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MEASURE DHS

Demographic and Health Surveys

*Quality information to plan,
monitor, and improve population,
health, and nutrition programs*

Demographic and Health Surveys: 25 Years of Quality Data



Since 1984, the MEASURE DHS (Demographic and Health Surveys) project has provided technical assistance to more than 240 surveys in over 85 countries, advancing global understanding of health and population trends in developing countries. DHS has earned a worldwide reputation for collecting and disseminating accurate, nationally representative data on fertility, family planning, maternal and child health, gender, HIV/AIDS, malaria, and nutrition.

The MEASURE DHS project is funded by the U.S. Agency for International Development (USAID). Contributions from other donors, as well as funds from participating countries, also support surveys. The project is implemented by ICF Macro. Since October 2008, ICF Macro has been partnering with five internationally experienced organizations

to expand access to and use of the DHS data: Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs, PATH, The Futures Institute, CAMRIS International, and Blue Raster.

The History of DHS

DHS I: 1984–1989

DHS II: 1989–1993

DHS III: 1993–1997

MEASURE DHS+: 1997–2003

MEASURE DHS: 2003–2008

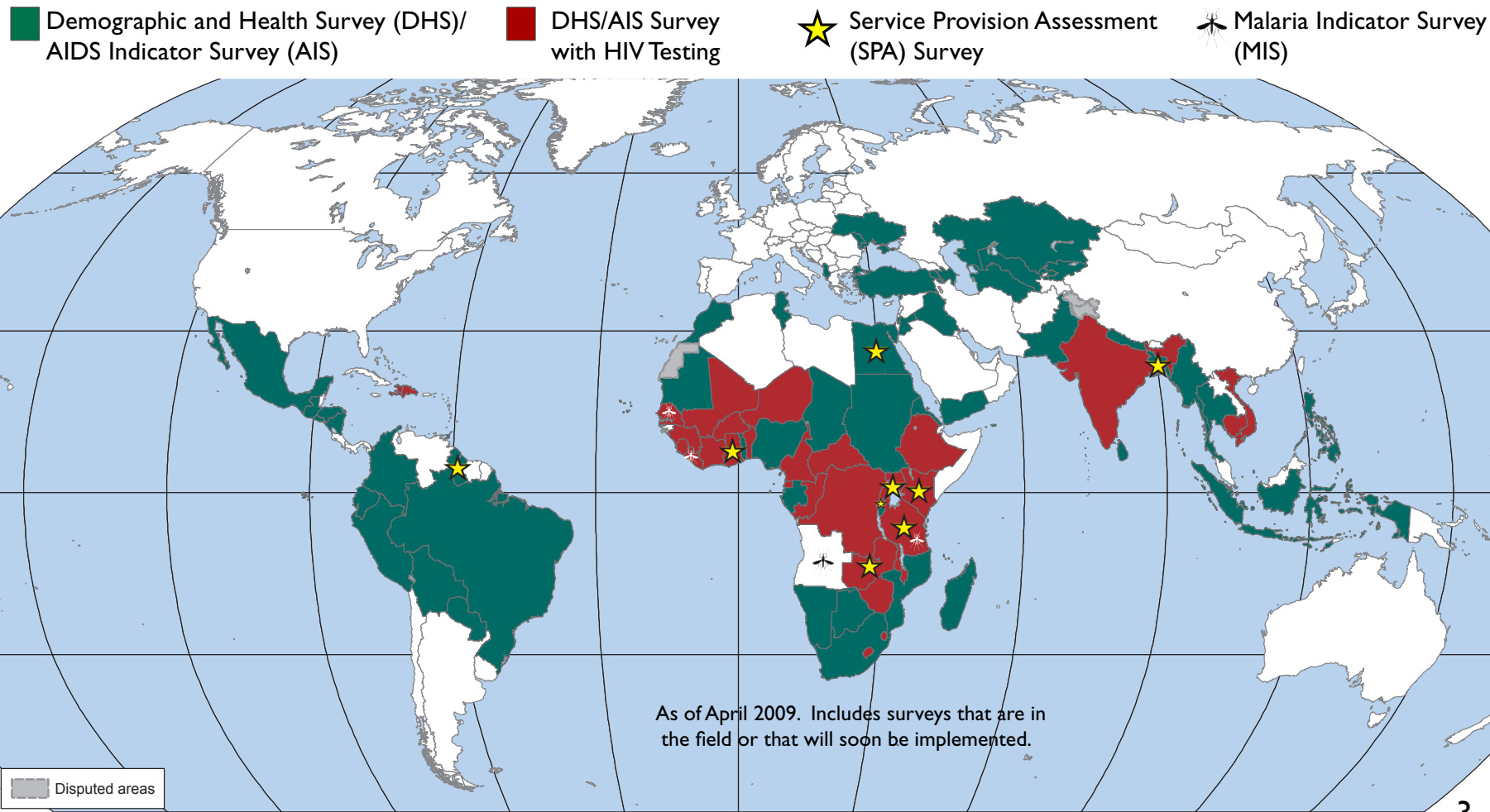
MEASURE DHS Phase III: 2008–2013

MEASURE DHS

- Believes that the ultimate purpose of collecting data is its use in policy formation, program planning, and monitoring and evaluation.
- Aims at fostering and reinforcing host country ownership of data collection, analysis, presentation, and use.
- Coordinates with key stakeholders on data collection and dissemination.
- Selects the most appropriate data collection methods to ensure the provision of high-quality data at a reasonable cost.
- Increases the capacity of host-country partners to collect and use data for program and policy purposes.

Countries Served

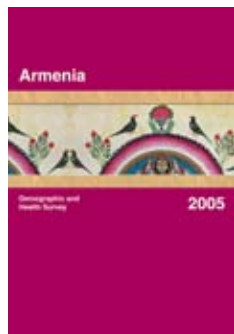
For 25 years, DHS has provided technical assistance in 85 countries for the implementation of more than 240 surveys, including HIV testing in more than 30 countries.



Survey Types: DHS, AIS, SPA, and MIS

The Demographic and Health Survey (DHS)

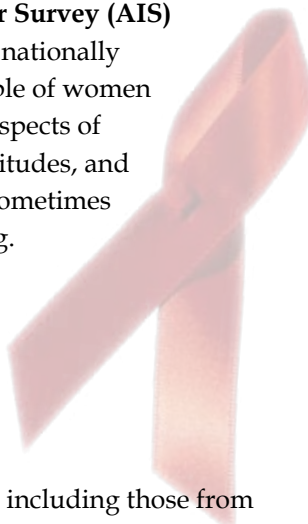
has collected nationally representative data on population, health, and nutrition since 1984. New topics have been added to address emerging health issues, including HIV/AIDS and sexually transmitted infections, malaria, youth, female genital cutting, women's empowerment, domestic violence, tobacco and alcohol use, and hypertension.



All MEASURE DHS surveys use consistent sampling methodologies and questions, ensuring comparability among countries and over time while still maintaining flexibility to meet individual country needs.

The AIDS Indicator Survey (AIS)

collects data from a nationally representative sample of women and men about all aspects of HIV knowledge, attitudes, and behavior. The AIS sometimes includes HIV testing. The AIS also helps countries monitor national programs by collecting and reporting on standard AIDS program indicators, including those from UNAIDS, PEPFAR, and WHO. In some countries, the AIS has been combined with a Malaria Indicator Survey (MIS).



DHS Data at Work: Programs and Policies in India and Nigeria

The high levels of malnutrition and anemia among children reported in the 2005-06 National Family Health Survey in India sparked swift and decisive action from the Prime Minister. Upon release of the data, the Prime Minister sent letters to the Chief Ministers in each of India's 29 states requiring them to take measures to improve child nutrition.

In Nigeria, two major providers of mosquito nets increased program efforts and budgets to market insecticide-treated nets (ITN) in response to findings from the 2003 Nigeria DHS showing that only 1% of Nigerian households owned an ITN.



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The Service Provision Assessment (SPA)

survey provides a picture of the strengths and weaknesses of a country's health care delivery systems through inventories in a sample of health care facilities and interviews with providers and clients. SPA surveys typically collect data from a sample of over 400 facilities and cover all types of health services, from national hospitals to small health centers. In most cases, public, private, non-governmental organization (NGO), and faith-based institutions are all represented. Indicators include facility infrastructure (water, electricity, infection control), equipment and supplies, support systems, management systems, providers' adherence to standards, basic availability and cost of services, and quality of care.



The Malaria Indicators Survey (MIS) was developed by the Monitoring and Evaluation Reference Group of Roll Back Malaria with Macro. The MIS package includes questionnaires, a manual, and guidelines that are based largely on MEASURE DHS materials. MIS collects data on all the internationally recognized malaria indicators, including ownership and use of insecticide-treated nets (ITNs), preventive treatment of pregnant women, treatment of fever in children, and indoor residual spraying of insecticide to kill mosquitoes.

The Key Indicators Survey (KIS) is designed to produce data for small areas—regions, districts, catchment areas—that may be targeted by an individual project, although they can be used in nationally representative surveys as well. The KIS is a shorter, more simple survey than the standard DHS.

Other surveys. MEASURE DHS implements other surveys to meet country needs, including interim surveys, benchmark surveys, panel surveys, continuous surveys, and qualitative research (page 11).

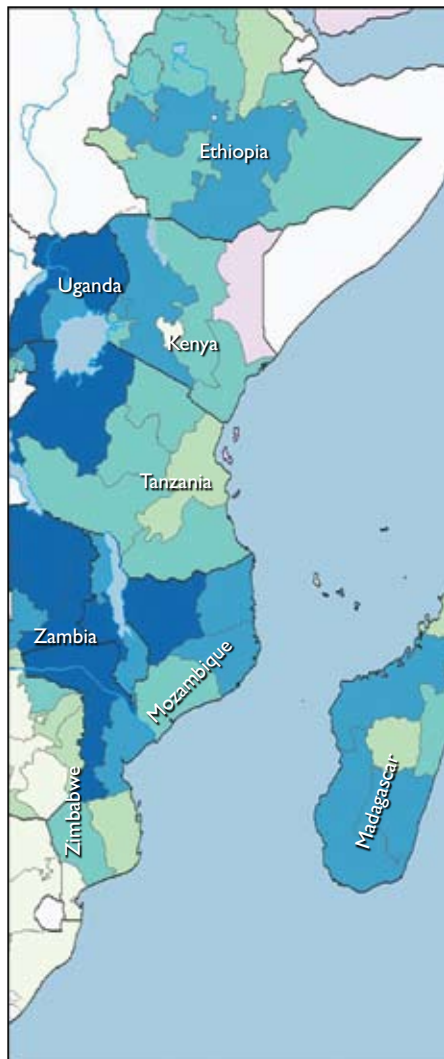
SPA Data at Work

The 2007 Rwanda SPA reported that many hospitals were experiencing stock-outs of antimalarial drugs. In response, the government took action to help hospitals develop a better procurement process to ensure drug availability.

The Permanent Secretary of the Ministry of Health added, "Hospitals will have to be equipped with testing facilities if we are to curb malaria. So, the statistics from the survey will help the Ministry to plan and avail these services."

Malaria was the leading cause of death and illness in Rwanda in 2006.

New Methods: GIS, Wealth Index, and Biomarkers



Geographic Information Systems (GIS)

Where people live affects their health, nutrition, and access to health care services. To promote a better understanding of these issues, MEASURE DHS has routinely collected geographic information since 1996. Using GIS, researchers can link DHS data with routine health data, health facility locations, land use, local infrastructure (roads, rivers), and environmental conditions.

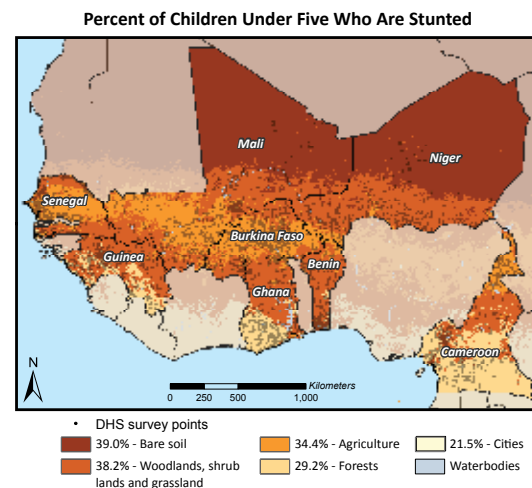
Linked DHS and geographic data are now being used to improve planning for HIV/AIDS and family planning programs and to analyze the effects of environment on early childhood mortality in West Africa. Researchers are using GIS with anemia prevalence data to model estimates of malaria endemic/epidemic areas and the seasonality and intensity of transmission.

GIS Services at MEASURE DHS include:

- Collection of geographic information (latitude and longitude) with GPS units for most surveys
- Linking DHS geographic data with other geographic data for analysis

- Training in GIS, including analysis, map-making, and integration of GIS data
- Publication of further analysis reports and atlases
- Online GIS mapping tools for technical and non-technical users

MEASURE DHS is also looking at new technologies such as personal digital assistants (PDAs) and GPS technology to improve data collection for all DHS surveys.



This map shows a modeling analysis of stunting among children by land cover type in eight DHS surveys.

Measuring Wealth

The wealth index, a composite measure of household wealth, allows the analysis of economic inequalities in access to health services and in key health outcomes, such as childhood morbidity and mortality. Using the wealth index, analyses can determine which health and population issues disproportionately affect the poor, allowing for more effective program planning and evaluation.

Developed in partnership with the World Bank, the wealth index is a measure of the living standard of a household based on a household's ownership of assets, materials used for housing construction, and access to water and sanitation facilities. The wealth index places individual households on a continuous scale of relative wealth. The wealth index is particularly valuable in countries that lack reliable data on income and expenditures, the traditional indicators used to measure economic status.



Biomarkers

Biomarkers are objective physical or biologic measures of health conditions. For years, DHS has measured height and weight of women and children to evaluate their nutritional status. Now, using field-friendly technologies, DHS is able to collect biomarker data relating to a wide range of conditions, including infectious and sexually transmitted diseases, chronic illnesses such as diabetes, micronutrient deficiencies, and exposure to environmental toxins.

Traditionally, much of the data gathered in DHS surveys has been self-reported. Biomarkers, on the other hand, provide an objective profile of a specific disease or health condition in a population by using simple equipment.

In the face of global infectious diseases, the demand for biomarker data is growing. Anemia testing became a standard component of the DHS survey protocol after the 1995 Kazakhstan DHS showed that respondents were comfortable with providing blood specimens for testing. Since then, 15 more biomarkers have been added to DHS surveys in more than 30 countries. DHS surveys have

tested for syphilis, the herpes simplex virus, serum retinol (vitamin A), lead exposure, high blood pressure, and immunity from vaccine-

preventable diseases like measles and tetanus.



DHS Data at Work: Nutrition in Peru

In Peru, the government has used the DHS stunting and anemia results to design child nutrition programs at the department level. The government of Peru also financed oversampling of the 2008 DHS to obtain nutrition and health results for each of its 24 departments. Peru's Economics and Finance Ministry's "Budgeting by Results" strategy requires that these data be used to set budget allocations among the departments and to evaluate each department's progress in reducing child malnutrition and improving child health indicators.

Special Focus on HIV/AIDS

MEASURE DHS has helped to change the way the world measures HIV prevalence. In 2001, the Mali DHS included HIV testing, providing—for the first time in the DHS—a nationally representative, population-based HIV prevalence estimate. UNAIDS and national governments have adjusted their official HIV prevalence estimates in response to the nationally representative HIV prevalence data provided through DHS surveys.

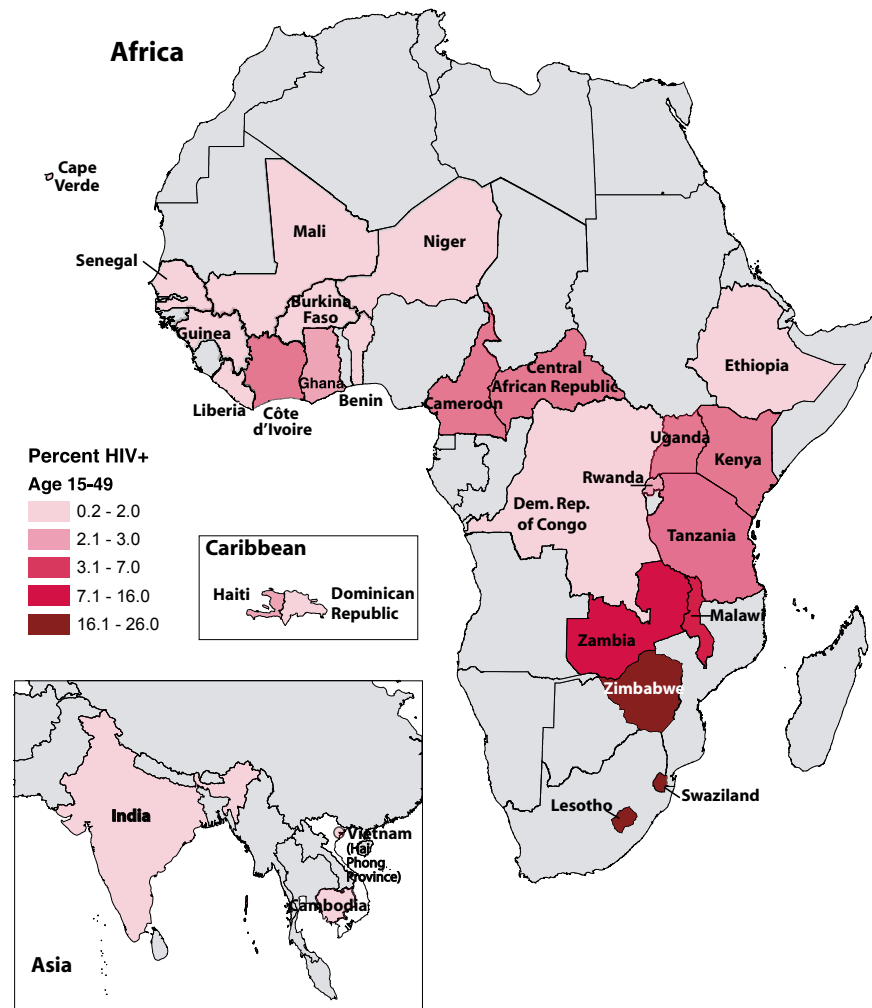
Between 2001 and 2008, DHS included population-based HIV testing in more than 30 countries. The DHS HIV testing protocol provides for informed, anonymous, and voluntary testing of women and men interviewed. The testing is simple; in most cases, the interviewer collects dried blood spots on filter paper from a finger prick, and the filter paper is transported to a laboratory for testing.



In addition to HIV prevalence testing, MEASURE DHS surveys measure HIV knowledge, attitudes, and sexual behaviors, as well as the capacity of health care facilities to provide HIV-related services, such as provision of antiretrovirals and prevention of mother-to-child-transmission (PMTCT) services.

Further analyses of HIV prevalence data have reshaped the world's understanding of the epidemic. For example, DHS data have debunked myths about wealth and education, demonstrating that HIV prevalence is usually higher among the most educated and wealthiest women and men.

HIV Prevalence in MEASURE DHS Surveys



Special Focus: Youth and Gender

Youth (Age 15-24)

The DHS surveys collect information about young people's age at first marriage, sexual debut, knowledge and use of contraception, and childbearing. When young women marry or become sexually active at a young age, they risk having children before they are physically ready. Early marriage also adds to the number of children a woman will bear over her lifetime. Early and unplanned pregnancies put young women at risk for reproductive health complications. Early sexual activity exposes young women and men to diseases such as syphilis and gonorrhea, which in turn make them more vulnerable to HIV. Together, all of these data provide a broad picture of the reproductive health needs of young women and men.

DHS surveys have collected extensive information about youth and their sexual behavior in more than 50 countries. Of the 33 million people living with HIV, about a quarter



are young adults. DHS data from 28 countries show that prevalence among youth varies widely by country, from less than 0.1% of youth in India to 14% in Swaziland.

DHS has published special studies and dissemination materials on youth.

Gender and Domestic Violence

The DHS also explores gender-related issues including gender differentials in educational attainment, age at marriage, and age at first sex. Additionally, the DHS includes modules that look at women's empowerment, such as women's participation in household decision-making, employment, control of women's earnings, and attitudes toward wife beating. Female genital cutting is also measured in some countries.



Domestic violence data have been collected in 30 countries since 1990. These data are, in many cases, the only national source of data on physical, sexual, and emotional violence.

DHS Data at Work

The Parliament of Moldova, in response to the 2005 Moldova DHS, adopted a law in 2007 that aims at preventing and combating domestic violence. The 2005 DHS reported that 27% of women over age 15 have experienced physical violence in the home at least once. The DHS also debunked the myths that domestic violence in Moldova is primarily a rural phenomenon and that it occurs mostly among the poorest families. In fact, there is little difference between rural and urban areas, and while women from the poorest families are most likely to have experienced violence (33%), it is not uncommon among women from the wealthiest families (22%). UNICEF and the local NGO Gender-Centre welcomed the new law, which provides for legal protection of victims and the creation of rehabilitation centers and other support services.

Capacity Building



Since 2003, DHS has trained. . .

- 6,774 interviewers
- 1,936 supervisors and editors
- 824 health technicians
- 699 data entry specialists
- 597 mapping or sampling staff
- 112 lab staff

Training and Mentoring

With each survey, MEASURE DHS improves the implementing agency and host-country counterparts' capacity to collect, analyze, disseminate, and use DHS data. Mentoring takes place through this constant capacity building, as MEASURE DHS staff assist in developing questionnaires, monitoring fieldwork, providing quality control, and helping with the creation of survey report documents.

The presence of MEASURE DHS staff throughout the survey process allows for more formal training opportunities as well, such as training sessions for interviewers, field managers, data processors, and researchers. In addition, the supplies used during the survey (scales, biomarker supplies, GPS units, computers) remain in the country for future use.

All DHS survey documentation is available for download at www.measuredhs.com.

Special Workshops

MEASURE DHS also runs workshops to train groups on data use and analysis. Trainings may be topic-specific (e.g., gender, youth,

family planning, HIV) or audience-specific (e.g., health care providers, policymakers, journalists).

Examples of recent DHS workshops include the following:

- In Kenya, GIS experts taught host-country counterparts how to use DHS geographical data, link it to their own GIS, and create maps of their data, leading to increased data use.
- DHS analysts worked with local counterparts in Nepal to analyze DHS datasets, write several publishable papers based on their results, and review implications of data for programs and policies.
- DHS data processing staff worked with the Uganda Ministry of Health to train staff to analyze Uganda DHS data.
- TV, radio, and newspaper journalists in Ethiopia attended a seminar on reading DHS reports and tables and incorporating DHS data in their news stories.
- A curriculum was developed to provide university faculty with the tools to introduce DHS data into their public health and demography courses.

Analysis and Qualitative Research

Analysis

DHS data lend themselves to further analysis through trend reports, comparative studies, and journal articles. Further analysis can explore the factors that affect HIV prevalence in a given population, examine trends in contraceptive prevalence over 20 years, or compare infant mortality in multiple countries.

DHS also offers opportunities for Fellowships and mentors analysts from developing countries as they use DHS data to answer research questions and write publishable research papers.

DHS Data at Work

Recent analyses have explored the relationship between HIV prevalence and wealth, debunking the myth that HIV is more common in the poorest communities. Conversely, HIV prevalence in many DHS countries is highest among the wealthiest women and men.

DHS analysis also informs international birth spacing guidelines. DHS infant mortality data have led to the adjusted recommendation that birth spacing of three to five years is ideal for minimizing childhood mortality.

Qualitative Research

MEASURE DHS uses qualitative research to improve the process of conducting surveys, especially to assess the understanding of DHS survey questions, to explain survey findings, and to enhance health service programming. A variety of qualitative methods are used to contribute to increased understanding of local perspectives and improved approaches for development interventions.

In Uganda, DHS conducted a study with the USAID-funded UPHOLD project in 2005 to discover the kinds of support services needed by voluntary counseling and testing (VCT) clients. More than 100 VCT clients were interviewed just after their HIV test and then again several weeks later to determine why they came in for testing, with whom they shared their test results, and what kind of support services they most needed. Results show that VCT clients had no awareness or any expectation of any type of support services. Further analysis of the data will be presented to the UPHOLD project staff to help them develop locally appropriate interventions.



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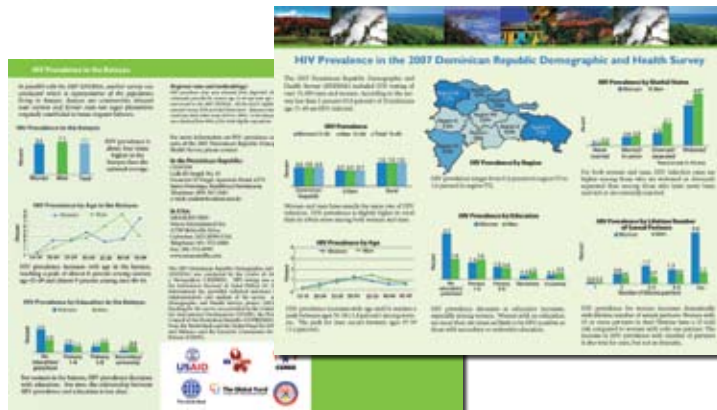
Dissemination and Use of DHS Data

Results from DHS surveys are meaningful only if they are used to improve people's health and well-being through policies and programs. To make best use of DHS data, MEASURE DHS focuses on strategic dissemination and data use activities for each survey, including the following:

- Preparation of special print materials for non-technical users, including HIV fact sheets for countries with HIV testing and Key Findings booklets in local languages
- Seminars and trainings at the national or subnational level to assist program managers, policymakers, and NGOs in interpreting and using DHS data
- Assistance to local professionals in preparing audiovisual materials on key

national and regional DHS findings, such as documentary videos and radio spots

- Promotion of DHS web tools, like STATcompiler and the HIV/AIDS Survey Indicators Database, through demonstrations at conferences and formal trainings in-country
- Collaboration with other international organizations to adapt DHS data for their specific program needs
- Reports comparing DHS findings with other national survey research
- Work with the media to expand coverage of DHS results by holding press conferences, organizing journalists' workshops, and distributing press releases



Dissemination in Ukraine

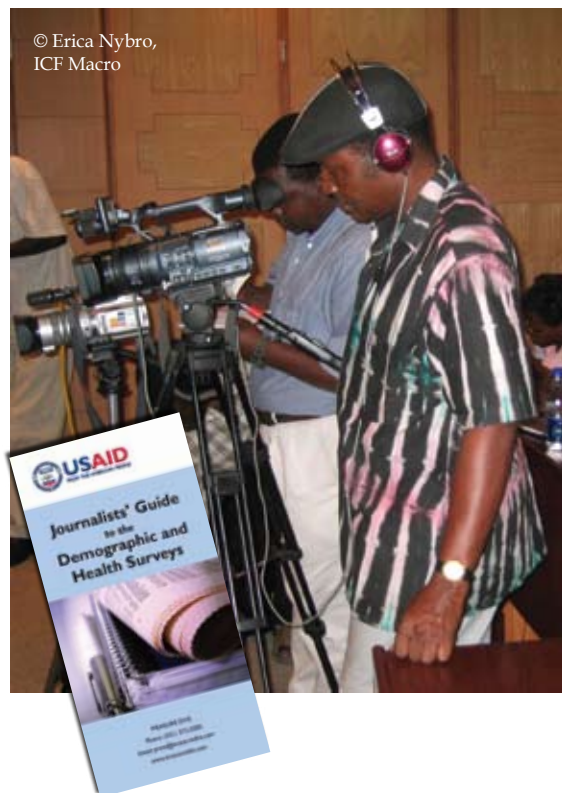
The first Ukraine DHS took place in 2007. Dissemination activities included presentations of major results to an audience of almost 100 professionals in Kiev, as well as distribution of the final report, Key Findings, and five topical fact sheets. All materials were produced in both English and Ukrainian. Smaller, topic-specific “round tables” are planned to further support data use.



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DHS in the News

The MEASURE DHS project has been quoted in newspapers and media outlets in the United States and worldwide. Work with journalists in survey countries and partnerships with journalist associations around the globe have facilitated journalists' understanding of DHS data and promoted more accurate reporting of DHS results.



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ICF Macro

The Boston Globe

Number of orphans spikes as Zimbabwe crises deepen

July 18, 2007 - Largely because of the AIDS crisis, nearly one-quarter of all children in Zimbabwe are orphans, a figure that approaches historic levels set in Rwanda after the genocide in 1994, according to a new national survey. The 2006 survey, conducted by the government Central Statistical Office in collaboration with Macro International, a Maryland-based organization that conducts health surveys around the world, found that 22 percent of children under the age of 18 in Zimbabwe had lost one or both parents, up from 9 percent in 1994 and 14 percent in 1999. Overall, Zimbabwe recorded an 18 percent HIV-prevalence rate among adults, said the survey.

Mail & Guardian online

Meeting the Goals

September 30, 2008. . . This week we spoke to Rwandan President Paul Kagame: "Rwanda assesses its progress towards achieving the MDGs on an annual basis using existing data management information systems, which are backed up by national surveys, such as the Households Living

Conditions Surveys and the Demographic and Health Surveys (DHS), which are carried out every two to five years, providing high-quality information on targets relating to poverty, education, health and environment."

The Phnom Penh Post

Government to tackle maternal mortality

January 14, 2009 - The government has said it will introduce new incentives to midwives in 2009 with the aim of reducing the number of mothers, particularly those in rural areas, dying during childbirth.

Veng Thai, Phnom Penh municipal director of health, told the Post Monday that the government was not satisfied with the current rate of maternal mortality and would try to reduce it by offering financial and training incentives to midwives, encouraging them to work in remote areas.

According to Cambodia's latest Demographic and Health Survey, maternal mortality has decreased only slightly over the last decade, with 437 mothers per 100,000 live births dying in 2005 compared with 472 in 2000.

Website

The MEASURE DHS website (www.measuredhs.com) allows free access to survey publications, information on survey methodology and topics, survey status lists, and much more.

Highlights include:

- Special topic areas (“corners”) for youth, gender, malaria, and HIV, including user-friendly graphs, maps, and indicator tables
- GIS tools such as the STATmapper and HIVmapper
- Press section for journalists, including press releases and “DHS in the News”
- Materials to assist in the use of DHS data for analysis
- Free downloads of all DHS publications in the searchable DHS library
- Access to datasets, STATcompiler, and the HIV/AIDS Survey Indicators Database

Sign up today for email alerts to receive announcements about new publications and important events.

www.measuredhs.com



STATcompiler

The DHS STATcompiler is an innovative online database tool that allows users to select from numerous countries and hundreds of population, health, and nutrition indicators. This flexible and easy-to-use tool allows users to produce customized tables of data from the Demographic and Health Surveys in seconds with just a few simple clicks of the mouse.

Compare an indicator over many countries.

Compare the fertility rates in West Africa where DHS has conducted surveys (see table at right).

View trends within a country over time.

The STATcompiler allows you to view trends within a country by looking at a single indicator across time.

		Total fertility rate 15-49
Benin 2006 (1)		
Total		
Total		5.7
Burkina Faso 2003		
Total		
Total		5.9
Ghana 2003		
Total		
Total		4.4
Guinea 2005		
Total		
Total		5.7
Liberia 2007		
Total		
Total		5.2
Mali 2006		
Total		
Total		6.6
Niger 2006		
Total		
Total		7.0
Nigeria 2003		
Total		
Total		5.7
Senegal 2005		
Total		
Total		5.3

www.statcompiler.com

HIV/AIDS Survey Indicators Database

The HIV/AIDS Database covers more than 65 countries, and data are available from more than 200 surveys. Users can make customized tables or country reports with indicators from the UN, the U.S. government, and other sources.

The HIV/AIDS Survey Indicators Database provides:

- Data from a variety of sources including DHS, AIS, MICS, RHS, SBS, BSS, and other sources, offering a more complete view of the HIV epidemic
- Trend data to examine changes over time
- Data based on internationally recognized indicators to support reporting to funders and evaluation of programs

The Database is supported by USAID, PEPFAR, UNICEF, and UNAIDS.

www.measuredhs.com/hivdata



© 2006 Felix Masi/Voiceless Children. Courtesy of Photoshare

STATmapper and HIVmapper



Here, STATmapper visually displays the distribution of children's vaccination coverage in Africa.

STATmapper and HIVmapper, interactive mapping tools, allow users to create maps in seconds from a database of DHS findings from more than 75 countries.

Users can create a wide variety of maps, ranging from use of family planning in Kenya to households with access to electricity in Southern Asia. Other STATmapper topics include fertility, childhood mortality, maternal and child health, and nutrition.

HIVmapper indicators include HIV knowledge, attitudes, measures of stigma, sexual behavior, HIV testing, and HIV prevalence. Visuals help the audience understand the distribution of HIV prevalence

in East Africa or levels of HIV knowledge in different regions of Kenya.

By choosing the countries or regions and indicators of interest, you have a customized map ready in seconds. You even select the colors, labels, and overall look of your map. Print or save map images or the tabular data for use in presentations, reports, and analysis.

www.STATmapper.com

www.HIVmapper.com

Spatial Data Repository

MEASURE DHS also supports the HIV Spatial Data Repository, which provides geographically linked HIV-related data for mapping in a geographic information system (GIS). Data are provided in shape files, which allow GIS users to integrate their own GIS data to produce new analyses and mapping of HIV data. The HIV Spatial Data Repository is part of PEPFAR's effort to provide data for decisionmaking and improve knowledge and understanding of the impact of HIV worldwide.

www.hivspatialdata.net

MEASURE DHS is implemented by ICF Macro
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