Volume 4, Number 2
Fall 2002

# DHS+ Dimensions

A semiannual newsletter of the Demographic and Health Surveys project

Carlyn Saltman, JHU/CCP

*The DHS/ World Bank asset index uses household assets and amenities to measure the distribution of wealth within a country.*

MEASURE *DHS+*

## Contents



## DHS and World Bank Use Wealth Index To Measure Socioeconomic Status

### Measurement of Poverty by Means of DHS Data

ORC Macro and the World Bank have jointly devised a methodology for using Demographic and Health Surveys (DHS) to classify populations according to socioeconomic level by means of an index of wealth. On the basis of respondents' household assets, amenities, and services (information collected in the DHS household questionnaire), the DHS/World Bank (DHS/WB) asset index measures the distribution of wealth across a country.

The wealth index data are being used to measure how access to social services varies according to economic status. The data can also be used to highlight the disproportionate effects of relative levels of poverty on health and nutrition indicators. Forty-four Country Reports on Health, Nutrition, Population and Poverty have been published so far describing the health status and use of services among individuals belonging to different socioeconomic classes. Data from those reports provide basic information for World Bank staff, government officials, program managers and others to use in preparing country analyses and in developing health, nutrition and population activities for the disadvantaged.

*Continued on page 2*

## Implications of an Assets-Oriented Approach

Reliance on an index of assets to measure socioeconomic status is somewhat unconventional in research about economic disparities, which has traditionally been based on measurements of consumption or income. DHS surveys are often implemented in countries where income itself may not be the most reliable—or even available—way of measuring socioeconomic status. Large proportions of the population often work in the agricultural or informal sectors, receiving no cash payment for their work. Instead, they may be paid in kind—for example, being given the right to use someone else's land for farming or being given animals to raise. The difficulty in assessing socioeconomic status in such countries can be overcome by means of the wealth index. Since ownership of assets has been found to be an accurate proxy for consumption, the DHS/WB asset index indirectly measures the long-term economic status of a household.

Assets and amenities included in the index range from the possession of items such as bicycles, cars, radios, sofas, and televisions; dwelling characteristics such as type of flooring material or the existence of overcrowding; household facilities such as source of drinking water, type of toilet facility, and type of cooking fuel; and other characteristics related to wealth status. The index has been compared against the poverty rates and the gross state product per capita for India. On the microeconomic level, expenditures data were compared with assets data for the same households for Nepal, Pakistan, Indonesia (Filmer and Pritchett 1998, 2001), and Guatemala (Rutstein 1999). Evidence from those studies shows that the DHS/WB asset index is highly comparable to conventional measures of consumption expenditures.

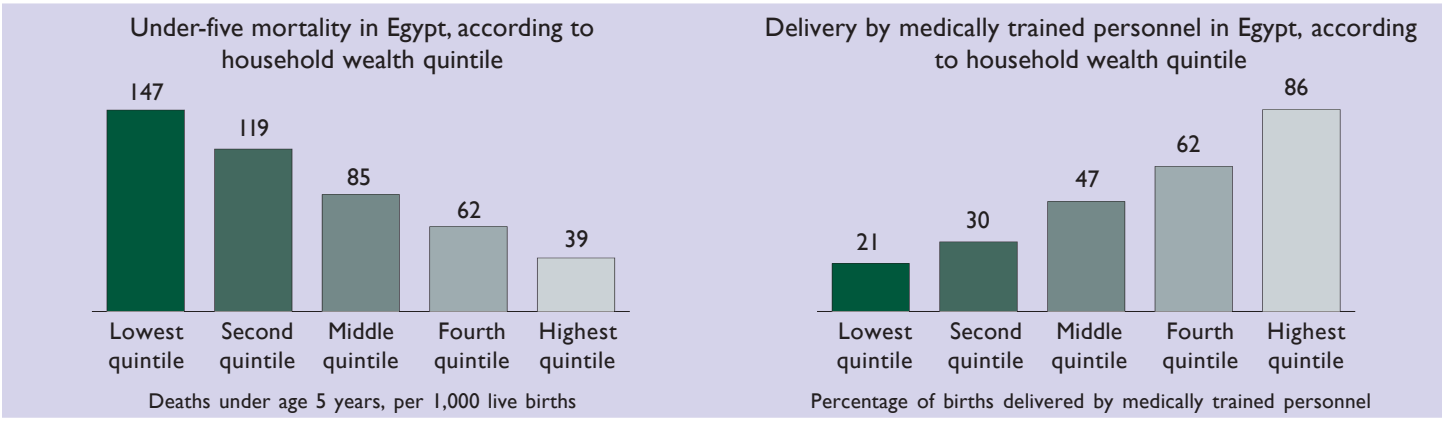
A standard list of assets is included in the questionnaires for all DHS countries. In addition to the list of standard assets, country-specific assets are included where they are relevant to better distinguish levels of wealth in that country. The inclusion of all the available assets, and the use of the same categories of assets across all countries, lessens the subjectivity likely to be involved in selecting only some variables to be included. On the other hand, the use of some items may confound the relationship between poverty and health. For instance, water and sanitation are not solely indicators of household wealth. Rather they are also likely to be direct determinants of the health status of household members.

## Definition of Wealth Quintiles

The DHS/WB asset index uses principal-components analysis to divide the population into quintiles—five categories, from the poorest 20 percent to the richest 20 percent—on the basis of wealth. Each household asset is assigned a weight or factor score, and the resulting asset scores are standardized in relation to a standard normal distribution with a mean of zero and a standard deviation of one. Wealth quintiles are then expressed in terms of quintiles of all individuals in the population, rather than of subsets of individuals at risk for any one health indicator. This approach has the advantage of producing information directly relevant to the underlying question of interest— specifically, the health status of the poor or access to services for the poor in the population as a whole. The approach also facilitates making comparisons across indicators for the same quintiles, since the quintile denominators remain unchanged across indicators.

## The Asset Index and Geographic Information

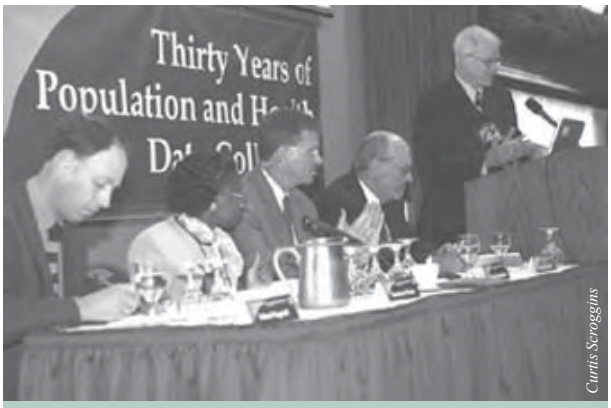
In 1996, DHS began to collect geographic information in the form of latitudinal and longitudinal coordinates for each community where DHS respondents live. That set of point locations can then be linked to all of the household and individual-level attributes contained in the full DHS data set. Within a geographic information system, other data sets (such as infrastructure and road networks) can be analyzed simultaneously with the DHS data. Thus, communities within a country can (for example) be classified according to proximity to health services, agricultural suitability of the surrounding land, or level of malaria risk. Combining contextual geographic information with the poverty ranking from the wealth index adds a new dimension to the analysis that may be undertaken with DHS data. Such data linkages allow for a multifaceted approach to understanding the spatial distribution of the poor, as measured by both their health and their socioeconomic status. This approach creates a useful tool for measuring progress in health and educational programs among the poor.



# USAID Celebrates 30 Years of Collecting Data on Population and Health

On June 3-4, 2002, MEASURE *DHS+* and the United States Agency for International Development (USAID) hosted a symposium entitled *Thirty Years of Population and Health Data Collection* at the National Press Building in Washington, D.C. Attendees included 250 to 300 representatives from USAID's Bureau for Global Health, regional bureaus and field missions, and U.S. cooperating agencies, as well as from other international and host country organizations.

For 30 years, USAID has supported the collection, analysis, and use of data on international population and health by means of MEASURE and other projects. To highlight the changing needs and trends of local populations, USAID has invested some $340 million since 1965 on DHS and similar surveys in developing countries. This symposium celebrated the work of the MEASURE partner organizations and other USAID cooperating agencies, and it offered a forum to discuss technical challenges, opportunities, and future directions.




*Dr. Duff Gillespie, Senior Deputy Assistant Administrator of the Bureau for Global Health, USAID, speaks at the Symposium on 30 Years of Population and Health Data Collection.*

Participants in the symposium were able to reflect on how much has been achieved since USAID began funding international population and health surveys. They also reviewed the policy impact, program changes, and new directions that have resulted from the data collection program; discussed where the program stands and what has been working; and looked ahead to consider future directions.


*Martin Vaessen, director of the Demographic and Health Surveys program, ORC Macro*

Plenary sessions held over the 2 days were "History and use of USAID data collection efforts," "The impact of data on policies and programs," "Approaches to data collection: Responding to differing needs," and "Future directions in meeting global health and population information needs." Special sessions were held on issues such as global health, adolescents, gender, HIV/AIDS, and poverty and equity. Speakers included representatives from USAID, ORC Macro, MEASURE, the United Nations Population Fund (UNFPA), the United Nations Children's Fund (UNICEF), and the World Bank, as well as experts from Africa, Asia, and Latin America. On both days, there were exhibits and demonstration booths for the display of materials and tools developed and used by MEASURE partners. CSPro was demonstrated by DHS and the Bureau of the Census; DHS held demonstrations of both STATcompiler and the HIV/AIDS Survey Indicators Database, as well as a demonstration on the collection of biomarkers. A reception following the symposium was provided by the David and Lucille Packard Foundation.

The media coverage of the symposium was excellent . A press conference was held on June 3 to brief reporters on the importance of having a steady stream of data to detect health trends and emerging threats as well as to improve population and health conditions in the world's poorest countries. Dr. Duff Gillespie, senior deputy assistant administrator at the Bureau for Global Health, USAID, and Martin Vaessen, director of the MEASURE *DHS+* project at ORC Macro, held the joint press briefing. "The need for reliable information has never been greater," said Dr. Gillespie. "Much progress has been made over the last 30 years, but all health concerns have not been resolved and new challenges, such as the HIV/AIDS pandemic, continually arise." Added Mr. Vaessen, "Surveys not only have been a powerful tool for change, they have helped galvanize donor and country commitment to policies and funding because they have shown that change was possible and taking place."

MEASURE *DHS+* assists countries worldwide in the collection and use of data to monitor and evaluate population, health, and nutrition programs. Funded by the U.S. Agency for International Development (USAID), MEASURE *DHS+* is implemented by Macro International Inc., an Opinion Research Corporation company (ORC Macro), in Calverton, Maryland, with the Population Council and the East-West Center. *DHS+* Dimensions is published twice a year to provide information about the program and the status of *DHS+* surveys. Send correspondence to MEASURE *DHS+*, ORC Macro, 11785 Beltsville Drive, Suite 300, Calverton, MD 20705, USA (tel.: 301-572-0200; fax: 301-572-0999; www.measuredhs.com). Project Director: Martin Vaessen.

# Nepal Survey Reveals Decline in Fertility, Increase in Contraceptive Use

The findings from the 2001 Nepal Demographic and Health Survey (NDHS) were presented at a national seminar in Kathmandu on May 6, 2002. More than 200 people attended the seminar, including dignitaries from the Ministry of Health and other government organizations as well as representatives from USAID/Nepal, UNICEF, WHO, UNFPA, and other NGOs. The minister of health, Mr. Sharat Singh Bhandari, attended, praising all involved for work well done. Media coverage on the seminar was extensive, with Nepal TV broadcasting the inaugural session on television the same night. The following day, several articles published in leading Nepali and English-language news-papers summarized key findings of the survey. The fieldwork for the 2001 NDHS was conducted by New ERA, a local research organization, between January and June 2001. In total, 8,726 women age 15-49 and 2,261 men age 15-59 were interviewed.

## Decline in Fertility

Comparison of the data from the 2001 Nepal DHS survey with earlier surveys indicates a noticeable decline in fertility rates over time. Fertility has declined steadily from 5.1 births per woman in 1984-1986 to 4.1 births per woman in 1998-2000. Especially notable is the 18 percent decline in fertility among women below age 30, from 3.6 births per woman during the period 15-19 years before the survey to 2.9 births per woman during the period 0-4 years before the survey.

Differences by place of residence are marked, with rural women having more than twice as many children (4.4) as urban women (2.1). Education is also strongly related to fertility, with uneducated women having more than twice as many children (4.8) as women with at least a secondary education (2.3).

The 2001 NDHS also indicates that the proportion of men and women under age 25 who have never married is increasing over time. In 1961, only one in four women age 15-19 was not married; in 2001 that figure was almost 60 percent. A similar pattern of decline in nuptiality was found among men.

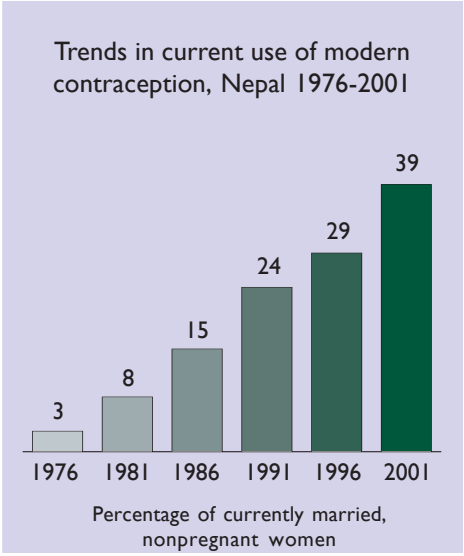
## Increases in contraceptive use

There has been an impressive increase in the use of contraception in Nepal over the last 25 years. Use of modern contraception among currently married nonpregnant women age 15-49 increased from only 3 percent in 1976 to 39 percent in 2001, with an almost 35 percent increase in use between 1996 and 2001. The increase is largely attributable to increases in the use of injectables and female sterilization.

The most widely used modern method is female sterilization (15 percent among currently married women), followed by injectables (8 percent) and male sterilization (6 percent).

## Antenatal, Delivery, and Postnatal Services

Half of pregnant women surveyed in Nepal received antenatal care, with 28 percent receiving care from a medical professional or an auxiliary nurse midwife. About half of mothers who received antenatal care reported that they had been informed about the signs of pregnancy complications.




Institutional births are not common in Nepal. Less than one in 10 births during the 5 years preceding the NDHS took place in a health facility. Thirteen percent of the births were attended by a medical professional.

Only 17 percent of mothers who delivered outside of a health institution received postnatal care within 2 days of delivery. Nearly four in five mothers received no postnatal care at all.

## Childhood Mortality Rates Decrease

Although they remain high, childhood mortality levels have declined rapidly since the 1980s. Under-five mortality during the 5 years before the survey dropped to 58 percent of what it had been 10 to 14 years before the survey. Infant mortality rates also declined significantly, to 60 percent of their levels 10 to 14 years before. That decline in childhood mortality has been confirmed by data from other sources. Despite the improvements, however, the 2001 NDHS showed about one in every 11 children born in Nepal dying before reaching the age of five (91 deaths per 1,000 live births). Slightly more than two-thirds of those deaths occurred in the first year of life (64 deaths per 1,000 live births).


*Pav Govindasamy*

# Use of Withdrawal, Abortion Rates High in Armenia

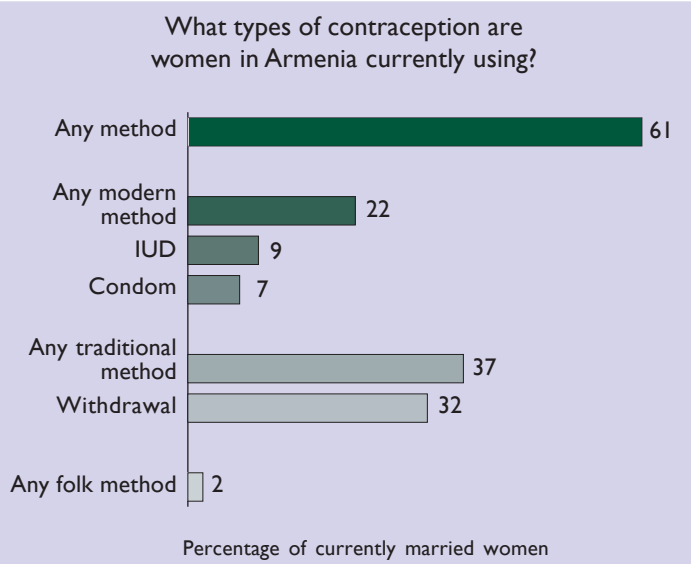
The seminar to release the findings of the 2000 Armenia Demographic and Health Survey (ADHS) was held in Yerevan in January 2002. More than 100 people attended the seminar, including representatives from the Ministry of Health, the National Statistical Service, the Ministry of Social Welfare, the National Institute of Health, USAID/Armenia, USAID cooperating organizations, and international organizations such as UNICEF and the World Bank. The ADHS was a nationally representative survey of 6,430 women age 15-49 and 1,719 men age 15-54. Survey fieldwork was conducted by the National Statistical Service and the Ministry of Health of Armenia between October and December 2000.

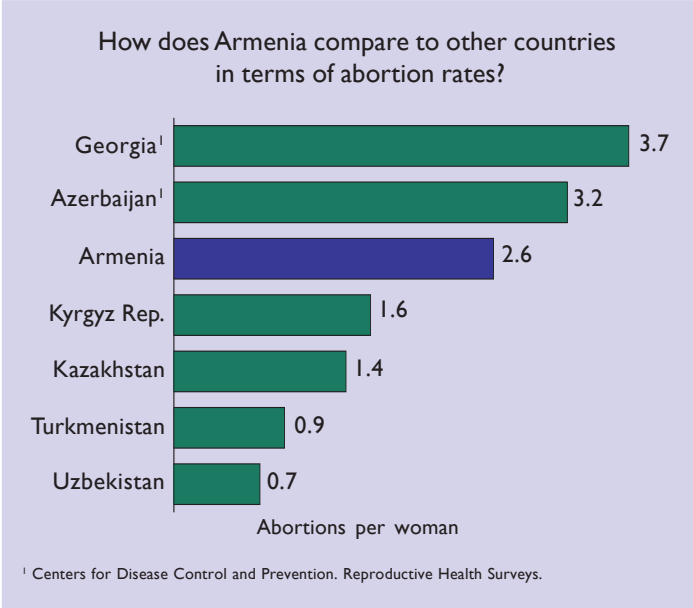
## Withdrawal Use

The ADHS found a high level of contraceptive use, but also a striking pattern of reliance on traditional methods. Among married women, 61 percent reported currently using contraception—22 percent using modern methods, 37 percent using traditional methods, and 2 percent using folk methods. By far the most commonly used method was withdrawal; 32 percent of currently married women, more than half of all women who reported using contraception, reported using withdrawal. The IUD and the condom, the next most commonly used methods, were used by 9 percent and 7 percent of married women, respectively.

The level of withdrawal use among married women in Armenia was found to be much higher than in any other former Soviet republic in which a DHS had been conducted. Withdrawal use found in Central Asia ranges from 3 percent in Kazakhstan and Uzbekistan to 6 percent in the Kyrgyz Republic. In Georgia, 11 percent of women used withdrawal.

Overall levels of contraceptive use were similar for different types of women, whether they lived in urban or rural areas and across regions and educational categories. Nevertheless, the urban women and women with a higher education relied more on modern methods (the IUD and the condom) and less on traditional methods (especially withdrawal).




Women using withdrawal were found to have high discontinuation rates because of method failure. Twenty-nine percent of women using withdrawal experienced a contraceptive failure and became pregnant within 12 months of starting use.

## Induced Abortion

In Armenia, as in all of the former Soviet Union, induced abortion has been a primary means of fertility control for many years. The ADHS estimated that the total abortion rate (TAR), which indicates the number of abortions a woman would have in her lifetime if she experienced the currently observed age-specific rates during her childbearing years, was 2.6. This compares to a total fertility rate of 1.7 births per woman.

The TAR in Armenia was significantly higher in rural areas (3.4 abortions per woman) than in urban areas (2.1 abortions per woman). That is the reverse of the findings in Kazakhstan and the Kyrgyz Republic, where abortion rates were higher in urban than in rural areas. The higher abortion rate in rural areas is consistent with the greater reliance there on withdrawal as a method of contraception.

Two-thirds of all abortions were performed on women who were using contraception at the time but experienced method failure. More than half of all abortions occurred after the failure of traditional methods of contraception, specifically withdrawal (46 percent) and periodic abstinence (6 percent).

# Summary of Demographic and Health Surveys

| COUNTRY SURVEY | IMPLEMENTING ORGANIZATION |
|---|---|
| **CENTRAL ASIA** | |
| **Kazakhstan 1999** | National Institute of Nutrition |
| 1995 | Inst. of Obst. & Ped., MOH |
| **Kyrgyz Republic 1997** | Settlmt. and Land Rec. Dep., Min. of Agr. |
| **Turkmenistan 2000** | MCH/MOH and MIT |
| **Uzbekistan 2002** | Min. of Macroeconomics/MOH |
| 1996 | Inst. of Obst. & Gynec., MOH |
| **LATIN AMERICA & CARIBBEAN** | |
| **Bolivia 1998** | Instituto Nacional de Estadística |
| 1993/94 | Instituto Nacional de Estadística |
| 1989 | Instituto Nacional de Estadística |
| **Brazil 1996** | Soc. Civil Bem-Estar Familiar no Brasil |
| 1991(NE) | Soc. Civil Bem-Estar Familiar no Brasil |
| 1986 | Soc. Civil Bem-Estar Familiar no Brasil |
| **Colombia 2000** | PROFAMILIA |
| 1995 | PROFAMILIA |
| 1990 | PROFAMILIA |
| 1986 | Corp. Cen. Reg. de Pob./Min. de Salud |
| **Dominican Rep. 2002** | CESDEM |
| 1999 | CESDEM |
| 1996 | CESDEM/PROFAMILIA |
| 1991 | PROFAMILIA |
| 1986 | Consejo Nacional de Población y Familia |
| 1986 (Exp.) | Consejo Nacional de Población y Familia |
| **Ecuador 1987** | Cen. de Estud. de Pob. y Paternidad Responsible |
| **El Salvador 1985** | Asociación Demográfica Salvadoreña |
| **Guatemala 1998/99 (Interim)** | Instituto Nacional de Estadística |
| 1997 (In-depth 1)* | Instituto Nacional de Estadística |
| 1997 (In-depth 2)* | Instituto Nacional de Estadística |
| 1995 | Instituto Nacional de Estadística |
| 1987 | Inst. de Nutrición de Cent. y Panamá |
| **Haiti 2000** | Institut Haïtien de l'Enfance |
| 1994/95 | Institut Haïtien de l'Enfance |
| **Mexico 1987** | Dir. Gen. de Plan. Fam., Sec. de Salud |
| **Nicaragua 2001** | Instituto Nacional de Estadísticas y Censos |
| 1997/98 | Instituto Nacional de Estadísticas y Censos |
| **Paraguay 1990** | Centro Paraguayo de Estudios de Poblacion |
| **Peru 2000** | Instituto Nacional de Estadística |
| 1996 | Instituto Nacional de Estadística |
| 1991/92 | Instituto Nacional de Estadística |
| 1986 | Instituto Nacional de Estadística |
| 1986 (Exp.) | Instituto Nacional de Estadística |
| **Trinidad & Tobago 1987** | Family Planning Association of Trinidad/Tobago |

| COUNTRY SURVEY | IMPLEMENTING ORGANIZATION |
|---|---|
| **SOUTH/SOUTHEAST ASIA** | |
| **Bangladesh 2001*** | Mitra & Associates/ACPR/NIPORT |
| 2000 | Mitra & Associates/NIPORT |
| 1999 (SPA) | Mitra & Associates/NIPORT |
| 1996/97 | Mitra & Associates/NIPORT |
| 1993/94 | Mitra & Associates/NIPORT |
| **Cambodia 2000** | National Institute of Statistics/MOH |
| 1998 | SAWA Cam./Nat. Inst. of Public Health |
| **India 1998-2000*** | Various Organizations |
| 1998/99 | International Inst. for Population Sciences |
| 1992/93 | International Inst. for Population Sciences |
| **Indonesia 2002** | Central Bureau of Statistics/NFPCB/MOH |
| 1997 | Central Bureau of Statistics/NFPCB/MOH |
| 1994 | Central Bureau of Statistics/NFPCB/MOH |
| 1991 | Central Bureau of Statistics/NFPCB/MOH |
| 1987 | Central Bureau of Statistics/NFPCB |
| **Myanmar 1996/97** | Academy of Preventive Medicine |
| **Nepal 2001** | New ERA |
| 1996 | Ministry of Health/New ERA |
| 1987 (In-depth) | New ERA |
| **Pakistan 1990/91** | National Institute of Population Studies |
| **Philippines 2003** | National Statistics Office/Dept. of Health |
| 1998 | National Statistics Office/Dept. of Health |
| 1993 | National Statistics Office |
| **Sri Lanka 1987** | Dept. of Cen. & Stat., Min. of Plan Impl. |
| **Thailand 1987** | Inst. of Pop. Studies, Chulalongkorn U. |
| **Vietnam 2002** | Nat. Comm. on Pop. and FP/Gen. Stat. Off. |
| 1997 | Nat. Comm. on Pop. and FP/Gen. Stat. Off. |
| **NORTH AFRICA/WEST ASIA/EUROPE** | |
| **Armenia 2000** | Nat. Stat. Service/MOH |
| **Egypt 2002 (SPA)** | |
| 2000 | National Population Council |
| 1998 (Interim) | El-Zanaty & Associates |
| 1997 (Interim) | El-Zanaty & Associates |
| 1996/97 (In-Depth)* | National Population Council |
| 1995 | National Population Council |
| 1992 | National Population Council |
| 1988/89 | National Population Council |
| **Jordan 2002** | Department of Statistics |
| 1997 | Department of Statistics |
| 1990 | Department of Statistics |


Caroline Jacoby


P. Govindasamy

| COUNTRY SURVEY | IMPLEMENTING ORGANIZATION |
|---|---|
| **Morocco 2003** | SEIS - Ministry of Health |
| 1995 (Panel) | Ministère de la Santé Publique |
| 1992 | Ministère de la Santé Publique |
| 1987 | Ministère de la Santé Publique |
| **Tunisia 1988** | Office Nat. de la Fam. et de la Population |
| **Turkey 1998** | Hacettepe Inst. of Population Studies |
| 1993 | Hacettepe Inst. of Population Studies/MOH |
| **Yemen 1997** | Central Statistical Organization |
| 1991/92 | Central Statistical Organization |

## SUB-SAHARAN AFRICA

| | |
|---|---|
| **Benin 2001** | Institut Nat. de la Stat. et de l'Ana. Écon. |
| 1996 | Institut National de la Statistique |
| **Botswana 1988** | Ministry of Health |
| **Burkina Faso 2003** | Inst. Nat. de la Statistique et la Démo. |
| 1998/99 | Inst. Nat. de la Statistique et la Démo. |
| 1992/93 | Inst. Nat. de la Statistique et la Démo. |
| **Burundi 1987** | Dép. de la Pop., Min. de l'Intérieur |
| **Cameroon 2003** | DSCN and BUCREP |
| 1998 | Bur. Cen. Recensements et Études de Pop. |
| 1991 | Min. du Plan et de l'Amén. du Terr. |
| **Central African Rep. 1994/95** | Dir. des Stat. Dém. et Sociales |
| **Chad 2004** | Inst. de la Stat., des Études Écon. et Démogra. |
| 2002 | Inst. de la Stat., des Études Écon. et Démogra. |
| 1996/97 | Bureau Central du Recensement |
| **Comoros 1996** | Centre National de Doc. et de Rech. Sci. |
| **Côte d'Ivoire 2003** | Inst. National de la Statistique |
| 1998/99 | Inst. National de la Statistique |
| 1994 | Inst. National de la Statistique |
| **Eritrea 2002** | National Statistics and Evaluation Office |
| 1995/96 | National Statistics Office |
| **Ethiopia 2000** | Central Statistical Authority |
| **Gabon 2000** | Direction Générale de la Statistique |
| **Ghana 2002 (SPA)** | Ghana Statistical Service |
| 1998 | Ghana Statistical Service |
| 1993/94 | Ghana Statistical Service |
| 1988 | Ghana Statistical Service |
| **Guinea/Conakry 1999** | Direction Nationale de la Statistique |
| **Kenya 2003** | Central Bureau of Statistics |
| 1999 (SPA)* | National Council for Population and Dev. |
| 1998 | National Council for Population and Dev. |
| 1993 | National Council for Population and Dev. |
| 1988/89 | National Council for Population and Dev. |

*John Harris, JHU/CCP*

| COUNTRY SURVEY | IMPLEMENTING ORGANIZATION |
|---|---|
| **Liberia 1986** | Min. of Planning & Economic Affairs |
| **Madagascar 2003** | DDDS de l'Institut Nat. de la Stat. |
| 1997 | DDDS de l'Institut Nat. de la Stat. |
| 1992 | Centre Nat. de Recherches sur l'Env. |
| **Malawi 2000** | National Statistical Office |
| 1996 (KAP) | National Statistical Office |
| 1992 | National Statistical Office |
| **Mali 2001** | CPS/MSSPA et DNSI |
| 1995/96 | CPS/MSSPA et DNSI |
| 1987 | Inst. de Sahel: USED/CERPOD |
| **Mauritania 2000** | Office Nat. de la Statistique |
| **Mozambique 2003** | Instituto Nacional de Estatística |
| 1997 | Instituto Nacional de Estatística |
| **Namibia 2002** | Min. of Health and Social Services |
| 1992 | Min. of Health and Social Services |
| **Niger 1998** | Care International |
| 1992 | Dir. de la Stat. et des Comptes Nat. |
| **Nigeria 2003** | Nat. Pop. Commision |
| 1999 | Nat. Pop. Commision |
| 1990 | Federal Office of Statistics |
| 1986/87 (Ondo State) | Ministry of Health, Ondo State |
| **Rwanda 2001 (SPA)** | Office National de la Population |
| 2000 | Office National de la Population |
| 1992 | Office National de la Population |
| **Senegal 1999** | SERDHA |
| 1997 (Interim) | Min. de l'Economie et des Finances |
| 1992/93 | Dir. de la Prévision et de la Stat. |
| 1986 | Min. de l'Economie et des Finances |
| **South Africa 1998** | Dept. of Health/Med. Research Council |
| **Sudan 1989/90** | Dept. of Stat., Min. of Fin. & Econ. Plan. |
| **Tanzania 1999** | National Bureau of Statistics |
| 1996 | Bureau of Statistics, Planning Comm. |
| 1995 (In-depth)* | Bureau of Statistics, Planning Comm. |
| 1994 (KAP) | Bureau of Statistics, Planning Comm. |
| 1991/92 | Bureau of Statistics, Planning Comm. |
| **Togo 1998** | Direction de la Statistique |
| 1988 | Unité de Rech. Dém., Dir. de Stat., Dir. Gén. Santé |
| **Uganda 2000** | Uganda Bureau of Statistics |
| 1995/96 (In-depth)* | Inst. Stat. & Applied Econ., Makerere U. |
| 1995 | Dept. of Stat., Min. Fin. & Econ. Plan. |
| 1988/89 | Ministry of Health |
| **Zambia 2001/02** | Central Statistical Office |
| 1996/97 | Central Statistical Office |
| 1992 | University of Zambia |
| **Zimbabwe 1999** | Central Statistical Office |
| 1994 | Central Statistical Office |
| 1988/89 | Central Statistical Office |

| | |
|---|---|
| ***Guatemala 1:** | Health Expenditure Survey |
| ***Guatemala 2:** | Health Provider Survey |
| ***Bangladesh:** | Maternal Health Services and Maternal Mortality Survey |
| ***India:** | 16 Uttar Pradesh Benchmark Surveys |
| ***Egypt:** | Reasons for Nonuse in Upper Egypt |
| ***Kenya:** | Service Provision Assessment |
| ***Tanzania:** | Estimation of Adult and Childhood Mortality in a High HIV/AIDS Population |
| ***Uganda:** | Negotiating Reproductive Outcomes |

# HIV Testing Conducted as Part of Mali DHS

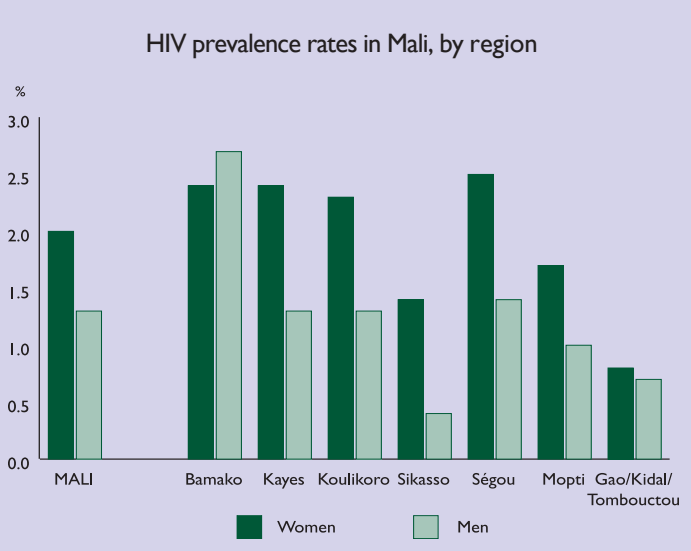
In 2001, information on nationally representative HIV seroprevalence levels was obtained for the first time as part of a Demographic and Health Survey. The Mali 2001 Enquête Démographique et de Santé (EDSM-III) was the first DHS survey to include HIV testing.

The EDSM-III was implemented between January and May 2001 by the Cellule de Planification et de Statistique du Ministère de la Santé and the Direction Nationale de la Statistique et de l'Informatique. The EDSM-III was carried out with financial support from USAID, UNICEF, the World Bank, and UNFPA. In all, 12,331 households, 12,849 women, and 3,405 men were successfully interviewed.

## HIV Test Methodology

In one-third of the households, all women age 15-49 and all men age 15-59 were asked to consent to be tested for HIV. The HIV testing was conducted anonymously and the results of the test were not given to the respondents. Instead the respondents were given a referral card for free HIV testing and counseling at a local clinic.

Twenty-five female health agents were trained to administer the HIV test. After a respondent had consented to be tested, his/her index finger was pricked by means of a retractable lancet and two drops of blood were collected on a piece of filter paper. The filter paper was dried, given an identification number, and sealed in a plastic bag. The identification number was recorded on a separate card, along with the respondent's age, sex, and the cluster where he or she lived. This was the only information that was linked to the results of the HIV test. The filter paper and the identification card were then sent to a central laboratory in Bamako for testing.




In the laboratory, HIV testing was conducted by means of three ELISA tests (Murex 1.2.0, Vironostika, and Genscreen), with confirmatory testing of all the positive results using Western Blot.

## Coverage Rates

Of the 4,556 women age 15-49 who were asked to be tested for HIV, 3,882 consented and were tested, for a coverage rate of 85 percent. Of the 4,062 men age 15-59, 3,069 consented and were tested for HIV, for a coverage rate of 76 percent. The total coverage rate for all respondents was 81 percent. The coverage rates were significantly higher in the rural areas (84 percent) than in the urban areas (74 percent). Coverage rates among urban men were particularly low (67 percent).

Noncoverage was due to either refusal or absence from the household at the time of the test. Among eligible respondents, 12 percent refused to take the test (9 percent among women and 14 percent among men). The majority of the other respondents not tested were away from home at the time of the test.

## HIV Seroprevalence Rates

The overall HIV seroprevalence rate for women age 15-49 was 2.0 percent. The rate among men age 15-59 was 1.3 percent. The national seroprevalence for both men and women was 1.7 percent. At that level, it is estimated that approximately 80,000 Malian adults were seropositive in 2001.

HIV rates for both men (3.8 percent) and women (3.3 percent) reach their maximum at age 30-34 years. With respect to regional differentials, HIV prevalence was highest in Bamako, with 2.5 percent of the population being HIV positive. The rate is lowest in Gao/Kidal/Tombouctou, at 0.7 percent. HIV rates in urban areas (2.2 percent) are higher than in rural areas (1.5 percent).

## Future Directions

The successful incorporation of HIV testing into the Mali DHS has led other countries to consider adding testing to their surveys. Testing for both HIV and syphilis was conducted in the 2001-2002 Zambia DHS survey and HIV testing is being conducted in the ongoing 2002 Dominican Republic DHS survey.

## Force-feeding of Girls in Mauritania

*Gavage*, or force-feeding, is the traditional practice that consists of making subjects eat more food than they would voluntarily. In Mauritania, girls are made to eat large quantities of food so that they will become obese—obesity being a sign of beauty and wealth in Moorish society. According to the findings of the 2000-2001 Mauritania Demographic and Health Survey (MDHS), more than a fifth of women (22 percent) either had been or were being force fed. The practice was slightly more prevalent in rural areas (24 percent) than in urban areas (19 percent). Force-feeding in Mauritania is practiced almost exclusively by the Arab population—the largest ethnic group in the country.

For three-fourths of the women, force-feeding began between 6 and 11 years of age, although 9 percent were being force fed before the age of 6. Thirty-eight percent of women were force fed for a duration of 12 to 24 months. However, 5 percent of women were force fed for 10 years or more.

The MDHS found that 40 percent of Mauritanian women believed that force-feeding makes a girl more beautiful, 27 percent believed that it improves one's social status, and 14 percent believed that it improves her chances of marriage. On the other hand, 45 percent of women believed that not being force fed is better for a girl's health and 35 percent believed that not being force fed makes it easier to work and to move around.

The popularity of the practice does appear to be declining with each generation. Thirty-six percent of women age 40-44 reported having been force fed, but only 17 percent of women age 20-24 reported experiencing the practice. However, among women with at least one daughter, 20 percent had either force fed their daughter or intended to do so.

## Online HIV/AIDS Survey Indicator Database

MEASURE *DHS*+ launched the online HIV/AIDS Survey Indicators Database in May 2002. Designed as a tool to be used by policymakers and program managers, the database provides easily accessible and comprehensive information on HIV/AIDS indicators derived from sample surveys. The database allows the user to produce tables for specific countries, organized by selected background characteristics.

Currently the main sources of HIV/AIDS indicators in the database are the Demographic and Health Surveys, the UNICEF Multiple Indicator Cluster Surveys, the CDC Reproductive Health Surveys and Young Adult Surveys, the MEASURE *Evaluation* Sexual Behavior Surveys, and the Family Health International Behavioral Surveillance Surveys. The database is designed to be global in scope, eventually containing data on HIV in all the countries for which indicators are available.

The indicators included in the database are drawn from the *UNAIDS National AIDS Programmes: Guide to Monitoring and Evaluation*. The guide provides standardized indicators for measuring the success of HIV/AIDS programs. Included are the HIV/AIDS indicators that experts have identified for monitoring the goals set at the UN General Assembly Special Session on HIV/AIDS and the Millennium Development Goals on combating HIV/AIDS.

The database contains indicators from 15 different HIV/AIDS program areas: policy and political commitment; condom availability and quality; stigma and discrimination; knowledge; voluntary counseling and testing; mother to child transmission; sexual negotiation and attitudes; sexual behavior; young people's sexual behavior; injecting drug use; blood safety/nosocomial transmission; STI care and prevention; care and support; health and social impact; and impact (HIV incidence/STI prevalence).

The database is overseen by a technical advisory committee that includes representatives from USAID, UNICEF, CDC, UNAIDS, WHO, the U.S. Census Bureau, Family Health International, the Synergy Project, MEASURE *Evaluation*, and MEASURE *DHS*+ (the implementing organization). USAID provides the primary funding for the initiative, with UNAIDS and UNICEF providing additional financial support.

To access the HIV/AIDS Survey Indicators Database, go to **http://www.measuredhs.com/hivdata/**

# MEASURE *DHS+* Visitors and Events

### January 2002

- Fred Arnold participated in the Symposium on the Sex Ratio in India, held at the International Institute for Population Sciences in Mumbai, January 10–11. He coauthored a paper entitled, "Sex ratios and sex-selective abortions in India: Findings from the 1998–99 National Family Health Survey." Arnold also presented a paper prepared by Sunita Kishor, entitled "Putting India's experience in context: Population sex ratios and sex ratios at birth from the Demographic and Health Surveys."

### February 2002

- Ramadan Hamed from Cairo University (Egypt) visited ORC Macro February 4 – 15, 2002, to conduct further analysis of the 2000 Egypt DHS survey by means of GIS.

- MEASURE *DHS+* conducted a data processing procedures workshop February 25 – March 22 at ORC Macro. This was the first DHS workshop to use model CSPro programs. Six participants—from countries about to start fieldwork on a DHS survey—attended and learned how to adapt model programs for DHS data entry and editing their country's survey. Alex Izmukhambetov from the Academy of Preventive Medicine (Kazakhstan), Luis Ulloa from the Instituto Nacional de Estadística e Informática (Peru), Z.D. Mutalova from the Uzbekistan Ministry of Health, Achmad Sukroni and Martin Suanta from the Indonesia Central Bureau of Statistics, and Jacqueline Anum from the Ghana Statistical Service attended the workshop.

### March 2002

- Kumbutso Dzekedzeke from the Zambia Central Statistical Office and Jacob Record Malungo from the University of Zambia visited ORC Macro offices March 7 – 8, 2002, to review the status of the ongoing Zambia DHS survey.

### May 2002

- On May 1, Sunita Kishor gave a presentation on domestic violence at the technical update on gender-based violence and reproductive health organized by the Inter-Agency Gender Working Group.

- MEASURE *DHS+* participated in the Population Association of America's annual meeting, in Atlanta, Georgia, May 9 – 11, 2002.

- MEASURE *DHS+* participated in the Global Health Council's 29th annual conference, Global Health in Times of Crisis, in Washington D.C., May 28 – 31, 2002.

### June 2002

- MEASURE *DHS+* co-hosted a USAID-sponsored symposium entitled Thirty Years of Population and Health Data Collection, held June 3 – 4, 2002, at the National Press Club in Washington, D.C. For details, see related article on page 3.

- Mohamed Maiga, Isaka Niambélé, Flabou Bougoudogo, and Mamadou Basséry Ballo from the Ministère de la Santé, and Seydou Moussa Traoré and Souleymane Ba from the Direction Nationale de la Statistique et de l'Informatique (Mali), visited ORC Macro offices June 3 – 14 to work on the final report for the 2002 Mali DHS.

- MEASURE *DHS+* participated in a meeting, Monitoring and Evaluation of HIV/AIDS Plus in Young Persons, held in Saas-Fee, Switzerland June 9 – 12.

- MEASURE *DHS+* was invited to make a presentation at the African Evaluation Association Conference that was held June 10 – 14 at the United Nations complex in Nairobi. Anne Cross made a presentation on what's new in the DHS.

- Abdoul Fatahi Chitou and Bruno Magloire Nouatin from the Institut National de la Statistique et de l'Analyse Économique (Benin) visited ORC Macro to finalize the final report for the Benin DHS.

- Mohamed Al Alami from the Jordan Department of Statistics visited ORC Macro offices for training on how to prepare data entry programs for Jordan.

- MEASURE *DHS+* attended the International Scientific Symposium on Measurement and Assessment of Food Deprivation and Undernutrition held at the United Nations Food and Agriculture Organization headquarters June 26 – 28, 2002, in Rome, Italy. Altrena Mukuria made a presentation entitled *Demographic and Health Surveys: Use of anthropometry for policy and programs*.

# DHS Publications on the Web

Most Internet shoppers have seen the shopping-cart feature that allows them to purchase with a quick click of the mouse on the Web sites of online retailers. By means of the publications section on our Web site, DHS publications are now equally simple to order.

The new shopping cart feature, which is available at www.measuredhs.com/pubs/, lets users browse, select multiple publications, and check out. Although specific quantities of publications may be limited, DHS publications remain free to registered users.

Users can search and browse publications by

- *Searching* on words in the title or abstract
- *Browsing* by country, language, year, or publication type
- *Choosing* one of the new DHS publications highlighted in the New Publications section of the Search and Browse page,

For each publication, users may choose from the following options:

- *View* an abstract about the publication
- *Access* a free download of the publication in Portable Document Format (PDF)
- *Order* the publication on line.

For more information or instruction on the DHS publication on-line ordering system, please visit our Web site:

**www.measuredhs.com/pubs/**

Publications may also be ordered from our catalog or by mail, phone, or fax. To request a publications catalog or *DHS+ Dimensions*, please contact

**Demographic and Health Surveys**
**Attn: Publications Clerk**
**ORC Macro**
**11785 Beltsville Drive, Suite 300**
**Calverton, MD 20705-3119 USA**
**Tel.: 301-572-0958**
**Fax: 301-572-0999**
**E-mail: reports@macroint.com**
**Web: www.measuredhs.com**

# New Publications

## DHS Country Reports

| | |
|---|---|
| **Benin** | 2001 Final Report (French) |
| | 2001 Key Findings (French) |
| **Mali** | 2001 Final Report (French) |
| | 2001 Key Findings (French) |
| **Nepal** | 2001 Final Report |
| | 2001 Key Findings |

## Analytical Studies

Westoff, Charles F. , et al. 2002. *Contraception-abortion connections in Armenia*.

## Nutrition Publications

Benin Nutrition Chartbook
Mali Nutrition Chartbook

## Other Publications

Ergöçmen, Banu, et al. 2001. *An analytical insight Into a traditional method: Withdrawal use in Turkey*.

Institut Haïtien de l'Enfance. 2002. *Profil des jeunes femmes et des jeunes hommes en Haïti*. (French)

ORC Macro. 2002. *Reproductive health of young adults in Uganda*.

# Look for these new 2001-2002 survey publications coming soon!

**Bangladesh Maternal Mortality and Maternal Health Services Survey**
**Eritrea DHS**
**Namibia DHS**
**Nicaragua DHS**
**Rwanda SPA**
**Zambia DHS**

# Selected Statistics From DHS Surveys

| REGION/ SURVEY COUNTRY | VITAL RATES: Total Fertility Rate[a] | VITAL RATES: Total Wanted Fertility Rate[a] | VITAL RATES: IMR/ Under-5 Mortality Rate[b] | USE OF CONTRACEPTION (Currently Married Women 15-49): %Currently Using Any Method[c] | USE OF CONTRACEPTION (Currently Married Women 15-49): %Currently Using Any Modern Method[d] | MATERNAL CARE (Births in Last 5 Yrs.): % Women Receiving Antenatal Care[e] | MATERNAL CARE (Births in Last 5 Yrs.): % Women Receiving Assistance at Delivery from Professional[e] | CHILD HEALTH INDICATORS: Median Duration (Months) of Breast-feeding[f] | CHILD HEALTH INDICATORS: % Children 0-59 Months Stunted[g] | CHILD HEALTH INDICATORS: % Children Fully Immunized[h] |
|---|---|---|---|---|---|---|---|---|---|---|
| **CENTRAL ASIA** | | | | | | | | | | |
| Kazakhstan 1999 | 2.1 | 1.9 | 62/71 | 66 | 53 | 94 | 99 | 7[l] | 10 | 81 |
| Kyrgyz Republic 1997 | 3.4 | 3.1 | 61/72 | 60 | 49 | 97[i] | 98 | 17 | 25[m] | 82 |
| Turkmenistan 2000 | 2.9 | 2.7 | 74/94 | 62 | 53 | 98[i] | 97 | 18 | 22 | 90 |
| **LATIN AMERICA/CARIBBEAN** | | | | | | | | | | |
| Bolivia 1998 | 4.2 | 2.5 | 67/92 | 48 | 25 | 65 | 57 | 18 | 26[n] | 26 |
| Colombia 2000 | 2.6 | 1.8 | 21/25 | 77 | 64 | 91[i] | 86 | 13 | 14 | 52[o] |
| Guatemala 1999 | 5.0 | 4.1 | 45/59 | 38 | 31 | 60 | 41 | 20 | 46 | 60 |
| Haiti 2000 | 4.7[b] | 2.7[b] | 80/119 | 28 | 22 | 79 | 24 | 19 | 23 | 34 |
| Nicaragua 1998 | 3.9[b] | 2.5 | 40/50 | 60 | 57 | 82 | 65 | 12 | 25 | 73 |
| Peru 2000 | 2.9 | 1.8 | 33/47 | 69 | 50 | 84[i] | 59 | 22 | 25 | 66[p] |
| **NORTH AFRICA/WEST ASIA/EUROPE** | | | | | | | | | | |
| Armenia 2000 | 1.7 | 1.5 | 36/39 | 61 | 22 | 92[i] | 97 | 9 | 13 | 76 |
| Egypt 2000 | 3.5 | 2.9 | 44/54 | 56 | 54 | 53 | 61 | 18 | 19 | 92 |
| Jordan 1997 | 4.4 | 2.9 | 29/34 | 53 | 38 | 96 | 97 | 12 | 8 | 21 |
| Turkey 1998 | 2.6 | 1.9 | 43/52 | 64 | 38 | 68 | 81 | 12 | 16 | 46 |
| Yemen 1997 | 6.5 | 4.6 | 75/105 | 21 | 10 | 34 | 22 | 18 | 52 | 28 |
| **SOUTH/SOUTHEAST ASIA** | | | | | | | | | | |
| Bangladesh 2000 | 3.3 | 2.2 | 66/94 | 54 | 43 | 33[i] | 12 | 31[k] | 45 | 60 |
| Cambodia 2000 | 4.0[b] | 3.1[b] | 95/124 | 24 | 19 | 38[i] | 32 | 24 | 45 | 40 |
| India 1999 | 2.9 | 2.1 | 68/95 | 48 | 43 | 65[i] | 42[i] | 25 | 47[m] | 42 |
| Indonesia 1997 | 2.8 | 2.4 | 46/58 | 57 | 55 | 89 | 43 | 24 | † | 55 |
| Nepal 2001 | 4.1 | 2.5 | 64/91 | 39 | 35 | 49 | 13 | 33 | 51 | 66 |
| Philippines 1998 | 3.7 | 2.7 | 35/48 | 47 | 28 | 86 | 56 | 13 | † | 73 |
| Vietnam 1997 | 2.7[b] | † | 28/38 | 75 | 56 | 71[i] | 77[i] | 17 | † | 57 |
| **SUB-SAHARAN AFRICA** | | | | | | | | | | |
| Benin 2001 | 5.6 | 4.6 | 89/160 | 19 | 7 | 87 | 73 | 22 | 31 | 49 |
| Burkina Faso 1999 | 6.8[b] | 6.0[b] | 105/219 | 21 | 5 | 61 | 31 | 28 | 37 | 29 |
| Cameroon 1998 | 5.2 | 4.6 | 77/151 | 19 | 7 | 79[i] | 58[i] | 18 | 29 | 36 |
| Chad 1997 | 6.6[b] | 6.3[b] | 103/194 | 4 | 1 | 32 | 24 | 21 | 40 | 11 |
| Côte d'Ivoire 1999 | 5.2 | 4.5 | 112/181 | 15 | 7 | 84 | 47 | 21 | 25 | 51 |
| Ethiopia 2000 | 5.9[b] | 4.9[b] | 97/166 | 8 | 6 | 27[i] | 6 | 25 | 52 | 14 |
| Gabon 2000 | 4.3[b] | 3.5[b] | 57/89 | 33 | 12 | 95[i] | 87 | 12 | 21 | 17 |
| Ghana 1998 | 4.6[b] | 3.7[b] | 57/108 | 22 | 13 | 89 | 44 | 22 | 26 | 62 |
| Guinea 1999 | 5.5 | 5.0 | 98/177 | 6 | 4 | 71 | 35 | 22 | 26 | 32 |
| Kenya 1998 | 4.7 | 3.5 | 74/112 | 39 | 32 | 92[i] | 42[i] | 21 | 33 | 65 |
| Madagascar 1997 | 6.0 | 5.2 | 96/159 | 19 | 10 | 77[i] | 47[i] | 21 | 48[m] | 36 |
| Malawi 2000 | 6.3 | 5.2 | 104/189 | 31 | 26 | 91[i] | 56 | 24[i] | 49 | 70 |
| Mali 2001 | 6.8 | 6.1 | 126/238 | 8 | 6 | 57[i] | 41 | 23 | 38 | 29 |
| Mauritania 2001 | 4.7 | 4.3 | 74/116 | 8 | 5 | 65[i] | 57 | 21 | 35 | 32 |
| Mozambique 1997 | 5.2 | 4.7 | 135/201 | 6 | 5 | 71[i] | 44[i] | 22 | 36[m] | 47 |
| Niger 1998 | 7.5 | 7.2 | 123/274 | 8 | 5 | 40[i] | 44[i] | 21 | 41[m] | 18 |
| Rwanda 2000 | 5.8 | 4.7 | 107/196 | 13 | 4 | 92[i] | 31 | 33[i] | 43 | 76 |
| Senegal 1997 | 5.7 | 4.6 | 68/139 | 13 | 8 | 82 | 47 | 21 | † | † |
| South Africa 1998 | 2.9 | 2.3 | 45/59 | 56 | 55 | 94 | 84 | 16 | † | 63 |
| Tanzania 1999 | 5.6 | 4.8 | 99/147 | 25 | 17 | 49[i] | 36 | 21 | 44 | 68 |
| Togo 1998 | 5.2 | 4.2 | 80/146 | 24 | 7 | 82[i] | 51[i] | 24 | 22 | 31 |
| Uganda 2001 | 6.9 | 5.3 | 88/152 | 23 | 18 | 92[i] | 39 | 22[i] | 39 | 37 |
| Zambia 2002 | 5.9 | ‡ | 95/168 | 34 | 23 | 93 | 43 | ‡ | 47 | 70 |
| Zimbabwe 1999 | 4.0[b] | 3.4[b] | 65/102 | 54 | 50 | 93[i] | 73 | 19 | 27 | 75 |

† Not available from survey data.
‡ Not available until publication of final report.
a Based on 3 years preceding survey (women 15-49).
b Based on 5 years preceding survey.
c Excludes prolonged abstinence.
d Excludes periodic abstinence, withdrawal, "other."
e Care provided by medically trained personnel.
f Children <3 years old (any breastfeeding).
g Height-for-age z-score is below –2 SD based on the NCHS/CDC/WHO reference population.
h Children 12-23 months vaccinated (BCG, measles, three doses each DPT and polio).
i Based on last birth.
j Based on births in the preceding 3 years.
k Based on births in the preceding 4 years.
l Children 0-59 months old.
m Children 0-35 months old.
n Children 3-35 months old.
o Excludes measles.
p Children 18-29 months old.

For more indicators, and to build custom tables with DHS data, visit the STATcompiler at www.measuredhs.com