99	33	9	5	57	74	72	99
Colombia, 1995	52	24	6	1	58	77	61	98
Colombia, 2000	39	20	3	3	50	65	64	99
Dominican Republic, 1996	90	27	10	6	34	47	89	98
Guatemala, 1995	89	38	4	2	49	46	9	92
Guatemala, 1998	78	39	4	0.5	66	56	9	92
Haiti, 1994-1995	163	106	25	9	19	44	2	65
Haiti, 2000	164	109	17	8	25	42	4	70
Nicaragua, 1997-1998	69	30	4	4	61	73	33	92
Nicaragua, 2001	64	19	3	4	64	71	78	99
Paraguay, 1990	57	20	—	—	20	53	41	98
Peru, 1996	110	22	1	1	55	66	14	97
Peru, 2000	93	18	1	2	58	81	13	88
Middle East/North Africa								
Egypt, 1995	147	39	—	—	65	93	21	86
Egypt, 2000	98	34	1	0.1	91	92	31	94
Jordan, 1997	42	25	3	2	21	17	91	99
Morocco, 1992	112	39	6	2	54	95	5	78
Yemen, 1997	163	73	39	13	8	56	7	50
South Asia								
Bangladesh, 1996-1997	141	76	65	33	47	67	2	30
Bangladesh, 1999-2000	140	72	—	—	50	75	4	42
India, 1992-1993	155	54	—	—	17	65	12	79
India, 1998-1999	141	46	50	15	21	64	16	84
Nepal, 1996	156	83	26	21	32	71	3	34
Nepal, 2001	130	68	27	15	54	82	4	45
Pakistan, 1990-1991	125	74	—	—	23	55	5	55

Country	Under-5 mortality rate (deaths to children under 5 per 1,000 live births)		Malnutrition among women/mothers (% with Body Mass Index*<18.5 kg/m^2)†		Children ages 12 months to 23 months who were fully vaccinated (%)		Women receiving delivery assistance from a doctor or nurse/midwife (%)	
	Poorest quintile	Richest quintile	Poorest quintile	Richest quintile	Poorest quintile	Richest quintile	Poorest quintile	Richest quintile
Sub-Saharan Africa								
Benin, 1996	208	110	21	7	38	74	34	98
Benin, 2001	198	93	16	6	49	73	50	99
Burkina Faso, 1998-1999	239	155	16	9	21	52	18	75
Cameroon, 1991	201	82	—	—	27	64	32	95
Cameroon, 1998	199	87	12	4	24	57	28	89
Central African Republic, 1994-1995	193	98	16	11	18	64	14	82
Chad, 1996-1997	171	172	28	21	4	23	3	47
Comoros, 1996	129	(87)	7	9	40	82	26	85
Côte d'Ivoire, 1994	190	97	11	6	16	64	17	84
Eritrea, 1995	152	104	45	21	25	84	5	74
Ethiopia, 2000	159	147	32	25	7	34	0.9	25
Gabon, 2000	93	55	9	4	6	24	67	97
Ghana, 1993	156	75	12	7	38	79	25	85
Ghana, 1998	139	52	18	5	50	79	18	86
Guinea, 1999	230	133	17	9	17	52	12	82
Kenya, 1998	136	61	18	6	48	60	23	80
Madagascar, 1997	195	101	24	15	22	66	30	89
Malawi, 1992	253	172	14	6	73	89	45	78
Malawi, 2000	231	149	10	6	65	81	43	83
Mali, 1995-1996	298	169	16	12	16	56	11	81
Mali, 2001	248	148	13	10	20	56	8	82
Mauritania, 2000-2001	98	79	17	9	16	45	15	93
Mozambique, 1997	278	145	17	4	20	85	18	82
Namibia, 1992	110	76	19	5	54	63	51	91
Namibia, 2000	55	31	—	—	60	68	55	97
Niger, 1998	282	184	27	13	5	51	4	63
Nigeria, 1990	240	120	—	—	14	58	12	70
Rwanda, 2000	246	154	12	7	71	79	17	60
Senegal, 1997	181	70	—	—	—	—	20	86
South Africa, 1998	87	22	—	—	51	70	68	98
Tanzania, 1996	140	98	12	7	57	83	27	81
Tanzania, 1999	160	135	—	—	53	78	29	83
Togo, 1998	168	97	13	8	22	52	25	91
Uganda, 1995	192	113	13	6	34	63	23	70
Uganda, 2000-2001	192	106	15	5	27	43	20	77
Zambia, 1996	212	136	10	8	71	86	19	91
Zambia, 2001-2002	192	92	21	10	64	80	20	91
Zimbabwe, 1994	85	56	6	1	72	86	55	93
Zimbabwe, 1999	100	62	9	4	64	64	57	94

Note: Figures have been rounded.

( ) Parentheses indicate that the figure is based on a relatively small number of cases and may not be reliable.

— Data not available.

*Body Mass Index is based on weight in kilograms divided by square height in meters.

† In some countries, surveys measured malnutrition among women ages 15 to 49 or 15 to 44; in other countries, the surveys measured malnutrition among women with children under 5 years of age.

Source: D. Gwatkin et al., *Initial Country-Level Information About Socio-Economic Differences in Health, Nutrition, and Population*, Volumes I and II (November 2003).

Box 2

Health Inequalities by Social and Geographic Factors

This *Bulletin* focuses largely on economic inequalities in health. In most countries, however, important disparities also exist by sex, race, ethnic group, language, occupation, and residence. Researchers in Bangladesh, for instance, have found multiple disparities in childhood vaccination, with girls, ethnic minorities, and children in isolated regions less likely than others to be immunized.[1] The effects of poverty on health are often exacerbated by social discrimination and exclusion from health, education, and other services.

Disparities by social group can be more pronounced than differences based on income alone. For example, in 1993, under apartheid, black children in South Africa were 5.5 times as likely as white children to die before their first birthday. Poor children of either race were 2.9 times more likely than better-off children to die during this age period.[2]

Women and girls often face discrimination in health and special obstacles in accessing health care. In India, the mortality gap between girls and boys has been increasing over time. Presently, an estimated 2 million girls age 6 and younger are "missing" due to sex-selective abortion and neglect in health care and nutrition.[3]

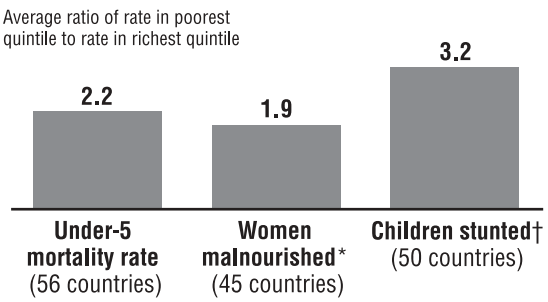
When services are difficult to reach, travel costs may be more prohibitive for women than for men. Women generally earn less than men and have less control over how household resources are spent. Cultural norms may also restrict women from traveling long distances, especially alone, to obtain health services.

Poor communities typically face multiple health risks related to their location. The poor tend to predominate in rural and remote areas lacking infrastructure, services, and trained personnel. In cities, the poor often reside close to polluted areas, including highways and industrial sites. When natural disasters strike, the poor tend to suffer disproportionately because of flimsy housing and residence in vulnerable areas such as floodplains.

1. A. Mushtaque Chowdhury et al., "Who Gets Vaccinated in Bangladesh: The Immunisation Divide," *Bangladesh Health Equity Watch* (March 2002), accessed online at www.gega.org.za/download/newsvol1_6/BHEWImmunization_brief.pdf on Nov. 21, 2003.
2. Lucy Gilson and Di McIntyre, "South Africa: Addressing the Legacy of Apartheid," in *Challenging Inequities in Health: From Ethics to Action,* ed. Timothy Evans et al. (New York: Oxford University Press, 2001): 198.
3. Carl Haub and O.P. Sharma, "India's 2 Million Missing Girls" (Washington, DC: Population Reference Bureau), unpublished paper, June 2003.

Figure 2

Health Inequalities in Less Developed Countries, 1990–2002



Note: Ratios are not adjusted for differences in population size across countries. Countries with indicator values <1 percent were excluded from the calculation so as not to skew results.
*In some countries, surveys measured malnutrition among women ages 15 to 49 or 15 to 44; in other countries, the surveys measured malnutrition among women with children under 5 years of age.
† Stunted children have a low height for age in relation to an international reference population of well-nourished children.
Source: D. Gwatkin et al., *Initial Country-Level Information About Socio-Economic Differences in Health, Nutrition, and Population*, Volumes I and II (November 2003).

child nutrition and mortality. Social and geographic factors also account for disparities in health status (see Box 2).

Inequalities in Health

In examining recent DHS data from more than 50 developing countries, researchers found that the poorest quintiles fare worse than better-off groups on a range of health outcomes, including childhood mortality and nutritional status. On average, a child from the poorest wealth quintile is twice as likely as a child in the richest quintile to die before age 5 (see Figure 2). The disparity is similar in maternal nutrition, with women in the poorest quintile almost twice as likely as those in the wealthiest to be malnourished (defined as having a Body Mass Index score less than 18.5 based on weight in kilograms divided by square height in meters).

Stunting, or chronic malnutrition among children under 5, reveals a more pronounced level of inequality. Children who are stunted are considered too short for their age compared with an international reference population; stunting is generally considered to reflect the effects of long-term malnutrition on a child's physical growth. On average, stunting is more than three times as likely among children in the poorest quintile than in the wealthiest quintile. The inequalities in stunting are particularly large in Latin America and the Caribbean. Among the nine countries in the region included in the study—Bolivia, Brazil, Colombia, Dominican Republic, Guatemala, Haiti, Nicaragua, Paraguay, and Peru—an unweighted average of 35 percent of children in the poorest quintile were stunted, compared with 5 percent in the wealthiest quintile.

Usually, health outcomes differ across each economic quintile, not just between the poorest and richest quintile. The average childhood mortality levels by wealth quintile in Indonesia, Philippines, and Vietnam reflect this association (see Figure 3). Child survival prospects improve with increasing levels of assets.

The analysis of DHS data was not designed to establish a causal link between wealth and child health. Other studies, however, have found statistically significant relationships (associations that are not due to chance) between economic status and child health. In one study, which examined childhood nutrition in 20 developing countries, researchers found that 18 countries had statistically significant inequalities in both stunting and underweight.[28] The author of another study found that seven out of nine less developed countries had significant inequalities in under-5 mortality rates.[29]

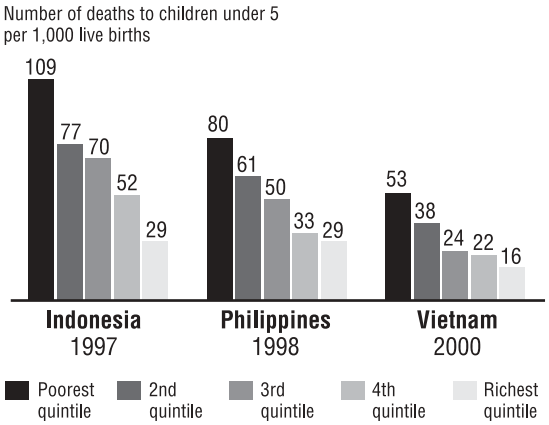
Inequalities in the Use of Health Services

The DHS study shows that people in the poorest quintiles are less likely than those in better-off quintiles to use basic health services such as immunization, maternity care, and family planning. On average, children ages 12 months to 23 months in the wealthiest quintiles are twice as likely as those in the poorest quintiles to have received all of the basic childhood vaccinations (see Figure 4). The World Health Organization recommends that children receive one dose each of BCG (tuberculosis) and measles, and three doses each of DPT (diphtheria, pertussis, tetanus) and polio vaccines by age 1. Among regions, inequality in immunization is especially high in sub-Saharan Africa: In the poorest quintile, only an average of 32 percent of children had been fully vaccinated, compared with 62 percent in the richest quintile (see Figure 5, page 10).

The use of professional health care during childbirth also varies considerably. Births to women in the richest quintile are about five times more likely, on average, to be attended by a trained professional such as a doctor, nurse, or midwife (see Figure 4). Professional assistance at delivery is critical since a number of serious pregnancy-related complications cannot be predicted in advance.

Figure 3

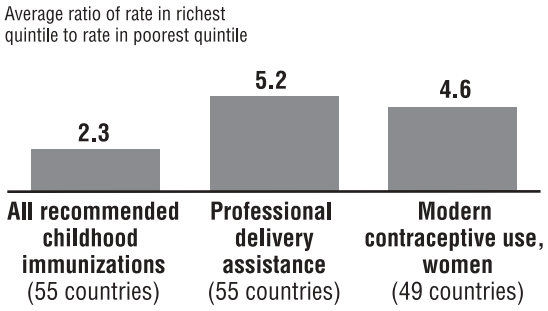
Under–5 Mortality Rates by Economic Quintile



Source: D. Gwatkin et al., *Initial Country-Level Information About Socio-Economic Differences in Health, Nutrition, and Population,* Volumes I and II (November 2003).

Figure 4

Inequalities in the Use of Health Services, 1990–2002

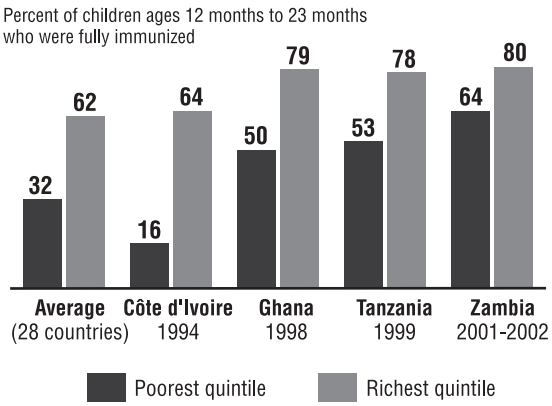


Note: Ratios are not adjusted for differences in population size across countries. Countries with indicator values <1 percent were excluded from the calculation so as not to skew the results.
Source: D. Gwatkin et al., *Initial Country-Level Information About Socio-Economic Differences in Health, Nutrition, and Population,* Volumes I and II (November 2003).

The level of inequality is also high for modern contraceptive use, especially in sub-Saharan Africa. On average, married women in the wealthiest quintile are nearly five times more likely than those in the poorest quintile to use contraception (see Figure 4). This may reflect disparities in access to family planning services, as well as different levels of demand for contraception. Less-educated women, for instance, tend to want larger families than better-off, more-educated women. The most extreme rich-poor differences are in some of the countries where at most 10 percent of women use modern

Figure 5

Full Vaccination by Economic Quintile, Sub–Saharan Africa



Note: The average immunization coverage level is not adjusted for differences in population size across countries.
Source: D. Gwatkin et al., *Initial Country-Level Information About Socio-Economic Differences in Health, Nutrition, and Population,* Volumes I and II (November 2003).

contraception: Chad, Mauritania, Mozambique, Niger, Nigeria, Senegal, and Yemen.

Trends in Health Inequalities

The picture is mixed when examining trends in inequality levels in health outcomes and service use among countries with available data (see Table 3). Interpreting the data can be complicated. In some cases, inequalities declined because of a worsening health situation among those in the wealthiest quintile. In other cases, inequalities increased, but health indicators (Table 2) improved for both the poorest and the wealthiest quintiles. The increase in inequality reflects the fact that progress was achieved more rapidly for the better-off than for the poor. Relatively few countries reduce inequalities while also improving health or access to services among people in the wealthiest and the poorest quintiles.

In under-5 mortality, no countries for which trend data were available managed to reduce inequalities as well as mortality rates among children in the richest and poorest quintiles (see Table 3). Some countries, however, did make substantial progress on improving the survival prospects among poor children. Egypt is notable in this respect. In 1995, the under-5 mortality rate was 147 among children in the poorest quintile; by 2000, the rate had dropped to 98.

In 16 countries, inequalities remained about the same over time or increased. In nine of these countries, however, child survival actually improved for those in the poorest and the wealthiest quintiles. Mortality declines tended to be larger for children in the wealthiest quintiles.

In two out of 15 countries with trend data on malnutrition among women—Benin and Haiti—inequality declined over time and malnutrition among women in the poorest quintiles decreased by at least 5 percentage points. Although inequalities in malnutrition appeared to decline in a number of countries, this is at least partly due to a slight worsening in the nutritional situation of women in the wealthiest quintiles. The nutritional status of women in the wealthiest quintile deteriorated slightly or stayed about the same in Colombia, Kazakhstan, Peru, and Zimbabwe.

Immunization programs often make special efforts to reach the poor, and in two countries—Guatemala and Kazakhstan—wealthier children are actually slightly disadvantaged relative to poor children in being fully vaccinated. Kazakhstan and Nepal reduced inequality and improved immunization coverage among children in the poorest and wealthiest quintiles. Egypt also made impressive strides, reducing inequalities slightly and increasing full immunization coverage among children in the poorest quintile by 26 percentage points. Similarly impressive, Nepal improved coverage among the poor by about 22 percentage points.

A number of countries made progress in ensuring that both poor and better-off women had a trained medical professional attending their deliveries. Countries that reduced inequalities and increased coverage of trained medical assistance at delivery include Benin, Egypt, India, Nicaragua, Turkey, and Vietnam. Nicaragua more than doubled coverage among the poorest quintile (from 33 percent to 78 percent). Additionally, Benin and Turkey achieved improvements of 15 percentage points and 10 percentage points respectively among women in the poorest quintile, and coverage was already more than 90 percent among women in the wealthiest quintile. In a number of countries, inequalities increased without any progress in coverage among poor women.

Table 3

Trends in Health Inequalities

Country	Poor-rich ratio		Rich-poor ratio	
	Under-5 mortality	Malnutrition among women†	Children ages 12 months to 23 months who were fully vaccinated	Women receiving delivery assistance from a doctor or nurse/midwife
East Asia, Pacific				
Vietnam, 1997	2.8	—	1.4	2.0
Vietnam, 2000	3.3[a]	—	2.1	1.7[b]
Europe, Central Asia				
Kazakhstan, 1995	1.2	1.5	1.6	1.0
Kazakhstan, 1999	1.8	0.8	0.9[a]	1.0
Turkey, 1993	4.6	0.8	2.0	2.3
Turkey, 1998	2.6	1.0	2.5	1.8[b]
Latin America, Caribbean				
Colombia, 1995	2.2	4.9	1.3	1.6
Colombia, 2000	1.9	1.1	1.3	1.5[b]
Guatemala, 1995	2.4	2.1	0.9	9.8
Guatemala, 1998	2.0	7.4	0.8[a]	10.4
Haiti, 1994-1995	1.5	2.7	2.3	31.0
Haiti, 2000	1.5	2.1	1.7	17.1
Nicaragua, 1997-1998	2.3	1.0	1.2	2.8
Nicaragua, 2001	3.3	0.9	1.1	1.3[b]
Peru, 1996	5.0	1.2	1.2	7.1
Peru, 2000	5.3	0.7	1.4	6.7
Middle East, North Africa				
Egypt, 1995	3.8	—	1.4	4.2
Egypt, 2000	2.9	14.0	1.0[b]	3.0[a]
South Asia				
Bangladesh, 1996-1997	1.9	2.0	1.4	16.6
Bangladesh, 1999-2000	1.9	—	1.5	12.0
India, 1992-1993	2.8	—	3.8	6.6
India, 1998-1999	3.1[a]	3.5	3.0	5.1[a]
Nepal, 1996	1.9	1.2	2.2	11.6
Nepal, 2001	1.9[a]	1.8	1.5[a]	12.5
Sub-Saharan Africa				
Benin, 1996	1.9	3.0	1.9	2.8
Benin, 2001	2.1[a]	2.8	1.5	2.0[b]
Cameroon, 1991	2.5	—	2.3	3.0
Cameroon, 1998	2.3	2.9	2.4	3.2
Ghana, 1993	2.1	1.6	2.1	3.4
Ghana, 1998	2.7[a]	3.7	1.6	4.8
Malawi, 1992	1.5	2.4	1.2	1.7
Malawi, 2000	1.5[a]	1.7	1.2	1.9
Mali, 1995-1996	1.8	1.3	3.5	7.3
Mali, 2001	1.7[a]	1.3	2.9	10.1
Namibia, 1992	1.5	3.6	1.2	1.8
Namibia, 2000	1.8[a]	—	1.1[a]	1.8[b]
Tanzania, 1996	1.4	1.7	1.4	3.0
Tanzania, 1999	1.2	—	1.5	2.9
Uganda, 1995	1.7	2.2	1.8	3.1
Uganda, 2000-2001	1.8	3.1	1.6	3.9
Zambia, 1996	1.6	1.3	1.2	4.7
Zambia, 2001-2002	2.1[a]	2.0	1.3	4.6
Zimbabwe, 1994	1.5	4.8	1.2	1.7
Zimbabwe, 1999	1.6	2.1	1.0	1.6

Poor-rich ratio
A ratio of one indicates approximate equality; values greater than one indicate disadvantage experienced by the **poorest** quintile

Rich-poor ratio
A ratio of one indicates approximate equality; values greater than one indicate advantage experienced by **wealthiest** quintile

Note: Ratios are based on the author's calculations using data rounded to the nearest decimal point. Differences in ratios of 0.1 or less are not considered a change.

[a] Both poorest and wealthiest quintiles improved over time (see Table 2). Differences equal to or less than 3 percentage points are not considered a change; declines of 5 or less in mortality rates are not considered a change.

[b] Wealthiest quintile over 90 percent; improvement among poor.

† In some countries, this includes only those women with children under 5 years of age.

Source: D. Gwatkin et al., *Initial Country-Level Information About Socio-Economic Differences in Health, Nutrition, and Population,* Volumes I and II (November 2003).

Table 4

Benefits Received by the Poorest and Richest Quintiles From Public Spending on Curative Health Services

Country	Percent of benefits received from health care services at primary-level facilities		Percent of benefits received from all curative* health care services at hospital and primary-level facilities	
	Poorest quintile	Richest quintile	Poorest quintile	Richest quintile
Côte d'Ivoire, 1995	14	22	11	32
Ghana, 1992	10	31	12	33
Guinea, 1994	10	36	4	48
Kenya (rural), 1992	22	14	14	24
Madagascar, 1993	10	29	12	30
South Africa, 1994	18	10	16	17
Tanzania, 1992-1993	18	21	17	29

*Data are based on a household's reported use of health services in response to an illness or injury and are thus considered curative by the study authors.
Source: Adapted from F. Castro-Leal et al., "Public Spending on Health Care in Africa: Do the Poor Benefit?" *Bulletin of the World Health Organization* 78, no. 1 (2000): 70.

Table 5

Share of Public Health Spending Received by Poorest and Richest Quintiles, Selected Countries

Country, Year	Poorest quintile	Richest quintile
Jamaica, 1989	30	9
Malaysia, 1989	29	11
Brazil, 1985	17	42
Egypt, 1995	16	24
Vietnam, 1992	12	29
Indonesia, 1989	12	29

Source: W. Hsiao and Y. Liu, "Health Care Financing: Assessing Its Relationship to Health Equity," in *Challenging Inequities in Health: From Ethics to Action,* ed. T. Evans et al. (2001): 271.

Benefits Received by the Poor From Public Health Services

Often, governments in less developed countries support free or subsidized health services to improve health conditions among poor and vulnerable people. Publicly funded primary health care services are, in some cases, part of a countrywide strategy to reduce poverty.[30] In many countries, however, the poor are not benefiting as much as better-off groups from public subsidies in health.

One study of seven African countries examined which economic groups benefited most from publicly funded curative health care services (see Table 4). Researchers found that the poorest one-fifth of people received less than 20 percent of the benefits from this type of spending in all seven countries.[31] As for primary-level services, such as those provided at basic clinics and dispensaries, the poorest people benefited less than better-off groups in five of the seven countries.

The picture is mixed when examining public health spending in other regions. Jamaica and Malaysia, for example, have managed pro-poor distribution of health spending (see Table 5). In other cases, such as Brazil, public health spending dramatically favors the wealthiest quintile.

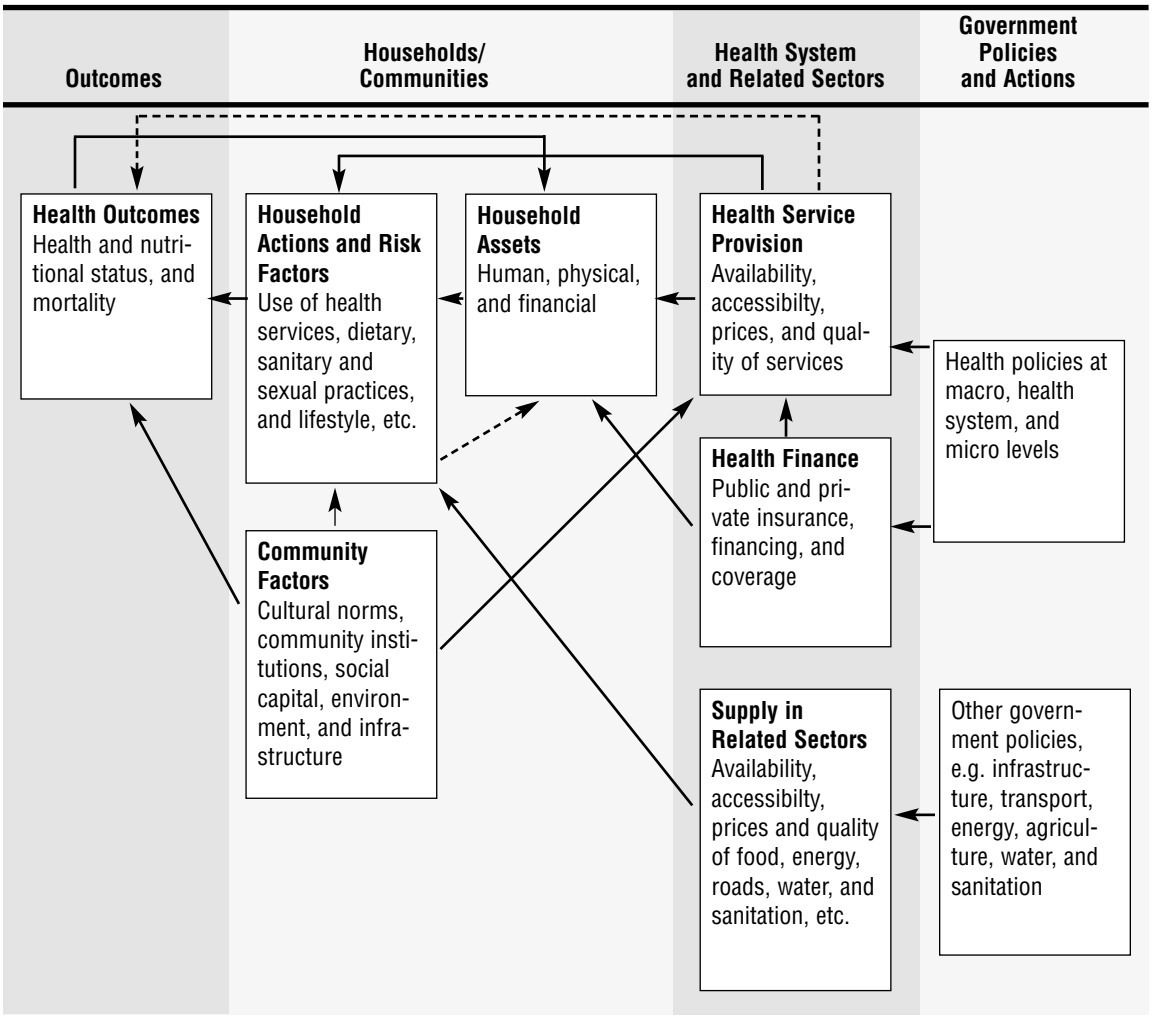
Determinants of Health Status and Disparities

What factors influence an individual's health status? A variety of social, economic, and health system factors contribute, as seen in Figure 6. In general, the poor are disadvantaged in all of the determinants of health. The poor are also more subject to multiple risk factors for ill health. The interplay between social and other risk factors is particularly important for understanding health disparities.

At the household level, the poor are more vulnerable to disease because of a lack of financial resources, limited knowledge of and education on health matters, limited use of health services, and inadequate nutrition. Higher income and assets are especially important in regard to health. The better-off tend to use health services more frequently; rely on trained health professionals rather than traditional practitioners; and have smaller, better-nourished families. Education—especially women's education—figures prominently in household practices and behaviors related to good health.[32]

Community factors, including environment and geography, typically disadvantage the poor in relation to health. The inhabitants of underserved rural and remote areas tend to be poor and have less access to clean water, safe housing, and efficient transportation. In poor communities, social norms are more likely to support behaviors associated

Figure 6
Determinants of Health Outcomes



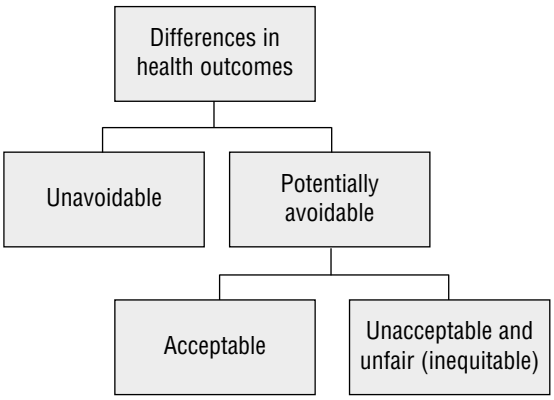
Source: A. Wagstaff, "Poverty and Health Sector Inequalities," *Bulletin of the World Health Organization* 80, no. 2 (2002): 99.

with poor health, including early age at marriage, large family size, and discrimination against women.[33]

In general, the poor receive fewer benefits from the health system than do the better-off. The poor are more likely to find that health services are unavailable, inaccessible, too expensive, or of relatively low quality. One study, for instance, found that those in the poorest quintile in South Africa had to travel an average of nearly two hours to obtain medical attention, compared with 34 minutes for those in the wealthiest quintile.[34] Typically, rural areas where the poor reside have a low number of health care professionals per inhabitant. Researchers have found that travel distance and opportunity costs associated with travel to health care are especially important factors in regard to the use of health services by the poor.[35]

Government policies and actions also affect the health of the poor. Public spending on health can influence the type and quality of services available to the poor. Many governments allocate the highest proportion of their health budgets to urban hospitals, leaving rural residents without adequate health facilities. Different public financing approaches can affect the affordability and availability of services to the poor. Public investment in areas such as transportation and water also affect health outcomes.[36]

Figure 7
Judging the Equity of Health Outcomes



Source: M. Whitehead in *Challenging Inequities in Health: From Ethics to Action* (2001).

Explaining Disparities

Researchers have developed a framework specifically focused on explaining disparities in health. This model accounts for the multiple vulnerabilities experienced by the poor and emphasizes the social underpinnings of health differences.[37] In this framework, four broad mechanisms contribute to disparities, including social stratification, differential exposure, differential susceptibility, and differential social consequences of ill health.

- **Social stratification** refers to the social differences—and the size of those differences—among population groups. Social position influences health status, and those with higher social status tend to enjoy better health. Policies that reduce stratification or enhance social mobility may reduce health disparities.

- **Differential exposure** refers to the higher likelihood that people of lower socioeconomic status will be exposed to conditions that adversely affect their health. Less advantaged people tend to have greater exposure to multiple health risks. That is, exposures "cluster"—less advantaged people may be malnourished and face limited access to clean water and educational services.

- **Differential susceptibility** refers to the greater vulnerability of disadvantaged groups to illness due to the interactions among multiple health risks. These interactions may account for why the poor become more ill than the better-off when experiencing similar levels of exposure to risk. In Sweden, for example, men in lower socioeconomic groups are more likely to experience alcohol-related disease and death than better-off men, even when they drink similar amounts of alcohol.[38]

- The less advantaged also experience **differential consequences** of disease or injury. An illness producing limited consequences for the better-off can be catastrophic for the disadvantaged, resulting in loss of land or livestock, school dropout, and other outcomes. Ill health, in turn, can exacerbate social divisions or social stratification because of its socioeconomic consequences.

Determining When Inequalities Are Inequitable

Inequalities in health are a fact of life. Individuals—with differences in genetic makeup, biology, lifestyle, and nutrition—experience different health outcomes throughout their lives. Women and men, by virtue of physiology, have different health experiences.

At what point do health inequalities become inequitable and merit special concern? An important justification for focusing on the poor is the extent to which their higher disease burden reflects social and economic injustice. Researcher Margaret Whitehead posits that health inequities are differences in health that are both avoidable and unfair (see Figure 7). Health inequalities are unfair when they stem from factors that society can do something about—unequal access to resources such as education, clean water, safe housing, transportation, and health care services.[39]

In developing countries, millions of people die from preventable or avoidable diseases associated with low socioeconomic status. An estimated 1.7 million people, for instance, die annually from diseases linked to unsafe water, sanitation, and hygiene.[40] To a large extent, their health problems are avoidable and unfair, the inequalities reflecting different socioeconomic constraints and opportunities rather than different individual choices.[41]

Health inequalities may also be unavoidable. Some people may be more prone to

heart disease or stroke because of genetic predisposition, an unavoidable condition. There are also cases of potentially avoidable but socially acceptable differences. The differences in injury risk faced by motorcycle riders wearing helmets and those not wearing helmets are potentially avoidable, but may be acceptable where adults with sufficient income knowingly assume the risk of not wearing head protection.

Achieving health equity means eliminating avoidable differences in health and providing health services based on need. The International Society for Equity in Health defines health equity as "the absence of systematic and potentially remediable differences in one or more aspects of health across socially, economically, demographically, or geographically defined population groups or subgroups." The society distinguishes between two types of health equity: horizontal equity, the provision of equal health services or treatment where health needs are equivalent; and vertical equity, the provision of enhanced health services to groups with greater health needs.[42]

Approaches for Benefiting the Poor

More than 25 years after the Health for All declaration was signed, the record suggests that improving the health of the poorest groups in less developed countries remains an immense challenge. What can be done? In general, much remains to be known about how policies and programs can improve the health of the poorest groups. In particular, researchers have not widely investigated how broad social and economic interventions influence health disparities.[43]

Although researchers have identified different causes of inequalities, no consensus exists about which determinants are most important across countries.[44] There is agreement, however, on the need for policies to reduce extreme economic poverty, which is, according to various analysts, "the major risk factor for poor health and premature death globally."[45] Researchers also tend to agree that the most effective responses to health disparities are multisectoral, involving health, education, finance, environment, agriculture, transportation, labor, and other sectors (see Box 3).

Box 3

Addressing the Causes of Health Inequalities

Information on the health of the population as a whole, while widely available, is not always useful in understanding inequalities. In Chile, for example, cardiovascular disease is the leading cause of death, but road traffic accidents explain much of the difference in life expectancy between the most and least educated.[1] In Cebu, Philippines, the availability of health services plays an important role in the average child's survival prospects, but inequalities in income and mother's education are more important in explaining the mortality differences between poor and nonpoor children.[2]

For the poor, the synergies among risk factors are particularly important. The poor tend to experience multiple health risks that accumulate over a lifetime. For example, in San Juan Cancuc in Chiapas, one of Mexico's poorest counties, the residents have multiple risk factors: All the people are indigenous, two-thirds are illiterate, only 4 percent reside in households with running water, and most have little access to health care services.[3] The residents have higher death rates at every age than their better-off counterparts in other counties in Mexico. They also carry a triple disease burden, with high levels of communicable diseases like diarrhea as well as high levels of injury and noncommunicable illnesses such as cardiovascular disease.

In the Mexico study, the authors found that the best policy and program responses may vary by the type of health problem. In their analysis, marginality—defined as low-income, limited access to education, and inadequate living conditions—explained more of the inequality among counties in under-5 mortality (26 percent) than did unequal public health expenditures (7 percent). The authors suggest that child survival inequalities could be reduced most quickly by addressing marginality in the most disadvantaged counties, emphasizing improvements in education, income, and housing. For bridging the gap in deaths from noncommunicable diseases, however, the authors found that marginality and health care resources were equally important.

1. Margaret Whitehead et al., "Developing the Policy Response to Inequities in Health: A Global Perspective," in *Challenging Inequities in Health: From Ethics to Action*, ed. Timothy Evans et al. (New York: Oxford University Press, 2001): 313.
2. Adam Wagstaff, "Poverty and Health Sector Inequalities," *Bulletin of the World Health Organization* 80, no. 2 (2002): 100.
3. Rafael Lozano et al., "Mexico: Marginality, Need, and Resource Allocation at the County Level," in *Challenging Inequities in Health: From Ethics to Action,* ed. Timothy Evans et al. (New York: Oxford University Press, 2001): 282, 289, 291.

Socioeconomic Approaches

Increasingly, decisionmakers consider factors outside of the health sector—including social, economic, and environmental conditions—important determinants of health.[46] In a 1999 report on poverty and health, the Director-General of the World Health Organization wrote, "Many of the determinants of ill-health, and thus the means for

bringing about significant improvements in the health of the poor, will depend on developments beyond the health sector."[47] The report notes that a poverty-oriented health strategy for the World Health Organization should:

- Influence the determinants of health by shaping development policy in areas such as labor, trade, agriculture, microcredit, and environment;

- Reduce health risks among the poor through traditional public health measures and by addressing threats that disproportionately affect the poor, such as conflict, environmental hazards, dangerous working conditions, and natural disasters;

- Focus on the health problems that disproportionately affect the poor; and

- Advise governments on devising health systems that better serve the poor.

Some analysts propose that efforts to improve the health of the poor should be considered part of a broader strategy for social justice or fair treatment and lack of discrimination.[48] In this view, health disparities reflect unfair social arrangements, and "A nation's health inequities may be seen as a barometer of its citizens' experiences of social justice and human rights."[49] The health system is just one entry point for social change. Policies in other sectors are key, including measures to improve access to education and job training; enhance the position of women and marginalized groups; promote healthier workplaces, homes, and cities; reduce threats posed by environmental hazards; provide social safety nets and other protections against impoverishment; and promote open and more participatory governance.[50]

Policies That Are Pro–Growth and Pro–Poor

Economic growth—in the form of higher per capita income levels—is often associated with larger health inequalities. One study of under-5 mortality rates across 42 developing countries, for instance, found that higher per capita income and inequality were strongly related. How does rising income worsen inequalities? One explanation may be that technological advancements are associated with increasing incomes, and the better-off tend to benefit from technological change ahead of the poor.[51]

Although related to greater inequality, higher income levels are also linked to better average health in a population. To counter the effect of rising income on inequalities, analysts suggest that macroeconomic policies should be both "pro-growth" and "pro-poor."[52] In this view, policies emphasizing economic growth need to be counterbalanced by strong social policies in areas such as education, labor, gender, primary health care, and nutrition. In addition, special measures need to ensure that the greatest benefits of programs flow to the poor.

Investments in Education

Education may play an especially important role in addressing health disparities and in mediating the "income effect" on inequalities. One study credits Japan's early investment in universal primary education as important in the achievement of its notably high levels of life expectancy and low levels of infant mortality over the past century. These achievements took place despite large income inequalities at different points in time.

In Japan, primary education was free and universal by the early 1900s, with high attendance among both girls and boys. Subsequent generations experienced health dividends as a result, including a drop in the infant mortality rate in the 1920s as the first group of mothers to benefit from universal primary education had children. Along with universal education, an array of policies emphasizing human development contributed to improved health during the early 1900s, including efforts to make medical services more accessible to the poor.[53]

In Chile, high levels of educational attainment may have kept health inequalities from worsening during the 1990s, a period of rapid economic growth.[54] From 1990 to 2000, the Chilean government doubled its spending on public education and instituted wide-ranging education reforms. More Chileans reaped the longevity benefits of education: Researchers found increases in adult survival prospects with higher levels of educational attainment. Chile's overall

increases in life expectancy from the mid-1980s to the mid-1990s would have been substantially less without the parallel achievements in education.

How does education influence health? Researchers believe the association between education and health may be due to a number of factors, including the tendency of educated people to obtain safer, better jobs; have greater levels of health literacy; take preventive health care measures; avoid risky behaviors; and experience greater "self-efficacy" or level of control in their lives.[55] Education also empowers people to demand more and better-quality health services.[56]

Rural Development Activities

In Matlab, a rural region in Bangladesh, socioeconomic disparities in child survival have decreased dramatically over the past 20 years. In investigating why, researchers examined trends in child survival during the 1980s and 1990s in four different settings:

1) Areas where BRAC (formerly known as the Bangladesh Rural Advancement Committee) operated a rural development program focusing on poverty alleviation and women's development activities, including basic health care, skills training, nonformal education, and income generation;

2) Areas where the International Centre for Diarrhoeal Disease Research offered intensive health extension services through a Maternal and Child Health and Family Planning Program (MCH-FP);

3) Areas where both BRAC and MCH-FP activities were provided; and

4) Areas where only government health and development services were available.

The researchers found equity gains in child survival in all four areas. The child survival gains among the poor were the steepest, however, for BRAC members living in areas with the intensive MCH-FP services. These children fared better than those in relatively well-off families who lived in areas served only by the government health and development programs.[57]

The different program interventions also had independent effects on the survival prospects of poor children. In the MCH-FP areas, the child survival gains among children were more equitably distributed than in the areas without intensive MCH-FP services. BRAC programs also benefited poor children. The children of mothers participating in BRAC activities had survival prospects similar to children in well-off families. One important finding was that the survival gap widened over time between poor members of BRAC and poor nonmembers.[58] Although some experts suggest that the BRAC results may not capture the program impact per se, reflecting instead prior differences between members and nonmembers, further analysis of this issue has demonstrated that development programs can have a real impact on child mortality disparities even when taking these differences into account.[59]

> Although the poorest people suffer disproportionately from preventable disease, they tend to make less use of health services.

The Bangladesh researchers concluded that a broad-based policy approach best addresses socioeconomic and gender inequalities in child survival. They warned, however, that special efforts are needed to ensure the participation of poor and marginalized groups in health and development programs lest they be left further behind.

Health–Service Approaches

The health sector has an important role to play even though some important determinants of health inequalities may reside in the broader socioeconomic environment. Equitable access to medical services could reduce poor-rich differences in the severity and lethality of disease. Greater access or exposure to public health measures, often preventive in focus, could help reduce the occurrence of disease among the poor.[60]

In general, researchers have studied pro-poor health sector interventions much more extensively than socioeconomic approaches. Thus, more is known about how health services can address the needs of the poor than about the effectiveness of broad socioeconomic strategies. There are a number of pro-equity strategies to improve access to health services. In the short-term, it also may be more feasible to reform the health sector in

Table 6

Protection Mechanisms for the Poor: Direct and Characteristic Targeting

Feature	Direct or Individual Targeting	Characteristic Targeting
Population targeted	Poor individuals	Individuals of specified groups
Qualification for reduced or no fees	Members of poor families	TB patients Children under 5 Pregnant women AIDS patients Residents in rural or poor areas Civil servants
Means of determining eligibility	Testing to determine income or wealth (may use income or nonincome indicators) Social worker evaluation Visual assessment Certification by village elder or chief or council	Age Geographical residence Employment Nutritional and health status Land ownership
Advantages	Targets poor directly Reaches poor more effectively	Requires less information Requires less cost to administer Less stigma attached
Disadvantages	Requires much information Risks missing some poor and including nonpoor Stigmatizes waiver recipients May be more bureaucratic and arbitrary	May not exempt all the poor from paying fees Exempts many who can afford to pay

Adapted from Newbrander et al. (2000), as described in Marie Tien and Grace Chee, *Literature Review and Findings: Implementation of Waiver Policies* (March 2002): 12-13.

ways that benefit the poor rather than alter the broader socioeconomic environment.[61]

Although the poorest people suffer disproportionately from preventable disease, they tend to make less use of health services and have lower access to quality services than do the better-off.[62] Research findings commonly support Julian Tudor Hart's inverse care law. Writing in 1971 about health inequalities in Britain, Hart observed, "The availability of good medical care tends to vary inversely with the need of the population served."[63]

Directing More Benefits Toward the Poor

In most developing countries, the government plays a key role in financing and delivering health services. A common justification for public sector involvement is the need to provide affordable health care services to all citizens, especially the poorest and most vulnerable groups. A key question is how to ensure that the poor receive the benefits intended for them from public spending in health.

Public health programs may use "targeting" strategies to direct more of their benefits toward the poor.[64] These strategies are often classified into two types, direct targeting and characteristic targeting (see Table 6 for distinctions between the two types). Direct targeting involves identifying particular individuals or households as poor so they receive program benefits. Targeting by characteristic involves directing program benefits to population groups on the basis of factors such as residence, age, disease, employment, or nutritional status. In practice, many programs employ multiple targeting methods to ensure that more benefits flow to the poor or to targeted groups.[65]

In recent years, the question of how to direct benefits to the poor has taken on greater prominence as cash-strapped governments have introduced user fees to raise revenue for public health services. Higher prices, without any accompanying increase in service quality, tend to deter the poor more than the rich from seeking care.[66] User fees also have been associated with lower use of reproductive and child health care services among vulnerable groups. In Kenya, user fees led to a reduction in the use of public outpatient services for sexually transmitted infections, especially among women.[67] In rural Zambia, researchers linked user fees to lower hospital admission rates for girls.[68] Identifying the poor and other vulnerable groups for fee waivers is an important objective for many targeting efforts.

Direct Targeting

The major constraints of direct targeting efforts in the health sector include defining who is poor, administering waivers, and motivating providers to grant waivers and exemptions.[69] Many country policies fail to define exactly who is "poor."[70] Often, pol-

icies state only that "the poor" or "paupers" or "the destitute" should be waived from fees. In some cases, providers use subjective criteria to determine eligibility such as the condition of clothing or shoes. Establishing who is poor is a special challenge in settings where many residents are rural, illiterate, and work in the informal economy.[71]

Successful programs often expend considerable effort in assessing eligibility.[72] In Colombia, municipal officials select eligible households after conducting interviews with all households in their jurisdictions. Some programs also employ locally developed definitions of poverty. In Thailand, one community developed poverty indicators such as "no possessions or assets," "earn in the morning, eat in the evening" (meaning that food has to be earned daily), and "old—cannot work, and no money sent from children."[73]

Experience suggests that a formal, structured fee-waiver process is important, and local involvement in screening is usually helpful. Yet local involvement in screening is no guarantee against "leakage," as this observation by a community leader in Thailand suggests: "The municipality tried to ask community leaders to look for the poor and issue them the low-income card, but they did not do that effectively. They submit the names of their relatives."[74] In numerous countries—including Bangladesh, Ghana, Lesotho, and Vietnam—free or subsidized health services have gone to relatives and friends of providers or state officials.[75]

In some cases, health facility managers have been reluctant to waive fees for the poor because of revenue loss. Many facilities rely on user-fee revenue for drug stocks and other items. In some cases, staff salaries are tied to fee revenue.

Overall, the results of direct targeting efforts for fee waivers have been mixed. In some cases, these efforts have not protected sizable numbers of the poor. In Zambia, for instance, researchers found that nearly one-fourth of those accessing public care were incorrectly denied waivers.[76]

Some direct targeting programs, however, have been successful. In a review of more than 50 programs in less developed countries, the following factors were associated with successful efforts:

- Having formal, concrete criteria for eligibility;
- Involving local and/or central officials in determining eligibility rather than relying entirely on facilities to administer waivers;
- Regularly reviewing the exemption status of beneficiaries; and
- Instituting routine verification measures.[77]

Additionally, successful programs usually budget adequate funds to reimburse facilities for lost revenue and have a systematic procedure for facility reimbursement.[78]

Characteristic Targeting

Programs may also target benefits based on age, residence, nutritional status, employment type, land ownership, and other criteria. The main drawback of characteristic targeting strategies is that the nonpoor may also fall into exempt categories. One researcher proposes that if at least half of those using a given service are poor, however, then the program is effective from both public health and equity perspectives.[79]

The main drawback of characteristic targeting strategies is that the nonpoor may also fall into exempt categories.

Geographic targeting involves allocating resources—usually in the form of free or subsidized health services—to those areas with the largest number of poor people. The extent to which geographic targeting reaches the poor depends on the concentration or geographic distribution of poverty. In India, one estimate suggests that offering free services to residents in the poorest states would reach about 62 percent of the poor, but 38 percent of the nonpoor. In contrast, by providing services to those in the poorest regions in Romania, an upper middle-income country, the program would cover 25 percent of the poor and 75 percent nonpoor.[80]

Generally, precision increases as geographic area decreases. In Romania, switching from the poorest regions to *judets*,

smaller geographic units, would increase coverage of the poor from 30 percent to 37 percent. In Mexico, by focusing on municipalities rather than states, the share of the poor population reached would increase from 41 percent to 54 percent.[81]

Another strategy is called "self-targeting." These services are available to everyone, but have elements—such as stigma or lower quality—that deter nontargeted groups. In Chile, a child nutrition program shifted from providing families with powdered milk, which could be easily consumed by adults, to distributing a milk and cereal product. The milk and cereal formed a gruel widely perceived by adults as suitable only for children. By switching, the program aimed to increase the program benefits for children.[82]

Targeting by age and disease are other options but probably need to be combined with other strategies for greater precision in reaching the poor. Programs may make certain services free for people in certain age groups, typically children 5 years and younger. At younger ages, the poor suffer disproportionately more ill health than the better-off. Even so, focusing only on age does not necessarily translate into programs benefiting poor children. Many free or subsidized childhood immunization programs, for instance, reach nonpoor groups more successfully than poor groups.[83]

[I]n many countries, the bulk of public spending on health is directed toward hospitals in urban areas and specialist care at the expense of rural primary care facilities.

Targeting by disease involves the provision of free or subsidized services for conditions that account for the greatest share of disease, disability, and death among the poor. This type of targeting also entails formulating strategies for delivering interventions to the poor. In practice, programs that target only by disease may be of more benefit to easier-to-reach nonpoor groups who also suffer from communicable diseases than to the poor.[84]

Programs using multiple targeting approaches may be most effective. The author of a review of social sector programs in Latin America concluded that well-crafted targeted programs benefited the poor more than nontargeted programs did. In 18 targeted programs the author examined, a median of 72 percent of program benefits went to the poorest 40 percent of households. By contrast, in eight untargeted food subsidy programs, 33 percent of the program benefit went to the poorest households. Public primary health programs fared slightly better: 57 percent of benefits went to poor households across 11 programs.[85]

Promoting Primary and Essential Health Care

Primary health care—the approach identified in the 1970s for achieving Health for All by 2000—is still an important strategy for reaching the poor. Although the definition of primary health care varies, a common aim is to make basic health services affordable and widely available, especially to poor and rural people. The ultimate goal is to improve health quickly at relatively little cost. This approach led many countries to dispatch thousands of community health workers to villages and rural areas to deliver basic, low-cost services to the poor.

In surveying the record over the past 30 years, the World Health Organization concludes that many primary health care programs have not been able to achieve their potential. In a number of countries, people see primary health programs as providing "primitive" services exclusively for the poor. An important criticism is that these programs have not adequately taken the needs and interests of the intended beneficiaries—the poor—into account. Planners have focused on supply-side issues such as reaching poor, rural villagers with services rather than on issues of most concern to users, such as the quality and responsiveness of services. Other program weaknesses include inadequate funding, lack of staff time for prevention and community outreach, and insufficient training and equipment.[86]

Although the record is mixed, WHO notes that the technical basis for primary care is sound and that the approach is being refined continuously. WHO reports a gradual shift toward a "new universalism": programs

that provide essential care, defined primarily through cost-effectiveness criteria, to everyone. The essential services approach emphasizes high-quality service delivery. Though financed by the government, these services may not necessarily be delivered by the government. WHO notes that while these types of interventions should benefit the poor, planners still need to make special efforts to ensure that the poor benefit from these programs.[87]

Increasing Availability of Health Services

Typically, health services and trained health personnel are less accessible for the poor than for better-off groups. One major problem is that, in many countries, the bulk of public spending on health is directed toward hospitals in urban areas and specialist care at the expense of rural primary care facilities. As a result, primary care facilities are often short-staffed and lacking medicines. Thus, many patients bypass these facilities and go directly to hospitals for care, expecting basic health services. This process, in turn, provides further justification for public spending on hospitals.

A common prescription for health systems is to direct more resources toward primary-level facilities and care. By increasing and strengthening these services, programs could address important accessibility issues for the poor: travel time to the nearest facility or to a facility with needed or desired services (see Box 4) and residence in a rural or neglected area, where services are scarce or unavailable. In Ghana, researchers estimated that reducing the average distance to the nearest public clinic could increase use by more than 90 percent.[88]

Increased investment in primary health care, however, may not always benefit the poor. If the poor are not already using publicly funded health services at the primary level, this investment may not yield a return benefiting them. For instance, one study found that in Côte d'Ivoire, Ghana, Guinea, and Madagascar, the poor used health care services far less than the better-off did at all levels, including primary care. By contrast, the authors suggested that increased spending might be effective in Kenya, South Africa, and Tanzania, where the poor already used primary care facilities and derived about 20 percent of benefit from public funding at the primary level.[89]

Box 4

Improving Equity Through Doorstep Delivery in Bangladesh

In Bangladesh, local family welfare assistants have provided family planning information and supplies to women in their homes since the mid-1970s. This doorstep delivery is credited with helping the country's family planning program increase modern method use from 5 percent in 1975 to 43 percent in 1999-2000, with relatively little variation by residence or education.[1] During this period, women also had dramatically smaller families, with the average number of children dropping from more than six children to about three.

The program has been successful because it reduces travel time and costs for women. The savings include direct money costs and opportunity costs such as missed housework. Additionally—in a country with conservative religious traditions—home visits save women from having to get permission to travel outside the home.

The home visits have been especially beneficial for uneducated and rural women. One study found that uneducated women were 4.4 times more likely to adopt a contraceptive method after a home visit than peers who were not visited. Highly educated women were 1.8 times more likely than their nonvisited peers to initiate use. Uneducated women also were more reliant on home workers for sustained use of contraception, possibly because workers refilled supplies and helped troubleshoot side effects. Uneducated women visited at home were 61 percent less likely to discontinue than their peers; this figure was 28 percent for highly educated women.[2] The author noted: "Visits substitute for the access to income, information, and mobility possessed by more educated women. The visiting project has an equity effect."

In recent years, home visits in Bangladesh have declined dramatically, enabling the program to save on salaries and invest more in services. As Bangladesh relies more heavily on clinic-based service delivery, however, the family planning needs of poor and vulnerable women may not be adequately served.

1. National Institute of Population Research and Training, Mitra and Associates, and ORC Macro, *Bangladesh Demographic and Health Survey 1999-2000* (Dhaka, Bangladesh, and Calverton, MD: National Institute of Population Research and Training, Mitra and Associates, and ORC Macro, 2001): 53-56.
2. Mary Arends-Kuenning, "Who Benefits From Doorstop Delivery in Bangladesh," *Population Briefs* 3, no. 4 (December 1997), accessed online at www.popcouncil.org/publications/popbriefs/pb3(4)_6.html, on July 15, 2003.

Improving the Quality of Services

The underuse of publicly supported health services by the poor is a common problem. In Bangladesh, for example, researchers found that public health facilities in rural areas were underused despite the tremen-

Box 5

Kerala: A Health Success Story

Although Kerala is not the wealthiest state in India, it is one of the country's top-performing states in health. Its infant mortality rate—16 deaths per 1,000 live births—is among the lowest in the country, far less than India's overall rate of 68.[1] In fact, its infant mortality rate is about half that of Brazil and on par with rates found in higher-income countries such as Argentina and Uruguay.[2] With a life expectancy over 70 years, Keralites live about as long as Europeans.

The use of health services is high in Kerala, with more than 90 percent of births delivered in health facilities and 80 percent of children fully vaccinated. Moreover, the government distributes its public health spending almost uniformly across income groups.[3]

What accounts for this success? Analysts offer many different explanations but agree that Kerala's unique political and social environment is key. Kerala is distinguished by a highly educated, organized, and activist populace that makes strong demands on the government.[4] Women enjoy a high degree of autonomy and have a literacy rate of nearly 90 percent.[5]

Keralites place a high value on health and education. Among the poor, health services have long been considered a right. In the 1950s and 1960s, the poor became increasingly politicized regarding health. One researcher reported, "In Kerala, if a PHC (primary health center) were unmanned for a few days, there would be a massive demonstration at the nearest collectorate (the government's administrative center in a district) led by local leftists, who would demand to be given what they knew they were entitled to."[6] In some cases, community members inflicted physical harm on service providers considered derelict in performing their duties.

1. International Institute for Population Sciences (IIPS) and ORC Macro, *National Family Health Survey, India, 1998-99: Kerala* (Mumbai, India: IIPS, 2001): 114.
2. Carl Haub, *2003 World Population Data Sheet* (Washington, DC: Population Reference Bureau).
3. The World Bank, "India, Raising the Sights: Better Health Systems for India's Poor," accessed online at http://Inweb18.worldbank.org/sar/sa.nsf/Attachments/ovr/$File/hOvr.pdf, on June 2, 2003.
4. Patrick Heller, "Social Capital as a Product of Class Mobilization and State Intervention: Industrial Workers in Kerala, India," in *State-Society Synergy: Government and Social Capital in Development* , ed. Peter Evans, University of California International and Area Studies Digital Collection, Edited Volume No. 94 (Berkeley, CA: University of California Press, 1997): 48-84, accessed online at http://repositories.cdlib.org/uciaspubs/research/94/4, on Dec. 16, 2003.
5. IIPS and ORC Macro, *National Family Health Survey, India, 1998-99: Kerala* (Mumbai, India: IIPS, 2001): 2.
6. Joan Mencher. "The Lessons and Non-Lessons of Kerala: Agricultural Labourers and Poverty," *Economic and Political Weekly* 15, special number (October): 1781-1802 as reported in John Caldwell, "Routes to Low Mortality in Poor Countries," *Population and Development Review* 12, no. 2 (June 1986): 198.

dous need for services.[90] Researchers have documented many instances of the poor bypassing public services for private care or deferring medical treatment altogether.[91]

Why? Many factors may lead to low use of publicly funded health services among the poor. There are demand-side barriers such as lack of health knowledge. In many cases, supply-side issues are also important obstacles. In Bangladesh, analysts pointed to the inadequate quality of services, including depleted supplies of essential drugs, absenteeism of doctors, and poor provider-client relations.[92] Other settings confirm that quality of care is key. In Ghana, economic problems in the late 1970s and early 1980s led to lower-quality publicly supported health services. Between 1979 and 1983, there was a 40 percent decline in the use of public facilities.[93]

In many countries, government health services are inadequate. In addition to costs, clients of government facilities commonly complain about a lack of privacy, inconvenient hours or location, unreliable drug stocks, unhygienic conditions, broken equipment, provider unresponsiveness, and long waiting times.[94] In rural Tanzania, for instance, women who had given birth at health centers were surveyed about facility-based deliveries. The disadvantages women mentioned included being ridiculed by nurses for lack of baby clothes (22 percent) and being hit by nurses during delivery (13 percent).[95]

Studies have documented numerous instances of providers exhibiting negative attitudes toward poor and vulnerable people, including women and ethnic minorities. In some cases, there are cultural and linguistic barriers between providers and clients. The lack of health personnel in Latin America who speak indigenous languages is widely cited as an obstacle to health service use. For the region's indigenous people, both the supply of and demand for health services are generally low.[96]

How can the health system better serve the poor? Some countries—Brazil, Costa Rica, Cuba, and Sri Lanka—and the Indian state of Kerala (see Box 5) have managed to provide high-quality publicly funded health services, and there may be lessons to be learned from their experiences.[97] Some analysts, however, examining experiences across countries, conclude that a number of developing-country governments lack the capacity to administer and deliver services through a centrally controlled, national network of primary facilities.[98]

WHO notes that many countries are redefining the government's role in health, with a shift in emphasis from the direct

delivery of services to health "stewardship." In this role, the government's key functions include health policy, regulation, and the purchasing of services. The government oversees and enforces policies and strategies, taking care to ensure that the health system is both equitable and efficient. Although more governments may be moving into a stewardship role, WHO notes that the capacity to handle these functions is still weak in many countries.[99]

Developing Public–Private Partnerships to Improve Reach and Responsiveness

Governments may opt for alternatives to the direct delivery of services by developing partnerships with nongovernmental providers.[100] In many countries, nongovernmental organizations (NGOs) receive public support to deliver health services to poor and vulnerable segments of society. Since many NGOs already work closely with the poor, they may be better equipped to identify and serve the poor than governments. In some countries, NGOs may also have greater flexibility and accountability than centralized, hierarchical bureaucracies.

NGOs have been effective in some settings. BRAC, described earlier, is one of the major providers of health and development-related services in Bangladesh, with more than 2 million member families.[101] Research has documented substantial health gains among the poor participating in BRAC and other NGO programs in Bangladesh.

In other countries, public-private partnerships extend services to low-income or rural groups. In Ghana, private nonprofit organizations, which make up what is known as the "mission" sector because they are mostly faith-based groups, reach an estimated 30 percent of those seeking health care, predominantly in rural areas. The government provides support for health worker salaries at "mission" facilities.[102]

In Bolivia, PROSALUD, a nonprofit organization, was created through a public-private partnership to provide high-quality health care services to low-income groups. The largest health nongovernmental organization in Bolivia, PROSALUD has grown from two health centers in 1985 to more than 30 in 2000, serving more than a half-million low- and lower-middle-income Bolivians. In 1992, an evaluation found that PROSALUD's unit costs were lower than those of government clinics, its staff and operations were more efficient, and its service area populations made greater use of its services.[103]

[In] India's Gadchiroli district … a home-based newborn health care program … reduced deaths among infants in their first month of life by 62 percent.

PROSALUD takes special measures to maintain access for poor clients. User fees are waived for the poor. Fees charged for curative services subsidize free preventive services. Clinics in better-off areas help support those in poor areas.

Over time, PROSALUD centers have been attracting a higher proportion of middle-income clients. The services are of high quality and, while the user fees are higher than those at government facilities, they are less than those charged by private providers.[104] Although the centers were initially designed for the poor, a more economically diverse clientele may benefit poor clients in the long run, as wealthier clients are better positioned to demand quality services that also benefit poor clients.[105]

Mobilizing Community Resources

Recent projects in India and Ghana have mobilized community resources in innovative ways to improve health services and outcomes among the poor. Successful approaches include intensive training of community-based health workers, the involvement of traditional leaders, and local delivery of services. Some projects have achieved dramatic results by reorganizing existing health resources to better meet the needs of poor clients.

India's Gadchiroli district is an unlikely setting for a success story in saving newborn lives. Yet, in this economically depressed and remote area about 1,000 kilometers from Mumbai, the Society for Education, Action, and Research in Community Health (SEARCH) developed a home-based newborn health care program that reduced deaths

among infants in their first month of life by 62 percent. In the project areas receiving home-based newborn care, the neonatal mortality rate dropped to 25 deaths per 1,000 live births by the study's third year. In villages that had no program activities, the neonatal mortality rate remained around 50 to 65 throughout the course of the study, from 1995 to 1998.[106]

SEARCH trained village health workers and traditional birth attendants in health education, resuscitation of infants, the monitoring of nutrition and temperature, and the recognition and treatment of infections. With hospital care unavailable in the project areas, the SEARCH team equipped trained health workers and birth attendants with supplies and instructions for "clean" or infection-free deliveries, nutritional tablets, antibiotics and other medicines, and "warm bags"—portable, handmade incubators made out of foam-insulated cloth.

In Navrongo, an impoverished and isolated part of northern Ghana, an experimental study tested the impact of relocating community health nurses from health centers to rural villages and the impact of mobilizing local self-help traditions to engage traditional leaders and communities in planning and delivering health services.[107] The nurses, shifted from underused subdistrict health centers, were renamed community health officers and were lodged in community-built health compounds. They were equipped with motorbikes, medicines, and immunization and family planning supplies and were trained in community outreach and management information systems. Community leaders were trained in mobilizing social support for health care and family planning.

The results were dramatic. In communities with trained health officers, immunization and family planning coverage increased.[108] After two or more years of project implementation, mortality among children 24 months to 59 months decreased by nearly 60 percent.[109] In the areas where nurse relocation was combined with community mobilization, fertility declined by one birth relative to comparison areas. Researchers found that a single community health officer could outperform the subdistrict health centers: In the areas with community health officers, the number of health service visits increased eightfold over the pre-project levels. In response to these findings, the government of Ghana has made the Navrongo experiment national policy and has launched a program to phase in its strategies throughout the country.[110]

In India, communities participating in the Local Initiatives Program mobilized resources in urban and rural settings to extend health services to low-income families. As part of this program, three NGOs established more than 600 community-level village committees and trained and managed more than 2,000 community health volunteers. The program equipped communities with training and management tools to monitor service delivery and to map community needs. Health volunteers delivered reproductive and child health services and information locally. The project trained them to use pictorial maps to record the reproductive and service status of each household, forming the basis for the project's field information system.[111]

The program operated in three settings, and each community secured health resources in innovative ways. In the urban slums of Kolkata, the program obtained clinic space from local clubs and essential drugs for free from the state government. In rural areas near Chandigarh, communities used village temples as satellite clinic sites and procured essential drugs from community contributions. In mountainous and remote Uttaranchal, medical and nursing students from the Himalayan Institute Hospital Trust received course credit for staffing mobile and satellite clinics in areas without government health providers.

In total, participating communities established more than 200 local health posts to fill gaps in government services. By the end of the four-year program, contraceptive prevalence averaged 65 percent across the three program sites, up from rates of 12 percent to 50 percent at the program's start. More than 90 percent of children were fully immunized in the three areas, up from around 50 percent.[112]

The Janani program, also operating in India, has mobilized private and other resources to provide family planning services to low-income families in Bihar, Jharkhand, and parts of Madhya Pradesh. Janani "franchises" networks of health providers to offer high-quality services in a cost-effective way.

The program uses three service delivery mechanisms: retail outlets selling subsidized condoms and pills; village-level outlets, called Titli ("Butterfly") centers, staffed by rural medical practitioners who provide condoms, pills, pregnancy tests, counseling, and clinic referrals; and town clinics staffed by a trained network of doctors.[113] Janani maintains quality by conducting regular audits, spurring competition locally, and keeping community leaders informed about standards for services.

Rural medical practitioners play a key role in Janani's program. Although these practitioners offered rudimentary health services before the program began, Janani better equips them to serve community needs through intensive training and supplies. To facilitate greater use of services by women, the program also trains a female relative of the practitioner, typically his wife, to work as a woman medical practitioner.[114]

In 2002, the program provided annual contraceptive protection to more than 1 million couples. Janani's networked providers delivered family planning services not readily available from other providers. Most of Janani's network of rural centers, 96 percent, provided oral contraceptives, compared with 41 percent of rural practitioners outside the network. More than 70 percent of the networked doctors delivered tubal ligations and IUDs, versus 30 percent and 23 percent respectively among non-networked doctors. More than 90 percent of the rural centers and 70 percent of the networked doctors had a female health worker, compared with 8 percent of the non-networked rural centers and 34 percent of non-networked doctors.[115]

Health–Financing Approaches

The costs associated with ill health—including medical bills and indirect costs such as lost income—can be catastrophic for the poor.[116] In India, one study found that nearly 25 percent of those hospitalized fell below the poverty line because of medical costs.[117] A recent World Bank study with 127 case studies examining why families fall into poverty provides further evidence of medical impoverishment. In reviewing these cases, analysts identified health problems as the single most common trigger for the descent into poverty.[118] Ill-health can deplete household savings and earnings and impair the capacity of adults and children to work and learn, fostering conditions that create and perpetuate poverty.

Health care financing systems play an important role in determining whether the poor have access to health care services. Financing also can influence the extent to which people risk poverty or fall deeper into poverty as a result of health care costs.[119] What is equitable financing? According to WHO, in a fair system, "The risks each household faces due to the costs of the health system are distributed according to ability to pay rather than to the risk of illness: A fairly financed system ensures financial protection for everyone."[120]

Analysts identified health problems as the single most common trigger for the descent into poverty.

Inequity in Financing

Typically, health care financing systems disadvantage the poor. In developing countries, low government spending in health usually means that a substantial proportion of health care expenditures—up to 80 percent in some countries—are borne by users through out-of-pocket payments.[121] A reliance on out-of-pocket payments for financing health care is the worst possible option for poor and vulnerable people.[122]

When people have to pay for services at the time they need them, access to care is limited to those who can afford the fees. This type of system exposes the poor to potentially large, unexpected costs. Often, the poor lack the cash reserves to cover these types of expenses. Since the poor are also less likely to participate in job-based health prepayment or insurance schemes, they are more vulnerable to impoverishment as a result of fees.

Although there are techniques to protect the poor from user fees, many of these have proven less than successful in practice. Additionally, fee waivers cover only government services, and many of the poor opt for private care.[123] The poor may select private providers, despite higher direct costs, because

Box 6

Options for Financing Health Services in Niger

During a severe economic crisis in the 1980s, the Ministry of Health in Niger debated different cost-recovery policies for publicly supported health services. To better inform the debate, the Ministry decided to pilot test different financing mechanisms for district-level health services: a fee-for-service model in Say district and a risk-sharing strategy involving a combination annual district tax and small fee-for-service ("tax-small fee") model in Boboye district. In these districts, the new fees were accompanied by quality improvements, including greater availability of drugs. The study included the district of Illéla for comparison purposes, and no quality or administrative improvements were instituted there.

The tax-small fee intervention in Boboye resulted in significant improvements in the use of publicly supported health services by women, children, and the poor. The rate of use doubled among the poorest quarter of the population. By contrast, the use of services remained low among the poor in Say district, and use among the poor declined in Illéla.

Notably, the vast majority of people in Boboye and Say districts preferred the tax-small fee model over the pure fee-for-service approach, including more than 80 percent of the poorest people in both districts. Most said the main problem with the pure fee-for-service approach was finding the resources to pay for each episode of illness. The study authors noted that the tax-small fee method also seemed to have other positive side-effects. The use of prenatal care services increased significantly in Boboye even though no fees were charged for these services either before or during the intervention. Increases in the use of curative services may have stimulated greater use of preventive services.[1]

1. Françoise Diop et al., "The Impact of Alternative Cost Recovery Schemes on Access and Equity in Niger," *Health Policy and Planning* 10, no. 3 (1995): 223-40.

they perceive the services as higher quality or more convenient.

A pro-poor financing system emphasizes prepayment for health care through taxes or insurance, with contributions tied to a person's ability to pay rather than to health risk or use of services.[124] Few countries, however, manage to finance their health care systems fairly. One stumbling block is a limited ability to raise tax revenue. Many poor countries, hindered by small formal economies, have a limited tax base and a limited capacity to collect taxes. Moreover, tax evasion tends to rise as tax rates become more progressive or are tied to ability to pay.[125]

Even if funds are mobilized fairly, few governments allocate health resources equitably. Although the poor have the greatest health needs, the majority of health budgets are directed toward hospitals in urban areas, which are used predominantly by better-off groups.[126] In many Asian countries, for instance, governments allocate an average of less than 10 percent of their health resources for primary care.[127] As a result, people who are not poor tend to benefit disproportionately from public spending in health.[128]

Strategies for Greater Financial Protection

Different strategies can help protect the poor from medical impoverishment. Since the loss of income due to illness can be especially devastating, some countries provide subsidized or free hospital care for income-earning adults.[129] Uganda and Bangladesh are piloting programs to cover hospital costs for the poor. Since hospital costs can both cause and deepen poverty, some analysts recommend that both poor and near-poor groups should be covered.[130]

Risk-sharing arrangements or insurance plans can help protect the poor from financial risk. Participants in these schemes "pool" or merge their risk of paying for health care by prepaying for care through regular premiums or salary deductions. These arrangements lower each participating individual's liability for health care costs and help participants avoid large payments when ill. Tax revenues, when allocated to health care, may be considered another form of risk pooling (see Box 6 for a description of a tax that was pilot tested in Niger).

In some cases, governments may subsidize insurance or social security schemes to cover the participation of the poor. In Chile, the government disburses funds through the social security health program, FONASA, to extend health care services to the poor. FONASA covers the cost of health services at both government facilities and private practices. Legally indigent members pay no premiums. The program is highly efficient: FONASA uses more than 90 percent of its government subsidy to cover the costs of services provided to its poorest members.[131]

Although insurance can provide protection from medical impoverishment, relatively few of the poor participate in these schemes. In most developing countries, social or private insurance covers only a small proportion of the population working

in the formal sector.[132] The poor tend to work in the informal sector.

Participation in community health care plans may be an option for poor rural people. Community financing of health care has been successfully established among rural residents in countries such as India, Indonesia, and China. Members pay premiums to cover their health care costs, or in some cases, the community health fund deducts premiums from a cooperative's crop sales. Those with seasonal incomes may pay premiums during harvest time or periods of high cash flow, providing them with regular access to health care the entire year. Some community-based health funds are supplemented by government subsidies.[133]

Community health funds, however, are not common in developing countries. One obstacle is that successful fund management requires a great deal of knowledge and technical expertise.[134] The successful community health funds in Indonesia (Dana Sehat), for instance, require extensive involvement by the government in community mobilization, training, guidance, and monitoring. Government officials and teams, for example, facilitate meetings, provide technical assistance in surveying the community and analyzing the results, develop a range of health care benefits and financing options, and monitor and guide fund management.

In general, risk pooling and prepayment schemes require far greater institutional and organizational capacity than out-of-pocket financing. Many low-income countries lack the managerial capacity required. WHO notes that job-based contributions or community or provider-based prepayment plans—although improvements over out-of-pocket financing—are difficult to sustain and should be considered transitional. The ultimate objective is to attain larger, less fragmented insurance or prepayment plans because these ensure adequate sharing of risk, subsidization of the poor, larger financial reserves, and more cost-effective administration.[135]

Approaches for Measuring Progress

An increasing amount of information is available about the health of the poor worldwide. These data show persistent disparities in health within less developed countries. Even still, many governments and international agreements fail to set health objectives for reducing disparities in health among socioeconomic groups. The development of poverty-oriented health goals, however, is key for monitoring progress in improving the health of the poor.[136]

Defining success, while important, can be challenging. Rapid economic growth may counter progress in initiatives aimed at reducing health inequalities. Health inequalities often deepen with rising per capita incomes. In these environments, programs may be successful if socioeconomic inequalities in health do not worsen.[137]

Setting objectives may entail making difficult choices. Improving the health of the poorest and most vulnerable groups, for instance, may raise costs or lower efficiency.[138] Programs also may face challenges in whether to define success by absolute or relative measures. It is possible to achieve improvements in health outcomes among both the poor and the rich but to see inequality increase. Is a program successful if mortality among the poor declines by 10 percent, but decreases among the rich by 20 percent?[139]

Few countries do well in terms of both population averages and levels of inequality in health. One study of child malnutrition covering 20 developing countries found that only two countries had relatively low average childhood stunting levels and low levels of inequality. A measure such as economist Adam Wagstaff's "achievement index," which takes into account both average health levels and health inequalities, may be one quantitative solution for program evaluation.[140]

Unfortunately, few governments have taken on the challenge of defining or measuring success. According to a study by WHO, the majority of national health policies do not explicitly concern the situation of the poor. Instead, most state their objectives in terms of overall or average health improvements rather than how those gains are distributed.[141]

Similarly, international health goals may not explicitly address disparities. For example, some of the recent Millennium Development Goals in health—including objectives to reduce child mortality and improve maternal health—require improvements in national averages only. One study suggests that achieving these goals may not necessarily result in large gains among the poor. If

countries achieve these goals through improvements among the better-off, a top-down approach, the poorest groups may not reap substantial benefits.[142]

National and international health goals stated as averages will continue to mask differences within countries between rich and poor. Unless these goals explicitly address equity concerns, the differences in health between social and economic groups will not be adequately measured or monitored.

Conclusion

The need to improve the health of the world's poor is urgent. More than 1 billion people are excluded from both essential basic care and the world's dramatic advances in health and medical technology because of their extreme poverty.[143] This exclusion has taken an enormous toll on families, communities, and societies. The growing poor-rich divide in access to information, technology, and high-quality basic and specialized health care threatens to leave the global poor even further behind.[144]

Although governments and international organizations widely agree that improving the health of poor people is a global priority, programs designed to benefit the poor have not been entirely successful. Serious health disparities persist both between and within countries, and many of the leading causes of death among the poor are preventable and treatable.

Many health systems still fail the poor. Health systems are often unresponsive to the needs of the poor and increase their vulnerability to impoverishment. Services developed for the poor have often been of poor quality. In some cases, public spending on health—justified on equity grounds—benefits nonpoor groups more than the poor. Moreover, few countries have taken measures to track progress in reducing socioeconomic disparities in health.

The weight of evidence suggests that health disparities can be addressed. Even some of the poorest countries in the world have achieved substantial health gains among their most vulnerable people. Although public health has traditionally focused on improving the health of the majority, policies and programs can be reoriented to better meet the needs of poor and vulnerable groups. A number of projects have successfully mobilized community resources to improve the health of the poor. There are proven techniques for increasing the benefits that accrue to the poor from publicly funded health programs.

The research available indicates that a broad-based policy approach is the best avenue for redressing health disparities in less developed countries. In the long term, a comprehensive pro-poor approach needs to influence the multiple social and economic determinants of health disparities, improving access to vital services and opportunities and reducing discrimination and isolation. The health system can also institute more immediate changes that translate into better health and quality of life for the poor.

References

1. World Bank, *World Development Report 2000/2001: Attacking Poverty* (New York: Oxford University Press, 2001).
2. World Health Organization (WHO), *The World Health Report 2000-Health Systems: Improving Performance* (Geneva: WHO, 2000), accessed online at www.who.int/whr2001/2001/archives/2000/en/contents.htm, on June 3, 2003.
3. WHO, Declaration of Alma-Ata (International Conference on Primary Health Care, Alma-Ata, USSR, Sept. 6-12, 1978), accessed online at www.who.int/hpr/NPH/docs/declaration_almaata.pdf on March 10, 2003; and Frank P. Grad, "The Preamble of the Constitution of the World Health Organization," *Bulletin of the World Health Organization* 80, no. 12 (2002), accessed online at www.who.int/docstore/bulletin/pdf/2002/bul-12-E-2002/80(12)981-984.pdf, on March 4, 2003.
4. WHO, *Macroeconomics and Health: Investing in Health for Economic Development,* Report of the Commission on Macroeconomics and Health (Geneva: WHO, 2001).
5. WHO, *The World Health Report 2002—Reducing Risks, Promoting Healthy Life* (Geneva: WHO, 2002) 186-7.
6. Global Alliance on Vaccines and Immunizations, "Global Immunization Challenges," accessed online at www.vaccinealliance.org/home/General_Information/About_alliance/Governance/globalimmchallenges.php, on July 8, 2003.
7. Cesar G. Victora et al., "Applying an Equity Lens to Child Health and Mortality: More of the Same is Not Enough," *The Lancet* 362, no. 9379 (July 19, 2003).
8. World Bank, "Global Economic Prospects and the Developing Countries 2003," accessed online at www.worldbank.org/prospects/gep2003/chap1.pdf, on July 18, 2003.
9. WHO, *The World Health Report 2000.*
10. WHO, *Macroeconomics and Health: Investing in Health for Economic Development,* Report of the Commission on Macroeconomics and Health: 55-6.
11. Joe Anderson et al., *Malaria Research: An Audit of International Activity* PRISM Report No. 7 (London: The Wellcome Trust, Unit for Policy Research in Science and Medicine, 1996): 29.
12. The Global Forum for Health Research, *10/90 Report on Health Research 2001-2002* (Geneva: Global Forum for Health Research, 2002): xviii.
13. The Global Forum for Health Research, *10/90 Report on Health Research 2001-2002*: 13.
14. WHO, *The World Health Report 2000.*
15. Peter Lamptey et al., "Facing the HIV/AIDS Pandemic," *Population Bulletin* 57, no. 3 (Washington, DC: Population Reference Bureau, 2002): 17.
16. Timothy Evans et al., "Introduction," in *Challenging Inequities in Health: From Ethics to Action,* ed. Timothy Evans et al. (New York: Oxford University Press, 2001): 10.
17. WHO, *Macroeconomics and Health: Investing in Health for Economic Development,* Report of the Commission on Macroeconomics and Health: 42-54.
18. Evans et al., "Introduction," in *Challenging Inequities in Health: From Ethics to Action:* 10.
19. Shea Rutstein, personal communication, December 2003.
20. Demographic and Health Surveys Program, *DHS Dimensions* 4, no. 2 (Fall 2002), accessed online at www.measuredhs.com/pubs/pdf/NL42/Vol4no2.pdf, on April 15, 2003.
21. The World Bank, "Multi-Country Reports by HNP Indicators on Socio-Economic Inequalities: Discussion," accessed online at www.worldbank.org/poverty/health/data/discuss2.htm, on April 16, 2003.
22. The World Bank, *2002 World Development Indicators* (Washington, DC: The World Bank; 2003): 193.
23. World Bank, *World Development Report 2000/2001: Attacking Poverty.*
24. Charo Quesada, "Amartya Sen and the Thousand Faces of Poverty," *IDB America*, accessed online at www.iadb.org/idbamerica/English/JUL01E/Jul01e2.html, on March 4, 2003.
25. Adrea Mach, "Amartya Sen on Development and Health," *To Our Health*, accessed online at www.who.int/infwha52/to_our_health/amartya.html, on March 4, 2003.
26. Demographic and Health Surveys Program, *DHS Dimensions.*
27. Sudhir Anand et al., "Measuring Disparities in Health," in *Challenging Inequities in Health: From Ethics to Action,* ed. Timothy Evans et al. (New York: Oxford University Press, 2001): 51.
28. Adam Wagstaff and Naoko Watanabe, *Socio-economic Inequalities in Child Malnutrition in the Developing World*, accessed online at http://econ.worldbank.org/docs/1189.pdf, on April 15, 2003.
29. Adam Wagstaff, "Socioeconomic Inequalities in Child Mortality: Comparisons Across Nine Developing Countries," *Bulletin of the World Health Organization* 78, no. 2 (2000): 26.
30. Florencia Castro-Leal et al., "Public Spending on Health Care in Africa: Do the Poor Benefit?" *Bulletin of the World Health Organization* 78, no. 1 (2000): 66.
31. Castro-Leal et al., "Public Spending on Health Care in Africa: Do the Poor Benefit?": 69.
32. Adam Wagstaff, "Poverty and Health Sector Inequalities," *Bulletin of the World Health Organization* 80, no. 2: 100.
33. Wagstaff, "Poverty and Health Sector Inequalities": 100.
34. Castro-Leal et al., "Public Spending on Health Care in Africa: Do the Poor Benefit?": 71.

35. Wagstaff, "Poverty and Health Sector Inequalities": 100.
36. Wagstaff, "Poverty and Health Sector Inequalities": 101.
37. Timothy Evans et al., *Challenging Inequities in Health: From Ethics to Action—Summary*, accessed online at www.rockfound.org/documents/435/summary_challenging.pdf, on June 5, 2003. Description of conceptual model developed by Finn Diderichsen, Timothy Evans, and Margaret Whitehead.
38. Evans et al., *Challenging Inequities in Health: From Ethics to Action—Summary.*
39. Evans et al., *Challenging Inequities in Health: From Ethics to Action—Summary.*
40. WHO, *The World Health Report 2002.*
41. Wagstaff, "Poverty and Health Sector Inequalities": 97.
42. James Macinko and Barbara Starfield, "Annotated Bibliography on Equity in Health, 1980-2001," *International Journal for Equity in Health,* accessed online at www.equityhealthj.com/content/1/1/1, on April 16, 2003.
43. Macinko and Starfield, "Annotated Bibliography on Equity in Health, 1980-2001."
44. Wagstaff, "Poverty and Health Sector Inequalities": 102.
45. Margaret Whitehead et al., "Developing the Policy Response to Inequities in Health: A Global Perspective," in *Challenging Inequities in Health: From Ethics to Action,* ed. Timothy Evans et al. (New York: Oxford University Press, 2001): 314.
46. Davidson Gwatkin, "Reducing Health Inequalities in Developing Countries," accessed online at http://poverty.worldbank.org/files/9219_OTPHPaper-Gwatkin.pdf, on June 5, 2003.
47. WHO, "Poverty and Health: Report by the Director-General," accessed online at www.who.int/gb/EB_WHA/PDF/EB105/ee5.pdf, on June 5, 2003.
48. Fabienne Peter and Timothy Evans, "Ethical Dimensions of Health Equity," in *Challenging Inequities in Health: From Ethics to Action,* ed. Timothy Evans et al. (New York: Oxford University Press, 2001): 26.
49. Evans et al., *Challenging Inequities in Health: From Ethics to Action-Summary.*
50. Evans et al., "Introduction": 5-9.
51. Adam Wagstaff, "Inequalities in Health in Developing Countries: Swimming Against the Tide?" accessed online at http://econ.worldbank.org/files/12290_wps2795.pdf, on June 2, 2003: 10, 16, 21.
52. Whitehead et al., "Developing the Policy Response to Inequities in Health: A Global Perspective," in *Challenging Inequities in Health: From Ethics to Action:* 314-15.
53. Toshihiko Hasegawa, "Japan: Historical and Current Dimensions of Health and Health Equity," in *Challenging Inequities in Health: From Ethics to Action,* ed. Timothy Evans et al. (New York: Oxford University Press, 2001): 91-103.
54. Jeanette Vega et al., "Chile: Socioeconomic Differentials and Mortality in a Middle-Income Nation," in *Challenging Inequities in Health: From Ethics to Action,* ed. Timothy Evans et al. (New York: Oxford University Press, 2001): 123, 124, 134, 136.
55. Finn Diderichsen et al., "The Social Basis of Disparities in Health," in *Challenging Inequities in Health: From Ethics to Action,* ed. Timothy Evans et al. (New York: Oxford University Press, 2001): 18.
56. Mushtaque Chowdhury, personal communication, Nov. 9, 2003.
57. Abbas Bhuiya et al., "Bangladesh: An Intervention Study of Factors Underlying Increasing Equity in Child Survival" in *Challenging Inequities in Health: From Ethics to Action,* ed. Timothy Evans et al. (New York: Oxford University Press, 2001): 235, 238.
58. Bhuiya et al., "Bangladesh: An Intervention Study of Factors Underlying Increasing Equity in Child Survival" in *Challenging Inequities in Health: From Ethics to Action:* 234, 238.
59. Abbas Bhuiya and Mushtaque Chowdhury, "Beneficial Effects of a Woman-Focused Development Programme on Child Survival: Evidence From Rural Bangladesh," *Social Science & Medicine* 55, no. 9 (November 2002): 1553-60.
60. Barbara Starfield, personal communication, Oct. 10, 2003.
61. Diderichsen et al., "The Social Basis of Disparities in Health," in *Challenging Inequities in Health: From Ethics to Action:* 21, 22.
62. Wagstaff, "Poverty and Health Sector Inequalities": 97-105.
63. Julian Tudor Hart, "The Inverse Care Law," *The Lancet* (February 1971), accessed online at www.sochealth.co.uk/history/inversecare.htm, on May 22, 2003.
64. Davidson Gwatkin, "The Current State of Knowledge About Targeting Health Programs to Reach the Poor," accessed online at www.worldbank.org/poverty/health/library/targeting.pdf, on June 3, 2003.
65. Marie Tien and Grace Chee, *Literature Review and Findings: Implementation of Waiver Policies* (Washington, DC: Partners for Health Reformplus, March 2002): 27, accessed online at www.phrplus.org/Pubs/Tech009_fin.pdf, on Dec. 22, 2003.
66. Andrew Creese, "User Fees," *British Medical Journal* 315 (July 26, 1997): 202-3; and Lucy Gilson, "The Lessons of User Fee Experience in Africa," *Health Policy and Planning* 12, no. 4 (1997): 273-85.
67. Priya Nanda, "Examining User Fees in Health Care From a Women's Health Perspective," in *Reproductive Health Matters* 10, no. 20 (2002): 128-29.
68. Constantine Malama et al., "User Fees Impact Access to Healthcare for Female Children in Rural Zambia," in *Journal of Tropical Pediatrics* 48, no. 6 (December 2002): 371-72.
69. Tien and Chee, *Literature Review and Findings: Implementation of Waiver Policies;* and Margaret Grosh, *Administering Targeted Social Programs in Latin America: From Platitudes to Practice* (Washington, DC: The World Bank, 1994).
70. Steven Russell and Lucy Gilson, "User Fee Policies to Promote Health Service Access for the Poor: A Wolf in Sheep's Clothing?" in *International Journal of Health Services* 27, no. 2 (1997): 359-80.
71. Tien and Chee, *Literature Review and Findings: Implementation of Waiver Policies.*
72. Gwatkin, "The Current State of Knowledge About Targeting Health Programs to Reach the Poor."
73. Tien and Chee, *Literature Review and Findings: Implementation of Waiver Policies:* 15, 17.
74. Dayl Donaldson et al., *Health Financing in Thailand: Technical Report* (Boston: Management Sciences for Health, May 1999): 59.
75. William Hsiao and Yuanli Liu, "Health Care Financing: Assessing Its Relationship to Health Equity," in *Challenging Inequities in Health: From Ethics to Action,* ed. Timothy Evans et al. (New York: Oxford University Press, 2001): 268-69; and Lincoln Chen and Linda Heibert, "From Socialism to Private Markets: Vietnam's Health in Rapid Transition," accessed online at www.hsph.harvard.edu/Organizations/healthnet/HUpapers/94_11.pdf, on June 11, 2003.
76. Tien and Chee, *Literature Review and Findings: Implementation of Waiver Policies:* 6.

77. Carla Y. Willis, *Means Testing in Cost Recovery of Health Services in Developing Countries* (Washington, DC: Abt Associates, November 1993).
78. Tien and Chee, *Literature Review and Findings: Implementation of Waiver Policies:* 19.
79. Tien and Chee, *Literature Review and Findings: Implementation of Waiver Policies:* 11.
80. Gwatkin, "The Current State of Knowledge About Targeting Health Programs to Reach the Poor."
81. Gwatkin, "The Current State of Knowledge About Targeting Health Programs to Reach the Poor"; and Judy Baker and Margaret Grosh, *Measuring the Effects of Geographic Targeting on Poverty Reduction,* Living Standards Measurement Study Working Paper No. 99 (Washington, DC: The World Bank, 1994): 17.
82. Margaret E. Grosh, *Administering Targeted Social Programs in Latin America: From Platitudes to Practice* (Washington, DC: The World Bank, 1994): 111-16.
83. Gwatkin, "The Current State of Knowledge About Targeting Health Programs to Reach the Poor."
84. Gwatkin, "The Current State of Knowledge About Targeting Health Programs to Reach the Poor."
85. Grosh, *Administering Targeted Social Programs in Latin America: From Platitudes to Practice:* 39; and Gwatkin, "The Current State of Knowledge About Targeting Health Programs to Reach the Poor."
86. WHO, *The World Health Report 2000:* 14.
87. WHO, *The World Health Report 2000:* 15-16.
88. Victor Lavy and Jean-Marc Germain, *Quality and Cost in Health Care Choice in Developing Countries,* Living Standards Measurement Study Working Paper No. 105 (Washington, DC: The World Bank, 1994): 21.
89. Castro-Leal et al., "Public Spending on Health Care in Africa: Do the Poor Benefit?": 70.
90. Mazharul Islam, "Under-utilization of Healthcare Services in Bangladesh: An Emerging Issue," accessed online at www.cpd-bangladesh.org/cunfpa9.html, on June 23, 2003.
91. Deon Filmer et al., "Health Policy in Poor Countries: Weak Links in the Chain," accessed online at www.worldbank.org/poverty/health/library/wps1874.pdf, on June 3, 2003: 20-4.
92. Bhuiya et al., "Bangladesh: An Intervention Study of Factors Underlying Increasing Equity in Child Survival": 237.
93. Lavy and Germain, *Quality and Cost in Health Care Choice in Developing Countries:* 18.
94. Organisation for Economic Co-operation and Development (OECD) and WHO, *DAC Guidelines and Reference Series: Poverty and Health* (Paris, France: OECD, 2003): 40.
95. Study by D.N. Mtemeli (1994), "An Investigation Into Why Women in Muttasa District Prefer to Deliver at Home and Not in Health Institutions," as reported in Filmer et al., "Health Policy in Poor Countries: Weak Links in the Chain," accessed online at www.worldbank.org/poverty/health/library/wps1874.pdf, on June 3, 2003.
96. Pan American Health Organization (PAHO), *Health in the Americas,* Volume I (Washington, DC: PAHO, 1998): 96.
97. Filmer et al., "Health Policy in Poor Countries: Weak Links in the Chain"; and Starfield, personal communication, Oct. 10, 2003.
98. Filmer et al., "Health Policy in Poor Countries: Weak Links in the Chain."
99. OECD and WHO, *Poverty and Health.*
100. Gwatkin, "Reducing Health Inequalities in Developing Countries."
101. Bhuiya et al., "Bangladesh: An Intervention Study of Factors Underlying Increasing Equity in Child Survival": 229.
102. Yasmin Chandani et al., *Ghana: Implications of Health Sector Reform for Family Planning Logistics* (Arlington, VA: Family Planning Logistics Management/John Snow International, 2000).
103. William Newbrander et al., "The PROSALUD Model for Expanding Access to Health Services" (Washington, DC: World Bank Institute Online Journal and Boston: Management Sciences for Health, 2000): 6, accessed online at www.worldbank.org/wbi/healthflagship/oj_prosalud.pdf, on Dec. 22, 2003.
104. Newbrander et al., "The PROSALUD Model for Expanding Access to Health Services": 6.
105. William Newbrander, personal communication, Aug. 11, 2003.
106. Save the Children, "A Model of Neonatal Care in the Gadchiroli District in India," *State of the World's Newborns,* accessed online at www.savethechildren.org/publications/newborns_report.pdf, on Oct. 27, 2003.
107. Cornelius Debpuur et al., "The Impact of the Navrongo Project on Contraceptive Knowledge and Use, Reproductive Preferences, and Fertility," *Studies in Family Planning* 33, no. 2 (2002): 141-64.
108. Debpuur et al., "The Impact of the Navrongo Project on Contraceptive Knowledge and Use, Reproductive Preferences, and Fertility."
109. Philomena Nyarko et al., *The Impact of the Navrongo Community Health and Family Planning Project on Child Mortality, 1993-2000,* Policy Research Division Working Paper (New York: Population Council, forthcoming).
110. Frank K. Nyonator et al., *The Ghana Community-based Health Planning and Services Initiative: Fostering Evidence-based Organizational Change and Development in a Resource-constrained Setting,* Policy Research Division Working Paper No. 180 (New York: Population Council, 2003): 3-6.
111. Abu Sayeed, program director of India LIP, personal communication, Dec. 2, 2003.
112. Sallie Craig Huber et al., *Final Report, May 1999-April 2003,* India Local Initiatives Program (Boston: Management Sciences for Health, 2003).
113. Janani, *Janani Progress Report,* accessed online at www.janani.org/progressreport.htm, on Nov. 12, 2003.
114. Gopi Gopalakrishnan, "Social Franchising for Reproductive Health: A Model for Extensive Reach and Sustainability," accessed online at www.dktinternational.org/article9print.htm, on Nov. 12, 2003.
115. Gopi Gopalakrishnan, Janani program director, personal communication, Nov. 21, 2003.
116. Hsiao and Liu, "Health Care Financing: Assessing Its Relationship to Health Equity," in *Challenging Inequities in Health: From Ethics to Action:* 268-72.
117. World Bank, *Raising the Sights: Better Health Systems for India's Poor* (Washington, DC: World Bank, 2001): 3.
118. The World Bank, *Dying for Change* (Washington, DC: The World Bank, 2002): 23.
119. Hsiao and Liu, "Health Care Financing: Assessing Its Relationship to Health Equity": 265.
120. WHO, *The World Health Report 2000:* 35.
121. OECD and WHO, *Poverty and Health:* 46.
122. Whitehead et al., "Developing the Policy Response to Inequities in Health: A Global Perspective": 318-19.
123. WHO, *The World Health Report 2000:* 35.
124. WHO, *The World Health Report 2000:* 35.

125. Hsiao and Liu, "Health Care Financing: Assessing Its Relationship to Health Equity": 268-69.
126. Hsiao and Liu, "Health Care Financing: Assessing Its Relationship to Health Equity": 268-69.
127. Pham Manh Hung et al., "Vietnam: Efficient, Equity-Oriented Financial Strategies for Health," in *Challenging Inequities in Health: From Ethics to Action,* ed. Timothy Evans et al. (New York: Oxford University Press, 2001): 304.
128. Hsiao and Liu, "Health Care Financing: Assessing Its Relationship to Health Equity": 268-69.
129. Gwatkin, "Reducing Health Inequalities in Developing Countries": 32.
130. OECD and WHO, *Poverty and Health:* 48.
131. Davidson Gwatkin, "Free Government Health Services: Are They the Best Way to Reach the Poor?" accessed online at http://poverty.worldbank.org/files/13999_gwatkin0303.pdf, on June 5, 2003.
132. Hsiao and Liu, "Health Care Financing: Assessing Its Relationship to Health Equity": 272.
133. Hsiao and Liu, "Health Care Financing: Assessing Its Relationship to Health Equity": 262-63.
134. Hsiao and Liu, "Health Care Financing: Assessing Its Relationship to Health Equity": 273.
135. WHO, *The World Health Report 2000:* 98, 101, 103.
136. Whitehead et al., "Developing the Policy Response to Inequities in Health: A Global Perspective": 310.
137. Wagstaff, "Inequalities in Health in Developing Countries: Swimming Against the Tide?"
138. Whitehead et al., "Developing the Policy Response to Inequities in Health: A Global Perspective": 310.
139. Macinko and Starfield, "Annotated Bibliography on Equity in Health, 1980-2001."
140. Wagstaff and Watanabe, *Socioeconomic Inequalities in Child Malnutrition in the Developing World.*
141. World Bank, *Dying for Change:* 22.
142. Davidson Gwatkin, *Who Would Gain Most from Efforts to Reach the Millennium Development Goals for Health: An Inquiry into the Possibility of Progress that Fails to Reach the Poor* (Washington, DC: The World Bank, 2002): 10-12, 18.
143. WHO, *The World Health Report 2000:* 5.
144. WHO, *Macroeconomics and Health: Investing in Health for Economic Development,* Report of the Commission on Macroeconomics and Health: 23-24.

Suggested Resources

Evans, Timothy, et al., eds. *Challenging Inequities in Health: From Ethics to Action.* New York: Oxford University Press, 2001.

Gwatkin, Davidson, et al. "Initial Country-Level Information About Socio-Economic Differences in Health, Nutrition, and Population." Volumes I and II. Washington, DC: The World Bank, November 2003.

Gwatkin, Davidson R. "Reducing Health Inequalities in Developing Countries." Accessed online at http://poverty.worldbank.org/files/9219_OTPHPaper-Gwatkin.pdf, on June 5, 2003.

Macinko, James, and Barbara Starfield. "Annotated Bibliography on Equity in Health, 1980-2001." *International Journal for Equity in Health*. Accessed online at www.equityhealthj.com/content/1/1/1, on April 16, 2003.

Organisation for Economic Co-operation and Development and World Health Organization. *Poverty and Health, DAC Guidelines and Reference Series.* Paris: OECD, 2003.

Tien, Marie, and Grace Chee. *Literature Review and Findings: Implementation of Waiver Policies.* Washington, DC: Partners for Health Reformplus (Abt Associates Inc.), March 2002.

Wagstaff, Adam. "Poverty and Health Sector Inequalities." *Bulletin of the World Health Organization* 80, no. 2 (2002).

Wagstaff, Adam. *Inequalities in Health in Developing Countries: Swimming Against the Tide?* Accessed online at http://econ.worldbank.org/files/12290_wps2795.pdf, on June 2, 2003.

World Bank. *World Development Report 2004: Making Services Work for Poor People.* Washington, DC: The World Bank, 2003.

World Health Organization. *Bulletin of the World Health Organization—Special Theme: Inequalities in Health* 78, no. 1 (2000).

Recommended Websites

BRAC
www.brac.net/

Global Equity Gauge Alliance
www.gega.org.za/

Health Equity Program, Rockefeller Foundation
www.rockfound.org/display.asp?Context=3&SectionTypeID=18&Preview=0&ARCurrent=1

International Journal for Equity in Health
www.equityhealthj.com/home/

Janani
www.janani.org/

Local Initiatives Program—India
Management Sciences for Health
www.msh.org/programs/india_lip.html

Pan American Health Organization, Public Policy and Health Program
http://165.158.1.110/english/hdp/hdd.htm

Regional Network for Equity in Health in Southern Africa
www.equinetafrica.org/

The World Bank
Poverty, Health, Nutrition, and Population (PovertyNet)
www.worldbank.org/poverty/health/index.htm

POPULATION REFERENCE BUREAU

1875 Connecticut Ave., NW, Suite 520
Washington, DC 20009 USA
202-483-1100; 202-328-3937 (fax)
popref@prb.org
www.prb.org