

# THE WEALTH GAP IN HEALTH

**DATA ON WOMEN AND CHILDREN IN 53 DEVELOPING COUNTRIES**

Despite improvements in public health in the last half-century, large disparities in health exist between and within countries. Differences among socioeconomic groups can be pronounced, but are easily masked by national data that are used for monitoring and reporting progress. A recent analysis of data from the Demographic and Health Surveys (DHS) program provides clear evidence of the gap between the rich and poor in a range of health and population indicators—fertility, infant and child mortality, nutrition, and the use of family planning and other health services.

**PRB** POPULATION REFERENCE BUREAU **BRIDGE**  
CELEBRATING 75 YEARS • 1929 - 2004

		TOTAL FERTILITY RATE (LIFETIME BIRTHS PER WOMAN)			PERCENT OF WOMEN AGES 15-19 GIVING BIRTH IN ONE YEAR			UNDER 5 MORTALITY RATE			PERCENT OF CHILDREN STUNTED			PERCENT OF MALNOURISHED WOMEN		
		POOREST FIFTH	MIDDLE FIFTH	RICHEST FIFTH	POOREST FIFTH	MIDDLE FIFTH	RICHEST FIFTH	POOREST FIFTH	MIDDLE FIFTH	RICHEST FIFTH	POOREST FIFTH	MIDDLE FIFTH	RICHEST FIFTH	POOREST FIFTH	MIDDLE FIFTH	RICHEST FIFTH
<b>EAST ASIA AND PACIFIC</b>																
Cambodia	2000	4.7	3.9	2.2	5	6	3	155	115	64	53	43	28	24	21	17
Indonesia	1997	3.3	2.6	2.0	8	6	2	109	70	29	—	—	—	—	—	—
Philippines	1998	6.5	3.6	2.1	13	3	1	80	50	29	—	—	—	—	—	—
Vietnam	2002	2.2	1.8	1.4	4	2	1	53	24	16	—	—	—	—	—	—
<b>EASTERN EUROPE AND CENTRAL ASIA</b>																
Armenia	2000	2.5	1.4	1.6	11	3	3	61	40	30	19	12	9	3	4	4
Kazakhstan	1999	3.4	2.1	1.2	5	5	2	82	72	45	15	8	8	7	5	9
Kyrgyz Republic	1997	4.6	3.6	2.0	12	6	3	96	78	49	34	21	14	7	6	7
Turkey	1998	3.9	2.7	1.7	8	7	3	85	53	33	29	13	4	2	3	2
Turkmenistan	2000	3.4	3.0	2.1	3	3	3	106	86	70	25	24	17	11	9	10
Uzbekistan	1996	4.4	3.2	2.2	6	8	5	70	55	50	40	30	31	12	10	8
<b>LATIN AMERICA AND THE CARIBBEAN</b>																
Bolivia	1998	7.4	4.4	2.1	17	10	3	147	104	32	43	25	6	1	1	2
Brazil	1996	4.8	2.1	1.7	18	7	3	99	39	33	23	5	2	9	7	5
Colombia	2000	4.4	2.4	1.8	16	9	3	39	24	20	22	11	5	3	3	3
Dominican Republic	1996	5.1	3.3	2.1	23	13	3	90	60	27	22	8	3	10	7	6
Guatemala	1998/99	7.6	5.1	2.9	18	12	3	78	76	39	65	54	8	4	2	1
Haiti	2000	6.8	5.0	2.7	10	12	5	164	141	109	31	25	7	17	13	8
Nicaragua	2001	5.6	3.1	2.1	19	12	7	64	39	19	35	16	5	3	4	4
Peru	2000	5.5	2.6	1.6	16	6	2	93	44	18	47	17	5	1	1	2
<b>MIDDLE EAST AND NORTH AFRICA</b>																
Egypt	2000	4.0	3.3	2.9	6	6	2	98	71	34	27	19	11	1	1	z
Jordan	1997	5.2	4.3	3.1	4	4	3	42	34	25	14	6	5	3	2	2
Morocco	1992	6.7	4.2	2.3	5	5	2	112	79	39	39	22	8	6	5	2
Yemen	1997	7.3	7.3	4.7	12	12	8	163	112	73	58	56	35	39	24	13
<b>SOUTH ASIA</b>																
Bangladesh	1999/2000	4.6	3.3	2.2	21	16	8	140	106	72	61 <sup>b</sup>	58 <sup>b</sup>	35 <sup>b</sup>	65 <sup>b</sup>	53 <sup>b</sup>	33 <sup>b</sup>
India	1998/99	3.4	2.6	1.8	13	10	4	141	101	46	58	47	27	50	41	15
Nepal	2001	5.3	4.7	2.3	16	14	7	130	104	68	62	47	36	27	33	15
<b>SUB-SAHARAN AFRICA</b>																
Benin	2001	7.2	6.5	3.5	18	16	4	198	181	93	35	30	18	16	12	6
Burkina Faso	1998/99	7.2	6.8	4.5	17	15	9	239	220	155	42	36	26	16	14	9
Cameroon	1998	5.9	5.0	3.6	20	16	6	199	136	87	36	32	15	12	6	4
Central African Republic	1994/95	5.1	4.8	4.9	16	16	14	193	158	98	42	33	25	16	15	11
Chad	1996/97	7.1	6.2	6.2	18	19	21	171	225	172	47	41	31	28	19	21
Comoros	1996	6.4	4.5	3.0	7	7	3	129	112	87 <sup>a</sup>	45	29	23	7	11	9
Côte d'Ivoire	1994	6.4	5.7	3.7	19	16	7	190	148	97	34	26	13	11	8	6
Eritrea	1995	8.0	6.4	3.7	23	18	4	152	183	104	48	34	24	45	41	21
Ethiopia	2000	6.3	5.9	3.6	8	13	7	159	227	147	53	55	43	32	33	25
Gabon	2000	6.3	4.1	3.0	21	15	7	93	97	55	33	19	12	9	7	4
Ghana	1998	6.3	5.0	2.4	13	13	2	139	125	52	35	28	10	18	10	5
Guinea	1999	5.8	6.3	4.0	21	21	9	230	198	133	32	27	16	17	11	9
Kenya	1998	6.5	4.7	3.0	16	11	6	136	92	61	44	30	17	18	12	6
Madagascar	1997	8.1	6.8	3.4	27	21	8	195	175	101	49	52	43	24	18	15
Malawi	2000	7.1	6.4	4.8	19	18	14	231	219	149	58	51	34	10	10	6
Mali	2001	7.3	7.3	5.3	20	23	11	248	262	148	45	40	20	13	14	10
Mauritania	2000/01	5.4	4.9	3.5	9	10	5	98	131	79	39	35	23	17	16	9
Mozambique	1997	5.2	5.4	4.4	19	18	13	278	216	145	48	35	22	17	11	4
Namibia	2000	6.0	4.6	2.7	10	10	6	55	59	31	27	24	15	19 <sup>c</sup>	16 <sup>c</sup>	5 <sup>c</sup>
Niger	1998	8.4	7.8	5.7	26	23	15	282	348	184	42	42	32	27	19	13
Rwanda	2000	6.0	5.9	5.4	5	6	5	246	210	154	49	47	27	12	10	7
Senegal	1997	7.4	6.2	3.6	19	11	4	181	145	70	—	—	—	—	—	—
South Africa	1998	4.8	2.7	1.9	11	7	2	87	49	22	—	—	—	—	—	—
Tanzania	1999	7.8	6.1	3.4	20	18	8	160	193	135	50	45	23	12 <sup>b</sup>	9 <sup>b</sup>	7 <sup>b</sup>
Togo	1998	7.3	6.0	2.9	14	11	4	168	154	97	29	20	11	13	10	8
Uganda	2000/01	8.5	7.5	4.1	23	20	11	192	164	106	43	43	25	15	9	5
Zambia	2001/02	7.3	6.8	3.6	19	18	9	192	196	92	54	50	32	21	16	10
Zimbabwe	1999	4.9	4.5	2.6	16	11	7	100	102	62	33	32	19	9	5	4

		PERCENT OF MARRIED WOMEN USING MODERN CONTRACEPTION			PERCENT OF PREGNANT WOMEN WITH 3+ ANTENATAL CARE VISITS			PERCENT OF BIRTHS ATTENDED BY MEDICALLY TRAINED PERSONNEL			PERCENT OF CHILDREN FULLY VACCINATED			PERCENT OF WOMEN WITH KNOWLEDGE ABOUT SEXUAL TRANSMISSION OF HIV/AIDS			PERCENT OF WOMEN WHO HAVE COMPLETED FIFTH GRADE		
		POOREST FIFTH	MIDDLE FIFTH	RICHEST FIFTH	POOREST FIFTH	MIDDLE FIFTH	RICHEST FIFTH	POOREST FIFTH	MIDDLE FIFTH	RICHEST FIFTH	POOREST FIFTH	MIDDLE FIFTH	RICHEST FIFTH	POOREST FIFTH	MIDDLE FIFTH	RICHEST FIFTH	POOREST FIFTH	MIDDLE FIFTH	RICHEST FIFTH
<b>EAST ASIA AND PACIFIC</b>																			
Cambodia	2000	13	20	25	9	14	57	15	27	81	29	38	68	56	68	90	11	23	66
Indonesia	1997	46	57	57	66	87	96	21	48	89	43	57	72	5	16	52	52	67	92
Philippines	1998	20	33	29	64	84	93	21	73	92	60	76	87	—	—	—	71	96	98
Vietnam	2002	58	58	52	34	62	85	58	95	100	44	71	92	63	86	95	48	87	94
<b>EASTERN EUROPE AND CENTRAL ASIA</b>																			
Armenia	2000	16	22	29	47	84	91	93	99	100	66	73	68 <sup>a</sup>	36	57	71	99	100	100
Kazakhstan	1999	49	53	55	71	74	78	99	99	99	69	79 <sup>a</sup>	62 <sup>a</sup>	62	80	91	98	100	100
Kyrgyz Republic	1997	44	48	54	83	87	84	96	98	100	69	73	73	—	—	—	98	99	100
Turkey	1998	24	38	48	23	58	91	53	89	98	28	49	70	17	47	76	53	78	94
Turkmenistan	2000	51	53	50	81	84	92	97	96	98	85	86	78	37	43	70	98	98	99
Uzbekistan	1996	46	56	52	82	79	84	92	99	100	81	79	78	—	—	—	99	99	100
<b>LATIN AMERICA AND THE CARIBBEAN</b>																			
Bolivia	1998	7	22	46	28	62	91	20	68	98	22	21	31	13	61	89	29	72	93
Brazil	1996	56	74	77	64	92	97	72	96	99	57	85	74	81	98	99	23	63	83
Colombia	2000	54	67	66	69	91	94	64	95	99	50	70	65	52	76	79	44	84	95
Dominican Republic	1996	51	58	64	86	95	98	89	98	98	34	47	47	98	99	99	41	76	92
Guatemala	1998/99	5	25	60	65	85	96	9	39	92	66	68	56	—	—	—	7	31	83
Haiti	2000	17	26	24	41	63	82	4	14	70	25	41	42	42	46	48	10	30	72
Nicaragua	2001	50	71	71	58	83	93	78	95	99	64	78	71	16	35	49	20	65	92
Peru	2000	37	54	58	54	84	96	20	79	98	58	68	81	19	64	80	47	89	97
<b>MIDDLE EAST AND NORTH AFRICA</b>																			
Egypt	2000	43	54	61	19	42	74	31	61	94	91	92	92	—	—	—	22	55	91
Jordan	1997	28	35	47	84	92	95	91	98	99	21	20	17	50	66	73	76	90	96
Morocco	1992	18	38	48	2	14	54	5	28	78	54	84	95	—	—	—	2	18	63
Yemen	1997	1	7	24	3	12	46	7	16	50	8	23	56	—	—	—	3	13	52
<b>SOUTH ASIA</b>																			
Bangladesh	1999/2000	37	45	50	5	11	50	4	7	42	50	61	75	2	8	48	10	39	76
India	1998/99	29	45	55	21	44	81	16	42	84	21	41	64	5	19	60	10	37	86
Nepal	2001	24	32	55	13	29	62	4	10	45	54	65	82	11	24	60	9	17	55
<b>SUB-SAHARAN AFRICA</b>																			
Benin	2001	4	7	15	59	78	92	50	77	99	49	57	73	39	56	72	3	9	55
Burkina Faso	1998/99	2	3	16	36	40	71	18	22	75	21	22	52	64	73	91	1	3	36
Cameroon	1998	1	6	17	47	76	88	28	64	89	24	38	57	58	81	93	25	54	83
Central African Republic	1994/95	1	2	9	34	61	79	14	41	82	18	29	64	79	91	96	3	16	57
Chad	1996/97	z	z	5	8	18	59	3	7	47	4	6	23	29	46	87	1	2	27
Comoros	1996	7	10	19	41	74	88	26	55	85	40	53	82	34	64	81	9	30	60
Côte d'Ivoire	1994	1	2	13	26	46	75	17	46	84	16	33	64	71	81	89	10	20	54
Eritrea	1995	z	1	19	21	29	84	5	7	74	25	44	84	23	46	91	1	4	58
Ethiopia	2000	3	2	23	7	11	45	1	2	25	7	9	34	56	56	85	2	3	42
Gabon	2000	6	12	18	70	89	94	67	92	97	6	18	24	88	96	96	56	80	88
Ghana	1998	8	14	18	59	77	91	18	48	86	50	63	79	56	73	90	26	60	86
Guinea	1999	1	3	9	48	61	85	12	27	82	17	33	52	85	91	98	2	4	44
Kenya	1998	13	31	50	77	82	87	23	42	80	48	71	60	92	97	98	59	76	91
Madagascar	1997	2	7	24	55	62	83	30	41	89	22	27	66	39	60	96	9	16	72
Malawi	2000	20	23	40	77	78	86	43	51	83	65	69	81	88	92	98	26	34	74
Mali	2001	4	3	18	25	31	74	8	12	82	20	19	56	43	39	81	2	3	42
Mauritania	2000/01	z	3	17	16	50	75	15	57	93	16	37	45	—	—	—	8	21	63
Mozambique	1997	1	3	17	30	47	75	18	31	82	20	36	85	21	23	40	3	9	48
Namibia	2000	29	30	64	72	83	84	55	77	97	60	65	68	75	88	97	66	80	93
Niger	1998	1	2	18	14	17	64	4	8	63	5	9	51	35	40	84	3	5	38
Rwanda	2000	2	4	15	40	45	60	17	18	60	71	75	79	93	94	97	28	32	67
Senegal	1997	1	5	24	44	65	84	20	45	86	—	—	—	45	59	81	—	—	—
South Africa	1998	34	55	70	78	83	90	68	89	98	51	69	70	70	85	92	68	85	97
Tanzania	1999	6	12	32	82	83	93	29	33	83	53	62	78	68	72	90	44	50	82
Togo	1998	3	7	13	50	72	90	25	53	91	22	32	52	75	85	94	5	19	57
Uganda	000/01	11	12	41	59	68	86	20	32	77	27	40	43	75	86	95	24	45	82
Zambia	2001/02	11	20	53	80	87	92	20	34	91	64	66	80	69	85	94	41	61	95
Zimbabwe	1999	41	43	67	84	77	69	57	65	94	64	68	64	72	80	91	70	81	97

This chart shows selected indicators from this study for 53 developing countries. These data shed new light on how the poorest women and children are faring, compared with their better-off counterparts. The rankings within each country are relative: the “poorest” and “richest” groups are based on a wealth index for each country (see Notes) and do not reflect absolute levels of wealth or income. In many countries, the vast majority is poor by international standards. Still, the data highlight the particular disadvantages faced by those at the bottom of the economic scale.

## KEY FINDINGS

Nearly everywhere, inequalities in health care and health status are persistent and pervasive: The poorest women and their children face greater health risks and are less likely to use key health services than those who are better off.

- Poorer women generally have more children than better-off women, and have them earlier in life. The poorest adolescents (ages 15 to 19) are three times more likely on average to give birth than the wealthiest adolescents.
- The children of the poorest mothers are three times more likely to be stunted (have low height for their age) and twice as likely to die than children of the wealthiest mothers.
- The wealthiest women are one-half as likely to be malnourished, four times more likely to use modern

contraception, and five times more likely to have a medically trained assistant when giving birth.

- The poor are disadvantaged in nearly all of the factors that contribute to good health, such as education, knowledge of health matters, nutrition, and use of health services. Education figures prominently among these determinants: The wealthiest women are nine times more likely, on average, to have completed fifth grade than the poorest women.

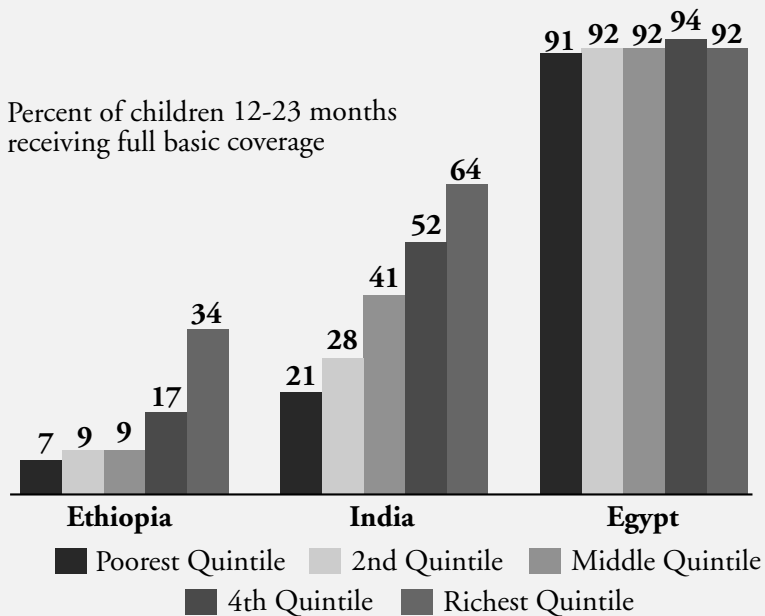
## IMPLICATIONS

Many governments and international agreements have established health, population, and nutrition goals that are stated as national averages. Tracking these averages doesn't allow for monitoring disparities among specific socioeconomic groups. Unless national goals explicitly call for improving equity, countries can achieve progress in health overall without bringing substantial benefits to the poorest and most vulnerable groups. The development of poverty-oriented health goals, therefore, is key for monitoring progress in improving the health of the poor. Collecting socioeconomic data along with health data is also essential.

Although basic health services are often designed to be universal, a closer look may reveal that the people served are concentrated among better-off groups. Health programs thus need to explore alternative ways to allocate resources and direct their efforts so that the benefits accrue to those most in need.

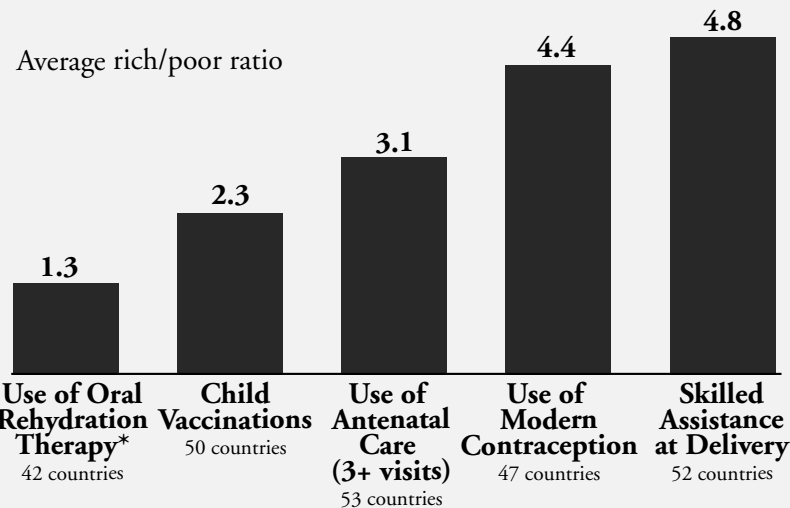
### CHILDHOOD VACCINATION COVERAGE, ETHIOPIA, INDIA, AND EGYPT

Percent of children 12-23 months receiving full basic coverage



The poor typically benefit less from health services than the rich, except where special efforts are made to reach the poorest citizens.

### INEQUALITIES IN THE USE OF HEALTH SERVICES, LATEST SURVEYS, 1992-2002



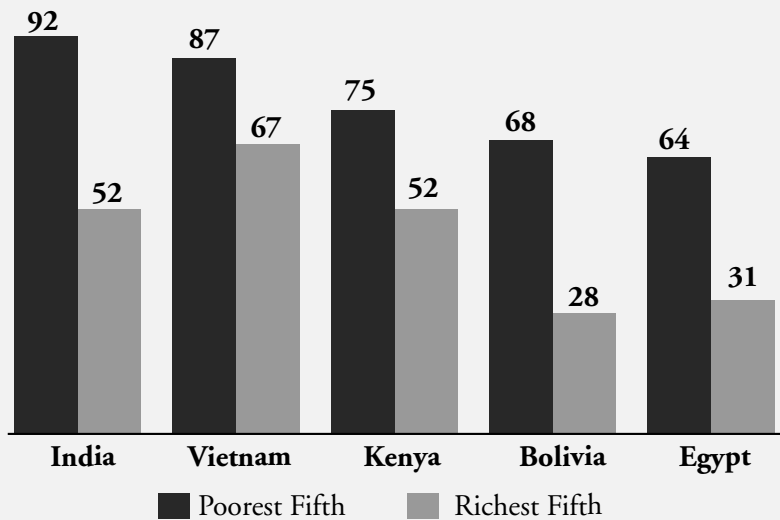
Note: Represents the average of the ratios of the richest fifth to poorest fifth, not weighted for population size and excluding countries with use less than 1 percent.

\*Percent of children with diarrhea in the two weeks preceding the survey who had received oral rehydration salts, other recommended home fluids, or increased liquids.

Among key health services, the gap in use between rich and poor is greatest for modern contraception and skilled delivery assistance. The wealthiest women are four to five times more likely than the poorest women to use these services.

### CONTRACEPTIVE USERS WHO OBTAIN SUPPLIES AND SERVICES FROM A PUBLIC-SECTOR PROGRAM

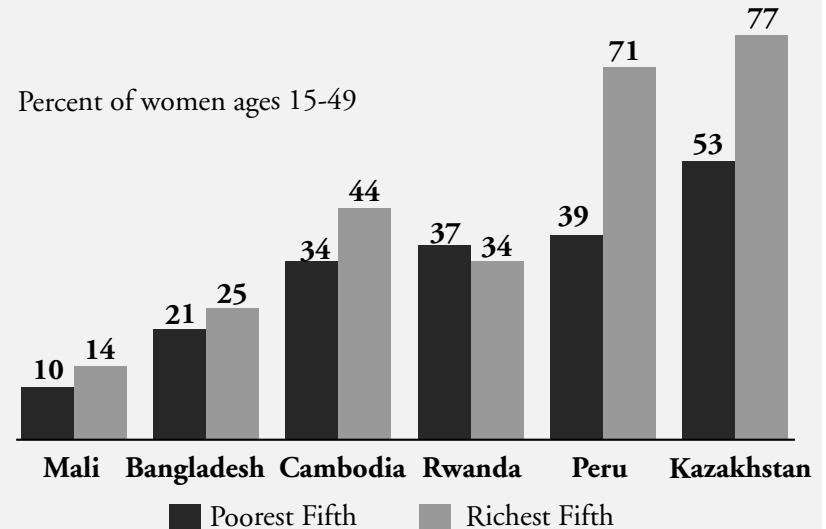
Percent of married women users



Poorer women are more likely than wealthier women to obtain their family planning method from a public-sector facility or provider.

### WOMEN WHO DECIDE BY THEMSELVES TO SEEK THEIR OWN HEALTH CARE

Percent of women ages 15-49



Note: Includes only those women who say that they alone have the final say in decisions to obtain their own health care.

Women have limited autonomy to seek health care in most places, and may be further disadvantaged if they are very poor.

## NOTES

The data presented here, compiled under the World Bank's Health and Poverty project, were drawn from household surveys conducted by the Demographic and Health Surveys (DHS) program. These surveys collect information on fertility, health, and nutrition issues from 5,000 to 10,000 or more households in each country. The surveys also gather data about some 20 to 30 household attributes, or assets—type of flooring and/or roof; source of water; availability of electricity; possession of such items as watches, radios, bicycles or a car; and other characteristics related to wealth status.

For each country, researchers combined the household assets into a single wealth index and divided the population into five groups of equal size, or quintiles, based on individuals' relative standing on the household index. The wealth index provides a country-specific or relative definition of economic status rather than an absolute definition of wealth. The economic status of the lowest or poorest quintile in Haiti, for example, is different from that of the poorest quintile in Brazil. Thus, data comparisons among countries must be made with caution.

The use of an asset measure rather than income or consumption measures is unconventional in economic research, but it is a practical measure as income and consumption data can be hard to obtain or unreliable. Additional technical discussion can be found at the World Bank's Poverty Net website: [www.worldbank.org/poverty/health/](http://www.worldbank.org/poverty/health/).

This chart shows the value of each health indicator for the lowest (poorest), mid-

dle, and highest (richest) quintiles. Data for the second and fourth quintiles are not shown but in most cases fall predictably between the first, third, and fifth quintiles. National averages are also not shown, but in most cases are close—but not identical—to the middle quintile.

## DEFINITIONS

*For some countries, the definitions of some indicators differ slightly from those published in DHS country reports.*

**Total Fertility Rate:** The average number of children a woman would have in her lifetime, given current age-specific fertility rates.

**Percent of Women Ages 15-19 Giving Birth in One Year:** The adolescent fertility rate (births per 1,000 women ages 15-19) divided by 10. Data refer to births during the preceding three years expressed as an annual average.

**Under 5 Mortality Rate:** Deaths to children under age 5 per 1,000 live births. The figure is based on births in the 10 years preceding the survey.

**Percent of Children Stunted:** Children whose height-for-age Z-score is below -2 standard deviations of the median reference standard for their age as established by the World Health Organization (includes moderately and severely stunted). The figures are based on children under age 3, 4, or 5, depending on the country.

**Percent of Malnourished Women:** Women ages 15-49 whose body mass index (BMI) is less than 18.5, where BMI—an indicator of adult nutritional status—is defined as weight in kilograms divided by the square of height in meters.

## Percent of Married Women Using

**Modern Contraception:** Modern contraception is defined to include male/female sterilization, oral contraceptive pill, contraceptive injection, intrauterine device, male/female condom, diaphragm, cervical cap, or contraceptive jelly or foam.

**Percent of Pregnant Women With 3+ Antenatal Care Visits:** Births in the five years before the survey for which a woman received three or more antenatal care consultations from a medically trained person.

**Percent of Births Attended by Medically Trained Personnel:** Percent of births in the previous five years attended by a doctor, nurse, or trained midwife.

**Percent of Children Fully Vaccinated:** Percent of surviving children ages 12 to 23 months who received all basic vaccinations, namely BCG, three doses of DPT and oral polio, and measles. In Latin America and the Caribbean, the age range is 18 to 29 months.

**Percent of Women With Knowledge About Sexual Transmission of HIV/AIDS:** Women ages 15-49 who report that they know of HIV/AIDS and know of at least one of the following ways to avoid the sexual transmission of HIV/AIDS: abstinence, using a condom, avoiding multiple sex partners, avoiding sex with prostitutes, and avoiding unprotected homosexual sex. In some countries, only ever-married women are surveyed.

**Percent of Women Who Have Completed Fifth Grade:** Women ages 15-49 who have completed at least five years of primary schooling.

## DATA SOURCE

D. R. Gwatkin, S. Rutstein, K. Johnson, E. A. Suliman, and A. Wagstaff, *Initial Country-Level Information about Socioeconomic Differences in Health, Nutrition, and Population, Volumes I and II*, (Washington, D.C.: The World Bank, Nov. 2003)

## FOR MORE INFORMATION

Data for more than 100 health indicators, by wealth quintile, from 78 Demographic and Health Surveys can be accessed at the Country Data section of the World Bank's Poverty Net website: [www.worldbank.org/poverty/health/](http://www.worldbank.org/poverty/health/).

## ACKNOWLEDGMENTS

Lori Ashford and Haruna Kashiwase prepared this chart in collaboration with Davidson Gwatkin and El Daw Suliman of the World Bank. Shea Rutstein and Kiersten Johnson of ORC Macro prepared the data tabulations. Thanks are also due to the following reviewers: Jacob Adetunji, Stan Bernstein, Dara Carr, Mai Hijazi, Vijay Rao, Krista Stewart, Charles Teller, and Nancy Yinger.

Funding was provided by the U.S. Agency for International Development under BRIDGE (BRinging Information to Decisionmakers for Global Effectiveness), Cooperative Agreement No. GPO-A-00-03-00004-00.

Design: Heather Lilley, PRB  
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