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# DHS Dimensions

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## October 2005

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## Collaboration in Guyana Reduces Costs, Improves Data Collection and Meets Program Needs

MEASURE DHS and the Family Health International (FHI)-led Guyana HIV/AIDS Reduction and Prevention Project (GHARP) have joined efforts to carry out the first national assessment of HIV health services in Guyana's history. In early summer of 2004, the two USAID-funded projects were each poised to collect data from health professionals at work in government facilities in Guyana. MEASURE DHS was planning a country-wide HIV/AIDS Service Provision Assessment (SPA) while FHI /GHARP was planning to evaluate a 2-year national HIV prevention of mother-to-child transmission (PMTCT) program managed by the Ministry of Health.

Rather than conducting two separate surveys, MEASURE DHS collaborated with the local implementing agency, the Guyana Responsible Parenthood Association, and FHI/GHARP to work out ways to conduct only one survey and still meet the needs of all the major stakeholders. MEASURE DHS modified the SPA sampling design to include all current and planned PMTCT sites in the country rather than just a representative



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**Dorothy Bailey Health Center in Georgetown, Guyana, site of the pilot project of the first PMTCT project in Guyana.**

*Continued on page 2*

## Collaboration with local groups in Tanzania

Wide dissemination of DHS survey results depends on collaboration with local groups, as they are more able to tap into community-level groups.

The data from the recent Tanzania HIV/AIDS Indicator Survey (THIS) are being shared with a variety of audiences through partnerships between ORC Macro and organizations working on the ground.

The Tanzania Gender Networking Programme recently requested assistance from MEASURE DHS in preparing materials for a gender conference. DHS produced flyers about HIV and women based on THIS gender data and helped prepare a presentation based on the same results. The flyers and the presentation were disseminated at the gender conference, reaching approximately 2000 people.

ORC Macro also collaborated with Family Health International (FHI) in Tanzania to prepare materials on HIV and youth for an event that disseminated results from the THIS as well as two other Tanzanian youth surveys.

sample. Thus, the SPA supplied FHI/GHARP with information on staffing, facility infrastructure, equipment and supplies, and support and management systems for all current and future PMTCT services, the centerpiece of Guyana's HIV prevention program.

At FHI/GHARP's request, MEASURE DHS also incorporated a new component into the SPA survey to assess the quality of group and individual counseling provided at the PMTCT sites. This new component combines observation of counseling with exit interviews with individual clients. The counseling assessment component proved to be an especially valuable addition to the survey, providing a relevant end-of-project evaluation of the PMTCT program, which had focused on the training and hiring of PMTCT counselors. Ultimately, the enhanced SPA and PMTCT evaluation will not only guide efforts to expand the national PMTCT program but will also help in the design of interventions funded through the President's Emergency Plan for AIDS Relief.

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**"We had to minimize the impact of these survey activities on the government health staff, first because they take provider time away from patients and second because too many of these activities lead to health provider research fatigue." - Rebecca Henry, DHS survey manager for Guyana**

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Merging two separate research instruments into one proved to be a win-win situation for all concerned. Guyana has few skilled researchers and few health care providers and service delivery sites. Carrying out two surveys would have been taxing for such a small country. As DHS's Guyana survey manager noted, "I was very concerned about the amount of interviewing time needed from the government health providers during working hours just to complete our survey, let alone several other surveys. We had to minimize the impact of these survey activities on the government health staff, first because they take provider time away from patients and second because too many of these activities lead to health provider research fatigue."

Collaboration brought other benefits. Traversing Guyana's landscape is time consuming and expensive. Most of the country's ten regions are accessible only by boat, plane, foot or four-wheeled vehicle. In four of these regions, FHI and DHS teams traveled together to evaluate PMTCT counseling and also collect data on other aspects of HIV prevention and care and support services.

Data collection for the Guyana HSPA was completed in March, 2005. The Guyana HIV/AIDS program managers gained valuable information for monitoring health care and making evidence-based decisions for the future. MEASURE DHS gained a new tool for assessing the quality of PMTCT counseling, and FHI achieved its mandate to evaluate a national program. The experience shows again that when organizations are committed to sharing their resources and knowledge, everyone benefits. ■

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MEASURE DHS assists countries worldwide in the collection and use of data to monitor and evaluate population, health, and nutrition programs. Funded by the United States 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 Johns Hopkins University Bloomberg School of Public Health's Center for Communication Programs (Hopkins CCP), PATH, Casals and Associates, and Jorge Scientific Corporation. 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](http://www.measuredhs.com)). Project Director: Martin Vaessen.

# New Research Highlights: Trends in Ghana's Health Indicators; Challenges Facing Orphans; Gender; and Results of USAID Interventions in Madagascar

## Trends in Demographic, Family Planning, and Health Indicators in Ghana

This report highlights trends in population, family planning, and maternal and child health based on DHS surveys conducted between 1988 and 2003.

According to the report, Ghanaian women now wait longer to have their first birth and the proportion of young women age 15-19 that have had a child or are pregnant with their first child has declined. Current use of any modern contraceptive method has steadily increased for women age 15 to 49 (from 4% in 1988 to 19% in 2003), along with their desire to stop childbearing. Nevertheless, the dramatic decline in fertility experienced in the eighties and nineties appears to have slowed down. Infant and under-five mortality rates decreased between the 1988 GDHS and the 1998 GDHS, but that decline leveled off by the time of the 2003 survey.

Trends in household conditions, attitudes toward family size, children's medical treatment, and nutritional status of children are also examined.

## Orphans face educational and nutritional challenges

A new working paper from MEASURE DHS, *Education and Nutritional Status of Orphans and Children of HIV-Infected Parents in Kenya*, examines data from the most recent Demographic and Health Survey in Kenya (KDHS 2003) to explore whether orphaned and fostered children and children of HIV-infected parents are more disadvantaged than children of non-HIV-infected parents in terms of nutrition and education. The study also examines if children of HIV-infected parents are less likely to receive health care than children of non-HIV-infected parents.

According to the paper, children of HIV-infected parents are significantly less likely to be attending school, more likely to be underweight and wasted (low weight for height), and less likely

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**“Other research has shown the challenges faced by orphaned children, but here we see that fostered children and those living with HIV-infected parents are equally vulnerable.” - Vinod Mishra, DHS researcher**

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to receive treatment for acute respiratory infections and diarrhea than children of non-HIV-infected parents. The relationship between orphanhood and nutrition was not strong, but fostered children were somewhat more likely to be stunted, underweight, and wasted than children of HIV-negative parents. In addition, children of non-HIV-infected single mothers were found to be generally more disadvantaged in nutrition, health care, and schooling than children who live with both non-HIV-infected parents.

## A Focus on Gender: Collected Papers on Gender Using DHS Data

This group of six papers focuses on the dynamics of gender in developing countries. The papers, commissioned by the MEASURE DHS project, were prepared by researchers recognized for their work in the areas of demography, reproductive health, and gender. The analyses presented are based on Demographic and Health Surveys (DHS) data from different countries.

A common theme of several of the papers is the struggle to define women's empowerment and/or autonomy and then to adequately measure it. Five of the papers in this volume focus on

the gender questions in the core DHS questionnaire, particularly the questions on household decisionmaking and women's autonomy and empowerment, and their relationship to different population, health, and nutrition (PHN) outcomes of interest. The last paper examines whether PHN outcomes vary by women's experience of domestic violence.

## Madagascar Baseline Survey on Reproductive Health and Child Survival in USAID Intervention Zones

USAID has been supporting projects in the Madagascar provinces of Fianarantsoa and Antananarivo with specific, community-level interventions since 1997. Using data from the 2003-04 Madagascar DHS, MEASURE DHS evaluated the results of these programs and found dramatic improvements related to maternal and child health in the areas of: medical assistance for mothers before, during, and after the birth of their children; birth spacing; full vaccination coverage for children; exclusive breastfeeding; distribution of vitamin A capsules; and use of homemade oral rehydration therapy to treat diarrhea. Use of modern family planning methods in the intervention zone also increased, causing a decline in fertility and along with it, an important reduction in teenage pregnancy.

This study also found areas for improvement in: child malnutrition, as stunting still affects about half of the children in the intervention zone; iron intake, as very low rates are still found among pregnant women; fertility rates, as women age 15-49 in Fianarantsoa have an average of 6.6 children; and education, as women living in rural areas have less access to education than those living in urban areas. ■

# Summary of DHS Surveys

## SOUTH/SOUTHEAST ASIA

### Bangladesh 2004

2001 (Maternal Health Services/Maternal Mortality Survey)  
1999-2000  
1999-2000 (modified SPA)  
1996-97  
1993-94

### Cambodia 2005

2000  
1998

### India 2005-06

1998–2003 (Benchmark Surveys, Various Topics)  
1998-99  
1992-93

### Indonesia 2002

2002 (Young Adult Reproductive Health Survey)  
1997  
1994  
1991  
1987

### Myanmar 1996 (Special)

### Nepal 2006

2002–05 (Benchmark Surveys/Variou Topics)  
2001  
1996  
1987 (In-depth)

### Pakistan 2006

1990-91

### Philippines 2003

1998  
1993 (Safe Motherhood Survey)  
1993

### Sri Lanka 1987

### Thailand 1987

### Vietnam 2005 (AIS)

2002  
1997

## NORTH AFRICA/WEST ASIA/EUROPE

### Armenia 2005

2000

### Egypt 2005

2004 (SPA)  
2003 (Interim)  
2002 (SPA)  
2000  
1998 (Interim)  
1997 (Interim)  
1996-97 (Reasons for Nonuse in Upper Egypt)  
1995  
1992  
1988

### Jordan 2002

1997  
1990

### Moldova 2005

### Morocco 2003-04

1995 (Panel)  
1992  
1987

### Tunisia 1988

### Turkey 2003 (limited assistance)

1998  
1993

### Yemen 1997

1991-92

## CENTRAL ASIA

### Kazakhstan 1999

1995

### Kyrgyz Republic 1997

### Turkmenistan 2000

### Uzbekistan 2002 (Health Examination Survey)

1996

## LATIN AMERICA & CARIBBEAN

### Bolivia 2003

1998  
1993-94  
1989

### Brazil 1996

1991 (Northeast)  
1986

### Colombia 2004-05 (limited assistance)

2000  
1995  
1990  
1986

### Dominican Rep. 2002

1999 (Experimental)  
1996  
1991  
1986  
1986 (Experimental)

### Ecuador 1987

### El Salvador 1985

### Guatemala 1998-99 (Interim)

1997 (Health Expenditure Survey)  
1997 (SPA)  
1995  
1987

### Guyana 2005 (AIS)

2004-05 (SPA)

### Haiti 2005

2000  
1994-95

### Honduras 2005-06

### Mexico 2000 (SPA)

1987

### Nicaragua 2001

1997-98

### Paraguay 1990

### Peru 2002–06 (Continuous)

2000  
1996  
1992  
1986

1986 (Experimental)

### Trinidad & Tobago 1987

## SUB-SAHARAN AFRICA

### Benin 2001

1996

### Botswana 1988

### Burkina Faso 2003

1998-99  
1992-93

### Burundi 1987

### Cameroon 2004

1998  
1991

### Cape Verde 2004

### Central African Rep. 1994-95

### Chad 2004

1996-97

### Comoros 1996

### Congo (Brazzaville) 2005-06

### Côte d'Ivoire 2005 (AIS)

1998-99  
1994

### Eritrea 2002

1995

### Ethiopia 2005

2000

### Gabon 2000

### Ghana 2003

2002 (SPA)  
1998  
1993-94  
1988

### Guinea 2005

1999  
1992

### Kenya 2004 (SPA)

2003  
1999 (SPA)  
1998  
1993  
1989

### Lesotho 2004

### Liberia 2006

1986

### Madagascar 2003/04

1997  
1992

### Malawi 2004/05

2000  
1996 (KAP)  
1992

### Mali 2006

2001  
1995-96  
1987

### Mauritania 2003 (Special)

2000-01

### Mozambique 2003

1997

AIS: AIDS Indicator Survey  
SPA: Service Provision Assessment



## New Publications

### Namibia 2000

1992

### Niger 2005

1998

1992

### Nigeria 2003

1999 (limited assistance)

1990

1986 (Ondo State)

### Rwanda 2005

2001 (SPA)

2000

1992

### Senegal 2005

1999 (limited assistance)

1997

1992-93

1986

### South Africa 2003-04

1998

### Sudan 1990

### Swaziland 2006

### Tanzania 2004-05

2003-04 (AIS)

1999 (Interim)

1996

1995 (Estimation of Adult and Childhood

Mortality in a High HIV/AIDS Population)

1994 (KAP)

1992

### Togo 1998

1988

### Uganda 2006

2004-05 (AIS)

2000-01

1995-96 (Negotiating Reproductive Outcomes)

1995

1988-89

### Zambia 2006

2001-02

1996

1992

### Zimbabwe 2005

1999

1994

1988

### Bangladesh

### Cameroon

### Chad

### Indonesia

### Madagascar

### Morocco

### Mozambique

### Tanzania

### 2004 DHS Final Report

### 2004 DHS Final Report (French)

### 2004 DHS Final Report (French)

### 2002-03 Jayapura City Young Adult Reproductive Health Survey

### 2003-04 Final Report for the Baseline Survey of Reproductive Health and Child Survival in the USAID Intervention Zones (French)

### 2003-04 DHS Final Report (French)

### 2003 DHS Final Report (Portuguese)

### 2003-04 AIS Final Report

### Africa Nutrition Chartbooks

Burkina Faso: 2003 Nutrition of young children and mothers (French/English)

Ghana: 2003 Nutrition of young children and mothers

Madagascar: 2003-04 Nutrition of young children and mothers (French/English)

### Gender Reports

Kishor, S., ed. 2005. *A Focus on Gender: Collected Papers on Gender Using DHS Data*. (OD32)

### Further Analysis

Ghana Trend Report. 2005. *Trends in Demographic, Family Planning and Health Indicators in Ghana 1960-2003*. (TR2)

Akwara, P.A., G.B. Fosu, P. Govindasamy, S. Alayón and A. Hyslop. 2005. *An In-depth Analysis of HIV Prevalence in Ghana*. (FA46)

### DHS Working Papers

Garenne, M. and E. Gakusi. 2005. *Under-five Mortality Trends in Africa: Reconstruction from Demographic Sample Surveys*. (WP26)

Mishra, V., F. Arnold, F. Otieno, A. Cross, R. Hong. 2005. *Education and Nutritional Status of Orphans and Children of HIV-Infected Parents in Kenya*. (WP24)

Mishra, V., F. Arnold, G. Semenov, R. Hong and A. Mukuria. 2005. *Epidemiology of Obesity and Hypertension in Uzbekistan*. (WP25)

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All DHS publications may be downloaded or ordered online at <http://www.measuredhs.com>

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## Final Reports Coming Soon

Ethiopia DHS 2005

Guinea DHS 2005

Lesotho DHS 2005

Malawi DHS 2004-05

Senegal DHS 2005

Tanzania DHS 2005

Egypt SPA 2004

Guyana AIS 2005

Guyana HIV SPA 2005

Kenya SPA 2004

## DHS Data at Work

### Tanzanian President Uses DHS Data to Measure His Achievements

Citing data from the Preliminary Report for the 2004 Demographic and Health Survey and the 2003-04 AIDS Indicator Survey, President Mkapa announced great improvements in Tanzanian development. Achievements listed included increased access to clean water, a decrease in infant and under-5 mortality, and an increase in vitamin A supplementation among children under five.

### Nigeria DHS Results Prompt New Malaria Prevention Initiative

In response to 2003 Nigeria DHS malaria data, Population Services International and the British Department for International Development (DFID) increased program efforts and budgets in order to market insecticide-treated bednets.

### 2005 World Malaria Report Uses DHS Data

The recently released 2005 World Malaria Report (from UNICEF and The World Health Organization) cites DHS data on child illness, use of bednets and antimalarial drugs. The report focuses on the Roll Back Malaria Project, but uses data from several sources to describe the current burden of malaria in the developing world.

### Maps Based on DHS Data Help Plan US Government HIV Programs

MEASURE DHS is collaborating with MEASURE Evaluation to use results from the Tanzania HIV/AIDS Indicator Survey for monitoring and planning US government HIV programs. Key indicators such as HIV prevalence, knowledge of HIV/AIDS prevention, education, and media exposure were mapped to reflect the regional variation in the country. The HIV prevalence data were combined with the 2002 Tanzania census to estimate the number of HIV-infected people by district. These data are being used to plan FY06 President's Emergency Plan for AIDS Relief programs. An atlas of HIV indicators is also being produced in Tanzania.

### Madagascar Uses DHS Data for National Strategies

Madagascar's Ministry of Health and Family Planning prepared two strategic papers, relying heavily on the 2003-04 Madagascar DHS data. The first strategy was titled: National Action Plan for Nutrition 2005-2009 while the second focused on the Implementation of a New Strategy the Programme of Family Planning 2005-2009. DHS staff also attended the first of a series of provincial MDHS dissemination seminars during which both papers were used for provincial planning. ■

## News Articles Worldwide Feature DHS Data

- Bangladesh, *The New Nation*:** "The vicious cycle of malnutrition," by Dr. AMM Anisul Awwal, September 3, 2005
- Cameroon, *Cameroon Tribune*:** "Population shun condoms," by Brenda Yufeh, August 19, 2005
- India, *Sunday Times*:** "Sit at home and get an HIV test done," by Sushil Rao, June 17, 2005
- Madagascar, *Madagascar Tribune*:** "La santé de la mère et de l'enfant s'améliore," April 8, 2005
- Morocco, *Liberation Press*:** "La mortalité maternelle et infantile reste inquiétante en Afrique du Nord: Algérie, Tunisie et Maroc," by Fatima Moho, April 9, 2005
- Nepal, *The Rising Nepal*:** "Child poverty in Nepal," by Dr. Nishwa Bath Tiwari, October 16, 2005
- Nepal, *Nepalnews.com*:** "MDGs cannot be achieved if questions of RH are not squarely addressed," by Junko Sazaki, September 9, 2005
- Philippines, *Sun Star*:** "Population office mobilizes media for public awareness," June 17, 2005
- Peru, *La Republica*:** "El desafío de la salud maternal," by Alberto Garcia, April 11, 2005
- Philippines, *Channel News Asia*:** "Filipinos highly misinformed about AIDS: survey," May 18, 2005
- Tanzania, *The Citizen*:** "HIV/AIDS tests attract crowds at exhibition," by Deogratius Kiduduye, August 5, 2005
- U.S., *The New York Times*:** "Entrenched epidemic: wife-beatings in Africa," by Sharon LaFraniere, August 11, 2005

## Key Findings from Recent DHS Surveys

### Jayapura City Young Adult Reproductive Health Survey

This survey was carried out in Jayapura City, the capital of Papua, Indonesia, where one in four people is between the ages of 15 and 24. The survey aimed at providing baseline data on issues related to knowledge, attitudes, and behaviors of young unmarried women and men regarding sexual activity, reproductive health, family planning, and HIV/AIDS prevention.

More than 95 percent of the women surveyed and 88 percent of the men reported knowing about modern contraceptive methods. Among those who intend to use a contraceptive method in the future, 9 in 10 said that they would prefer a modern contraceptive method, preferably supplied by public health sources. However, unmarried people are not eligible to receive contraceptives from public health sources, even though 8 percent of women and 23 percent of men openly admit having had sexual intercourse before marriage.

### Tanzania HIV/AIDS Indicator Survey (THIS) 2003-04

Results from HIV testing in Tanzania revealed that 7 percent of Tanzanian adults are HIV positive. The infection rate among urban residents (10.9%) is twice as high as that of rural residents (5.3%), but overall, women have a slightly higher prevalence than men (7.7% and 6.3%, respectively).

HIV prevalence increases with education, as adults with secondary or higher education are 50 percent more likely to be infected than those with no education. Infection rates are three times higher among those in the highest wealth quintile than those in the lowest quintile.

### Cameroon 2004

The 2004 Cameroon DHS reports that infant mortality and under-5 mortality

have changed only slightly in the last 6 years, but young Cameroonian children have a greater chance of survival to their fifth birthday than other children in the region. Nearly half of children 12-23 months have received all the vaccines from the Expanded Programme on Immunization (EPI), an increase from 36 percent in 1998. The nutrition situation of children has not improved since 1998.

Thirty percent of children under the age of 3 are stunted, indicating that they are chronically malnourished.

Thirteen percent of married women in Cameroon

use a modern method of contraception. The utilization of condoms has improved from 2 percent in 1998 to 8 percent in 2004.

HIV testing indicates that 5.5 percent

of the adult population is infected with HIV. Prevalence is higher among women than men in both urban and rural areas, and in households with higher economic status.

### Bangladesh 2004

The 2004 BDHS reports a slight decline in fertility (from 3.3 during the 1990s to 3.0). Almost half (47%) of married women use a method of contraception.

Maternal health indicators have improved since the 1999-2000 BDHS: currently, almost half of women receive antenatal care compared with only one-third 5 years ago. However, 90 percent of births still occur at home and the large majority of women do not receive postnatal care.

Child mortality has declined in the last 5 years and 73 percent of children are fully immunized. However, few sick children were taken to health care providers for treatment. ■

Visit the [STATcompiler](http://www.measuredhs.com/statcompiler) ([www.measuredhs.com/statcompiler](http://www.measuredhs.com/statcompiler)) and the [AIDS Indicator Database](http://www.measuredhs.com/hivdata) ([www.measuredhs.com/hivdata](http://www.measuredhs.com/hivdata)) for more DHS Data

## DHS Welcomes Population and HIV Fellows

In 2005, DHS started an international fellowship program, hiring recent doctoral recipients as Population and HIV researchers. The fellowships, sponsored by USAID, were created to provide training in the use of DHS data and to provide an opportunity for analysis of HIV data.

Chi Chiao received her doctoral degree in public health from UCLA in 2005. Her primary academic interests include the demographic and social processes that influence sexual behaviors. In particular, she is interested in exploring the multiple ways in which these processes, as well as the characteristics of individuals and their sexual relationships, influence the sexual behaviors of women. Chi is originally from China.

Tesfayi Gebreselassie completed his PhD in Economic Development and Demography from Pennsylvania State University in 2005. His thesis focused on child nutrition and poverty in Ethiopia, his home country. His research at DHS uses the reproductive calendar to examine issues of postpartum contraceptive use and breastfeeding. He is also working on a project about spousal communication on fertility preferences using couples data.

Lekha Subaiya, originally from India, graduated in August 2005 from the University of Maryland at College Park with a doctoral degree in sociology, and a specialization in demography. Her dissertation focused on the issue of aging in developing countries. Her research interests are family dynamics, union formation, and gender. At Macro, she is working on projects related to birth-spacing, nonmarital fertility, and gender empowerment.

Two more population fellows and one additional HIV fellow, including some from the U.S., are expected to join the DHS team by the end of the year. ■

# Selected Statistics From DHS Surveys

SURVEYS	VITAL RATES			USE OF CONTRACEPTION (Currently Married Women 15–49)		MATERNAL CARE (Births in Last 5 Years)		CHILD HEALTH INDICATORS		
	Total Fertility Rate <sup>a</sup>	Total Wanted Fertility Rate <sup>a</sup>	IMR/Under-5 Mortality Rate <sup>b</sup>	% Currently Using Any Method <sup>c</sup>	% Currently Using Any Modern Method <sup>d</sup>	% Women Receiving Antenatal Care <sup>e</sup>	% Women Receiving Assistance at Delivery from Professional <sup>e</sup>	Median Duration (Months) of Breast-feeding <sup>f</sup>	% Children 0–59 Months Stunted <sup>g</sup>	% Children Fully Immunized <sup>h</sup>
<b>CENTRAL ASIA</b>										
Kazakhstan 1999	2.1	1.9	62/71	66	53	94	99	7	10	81
Turkmenistan 2000	2.9	2.7	74/94	62	53	98 <sup>i</sup>	97	18	22	90
Uzbekistan 2002	2.9	†	62/73	68	63	†	†	20	21	†
<b>LATIN AMERICA/CARIBBEAN</b>										
Bolivia 2003	3.8	2.1	54/75	46	26	79	61	20	27	50
Colombia 2000	2.6	1.8	21/25	77	64	91 <sup>i</sup>	86	13	14	52 <sup>m</sup>
Dominican Rep. 2002	3.0	2.3	31/38	70	66	98	98	7	9	35
Haiti 2000	4.7 <sup>b</sup>	2.7 <sup>b</sup>	80/119	28	22	79	24	19	23	34
Nicaragua 2001	3.2	2.3	31/40	69	66	86	67	17	20	72 <sup>n</sup>
Peru 2004-05	2.4	‡	†	71	47	91	70	‡	‡	69
<b>NORTH AFRICA/WEST ASIA/EUROPE</b>										
Armenia 2000	1.7	1.5	36/39	61	22	92 <sup>i</sup>	97	9	13	76
Egypt 2002	3.2	2.5	38/46	60	57	69	69	19	16	88
Jordan 2002	3.7	2.6	22/27	56	41	99	100	13	9	94 <sup>o</sup>
Turkey 2003	2.2	1.6	29/37	71	43	81	83	14	12	54
Morocco 2003-04	2.5	1.8	40/47	63	55	68	63	14	18	89
<b>SOUTH/SOUTHEAST ASIA</b>										
Bangladesh 2004	3.0	2.0	65/88	58	47	56	13	29	55	73
Cambodia 2000	4.0 <sup>b</sup>	3.1 <sup>b</sup>	95/124	24	19	38 <sup>i</sup>	32	24	45	40
India 1998-99	2.9	2.1	68/95	48	43	65 <sup>j</sup>	42 <sup>i</sup>	25	47 <sup>i</sup>	42
Indonesia 2003	2.6	2.2	35/46	60	57	92 <sup>i</sup>	66	22	†	51
Nepal 2001	4.1	2.5	64/91	39	35	49	13	33	51	66
Philippines 2003	3.5	2.5	29/40	49	33	88 <sup>i</sup>	60	14	†	70
Vietnam 2002	1.9	1.6	18/24	79	57	86 <sup>i</sup>	85 <sup>i</sup>	18	†	67
<b>SUB-SAHARAN AFRICA</b>										
Benin 2001	5.6	4.6	89/160	19	7	87	73	22	31	59
Burkina Faso 2002-2003	6.2	5.4	81/184	14	9	73	57 <sup>i</sup>	25	39	44
Cameroon 2004	5.0 <sup>b</sup>	4.5 <sup>b</sup>	74/144	26	13	83 <sup>j</sup>	62 <sup>i</sup>	18	32 <sup>i</sup>	48
Chad 2004	6.3	‡	101/190	11	2	43	24	‡	‡	11
Eritrea 2002	4.8	4.4	48/93	8	7	70	28	22	38	76
Ethiopia 2000	5.9 <sup>b</sup>	4.9 <sup>b</sup>	97/166	8	6	27 <sup>i</sup>	6	26	52	14
Gabon 2000	4.3 <sup>b</sup>	3.5 <sup>b</sup>	57/89	33	12	95 <sup>i</sup>	87	12	21	17
Ghana 2003	4.4	3.7	64/111	25	19	92	47	23	30	69
Guinea 2005	5.7	‡	91/163	9	6	82	38	‡	35	37
Kenya 2003	4.9	3.6	77/115	39	32	90	42	21	30	57
Madagascar 2003-04	5.2	4.7	58/94	27	18	80	51 <sup>i</sup>	22	48	53
Malawi 2004	6.0	‡	76/133	33	28	93	57	‡	48	64
Mali 2001	6.8	6.1	113/229	8	6	57 <sup>i</sup>	41	23	38	29
Mauritania 2001	4.7 <sup>b</sup>	4.3 <sup>b</sup>	74/116	8	5	65 <sup>i</sup>	57	21	35	32
Mozambique 2003	5.5	4.9	101/153	17	12	85	48	22	41	63
Namibia 2000	4.2	3.4	38/62	44	43	91	78	15	24	65
Nigeria 2003	5.7	5.3	109/217	13	8	63	36	18	38	13
Rwanda 2005	6.1	‡	86/152	17	10	94	39	‡	45	17
Senegal 2005	5.3	‡	61/121	12	10	93	52	‡	16	59
South Africa 1998	2.9	2.3	45/59	56	55	94	84	16	†	63
Tanzania 2004-05	5.7	‡	68/112	26	20	94	46	‡	27	71
Uganda 2001	6.9	5.3	88/152	23	18	92 <sup>i</sup>	39	22 <sup>i</sup>	39	37
Zambia 2002	5.9	4.9	95/168	34	23	93	43	21	47	70
Zimbabwe 1999	4.0	3.4	65/102	54	50	93 <sup>i</sup>	73	20	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 0–35 months old.

m Excludes measles.

n Children 18–29 months old.

o Excludes BCG.