Ghana

Monitoring the situation of children, women and men

Multiple Indicator Cluster Survey
2006

unicef

MICS

Monitoring the situation of children, women, and men

Multiple Indicator Cluster Survey 2006

Summary table

Topic	MICS Indicator Number	MDG Indicator Number	Indicator	Value	
CHILD MORTALITY					
Child mortality	1	13	Under-five mortality rate	111	per thousand
	2	14	Infant mortality rate	71	per thousand
NUTRITION					
Nutritional status	6	4	Underweight prevalence	17.8	percent
	7		Stunting prevalence	22.4	percent
	8		Wasting prevalence	5.4	percent
Breastfeeding	45		Timely initiation of breastfeeding	35.2	percent
	15		Exclusive breastfeeding rate	54.4	percent
	16		Continued breastfeeding rate		
			at 12-15 months	94.6	percent
			at 20-23 months	56.1	percent
	17		Timely complementary feeding rate	58.7	percent
	18		Frequency of complementary feeding	49.5	percent
	19		Adequately fed infants	52.1	percent
Salt iodization	41		Iodized salt consumption	32.4	percent
Vitamin A	42		Vitamin A supplementation (under-fives)	60.2	percent
	43		Vitamin A supplementation (post-partum mothers)	54.5	percent
Low birth weight	9		Low birth weight infants	9.1	percent
	10		Infants weighed at birth	36.1	percent
CHILD HEALTH					
Immunization	25		Tuberculosis immunization coverage	94.2	percent
	26		Polio immunization coverage	80.1	percent
	27		DPT immunization coverage	81.4	percent
	28	15	Measles immunization coverage	77.7	percent
	31		Fully immunized children	64.4	percent
	29		Hepatitis B immunization coverage	81.4	percent
	30		Yellow fever immunization coverage	76.7	percent
Tetanus toxoid	32		Neonatal tetanus protection	77.1	percent
Care of illness	33		Use of oral rehydration therapy (ORT)	37.0	percent
	34		Home management of diarrhoea	19.0	percent
	35		Received ORT or increased fluids, and continued feeding	28.6	percent
	23		Care seeking for suspected pneumonia	33.6	percent
	22		Antibiotic treatment of suspected pneumonia	32.9	percent
Solid fuel use	24	29	Solid fuels	85.6	percent
Malaria	36		Household availability of insecticide-treated nets (ITNs)	18.7	percent
	37	22	Under-fives sleeping under insecticide-treated nets	21.8	percent
	38		Under-fives sleeping under mosquito nets	32.6	percent
	39	22	Antimalarial treatment (under-fives)	48.3	percent
	40		Intermittent preventive malaria treatment (pregnant women)	27.5	percent

Topic	MICS Indicator Number	MDG Indicator Number	Indicator	Value	
Source and cost of supplies	96		Source of supplies (from public sources)		
			Insecticide treated nets	68.3	percent
			Antimalarials	47.8	percent
	97		Cost of supplies (median costs)		
			Insecticide treated nets		
			public sources	25,000	GHC
			private sources	30,000	GHC
			Antimalarials		
			public sources	25,042	GHC
			private sources	10,000	GHC
ENVIRONMENT					
Water and Sanitation	11	30	Use of improved drinking water sources	78.1	percent
	13		Water treatment	3.3	percent
	12	31	Use of improved sanitation facilities	60.7	percent
	14		Disposal of child's faeces	43.7	percent
REPRODUCTIVE HEALTH					
Contraception and unmet need	21	19c	Contraceptive prevalence	16.6	percent
Maternal and newborn health	20		Antenatal care	92.1	percent
	44		Content of antenatal care		
			Blood test taken	78.3	percent
			Blood pressure measured	91.9	percent
			Urine specimen taken	80.0	percent
			Weight measured	90.9	percent
	4	17	Skilled attendant at delivery	49.7	percent
	5		Institutional deliveries	48.7	percent
CHILD DEVELOPMENT					
Child development	46		Support for learning	39.3	percent
	47		Father's support for learning	46.9	percent
	48		Support for learning: children's books	12.7	percent
	49		Support for learning: non-children's books	40.0	percent
	50		Support for learning: materials for play	28.1	percent
	51		Non-adult care	24.8	percent

Topic	MICS Indicator Number	MDG Indicator Number	Indicator	Value	
EDUCATION					
Education	52		Pre-school attendance	51.6	percent
	53		School readiness	86.7	percent
	54		Net intake rate in primary education	43.3	percent
	55	6	Net primary school attendance rate	75.3	percent
	56		Net secondary school attendance rate	45.1	percent
	57	7	Children reaching grade five	90.1	percent
	58		Transition rate to secondary school	97.5	percent
	59	7b	Primary completion rate	24.2	percent
	61	9	Gender parity index		
			primary school	1.00	ratio
			secondary school	0.99	ratio
Literacy	60	8	Adult literacy rate (youth)		
			women	67.9	percent
			men	75.4	percent
CHILD PROTECTION					
Birth registration	62		Birth registration	51.4	percent
Child labour	71		Child labour	33.9	percent
	72		Labourer students	78.9	percent
	73		Student labourers	32.2	percent
Child discipline	74		Child discipline		
			Any psychological/physical punishment	89.2	percent
Early marriage and polygyny	67		Marriage before age 15	4.4	percent
			Marriage before age 18	25.9	percent
	68		Young women aged 15-19 currently married/in union	8.1	percent
	70		Polygyny	21.6	percent
	69		Spousal age difference		
			women aged 15-19	12.8	percent
			women aged 20-24	16.8	percent
Female genital mutilation/ cutting	66		Approval for FGM/C	2.3	percent
	63		Prevalence of female genital mutilation/cutting (FGM/C)	3.8	percent
Domestic violence	100		Attitudes towards domestic violence		
			women	46.7	percent
			men	36.6	percent
Disability	101		Child disability	16.4	percent

Topic	MICS Indicator Number	MDG Indicator Number	Indicator	Value	
HIV/AIDS, SEXUAL BEHAVIOUR, AND ORPHANED AND VULNERABLE CHILDREN					
HIV/AIDS knowledge and attitudes	82	19b	Comprehensive knowledge about HIV prevention among young people		
			women 15-24	25.1	percent
			men 15-24	33.0	percent
	89		Knowledge of mother- to-child transmission of HIV		
			women	69.4	percent
			men	67.2	percent
	86		Attitude towards people with HIV/AIDS		
			women	7.6	percent
			men	10.7	percent
	87		People who know where to be tested for HIV		
			women	48.3	percent
			men	58.2	percent
	88		People who have been tested for HIV		
			women	13.6	percent
			men	8.8	percent
	90		Counselling coverage for the prevention of mother-to-child transmission of HIV	45.5	percent
	91		Testing coverage for the prevention of mother-to-child transmission of HIV	10.3	percent
Sexual behaviour	84		Sex before age 15		
			women	6.5	percent
			men	4.8	percent
	92		Age-mixing among sexual partners	12.1	percent
	83	19a	Condom use with non-regular partners		
			women	41.6	percent
			men	55.7	percent
	85		Higher risk sex in the last year		
			women	51.5	percent
			men	87.9	percent
Support to orphaned and vulnerable children	75		Prevalence of orphans	7.7	percent
	78		Children's living arrangements	14.3	percent
	77	20	School attendance of orphans versus non-orphans	1.02	ratio

Note:
Refer to Annex E for definitions of the above indicators

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List of abbreviations and acronyms

AIDS	Acquired Immune Deficiency Syndrome
BCG	Bacillis-Cereus-Geuerin (Tuberculosis)
CDC	Center for Disease Control
CSPro	Census and Survey Processing System
CWIQ	Core Welfare Indicator Questionnaire
DHS	Demographic and Health Survey
DPT	Diphtheria Pertussis Tetanus
(DPT)HH	DPT Hepatitis B Haemophilus B
EA	Enumeration Area
EPI	Expanded Programme on Immunization
FGM/C	Female Genital Mutilation/Cutting
GDHS	Ghana Demographic and Health Survey
GPRS	Ghana Poverty Reduction Strategy
GPRS II	Growth and Poverty Reduction Strategy II
GPI	Gender Parity Index
GLLS	Ghana Living Standards Survey
GSS	Ghana Statistical Service
HIV	Human Immunodeficiency Virus
IDD	Iodine Deficiency Disorders
IQ	Intelligence Quotient
ITN	Insecticide Treated Net
IUD	Intrauterine Device
JSS	Junior Secondary School
LAM	Lactational Amenorrh0ea Method
LPG	Liquefied Petroleum Gas
MDGs	Millennium Development Goals
MICS	Multiple Indicator Cluster Survey
MMR	Measles Mumps Rubella
MoH	Ministry of Health
MTCT	Mother-To-Child Transmission
NAR	Net Attendance Rate
NCHS	(US) National Center for Health Statistics
ORT	Oral rehydration treatment
ORS	Oral Rehydration Salts
PEPFAR	(US) President's Emergency Plan for AIDS Relief
PHC	Population and Housing Census
ppm	Parts Per Million
RHF	Recommended Homemade Fluid
SD	Standard Deviation
SPSS	Statistical Package for Social Sciences
SSS	Senior Secondary School
STI/D	Sexually Transmitted Infection / Disease
TBA	Traditional Birth Attendant
U5MR	Under-five Mortality Rate
UN	United Nations
UNAIDS	United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNGASS	United Nations General Assembly Special Session on HIV/AIDS
UNICEF	United Nations Children's Fund
WFFC	World Fit for Children
WHO	World Health Organization

Preface

The Multiple Indicator Cluster Survey (MICS), aims at providing indicators to monitor progress on issues relating to women and children.

MICS, developed initially to measure progress towards an internationally agreed set of goals from the 1990 World Summit for Children is now in its third round. At least 50 countries have participated in each round of data collection. The first round of the survey was undertaken around 1995; the second round around 2000 and the third around 2005. The results from these surveys have added to the wealth of data needed to monitor the situation of children and women. Ghana participated in the first round of MICS, and the survey was conducted by Ministry of Health (MoH) with technical assistance from Ghana Statistical Service (GSS). In the third round of MICS, just completed, the survey was conducted by the Ghana Statistical Service in collaboration with the Ministry of Health, UNICEF, Ghana and Macro International.

Building on the initial goals for the MICS, the current survey was designed primarily to collect information on a broad set of indicators also needed for monitoring the goals and targets of the Millennium Declaration, the World Fit for Children Declaration and Plan of Action, the United Nations General Assembly special session on HIV/AIDS and of the African summit on malaria.

Ghana has embarked on several national strategies in its goal to fight poverty. Since 2000 the main thrust of the programmes have been derived from the Ghana Poverty Reduction Strategy (GPRS), now in its second round, the Growth and Poverty Reduction Strategy GPRS II which began in 2006. The findings from MICS would provide additional data on progress towards goals established by the GPRS II. Furthermore, the availability of the MICS data will enhance the implementation of donor-specific programmes such as the High Impact Rapid Delivery (HIRD), Integrated Management of Childhood Illness (IMCI) and the Untied States Government President's Emergency Plan for AIDS Relief, among others.

Dr. Grace Bediako
Government Statistician

Acknowledgements

The Ghana Multiple Indicator Cluster Survey (MICS) 2006 was executed successfully through the invaluable assistance given by all collaborating agencies, institutions, organisations and individuals to whom we owe a great deal of gratitude.

We acknowledge the Ministry of Health (MoH) for sourcing substantial funds for the survey, releasing staff to serve on the secretariat and participating in the fieldwork, as well as providing the logistical support for the exercise. We also thank the Dutch Government sincerely for providing funds through MoH for the MICS.

The MICS project was initiated by UNICEF, and we appreciate their effort in the organisation of the survey, which involved the staff from the New York and Ghana offices. We are also grateful to them for their immense and diverse contributions ranging from expert visits, international training programmes, local technical assistance, procurement and administration. The international training opportunities provided by UNICEF, made it possible for the MICS team to meet and work with colleagues from the other National Statistics offices and helped build capacity in our institutions.

In implementing the Ghana MICS, there was collaboration with MEASURE DHS/Macro International, Inc. and USAID, under the US President's Emergency Plan for AIDS Relief (PEPFAR), providing significant technical assistance and funding, in particular, with regard to the inclusion of the male questionnaire. We sincerely thank them, as well as the Ghana AIDS Commission, for their effort to expand on the HIV/AIDS module of the survey and also made the collaboration with DHS/Macro possible.

We appreciate the work done by the Ghana MICS 2006 Steering Committee for their immense contribution in the implementation of the survey.

We are grateful to the entire project staff of the Ghana MICS for their tireless work, dedication to duty and other contributions in the different phases of the survey. We give our sincerest gratitude to the field survey personnel for their dedication and professionalism that has produced data of very good quality. The contribution of other staff in the Statistical Service who worked behind the scenes in various ways to assist the Secretariat is acknowledged. Their names have been printed in the appendix in acknowledgement of their contribution.

We thank the contributors to this report for the good work done. Their names have been mentioned individually in the report.

The final and sincere thanks go to all respondents who readily made themselves available to be interviewed and contributed to the 2006 Ghana MICS successful.

Executive Summary

Household Characteristics

- Proportion of children aged less than 15 years is 40.5 percent
- Twenty-nine percent of households are headed by women with urban (32 percent) / rural (26 percent)
- At least there is one child less than 5 years old in 37 percent of households in urban areas and 45 percent in rural areas; whereas three-quarters of all households have a child under 18 and / or a woman aged 15-49 years.
- Twenty-nine percent of households have a household size of 4-5 members and 28 percent has 2-3 household members.

Characteristics of Respondents

- The largest proportions of women and men are in 15-19 years and 20-24 years age groups. Thirty-nine percent of females and 44 percent of males are in the age group 15-24 year.
- About 3 in 5 women and about half of men are currently married or living together. However, 3 in 10 women and one in two men have never married.
- Out of 3 women, 2 have given birth at least once and one out of two men has ever fathered a child.
- Men are slightly more likely to live in rural areas (56 percent) than women (53 percent). Sixty-five percent of children under five live in rural areas and 36 percent live in urban areas.
- Twenty-six percent of women and 15 percent of men have no education. Twenty percent of women and 15 percent of men have only primary education. Thirty-eight percent of women and 47 percent of men have only middle / JSS level of education. On the other hand, 16 percent of women and 25 percent of men have attained secondary or higher levels of education.
- Fifty percent of women and 65 percent of men are literate. In the richest wealth quintile, 68 percent and 75 percent of women and men respectively are literate while in the poorest wealth quintile, 17 percent and 32 percent of women and men respectively are literate. 60 percent of women and 75 percent of men in urban areas are literate; but in the rural areas, only 40 percent of women and 60 percent of men are literate. The highest percentage of female literates (65 percent) is found in Greater Accra Region and the lowest (15 percent) is found in Upper West Region. Among men the highest percent of literates is found in Ashanti Region (77 percent) while the lowest (31 percent) is found in the Northern and Upper West regions.

Child Mortality

- Infant mortality rate is 71 deaths per 1,000 live births and under-five mortality rate is 111 deaths per 1,000 live births
- Under-five mortality rate experienced by female children (89 deaths per 1,000 live births) is about two deaths of what is experienced by male children (131 deaths per 1,000)
- Mortality among rural children is 72 percent and 114 percent for both infant and under-five children. It is however 68 percent and 106 percent respectively for urban children.

Nutritional Status

- Eighteen percent and 3 percent of children under-five are under weight and severely underweight respectively; overweight is not a problem among children under-five, only 1 percent are overweight.
- Malnourishment peaks at age 12-23 months; 22 percent of children are stunted and 5 percent wasted. Children in the Upper East and Northern regions of the country are more underweight, stunted and wasted. Boys are more slightly underweight, stunted and wasted than girls.

Breastfeeding

- About 55 percent of children less than six months are exclusively breastfed with 65 percent for those children aged 0-3 months
- Among children 6-9 months, 69 percent receive breast milk and solid or semi-solid foods; at 12-15 months, 95 percent are still being breastfed and by age 20-23 months 56 percent are still being breastfed.

Salt Iodization

- Salt is not iodized in 45 percent of households tested. 35 percent have salt that contains 15 parts per million (ppm) or more of iodine and 20 percent have less than 15 ppm. The use of adequately iodized salt is twice as high in urban as compared to rural areas.

Vitamin A Supplement

- Sixty percent of children aged 6-59 months receive a high dose of Vitamin A supplement while 7 percent never received the supplement

Low Birth Weight

- Out of 40 percent of weighed live births, approximately 9% of weighed live births are below 2500 grams

Immunization

- Sixty-four percent of children aged 12-23 months are fully immunized before the age of 12 months and more than 73 percent of children 12-23 months have all the required vaccinations
- About 94 percent of children aged 12-23 months receive a BCG vaccination by the age of 12 months
- First dose of (DPT)HH is given to 94 percent of children aged 12-23 months, 89 percent of the same age group receive second dose and 81 percent of the same age group receive the third dose
- Ninety-six percent of children aged 12-23 months receive polio by age 12 months and third dose, only 80 percent.

Tetanus Toxoid

- Protection level of women who have had a live birth within the last 2 years against tetanus is generally high peaking at 81 percent at age 30-34 years.
- Sixty-four percent of women receive at least 2 doses during the last pregnancy

Oral Rehydration Treatment

- Nineteen percent of children aged 0-59 months with diarrhoea are managed at home. Only 9 percent of infants under 12 months are managed at home as compared to 31 percent of those 24-35 months

Care Seeking and Antibiotic Treatment of Pneumonia

- Thirty-three percent of children under-five years with suspected pneumonia receive an antibiotic treatment. Generally treatment of suspected pneumonia with an antibiotic is very low among poor households

Solid Fuel Use

- Eighty-six percent of households are using solid fuels for cooking. Its use is slightly lower in the urban areas (74 percent) than in the rural areas (96 percent).
- The higher the educational level of the head of household, the lower the use of solid fuels for cooking (58%); similarly, the percentage is lowest among the wealthiest households (49%)

Malaria

- Forty-nine percent of households have at least one mosquito net but, only 19% of households have insecticide treated net (ITN).
- Thirty-three percent of children under-five sleep under a mosquito net but 22 percent sleep under an ITN
- The use of ITN is higher in the rural areas (25%) than in the urban areas (16%)
- Twenty-two percent of children under-five were ill with fever. The prevalence of fever is lowest among infants 0-11 months old but peaked at 12-23 months old children (27 percent)
- The most widely used appropriate anti-malarial drugs are chloroquine used by 42 percent of children aged 0-59 months with fever and armodiaquine used by 14 percent. Of children with fever, 61 percent are treated with an appropriate anti-malarial drug and 48 percent receive the drug within 24 hours of onset of symptoms.

Water and Sanitation

- Thirty-eight percent of the population has access to pipe-borne water in their dwelling, yard or plot or public tap
- Twenty-nine percent and 6 percent of the population get their drinking water from boreholes and protected wells respectively.
- Five percent depend on sachet water for drinking water and only 0.1 percent drink bottled water.
- Seventy-eight percent of the population has improved sources of drinking water.

Time to Source Water

- The mean time for accessing water by households that do not have water in dwelling is 18 minutes. Rural households get to the source and back in 21 minutes but urban households spend 13 minutes

Person Collecting Water

- Adult women are more likely to fetch water than men and children. In 64 percent of households, adult women collect water either alone or with children compared to 17 percent in which adult men do the fetching

- In 16 percent of households, children are those who collect water, whether male or female.

Use of Sanitary Means of Excreta Disposal

- Sixty-one percent of the population is using improved sanitation facilities. The improved sanitation is however more prevalent in urban areas (83 percent) than in rural areas (50 percent)

Disposal of child's faeces

- About two out of every five children's stool are put or rinsed into a toilet or latrine; 20 percent are thrown into garbage (solid waste). Only 2 percent of children are made to use the toilet/latrine themselves.

Use of Improved Water Sources and Improved Sanitation

- Forty-eight percent of households use improved sources of drinking water and sanitary means of disposing excreta.
- In the urban areas 68 percent of households use both improved sources of drinking water and sanitary means of excreta disposal while only 38 percent of rural households use both methods.

Durability of Dwelling

- No house is located in a hazardous area; however, 10 percent of all dwellings is in poor condition and one in fifty are vulnerable to accidents.
- About three percent of the dwellings are considered non-durable and 4 percent have natural floor materials (earth/mud/mud bricks).

Contraception

- Approximately 17 percent of women currently married or in union, are using contraception
- The most popular method of contraception currently used is the injection and it is used by 6 percent of the married women. Pill use accounts for 5 percent of married women.
- The condom is used by less than two percent of partners of married women.

Antenatal Care

- Coverage of antenatal care is relatively high with, 92 percent of pregnant women aged 15-49 years receiving medical care at least once from a skilled provider.
- Higher antenatal care by professional health personnel is recorded in the urban areas of the country (96 percent) than in the rural areas (90 percent).
- Ten percent of pregnant women have their blood pressure checked and weight measured
- Eighty percent have their urine tested, and 78 percent have a blood sample taken respectively for laboratory examination.

Assistance at Delivery

- Fourth-one percent of births are delivered with the assistance of a nurse/midwife while doctors assisted with 9 percent of births. Trained TBAs and untrained TBAs that assisted with deliveries were 21% and 10% respectively.

Child Development

- On average household members are engaged with children in three activities that promote learning. Forty-seven percent of the children have their fathers involved in one or more activities.
- Thirty percent of children are living in a household without their biological fathers.
- The proportion of children 0-59 months with whom an adult household member engaged in 4 or more activities is 50 percent in urban areas and 34 percent in rural areas.
- Most households do not have children's and non-children's books. 40 percent of children live in households with at least 3 non-children's books. But 13 percent of those under-five have children's books.
- Twenty-eight percent of children under-five years have three or more playthings to play with in their homes but 17 percent do not have any. Thirty-four percent of children aged 0-23 months have no playthings, while 5 percent of those aged 24-59 months do not have.
- During the week preceding the survey, 25 percent of children had inadequate care. Female children under-five are more likely to be left with inadequate care than male children. Also 29 percent of rural children are with inadequate care compared to 17 percent of urban children.

Pre-school Attendance and School Readiness

- Fifty-two percent of children aged 36-59 months are attending pre-school; 71 percent in urban areas compared to 41 in rural areas. Eighty-four percent of children whose mothers have attained at least secondary level attend early childhood education compared to 35 percent whose mothers had no education.

Primary and Secondary School participation

- Forty-three percent of children of primary school entry age are attending first grade.
- Only 75 percent of children of primary school age are attending school.
- Eighty-five percent of urban children attend school as against 70 percent rural children
- Forty-five percent of children of secondary school age are attending JSS or higher while 55 percent are either out of school or are in primary school. 57 percent urban children and 36 percent rural children are attending secondary school.
- Ninety percent of all children starting grade one eventually reach grade five.
- There is no difference in school attendance between boys and girls (gender parity for primary and JSS for boys and girls is 1.00 and 0.99 respectively)

Literacy

- Sixty-four percent of women and 71 percent of men are literate. In the richest wealth quintile, 81 percent of women and 85 percent of men are literates while in the poorest wealth quintile, 30 percent of women and 38 percent of men are literate.

Birth Registration

- The births of 51 percent of children under-five years have been registered. Seventy-nine percent of births to mothers with secondary and higher are registered while only 41 percent of births to mothers with no education are registered.
- Seven out of every ten children born in urban areas are registered compared to four out of ten of children born in rural areas.

Child Labour

- Thirty-four percent of children 5-14 years are engaged in child labour. Children aged 5-11 engaged in child labour were more (39%) compared to those aged 12-14 (22%).
- While only 14 percent of children from the richest wealth quintile are engaged in child labour, 48 percent of those from the poorest quintile are engaged.
- Of 83 percent of children 5-14 years of age attending school, 32 percent are also involved in child labour activities.

Child Discipline

- Eighty-nine percent of children aged 2-14 years are subjected to a form of psychological or physical punishment.
- Ten percent are subjected to severe physical punishment and 69 percent to minor punishment.

Early Marriage and Polygyny

- Four percent of 15-49 years women in marriage or union were married before age 15 and 26 percent of women aged 20-49 married before age 18.
- By age of 25, more than half of the women are married or cohabiting with a partner while at 30 years of age over 90 percent of women are in union.
- Half of the men marry or cohabit with a woman by the age of 30 years and after the age of forty years, 95 percent marry or cohabit with a woman.

Female Genital Mutilation/Cutting (FGM/C)

- Four percent of women aged 15-49 years have had some form of FGM/C. The practice of FGM/C is most prevalent dominant in the two upper regions. Upper West Region is leading with 56 percent while Upper East followed with 13 percent.
- Ninety-three percent of women aged 15-49 years believe that the practice should be discontinued; whiles only 2 percent believe otherwise.

Domestic Violence (DV)

- Acceptance of domestic violence is highest in the Upper West Region (76 percent) of Ghana and lowest in Greater Accra (28 percent)
- Forty-seven percent of women aged 15-49 believe that a husband is justified in beating his wife. This belief, is held among a higher proportion of women in the rural areas (57 percent) than the urban areas (36 percent)
- Thirty-six percent of men believe wife beating is justified. This belief is held among a higher proportion of men in rural areas (44%) than those in urban areas (27%).

Child Disability

- Sixteen percent of children aged 2-9 years have at least one form of disability.

Knowledge of HIV Transmission

- Ninety-eight percent of men and 97 percent of women have heard of AIDS.
- Sixty percent and 56 percent of men and women respectively know of all three main ways of preventing HIV transmission.
- Forty-one percent of men and 28 percent of women know that a healthy-looking person can be infected.
- Ninety-two percent of men and 93 percent of women know that HIV can be transmitted from mother to child.

Attitude towards People Living with HIV/AIDS (PLWHA)

- Education, wealth, and type of resident are strongly related to negative attitudes towards those who are HIV-positive. Rural residents, less educated people and those in lower wealth quintiles are most likely to have discriminatory attitudes towards the HIV-positives than educated people living in urban areas and are in the upper wealth quintiles.

Knowledge of Facility for HIV Testing

- Fifty-eight percent and 48 percent of men and women respectively know where to be tested while 9 percent of men and 14 percent of women have actually ever been tested
- Women in 25-29 years age group and men in the 35-39 years age group recorded the highest proportions of those that have been tested.

Sexual Behaviour Related to HIV Transmission

- Young women have sex earlier than their male counterparts. Seven percent of young women and 5 percent of young men aged 15-19 years had sex before age 15.
- Two percent of women and 6 percent of men had sex with more than one partner.
- Forty percent of women and 60 percent of men use condom during sexual intercourse.

Orphans and Vulnerable Children

- Fourteen percent of all children are not living with a biological parent.
- Eight percent of all children have one or both parent's dead.
- Sixty percent of children under 18 years are living with both parents; 21 percent of these children live with only their mother, 4 percent live with only their father, and 15 percent live with neither parent.

I. Introduction

Background

This report is based on the Ghana Multiple Indicator Cluster Survey, conducted in 2006 by Ghana Statistical Service and the Ministry of Health. The survey provides valuable information on the situation of women, men and children in Ghana. It was based largely on the need to monitor progress towards goals and targets emanating from recent international agreements, the Millennium Declaration, adopted by all 191 United Nations Member States in September 2000 and the Plan of Action of *A World Fit for Children*, adopted by 189 Member States at the United Nations Special Session on Children in May 2002.

In signing these international agreements, governments committed themselves to improving conditions for children and to monitor progress towards this end. UNICEF was assigned a supporting role in this task (see table below).

A Commitment to Action: National and International Reporting Responsibilities

The governments that signed the Millennium Declaration and the World Fit for Children Declaration and Plan of Action also committed themselves to monitoring progress towards the goals and objectives they contained:

"We will monitor regularly at the national level and, where appropriate, at the regional level and assess progress towards the goals and targets of the present Plan of Action at the national, regional and global levels. Accordingly, we will strengthen our national statistical capacity to collect, analyse and disaggregate data, including by sex, age and other relevant factors that may lead to disparities, and support a wide range of child-focused research. We will enhance international cooperation to support statistical capacity-building efforts and build community capacity for monitoring, assessment and planning." **(A World Fit for Children**, paragraph 60)

"…We will conduct periodic reviews at the national and subnational levels of progress in order to address obstacles more effectively and accelerate actions.…" **(A World Fit for Children**, paragraph 61)

The Plan of Action (paragraph 61) also calls for the specific involvement of UNICEF in the preparation of periodic progress reports:

"… As the world's lead agency for children, the United Nations Children's Fund is requested to continue to prepare and disseminate, in close collaboration with Governments, relevant funds, programmes and the specialized agencies of the United Nations system, and all other relevant actors, as appropriate, information on the progress made in the implementation of the Declaration and the Plan of Action."

Similarly, the **Millennium Declaration** (paragraph 31) calls for periodic reporting on progress:

"…We request the General Assembly to review on a regular basis the progress made in implementing the provisions of this Declaration, and ask the Secretary-General to issue periodic reports for consideration by the General Assembly and as a basis for further action."

Ghana in its drive to fight poverty has embarked on national strategies – the Ghana Poverty Reduction Strategy (GPRS) in 2000 and the Growth and Poverty Reduction Strategy GPRS II) from 2006. Findings from Multiple Indicator Cluster Survey (MICS) would provide up-to-date information on progress towards goals established by the GPRS II. In addition to the

national strategy, donor-specific programmes were also implemented including the High Impact Rapid Delivery (HIRD), Integrated Management of Childhood Illness (IMCI), and the United States Government President's Emergency Plan for AIDS Relief, etc.

This final report presents the results and findings of the survey.

Survey Objectives

The MICS 2006 has the following primary objectives:

- To provide up-to-date information for assessing the health situation of women and children in Ghana;
- To present the current level of knowledge and behavioural indicators regarding HIV / AIDS and malaria;
- To furnish data needed for monitoring progress toward the Millennium Development Goals, and the goals of *A World Fit for Children* (WFFC) as a basis for future action; such as the US President's Emergency Plan for AIDS Relief (PEPFAR).
- To contribute to the formation of baselines for the GPRS II and the Ministry of Health (MoH) Plan of Work 2007-2011, and to provide progress monitoring for other policies and programmes in Ghana;
- To contribute to the improvement of data and monitoring systems in Ghana and to strengthen technical expertise in the design, implementation, and analysis of such systems.

The report

The report is divided into chapters as outlined in the table of contents. A number of annexes serve as reference and background information to the report. Please note that most tables refer to "MICS Indicators". The computations of these are explained in detail in Annex E, further referencing the survey questionnaires in Annex F.

II. Sample and Survey Methodology

Sample Design

The sample for the MICS 2006 was designed to provide estimates on a large number of indicators of the health status of women, men, and children at the national level, for urban and rural areas, as well as for the 10 administrative regions in the country.

A representative probability sample of 6,302 households was selected nationwide. The list of enumeration areas (EAs) from the Ghana Living Standards Survey 5 (GLSS 5) served as a frame for the MICS sample. The frame was first stratified into the 10 administrative regions in the country, then into urban and rural EAs.

The MICS 2006 used a two-stage stratified sample design. At the first stage of sampling, 300 census enumeration areas (124 urban and 176 rural EAs) were selected. These are a sub-sample of the 660 EAs (281 urban and 379 rural) selected for the GLSS 5. The clusters in each region were selected using systematic sampling with probability proportional to their size. The distribution of EAs between regions is not proportional to the 2000 Population and Housing Census, mainly due to over-sampling in the number of EAs for Northern, Upper East and Upper West Regions.

A complete household listing exercise covering all EAs in the GLSS 5 was carried out in May through July 2005 with a few selected EAs listed in early 2006. At the second stage, a systematic sampling of households was selected based on this list. The MICS households were selected systematically from the household listing provided by GLSS 5 after eliminating from the list households previously selected by the GLSS 5 (20 per EA). The reason for selecting different households is that the GLSS 5 interviews are long and demanding for respondents. It therefore seemed preferable to keep the two household samples separate in order to avoid respondent fatigue and possible high rates of refusal in the households falling in both samples as they were being conducted concurrently. For the MICS, 20 households per EA were selected except for rural EAs in Northern, Upper East and Upper West regions, where 20 households per EA were selected per urban EA and 25 households selected per rural EA. The objective of this exercise was to ensure an adequate number of complete interviews to provide estimates for important population characteristics with acceptable statistical precision per region. Due to the fixed sample size per EA, the disproportional number of EAs and different sample sizes selected per EA among regions, the MICS 2006 household sample is not self-weighting at the national level. For reporting national level results, sample weights are used. A more detailed description of the sample design can be found in Appendix A.

Questionnaires

Four sets of questionnaires were used in the survey:

- a household questionnaire which was used to collect information on all *de jure* household members and household characteristics and to identify eligible individuals;
- a women's questionnaire administered in each household to all women aged 15-49 years;
- a men's questionnaire administered in every third selected household to all men aged 15-49 years; and
- an under-5 questionnaire, administered to mothers or caretakers of all children under

five years[1] living in the household.

The questionnaires included the following modules:

Household Questionnaire:
- Household Listing
- Education
- Water and Sanitation
- Durability of Housing
- Malaria-related questions
- Child Labour
- Child Discipline
- Disability
- Salt Iodization

Women Questionnaire:
- Child Mortality
- Tetanus Toxoid
- Maternal and Newborn Health
- Marriage and Union
- Security of Tenure
- Contraception
- Attitudes Towards Domestic Violence
- Female Genital Mutilation / Cutting
- Sexual Behaviour
- HIV Knowledge

Men Questionnaire:
- Marriage and Union
- Sexual Behaviour
- Contraception
- HIV / AIDS and other Sexually Transmitted Infections (STIs)

Under-five Questionnaire:
- Birth Registration and Early Learning
- Child Development
- Vitamin A
- Breastfeeding
- Care of Illness
- Malaria
- Immunization
- Anthropometry

The questionnaires are based on the MICS model questionnaires[2] and modified to fit the Ghanaian survey standards and conditions. The questionnaires were pre-tested in the Greater Accra Region in June 2006. The training for the pre-test was conducted by GSS staff for 22 interviewers for 13 days. This was followed by the formation of four teams consisting of a supervisor and four interviewers that conducted the pilot survey in four selected localities (2 urban and 2 rural) in the same region to test the entirety of survey procedures.

[1] The terms "children under five", "children age 0-4 years", "under-fives", and children age 0-59 months" are used interchangeably in this report.
[2] The model MICS3 questionnaire can be found at www.childinfo.org, or in UNICEF, 2006.

Based on the results of the pre-test and pilot, further modifications were made to wording and flow of the questions and the survey plan. A copy of the MICS 2006 questionnaires is provided in Appendix F.

In addition to the administration of questionnaires, fieldwork teams tested the salt used for cooking in the households for iodine level, and measured the heights and weights of all children less than 5 years (0-59 months).

Training and Fieldwork

A total of 80 interviewers and 10 data entry operators participated in the main fieldwork training, conducted from 17th – 31st July, 2006. Data entry operators were invited to the main training to get a better understanding of the questionnaires and the survey techniques. The training included lectures on interviewing techniques, discussion of the questionnaires, and mock interviews among trainees to acquire skills in asking questions. All interviewers were further trained in testing iodine in salt and taking the height and weights of all under-five children. Towards the end of the training period, trainees spent three days conducting field interviews in 16 EAs (8 urban and 8 rural). Urban and rural areas were selected to provide the field staff a better understanding of working in different environments.

Supervisors and interviewers were selected based on their performance in the field practices, participation in class, assessment tests and fluency in the Ghanaian languages.

The data were collected by nine teams; each was comprised of four interviewers, one driver, one editor (who edited the questionnaires and took height and weight measurement) and a supervisor. Fieldwork began in August, 2006 and lasted for three months.

Data Processing

Data were captured using the CSPro software. The data were entered on 10 computers by 10 data entry operators and two data entry supervisors. In order to ensure quality control, all questionnaires were double entered and 4 secondary editors complemented the efforts of entry supervisors to perform internal consistency checks. Procedures and standard programmes developed under the global MICS Project and adapted to the Ghana questionnaire were used throughout the processing. Data processing began shortly after the commencement of fieldwork on 23rd August, 2006 and lasted for three months. Data were analysed using the Statistical Package for Social Sciences (SPSS) software program and the model syntax and tabulation plans developed by UNICEF.

III. Sample Coverage and Characteristics

This section presents information on the sample coverage, socio-economic and demographic characteristics of the household population, focusing on age, sex, region, place of residence, and socio-economic conditions of households.

Sample Coverage and Response Rates

Response rates are important as high non-response may affect the reliability of the survey results. Table HH.1 presents information on the results of the household and individual interviews. A total of 6,302 households were selected for the MICS. Of these, 6,264 were found to be occupied and interviews were completed for 5,939 households which represents a 95 percent response rate. A total of 6,240 women age (15-49) were identified from every selected household, while 1,909 eligible men (age 15-49) from every third selected household were identified for the individual interviews. Interviews were successfully completed for 5,891 women and 1,743 men, yielding response rates of 94 percent and 91 percent respectively. In addition, 3,545 children under five years were listed in the households. Questionnaires were completed for 3,466 children, corresponding to a response rate of 98 percent. Taking into account the non-response at the household level, the overall response rates for women, men and children under five were 90 percent, 87 percent and 93 percent respectively.

Regional differentials in response rates regarding household interviews, eligible women, and children were similar (around 90 percent or higher). However, overall response rates for women, men and children varied slightly by place of residence. The response rates are higher for the rural than the urban sample and among women than men. The main reason for non-response among households and eligible individuals was the failure to find these individuals at home despite several visits to the households.

Table HH.1: Results of household and individual interviews

Numbers of households, women, men, and children under five by results of the household, women's, men's and under-five's interviews, and household, women's, men's and under-five's response rates, Ghana, 2006

	Area		Region										Total
	Urban	Rural	Western	Central	Greater Accra	Volta	Eastern	Ashanti	Brong Ahafo	Northern	Upper East	Upper West	
Sampled households	2,480	3,822	580	520	861	480	641	940	480	710	580	510	6,302
Occupied households	2,470	3,794	577	520	856	478	637	936	476	706	574	504	6,264
Interviewed households	2,327	3,612	561	510	802	447	589	881	442	673	561	473	5,939
Household response rate	94.2	95.2	97.2	98.1	93.7	93.5	92.5	94.1	92.9	95.3	97.7	93.8	94.8
Eligible women	2,546	3,694	560	434	939	414	606	850	471	824	632	510	6,240
Interviewed women	2,385	3,506	537	426	859	375	565	808	452	790	598	481	5,891
Women response rate	93.7	94.9	95.9	98.2	91.5	90.6	93.2	95.1	96.0	95.9	94.6	94.3	94.4
Women's overall response rate	88.3	90.4	93.2	96.3	85.7	84.7	86.2	89.5	89.1	91.4	92.5	88.5	89.5
Eligible men	739	1,170	165	121	277	133	176	303	133	260	193	148	1,909
Interviewed men	660	1,083	154	118	237	117	163	272	120	248	179	135	1,743
Men response rate	89.3	92.6	93.3	97.5	85.6	88.0	92.6	89.8	90.2	95.4	92.7	91.2	91.3
Men's overall response rate	84.1	88.1	90.8	95.7	80.2	82.3	85.6	84.5	83.8	90.9	90.7	85.6	86.6
Eligible children under-five	1,030	2,515	319	263	330	245	346	426	245	595	399	377	3,545
Mother/Caretaker Interviewed	1,012	2,454	316	262	326	236	337	415	242	576	389	367	3,466
Child response rate	98.3	97.6	99.1	99.6	98.8	96.3	97.4	97.4	98.8	96.8	97.5	97.3	97.8
Children's overall response rate	92.6	92.9	96.3	97.7	92.6	90.1	90.1	91.7	91.7	92.3	95.3	91.4	92.7

Characteristics of Households

The age and sex distribution of the survey population is presented in Table HH.2 and the population pyramid in Figure HH.1. The survey successfully interviewed 5,939 households, consisting of 24,947 household members of whom 12,176 were males and 12,771 females yielding an estimated average household size of 4.2 and a sex ratio of 95.3 (data not shown).

The five-year age distribution for both sexes has a higher proportion of persons in the lower age groups (0-19 years) than for those in the higher age groups (20 and above) which is indicative of a youthful population.

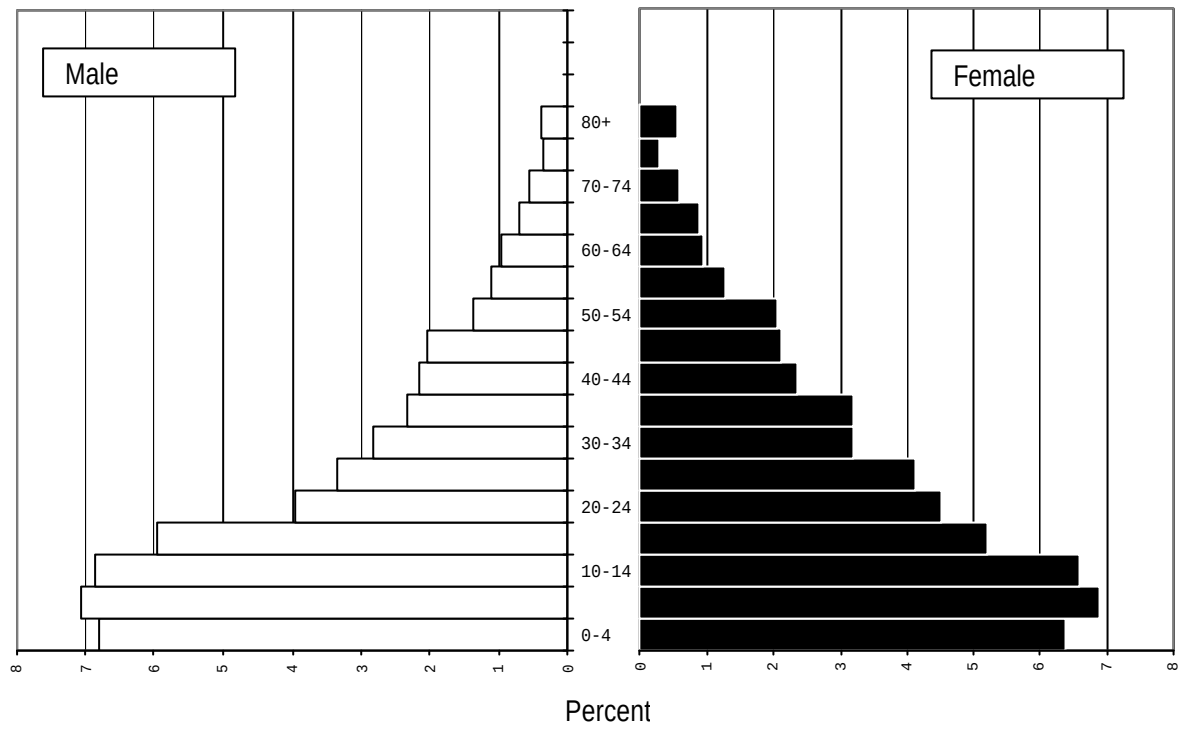
Table HH.2: Household population by age, sex and place of residence

Percent distribution of household population by five-year age groups, according to sex and residence, Ghana 2006

	Urban			Rural			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Age-group									
0-4	12.8	10.0	11.3	14.7	14.2	14.4	13.9	12.4	13.2
5-9	12.4	11.2	11.8	15.7	15.0	15.4	14.4	13.4	13.9
10-14	13.0	13.1	13.0	14.7	12.7	13.7	14.0	12.8	13.4
15-19	12.3	11.8	12.0	12.0	8.9	10.5	12.1	10.1	11.1
20-24	9.2	9.8	9.5	7.3	8.1	7.7	8.1	8.8	8.4
25-29	8.0	8.8	8.4	6.0	7.5	6.8	6.8	8.0	7.4
30-34	6.9	7.3	7.1	5.1	5.4	5.2	5.8	6.2	6.0
35-39	5.5	6.7	6.1	4.3	5.9	5.1	4.7	6.2	5.5
40-44	4.8	4.9	4.9	4.1	4.4	4.3	4.4	4.6	4.5
45-49	4.2	4.4	4.3	4.2	3.9	4.1	4.2	4.1	4.2
50-54	2.9	3.4	3.2	2.8	4.4	3.6	2.8	4.0	3.4
55-59	2.3	2.4	2.4	2.2	2.5	2.4	2.3	2.5	2.4
60-64	1.7	1.9	1.8	2.1	1.9	2.0	2.0	1.9	1.9
65-69	1.2	1.7	1.5	1.5	1.8	1.7	1.4	1.7	1.6
70-74	1.3	1.1	1.2	1.1	1.2	1.2	1.2	1.2	1.2
75-79	0.5	0.5	0.5	0.8	0.6	0.7	0.7	0.6	0.6
80+	0.6	1.0	0.8	0.9	1.2	1.0	0.8	1.1	0.9
Missing/DK	0.3	0.2	0.2	0.5	0.3	0.4	0.4	0.3	0.3
Broad age groups									
<15	38.2	34.3	36.2	45.1	41.9	43.5	42.4	38.7	40.5
15-64	57.8	61.4	59.7	50.1	52.9	51.5	53.2	56.5	54.9
65+	3.7	4.2	3.9	4.3	4.8	4.5	4.0	4.5	4.3
Missing/DK	0.3	0.2	0.2	0.5	0.3	0.4	0.4	0.3	0.3
Children aged 0-17	45.5	41.7	43.5	52.6	47.4	50.0	49.8	45.0	47.3
Adults 18+/Missing/ Don't Know	54.5	58.3	56.5	47.4	52.6	50.0	50.2	55.0	52.7
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Census results have shown that the proportion of children less than 15 years remains more than 40 percent declining from 45.0 percent in 1984 to 41.3 percent in 2000. The MICS results further show that the proportion of children less than 15 years is 40.5 percent. This is consistent with the 2000 Population and Housing Census results. In spite of this slight reduction in the proportion of age 0-14 years old, the proportion is still high and has serious repercussions for social infrastructure as well as the economic development of the country.

Figure HH.1: Population Pyramid



The dependent population (0-14 years and 65+) declined from 49.0 percent in 1984 to 47 percent in 2000 and further down to 45 percent in the MICS results. This translates into an age dependency ratio of 82 compared to 87 percent in 2000.

Data from the MICS show an excess of children in the 5-9 age group and a deficit in the 0-4 year old age-group, probably due to preference for reporting age 5 and under-reporting for age 0-4 years.

The sex composition of a population is influenced largely by the sex ratio at birth, differences between the sexes in death rates and differences between sexes in net migration (GSS 2005). In most populations, there is a slight excess of males than females at birth. This results in males usually outnumbering females at the younger ages while the reverse is true at the older ages due to higher male death rates at all ages. The results of the MICS are consistent with this observation.

Table HH.3 provides basic background information on the households. Within households, the sex of the household head, region, place of residence, number of household members, and households with at least one child (0-17 years) are shown in the table.

Table HH.3: Household composition			
Percent distribution of households by selected characteristics, Ghana 2006			
	Weighted percent	Number of households weighted	Number of households unweighted
Sex of household head			
Male	70.9	4,210	4,344
Female	29.1	1,730	1,595
Region			
Western	10.4	617	561
Central	9.7	576	510
Greater Accra	16.9	1,004	802
Volta	8.2	486	447
Eastern	12.8	758	589
Ashanti	16.6	988	881
Brong Ahafo	9.3	552	442
Northern	10.6	630	673
Upper East	3.4	202	561
Upper West	2.1	126	473
Residence			
Urban	45.3	2,692	2,327
Rural	54.7	3,247	3,612
Number of household members			
1	17.8	1,057	966
2-3	26.2	1,558	1,445
4-5	28.6	1,696	1,715
6-7	17.1	1,018	1,096
8-9	6.5	386	430
10+	3.8	224	287
At least one child aged < 18 years	72.2	5,939	5,939
At least one child aged < 5 years	40.0	5,939	5,939
At least one woman aged 15-49 years	72.1	5,939	5,939
Total	**100.0**	**5,939**	**5,939**

The weighted and unweighted numbers of households are equal, since sample weights were normalized (See Appendix A). The table also shows that 72 percent of households reported at least one child aged under 18 years and 40 percent have at least one child under five years.

Living arrangements among society groups are largely influenced by socio-cultural factors such as kinship types, marriages, family and household formation. In Ghana, the structure, composition and size of households differ among the various ethnic groups.

The sex of the head of household, size and household composition are important factors that have an impact on household welfare. Furthermore, the number of people who constitute a household can provide useful insights for policy-makers in ensuring equitable distribution of resources.

At the national level, women head 29 percent of Ghanaian households, a pattern that is consistent with the 2000 Population and Housing Census (31 percent) and the 2003 Core Welfare Indicator Questionnaire (CWIQ) (29 percent) results. This may be influenced by the prevailing kinship and inheritance system in the country, i.e., the patrilineal and matrilineal. In the patrilineal system, inheritance and descent are traced from the father's line and household heads are mostly men. In the matrilineal systems, inheritance is traced from the mother's lineage, and a large proportion of households are headed by women.

There are modest differences in female-headed households between urban (32 percent) and rural areas (26 percent) (data not shown).

The most common household size is 4-5 household members, (29 percent of households), followed by 2-3 household members (26 percent). Single-member households constitute almost one in five households.

Characteristics of Respondents

Tables HH.4, HH.4A and HH.5 provide information on the background characteristics of female and male respondents 15-49 years of age and of children under age 5. In all tables, the total numbers of weighted and unweighted observations are equal, since sample weights have been normalized (standardized). In addition to providing useful information on the background characteristics of women, men and children, the tables are also intended to show the numbers of observations in each background category. These categories are used in the subsequent tabulations of this report.

Table HH.4 provides background characteristics of female and male respondents 15-49 years of age. The table includes information on the distribution of women and men according to region, urban-rural areas, age, marital status, motherhood and parenthood status, education[3], and wealth index quintiles[4].

The age distribution shows that 2 in 5 females (39 percent) and males (44 percent) are in the 15-24 age-group. While the proportion in each group tends to decrease with increasing age, the largest proportions are in the 15-19 and 20-24 age groups. Data show that 3 in 5 women (59 percent) and almost half of men (45 percent) are currently married or living together. One in two men has never been married compared to 3 in 10 women. Every 2 in 3 women have given birth at least once, compared to 1 in 2 men who have ever fathered a child.

The distribution of respondents by urban-rural residence shows that men are slightly more likely to live in rural areas (56 percent) than women (53 percent). Regionally, the distribution of respondents varies significantly. For example, one-fifth of female respondents are from Greater Accra (19 percent) with 18 percent of men each from Greater Accra and Ashanti regions. Only 2 percent of respondents are from Upper West Region.

Overall, men are more educated than women. Twenty-six percent of women and 15 percent of men have no education. About one-fifth of women and 15 percent of men have only primary education, and almost half of men (47 percent) have only middle/JSS level of education compared to almost 2 in 5 women (38 percent). Almost a quarter of men have attained secondary or higher levels of education, while only 16 percent of women have.

Adult literacy is also an MDG indicator, relating to both men and women, and is an important background characteristic of respondents. In MICS, literacy was assessed on the ability of women and men to read a short simple statement or questions on school attendance. The questions on literacy were asked only of respondents who had not attended school or attended primary or middle/JSS only. The percent literate is presented in Table HH.4A.

[3] Unless otherwise stated, "education", when it is used as a background variable, refers to the highest educational level attended by the respondent.

[4] Principal components analysis was performed by using information on the ownership of household goods and amenities (assets) to assign weights to each household asset, and obtain wealth scores for each household in the sample (The assets used in these calculations were as follows: Persons per sleeping room; type of floor, roof, wall, cooking fuel, and sanitary facility; household assets; and source of drinking water). Each household was then weighted by the number of household members, and the household population was divided into five groups of equal size, from the poorest quintile to the richest quintile, based on the wealth scores of households they were living in. The wealth index is assumed to capture the underlying long-term wealth through information on the household assets, and is intended to produce a ranking of households by wealth, from poorest to richest. The wealth index does not provide information on absolute poverty, current income or expenditure levels, and the wealth scores calculated are applicable for only the particular data set they are based on. Further information on the construction of the wealth index can be found in Rutstein and Johnson, 2004, and Filmer and Pritchett, 2001.

Table HH.4: Men's and women's background characteristics

Percent distribution of men and women aged 15-49 years by background characteristics, Ghana, 2006

Background characteristic	Weighted percent		Number of men and women			
			Weighted		Unweighted	
	Men	**Women**	**Men**	**Women**	**Men**	**Women**
Region						
Western	10.1	10.1	176	593	154	537
Central	7.0	7.7	122	455	118	426
Greater Accra	17.8	19.1	311	1,125	237	859
Volta	7.7	7.2	135	426	118	375
Eastern	12.0	12.6	210	741	164	565
Ashanti	17.8	15.1	310	888	272	808
Brong Ahafo	8.8	9.7	154	569	120	452
Northern	13.2	12.6	231	745	247	788
Upper East	3.5	3.7	62	218	178	598
Upper West	2.0	2.2	35	130	134	481
Residence						
Urban	44.0	47.1	767	2,775	659	2,385
Rural	56.0	52.9	977	3,115	1,083	3,504
Age						
15-19	27.0	20.6	471	1,218	475	1,200
20-24	16.6	18.3	290	1,075	279	1,009
15-24	43.6	38.9	761	2,293	754	2,209
25-29	14.3	16.8	249	987	247	960
30-34	13.1	13.2	229	777	223	828
35-39	10.4	12.7	181	746	184	760
40-44	9.4	9.8	164	577	170	583
45-49	9.2	8.6	160	509	164	549
Marital/Union status						
Currently married/in union	44.7	58.8	778	3,465	802	3,627
Formerly married/in union	7.2	11.0	126	648	117	573
Never married/in union	48.1	30.2	837	1,778	821	1,689
Parenthood status						
Ever had a child	46.6	66.9	812	3,939	823	4,038
Never had a child	53.4	33.1	932	1,951	919	1,851
Education						
None	14.5	26.3	253	1,549	337	2,026
Primary	15.2	19.7	265	1,162	291	1,108
Middle/JSS	46.7	38.0	816	2,237	728	1,924
Secondary +	23.6	15.9	411	937	386	827
Wealth index quintiles						
Poorest	18.0	16.2	313	954	434	1,363
Second	16.5	17.6	287	1,037	339	1,217
Middle	18.9	19.5	330	1,149	286	995
Fourth	23.8	22.0	415	1,298	349	1,087
Richest	22.9	24.6	400	1,451	334	1,227
Total	**100.0**	**100.0**	**1,745**	**5,890**	**1,742**	**5,889**

Just over half of women and close to 3 out of four of men are literate, hence men are more likely to be literate than women. There is a strong relationship between wealth and literacy levels. Ninety-five percent of men and 85 percent of women categorized in the richest wealth quintile are literate compared with only 18 percent of women and 32 percent of men in the poorest wealth quintile.

Seventy percent of women and 87 percent of men in urban areas are literate, compared to smaller proportions in rural areas (42 percent of women and 61 percent of men). Regional variations in the level of literacy are marked, ranging from a high of 79 percent among women in Greater Accra to a low of 19 percent among women in the Upper West Region. Eighty-eight percent of men in Greater Accra Region are literate, compared with 36 percent in the Upper West Region. There is a marked difference between literacy in the three northern regions compared to the rest of Ghana.

Table HH.4A: Adult literacy

Percentage of women and men aged 15-49 years that are literate', Ghana, 2006

	Men		Women	
	Percentage literate*	Number of men aged 15-49 years	Percentage literate*	Number of women aged 15-49 years
Region				
Western	79.3	176	61.2	593
Central	73.8	122	53.9	455
Greater Accra	88.0	311	78.5	1,125
Volta	69.4	135	48.9	426
Eastern	76.3	210	58.7	741
Ashanti	83.9	310	65.9	888
Brong Ahafo	79.6	154	57.8	569
Northern	39.0	231	19.4	745
Upper East	39.3	62	21.0	218
Upper West	36.2	35	18.7	130
Residence				
Urban	86.9	767	70.4	2,775
Rural	61.3	977	42.0	3,115
Education				
None	0.0	253	0.1	1,549
Primary	14.9	265	7.5	1,162
Middle/JSS	100.0	816	100.0	2,237
Secondary+	100.0	411	100.0	937
Age				
15-19	73.3	471	71.0	1,218
20-24	78.9	290	64.3	1,075
25-29	76.8	249	52.4	987
30-34	68.5	229	48.4	777
35-39	67.9	181	44.5	746
40-44	70.8	164	47.8	577
45-49	65.3	160	40.4	509
Wealth index quintiles				
Poorest	32.3	313	17.5	954
Second	58.0	287	36.6	1,037
Middle	78.8	330	51.0	1,149
Fourth	86.6	415	69.5	1,298
Richest	94.9	400	84.6	1,451
Total	**72.6**	**1,745**	**55.4**	**5,890**

' Percentage of respondents who are able to read a short simple statement about every day life or who attended secondary or higher education.

** MICS indicator 60; MDG indicator 7*

*** The percentage not known includes those for whom no sentence in the required language was available or for whom no response was reported.*

Some background characteristics of children under-five are presented in Table HH.5. These include distribution of children by sex, age in months, region and place of residence, mother's or caretaker's education, and wealth index quintiles. Among children under age 5, there are slightly more boys than girls. Children are evenly divided in each of the 5 one-year age groups (one-fifth in each). The first year (0-11 months) has been split into two (<6 and 6-11 months) reporting 11 percent and 10 percent respectively.

Sixty-four percent of the children under five live in rural areas while 36 percent live in urban areas. The largest proportions of children reside in Northern (17 percent) and Ashanti (15 percent) Regions, while the smallest proportions are in the Upper West (3 percent) and Upper East (4 percent) Regions.

Table HH.5: Children's background characteristics					
Percent distribution of children under five years of age by background characteristics, Ghana, 2006					
Background characteristic	**Urban**	**Rural**	**Total**	Number of children weighted	Number of children unweighted
Sex					
Male	53.6	50.5	51.6	1,789	1,781
Female	46.4	49.5	48.4	1,678	1,687
Region					
Western	8.2	11.0	10.0	347	316
Central	8.9	8.6	8.7	302	262
Greater Accra	30.8	3.0	12.9	448	326
Volta	4.5	9.2	7.5	261	236
Eastern	9.3	15.6	13.3	463	337
Ashanti	20.2	11.5	14.6	506	415
Brong Ahafo	8.9	9.0	9.0	311	242
Northern	6.8	22.1	16.7	579	578
Upper East	1.2	5.9	4.2	146	389
Upper West	1.2	4.0	3.0	105	367
Age					
< 6 months	12.0	10.5	11.1	383	384
6-11 months	8.3	10.3	9.6	332	328
12-23 months	19.2	21.0	20.4	706	715
24-35 months	20.4	18.6	19.2	667	664
36-47 months	23.0	19.5	20.7	718	728
48-59 months	17.2	20.1	19.1	661	649
Mother's/caretaker's education					
None	23.6	47.1	38.7	1,343	1,677
Primary	21.2	22.0	21.7	753	672
Middle/JSS	40.3	27.8	32.3	1,120	902
Secondary+	14.8	3.0	7.2	251	217
Wealth index quintiles					
Poorest	1.5	34.4	22.7	786	1,035
Second	6.9	33.4	23.9	830	922
Middle	20.5	19.3	19.7	684	575
Fourth	32.3	10.0	18.0	623	503
Richest	38.8	2.9	15.7	544	433
Total	**35.7**	**64.3**	**100.0**	**3,467**	**3,468**

Mothers or caretakers of 2 in 5 children have no education, a fifth of mothers or caretakers of children under the age of 5 have only primary education and one third have attained middle/JSS levels. Only seven percent of mothers/caretakers of children under the age of 5 years have attained secondary or higher education. Sixteen percent of children live in the richest households, while approximately 47 percent of children under five come from households in the two poorest quintiles.

IV. Child Mortality

One of the overarching goals of the Millennium Development Goals (MDGs) and the World Fit for Children (WFFC) is to reduce infant and under-five mortality. Specifically, the MDGs call for the reduction in under-five mortality by two-thirds between 1990 and 2015. Monitoring progress towards this goal is an important objective. Measuring childhood mortality may seem easy, but attempts using direct questions, such as "Has anyone in this household died in the last year?" give inaccurate results. Using direct measures of child mortality from women's birth histories is time consuming, more expensive, and requires greater attention to training and supervision. Alternatively, indirect methods developed to measure child mortality produce robust estimates that can be comparable with the ones obtained from other sources. Indirect methods minimize the pitfalls of memory lapses, inexact or misinterpreted definitions, and poor interviewing technique.

Box CH.1: Mortality estimates - Direct vs. Indirect method

How do we measure it?
- Vital registration
- Population census
- Data from *birth histories as from DHS*
- Data from *"Brass methods" as from MICS*

What is the birth history method?
- The name comes from the exercise; all surveyed women provide detailed information on all their births, creating a birth history.
- All children are recorded whether dead or alive, by name, sex, birthday, and if dead, the date of death.
- With an appropriate sample size, the mortality rates in five-year intervals preceding the survey can be directly derived. This is called direct estimation.
- The mid-point of the interval is called the reference point. The reference point for the birth history for the most recent five-year period is then 2.5 years before the fieldwork of the survey.

What is the Brass method?
- William Brass was the first to develop a procedure for converting the proportion dead of children ever born, reported by women in age groups 15-19, 20-24, etc., into estimates of the probability of dying before attaining certain exact childhood ages. The method has been refined over the years.
- All births are recorded and sorted as living and dead, by sex and by other relevant variables.
- By using a complex model with country specific variations, the mortality rate estimates are indirectly derived.
- The most recent and statistically sound reference point is about 6 years before the survey fieldwork.

What has been done in Ghana?
- Four DHS have been conducted, all using birth histories. The latest was conducted in mid-2003. This gives a reference point of early 2001.
- The MICS of 2006 presents a reference point just a few months before, i.e. estimating the mortality at the same time as the GDHS. The so-called 'North'-model of indirect estimation (a Brass-type model) has been recommended and applied. Besides the technical model, it implies using the average mortality estimates based on 25-34 year old women.
- Mortality is the only result from MICS 2006 that has such a long time span, i.e. all other results are dated as of 2006. You may read the timeframe of each indicator is indicated in its table title.
- MICS 2006 doubled the sample size of the three northern regions compared to GDHS 2003 to get better confidence intervals at regional level. All survey data come with a confidence interval.
- At national level the GDHS2003 U5MR was recorded at 111. One may 'confidently' say that with 95 percent certainty the U5MR was between 99 and 123.
- At regional level, the sample is smaller resulting in higher confidence intervals. The GDHS 2003 U5MR for Upper East was recorded as 79. The interval for this figure is 45 to 112. In MICS2006 the U5MR for Upper East Region is estimated at 106, which is one third higher than the estimate from GDHS 2003. Apart from measuring a shorter time-span and with a different methodology, the result is within the confidence interval of GDHS 2003.

The infant mortality rate is the probability of dying before the first birthday and the under-five mortality rate is the probability of dying before the fifth birthday. In MICS surveys, infant and under-five mortality rates are calculated based on an indirect estimation technique known as the Brass method (United Nations, 1983; 1990a; 1990b). The data used in the estimation are: the mean number of children ever born for five-year age groups of women from age 15 to 49, and the proportion of these children who are dead, also for five-year age groups of women. The technique converts these data into probabilities of dying by taking

into account both the mortality risks to which children are exposed and their length of exposure to the risk of dying, assuming a particular model age pattern of mortality. Based on previous information on mortality in Ghana, the North model life table was selected as most appropriate. These estimates were calculated by averaging mortality estimates obtained from women age 25-29 and 30-34, with the reference point around mid-2001.

Table CM.1: Child mortality

Infant and under-five mortality rates, Ghana, 2006

Background characteristic	Infant mortality rate*	Under-five mortality rate**
Sex		
Male	84	131
Female	56	89
Region		
Western	45	66
Central	69	108
Greater Accra	60	92
Volta	57	86
Eastern	61	93
Ashanti	72	113
Brong Ahafo	88	142
Northern	83	133
Upper East	68	106
Upper West	114	191
Residence		
Urban	68	106
Rural	72	114
Mother's/Caretaker's education		
None	78	124
Primary	65	102
Middle/JSS	52	77
Secondary+	65	101
Wealth index quintiles		
Poorest	75	118
Second	79	126
Middle	65	100
Fourth	65	101
Richest	64	100
Total	**71**	**111**

** MICS indicator 2; MDG indicator 14*

*** MICS indicator 1; MDG indicator 13*

Table CM.1 provides estimates of child mortality by various background characteristics, while Table CM.2 provides the basic data used in the calculation of the mortality rates for the national total. The infant mortality rate is estimated at 71 deaths per 1,000 live births while the under-five mortality rate is 111 deaths per 1,000 births. This means that one in nine children born in Ghana dies before its fifth birthday and approximately two-thirds of all these deaths occur during their first year of life.

There seems to be a marked difference between the probabilities of dying among males and females. The under-five mortality rate experienced by female children (89 deaths per 1,000 live births) is about two-thirds of what is experienced by male children (131 deaths per 1,000) of the same cohort. The biological advantage enjoyed by female children over male children in the first few years of life may account for this.

Mortality among rural children is consistently higher than that for urban children with respect to both infant and under-five mortality. At the regional level, differences in mortality are also quite marked, although these figures, in particular, should be interpreted with caution since sampling errors associated with mortality estimates at regional disaggregation are large. The infant mortality rate varies from 45 to 114 deaths per 1,000 live births. Infant and under-5 mortality rates are lowest in the Western Region (infant, 45 per 1,000 live births; under-5, 66 per 1,000 live births), while the figures for Upper West Region (infant, 114 per 1,000 live births; under-5, 191 per 1,000 live births) are almost three times higher than Western Region.

There are also significant differences in mortality in terms of mothers' educational level and socio-economic status of the household in general. Children of mothers with no education

are more likely to die in infancy (78 deaths per 1,000 live births) than children of women with some form of education (52 to 65 deaths per 1,000 live births). Contrary to expectation, children of mothers with middle school or JSS education have lower mortality then children whose mothers have secondary education. This is likely attributed to the large confidence intervals associated with the rates among women with higher education, due to only 16 percent of all women sampled with secondary or higher education and this finding should be treated with caution.

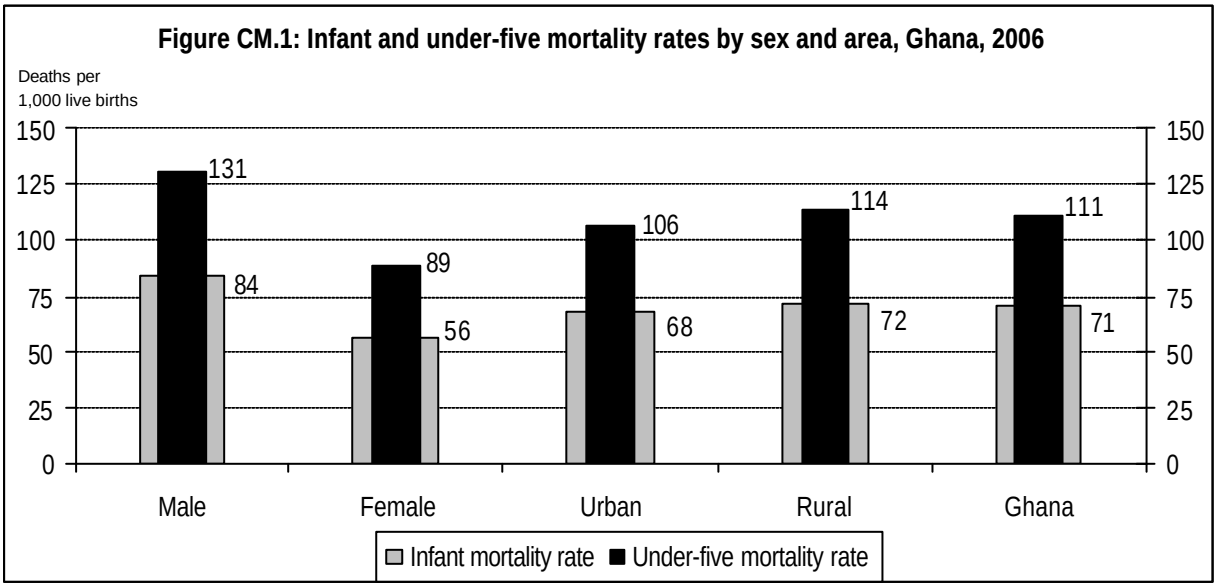
There are also differences in mortality in terms of wealth index quintile. In particular, the probabilities of dying among children living in the richest 60 percent of households are lower than the national average. Differentials in under-5 mortality rates by background characteristics are shown in Figure CM.1.

Table CM.2: Children ever born and proportion dead

Mean number of children ever born, children surviving and proportion dead by age of women, Ghana, 2006

	Mean number of children ever born	Mean number of children surviving	Proportion dead	Number of women
Age				
15-19	0.099	0.089	0.099	1,218
20-24	0.843	0.760	0.099	1,075
25-29	1.927	1.725	0.105	987
30-34	3.228	2.889	0.105	777
35-39	4.288	3.743	0.127	746
40-44	5.229	4.543	0.131	577
45-49	5.575	4.716	0.154	509
Total	**2.461**	**2.154**	**0.125**	**5,890**

Figure CM.1: Infant and under-five mortality rates by sex and area, Ghana, 2006



V. Nutrition

Nutritional Status

Children's nutritional status is a reflection of their overall health. When children have access to adequate food supply, are not exposed to repeated illness, and are well cared for, they reach their growth potential and are well-nourished.

In a well-nourished population, there is a reference distribution of height and weight for children under age five. Undernutrition in a population can be gauged by comparing children to a reference population. The reference population used in this report is the WHO/CDC/NCHS reference, which was recommended for use by UNICEF and the World Health Organization. Each of the three nutritional status indicators comprising weight-for-age, height-for-age and weight-for-height gives different information about growth and body composition. They are used to assess nutritional status and can be expressed in standard deviation units (Z-scores) from the median of the reference population.

Weight-for-age is a measure of both acute and chronic malnutrition. Children whose weight-for-age is below minus two standard deviations (-2 SD) from the median of the reference population are considered as *underweight*, while those whose weight-for-age is less than minus three standard deviations (-3 SD) from the median are classified as *severely underweight*.

Height-for-age is a measure of linear growth. Children whose height-for-age is below minus two standard deviations (-2 SD) from the median of the reference population are considered short for their age and are classified as *stunted.* Those whose height-for-age is below minus three standard deviations (-3 SD) from the median are classified as *severely stunted.* Stunting is a reflection of chronic malnutrition as a result of failure to receive adequate nutrition over a long period and/or recurrent chronic illness.

Children whose weight-for-height is below minus two standard deviations (-2 SD) from the median of the reference population are classified as *wasted*, while those who fall below minus three standard deviations (-3 SD) from the median are *severely wasted*. Wasting is usually the result of a recent nutritional deficiency. The indicator may exhibit significant seasonal shifts associated with changes in the availability of food or disease prevalence.

Table NU.1 shows the percentage of children under five years classified as malnourished according to the three categories, by background characteristics using the anthropometric measurements that were taken during fieldwork. Additionally, the table includes the percentage of children whose weight-for-height is above plus two standard deviations (+2 SD) from the median of the reference population and are classified as *overweight*.

Almost one in five children under age five in Ghana is underweight (18 percent) and 3 percent are classified as severely underweight (Table NU.1). Nearly a quarter of children (22 percent) are stunted or too short for their age and 5 percent are wasted or too thin for their height.

Table NU.1: Child malnutrition

Percentage of under-five children who are severely or moderately undernourished, Ghana, 2006

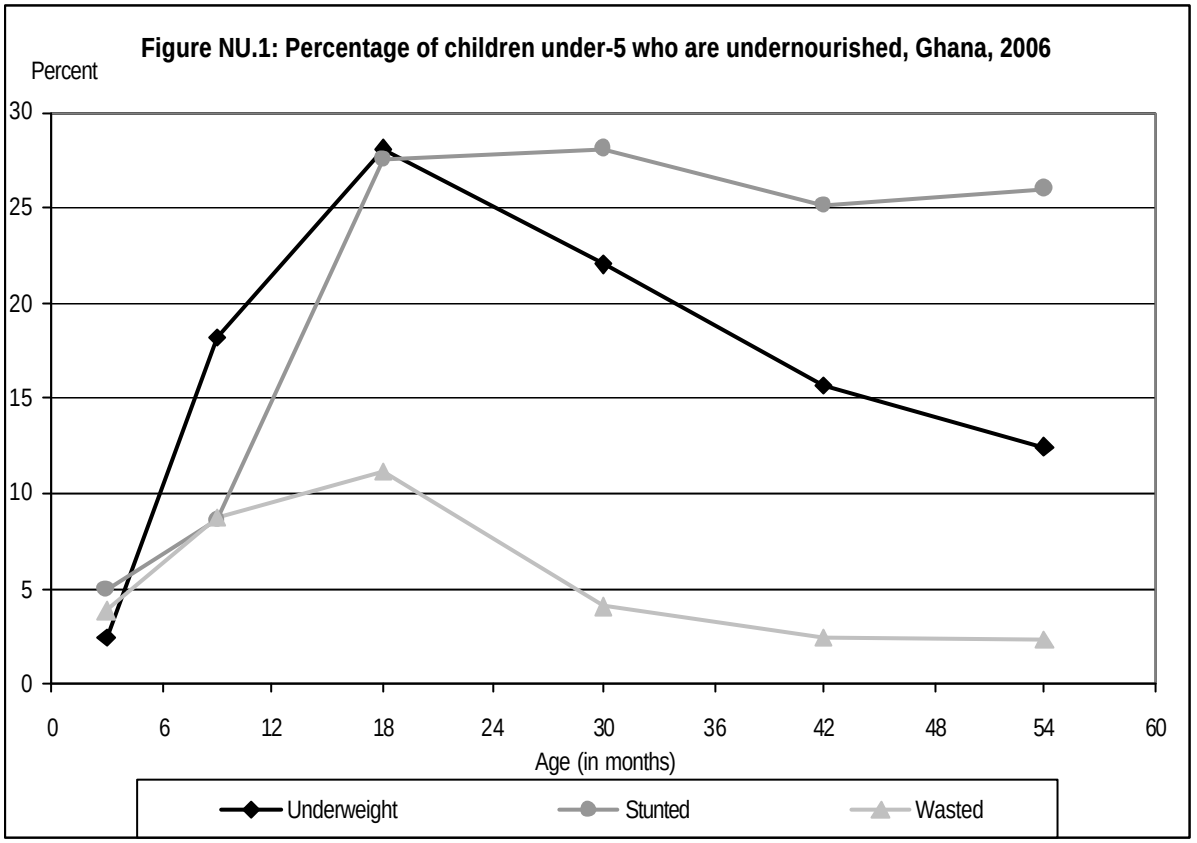
Background characteristic	Weight for age: Percent below -2 SD*	Weight for age: Percent below -3 SD	Height for age: Percent below -2 SD**	Height for age: Percent below -3 SD	Weight for height: Percent below -2 SD***	Weight for height: Percent below -3 SD	Weight for height: Percent above +2 SD	Number of children
Sex								
Male	18.3	3.4	23.0	7.4	5.6	1.0	1.0	1,642
Female	17.1	2.8	21.7	7.2	5.1	0.7	1.7	1,523
Region								
Western	14.6	1.1	20.7	5.5	6.5	0.5	0.9	326
Central	16.3	1.6	26.4	4.6	3.7	0.0	1.6	267
Greater Accra	7.7	1.7	9.8	2.7	3.1	1.1	1.3	406
Volta	20.3	5.4	20.9	8.1	4.8	2.1	0.4	231
Eastern	17.8	3.3	22.0	9.1	4.4	0.3	0.7	430
Ashanti	17.3	2.6	22.6	6.8	5.9	0.8	1.5	468
Brong Ahafo	13.3	1.7	22.2	4.9	3.1	0.5	3.5	288
Northern	26.8	5.9	30.5	12.4	7.1	1.1	1.1	529
Upper East	29.1	5.9	28.4	12.4	11.6	2.8	1.6	127
Upper West	19.1	2.6	22.5	6.0	7.7	0.3	1.4	94
Residence								
Urban	11.5	1.8	13.2	3.4	4.9	1.0	1.7	1,159
Rural	21.4	3.9	27.8	9.6	5.7	0.8	1.1	2,006
Age								
< 6 months	2.4	0.7	5.0	1.6	3.9	0.1	5.5	361
6-11 months	18.2	3.8	8.6	2.7	8.7	1.6	1.2	322
12-23 months	28.1	4.3	27.6	8.0	11.1	1.3	1.2	667
24-35 months	22.1	5.3	28.1	10.0	4.1	1.2	0.3	632
36-47 months	15.7	2.6	25.2	8.9	2.4	0.7	0.3	629
48-59 months	12.5	1.2	26.0	8.2	2.3	0.2	1.2	554
Mother's/Caretaker's education								
None	23.2	4.8	29.9	11.3	6.2	1.1	1.1	1,210
Primary	16.7	2.8	20.1	6.0	6.1	1.1	0.8	693
Middle/JSS	14.1	2.2	18.2	5.1	4.3	0.5	1.9	1,038
Secondary+	8.1	0.0	8.7	0.9	3.7	0.6	1.8	225
Wealth index quintiles								
Poorest	24.8	5.1	30.9	12.0	6.7	1.1	1.5	685
Second	21.3	3.8	29.4	10.7	5.5	0.8	1.3	763
Middle	19.8	3.1	23.0	5.6	5.6	0.6	0.3	626
Fourth	11.2	2.0	15.5	3.9	4.8	0.7	1.8	594
Richest	7.8	0.9	7.4	2.0	3.6	1.1	1.9	498
Total	**17.8**	**3.1**	**22.4**	**7.3**	**5.4**	**0.9**	**1.3**	**3,166**

** MICS indicator 6; MDG indicator 4*
*** MICS indicator 7*
**** MICS indicator 8*
' Includes children who are below -3 standard deviations (SD) of the NCHS/CDC/WHO International Reference Population median.

Table NU. 1 shows that children in the Upper East and Northern regions are more likely to be underweight, stunted and wasted, than children in other regions. Additionally, the percentage of children who are underweight and stunted is higher in the rural than the urban area. Children whose mothers have secondary or higher education are the least likely to be underweight (8 percent) and stunted (9 percent) compared to children of mothers with no education. The age pattern shows that a higher percentage of children aged 12-23 months are undernourished in comparison to children who are younger and older (Figure NU.1). This indicates that malnutrition peaks at this age band, which could be attributed to poor feeding practices that lead to inadequate food intake. This pattern is expected and is related

to the age at which many children cease to be breastfed (weaning period) and are exposed to contamination in water, food, and the environment. Overweight is not a problem among children under five in Ghana (1 percent).

Figure NU.1: Percentage of children under-5 who are undernourished, Ghana, 2006



Breastfeeding

Breastfeeding for the first few years of life protects children from infection, provides an ideal source of nutrients, and is economical and safe. However, many mothers stop breastfeeding too soon and there are often pressures to switch to infant formula, which can contribute to growth faltering and micronutrient malnutrition and is unsafe if clean water is not readily available. The World Health Organization (WHO) recommends that children should be exclusively breastfed for 6 months and continue to be breastfed with safe, appropriate and adequate complementary feeding for up to 2 years of age and beyond.

Table NU.2 provides information on the proportion of women who started breastfeeding their infants within one hour of birth, and women who started breastfeeding within one day of birth (which includes those who started within one hour).

Table NU 2: Initiation of breastfeeding

Percentage of women aged 15-49 years with a birth in the 2 years preceding the survey who breastfed their baby within one hour of birth and within one day of birth, Ghana, 2006

Background characteristic	Percentage who started breastfeeding within one hour of birth*	Percentage who started breastfeeding within one day of birth	Number of women with live birth in the two years preceding the survey
Region			
Western	43.4	72.3	144
Central	39.4	79.7	105
Greater Accra	46.3	80.2	167
Volta	19.9	68.3	97
Eastern	17.3	74.9	182
Ashanti	34.9	65.5	207
Brong Ahafo	25.0	63.0	107
Northern	45.0	75.2	260
Upper East	36.4	83.2	58
Upper West	28.5	46.6	37
Residence			
Urban	39.1	77.9	468
Rural	33.1	69.6	897
Months since last birth			
< 6 months	34.4	71.1	364
6-11 months	30.9	76.0	319
12-23 months	37.1	71.2	651
Mother's/Caretaker's Education			
None	35.9	70.9	503
Primary	32.5	71.5	300
Middle/JSS	33.3	73.8	465
Secondary+	48.6	76.7	97
Wealth index quintiles			
Poorest	38.8	67.4	313
Second	24.6	69.2	325
Middle	30.1	71.7	260
Fourth	38.1	78.1	267
Richest	49.4	79.1	199
Total	**35.2**	**72.5**	**1,365**

** MICS indicator 45*

The data indicate that nearly 3 in 4 women in Ghana breastfeed their children within one day of birth and a little over a third start breastfeeding within one hour of birth. Initiation of breastfeeding varies among regions. The proportion of infants that are breastfed within one hour of birth ranges from 17 percent in the Eastern Region to 46 percent in Greater Accra. Brong Ahafo has the lowest percentage of infants who started breastfeeding within one day of birth (63 percent), while Upper East (83 percent) has the highest. Women with secondary education or higher are more likely to breastfeed their children within one hour of birth (49 percent) than women with no education (36 percent). Initiation of breastfeeding within one day of birth increased with mothers' level of education and wealth quintiles. The practice increases from 67 percent among infants of women in the poorest wealth quintile to 79 percent among infants of women in the highest quintile.

In Table NU.3, breastfeeding status is based on reports children's consumption of food and fluids in the 24 hours prior to the interview. *Exclusively breastfed* refers to infants who received only breast milk (and vitamins, mineral supplements, or medicine). The table shows the practise of exclusive breastfeeding of infants during the first six months of life separately for 0-3 months and 0-5 months. It also describes complementary feeding of children 6-9 months and continued breastfeeding of children at 12-15 months and 20-23 months of age.

Fifty-four percent of children aged less than six months are being exclusively breastfed and the percentage is higher (65) for children 0-3 months (Table NU.3). Girls are slightly less likely to be exclusively breastfed than boys. Among children age 6-9 months, 59 percent are receiving breast milk and solid or semi-solid foods. At age 12-15 months, 95 percent of children are still being breastfed. This decreases to 56 percent by age 20-23 months.

Table NU.3: Breastfeeding

Percent of living children according to breastfeeding status at each age group, Ghana, 2006

Background characteristic	Children 0-3 months: Percent exclusively breastfed	Children 0-3 months: Number of children	Children 0-5 months: Percent exclusively breastfed *	Children 0-5 months: Number of children	Children 6-9 months: Percent receiving breastmilk and solid/mushy food **	Children 6-9 months: Number of children	Children 12-15 months: Percent breastfed***	Children 12-15 months: Number of children	Children 20-23 months: Percent breastfed ***	Children 20-23 months: Number of children
Sex										
Male	64.2	113	52.8	202	63.5	125	96.6	112	55.4	106
Female	65.9	106	56.1	181	53.0	107	92.6	121	56.7	116
Residence										
Urban	68.4	89	59.9	148	66.3	73	85.6	70	34.2	72
Rural	62.7	130	50.9	235	55.2	159	98.4	163	66.6	150
Mother's/Caretaker's education										
None	68.8	91	61.1	135	45.8	86	94.9	87	73.3	84
Primary	(65.3)	42	53.3	73	62.4	63	95.0	62	(58.0)	38
Middle/JSS	60.7	77	51.2	143	68.8	74	96.9	71	41.8	86
Secondary+	*	10	(43.2)	32	*	10	*	13	*	14
Wealth index quintiles										
Poorest	(76.2)	44	60.8	80	40.4	55	97.5	58	(75.5)	49
Second	53.1	58	45.3	100	58.6	57	97.9	51	65.1	51
Middle	(60.6)	42	54.1	63	(73.9)	40	(100.0)	46	(66.3)	47
Fourth	(64.8)	46	51.6	81	60.1	54	(85.6)	44	(33.1)	48
Richest	(78.5)	29	64.9	59	(71.2)	26	(88.7)	34	(27.2)	27
Total	**65.0**	**219**	**54.4**	**383**	**58.7**	**232**	**94.6**	**233**	**56.1**	**222**

** MICS Indicator 15;*

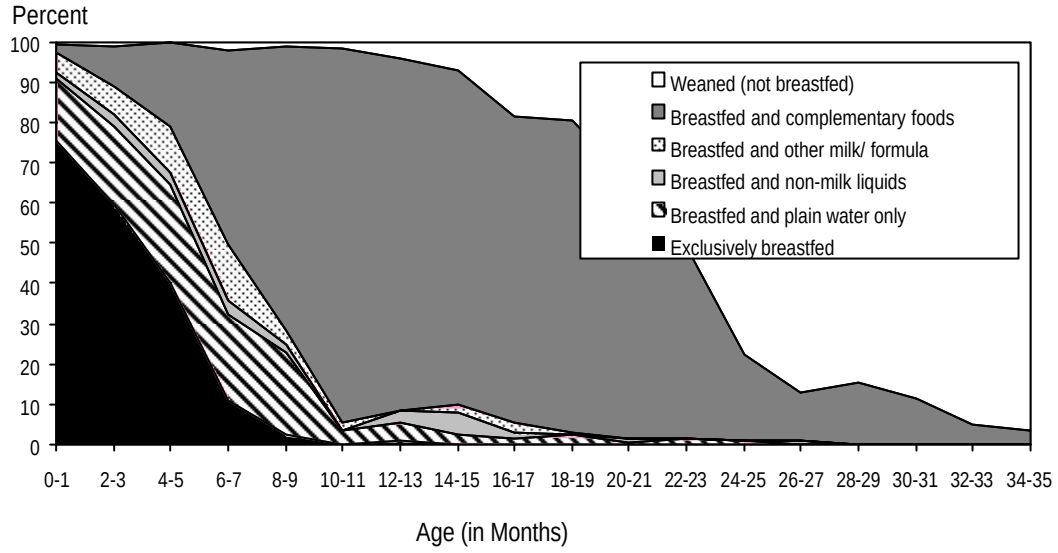
*** MICS Indicator 17;*

**** MICS Indicator 16*

An asterisk '' indicates figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses '( )' are based on 25 – 49 unweighted cases.*

Figure NU.2 shows the detailed pattern of breastfeeding by age in months. Even at the earliest ages, many children are receiving liquids or foods other than breast milk. By the end of the sixth month, the percentage of children exclusively breastfed is below 12 percent. Only about 20 percent of children are receiving breast milk after 2 years.

Figure NU.2: Infant feeding patterns by age. Percent distribution of children aged under 3 years by feeding pattern by age group, Ghana, 2006



Information on adequacy of infant feeding in children less than 12 months old is provided in Table NU.4. Different criteria of adequate feeding are used depending on the age of the child. For infants aged 0-5 months, exclusive breastfeeding is considered as adequate feeding. Infants aged 6-8 months are considered to be adequately fed if they are receiving breast milk and complementary food at least two times per day, while infants aged 9-11 months are considered to be adequately fed if they are receiving breast milk and eating complementary food at least three times a day. Fifty-four percent (54 percent) of infants age 0-5 months and 9-11 months respectively are considered adequately fed. Compared to these age groups, only 50 percent of children aged 6-11 months are being adequately fed. Overall, 52 percent of children aged 0-11 months are appropriately fed based on the age-specific feeding recommendations. With regard to background characteristics of mother, those with middle/JSS education are more likely to feed their children adequately compared to other groups.

Table NU.4: Adequately fed infants

Percentage of infants under 6 months of age exclusively breastfed, percentage of infants 6-11 months who are breastfed and who ate solid / semi-solid food at least the minimum recommended number of times yesterday and percentage of infants adequately fed, Ghana, 2006

Background characteristic	0-5 months exclusively breastfed	Number of children 0-5 months	6-8 months who received breastmilk and complementary food at least 2 times in prior 24 hours	Number of children 6-8 months	9-11 months who received breastmilk and complementary food at least 3 times in prior 24 hours	Number of children 9-11 months	6-11 months who received breastmilk and complementary food at least the minimum recommended number of times per day*	Number of children 6-11 months	0-11 months who were appropriately fed**	Number of infants aged 0-11 months
Sex										
Male	52.8	202	49.8	91	52.0	75	50.8	166	51.9	368
Female	56.1	181	37.6	71	56.2	95	48.2	166	52.3	348
Residence										
Urban	59.9	148	46.7	57	(60.6)	45	52.9	102	57.0	251
Rural	50.9	235	43.2	106	52.1	124	48.0	230	49.5	465
Mother's/Caretaker's education										
None	61.1	135	40.4	62	50.9	60	45.6	122	53.7	257
Primary	53.3	73	(46.3)	44	(40.0)	38	43.4	82	48.0	155
Middle/JSS	51.2	143	50.2	51	65.7	56	58.2	107	54.2	250
Secondary*	(43.2)	32	*	6	*	15	*	21	46.6	53
Wealth index quintiles										
Poorest	60.8	80	(39.0)	36	(43.8)	43	41.6	80	51.3	160
Second	45.3	100	(44.3)	41	(59.6)	44	52.2	85	48.5	184
Middle	54.1	63	(68.7)	30	(55.1)	28	62.2	58	58.0	121
Fourth	51.6	81	(31.4)	37	(55.0)	33	42.5	70	47.4	151
Richest	64.9	59	*	18	*	22	(53.4)	40	60.3	99
Total	**54.4**	**383**	**44.4**	**162**	**54.4**	**169**	**49.5**	**332**	**52.1**	**715**

** MICS indicator 18*

*** MICS indicator 19*

An asterisk '' indicates figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses '( )' are based on 25 – 49 unweighted cases.*

Salt Iodization

Iodine Deficiency Disorder (IDD) is the world's leading cause of preventable mental retardation and impaired psychomotor development in young children. In its most extreme form, iodine deficiency causes cretinism. It also increases the risks of stillbirth, neonatal mortality and miscarriage in pregnant women. Iodine deficiency is most commonly and visibly associated with goitre. IDD takes its greatest toll in impaired mental growth and development, contributing in turn to poor school performance, reduced intellectual ability, and work performance. The international goal was to achieve sustainable elimination of iodine deficiency by 2005 by encouraging people to use salt that is fortified with iodine. The indicator is the percentage of households consuming adequately iodised salt ($\geq$15 parts per million).

Calculation of the percentage of households consuming iodised salt is done using two different methodologies. The MICS approach factors in households without salt in the denominator, whereas the DHS approach does not. Both results are shown below, the MICS estimate in Table NU.5 and the DHS estimate in NU.5A. For direct comparison to GDHS 2003 one should use Table NU.5A and similarly, for comparison to other MICS countries, Table NU.5 should be used. It can be observed that the two methodologies do not produce significantly different results.

Table NU.5: Iodized salt consumption (MICS)

Percentage of households consuming adequately iodized salt, Ghana, 2006

Background characteristic	Percent of households in which salt was tested	Number of households interviewed	Percent of households with salt test result					Number of households in which salt was tested or with no salt
			Percent of households with no salt	Not iodized	0 < 15 PPM	15+ PPM*	Total	
Region								
Western	89.9	617	8.4	39.9	11.6	40.0	100.0	606
Central	88.3	576	11.1	48.4	23.9	16.7	100.0	571
Greater Accra	88.9	1,004	10.4	19.2	21.2	49.3	100.0	997
Volta	93.5	486	6.0	77.9	4.0	12.0	100.0	483
Eastern	93.5	758	6.1	58.6	16.4	18.9	100.0	754
Ashanti	89.3	988	9.8	23.1	19.4	47.7	100.0	978
Brong Ahafo	91.9	552	7.3	17.7	22.2	52.8	100.0	546
Northern	97.3	630	2.7	71.1	14.8	11.4	100.0	630
Upper East	94.8	202	4.6	61.7	21.5	12.3	100.0	201
Upper West	97.8	126	1.8	18.1	59.2	20.8	100.0	126
Residence								
Urban	88.2	2,692	11.0	26.5	17.9	44.6	100.0	2,668
Rural	94.3	3,247	5.1	53.9	18.8	22.2	100.0	3,225
Education of household head								
None	94.6	1,830	4.5	57.2	20.4	17.8	100.0	1,813
Primary	92.2	802	7.5	50.1	20.8	21.5	100.0	800
Middle/JSS	89.8	2,203	9.4	35.5	19.5	35.6	100.0	2,183
Secondary+	89.5	1,104	9.9	21.1	11.1	57.8	100.0	1,097
Wealth index quintiles								
Poorest	96.2	949	3.4	69.8	19.8	6.9	100.0	946
Second	94.5	1,147	5.1	56.1	21.6	17.2	100.0	1,141
Middle	90.0	1,285	9.0	45.6	20.0	25.4	100.0	1,271
Fourth	88.0	1,341	11.3	31.1	17.2	40.4	100.0	1,330
Richest	90.7	1,217	8.4	12.5	13.9	65.2	100.0	1,205
Total	**91.5**	**5,939**	**7.7**	**41.5**	**18.4**	**32.4**	**100.0**	**5,893**

**MICS indicator 41*

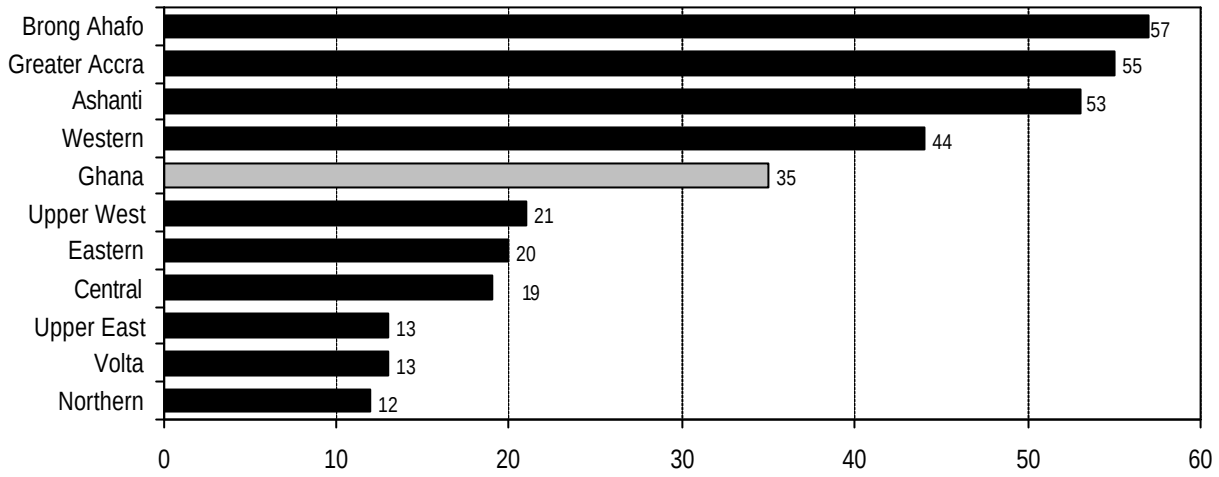
In Ghana, the campaign on iodised salt consumption is one of the programmes aimed at reducing micronutrient deficiencies among young children and women. According to data in Table NU.5A, salt used for cooking was tested in 92 percent of households interviewed in the MICS 2006 sample. The salt was tested for iodine content by using salt test kits and testing for the presence of potassium iodide and potassium iodate. Only in 8 percent of the households there was no salt available. For 35 percent of households tested, salt was found to contain 15 parts per million (ppm) or more of iodine, and in 1 in 5 households, less than 15 parts per million (ppm). In 45 percent of households tested, salt was not iodized. Use of salt with 15 or more ppm was lowest in Northern, Volta, and Upper East regions (around 12 percent), and highest in Brong Ahafo, Greater Accra and Ashanti regions (around 55 percent). The likelihood of using adequately iodized salt is twice as high in urban areas compared to rural areas.

Table NU.5A: Iodized salt consumption (DHS)

Percentage of households consuming adequately iodized salt, Ghana, 2006

Background characteristic	Percent of households in which salt was tested	Number of households interviewed	Percent of households with salt test result			Total	Number of households in which salt was tested
			Not iodized	<15 PPM	15+ PPM		
Region							
Western	89.9	617	43.6	12.7	43.7	100.0	555
Central	88.3	576	54.4	26.9	18.8	100.0	508
Greater Accra	88.9	1,004	21.4	23.7	55.0	100.0	893
Volta	93.5	486	82.9	4.3	12.8	100.0	454
Eastern	93.5	758	62.4	17.5	20.1	100.0	708
Ashanti	89.3	988	25.6	21.5	52.9	100.0	882
Brong Ahafo	91.9	552	19.1	24.0	56.9	100.0	507
Northern	97.3	630	73.0	15.2	11.7	100.0	613
Upper East	94.8	202	64.6	22.5	12.9	100.0	192
Upper West	97.8	126	18.4	60.3	21.2	100.0	124
Residence							
Urban	88.2	2,692	29.8	20.1	50.1	100.0	2,375
Rural	94.3	3,247	56.8	19.8	23.4	100.0	3,061
Education of household head							
None	94.6	1,830	60.0	21.4	18.6	100.0	1,731
Primary	92.2	802	54.2	22.5	23.3	100.0	740
Middle/JSS	89.8	2,203	39.2	21.5	39.3	100.0	1,978
Secondary+	89.5	1,104	23.4	12.3	64.2	100.0	987
Wealth index quintiles							
Poorest	96.2	949	72.3	20.5	7.2	100.0	913
Second	94.5	1,147	59.1	22.8	18.2	100.0	1,083
Middle	90.0	1,285	50.2	21.9	27.9	100.0	1,156
Fourth	88.0	1,341	35.1	19.4	45.5	100.0	1,180
Richest	90.7	1,217	13.6	15.2	71.2	100.0	1,104
Total	**91.5**	**5,939**	**45.0**	**19.9**	**35.1**	**100.0**	**5,436**

Figure NU.3: Percentage of households consuming adequately iodized salt by region, Ghana, 2006



Note: Figure is based on Table NU.5A (DHS)

Vitamin A Supplements

Vitamin A is an essential micronutrient for the normal functioning of the eye, resistance to diseases and proper functioning of the immune system. It is found in foods such as liver, eggs, red and orange coloured fruits, palm oil and green leafy vegetables, although the amount of vitamin A readily available to the body from these sources varies widely.

Providing young children with two high dose vitamin A capsules a year is a safe, cost-effective, efficient strategy for eliminating vitamin A deficiency and improving child survival. Giving vitamin A to new mothers who are breastfeeding helps protect their children during the first months of life and helps to replenish the mother's stores of vitamin A, which are depleted during pregnancy and lactation.

Within the six months prior to the MICS, 60 percent of children aged 6-59 months received a high dose Vitamin A supplement (Table NU.6). A quarter of the children (26 percent) did not receive the supplement in the last 6 months but did receive one prior to that time. Seven percent of children never received a Vitamin A supplement and five percent received one but mothers were not sure when. There are markedly regional differences in Vitamin A supplementation coverage in the 6 months prior to survey ranging from 33 percent in Greater Accra Region to 76 percent in the Brong Ahafo region.

The age pattern of Vitamin A supplementation shows that supplementation in the last six months rises from 63 percent among children aged 6-11 months to 68 percent among children aged 12-23 months and then declines steadily with age to 54 percent among the oldest group age 48-59 months.

Table NU.6: Children's vitamin A supplementation

Percent distribution of children aged 6-59 months by whether they received a high dose Vitamin A supplement in the last 6 months, Ghana, 2006

Background characteristic	Percent of children who received Vitamin A: Within last 6 months*	Prior to last 6 months	Not sure when	Not sure if received	Never received Vitamin A	Total	Number of children aged 6-59 months
Sex							
Male	59.5	25.9	5.7	1.5	7.4	100.0	1,587
Female	60.8	25.7	4.9	1.5	7.0	100.0	1,496
Region							
Western	63.2	21.7	7.5	2.6	5.0	100.0	301
Central	53.5	38.2	0.8	1.9	5.7	100.0	265
Greater Accra	33.4	58.8	4.2	0.1	3.5	100.0	396
Volta	62.7	20.8	6.5	2.4	7.5	100.0	237
Eastern	63.0	27.5	1.2	2.0	6.4	100.0	422
Ashanti	70.7	17.7	2.9	1.5	7.2	100.0	452
Brong Ahafo	75.9	12.9	0.4	0.5	10.2	100.0	273
Northern	60.8	14.7	13.5	1.3	9.7	100.0	512
Upper East	58.1	22.0	5.8	2.1	12.0	100.0	133
Upper West	66.8	11.9	11.6	1.0	8.9	100.0	93
Residence							
Urban	55.1	34.9	3.8	1.1	5.0	100.0	1,088
Rural	62.9	20.8	6.2	1.7	8.4	100.0	1,996
Age							
6-11 months	62.8	5.2	2.8	2.8	26.4	100.0	332
12-23 months	67.5	22.3	3.9	0.8	5.6	100.0	706
24-35 months	62.9	26.1	5.8	0.7	4.5	100.0	667
36-47 months	55.2	32.7	5.5	1.0	5.5	100.0	718
48-59 months	53.7	32.1	7.3	2.9	3.9	100.0	661
Mother's/Caretaker's education							
None	61.8	21.1	7.3	1.6	8.2	100.0	1,208
Primary	57.4	28.4	3.6	2.2	8.3	100.0	680
Middle/JSS	61.7	27.8	3.6	1.1	5.8	100.0	977
Secondary+	52.9	34.7	7.1	0.7	4.7	100.0	219
Total	**60.2**	**25.8**	**5.3**	**1.5**	**7.2**	**100.0**	**3,084**

** MICS indicator 42*

Mother's or caretaker's level of education is usually positively related to the likelihood of receiving Vitamin A supplementation but in the MICS 2006, the results say otherwise. The percentage receiving a supplement in the last six months decreases from children whose mothers have no education or have middle/JSS level of education (62 percent) to 57 percent of those whose mothers have primary education and 53 percent among children of mothers with secondary or higher education.

Table NU.7: Post-partum Vitamin A supplementation

Percentage of women aged 15-49 years with a birth in the 2 years preceding the survey who received a high dose Vitamin A supplement before the infant was 8 weeks old, Ghana, 2006

Background characteristic	Received vitamin A supplement*	Not sure if received vitamin A	Number of women with a birth in 2 years before survey
Region			
Western	66.3	0.0	144
Central	49.1	0.5	105
Greater Accra	64.7	1.2	167
Volta	64.6	0.0	97
Eastern	36.4	0.0	182
Ashanti	67.9	0.7	207
Brong Ahafo	60.8	1.3	107
Northern	38.0	3.3	260
Upper East	56.3	1.4	58
Upper West	60.1	0.0	37
Residence			
Urban	64.9	0.9	468
Rural	49.1	1.2	897
Mother's/Caretaker's Education			
None	47.0	1.8	503
Primary	52.4	0.5	300
Middle/JSS	60.5	0.9	465
Secondary+	70.7	0.4	97
Wealth index quintiles			
Poorest	41.8	2.1	313
Second	47.1	1.0	325
Middle	59.6	0.0	260
Fourth	66.6	0.5	267
Richest	63.7	1.8	199
Total	**54.5**	**1.1**	**1,365**

** MICS indicator 43*
Data refer to the most recent birth only.

As seen from Table NU.7, one in 2 mothers with a birth in the two years before the MICS received a vitamin A supplement within eight weeks of the birth. This percentage is highest in the Ashanti Region (68 percent) and lowest in the Eastern and Northern regions at 36 percent and 38 percent respectively. The likelihood of Vitamin A supplementation increases with the education of the mother or other caretaker from 47 percent among women with no education to 71 percent among women with secondary or higher education.

Low Birth Weight

Weight at birth is a good indicator not only of a mother's health and nutritional status but also the newborn's chances for survival, growth, long-term health and psychosocial development. Low birth weight (less than 2,500 grams) makes a child susceptible to a range of grave health risks. Babies who were undernourished in the womb face an increased risk of dying during their early months and years. Those who survive have impaired immune function and increased risk of disease; they are likely to remain undernourished, with reduced muscle strength, throughout their lives, and may suffer a higher incidence of diabetes and heart disease in later life. Children born underweight also tend to have a lower IQ and cognitive disabilities, affecting their performance in school and their job opportunities as adults.

Table NU.8: Low birth weight infants

Percentage of live births in the 2 years preceding the survey that weighed below 2,500 grams at birth, Ghana, 2006

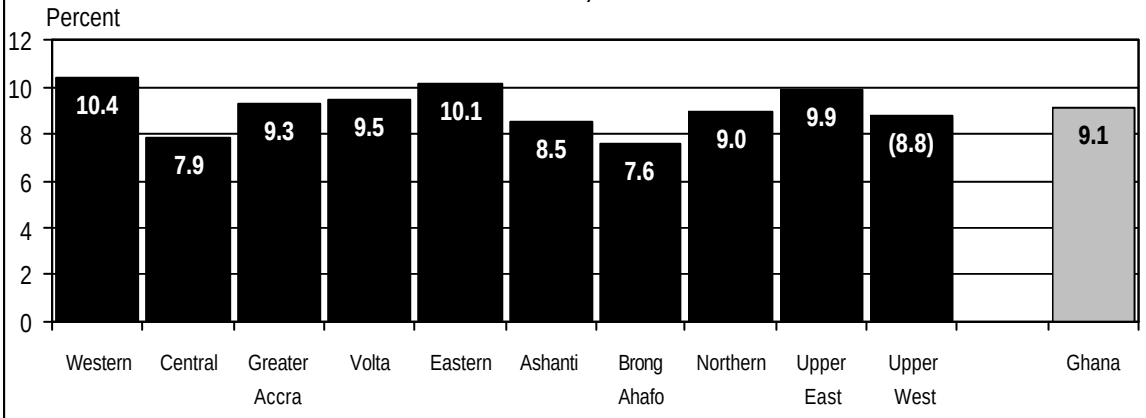
Background characteristic	Percent of live births: Below 2,500 grams*	Weighed at birth**	Number of live births
Region			
Western	10.4	34.3	144
Central	7.9	19.2	105
Greater Accra	9.3	74.3	167
Volta	9.5	30.6	97
Eastern	10.1	23.8	182
Ashanti	8.5	40.6	207
Brong Ahafo	7.6	36.8	107
Northern	9.0	27.8	260
Upper East	9.9	38.9	58
Upper West	8.8	20.4	37
Residence			
Urban	9.2	58.6	468
Rural	9.1	24.4	897
Mother's/Caretaker's education			
None	9.4	21.9	503
Primary	9.0	29.3	300
Middle/JSS	9.0	47.1	465
Secondary +	8.8	78.0	97
Wealth index quintiles			
Poorest	8.5	19.2	313
Second	9.7	18.9	325
Middle	8.7	28.9	260
Fourth	10.0	53.2	267
Richest	8.5	77.3	199
Total	**9.1**	**36.1**	**1,365**

** MICS indicator 9*
*** MICS indicator 10*
Data refer to the most recent birth only..

Because many infants are not weighed at birth and those who are weighed may be a biased sample of all births, the reported birth weights usually cannot be used to estimate the prevalence of low birth weight among all children. Therefore, the percentage of births weighing below 2,500 grams is estimated from two items in the questionnaire: the mother's assessment of the child's **size** at birth (i.e., very small, smaller than average, average, larger than average, very large) and the mother's recall of the child's **weight** or the weight as recorded on a health card if the child was weighed at birth[5].

Overall, nearly 2 in 5 babies were weighed at birth and approximately 9 percent of infants are estimated to weigh less than 2500 grams at birth (Table NU.8). There was no significant variation in low birth weight by background characteristics (Table NU.8 and Figure NU.4). The percentage of low birth weight does not vary much by urban and rural areas or by mother's education.

Figure NU.4 Percentage of Infants Weighing Less Than 2,500 Grams at Birth, Ghana, 2006



Note: Figure in parenthesis is based on 25-49 unweighted cases

[5] For a detailed description of the methodology, see Boerma, Weinstein, Rutstein and Sommerfelt, 1996.

VI. Child Health

Immunization

The Millennium Development Goal (MDG) 4 is to reduce child mortality by two thirds between 1990 and 2015. Immunization plays a key role in this goal. Immunizations have saved the lives of millions of children in the three decades since the launch of the Expanded Programme on Immunization (EPI) in 1974. Worldwide there are still 27 million children overlooked by routine immunization and as a result, vaccine-preventable diseases cause more than 2 million deaths every year.

A World Fit for Children goal is to ensure 90 percent of children under one year of age are fully immunized at national level, with at least 80 percent coverage in every district. According to UNICEF and WHO guidelines, a child should receive a BCG vaccination for protection against tuberculosis; three doses of (DPT)HH against diphtheria, pertussis, tetanus, hepatitis B and haemophilus influenza type B; three doses of polio vaccine, and a dose of MMR (measles, mumps and rubella) vaccination by the age of 12 months.

In the survey, information on vaccination coverage was obtained in two ways – from health cards and from mothers' or caretakers' verbal reports. All mothers or caretakers were asked to provide vaccination cards for children under the age of five. Interviewers copied vaccination information from the cards onto the MICS 2006 questionnaire. If a vaccination was not recorded on the card, the mother or caretaker was asked to recall whether the particular vaccination had been given and how many times.

The percentage of children aged 12 to 23 months who received each of the vaccinations before the age of 12 months is shown in Table CH.1 and Figure CH.1.

Ninety-four percent of children aged 12-23 months received a BCG vaccination by the age of 12 months and the first dose of (DPT)HH was given to 94 percent. The percentage declines for subsequent doses of (DPT)HH to 89 percent for the second dose, and 81 percent for the third dose. Similarly, 96 percent of children received Polio 1 by age 12 months and this declines to 80 percent by the third dose. Consequently, only 64 percent of Ghanaian children are fully immunized before the age of 12 months. This is far short of the 90 percent goal.

Table CH.1: Vaccinations in first year of life

Percent of children aged 12-23 months immunized against childhood diseases at any time before the survey and before the first birthday, Ghana, 2006

	Percent of children who received:												
	BCG*	Polio0	Polio1	Polio2	Polio3***	MMR****	(DPT)HH1	(DPT)HH2	(DPT)HH3**	All*****	Yellow fever******	None	Number of children aged 12-23 months
Vaccinated at any time before the survey													
According to:													
Vaccination card	83.4	53.0	83.9	81.8	76.4	74.5	84.0	81.8	77.8	69.7	73.9	0.0	706
Mother's report	10.8	8.2	12.3	9.7	6.1	10.9	10.2	8.5	5.7	3.7	10.5	2.4	706
Either	94.3	61.2	96.2	91.5	82.4	85.4	94.2	90.3	83.5	73.4	84.4	2.5	706
Vaccinated by 12 months of age	94.2	61.1	95.8	90.5	80.1	77.7	93.8	89.2	81.4	64.4	76.7	2.5	706

** MICS indicator 25*

*** Combined: MICS indicator 27 and MICS indicator 29*

**** MICS indicator 26*

***** MICS indicator 28; MDG indicator 15*

****** MICS indicator 31*

******* MICS indicator 30*

Figure CH.1: Percentage of children aged 12-23 months who received the recommended vaccinations by 12 months, Ghana, 2006

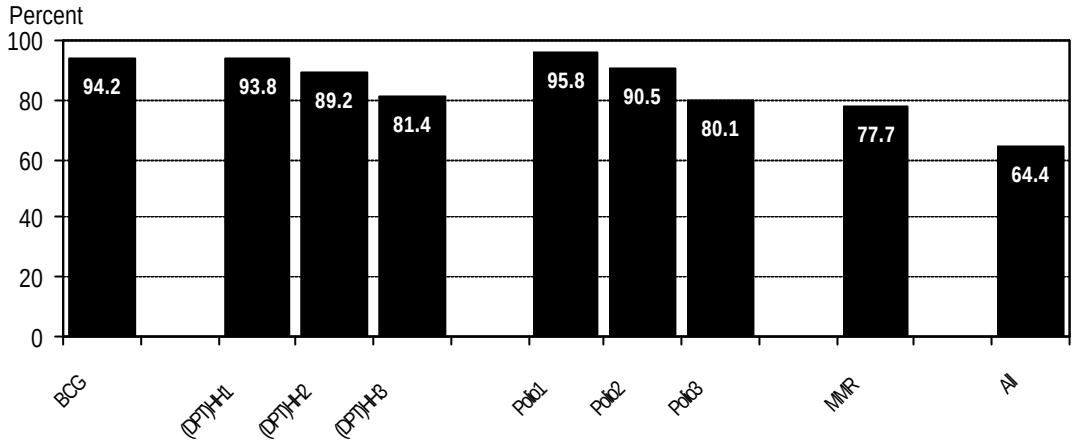


Table CH.2 shows vaccination coverage rates among children 12-23 months by background characteristics at any time before the survey.

More than 73 percent of children 12-23 months currently have all the required vaccinations. Predictably, children in wealthier households are much more likely to have all the necessary vaccinations. Eighty-four percent of children were vaccinated against yellow fever; Central Region recorded the lowest (61 percent) and Ashanti the highest of 95 percent. Generally, there is a strong association between mother's level of education and residence and the likelihood of child's receiving vaccinations. Children 12-23 months with mothers with more than primary education and residing in urban areas are more likely to be vaccinated.

Table CH.2: Vaccinations by background characteristics

Percentage of children aged 12-23 months currently vaccinated against childhood diseases, Ghana, 2006

Background characteristic	BCG	Polio0	Polio1	Polio2	Polio3	MMR	(DPT)HH1	(DPT)HH2	(DPT)HH3	All	Yellow fever	None	Percent with health card	Number of children aged 12-23 months
Sex														
Male	92.8	59.3	95.6	91.2	81.8	85.7	92.2	89.2	82.5	73.7	85.0	3.5	82.5	351
Female	95.7	63.1	96.7	91.8	83.1	85.1	96.1	91.4	84.5	73.1	83.8	1.4	87.8	355
Region														
Western	92.1	67.1	96.7	93.3	86.0	91.5	94.1	90.2	86.1	81.6	91.5	3.3	81.8	78
Central	(85.3)	(60.3)	(88.2)	(83.3)	(69.1)	(68.6)	(87.6)	(81.4)	(71.0)	(61.8)	(61.1)	(2.7)	(84.5)	45
Greater Accra	98.1	79.0	99.5	92.2	80.8	89.4	96.2	94.8	85.0	74.4	89.4	0.5	70.9	84
Volta	(86.0)	(51.9)	(88.7)	(75.4)	(63.7)	(76.3)	(87.9)	(73.3)	(64.2)	(55.7)	(72.2)	(6.1)	(70.3)	48
Eastern	93.9	51.2	93.9	92.0	88.3	83.1	93.9	92.0	85.1	76.2	83.8	6.1	87.9	102
Ashanti	98.6	71.4	100.0	98.8	90.6	95.4	98.6	95.8	91.9	83.2	95.4	0.0	91.1	110
Brong Ahafo	97.9	58.5	97.9	93.4	80.5	78.4	95.5	95.5	89.4	65.0	78.4	2.1	91.4	56
Northern	93.4	48.7	97.1	90.6	79.6	83.2	93.1	87.5	78.3	67.7	81.3	1.7	89.3	135
Upper East	96.3	62.8	95.4	91.5	88.5	88.2	95.4	92.7	92.7	82.6	89.6	0.8	93.8	31
Upper West	97.3	75.0	97.3	95.6	92.4	91.5	94.2	94.2	92.9	86.5	91.5	2.7	92.4	18
Area														
Urban	96.7	74.1	98.8	94.1	85.4	88.1	95.8	92.9	87.6	77.6	86.7	0.8	81.6	237
Rural	93.1	54.8	94.9	90.1	80.9	84.0	93.3	89.0	81.4	71.2	83.3	3.3	87.0	469
Mother's/Caretaker's education														
None	89.7	51.2	92.7	86.5	75.0	80.2	89.3	84.0	77.2	65.7	79.7	4.9	83.0	264
Primary	94.0	55.1	96.8	92.1	83.6	82.3	94.3	89.6	83.2	69.4	79.9	1.3	82.8	160
Middle/JSS	98.4	70.7	98.9	95.2	87.9	91.9	98.4	96.2	88.1	82.0	91.2	1.1	88.0	236
Secondary+	(100.0)	(91.4)	(100.0)	(98.7)	(93.3)	(92.3)	(100.0)	(98.7)	(96.9)	(86.9)	(92.3)	(0.0)	(91.7)	46
Wealth index quintiles														
Poorest	88.7	46.4	92.5	86.6	76.7	78.6	89.2	83.9	75.7	62.1	78.5	5.4	85.7	162
Second	91.5	49.4	94.3	87.6	77.1	83.1	92.0	86.2	79.0	71.7	80.6	3.7	83.7	159
Middle	95.8	60.1	96.5	95.1	86.4	86.4	96.3	93.6	87.3	76.2	86.4	1.6	86.8	151
Fourth	98.1	78.2	99.6	93.5	87.1	84.6	95.8	93.0	88.1	75.8	82.7	0.4	87.5	129
Richest	100.0	83.2	100.0	97.1	88.1	98.7	100.0	98.3	91.3	86.4	98.7	0.0	81.3	104
Total	**94.3**	**61.2**	**96.2**	**91.5**	**82.4**	**85.4**	**94.2**	**90.3**	**83.5**	**73.4**	**84.4**	**2.5**	**85.2**	**706**

Figures in parentheses '( )' are based on 25-49 unweighted cases.

Tetanus Toxoid

One of the strategies in the MDGs for the reduction of maternal mortality is the elimination of maternal tetanus. In addition, another goal is to reduce the incidence of neonatal tetanus to less than 1 case of neonatal tetanus per 1000 live births in every district. *A World Fit for Children* goal was to eliminate maternal and neonatal tetanus by 2005.

One measure of prevention of maternal and neonatal tetanus is to assure all pregnant women receive at least two doses of tetanus toxoid vaccine. However, if women have not received two doses of the vaccine during the pregnancy, they (and their newborn) are also considered to be protected if the following conditions are met:

- Received at least two doses of tetanus toxoid vaccine, the last within the prior 3 years;
- Received at least 3 doses, the last within the prior 5 years;
- Received at least 4 doses, the last within 10 years;
- Received at least 5 doses during lifetime.

Table CH.3: Neonatal tetanus protection

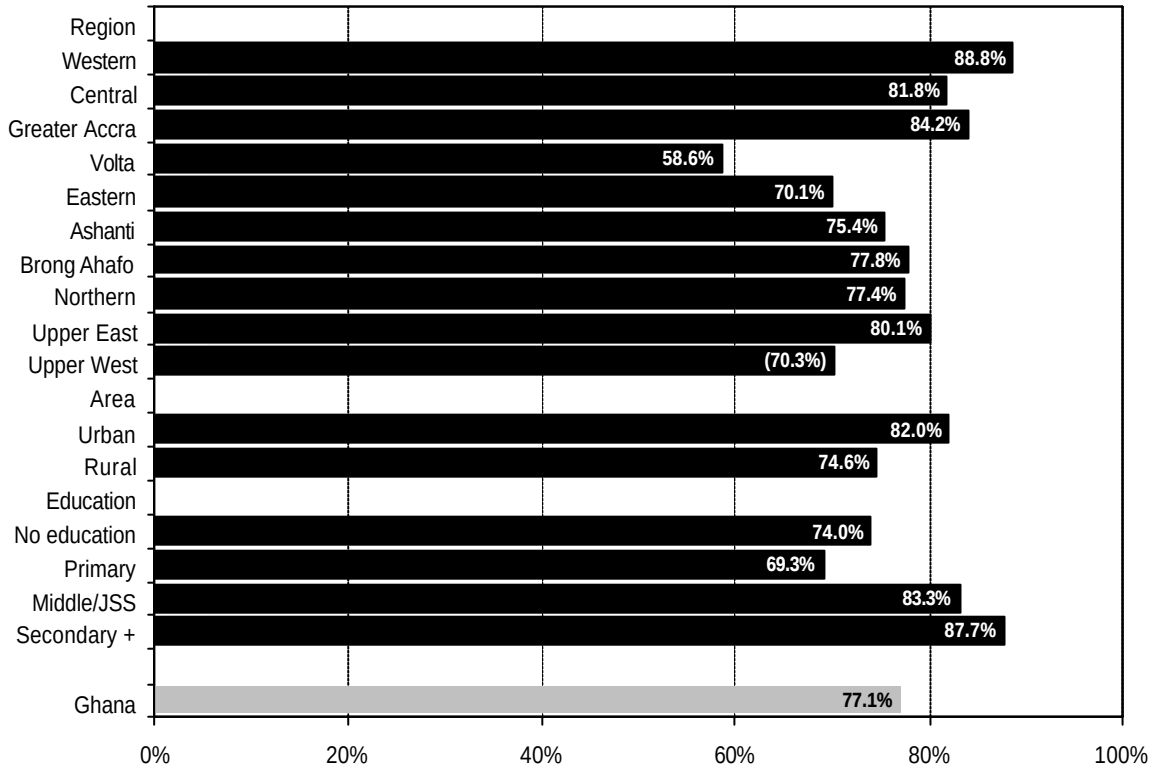
Percentage of mothers with a birth in the last 2 years protected against neonatal tetanus, Ghana, 2006

Background characteristic	Received at least 2 doses during last pregnancy	Received at least 2 doses, the last within prior 3 years	Received at least 3 doses, the last within 5 years	Received at least 4 doses, the last within 10 years	Received at least 5 doses during lifetime	Protected against tetanus *	Number of mothers
Region							
Western	69.6	18.6	0.0	0.6	0.0	88.8	144
Central	70.9	8.3	1.3	1.3	0.0	81.8	105
Greater Accra	68.6	15.6	0.0	0.0	0.0	84.2	167
Volta	47.8	10.8	0.0	0.0	0.0	58.6	97
Eastern	53.4	15.4	1.3	0.0	0.0	70.1	182
Ashanti	63.0	11.3	0.0	1.1	0.0	75.4	207
Brong Ahafo	61.2	14.7	0.8	0.0	1.1	77.8	107
Northern	69.5	7.5	0.3	0.0	0.0	77.4	260
Upper East	66.5	13.0	0.6	0.0	0.0	80.1	58
Upper West	59.6	10.7	0.0	0.0	0.0	70.3	37
Residence							
Urban	67.1	13.6	0.6	0.7	0.0	82.0	468
Rural	62.1	11.9	0.3	0.1	0.1	74.6	897
Age							
15-19	60.9	4.6	0.0	0.0	0.0	65.5	89
20-24	65.9	10.1	0.5	0.0	0.0	76.5	317
25-29	66.6	11.6	0.2	0.4	0.0	78.8	380
30-34	64.1	16.5	0.9	0.0	0.0	81.4	269
35-39	59.2	15.5	0.0	0.9	0.0	75.6	210
40-44	60.0	14.5	0.0	1.9	1.6	78.0	75
45-49	(51.3)	(9.4)	(3.3)	(0.0)	(0.0)	(64.0)	25
Mother's/Caretaker's education							
None	62.1	10.9	0.5	0.4	0.0	74.0	503
Primary	56.3	12.7	0.0	0.3	0.0	69.3	300
Middle/JSS	67.7	14.4	0.7	0.3	0.3	83.3	465
Secondary+	76.7	11.0	0.0	0.0	0.0	87.7	97
Wealth index quintiles							
Poorest	60.1	12.5	0.7	0.0	0.4	73.7	313
Second	59.4	12.0	0.3	0.4	0.0	72.1	325
Middle	62.4	10.8	0.5	0.4	0.0	74.1	260
Fourth	69.9	10.9	0.5	0.4	0.0	81.8	267
Richest	70.2	17.4	0.0	0.7	0.0	88.4	199
Total	**63.8**	**12.5**	**0.4**	**0.3**	**0.1**	**77.1**	**1,365**

** MICS Indicator 32*
Figures in parenthesis '( )' are based on 25 – 49 unweighted cases.

Table CH.3 and Figure CH.2 show the level of protection status from tetanus of women who have had a live birth within the last 2 years by major background characteristics. Overall, 64 percent of women received at least 2 doses during the last pregnancy. Five out of the ten administrative regions in Ghana (Volta, Eastern, Ashanti, Brong Ahafo and Upper West) are below the national average (64 percent). The results also showed that women with at least secondary education are more likely to receive at least 2 doses during last pregnancy. Protection level against tetanus is generally high except for the Volta Region which is below 60 percent. Among the age groups, protection level peaks at 81 percent at age 30-34. Urban women are more likely to be protected than their rural counterparts.

Figure CH.2: Percentage of women with a live birth in the last 12 months who are protected against neonatal tetanus, Ghana, 2006



Note: Figure in parenthesis is based on 25-49 unweighted cases

Oral Rehydration Treatment

Diarrhoea is the second leading cause of death among children under five worldwide. Most diarrhoea-related deaths in children are due to dehydration from loss of large quantities of water and electrolytes from the body in liquid stools. Management of diarrhoea – either through oral rehydration salts (ORS) or a recommended home fluid (RHF) - can prevent many of these deaths. Preventing dehydration and malnutrition by increasing fluid intake and continuing to feed the child are also important strategies for managing diarrhoea.

The goals are to: 1) reduce by one-half deaths due to diarrhoea among children under five by 2010 compared to 2000 *(A World Fit for Children)*; and 2) reduce by two-thirds the mortality rate among children under five by 2015 compared to 1990 (Millennium Development Goals). In addition, the *World Fit for Children* calls for a reduction in the incidence of diarrhoea by 25 percent.

The indicators are:

- Prevalence of diarrhoea
- Oral Rehydration Therapy (ORT)
- Home management of diarrhoea
- ORT or increased fluids ***AND*** continued feeding

In the MICS questionnaire, mothers (or caretakers) were asked to report whether the child had had diarrhoea in the two weeks prior to the survey. If so, they were asked a series of questions about what the child had to drink and eat during the episode and whether this was more or less than the child usually ate and drank.

Overall, 15 percent of under-five children had diarrhoea in the two weeks preceding the survey (Table CH.4). Diarrhoea prevalence was lower in the southern part of Ghana with Volta Region recording the lowest rate of 9 percent. The peak of diarrhoea prevalence occurs in the weaning period, among children age 6-23 months.

Table CH.4: Oral rehydration treatment

Percentage of children aged 0-59 months with diarrhoea in the last two weeks and treatment with oral rehydration solution (ORS) or other oral rehydration treatment (ORT), Ghana, 2006

Background characteristic	Had diarrhoea in last two weeks	Number of children aged 0-59 months	Fluid from ORS packet	Recommended homemade fluid	No treatment	ORT use rate *	Number of children aged 0-59 months with diarrhoea
Sex							
Male	16.7	1,789	28.4	11.0	61.9	38.1	299
Female	14.1	1,678	29.4	6.3	64.5	35.5	236
Region							
Western	10.6	347	(28.0)	(9.3)	(62.8)	(37.2)	37
Central	10.7	302	(56.5)	(2.9)	(40.6)	(59.4)	32
Greater Accra	11.5	448	39.1	19.0	41.8	58.2	52
Volta	8.6	261	*	*	*	*	22
Eastern	14.5	463	30.0	6.7	63.3	36.7	67
Ashanti	16.9	506	26.0	7.0	69.3	30.7	86
Brong Ahafo	18.8	311	20.3	7.6	72.1	27.9	59
Northern	22.4	579	21.6	10.9	68.8	31.2	129
Upper East	21.7	146	(41.8)	(5.5)	(52.7)	(47.3)	32
Upper West	18.7	105	*	*	*	*	20
Residence							
Urban	14.7	1,236	36.6	13.2	52.3	47.7	182
Rural	15.8	2,231	24.9	6.7	68.5	31.5	353
Age							
< 6 months	8.9	383	(6.8)	(2.3)	(90.9)	(9.1)	34
6-11 months	19.4	332	22.6	10.8	66.5	33.5	65
12-23 months	24.1	706	35.8	10.0	55.8	44.2	170
24-35 months	16.0	667	24.3	4.6	72.1	27.9	107
36-47 months	13.4	718	24.6	11.5	63.9	36.1	96
48-59 months	9.5	661	42.4	11.2	47.0	53.0	63
Mother's/Caretaker's education							
None	17.1	1,343	24.2	9.9	66.4	33.6	230
Primary	18.3	753	27.6	6.2	66.9	33.1	138
Middle/JSS	12.6	1,120	34.2	8.9	56.8	43.2	141
Secondary+	10.5	251	(47.2)	(14.3)	(45.6)	(54.4)	26
Total	**15.4**	**3,467**	**28.8**	**8.9**	**63.0**	**37.0**	**535**

** MICS Indicator 33*

An asterisk (*) indicates figure is based on fewer than 25 unweighted cases and has been suppressed.

Figures in parentheses '( )' are based on 25 – 49 unweighted cases.

Table CH.4 also shows the percentage of children receiving various types of recommended liquids during the episode of diarrhoea. Since mothers were able to name more than one type of liquid, the percentages do not necessarily add to 100. About 29 percent received fluids from ORS packets; and 9 percent received recommended homemade fluids. Children of mothers with at least secondary education are more likely to receive oral rehydration treatment than other children. As many as 63 percent of children with diarrhoea received no ORS or recommended home made fluid (RHF).

Table CH.5: Home management of diarrhoea

Percentage of children aged 0-59 months with diarrhoea in the last two weeks who took increased fluids and continued to feed during the episode, Ghana, 2006

Background characteristic	Had diarrhoea in last two weeks	Number of children aged 0-59 months	Children with diarrhoea who drank more	Children with diarrhoea who drank the same or less	Children with diarrhoea who ate somewhat less, same or more	Children with diarrhoea who ate much less or none	Home management of diarrhoea *	Received ORT or increased fluids AND continued feeding **	Number of children aged 0-59 months with diarrhoea
Sex									
Male	16.7	1,789	30.7	68.7	48.3	51.7	18.1	29.1	299
Female	14.1	1,678	38.6	60.0	51.2	48.2	20.1	27.8	236
Area									
Urban	14.7	1,236	33.8	64.7	48.3	51.7	18.7	29.1	182
Rural	15.8	2,231	34.4	65.0	50.2	49.4	19.2	28.3	353
Age									
0-11 months	13.8	715	22.0	76.7	42.9	56.4	9.2	15.0	99
12-23 months	24.1	706	34.7	64.6	40.7	59.3	16.3	27.2	170
24-35 months	16.0	667	49.8	48.8	61.4	38.6	31.1	36.8	107
36-47 months	13.4	718	32.4	67.3	51.9	48.1	19.9	29.8	96
48-59 months	9.5	661	28.1	70.7	60.3	38.5	19.8	37.6	63
Mother's/Caretaker's education									
None	17.1	1,343	36.6	62.4	54.3	45.0	21.3	31.2	230
Primary	18.3	753	36.5	62.4	40.3	59.7	18.5	25.6	138
Middle/JSS	12.6	1,120	28.9	70.2	51.2	48.8	17.0	27.7	141
Secondary+	10.5	251	(29.2)	(70.8)	(47.5)	(52.5)	(12.1)	(26.1)	26
Wealth index quintiles									
Poorest	19.8	786	39.0	60.7	54.5	45.3	21.8	30.9	155
Second	16.6	830	31.4	66.7	44.0	55.8	15.6	22.2	138
Middle	15.2	684	25.0	74.3	44.5	54.8	11.9	20.5	104
Fourth	12.6	623	41.3	58.7	53.6	46.4	29.5	42.3	78
Richest	10.9	544	34.8	63.1	53.3	46.7	18.0	33.2	60
Total	**15.4**	**3,467**	**34.2**	**64.9**	**49.6**	**50.2**	**19.0**	**28.6**	**535**

** MICS indicator 34*

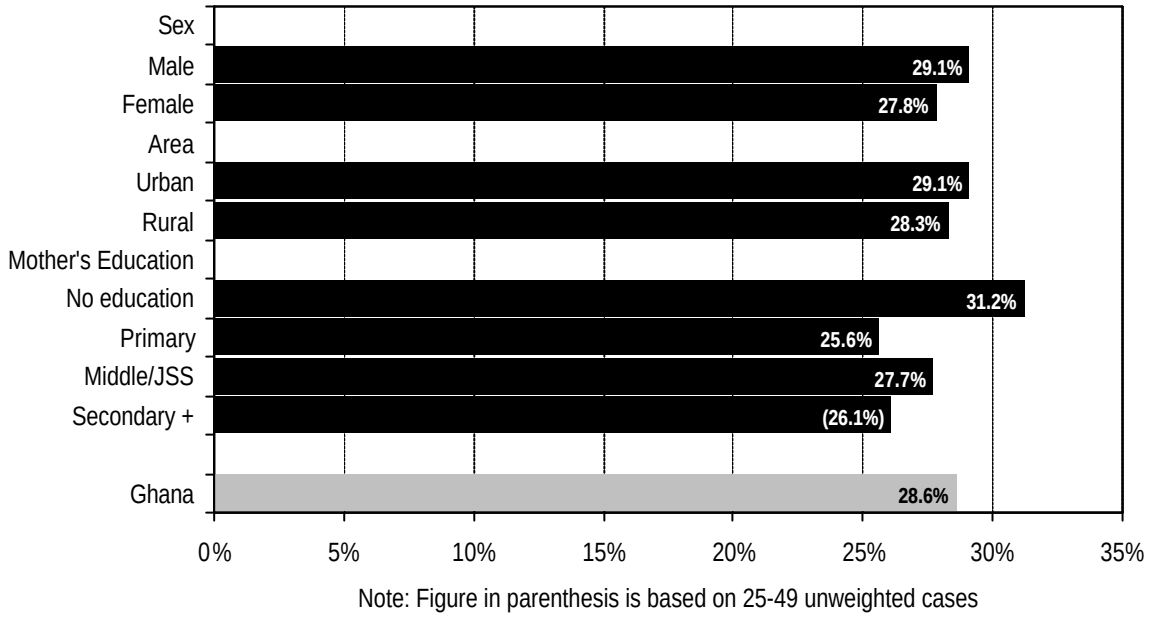
*** MICS indicator 35*

Figures in parentheses '( )' are based on 25 – 49 unweighted cases.

About one third (34 percent) of under-five children with diarrhoea drank more than usual while 65 percent drank the same or less (Table CH.5). Half of under-five children with diarrhoea ate somewhat less, same or more (continued feeding), and also half ate much less or ate nothing. Combining the information in Table CH.5 and Table CH.4 on oral rehydration therapy, it is observed that 29 percent of children either received ORT or increased fluid intake, and at the same time, feeding was continued, as is the recommendation.

Nineteen percent of children with diarrhoea were managed at home. There are significant differences in the home management of diarrhoea by background characteristics. Infants under 12 months are less likely to be managed at home (9 percent) compared to those age 24-35 months (31 percent).

Figure CH.3: Percentage of children aged 0-59 with diarrhoea who received ORT or increased fluids, AND continued feeding, Ghana, 2006



Note: Figure in parenthesis is based on 25-49 unweighted cases

Care Seeking and Antibiotic Treatment of Pneumonia

Pneumonia is the leading cause of death in children and the use of antibiotics in under-five children with suspected pneumonia is a key intervention. *A World Fit for Children* goal is to reduce by one-third the deaths due to acute respiratory infections.

Children with suspected pneumonia are those who had an illness with a cough accompanied by rapid or difficult breathing and whose symptoms were due to a problem in the chest or both problem in the chest and a blocked nose. If the child only had a blocked nose, the symptoms could be due to a cold only. The indicators are:

- Prevalence of suspected pneumonia
- Care seeking for suspected pneumonia
- Antibiotic treatment for suspected pneumonia
- Knowledge of the danger signs of pneumonia

Table CH.6 presents the prevalence of suspected pneumonia and, if care was sought outside the home, the site of care. Five percent of children aged 0-59 months were reported to have had symptoms of pneumonia during the two weeks preceding the survey. Of these children, only a third (34 percent) were taken to an appropriate health provider.

Table CH.6: Care seeking for suspected pneumonia

Percentage of children aged 0-59 months with suspected pneumonia in the last two weeks taken to a health provider, Ghana, 2006

Background characteristic	Had acute respiratory infection	Number of children aged 0-59 months	Children with suspected pneumonia who were taken to:												Number of children aged 0-59 months with suspected pneumonia
			Public sources						Private sources			Other sources			
			Govt. hospital	Govt. health centre	Govt. health post	Village health worker	Mobile/outreach clinic	Other public	Private hospital/clinic	Private physician	Pharmacy	Relative or friend	Chemical Shop	Any appropriate provider*	
Sex															
Male	4.8	1,789	14.8	12.4	1.8	0.1	0.0	1.0	4.1	0.0	6.7	0.1	21.3	34.1	85
Female	5.3	1,678	14.1	6.4	1.7	0.2	2.9	0.0	6.3	1.5	7.0	1.3	15.0	33.0	89
Area															
Urban	3.8	1,236	(14.4)	(3.1)	(2.0)	(0.0)	(0.0)	(0.0)	(5.5)	(0.0)	(20.4)	(0.0)	(16.0)	24.9	47
Rural	5.7	2,231	14.5	11.6	1.7	0.2	2.0	0.7	5.1	1.0	1.8	1.0	18.9	36.7	128
Age															
0-11 months	4.6	715	(10.4)	(15.7)	(1.3)	(0.5)	(7.8)	(0.0)	(8.0)	(0.0)	(0.0)	(3.7)	(15.7)	(43.8)	33
12-23 months	6.8	706	(22.2)	(5.7)	(1.9)	(0.2)	(0.0)	(1.8)	(1.6)	(2.7)	(9.4)	(0.0)	(12.6)	(36.1)	48
24-35 months	4.3	667	(13.7)	(12.8)	(1.3)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(5.3)	(0.3)	(24.4)	(27.8)	29
36-47 months	4.9	718	(8.3)	(8.0)	(3.3)	(0.0)	(0.0)	(0.0)	(7.3)	(0.0)	(6.9)	(0.0)	(22.1)	(26.8)	35
48-59 months	4.5	661	(14.5)	(6.4)	(0.6)	(0.0)	(0.0)	(0.0)	(10.3)	(0.0)	(11.6)	(0.0)	(18.7)	(31.8)	30
Mother's/Caretaker's education															
None	5.1	1,343	12.8	9.0	3.2	0.1	0.8	0.0	3.1	0.0	4.0	0.0	19.5	29.0	68
Primary	6.3	753	(13.3)	(11.5)	(0.0)	(0.4)	(4.2)	(0.0)	(7.6)	(2.7)	(9.3)	(0.2)	(22.8)	(39.7)	48
Middle/JSS	4.9	1,120	12.6	8.4	1.7	0.0	0.0	1.6	6.1	0.0	8.7	2.2	13.5	30.4	55
Secondary+	1.6	251	*	*	*	*	*	*	*	*	*	*	*	*	4
Total	**5.0**	**3,467**	**14.4**	**9.3**	**1.8**	**0.2**	**1.5**	**0.5**	**5.2**	**0.8**	**6.8**	**0.7**	**18.1**	**33.6**	**175**

** MICS indicator 23*

An appropriate provider excludes pharmacy and other sources

An asterisk '' indicates figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parenthesis '( )" are based on 25 – 49 unweighted cases.*

Table CH.7: Antibiotic treatment of pneumonia

Percentage of children aged 0-59 months with suspected pneumonia who received antibiotic treatment, Ghana, 2006

Background characteristic	Percentage of children aged 0-59 months with suspected pneumonia who received antibiotics in the last two weeks *	Number of children aged 0-59 months with suspected pneumonia in the two weeks prior to the survey
Sex		
Male	32.3	85
Female	33.4	89
Area		
Urban	(30.4)	47
Rural	33.7	128
Mother's/Caretaker's education		
None	27.7	68
Primary	(44.6)	48
Middle/JSS	28.0	55
Secondary+	*	4
Wealth index quintiles		
Poorest	(29.6)	46
Second	30.4	55
Middle	(35.1)	43
Fourth	*	18
Richest	*	13
Total	**32.9**	**175**

** MICS indicator 22*

An asterisk '' indicates figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parenthesis '( )" are based on 25 – 49 unweighted cases.*

Findings in Table CH.7 show the percentage of children treated for pneumonia symptoms with antibiotics. At 33 percent, the children receiving antibiotics is in line with the findings of Table CH.6.

Issues related to knowledge of danger signs of pneumonia are presented in Table CH.7A. Obviously, mothers' knowledge of the danger signs is an important determinant of care-seeking behaviour. Overall, only 3 percent of mothers / caretakers recognised both of the two danger signs of pneumonia (fast and difficult breathing) as reasons to take the child immediately to a health facility. The most commonly identified symptom for taking a child to a health facility is fever. The next most common symptoms identified by mothers / caretakers are child becoming more sick (46 percent) and bloody stools (14 percent), with 37 percent listing other symptoms.

Table CH.7A: Knowledge of the two danger signs of pneumonia

Percentage of mothers/caretakers of children aged 0-59 months who know of types of symptoms for taking a child immediately to a health facility, and percentage of mothers/caretakers who recognize fast and difficult breathing as signs for seeking care immediately, Ghana, 2006

Background Characteristic	Percentage of mother/caretakers of children aged 0-59 months who think that a child should be taken immediately to a health facility if the child: Is not able to drink or breastfeed	Becomes sicker	Develops a fever	Has fast breathing	Has difficulty breathing	Has blood in stool	Is drinking poorly	Has other symptoms	Mothers/caretakers who recognize the two danger signs of pneumonia	Number of mothers/caretakers of children aged 0-59 months
Region										
Western	20.0	51.0	85.4	2.2	7.7	26.6	8.3	19.1	0.3	347
Central	15.7	58.6	83.6	6.8	2.9	5.9	4.5	53.6	0.3	302
Greater Accra	11.2	40.2	84.3	5.7	8.3	18.2	5.4	34.0	3.7	448
Volta	9.3	7.5	81.7	0.8	2.7	7.2	2.9	67.8	0.0	261
Eastern	4.4	40.2	82.5	1.4	3.8	1.7	2.0	46.0	0.9	463
Ashanti	0.6	40.6	83.5	3.0	6.5	13.0	3.9	27.4	0.9	506
Brong Ahafo	11.6	85.6	82.5	13.9	11.3	17.8	18.5	18.3	6.0	311
Northern	35.1	53.1	83.3	13.8	14.1	18.0	12.2	34.7	4.6	579
Upper East	19.0	42.2	87.6	23.4	25.9	21.6	11.1	36.8	16.5	146
Upper West	15.0	18.7	89.8	1.9	3.4	0.3	1.0	55.8	0.0	105
Area										
Urban	11.4	44.2	84.8	5.4	8.2	12.7	6.6	37.7	2.6	1,236
Rural	16.0	47.2	83.2	7.6	8.4	14.3	7.5	36.4	2.9	2,231
Mother's/Caretaker's education										
None	20.9	50.1	85.4	9.5	10.0	14.6	8.8	35.9	3.2	1,343
Primary	11.8	39.7	81.1	6.6	7.1	13.5	6.2	36.2	2.7	753
Middle/JSS	8.4	47.1	83.4	3.7	7.1	13.4	6.3	36.5	1.9	1,120
Secondary+	13.0	40.5	84.8	6.9	8.7	11.1	5.1	46.2	4.2	251
Total	**14.3**	**46.1**	**83.8**	**6.8**	**8.3**	**13.7**	**7.2**	**36.9**	**2.8**	**3,467**

Solid Fuel Use

Cooking with solid fuels (biomass and coal) leads to high levels of indoor pollution and is a major cause of ill-health in the world, particularly among under-five children, in the form of acute respiratory illness.

Table CH.8 presents the distribution of households by type of cooking fuel. The three main sources of cooking fuel in the country are wood (50 percent), charcoal (35 percent) and LPG (10 percent).

Overall, 86 percent of households in Ghana are using solid fuels for cooking. Use of solid fuels varies across the 10 regions of the country from 61 percent in Greater Accra to 98 percent in Northern and Upper East regions. In addition the use of solid fuel for cooking is slightly lower in urban areas (74 percent) than rural households, where almost every household (96 percent) uses solid fuel for cooking. Use of solid fuel differentials with respect to the educational level of the head of household and household wealth index are also significant. The higher the educational level of the household head, the lower the use of solid fuels for cooking. In addition, the table clearly shows that the percentage is lowest among wealthiest households.

Table CH.8: Solid fuel use

Percent distribution of households according to type of cooking fuel, and percentage of households used solid fuels for cooking, Ghana, 2006

	Type of fuel using for cooking											
	Electricity	Liquefied Petroleum Gas (LPG)	Biogas	Kerosene	Charcoal	Wood	Crop residue/sawdust	None, no cooking	Other	Total	Solid fuels for cooking *	Number of households
Region												
Western	0.0	7.7	0.4	0.5	37.7	51.2	0.0	2.5	0.0	100.0	88.9	617
Central	0.2	6.3	0.0	0.7	31.9	56.3	0.1	4.5	0.0	100.0	88.3	576
Greater Accra	0.6	31.4	0.5	1.9	58.5	2.3	0.0	4.9	0.0	100.0	60.8	1,004
Volta	0.0	5.9	0.0	0.3	26.6	65.2	0.4	1.6	0.0	100.0	92.2	486
Eastern	0.0	5.8	0.0	0.3	31.4	60.4	0.0	2.2	0.0	100.0	91.7	758
Ashanti	0.1	10.4	0.0	0.6	37.4	45.8	0.0	5.4	0.2	100.0	83.2	988
Brong Ahafo	0.0	5.0	0.0	0.3	28.6	64.3	0.5	1.3	0.0	100.0	93.5	552
Northern	0.0	0.7	0.0	0.0	19.7	78.3	0.2	1.1	0.0	100.0	98.2	630
Upper East	0.2	0.6	0.0	0.0	16.3	66.1	15.5	1.2	0.0	100.0	97.9	202
Upper West	0.0	3.1	0.0	0.3	11.6	84.2	0.0	0.8	0.0	100.0	95.8	126
Residence												
Urban	0.3	19.7	0.2	1.3	57.7	15.8	0.2	4.8	0.0	100.0	73.7	2,692
Rural	0.0	2.5	0.0	0.1	15.9	78.6	1.0	1.7	0.1	100.0	95.5	3,247
Education of household head												
None	0.1	1.1	0.0	0.0	22.2	73.7	1.5	1.4	0.0	100.0	97.4	1,830
Primary	0.0	2.2	0.0	0.1	35.6	58.4	0.5	3.2	0.0	100.0	94.5	802
Middle/JSS	0.0	8.6	0.2	0.8	42.4	43.8	0.1	4.0	0.1	100.0	86.3	2,203
Secondary+	0.6	35.0	0.3	1.7	40.2	17.7	0.4	4.1	0.0	100.0	58.3	1,104
Wealth index quintiles												
Poorest	0.0	0.0	0.0	0.0	0.7	96.6	2.3	0.4	0.0	100.0	99.6	949
Second	0.0	0.0	0.0	0.0	5.9	91.4	0.9	1.7	0.0	100.0	98.3	1,147
Middle	0.0	0.5	0.1	0.2	36.7	58.3	0.2	3.8	0.2	100.0	95.3	1,285
Fourth	0.0	5.1	0.1	1.1	70.4	18.4	0.1	4.8	0.0	100.0	88.8	1,341
Richest	0.7	44.1	0.4	1.8	47.7	1.4	0.1	3.8	0.0	100.0	49.2	1,217
Total	**0.1**	**10.3**	**0.1**	**0.6**	**34.8**	**50.2**	**0.6**	**3.1**	**0.0**	**100.0**	**85.6**	**5,939**

** MICS indicator 24; MDG indicator 29*

Table CH.9: Solid fuel use by type of stove or fire

Among households using solid fuels for cooking, percent distribution by type of stove or fire, Ghana, 2006

	Food cooked on stove or open fire					Number of households using solid fuels for cooking
	Open fire	Open stove	Closed stove	Missing	Total	
Region						
Western	57.7	42.1	0.3	0.0	100.0	549
Central	63.1	36.3	0.6	0.0	100.0	508
Greater Accra	5.3	94.5	0.2	0.0	100.0	610
Volta	76.2	23.6	0.0	0.2	100.0	448
Eastern	66.1	33.5	0.4	0.0	100.0	695
Ashanti	54.5	44.8	0.6	0.2	100.0	822
Brong Ahafo	70.3	29.7	0.0	0.0	100.0	516
Northern	79.7	20.2	0.0	0.1	100.0	619
Upper East	84.0	16.0	0.0	0.0	100.0	198
Upper West	92.4	7.4	0.0	0.2	100.0	121
Residence						
Urban	23.4	76.1	0.4	0.0	100.0	1,984
Rural	83.4	16.4	0.1	0.1	100.0	3,102
Education of household head						
None	77.7	22.2	0.0	0.1	100.0	1,783
Primary	63.4	36.3	0.2	0.0	100.0	758
Middle/JSS	51.6	47.9	0.3	0.1	100.0	1,901
Secondary+	31.7	67.7	0.7	0.0	100.0	644
Wealth index quintiles						
Poorest	99.3	0.6	0.0	0.1	100.0	945
Second	94.4	5.4	0.0	0.2	100.0	1,127
Middle	62.3	37.5	0.2	0.0	100.0	1,224
Fourth	21.8	77.7	0.4	0.0	100.0	1,191
Richest	4.5	94.6	0.9	0.0	100.0	599
Total	**60.0**	**39.7**	**0.3**	**0.1**	**100.0**	**5,086**

Solid fuel use alone is a poor proxy for indoor air pollution, since the concentration of the pollutants is different when the same fuel is burnt in different stoves or fires. Use of closed stoves with chimneys minimizes indoor pollution, while an open stove or fire with no chimney or hood means that there is no protection from the harmful effects of solid fuels. Information on the type of stove used with solid fuel is depicted in Table CH.9. Sixty percent of households use open fires while 40 percent use open stoves. Almost all households (92 percent) in the Upper West Region use open fires for cooking, compared with only 5 percent in Greater Accra. The reverse is true for open stove (i.e. Greater Accra 95 percent and Upper West, 7 percent).

Malaria

Malaria continues to be a major public health concern. It is one of the leading causes of morbidity and mortality, especially among children under age five and pregnant women in Ghana. It also contributes to anaemia in children and is a common cause of school absenteeism. Preventive measures, especially the use of mosquito nets treated with insecticide (ITNs), can dramatically reduce malaria mortality rates among children. In areas where malaria is common, international recommendations suggest treating any fever in children as if it were malaria and immediately giving the child a full course of recommended anti-malarial tablets. Children with severe malaria symptoms, such as fever or convulsions, should be taken to a health facility.

The survey incorporated questions on the use of bednets, both at household level and among children under five years of age, as well as use of anti-malarial treatment, and intermittent preventive therapy for malaria.

Table CH.10: Availability of insecticide-treated nets

Percentage of households with at least one mosquito net and percentage with at least one insecticide-treated net (ITN), Ghana, 2006

	Percentage of households with at least one mosquito net	Percentage of households with at least one insecticide-treated net (ITN)*	Number of households
Region			
Western	10.7	8.0	617
Central	21.2	14.7	576
Greater Accra	19.1	12.9	1,004
Volta	60.7	23.0	486
Eastern	28.0	17.0	758
Ashanti	24.5	20.0	988
Brong Ahafo	39.7	28.3	552
Northern	43.0	24.0	630
Upper East	42.4	30.6	202
Upper West	51.6	31.7	126
Residence			
Urban	21.4	15.3	2,692
Rural	36.7	21.6	3,247
Education of household head			
None	31.5	16.3	1,830
Primary	30.0	18.0	802
Middle/JSS	27.5	18.1	2,203
Secondary+	31.4	24.5	1,104
Wealth index quintiles			
Poorest	40.5	19.4	949
Second	33.4	20.0	1,147
Middle	28.0	16.6	1,285
Fourth	26.0	18.1	1,341
Richest	24.1	19.8	1,217
Total	**29.8**	**18.7**	**5,939**

** MICS Indicator 36*

According to data in Table CH.10, almost a third of households have at least one mosquito net (30 percent) and 19 percent have at least one insecticide treated net (ITN). The likelihood of possessing a mosquito net or an ITN is 15 percent higher in rural areas than in urban areas. Possession of ITNs is also relatively high in Upper West and Upper East regions, and is low in Western Region. Although ownership of ITNs is higher in households with better educated household heads, interestingly, there are few differences by wealth quintile.

Table CH.11 indicates that 33 percent of children under the age of five slept under any mosquito net the night prior to the survey and 22 percent slept under an insecticide treated net. The use of bednets among children under five declines steadily with age. The use of the ITNs or bednets is higher in rural than urban areas. There were no significant gender disparities in bednet and ITN use among children under five.

Table CH.11: Children sleeping under bednets

Percentage of children aged 0-59 months who slept under an insecticide treated net during the previous night, Ghana, 2006

	Slept under a bednet *	Sleep under an insecticide treated net **	Slept under an untreated net	Slept under a net but don't know if treated	Don't know if slept under a net	Did not sleep under a bednet	Number of children aged 0-59 months
Sex							
Male	33.3	22.1	10.3	0.9	0.2	66.4	1,789
Female	31.8	21.6	9.8	0.4	0.2	68.0	1,678
Region							
Western	15.0	11.5	3.2	0.3	0.7	84.3	347
Central	25.8	19.8	6.0	0.0	1.0	73.2	302
Greater Accra	24.2	16.3	6.7	1.2	0.0	75.8	448
Volta	54.2	21.5	30.0	2.7	0.0	45.8	261
Eastern	32.2	24.9	6.7	0.5	0.0	67.8	463
Ashanti	26.5	21.8	4.2	0.5	0.2	73.3	506
Brong Ahafo	39.3	25.7	13.6	0.0	0.0	60.7	311
Northern	36.7	21.9	14.4	0.4	0.0	63.3	579
Upper East	51.5	39.3	11.3	0.9	0.2	48.2	146
Upper West	55.0	37.1	16.3	1.5	0.0	45.0	105
Residence							
Urban	22.4	16.4	5.4	0.6	0.2	77.5	1,236
Rural	38.3	24.8	12.7	0.7	0.2	61.5	2,231
Age							
0-11 months	37.9	27.8	9.3	0.9	0.0	62.1	715
12-23 months	36.2	24.5	10.9	0.8	0.3	63.5	706
24-35 months	31.3	19.6	11.0	0.8	0.2	68.5	667
36-47 months	29.9	20.6	8.9	0.4	0.3	69.8	718
48-59 months	27.3	16.3	10.5	0.5	0.2	72.5	661
Wealth index quintiles							
Poorest	41.4	24.4	16.4	0.7	0.0	58.5	786
Second	34.5	22.2	11.9	0.5	0.4	65.1	830
Middle	29.0	19.2	9.3	0.5	0.3	70.7	684
Fourth	29.0	20.8	6.7	1.5	0.0	71.0	623
Richest	25.7	22.2	3.3	0.2	0.2	74.1	544
Total	**32.6**	**21.8**	**10.1**	**0.7**	**0.2**	**67.2**	**3,467**

** MICS indicator 38*

*** MICS indicator 37; MDG indicator 22*

Questions on the prevalence and treatment of fever were asked for all children under age five. Almost a quarter (22 percent) of under-five children were ill with fever in the two weeks preceding the interview (Table CH.12). Fever prevalence was lowest among infants 0-11 months old, and peaked at 12-35 months (26-28 percent). Regional differences show Northern Region recording the highest (32 percent) and Central Region recording the lowest (17 percent) rates of fever prevalence.

Table CH.12: Treatment of children with anti-malarial drugs

Percentage of children 0-59 months of age who were ill with fever in the last two weeks who received anti-malarial drugs, Ghana, 2006

			Children with a fever in the last two weeks who were treated with													
			Anti-malarials:							Other medications:						
	Had a fever in last two weeks	Number of children aged 0-59 months	SP/Fansidar	Chloroquine	Amodiaquine	Quinine	Artemisinine based combinations	Other	Any appropriate anti-malarial drug	Paracetamol/ Panadol/ Acetaminophan	Aspirin	Ibuprofen	Other	Don't know	Any appropriate anti-malarial drug within 24 hours of onset of symptoms *	Number of children with fever in last two weeks
Sex																
Male	22.6	1789	0.3	42.3	11.7	0.6	5.7	3.9	59.8	78.2	1.7	1.3	18.8	3.5	48.3	404
Female	22.1	1678	0.8	41.9	15.5	0.9	3.0	3.4	62.0	75.7	1.5	3.2	17.5	1.3	48.4	371
Region																
Western	23.4	347	0.0	40.8	26.6	0.0	5.6	0.0	66.7	70.7	1.8	2.7	14.6	3.7	46.2	81
Central	16.8	302	(0.0)	(37.1)	(8.7)	(0.0)	(11.5)	(0.0)	(57.3)	(96.4)	(0.0)	(3.2)	(36.2)	(2.4)	(46.5)	51
Greater Accra	17.5	448	(0.0)	(36.4)	(15.8)	(0.0)	(17.4)	(5.8)	(69.3)	(76.7)	(6.7)	(6.6)	(19.4)	(0.0)	(66.3)	78
Volta	17.1	261	(0.0)	(75.4)	(4.4)	(0.0)	(0.0)	(4.7)	(79.4)	(89.4)	(4.5)	(2.4)	(7.6)	(0.0)	(57.6)	45
Eastern	20.7	463	0.0	38.0	8.8	0.0	1.6	1.0	46.8	81.1	0.0	0.0	27.1	5.1	32.1	96
Ashanti	20.9	506	0.0	30.1	12.4	0.9	1.2	4.0	48.6	70.7	2.0	0.0	13.1	3.6	35.4	106
Brong Ahafo	22.5	311	0.0	17.6	39.0	0.0	0.0	9.8	61.9	66.5	0.0	6.1	24.3	1.6	48.8	70
Northern	31.7	579	2.1	56.5	5.2	1.2	4.0	5.4	66.9	76.7	1.0	1.4	16.2	1.7	56.6	183
Upper East	27.0	146	1.2	59.0	2.3	2.6	0.2	0.0	64.5	79.7	0.0	0.9	8.9	3.6	52.9	39
Upper West	24.4	105	0.7	18.3	20.0	4.6	0.0	0.0	42.2	74.5	0.0	0.0	7.6	1.3	34.4	26
Area																
Urban	19.7	1236	0.2	37.2	20.7	0.1	12.0	5.1	68.7	80.6	2.2	3.3	22.3	0.8	58.0	243
Rural	23.8	2231	0.7	44.4	10.2	1.0	0.9	3.1	57.2	75.3	1.4	1.7	16.3	3.2	43.9	531
Age																
0-11 months	13.4	715	0.0	34.6	9.6	0.0	2.2	2.2	45.9	72.2	1.0	0.4	20.8	0.6	28.6	96
12-23 months	27.6	706	0.6	43.1	17.3	0.4	4.9	6.0	66.7	74.4	2.4	0.6	20.6	3.5	53.8	195
24-35 months	26.2	667	0.3	47.5	7.8	0.8	3.3	3.5	61.3	81.5	0.7	3.6	18.1	2.4	54.4	174
36-47 months	24.0	718	1.7	37.1	14.7	1.2	6.6	2.7	59.5	79.8	2.8	4.3	14.4	1.8	46.4	172
48-59 months	20.8	661	0.0	45.5	16.7	1.0	3.8	3.1	64.0	74.8	0.7	1.5	17.7	3.1	49.0	138
Total	**22.4**	**3467**	**0.6**	**42.1**	**13.5**	**0.7**	**4.4**	**3.7**	**60.8**	**77.0**	**1.6**	**2.2**	**18.2**	**2.4**	**48.3**	**775**

MICS indicator 39; MDG indicator 22

Figures in parentheses '( )' are based on 25-49 unweighted cases.

Mothers and caretakers were asked to report all the medicines given to a child to treat the fever, including both medicine given at home, and medicines given or prescribed at a health facility. Overall, 61 percent of children with fever in the last two weeks were treated with an "appropriate" anti-malarial drug and 48 percent received anti-malarial drugs within 24 hours of onset of symptoms.

"Appropriate" anti-malarial drugs include chloroquine, SP/fansidar, amodiaquine, quinine, artemisinine combination drugs and others. In Ghana, the most widely used were chloroquine (42 percent) and amodiaquine (14 percent). Over three-quarters of children were given other types of medicines that are not antimalarials, including paracetamol (77 percent).

Children with fever in the Volta Region are the most likely (4 out of 5) to have received an appropriate anti-malaria drug while those in the Upper West Region are the least (2 out of 5) to have received an appropriate drug. Urban children are more likely than rural children (69 versus 57 percent) to be treated appropriately. Little difference was noted between boys and girls in receiving appropriate anti-malarial drugs.

Table CH.13: Intermittent preventive treatment for malaria

Percent distribution of women aged 15-49 years with a birth in two years preceding the survey who received intermittent preventive therapy (IPT) for malaria during pregnancy, Ghana, 2006.

	Medicine to prevent malaria during pregnancy	SP/Fansidar only one time	SP/Fansidar two or more times *	Chloroquine	Other medicines	Don't know medicine	Number of women who gave birth in the preceding two years
Region							
Western	74.4	19.7	31.0	25.8	1.2	2.2	144
Central	64.0	15.0	16.1	30.2	1.8	2.8	105
Greater Accra	79.3	15.2	37.3	17.9	10.2	2.8	167
Volta	65.7	11.9	25.0	36.3	2.7	2.0	97
Eastern	56.2	9.9	18.1	23.9	2.4	3.7	182
Ashanti	64.5	12.8	21.9	26.4	4.3	4.1	207
Brong Ahafo	76.7	8.7	34.2	45.8	4.6	4.1	107
Northern	57.6	10.4	27.7	12.9	2.5	7.7	260
Upper East	81.3	10.8	40.3	16.1	1.6	13.4	58
Upper West	73.0	8.9	43.7	15.3	0.0	5.2	37
Residence							
Urban	75.9	14.3	34.6	22.5	5.8	3.9	468
Rural	62.2	11.7	23.8	25.0	2.4	4.9	897
Mother's/Caretaker's Education							
None	59.3	11.1	25.1	18.4	2.2	6.6	503
Primary	65.4	12.8	22.8	28.8	2.2	4.1	300
Middle/JSS	73.7	14.1	30.3	29.0	3.6	3.3	465
Secondary+	78.2	12.4	40.4	16.6	14.8	1.1	97
Total	**66.9**	**12.6**	**27.5**	**24.2**	**3.6**	**4.5**	**1,365**

** MICS Indicator 40*

Figures in parenthesis '( )" are based on 25 – 49 unweighted cases.

Findings on intermittent preventive treatment for malaria in pregnant women who gave birth in the two years preceding the survey is presented in Table CH.13. Two-thirds (67 percent) of women who gave birth in the preceding 2 years received medicine to prevent malaria during pregnancy. The rate ranges from 56 percent in Eastern to 81 percent in Upper East. Just over one quarter of women with recent births reported having received two or more doses of SP(Fansidar) during their last pregnancy; this is considered as intermittent preventive treatment. A quarter received chloroquine to prevent malaria during pregnancy.

Sources and Costs of Supplies for ITNs and Antimalarials

In the survey, questions were included to collect information on the sources and costs of four types of supplies: insecticide treated nets, antimalarials, antibiotics, and oral rehydration salts. Such information is very important in the sense that it makes possible a population-based assessment of the reach of programs and the extent to which particular target groups are covered by the programs. Such information is also useful for monitoring the provision of free or subsidized supplies, and for the assessment of costs of supplies, since prices of supplies can be a barrier to use of the supplies. For programme managers who want to find out public and private shares in the provision of the supplies, and of the relative importance of each source, information on sources and costs of supplies can be crucial.

The source and cost of supplies for insecticide treated nets (ITNs) is provided in Table CH.14. The table provides information on whether the ITNs are obtained from public or private sources, the percentage of households that have obtained the ITNs for free, and the median cost of ITNs for those households which have paid for them.

The results reveal that the public sector is the dominant source of insecticide treated nets (ITNs) with about 68 percent of households obtaining their ITNs from the public sector. Three of the most deprived regions (Northern 80 percent; Upper West 84 percent and Upper East 85 percent) depend heavily on the public sector for their supplies.
Very few households obtained ITNs for free. The median costs of an ITN was 25,000 cedis for those who obtained nets from government sources and 30,000 for those abstaining nets in the private sector.

The source and cost of supplies for antimalarials for children under five years of age are presented in Table CH.15. Unlike the ITNs, the source of supplies for antimalarials is fairly balanced between the public, and private and other sources.

Table CH.14: Source of supplies for ITNs

Percentage of households obtaining ITNs from public or private sources, percentage obtaining nets for free, and median cost of ITNs for those paying for nets by type of source of net, Ghana, 2006.

	Source of insecticide treatment nets				Number of households with at least one ITN	Percentage free				Median cost for those not free	
	Public*	Private medical	Other private	Total		Public	Number	Private	Number	Public**	Private**
Region											
Western	(70.9)	(13.4)	(15.8)	100.0	49	(5.5)	35	*	7	35,000	37,982
Central	71.6	8.2	20.1	100.0	85	2.5	61	*	7	20,000	20,000
Greater Accra	48.9	16.2	34.9	100.0	130	7.9	63	*	21	35,000	42,056
Volta	54.8	2.5	42.7	100.0	112	3.2	61	*	3	26,192	45,000
Eastern	60.2	9.2	30.6	100.0	129	0.0	78	*	12	25,000	20,599
Ashanti	65.9	7.9	26.2	100.0	198	6.5	130	*	16	35,000	30,300
Brong Ahafo	79.4	3.0	17.6	100.0	156	3.8	124	*	5	30,000	46,964
Northern	80.0	2.3	17.8	100.0	151	18.3	121	*	3	21,381	40,000
Upper East	85.0	1.1	13.9	100.0	62	9.1	53	*	1	5,000	5,000
Upper West	(83.5)	(0.0)	(16.5)	100.0	40	(5.1)	33	*	0	(20,000)	(0)
Residence											
Urban	69.1	7.5	23.4	100.0	411	7.3	284	(8.8)	31	30,000	40,000
Rural	67.9	6.1	26.0	100.0	700	6.6	475	(0.0)	43	25,000	30,000
Education of household head											
None	70.4	3.6	26.1	100.0	298	10.1	210	*	11	20,000	29,388
Primary	61.9	3.9	34.2	100.0	144	11.3	89	*	6	25,000	30,000
Middle / JSS	65.6	8.7	25.7	100.0	398	3.8	261	(4.0)	35	25,000	33,928
Secondary+	73.4	8.4	18.1	100.0	271	5.5	199	*	23	30,000	30,000
Wealth index quintiles											
Poorest	71.0	2.3	26.7	100.0	184	13.8	131	*	4	20,000	45,155
Second	69.4	8.5	22.1	100.0	229	4.9	159	*	19	25,000	30,000
Middle	60.1	6.1	33.8	100.0	214	7.3	128	*	13	25,000	20,000
Fourth	74.9	4.6	20.5	100.0	243	3.5	182	*	11	25,000	40,000
Richest	65.8	10.7	23.5	100.0	241	6.6	159	*	26	35,000	31,330
Total	**68.3**	**6.6**	**25.1**	**100.0**	**1,111**	**6.9**	**759**	**3.7**	**74**	**25,000**	**30,000**

** MICS indicator 96*
*** MICS indicator 97*
An asterisk '' indicates figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parenthesis '()" are based on 25 – 49 unweighted cases.*

Table CH.15: Source and cost of supplies for antimalarials

Percentage of children aged 0-59 months for whom antimalarials were obtained for free, and median cost of antimalarials for those paying for antimalarials, Ghana, 2006.

	Source of antimalarials				Number of children with fever in prior 2 weeks who were treated with antimalarials	Percentage Free		Median cost for those not free	
	Public*	Private	Other	Total		Public	Private	Public**	Private**
Sex									
Male	44.0	49.1	6.9	100.0	241	13.4	3.2	25,621	10,000
Female	51.9	44.4	3.7	100.0	230	13.4	2.5	25,000	10,406
Region									
Western	47.9	48.2	3.9	100.0	54	5.7	0.0	30,000	10,889
Central	(44.5)	(52.3)	(3.2)	100.0	29	(18.5)	(6.3)	20,000	9,754
Greater Accra	46.6	53.4	0.0	100.0	54	11.8	13.1	38,011	25,000
Volta	(31.1)	(63.2)	(5.7)	100.0	36	(0.0)	(0.0)	24,854	7,758
Eastern	(34.4)	(62.8)	(2.8)	100.0	45	(26.2)	(0.0)	25,704	12,000
Ashanti	37.0	57.7	5.3	100.0	51	6.1	0.0	34,795	13,929
Brong Ahafo	(45.4)	(43.9)	(10.6)	100.0	43	(25.4)	(0.0)	7,000	8,000
Northern	60.9	32.6	6.5	100.0	123	12.0	2.4	30,000	14,521
Upper East	(64.6)	(28.7)	(6.7)	100.0	25	(20.1)	(9.5)	20,000	10,603
Upper West	*	*	*	100.0	11	*	*	12,344	7,850
Residence									
Urban	47.4	50.1	2.5	100.0	167	18.1	6.1	31,448	15,000
Rural	48.1	45.1	6.9	100.0	304	10.9	0.9	25,000	9,837
Mother's/caretaker's education									
None	52.3	40.6	7.0	100.0	183	10.1	6.0	25,000	10,000
Primary	47.2	48.2	4.6	100.0	100	7.9	0.0	25,000	9,979
Middle/JSS	45.5	50.0	4.5	100.0	154	20.0	2.5	30,000	11,617
Secondary+	36.0	61.9	2.1	100.0	34	22.9	0.0	16,498	13,102
Wealth index quintiles									
Poorest	51.1	36.8	12.1	100.0	98	3.2	0.0	23,765	8,000
Second	47.7	48.4	3.9	100.0	114	11.4	0.0	30,000	8,000
Middle	44.1	51.1	4.8	100.0	96	10.2	2.0	26,107	10,000
Fourth	45.5	50.3	4.2	100.0	92	17.1	10.9	34,060	12,000
Richest	51.5	48.0	0.5	100.0	71	29.8	1.2	34,927	21,881
Total	**47.8**	**46.8**	**5.3**	**100.0**	**471**	**13.4**	**2.9**	**25,042**	**10,000**

MICS indicator 96
*** MICS indicator 97*
An asterisk '' indicates figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parenthesis '()" are based on 25 – 49 unweighted cases.*

VII. Environment

Environmental issues are of increasing concern because the environment is an essential factor contributing to health, productivity and welfare. Against this background and in recognition of its importance to national development, the survey looks at water sources, treatment, excreta disposal, and durability of housing, among other issues.

Water and Sanitation

Water requires attention in the life of human beings. Safe water is a basic necessity of good health. Unsafe drinking water can be a significant carrier of diseases. The source of drinking water is of great importance to health since the source determines the water quality and can help minimize fatal diseases such as diarrhoea, bilharzia, typhoid, dysentery, guinea worm, and cholera which are common in the country. The availability and accessibility to improved water sources therefore is essential. The various sources of drinking water in Ghana include pipe borne, borehole, protected well and river / spring, among others.

Use of improved water sources

The distribution of the population by source of drinking water is shown in Table EN 1. Thirty-eight percent of the population has access to pipe borne water either in their dwelling, yard or plot or public tap. Twenty-nine percent and six percent of the population get their drinking water from boreholes and protected wells respectively. While 5 percent of people depend on sachet water as drinking water, only 0.1 percent depend on bottled water. Overall, 78 percent of the population has improved sources of drinking water.

The proportion of the household population with access to piped water increases with the level of education of the household head. The same can be said of the socio-economic status of the household in relation to improved sources of drinking water. Members in households in the richest wealth index quintile have their drinking water mainly from piped (72 percent) and sachet water (20 percent). However, three out of every five poorest households drink from boreholes. More disturbing is the fact that 36 percent of those in poorest households have unimproved sources of water.

About half of rural households get their drinking water from boreholes or protected well, and two-thirds of members in urban households drink piped water.

There are also strong regional variations in overall prevalence of improved source of drinking water ranging between 53 percent (Volta Region) and 95 percent (Upper West Region). The situation in the Volta Region is considerably worse than in other regions. Nearly nine out of every ten households in Upper West region drink water from boreholes.

Table EN.1: Use of improved water sources

Percent distribution of household population according to main source of drinking water and percentage of household members using improved drinking water sources, Ghana, 2006

	Main source of drinking water																
	Improved sources								Unimproved sources								
	Piped into dwelling	Piped into yard or plot	Public tap/standpipe	Borehole	Protected well	Spring	Sachet water	Bottled water	Unprotected well	Rainwater collection	Tanker-truck	River/stream	Dam/lake/ pond/canal/ irrigation channel	Missing	Total	Improved source of drinking water*	Number of household members
Region																	
Western	3.6	7.3	35.5	22.2	11.1	2.4	1.1	0.0	8.5	0.0	1.1	6.9	0.3	0.0	100.0	83.2	2,451
Central	3.9	7.4	48.7	12.5	4.0	0.1	3.3	0.3	2.7	0.4	0.0	15.5	1.1	0.0	100.0	80.2	2,024
Greater Accra	15.1	15.0	30.4	0.8	0.2	0.0	25.9	0.8	0.1	0.2	4.7	1.8	0.0	5.0	100.0	88.1	3,911
Volta	2.2	3.8	27.7	15.8	0.6	0.8	1.8	0.0	17.4	4.4	0.0	12.7	6.1	6.6	100.0	52.7	1,978
Eastern	1.1	9.3	14.1	31.7	7.3	0.0	3.0	0.0	4.2	0.6	0.1	23.0	5.7	0.0	100.0	66.4	3,099
Ashanti	5.0	10.1	32.1	32.6	8.5	0.8	1.0	0.0	3.2	0.0	1.4	4.9	0.4	0.0	100.0	90.0	3,854
Brong Ahafo	2.9	4.2	24.9	32.3	5.7	0.0	1.7	0.0	7.0	0.2	0.0	21.1	0.0	0.0	100.0	71.7	2,295
Northern	0.9	6.4	11.9	47.7	5.6	0.5	0.0	0.0	6.4	0.1	0.1	17.1	3.1	0.1	100.0	73.0	3,549
Upper East	1.4	2.6	3.9	65.9	9.0	0.1	0.3	0.0	14.8	0.0	0.0	1.9	0.2	0.0	100.0	83.1	1,134
Upper West	0.5	1.0	2.9	86.8	1.8	1.5	0.4	0.0	1.0	0.0	0.2	2.2	1.7	0.0	100.0	94.8	652
Residence																	
Urban	10.1	16.8	38.8	6.5	6.6	0.3	11.3	0.3	3.5	0.2	2.4	0.7	0.0	2.4	100.0	90.7	10,315
Rural	0.7	2.0	15.8	44.1	4.7	0.7	1.0	0.0	7.3	0.7	0.2	18.9	3.2	0.6	100.0	69.1	14,632
Education of household head																	
None	0.7	3.8	20.4	42.6	4.7	0.8	0.8	0.1	7.2	0.5	0.4	14.1	2.8	1.0	100.0	74.0	8,832
Primary	2.7	4.1	27.6	25.7	4.0	0.7	3.5	0.0	7.9	0.5	1.4	15.4	3.3	3.3	100.0	68.2	3,327
Middle/JSS	4.7	9.1	30.9	22.9	7.2	0.4	5.3	0.1	4.9	0.6	1.6	9.9	1.2	1.3	100.0	80.6	8,665
Secondary+	14.3	18.5	22.3	12.7	4.8	0.2	16.4	0.4	2.5	0.4	1.3	5.4	0.3	0.5	100.0	89.6	4,123
Wealth index quintiles																	
Poorest	0.0	0.1	1.9	56.8	3.6	1.7	0.0	0.0	7.4	0.3	0.0	21.6	6.6	0.0	100.0	64.1	4,992
Second	0.0	0.5	14.0	41.1	7.9	0.6	0.0	0.0	8.8	0.5	0.0	23.7	2.0	1.0	100.0	64.1	4,984
Middle	0.3	1.8	38.3	28.2	7.1	0.3	0.9	0.0	8.8	1.2	1.5	8.6	0.8	2.2	100.0	76.9	4,991
Fourth	3.9	12.2	45.4	15.1	6.8	0.1	5.1	0.0	3.2	0.4	2.3	3.0	0.0	2.5	100.0	88.6	4,995
Richest	18.7	26.1	27.1	1.6	2.0	0.0	20.4	0.7	0.6	0.2	1.7	0.0	0.0	0.9	100.0	96.6	4,986
Total	**4.6**	**8.1**	**25.3**	**28.6**	**5.5**	**0.5**	**5.3**	**0.1**	**5.7**	**0.5**	**1.1**	**11.4**	**1.9**	**1.3**	**100.0**	**78.1**	**24,947**

** MICS indicator 11; MDG indicator 30*

Even though the proportion population with access to improved source of drinking water is encouraging (78 percent), more than one-fifth of all households still drink water from unimproved sources.

Household water treatment

Water borne and water based diseases arise from water that is infected mainly through environmental degradation and the disease is transmitted when the water is used for drinking or cooking. If the water is not treated it may be a main conduit of many fatal water borne diseases such as diarrhoea, guinea worm, typhoid fever, cholera, schistosomiasis, trachoma and lead poisoning.

Table EN.2 shows the percent distribution of the household population according to drinking water treatment method used in the household as well as the percentage of household members that apply appropriate water treatment methods.

Ninety-two percent of Ghana's population live in households that do not apply any appropriate water treatment method to their drinking water. Of those households that treat their drinking water, the most popular method used is straining through a cloth (4 percent) followed by allowing the water to stand and settle by itself (2 percent). Solar disinfection is the least common method used by households.

Treatment of all drinking water sources by households range from 1 percent in the Western and Brong Ahafo regions to 6 percent in Volta and Upper East regions. More households in the richest wealth index (5 percent) treat drinking water than the households found in the lower socio-economic categories; however the poorest households (4 percent) closely follow those in the richest category in the treatment of drinking water. A similar pattern is seen in education of household head. Households where the head has secondary or more education are likely to treat drinking water sources (4 percent) followed by those with no education (4 percent). Urban dwellers are more likely to treat their water than rural dwellers.

Households are more likely to treat unimproved drinking water sources (5 percent) than improved sources (3 percent).

Table EN.2: Household water treatment

Percent distribution of household population according to drinking water treatment method used in the household and percentage of household members that applied an appropriate water treatment method, Ghana, 2006

	Water treatment method used in the household									All drinking water sources: Appropriate water treatment method *	Number of household members	Improved drinking water sources: Appropriate water treatment method	Number of household members	Unimproved drinking water sources: Appropriate water treatment method	Number of household members
	None	Boil	Add bleach / chlorine	Strain through a cloth	Use water filter	Solar disinfection	Let it stand and settle	Other	Don't know						
Region															
Western	96.4	0.9	0.1	0.9	0.5	0.0	1.7	0.0	0.0	1.4	2,451	1.1	2,038	2.8	413
Central	93.4	1.0	0.1	0.4	0.6	0.0	3.9	0.5	0.0	1.7	2,024	1.5	1,551	24.0	473
Greater Accra	94.2	1.6	1.0	0.5	0.7	0.0	2.6	0.1	0.0	3.1	3,911	4.1	2,588	1.3	1,323
Volta	84.4	2.3	1.1	8.5	2.8	0.0	0.6	0.6	0.0	6.1	1,978	4.6	1,007	7.7	971
Eastern	93.0	1.5	1.0	2.9	0.0	0.0	1.3	0.5	0.0	2.6	3,099	2.2	1,967	3.1	1,133
Ashanti	93.1	1.5	1.0	2.5	1.6	0.0	1.2	0.0	0.0	3.9	3,854	4.3	3,487	0.3	367
Brong Ahafo	97.0	0.4	0.9	1.0	0.0	0.0	0.9	0.0	0.0	1.4	2,295	1.7	1,606	0.5	689
Northern	83.0	1.6	0.8	11.4	2.1	0.5	3.5	0.0	0.0	4.7	3,549	1.6	2,597	13.3	952
Upper East	91.6	2.1	2.3	2.5	1.0	1.0	2.4	0.3	0.0	6.0	1,134	4.3	939	14.1	195
Upper West	95.2	1.2	0.4	2.3	1.1	0.0	0.0	0.6	0.0	2.3	652	2.3	617	3.0	35
Residence															
Urban	92.2	1.4	1.0	2.3	1.2	0.1	2.1	0.1	0.0	3.7	10,315	4.2	8,407	1.3	1,908
Rural	91.6	1.4	0.7	4.3	0.9	0.2	1.9	0.3	0.0	3.1	14,632	1.6	9,991	6.1	4,641
Education of household head															
None	89.5	1.5	0.9	5.9	1.1	0.3	2.0	0.2	0.0	3.7	8,832	2.5	6,493	7.1	2,339
Primary	91.7	1.1	0.8	3.2	0.8	0.0	2.7	0.1	0.0	2.5	3,327	1.8	2,198	4.0	1,129
Middle/JSS	94.0	1.4	0.8	1.6	0.6	0.0	1.8	0.2	0.0	2.8	8,665	2.6	6,652	3.5	2,013
Secondary+	92.4	1.4	0.8	2.5	2.0	0.0	1.7	0.2	0.0	4.1	4,123	4.6	3,055	2.6	1,068
Wealth index quintiles															
Poorest	89.0	1.5	0.7	5.7	1.6	0.3	3.2	0.2	0.0	4.1	4,992	1.4	3,200	9.0	1,792
Second	90.9	1.2	0.8	5.3	0.7	0.1	1.2	0.5	0.0	2.8	4,984	2.0	3,192	4.2	1,792
Middle	93.9	1.5	0.9	2.5	0.5	0.0	1.1	0.1	0.0	2.7	4,991	2.2	3,868	4.6	1,122
Fourth	94.7	1.0	0.9	1.7	0.3	0.1	1.6	0.2	0.0	2.2	4,995	2.3	4,285	1.2	709
Richest	90.7	1.7	0.9	2.3	2.2	0.0	2.8	0.0	0.0	4.7	4,986	5.8	3,851	1.1	1,135
Total	**91.8**	**1.4**	**0.9**	**3.5**	**1.1**	**0.1**	**2.0**	**0.2**	**0.0**	**3.3**	**24,947**	**2.8**	**18,397**	**4.7**	**6,549**

** MICS indicator 13*

Table EN.3: Time to source of water

Percent distribution of households according to time to go to source of drinking water, get water and return, and mean time to source of drinking water, Ghana, 2006

	Time to source of drinking water								
	Water on premises	Less than 15 minutes	15 minutes to less than 30 minutes	30 minutes to less than 1 hour	1 hour or more	DK/Missing	Total	Mean time to source of drinking water (excluding those on premises)	Number of households
Region									
Western	10.9	58.2	18.9	9.2	2.8	0.0	100.0	14.3	617
Central	14.4	52.1	22.4	9.3	1.8	0.0	100.0	15.6	576
Greater Accra	33.3	54.3	6.9	3.1	2.3	0.2	100.0	11.3	1,004
Volta	15.5	38.1	17.3	15.9	12.8	0.4	100.0	24.9	486
Eastern	14.8	32.1	24.0	21.5	7.1	0.6	100.0	22.7	758
Ashanti	19.4	49.7	17.4	8.7	4.5	0.2	100.0	15.5	988
Brong Ahafo	8.7	51.0	26.3	10.7	3.3	0.0	100.0	15.9	552
Northern	9.4	29.9	26.9	24.9	8.7	0.2	100.0	26.1	630
Upper East	5.3	36.2	27.0	20.4	11.0	0.1	100.0	23.9	202
Upper West	3.1	29.5	37.9	26.5	3.0	0.0	100.0	20.6	126
Residence									
Urban	32.0	47.6	11.4	6.7	2.0	0.2	100.0	13.4	2,692
Rural	3.8	43.5	26.7	18.0	7.9	0.2	100.0	21.1	3,247
Education of household head									
None	6.4	41.7	26.2	18.1	7.3	0.2	100.0	21.2	1,830
Primary	9.0	48.2	21.0	13.9	7.9	0.1	100.0	20.0	802
Middle/JSS	17.6	49.6	17.6	11.1	3.8	0.3	100.0	16.2	2,203
Secondary+	36.6	40.2	13.1	7.1	3.0	0.1	100.0	15.1	1,104
Wealth index quintiles									
Poorest	0.5	34.9	30.7	24.0	9.7	0.2	100.0	24.6	949
Second	1.5	43.1	27.9	18.3	8.8	0.4	100.0	21.2	1,147
Middle	5.4	53.1	23.8	12.9	4.6	0.2	100.0	17.1	1,285
Fourth	22.3	52.7	13.4	8.6	3.0	0.0	100.0	14.6	1,341
Richest	51.3	38.3	5.8	3.3	1.3	0.1	100.0	11.4	1,217
Number of households	**16.2**	**45.3**	**20.0**	**13.0**	**5.3**	**0.2**	**100.0**	**18.4**	**5,939**

Time to source water

Table EN.3 shows data on the time it takes households to access their drinking water, Sixty-two percent of households have water on the premises or within 15 minutes. Nevertheless, almost one in five households takes 30 minutes or more to go, get water and return home.

Urban dwellers (32 percent) are more likely to get water on the premises than rural dwellers (4 percent). About one half of urban households and about two in five rural households take less than 15 minutes to reach their nearest source of drinking water excluding those who fetch water on their premises. More than two-thirds of households in Western, Central, and Greater Accra, Ashanti, and Brong Ahafo regions access their source of water in less than 15 minutes or have water on premises, compared to one-third of households in Upper West. Thirteen percent of households in Volta and 11 percent of households in Upper East spend more than one hour to their various sources.

The mean time for accessing water for households that do not have water in the dwelling is 18 minutes. Rural households get to the source of drinking water and back in 21 minutes, while urban households spend 13 minutes to access their source their drinking water. The mean time spent to get to water and return decreases consistently with education of household head (21 minutes for those with no education and 15 minutes for those with secondary and above. A similar pattern is seen for the wealth index quintile.

Person collecting water

Table EN.4 is the distribution of households according to the person who usually collects water used in the household so as to know whether fetching drinking water is the responsibility of a particular sex or age group.

In all, adult women are more likely to be responsible for fetching drinking water than men and children. In 64 percent of households, adult women collect household water either alone or with children, compared to 17 percent in which adult men do the collection. In 16 percent of households, children are the ones who usually collect water, whether male or female.

Even though there is no significant difference between urban adult women (43 percent) and rural adult women (42 percent) who go out to collect drinking water. The contribution of women in collecting water is greater in Northern, Upper East and Upper West regions where in almost 90 percent of households, adult women are the ones who usually collect water, either alone or with their children. The contribution of men is relatively higher in Greater Accra and Western regions. In over one-fifth of households in Western, Ashanti, and Brong Ahafo, it is children who usually collect water. In households with better educated heads, men play a relatively larger role in water collection then in households with less educated heads.

Table EN.4: Person collecting water

Percent distribution of households according to the usual person collecting water used in the household, Ghana, 2006

	Person collecting drinking water										Number of households where water is fetched
	Adult woman	Adult man	Female child (under 15)	Male child (under 15)	Children(both sexes)	Adult woman + child(ren)	Adult man + child(ren)	Other	DK/Missing	Total	
Region											
Western	40.1	21.3	3.3	2.9	16.1	14.4	0.6	1.4	0.0	100.0	549
Central	45.0	17.7	3.5	1.3	11.5	12.9	1.8	6.4	0.0	100.0	480
Greater Accra	42.2	22.3	2.6	2.1	4.8	22.5	3.1	0.4	0.0	100.0	570
Volta	50.8	15.7	3.1	0.8	9.4	17.6	1.2	0.8	0.5	100.0	410
Eastern	38.0	18.9	3.1	2.6	12.0	18.6	1.4	4.2	1.2	100.0	644
Ashanti	34.8	17.8	5.1	4.8	13.1	18.9	1.9	3.3	0.4	100.0	788
Brong Ahafo	44.7	12.8	4.6	3.7	12.5	20.3	0.9	0.5	0.0	100.0	500
Northern	49.6	5.7	2.2	0.2	2.3	38.4	0.7	1.0	0.0	100.0	571
Upper East	35.9	5.7	1.5	0.9	4.7	49.6	0.9	0.8	0.0	100.0	191
Upper West	49.0	5.2	3.3	0.0	3.2	38.1	0.6	0.2	0.3	100.0	122
Residence											
Urban	42.7	20.9	3.8	2.9	8.6	17.6	1.5	2.0	0.1	100.0	1,716
Rural	42.0	13.2	3.2	2.0	10.6	24.8	1.4	2.4	0.4	100.0	3,109
Education of household head											
None	45.4	7.6	3.6	1.4	9.5	28.8	1.3	2.2	0.2	100.0	1,704
Primary	44.5	17.0	3.3	2.0	8.7	20.4	1.6	1.8	0.7	100.0	723
Middle/JSS	39.2	20.4	3.4	3.3	10.9	18.5	1.6	2.5	0.2	100.0	1,765
Secondary+	39.8	24.7	3.2	2.5	9.7	16.9	1.0	2.0	0.3	100.0	633
Wealth index quintiles											
Poorest	46.3	9.5	3.2	0.9	6.2	32.2	0.9	0.7	0.1	100.0	944
Second	42.2	13.6	3.6	2.9	9.3	24.6	1.3	2.1	0.4	100.0	1,129
Middle	41.5	15.7	3.5	2.5	14.8	17.2	1.9	2.5	0.4	100.0	1,213
Fourth	41.4	19.8	3.4	2.4	9.5	18.4	1.1	3.7	0.2	100.0	1,017
Richest	38.4	25.6	3.4	3.3	7.4	18.0	2.2	1.7	0.0	100.0	521
Total	**42.2**	**15.9**	**3.4**	**2.3**	**9.9**	**22.2**	**1.4**	**2.2**	**0.3**	**100.0**	**4,825**

Table EN.5: Use of sanitary means of excreta disposal

Percent distribution of household population according to type of toilet used by the household and the percentage of household members using sanitary means of excreta disposal, Ghana, 2006

	Type of toilet facility used by household											
	Improved sanitation facility					Unimproved sanitation facility						
	Flush to piped sewer system	Flush to septic tank	Flush to pit (latrine)	Ventilated Improved Pit latrine (VIP)	Pit latrine with slab	Pit latrine without slab/open pit	Bucket	No facilities or bush or field	Missing	Total	Percentage of population using sanitary means of excreta disposal *	Number of household members
Region												
Western	0.5	8.2	0.4	29.5	37.3	11.3	0.0	12.8	0.0	100.0	75.9	2,451
Central	1.4	5.9	1.0	29.6	24.8	17.9	1.3	18.1	0.0	100.0	62.7	2,024
Greater Accra	5.4	19.6	13.0	36.3	11.0	5.4	0.8	8.1	0.3	100.0	85.4	3,911
Volta	0.9	2.9	0.7	25.5	8.9	30.1	0.3	30.8	0.0	100.0	38.8	1,978
Eastern	1.3	3.3	0.5	24.2	20.3	42.0	2.9	5.5	0.0	100.0	49.6	3,099
Ashanti	4.1	9.9	0.6	46.4	26.1	9.0	0.5	3.4	0.1	100.0	87.0	3,854
Brong Ahafo	0.6	1.4	0.6	40.4	36.0	14.5	0.0	6.4	0.0	100.0	79.1	2,295
Northern	0.0	0.5	0.8	19.7	4.1	1.1	0.9	72.9	0.0	100.0	25.1	3,549
Upper East	0.0	0.4	0.0	11.3	5.7	0.6	0.0	81.9	0.0	100.0	17.5	1,134
Upper West	0.0	6.0	0.2	6.6	4.5	3.4	0.0	78.7	0.7	100.0	17.2	652
Residence												
Urban	3.8	14.9	5.3	46.5	12.0	7.0	1.7	8.7	0.1	100.0	82.6	10,315
Rural	0.6	1.2	0.6	19.0	23.8	19.0	0.2	35.5	0.1	100.0	45.3	14,632
Education of household head												
None	0.4	1.8	0.7	22.8	14.7	12.4	0.0	47.1	0.0	100.0	40.4	8,832
Primary	0.4	4.5	1.2	30.4	24.6	17.5	0.8	20.4	0.4	100.0	60.9	3,327
Middle/JSS	1.9	7.0	2.4	37.1	23.7	16.4	1.3	10.1	0.1	100.0	72.1	8,665
Secondary+	6.6	19.6	7.8	32.6	13.3	9.7	1.4	9.0	0.0	100.0	79.9	4,123
Wealth index quintiles												
Poorest	0.0	0.0	0.0	1.3	15.7	15.6	0.0	67.4	0.0	100.0	17.0	4,992
Second	0.0	0.0	0.0	16.4	29.4	24.2	0.0	30.0	0.1	100.0	45.7	4,984
Middle	0.3	0.8	0.6	43.6	22.8	17.4	0.5	13.7	0.3	100.0	68.1	4,991
Fourth	1.2	5.4	2.2	53.3	18.7	9.2	1.6	8.3	0.1	100.0	80.9	4,995
Richest	8.1	28.2	9.9	37.4	8.1	3.6	2.0	2.6	0.0	100.0	91.7	4,986
Total	**1.9**	**6.9**	**2.6**	**30.4**	**18.9**	**14.0**	**0.8**	**24.4**	**0.1**	**100.0**	**60.7**	**24,947**

** MICS Indicator 12; MDG Indicator 31*

Use of sanitary means of excreta disposal

Inadequate disposal of human excreta and personal hygiene is associated with a range of diseases including diarrhoea and polio. Table EN5 shows the percent distribution of the household population by the type of toilet facility used. Sanitary facilities were classified into improved and unimproved sanitation facilities. *Improved sanitation facilities* include: flush toilets connected to sewage systems or septic tanks, ventilated improved pit latrines and pit latrines with slabs. Sixty-one percent of the population is using improved sanitation facilities. The table also shows that improved sanitation is more prevalent in urban areas (83 percent); whereas less than half of the rural population has access to improved sanitary facilities. Differentials at the regional level are significant. Use of improved sanitary facilities is highest in Ashanti, Greater Accra, Brong Ahafo, Western and Central Regions. Residents of the three northern regions are significantly less likely than others to use improved facilities. The majority of population in these regions use bush, fields, or have no toilet facilities. In addition, households in which the head has some form of education were more likely to have access to improved sanitary facilities.

Disposal of child's faeces

The manner in which a child's faeces are disposed may pose serious threats to healthy living, contribute to an unhygienic environment, and facilitate easy transmission of diseases. The study therefore examined what was done to dispose of the stools of children. Table EN.6 presents information on the distribution of children 0-2 years according to place of disposal of child's faeces and the percentage of children 0-2 years whose stools are disposed of safely.

For about two out of every five children, stools are put or rinsed into a toilet or latrine, while for one out of every five, stools are thrown into the garbage (solid waste). A few children (2 percent) to use the toilet /latrine themselves.

For most urban children (51 percent), the stools are disposed by putting or rinsing into a toilet or latrine. This disposal method is common also in the rural areas (36 percent) followed by throwing the faeces into the garbage (solid waste) (26 percent). Rinsing or putting a child's faeces into a toilet or latrine ranges between 2 percent in the Upper West Region and 59 percent in Ashanti and Western regions. Twelve percent of residents in the Upper East Region leave stool in the open. Burying as a method used to dispose of a child's faeces is high among households in Upper East (25 percent), Northern (20 percent), and Volta (15 percent) regions.

The high number of "other" methods of disposal, especially in Volta (35 percent), has been investigated. By far, the majority of observations reflect disposal in rivers or lakes. This phenomenon should have been captured in the questionnaire and during data cleaning, but was not. The survey partners will ensure that this is answer category is added to future implementation.

Table EN.6: Disposal of child's faeces

Percent distribution of children aged 0-2 years according to place of disposal of child's faeces, and the percentage of children aged 0-2 years whose stools are disposed of safely, Ghana, 2006

	What was done to dispose of the stools											
	Child used toilet/ latrine	Put/rinsed into toilet or latrine	Put/rinsed into drain or ditch	Thrown into garbage (solid waste)	Buried	Left in the open	Other	DK	Missing	Total	Proportion of children whose stools are disposed of safely *	Number of children aged 0-2 years
Region												
Western	2.0	58.7	22.0	11.3	2.7	0.0	3.4	0.0	0.0	100.0	60.7	220
Central	0.7	47.0	17.9	26.2	0.0	0.6	6.2	1.3	0.0	100.0	47.8	166
Greater Accra	2.8	50.5	11.3	23.0	0.7	0.0	3.8	0.0	7.8	100.0	53.3	273
Volta	0.0	33.5	0.7	11.6	14.5	0.0	34.7	0.0	5.0	100.0	33.5	153
Eastern	1.7	55.0	5.2	18.3	2.7	0.3	10.2	0.3	6.4	100.0	56.7	290
Ashanti	4.3	58.7	12.9	19.2	2.4	0.5	0.5	0.4	1.1	100.0	63.0	314
Brong Ahafo	5.1	48.0	30.6	15.9	0.5	0.0	0.0	0.0	0.0	100.0	53.0	169
Northern	1.7	12.7	14.6	38.0	20.1	4.1	5.9	0.0	2.9	100.0	14.4	374
Upper East	0.4	3.9	13.2	31.6	25.0	11.6	8.6	1.7	3.9	100.0	4.4	84
Upper West	0.0	2.2	35.5	38.2	3.0	3.6	16.9	0.0	0.5	100.0	2.2	63
Residence												
Urban	2.3	50.7	17.2	17.9	3.5	0.2	4.5	0.2	3.4	100.0	53.0	751
Rural	2.2	36.3	13.0	25.6	8.7	2.1	8.7	0.3	2.9	100.0	38.5	1,354
Mother's/Caretaker's education												
None	1.3	25.0	17.3	29.3	13.3	3.4	8.3	0.1	2.1	100.0	26.3	778
Primary	1.4	45.9	15.6	19.4	3.9	0.5	9.8	0.4	3.0	100.0	47.3	471
Middle/JSS	3.5	54.0	11.9	18.5	2.6	0.2	4.8	0.4	4.0	100.0	57.5	707
Secondary+	3.5	54.4	8.8	21.2	2.6	0.6	4.6	0.3	4.1	100.0	57.9	149
Wealth index quintiles												
Poorest	1.7	17.9	15.3	31.2	16.4	4.3	10.3	0.6	2.3	100.0	19.6	469
Second	1.8	38.6	13.6	25.9	5.7	1.6	10.4	0.0	2.5	100.0	40.4	505
Middle	3.0	45.0	15.5	22.2	4.1	0.4	6.4	0.5	2.7	100.0	48.1	415
Fourth	1.5	56.1	16.8	13.2	4.8	0.2	4.6	0.0	2.7	100.0	57.6	396
Richest	3.5	57.9	10.7	18.7	0.8	0.0	1.9	0.3	6.2	100.0	61.5	319
Total	**2.2**	**41.5**	**14.5**	**22.9**	**6.9**	**1.5**	**7.2**	**0.3**	**3.1**	**100.0**	**43.7**	**2,105**

** MICS indicator 14*

Use of improved water sources and improved sanitation

Table EN.7 gives information on the percentage of the household population using both improved drinking water sources and sanitary means of excreta disposal.

Table EN.7: Use of improved water sources and improved sanitation

Percentage of household population using both improved drinking water sources and sanitary means of excreta disposal, Ghana, 2006

	Percentage of household population using improved sources of drinking water *	Percentage of household population using sanitary means of excreta disposal **	Percentage of household population using improved sources of drinking water and using sanitary means of excreta disposal	Number of household members
Region				
Western	83.2	75.9	64.8	2,451
Central	80.2	62.7	53.7	2,024
Greater Accra	88.1	85.4	78.4	3,911
Volta	52.7	38.8	26.7	1,978
Eastern	66.4	49.6	38.6	3,099
Ashanti	90.0	87.0	79.7	3,854
Brong Ahafo	71.7	79.1	60.0	2,295
Northern	73.0	25.1	20.7	3,549
Upper East	83.1	17.5	16.5	1,134
Upper West	94.8	17.2	16.4	652
Area				
Urban	90.7	82.6	76.5	10,315
Rural	69.1	45.3	34.5	14,632
Education of household head				
None	74.0	40.4	31.7	8,832
Primary	68.2	60.9	47.3	3,327
Middle/JSS	80.6	72.1	62.9	8,665
Secondary+	89.6	79.9	75.5	4,123
Wealth index quintiles				
Poorest	64.1	17.0	8.3	4,992
Second	64.1	45.7	32.6	4,984
Middle	76.9	68.1	55.4	4,991
Fourth	88.6	80.9	74.3	4,995
Richest	96.6	91.7	88.7	4,986
Total	**78.1**	**60.7**	**51.9**	**24,947**

** MICS indicator 11; MDG indicator 30*
*** MICS indicator 12; MDG indicator 31*

Over half of household members (52 percent) use improved sources of drinking water and sanitary means of excreta disposal. Seventy-seven percent of urban households use both improved sources of drinking water and sanitary means of excreta disposal, while only 35 percent of rural households use both methods.

In the regions, use of both facilities varies considerably from 16-17 percent in the two upper regions to 80 percent in Ashanti. There is a marked difference between rich and poor, ranging from less than 10 percent in the poorest to almost 90 percent in the richest quintile.

Durability of Housing

The quality of dwellings used by people is often associated with health implications. Also, the type of flooring material used, the general condition of the dwelling, its location, and durability are indicators of the socio-economic status of the household. Table EN.8 presents information on the percentage of households and household members living in dwellings in urban areas that are not considered durable by background characteristics.

One out of every ten urban dwellings is in poor condition but only one in fifty are vulnerable to accidents. No house is however located in a hazardous area. Few dwellings, about three percent, are considered non durable, and few, about four percent, have natural floor material.

Table EN.8: Durability of housing

Percentage of households and household members living in dwellings in urban areas that are not considered durable by background characteristics, Ghana, 2006

Background Characteristics	Dwelling has natural floor material	Dwelling is in poor condition	Dwelling is vulnerable to accidents	Dwelling located in hazardous location	Percent of households living in dwellings considered non durable *	Number of households	Percent of household members living in dwelling considered non-durable	Number of household members
Education of household head								
None	9.0	19.8	1.4	0.0	4.7	490	3.9	2,205
Primary	7.8	9.8	3.4	0.0	6.5	308	4.9	1,161
Middle/JSS	3.6	8.2	2.2	0.0	3.2	1,122	3.4	4,169
Secondary+	1.2	5.0	1.8	0.0	1.8	773	1.9	2,779
Wealth index quintiles								
Poorest	(72.7)	(56.9)	(0.0)	(0.0)	(39.0)	28	30.0	147
Second	23.2	33.1	0.0	0.0	10.8	119	9.1	523
Middle	7.2	16.5	0.9	0.0	2.2	530	2.0	1,925
Fourth	2.8	8.0	3.1	0.0	3.7	929	4.0	3,275
Richest	0.5	3.7	2.1	0.0	2.1	1,085	1.7	4,445
Total	**4.4**	**9.6**	**2.1**	**0.0**	**3.4**	**2,692**	**3.3**	**10,315**

** MICS Indicator 94*
Figures in parentheses '( )' are based on 25 – 49 unweighted cases.

The households with highly educated heads (1 and 5 percent) are not as likely to use natural floor material nor have their dwellings in poor condition as those with household heads without education (9 and 20 percent). Similarly, those household members with high socio-economic status are less likely to use natural floor materials than those with low socio-economic status.

This table indirectly shows the disproportionate distribution of wealth as well. The wealth quintiles result in a roughly equal count of households in each quintile for the total sample. The above shows that of the 20 percent of the poorest households in this survey, only a tiny fraction in urban areas.

VIII. Reproductive Health

Contraception

Appropriate family planning is important to the health of women and children by preventing pregnancies that are too early or too late, extending the period between births and limiting the number of children. A *World Fit for Children* goal is that all couples have access to information and services to prevent pregnancies that are too early, too closely spaced, too late or too many.

Approximately 17 percent of women currently married or in union reported current use of contraception (Table RH.1). Almost 14 percent of the women use a modern method of contraception and three percent practice a traditional method of family planning. The most popular method currently used is the injection which is used by about 6 percent of the married women in Ghana. The next most popular method is the pill, which accounts for 5 percent of married women. The male condom is used by less than two percent of partners of married women. Two percent of married couples use periodic abstinence as a method of contraception. Less than one percent use female sterilisation, female condoms, the IUD, implants, withdrawal, vaginal methods, or the lactational amenorrhea method (LAM).

Contraceptive prevalence is highest in the Greater Accra Region (29 percent) with Central Region recording the second highest contraceptive use (23 percent). In terms of modern methods however, Central Region records the highest use of 19 percent compared to Greater Accra (17 percent). For any method of contraception, the Northern Region has the lowest use of eight percent whilst Western Region (7 percent) records the lowest in terms of modern methods. The results further indicate that married women in urban areas (21 percent) are more likely to use contraceptives than those residing in rural areas (13 percent) in Ghana.

Only about eight percent of married women aged 15-19 years currently use a method of contraception compared to 15 percent of 20-24-year-olds and seven percent of older women 45-49 years. Use is highest among women age 25-39.

Women's educational level is strongly associated with contraceptive use. The percentage of women using any method of contraception rises from nine among those with no education to 17 among women with primary education, and to 24 among women with middle/JSS education. Surprisingly it declines to 20 percent among women with secondary or higher education. In addition to differences in use, the method mix varies by education. About half of contraceptive users with no education use injectables. For those with primary education, the choice is between the pill and injectables at almost equal proportions. Partners of women with secondary or higher education are likely to use the male condom more than those with lower educational levels.

Table RH.1: Use of contraception

Percentage of women aged 15-49 years married or in union who are using (or whose partner is using) a contraceptive method, Ghana, 2006

	Percent of women (currently married or in union) who are using:																	
	Not using any method	Female sterilization	Pill	IUD	Injections	Implants	Condom	Female condom	Diaphragm/foam/ jelly	LAM	Periodic abstinence	Withdrawal	Other	Total	Any modern method	Any traditional method	Any method *	Number of women currently married or in union
Region																		
Western	91.4	0.2	3.7	0.5	2.2	0.2	0.0	0.0	0.0	1.0	0.6	0.3	0.0	100.0	6.7	1.8	8.6	345
Central	77.4	0.4	8.2	0.7	7.8	1.7	0.1	0.0	0.0	1.4	0.6	1.0	0.7	100.0	18.9	3.7	22.6	251
Greater Accra	71.2	0.6	4.0	1.3	6.5	1.2	2.9	0.1	0.7	0.5	9.6	0.4	1.1	100.0	17.3	11.6	28.8	518
Volta	86.6	0.5	2.1	0.0	7.8	0.6	1.0	0.0	0.6	0.0	0.9	0.0	0.0	100.0	12.5	0.9	13.4	315
Eastern	82.1	0.3	4.9	0.0	6.5	0.4	3.7	0.0	0.5	0.0	1.3	0.0	0.3	100.0	16.3	1.6	17.9	414
Ashanti	81.8	0.8	7.1	0.0	4.4	0.3	2.2	0.0	0.2	0.5	2.2	0.2	0.2	100.0	15.0	3.2	18.2	526
Brong Ahafo	82.9	0.4	8.0	0.0	5.5	0.5	1.4	0.0	0.0	0.9	0.0	0.0	0.5	100.0	15.7	1.4	17.1	294
Northern	91.7	0.1	2.2	0.2	5.2	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	100.0	8.3	0.0	8.3	551
Upper East	85.0	0.0	3.5	0.0	10.4	0.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0	100.0	15.0	0.0	15.0	150
Upper West	90.7	0.0	2.6	0.3	6.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	9.3	0.0	9.3	100
Residence																		
Urban	78.7	0.5	5.1	0.8	6.0	0.7	2.5	0.0	0.5	0.5	4.2	0.1	0.5	100.0	16.0	5.3	21.3	1,412
Rural	86.6	0.3	4.4	0.0	5.7	0.5	0.8	0.1	0.1	0.4	0.7	0.2	0.2	100.0	11.9	1.5	13.4	2,053
Age																		
15-19	91.9	0.0	1.9	0.0	0.8	0.0	3.4	0.0	0.0	0.0	2.1	0.0	0.0	100.0	6.0	2.1	8.1	98
20-24	84.6	0.0	6.5	0.0	3.6	0.7	1.9	0.0	0.2	1.1	0.9	0.3	0.2	100.0	12.9	2.5	15.4	514
15-24	85.8	0.0	5.7	0.0	3.1	0.6	2.1	0.0	0.1	0.9	1.1	0.2	0.2	100.0	11.8	2.4	14.2	613
25-29	80.0	0.0	5.5	0.3	6.3	0.3	2.7	0.0	0.4	0.9	2.9	0.1	0.5	100.0	15.6	4.5	20.0	737
30-34	81.7	0.3	4.0	0.5	7.0	1.3	1.1	0.0	0.0	0.4	3.2	0.0	0.5	100.0	14.3	4.0	18.3	646
35-39	80.0	0.5	5.9	0.5	7.3	0.8	0.5	0.1	0.7	0.0	2.9	0.3	0.6	100.0	16.2	3.8	20.0	608
40-44	84.1	1.0	5.2	0.1	6.6	0.0	1.1	0.3	0.2	0.0	1.2	0.2	0.0	100.0	14.5	1.4	15.9	462
45-49	93.0	0.9	0.2	0.5	3.9	0.0	0.9	0.0	0.0	0.0	0.3	0.2	0.0	100.0	6.4	0.6	7.0	399
Number of living children																		
0	92.9	0.0	1.2	0.0	0.5	0.0	3.7	0.0	0.0	0.0	1.7	0.0	0.0	100.0	5.4	1.7	7.1	293
1	83.4	0.0	6.4	0.0	3.6	0.6	2.3	0.0	0.2	0.7	2.7	0.2	0.0	100.0	13.1	3.6	16.6	559
2	81.8	0.2	4.5	0.8	5.4	0.9	1.7	0.0	0.5	0.9	2.7	0.2	0.4	100.0	14.0	4.2	18.2	640
3	80.1	0.3	5.4	0.4	8.5	0.9	1.1	0.1	0.3	0.4	1.9	0.0	0.7	100.0	16.9	3.0	19.9	592
4+	83.4	0.8	4.5	0.3	6.8	0.4	0.7	0.1	0.2	0.2	1.8	0.3	0.3	100.0	13.9	2.6	16.6	1,380
Mother's/Caretaker's education																		
None	91.0	0.3	2.1	0.2	5.4	0.3	0.3	0.0	0.1	0.2	0.1	0.1	0.0	100.0	8.7	0.3	9.0	1,258
Primary	83.2	0.4	5.4	0.1	5.8	0.6	1.4	0.0	0.3	0.4	1.4	0.0	0.9	100.0	14.1	2.7	16.8	676
Middle/JSS	76.3	0.4	7.1	0.3	6.5	0.9	2.0	0.1	0.5	0.8	4.4	0.4	0.4	100.0	17.7	6.0	23.7	1,200
Secondary+	80.3	0.7	4.3	1.3	5.0	0.1	4.6	0.1	0.0	0.2	3.0	0.0	0.3	100.0	16.1	3.6	19.7	331
Wealth index quintiles																		
Poorest	92.9	0.0	2.7	0.0	3.4	0.1	0.1	0.0	0.0	0.3	0.2	0.4	0.0	100.0	6.3	0.8	7.1	682
Second	86.7	0.1	3.7	0.0	5.4	1.2	0.9	0.0	0.3	0.1	0.8	0.1	0.7	100.0	11.6	1.7	13.3	703
Middle	84.2	0.8	6.0	0.1	6.3	0.1	1.2	0.0	0.0	0.3	0.9	0.1	0.0	100.0	14.5	1.3	15.8	657
Fourth	78.7	0.3	6.6	0.1	8.1	1.1	1.8	0.2	0.3	0.8	1.5	0.2	0.2	100.0	18.6	2.7	21.3	712
Richest	74.9	0.8	4.4	1.3	5.8	0.1	3.3	0.1	0.7	0.6	7.0	0.1	0.8	100.0	16.6	8.5	25.1	711
Total	**83.4**	**0.4**	**4.7**	**0.3**	**5.8**	**0.6**	**1.5**	**0.1**	**0.3**	**0.4**	**2.1**	**0.2**	**0.3**	**100.0**	**13.6**	**3.1**	**16.6**	**3,465**

** MICS indicator 21; MDG indicator 19C*

The results also show some association between the number of living children and contraceptive use. Married women with no child are far less likely to use any method of family planning compared with their counterparts with four children or more. Thus, contraceptive use tends to rise with increasing number of living children although for married women with four or more living children, contraceptive use is lower than among those with three living children. Contraceptive use rises from a low of seven percent among married women in the poorest wealth index quintile to a high of 25 percent among those in the richest wealth index quintile.

Antenatal Care

The antenatal period presents important opportunities for reaching pregnant women with a number of interventions that may be vital to their health and well-being and that of their unborn children. Better understanding of foetal growth and development and its relationship to the mother's health has resulted in increased attention to the potential of antenatal care as an intervention to improve both maternal and newborn health. For example, if the antenatal period is used to educate women and families about the danger signs and symptoms and about the risks of labour and delivery, it may provide the route for ensuring that pregnant women do, in practice, deliver with the assistance of a skilled health care provider. The antenatal period also provides an opportunity to supply information on birth spacing, which is recognized as an important factor in improving infant survival. Tetanus immunization during pregnancy can be life-saving for both the mother and infant. The prevention and treatment of malaria among pregnant women, management of anaemia during pregnancy and treatment of STIs can significantly improve foetal outcomes and improve maternal health. Adverse outcomes such as low birth weight can be reduced through a combination of interventions to improve women's nutritional status and prevent infections and diseases (e.g., malaria and STIs) during pregnancy. More recently, the potential of the antenatal period as an entry point for HIV prevention and care, in particular for the prevention of HIV transmission from mother to child, has led to renewed interest in access to and use of antenatal services.

The World Health Organisation (WHO) recommends a minimum of four antenatal visits based on a review of the effectiveness of different models of antenatal care and its guidelines are specific on the content on antenatal care visits, which include:

- Blood pressure measurement
- Urine testing for bateriuria and proteinuria
- Blood testing to detect syphilis and severe anaemia
- Weight / height measurement

Table RH.2: Antenatal care provider

Percent distribution of women aged 15-49 who gave birth in the two years preceding the survey by type of personnel providing antenatal care, Ghana, 2006

	Person providing antenatal care										
	Medical doctor	Nurse/mid-wife	Auxiliary midwife	Traditional birth attendant	Community health worker	Relative/Friend	Other/missing	No antenatal care received	Total	Any skilled personnel *	Number of women who gave birth in the preceding two years
Region											
Western	28.2	56.0	5.5	3.6	4.6	0.0	0.0	2.0	100.0	89.8	144
Central	21.0	71.7	0.0	0.0	3.1	0.0	0.0	4.1	100.0	92.8	105
Greater Accra	41.7	52.0	0.0	0.0	0.9	0.0	0.0	5.3	100.0	93.8	167
Volta	17.4	68.3	0.0	0.0	1.9	1.9	0.0	10.5	100.0	85.7	97
Eastern	30.7	60.6	0.0	0.9	0.0	0.0	0.0	7.8	100.0	91.3	182
Ashanti	32.7	59.7	5.1	0.6	0.3	0.0	0.0	1.7	100.0	97.5	207
Brong Ahafo	12.2	77.2	5.1	3.5	0.0	0.0	0.0	2.0	100.0	94.5	107
Northern	10.9	72.7	6.0	0.9	0.0	0.0	0.0	9.4	100.0	89.7	260
Upper East	2.6	83.1	5.3	0.0	1.0	0.0	0.0	8.0	100.0	90.9	58
Upper West	5.3	90.1	0.7	0.0	1.7	0.0	0.8	1.4	100.0	96.0	37
Residence											
Urban	33.9	60.5	1.6	1.2	0.0	0.0	0.0	2.8	100.0	96.0	468
Rural	17.8	68.4	4.0	1.0	1.7	0.2	0.0	7.0	100.0	90.1	897
Age											
15-19	11.1	76.9	2.8	1.1	2.2	0.0	0.0	6.0	100.0	90.7	89
20-24	18.1	69.9	2.5	1.3	1.3	0.0	0.1	6.8	100.0	90.5	317
25-29	24.1	67.4	2.3	0.6	0.5	0.0	0.0	5.1	100.0	93.8	380
30-34	29.4	60.6	4.2	0.8	0.4	0.7	0.0	4.0	100.0	94.1	269
35-39	26.3	62.2	2.6	0.9	2.8	0.0	0.0	5.3	100.0	91.0	210
40-44	25.9	55.1	6.9	3.7	0.2	0.0	0.0	8.3	100.0	87.8	75
45-49	21.6	63.9	8.5	0.0	0.0	0.0	0.0	5.9	100.0	94.1	25
Mother's/Caretaker's education											
None	15.3	67.5	5.0	1.2	1.3	0.0	0.1	9.6	100.0	87.9	503
Primary	22.0	67.4	1.9	1.2	0.4	0.3	0.0	6.8	100.0	91.4	300
Middle/JSS	28.3	65.5	2.6	0.8	1.5	0.2	0.0	1.0	100.0	96.4	465
Secondary+	44.5	52.0	0.0	1.0	0.2	0.0	0.0	2.3	100.0	96.5	97
Wealth index quintiles											
Poorest	12.8	71.7	3.9	0.2	0.6	0.0	0.1	10.8	100.0	88.4	313
Second	15.9	67.6	5.2	2.0	2.0	0.0	0.0	7.3	100.0	88.7	325
Middle	24.8	62.9	3.9	1.3	2.6	0.7	0.0	3.9	100.0	91.6	260
Fourth	26.3	69.4	1.5	0.7	0.0	0.0	0.0	2.1	100.0	97.1	267
Richest	46.1	51.8	0.0	1.0	0.0	0.0	0.0	1.2	100.0	97.9	199
Total	**23.3**	**65.7**	**3.1**	**1.0**	**1.1**	**0.1**	**0.0**	**5.5**	**100.0**	**92.1**	**1,365**

** MICS indicator 20*

Figures in parenthesis '( )' are based on 25 – 49 unweighted cases.

Coverage of antenatal care is relatively high in Ghana with 92 percent of women receiving antenatal care at least once from a skilled provider during the pregnancy (Table RH.2). Antenatal care coverage in both the urban (96 percent) and rural (90 percent) areas are high.

The type of personnel providing antenatal care to women aged 15-49 years who gave birth in the two years preceding the survey is presented in Table RH.2. The results indicate that 23 percent of all antenatal care in Ghana is provided by a medical doctor, 66 percent from a nurse/midwife and 3 percent from an auxiliary midwife. The Ashanti Region records the highest proportion of antenatal care provision by professional health personnel (98 percent) while the Volta Region has the lowest figure of 86 percent. Adolescents and women aged 40-44 are also less likely to have antenatal care provided by trained health personnel compared with women 45-49 years. The proportion of antenatal care provision by trained health professionals rises with education of the woman.

The types of services pregnant women received are shown in Table RH.3. Overall, nine in 10 pregnant women had their blood pressure checked and weight measured during antenatal care. Eighty percent had their urine tested and 78 percent had a blood sample taken respectively for laboratory examination. For all the four tests/measurements carried out, the Brong Ahafo region records the highest proportion while the lowest is in the Northern Region except for blood measurement which is lower in Volta Region and weight measurement for which Eastern Region records the lowest. Coverage for these types of antenatal care services increases with women's education and wealth quintile.

Table RH.3: Antenatal care

Percentage of pregnant women receiving antenatal care among women aged 15-49 years who gave birth in two years preceding the survey and percentage of pregnant women receiving specific care as part of the antenatal care received, Ghana, 2006.

	Percent of pregnant women receiving ANC one or more times during pregnancy*	Percent of pregnant women who had:				Number of women who gave birth in two years preceding survey
		Blood sample taken	Blood pressure measured	Urine specimen taken	Weight measured	
Region						
Western	98.0	88.4	92.0	90.6	90.7	144
Central	95.9	85.1	92.9	86.6	92.6	105
Greater Accra	94.7	92.5	93.8	94.0	92.1	167
Volta	89.5	67.8	83.3	69.7	85.8	97
Eastern	92.2	87.1	90.9	89.5	85.1	182
Ashanti	98.3	90.0	96.5	95.0	95.7	207
Brong Ahafo	98.0	93.9	98.0	96.5	98.0	107
Northern	90.6	46.3	87.9	48.0	87.5	260
Upper East	92.0	69.9	88.7	60.5	91.3	58
Upper West	98.6	66.5	97.7	59.1	97.6	37
Residence						
Urban	97.2	91.0	94.9	92.3	94.4	468
Rural	93.0	71.7	90.4	73.5	89.0	897
Age						
15-19	94.0	71.9	87.4	78.3	88.1	89
20-24	93.2	75.0	89.4	76.6	90.9	317
15-24	93.4	74.3	89.0	77.0	90.3	406
25-29	94.9	78.4	93.4	81.0	91.8	380
30-34	96.0	86.7	94.1	87.5	92.6	269
35-39	94.7	78.7	93.5	78.3	91.1	210
40-44	91.7	73.7	87.3	78.5	83.4	75
45-49	(94.1)	(62.3)	(94.1)	(50.5)	(87.1)	25
Mother's/Caretaker's education						
None	90.4	61.7	87.1	63.3	85.9	503
Primary	93.2	80.8	91.5	83.8	90.9	300
Middle/JSS	99.0	91.2	96.3	92.4	94.8	465
Secondary+	97.7	95.0	97.7	94.7	97.7	97
Wealth index quintiles						
Poorest	89.2	58.7	86.7	57.1	86.8	313
Second	92.7	71.9	89.4	77.0	84.5	325
Middle	96.1	84.1	92.7	88.0	94.2	260
Fourth	97.9	89.0	95.6	90.7	95.2	267
Richest	98.8	97.5	98.2	95.9	97.3	199
Total	**94.5**	**78.3**	**91.9**	**80.0**	**90.9**	**1,365**

** MICS indicator 44*

Figures in parenthesis '( )' are based on 25 – 49 unweighted cases.

Assistance at Delivery

Three quarters of all maternal deaths occur during delivery and the immediate post-partum period. The single most critical intervention for safe motherhood is to ensure a competent health worker with midwifery skills is present at every birth, and transport is available to a referral facility for obstetric care in case of emergency. *A World Fit for Children's* goal is to ensure that women have ready and affordable access to skilled attendance at delivery. The indicators are the proportion of births with a skilled attendant and proportion of institutional deliveries. The skilled attendant at delivery indicator is also used to track progress toward the Millennium Development target of reducing the maternal mortality ratio by three quarters between 1990 and 2015.

The MICS included a number of questions to assess the proportion of births attended by a skilled attendant. *A skilled attendant* includes a doctor, nurse, midwife or auxiliary midwife.

About half of births occurring in the 2 years prior to the MICS survey were delivered by skilled personnel (Table RH.4). This percentage is highest in the Greater Accra Region (83 percent) with seven regions below 50. The more educated a woman is, the more likely she is to have delivered with the assistance of a skilled attendant. While there appears to be no consistent pattern by age, adolescents (15-19 years) are less likely to have supervised delivery by skilled personnel.

About two in five of the births (41 percent) in the 2 years prior to the MICS survey were delivered with the assistance of a nurse/midwife while doctors assisted with a small proportion (9 percent). 21 percent of births were delivered by trained traditional birth attendants (TBAs) and about one in 10 by untrained TBAs. The highest proportion of 18 and 16 percent of deliveries in Northern and Eastern Regions respectively were done by untrained TBAs. Fifteen percent of births were delivered by either relatives or friends with the highest proportions recorded in Upper West (38 percent) and Volta (31 percent) regions.

Table RH.4: Assistance during delivery

Percent distribution of women aged 15-49 with a birth in two years preceding the survey by type of personnel assisting at delivery, Ghana, 2006

	Person assisting at delivery										
	Medical doctor	Nurse/midwife	Trained Traditional birth attendant	Untrained Traditional birth attendant	Relative/friend	Other/missing	No attendant	Total	Any skilled personnel *	Delivered in health facility **	Number of women who gave birth in preceding two years
Region											
Western	2.0	37.6	42.3	9.2	5.8	0.7	2.3	100.0	39.6	39.4	144
Central	5.9	37.7	35.1	7.1	8.7	1.9	3.6	100.0	43.6	45.0	105
Greater Accra	28.7	54.3	3.7	1.0	8.8	0.0	3.6	100.0	83.0	83.1	167
Volta	9.6	35.0	7.0	8.2	31.0	4.2	5.0	100.0	44.6	41.7	97
Eastern	8.3	30.5	26.5	16.0	15.4	0.0	3.3	100.0	38.8	39.5	182
Ashanti	14.5	46.0	23.5	6.6	6.7	0.0	2.8	100.0	60.5	59.6	207
Brong Ahafo	4.1	54.0	21.1	4.9	10.7	0.0	5.2	100.0	58.1	57.2	107
Northern	1.0	37.1	16.1	17.7	26.0	1.6	0.6	100.0	38.0	34.4	260
Upper East	2.2	41.8	17.3	10.8	19.8	5.8	2.2	100.0	44.1	42.3	58
Upper West	4.0	25.1	27.1	1.6	38.4	3.2	0.6	100.0	29.1	28.4	37
Residence											
Urban	19.6	57.4	10.2	3.1	6.4	0.5	2.8	100.0	76.9	77.1	468
Rural	3.3	32.2	27.2	13.0	19.9	1.5	2.8	100.0	35.5	33.9	897
Age											
15-19	4.7	31.9	21.3	10.5	20.1	1.8	9.6	100.0	36.6	41.7	89
20-24	4.4	44.2	25.2	10.6	13.6	1.0	1.0	100.0	48.6	49.0	317
15-24	4.5	41.5	24.4	10.6	15.0	1.2	2.9	100.0	46.0	47.4	406
25-29	10.6	44.4	16.8	8.9	16.9	1.4	0.9	100.0	55.1	51.8	380
30-34	9.1	42.8	23.7	7.7	11.1	1.1	4.4	100.0	51.9	49.6	269
35-39	13.8	34.5	22.1	10.5	15.6	0.6	3.0	100.0	48.3	47.7	210
40-44	12.5	34.9	22.4	7.6	16.9	0.7	5.1	100.0	47.3	47.3	75
45-49	(0.0)	(23.3)	(10.3)	(23.8)	(34.1)	(3.5)	(5.1)	(100.0)	(23.3)	(26.1)	25
Mother's/Caretaker's education											
None	3.6	27.8	20.5	16.8	24.7	2.4	4.2	100.0	31.4	29.7	503
Primary	6.7	40.9	25.4	7.9	16.4	0.3	2.4	100.0	47.6	45.9	300
Middle/JSS	11.9	51.1	22.5	4.7	7.1	0.6	2.1	100.0	63.0	63.4	465
Secondary+	28.2	59.2	9.0	0.9	2.6	0.0	0.0	100.0	87.4	85.2	97
Total	**8.9**	**40.8**	**21.4**	**9.6**	**15.3**	**1.1**	**2.8**	**100.0**	**49.7**	**48.7**	**1,365**

** MICS indicator 4; MDG indicator 17*
*** MICS indicator 5*
Figures in parenthesis '( )' are based on 25 – 49 unweighted cases.

IX. Child Development

It is well recognised that a period of rapid brain development occurs in the first 3-4 years of life, and the quality of home care is the major determinant of the child's development during this period. In this context, adult activities with children, presence of books in the home for the child, and the conditions of care are important indicators of quality of home care. *A World Fit for Children* goal is that "children should be physically healthy, mentally alert, emotionally secure, socially competent and ready to learn."

Information on a number of activities that support early learning was collected in the survey. These included the involvement of adults with children in the following activities: reading books or looking at picture books, telling stories, singing songs, taking children outside the home, compound or yard, playing with children, and spending time with children, naming, counting or drawing things, etc. Survey results are shown in Table CD.1.

An adult engaged in four or more activities that promote learning and school readiness with almost two-fifths (39 percent) of under-five children during the 3 days preceding the survey. On average, household members were engaged with children in three activities. The table also indicates that 47 percent of children (0-59 months) had their fathers involved in one or more activities that promote learning and school readiness. However, 30 percent of children (0-59 months) were living in a household without their biological fathers.

There are only slight differentials in terms of adult activities with children. The proportion of children less than 5 years (0-59 months) for whom an adult household member engaged in 4 or more activities is higher in urban (50 percent) than in the rural (34 percent) areas. The proportion of children with whom adults engaged in activities was greatest in the Western Region (59 percent) and lowest in the Northern Region (23 percent), while the proportion was 63 percent for children living in the richest household as opposed to those living in the poorest households (24 percent).

The three northern regions had the lowest proportion of children living in a household without their natural fathers, with Northern Region (9 percent) recording the least. Eastern and Central Regions recorded the highest (43 percent). The percentage of children living in a household without their natural fathers increases with the level of the mother's or caretaker's education.

Table CD.1: Family support for learning

Percentage of children aged 0-59 months for whom household members are engaged in activities that promote learning and school readiness, Ghana, 2006

	Percentage of children aged 0-59 months					
	For whom household members engaged in four or more activities that promote learning and school readiness *	Mean number of activities household members engage in with the child	For whom the father engaged in one or more activities that promote learning and school readiness **	Mean number of activities the father engage in with the child	Living in a household without their natural father	Number of children aged 0-59 months
Sex						
Male	41.0	3.3	48.1	1.1	29.7	1,789
Female	37.6	3.2	45.7	1.1	31.0	1,678
Region						
Western	58.5	3.8	44.9	1.0	35.9	347
Central	29.7	2.9	32.7	0.6	42.8	302
Greater Accra	57.3	4.0	54.3	1.6	37.2	448
Volta	28.0	3.0	41.5	0.7	27.2	261
Eastern	34.8	3.1	36.5	0.7	43.1	463
Ashanti	48.8	3.4	45.0	1.2	31.3	506
Brong Ahafo	33.2	3.4	47.6	1.1	35.3	311
Northern	23.4	2.8	64.3	1.4	8.5	579
Upper East	38.5	3.1	48.0	1.0	18.0	146
Upper West	37.6	2.7	33.0	0.6	16.1	105
Residence						
Urban	49.7	3.6	47.7	1.2	36.3	1,236
Rural	33.6	3.1	46.5	1.0	27.0	2,231
Age						
0-23 months	25.2	2.9	46.7	1.0	28.4	1,421
24-59 months	49.2	3.5	47.1	1.2	31.7	2,046
Mother's/Caretaker's education						
None	31.7	2.9	50.6	1.0	19.6	1,343
Primary	32.5	3.1	43.6	1.0	36.4	753
Middle/JSS	47.7	3.6	44.7	1.1	35.5	1,120
Secondary+	63.8	4.2	47.5	1.4	46.2	251
Father's education						
None	28.7	2.9	58.8	1.2	na	817
Primary	30.8	2.9	57.5	1.2	na	364
Middle/JSS	43.4	3.4	65.9	1.6	na	860
Secondary+	55.9	3.9	74.7	2.1	na	375
Father not in household	41.3	3.3	8.7	0.2	na	1,051
Wealth index quintiles						
Poorest	23.9	2.7	50.4	1.0	19.3	786
Second	34.4	3.0	42.1	0.9	30.4	830
Middle	38.6	3.2	41.5	0.9	40.3	684
Fourth	45.9	3.5	44.5	1.1	35.9	623
Richest	62.5	4.1	59.1	1.7	27.1	544
Total	**39.3**	**3.3**	**46.9**	**1.1**	**30.3**	**3,467**

** MICS indicator 46*

*** MICS indicator 47*

Exposure to books in early years not only provides the child with greater understanding of the nature of print, but may also give the child opportunities to see others reading, such as older siblings doing school work. The presence of books is important for later school performance and IQ scores.

In Ghana, 40 percent of children are living in households where at least 3 non-children's books are present (Table CD.2). However, only 13 percent of children aged 0-59 months have 3 or more children's books. The median number of books shows that most households do not have children's and non –children's books. Urban children appear to have more access to both types of books than those living in rural households. It is important to note that the median is zero if less than 50 percent of households have a book.

Table CD.2: Learning materials

Percentage of children aged 0-59 months living in households containing learning materials, Ghana, 2006

	Children living in households with:		Child has:		Child plays with:						
Background Characteristics	3 or more non-children's books*	Median number of non-children's books	3 or more children's books**	Median number of children's books	Household objects	Objects and materials found outside the home	Home-made toys	Toys that came from a store	No playthings mentioned	3 or more types of playthings ***	Number of children aged 0-59 months
Sex											
Male	41.2	0.0	13.0	0.0	49.1	57.1	35.7	38.7	17.5	28.6	1,789
Female	38.7	0.0	12.3	0.0	57.5	58.9	31.3	34.2	16.7	27.5	1,678
Region											
Western	44.4	0.0	17.4	0.0	45.9	42.9	37.2	32.1	21.6	20.1	347
Central	38.7	0.0	9.0	0.0	43.7	48.2	42.3	34.8	18.0	25.0	302
Greater Accra	68.8	10.0	26.4	0.0	41.7	58.1	22.4	73.3	11.2	35.2	448
Volta	23.1	0.0	10.5	0.0	74.4	70.3	35.6	26.8	12.4	31.6	261
Eastern	45.8	1.3	10.8	0.0	51.8	67.9	40.1	41.9	12.4	37.9	463
Ashanti	44.8	2.0	17.4	0.0	42.3	43.4	36.0	55.0	17.4	26.9	506
Brong Ahafo	28.0	0.0	8.2	0.0	54.8	67.6	37.5	30.4	18.8	28.8	311
Northern	24.2	0.0	2.9	0.0	68.8	66.7	26.8	10.2	21.3	24.6	579
Upper East	35.3	0.0	12.1	0.0	70.4	68.7	23.2	8.1	18.0	20.1	146
Upper West	29.6	0.0	7.8	0.0	44.0	38.2	38.8	11.4	26.6	14.7	105
Residence											
Urban	55.1	3.0	21.2	0.0	47.5	52.0	31.2	56.7	15.3	31.7	1,236
Rural	31.6	0.0	7.9	0.0	56.3	61.2	34.9	25.3	18.1	26.1	2,231
Age											
0-23 months	37.6	0.0	7.6	0.0	40.5	36.3	20.8	33.6	34.3	17.8	1,421
24-59 months	41.7	0.0	16.2	0.0	62.0	73.0	42.4	38.5	5.2	35.2	2,046
Mother's/Caretaker's education											
None	23.2	0.0	5.6	0.0	61.2	62.9	33.4	18.0	19.6	25.5	1,343
Primary	38.2	0.0	9.9	0.0	54.7	58.7	36.7	33.5	17.2	30.1	753
Middle/JSS	51.6	3.0	18.3	0.0	45.3	54.0	33.2	52.2	16.1	30.1	1,120
Secondary +	83.5	10.0	33.3	1.0	40.9	46.6	26.8	74.4	8.2	26.8	251
Wealth index quintiles											
Poorest	18.1	0.0	4.5	0.0	63.8	63.5	29.1	11.0	19.5	20.4	786
Second	28.9	0.0	6.2	0.0	54.3	60.4	38.2	25.2	19.2	27.7	830
Middle	37.2	0.0	9.9	0.0	52.3	60.6	38.2	39.0	15.9	31.1	684
Fourth	52.2	3.0	14.4	0.0	48.8	52.4	34.0	47.4	18.6	31.5	623
Richest	78.1	10.0	36.0	1.0	42.2	49.1	26.7	74.9	10.3	32.0	544
Total	**40.0**	**0.0**	**12.7**	**0.0**	**53.2**	**57.9**	**33.6**	**36.5**	**17.1**	**28.1**	**3,467**

** MICS indicator 49*

*** MICS indicator 48*

**** MICS indicator 50*

Over half (55 percent) of under-5 children living in urban areas live in households with more than 3 non-children's books, while the figure is 32 percent in rural households. The proportion of under-5 children who have 3 or more children's books is 21 percent in urban areas, compared to 8 percent in rural areas. The presence of both non-children and children's books is positively correlated with the child's age; children aged 24-59 months are twice as likely to have 3 or more children's books (16 percent) than children aged 0-23 months (8 percent).

Table CD.2 also shows that 28 percent of children aged 0-59 months had 3 or more playthings in their homes, while 17 percent had none of the playthings asked to the mothers/caretakers (Table CD.2). The playthings asked about in the MICS included household objects, homemade toys, toys that came from a store, and objects and materials found outside the home. Only slightly more than a third of children (37 percent) play with toys that come from a store, while 34 percent of children play with homemade toys and 58 percent play with objects and materials found outside the home. The proportion of male children (29 percent) who have 3 or more playthings is almost the same as female children (28 percent).

No marked differentials are observed in terms of mother's or caretaker's education in respect to having 3 or more playthings.

Apart from Upper West Region (15 percent), differentials are small by socio-economic status of households and regions. The only background variable which appears to have a strong correlation with the number of playthings children have is the age of the child, a somewhat expected result. It is also worth noting that a higher proportion of children aged 0-23 months have no playthings (34 percent) than those aged 24-59 months (5 percent).

Leaving children alone or in the presence of other young children is known to increase the risk of accidents. In the MICS, two questions were asked to find out whether children aged 0-59 months were left alone during the week preceding the interview, and whether children were left in the care of other children under 10 years of age.

Table CD.3 shows that 20 percent of children aged 0-59 months were left in the care of other children, while 10 percent were left alone during the week preceding the interview. Combining the two care indicators, it is calculated that one quarter (25 percent) of children were left with inadequate care during the week preceding the survey. Differences were observed by the sex of the child and by rural-urban residence. The data show that female children under 5 were more likely to be left with inadequate care than male children.

A higher proportion of rural children (29 percent) were left with inadequate care compared to only 17 percent with urban children. Inadequate care was more prevalent among children whose mothers have no education (33 percent), as opposed to children whose mothers or caretakers had at least some secondary education (13 percent).

Children aged 24-59 months were more likely to be left with inadequate care (30 percent) than those aged 0-23 months (18 percent). Regional differentials exist in respect to children left with inadequate care in the past week. Upper East Region (44 percent) recorded the highest proportion with Greater Accra and Central regions reporting the lowest figures (9 percent each). Furthermore, children of wealthier parents were less likely (12 percent) to experience inadequate care than those in the lower wealth index quintiles.

Table CD.3: Children left alone or with other children

Percentage of children aged 0-59 months left in the care of other children under the age of 10 years or left alone in the past week, Ghana, 2006

Background Characteristics	Percentage of children aged 0-59 months: Left in the care of children under the age of 10 years in past week	Left alone in the past week	Left with inadequate care in past week*	Number of children aged 0-59 months
Sex				
Male	18.6	9.4	22.2	1,789
Female	22.3	11.3	27.5	1,678
Region				
Western	11.9	8.2	16.4	347
Central	7.1	2.6	9.0	302
Greater Accra	6.0	4.1	9.2	448
Volta	15.9	3.6	16.4	261
Eastern	16.3	0.6	16.9	463
Ashanti	23.8	17.1	32.6	506
Brong Ahafo	30.2	17.2	39.6	311
Northern	33.2	20.2	38.9	579
Upper East	40.0	20.9	43.6	146
Upper West	33.0	3.9	34.3	105
Residence				
Urban	12.7	6.5	16.5	1,236
Rural	24.6	12.5	29.4	2,231
Age				
0-23 months	14.3	6.5	18.0	1,421
24-59 months	24.6	13.0	29.5	2,046
Mother's/Caretaker's education				
None	29.0	13.7	33.3	1,343
Primary	16.8	8.8	21.0	753
Middle/JSS	14.6	9.0	19.9	1,120
Secondary +	10.9	2.9	12.7	251
Wealth index quintiles				
Poorest	32.1	15.8	36.4	786
Second	21.7	11.4	26.7	830
Middle	18.6	7.6	23.0	684
Fourth	14.9	10.0	20.7	623
Richest	10.1	4.8	12.1	544
Total	**20.4**	**10.3**	**24.8**	**3,467**

** MICS indicator 51*

X. Education

The education system in Ghana has undergone a number of changes during recent years. An educational reform transforming Junior Secondary Schools (JSS) and Senior Secondary Schools (SSS) into Junior and Senior High School is among the latest initiatives implemented after the completion of the MICS fieldwork. Most importantly, school fees have been abolished and have increased enrolment rates substantially. While the enrolment figures are of high quality as reported through the Education Management System, household surveys are good tools to critically assess attendance rates.

The official school ages for compulsory schooling are as follows: kindergarten, 2 grades, 4-5 year olds; primary school, 6 grades, 6-11 years old; Junior Secondary School, 3 grades, 12-14 years old; and Senior Secondary School, 3 grades, 15-17 years old.

Pre-School Attendance and School Readiness

Attendance at pre-school classes in an organised learning or child education program is important for the readiness of children go to school. One of *the World Fit for Children* goals is the promotion of early childhood education.

Fifty-two percent of children aged 36-59 months in Ghana are attending pre-school (Table ED.1). Urban-rural and regional differentials are important – the figure is as high as 71 percent in urban areas, compared to 41 percent in rural areas. Among children aged 36-59 months, attendance in pre-school is highest in the Greater Accra Region (81 percent), and lowest in the Northern Region (30 percent). The figure shows a slight difference between boys and girls. There are however, marked variations by socioeconomic status. 87 percent of children living in the richest households attend pre-school, while the figure drops to 23 percent in the poorest households. Mother's or caretaker's education is also related to early childhood education; 84 percent of children whose mothers have attained at least secondary level attend early childhood education, compared to 35 percent of children whose mothers / caretakers have no education.

Table ED.1: Early childhood education

Percentage of children aged 36-59 months who are attending some form of organised early childhood education programme and percentage of first graders who attended pre-school, Ghana, 2006

Background characteristics	Percentage of children aged 36-59 months currently attending early childhood education*	Number of children aged 36-59 months	Percentage of children attending first grade who attended pre-school program in previous year**	Number of children attending first grade
Sex				
Male	50.0	708	85.5	105
Female	53.3	671	88.2	90
Region				
Western	46.5	131	*	19
Central	63.9	137	*	13
Greater Accra	80.6	176	(91.5)	41
Volta	36.8	108	(65.9)	27
Eastern	45.9	173	*	22
Ashanti	63.9	198	*	21
Brong Ahafo	50.1	145	*	13
Northern	29.8	206	(72.1)	27
Upper East	35.1	62	*	8
Upper West	(48.2)	42	*	3
Residence				
Urban	71.0	496	93.1	86
Rural	40.8	883	81.7	109
Age of child				
36-47 months	43.2	718	na	na
48-59 months	60.8	661	na	na
6 years	na	na	87.4	187
Mother's/Caretaker's education				
None	34.5	577	85.0	70
Primary	51.4	285	(75.9)	38
Middle/JSS	67.6	414	94.3	68
Secondary +	83.9	103	*	19
Wealth index quintiles				
Poorest	22.9	317	(74.2)	29
Second	41.0	330	(87.7)	39
Middle	52.1	274	(84.3)	41
Fourth	70.8	228	(85.9)	38
Richest	87.0	230	(96.3)	47
Total	**51.6**	**1,379**	**86.7**	**195**

** MICS indicator 52*
*** MICS indicator 53*
An asterisk indicates figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

The indicators for primary and secondary school attendance include:

- Net intake rate in primary education
- Net primary school attendance rate
- Net secondary school attendance rate
- Net primary school attendance rate of children of secondary school age
- Female to male education ratio (or gender parity index - GPI)

Table ED.1 also shows the proportion of children in the first grade of primary school who attended pre-school the previous year, an important indicator of school readiness. Overall, 87 percent of children who are currently attending first grade were attending pre-school the previous year. Ninety-three percent of children in first grade in urban areas attended pre-school the previous year, compared to 82 percent among children living in rural areas.

Primary and Secondary School Participation

Universal access to basic education and the achievement of primary education by the world's children is one of the most important goals of the Millennium Development Goals and *A World Fit for Children*. Education is a vital prerequisite for combating poverty, empowering women, protecting children from hazardous and exploitative labour and sexual exploitation, promoting human rights and democracy, protecting the environment, and influencing population growth.

Box ED.1. Estimation of primary school age

The MICS fieldwork was conducted from August to October, thus covering part of the annual school break, and, more importantly, the beginning of a new school-year.

The data processing team has adjusted the enrolment figures to accomodate this and other issues.

One adjustment from actual data is an estimation of the number of 6 year olds starting school. The issue is that some 5 year olds in fact will start primary one, but are not captured through the international measurement standard. This is due to a number of reasons, but is naturally adjusted by the number of 6 year olds entering Primary 2 at the same time.

The indicators of school progression include:

- Survival rate to grade five
- Transition rate to secondary school
- Net primary completion rate

Table ED.2: Primary school entry

Percentage of children of primary school entry age attending grade 1, Ghana, 2006

Background characteristics	Percentage of children of primary school entry age currently attending grade 1*	Number of children of primary school entry age
Sex		
Male	42.4	366
Female	44.3	338
Region		
Western	(29.9)	46
Central	50.7	77
Greater Accra	62.4	83
Volta	35.4	62
Eastern	54.6	73
Ashanti	43.4	104
Brong Ahafo	46.8	68
Northern	29.2	134
Upper East	(44.0)	32
Upper West	(35.4)	26
Residence		
Urban	53.0	244
Rural	38.2	460
Mother's/Caretaker's education		
None	34.9	343
Primary	39.4	136
Middle/JSS	59.2	186
Secondary +	(55.1)	40
Wealth index quintiles		
Poorest	22.6	182
Second	43.1	174
Middle	49.1	145
Fourth	51.3	108
Richest	65.2	96
Total	**43.3**	**704**

** MICS indicator 54*
Table is based on estimated age as of the beginning of the school year.
Figures in parentheses are based on 25-49 unweighted cases.

Of children who are of primary school entry age (estimated at age 6, see Box ED.1), 43 percent are attending the first grade of primary school (Table ED.2). Large differentials are present by region and place of residence. The proportion ranges from 62 percent in Greater Accra Region to 29 percent in the Northern Region. A larger proportion of children of school entry age are attending grade 1 in urban areas (53 percent) than in the rural areas (38 percent). A positive relationship with socioeconomic status is observed. In the richest households, the proportion is 65 percent, while it is 23 percent among children living in the poorest households.

Table ED.3 provides the percentage of children of primary school age attending primary or secondary school. The majority of children of primary school age are attending school (75 percent). However, 25 percent of primary-school age children are not in primary school. Generally, there is no difference regarding the net attendance ratio by sex. The regional distribution shows that the net attendance ratio is highest in Greater Accra (87 percent for both sexes) and lowest in Northern region (55 for both sexes).

Table ED.3: Primary school net attendance ratio

Percentage of children of primary school age attending primary school school (NAR), Ghana, 2006.

Background characteristics	Male		Female		Total*	
	Net attendance ratio	Number of children	Net attendance ratio	Number of children	Net attendance ratio	Number of children
Region						
Western	83.6	216	80.7	188	82.2	404
Central	73.1	180	78.2	163	75.6	343
Greater Accra	86.9	235	86.8	254	86.8	489
Volta	72.3	162	69.1	152	70.8	314
Eastern	84.2	223	84.4	236	84.3	460
Ashanti	84.1	321	83.2	303	83.6	624
Brong Ahafo	75.0	218	80.0	164	77.1	382
Northern	57.0	337	52.2	336	54.6	672
Upper East	69.4	113	71.0	109	70.2	222
Upper West	56.0	67	65.2	61	60.4	128
Residence						
Urban	84.4	723	84.4	753	84.4	1,476
Rural	70.6	1,349	69.6	1,212	70.1	2,561
Age at beginning of school year						
6 years	47.9	366	48.8	338	48.3	704
7 years	65.5	311	71.6	351	68.7	662
8 years	80.1	326	78.5	313	79.3	639
9 years	82.5	391	81.0	341	81.8	732
10 years	88.8	268	87.5	258	88.1	526
11 years	88.4	409	86.7	364	87.6	774
Mother's/Caretaker's education						
None	65.0	956	64.6	939	64.8	1,895
Primary	75.8	385	80.8	349	78.2	733
Middle/JSS	88.6	600	86.6	535	87.7	1,135
Secondary +	89.9	130	89.0	143	89.5	273
Wealth index quintiles						
Poorest	54.5	492	49.1	446	51.9	938
Second	73.2	476	72.6	405	72.9	881
Middle	78.3	432	84.0	401	81.0	833
Fourth	86.6	367	83.9	379	85.2	745
Richest	95.2	305	93.1	335	94.1	640
Total	**75.4**	**2,071**	**75.3**	**1,966**	**75.3**	**4,037**

** MICS indicator 55; MDG indicator 6*

Table is based on estimated age as of the beginning of the school year.

Children of primary school age living in urban areas (84 percent) are more likely to attend primary school than rural children (70 percent). Similarly, children whose mothers/caretakers have at least a secondary education are more likely to attend primary school than those mothers/caretakers that have primary education or no education. The richer the household, the more likely is the child to attend primary school. It is however, surprising that only 94 percent of primary school age children in the richest households are attending primary school.

The secondary school net attendance ratio is presented in Table ED.4. Only 45 percent of children of secondary school age are attending secondary school or higher education. Of the

remaining 55 percent, some are either out of school or attending primary school (Table ED.4A). The children of secondary school age in urban areas (57 percent) are more likely to attend secondary school than children in rural areas (36 percent). The attendance of secondary or higher education by children of secondary school age increases by wealth.

Table ED.4: Secondary School (JSS, SSS) net attendance ratio

Percentage of children of secondary school age attending secondary or higher education (NAR), Ghana, 2006

Background characteristics	Male		Female		Total	
	Net attendance ratio	Number of children	Net attendance ratio	Number of children	Net attendance ratio*	Number of children
Region						
Western	45.6	177	56.8	199	51.5	377
Central	48.5	157	47.4	136	48.0	292
Greater Accra	67.1	263	58.3	313	62.4	577
Volta	43.4	152	28.3	134	36.3	286
Eastern	44.2	259	45.3	214	44.7	473
Ashanti	57.2	272	48.5	276	52.8	548
Brong Ahafo	37.1	170	41.2	189	39.3	359
Northern	29.8	289	27.8	209	29.0	499
Upper East	22.9	103	32.1	69	26.6	171
Upper West	(24.0)	44	(28.8)	35	26.1	79
Residence						
Urban	59.3	745	55.7	840	57.4	1,585
Rural	36.0	1,142	35.2	934	35.7	2,076
Age at beginning of school year						
12 years	23.6	322	23.0	327	23.3	650
13 years	36.0	319	42.5	348	39.4	667
14 years	46.2	336	52.0	295	48.9	631
15 years	56.9	294	63.5	292	60.2	586
16 years	60.4	273	56.3	216	58.6	489
17 years	51.1	343	38.4	295	45.2	638
Wealth index quintiles						
Poorest	17.9	410	15.5	286	16.9	696
Second	37.7	375	33.4	302	35.8	677
Middle	46.3	412	41.5	380	44.0	792
Fourth	54.4	334	52.3	371	53.3	705
Richest	74.7	355	69.0	436	71.5	791
Total	**45.2**	**1,887**	**44.9**	**1,774**	**45.1**	**3,661**

** MICS indicator 56; MDG indicator 6*

Table is based on estimated age as of the beginning of the school year.
An asterisk '' indicates figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses '( )' are based on 25-49 unweighted cases.*

The primary school net attendance ratio of children of secondary school age is presented in Table ED.4A. Twenty-nine percent of children of secondary school age are attending primary school. The percentage is 31 percent for males and 27 percent for females. In rural areas the percentage of children of secondary school age attending primary school is higher (36 percent for boys and 31 percent for girls) compared to those of urban areas (24 percent for boys and 21 percent for girls).

Table ED.4A: Secondary School (JSS, SSS) age children attending primary school

Percentage of children of secondary school age attending primary school, Ghana, 2006

Background characteristics	Male		Female		Total	
	Net attendance ratio	Number of children	Net attendance ratio	Number of children	Net attendance ratio	Number of children
Region						
Western	33.0	177	25.3	199	28.9	377
Central	32.2	157	21.8	136	27.4	292
Greater Accra	16.7	263	20.7	313	18.9	577
Volta	38.1	152	40.7	134	39.4	286
Eastern	41.3	259	26.8	214	34.7	473
Ashanti	29.0	272	27.7	276	28.4	548
Brong Ahafo	31.6	170	27.2	189	29.3	359
Northern	26.1	289	23.3	209	24.9	499
Upper East	40.2	103	37.8	69	39.2	171
Upper West	(34.8)	44	(40.0)	35	37.1	79
Residence						
Urban	23.9	745	21.4	840	22.6	1,585
Rural	35.5	1,142	31.4	934	33.6	2,076
Age at beginning of school year						
12 years	61.2	322	60.2	327	60.7	650
13 years	50.3	319	41.0	348	45.4	667
14 years	34.4	336	24.9	295	30.0	631
15 years	17.4	294	11.5	292	14.4	586
16 years	12.2	273	8.4	216	10.5	489
17 years	7.4	343	2.6	295	5.2	638
Wealth index quintiles						
Poorest	35.9	410	29.6	286	33.3	696
Second	39.4	375	35.3	302	37.5	677
Middle	34.5	412	31.1	380	32.9	792
Fourth	30.1	334	25.5	371	27.7	705
Richest	12.9	355	15.9	436	14.5	791
Total	**30.9**	**1,887**	**26.7**	**1,774**	**28.9**	**3,661**

Table based on estimated age as of the beginning of the school year.
638 cases are missing from the background variable "Mother's education".
Figures in parentheses '( )' are based on 25-49 unweighted cases.

The percentage of children entering first grade who eventually reach grade 5 is presented in Table ED.5. The indicator is calculated as a product of probabilities of the surveyed yearly transition rates. Of all children starting grade one, the majority (90 percent) eventually reach grade five. This number includes children who repeat grades and eventually move up to reach grade five. The percentage of children entering first grade of primary school who eventually reach grade 5 is almost the same for males and females (91 and 89 percent) and for urban areas and rural areas (92 and 89 percent). The regional distribution shows that Western (99 percent) has the highest, while the lowest is in Brong Ahafo (68 percent).

Table ED.5: Children reaching grade 5

Percentage of children entering first grade of primary school who eventually reach grade 5, Ghana, 2006.

Background characteristics	Percent attending 2nd grade who were in 1st grade last year	Percent attending 3rd grade who were in 2nd grade last year	Percent attending 4th grade who were in 3rd grade last year	Percent attending 5th grade who were in 4th grade last year	Percent who reach grade 5 of those who enter 1st grade*
Sex					
Male	95.8	98.7	97.6	98.4	90.8
Female	98.1	97.5	97.5	95.5	89.0
Region					
Western	99.3	100.0	100.0	100.0	99.3
Central	93.0	96.4	94.7	97.1	82.5
Greater Accra	97.4	100.0	98.4	96.6	92.5
Volta	97.6	100.0	99.0	98.1	94.8
Eastern	97.9	100.0	98.8	97.0	93.8
Ashanti	99.2	98.7	96.4	97.6	92.1
Brong Ahafo	86.0	91.8	95.0	90.3	67.8
Northern	100.0	96.7	97.0	100.0	93.8
Upper East	99.2	99.2	98.8	98.1	95.3
Upper West	96.1	100.0	98.5	97.1	91.9
Residence					
Urban	98.4	98.5	97.6	97.0	91.7
Rural	96.1	98.0	97.5	97.1	89.2
Wealth index quintiles					
Poorest	91.8	94.9	97.7	92.3	78.6
Second	97.8	98.2	96.3	96.4	89.2
Middle	99.1	99.4	98.0	97.4	94.1
Fourth	98.3	98.2	98.2	97.7	92.6
Richest	98.1	100.0	97.3	100.0	95.5
Total	96.9	98.2	97.5	97.0	90.1

** MICS indicator 57; MDG indicator 7*

The net primary school completion rate and transition rate to secondary education are presented in Table ED.6. Only 24 percent of the children of primary completion age[6] were attending the last grade of primary education. The primary school completion rate shows a slight difference between males (26 percent) and females (22 percent). The net primary school completion rate is 37 percent for urban and 16 percent for rural.

Ninety-eight percent of the children who successfully completed the last grade of primary school were found to be attending the first grade of JSS. The figures show a very slight difference between female (99 percent) and male (97 percent), and no difference between urban and rural (98 percent).

[6] The completion age is 11 years. This value should be distinguished from the gross primary completion ratio which includes children of any age attending the last grade of primary.

Table ED.6: Primary school completion and transition to secondary education				
Primary school completion rate and transition rate to secondary education, Ghana, 2006				
Background characteristics	Net primary school completion rate*	Number of children of primary school completion age	Transition rate to secondary education**	Number of children who were in the last grade of primary school the previous year
Sex				
Male	25.9	409	96.7	281
Female	22.3	364	98.5	230
Region				
Western	24.3	87	100.0	56
Central	19.8	59	100.0	51
Greater Accra	44.2	106	98.2	82
Volta	30.1	59	(100.0)	31
Eastern	22.5	94	92.8	75
Ashanti	29.2	118	96.5	87
Brong Ahafo	18.3	71	98.5	55
Northern	13.5	111	98.7	53
Upper East	(10.9)	43	*	14
Upper West	*	23	*	7
Residence				
Urban	36.6	315	97.6	237
Rural	15.8	459	97.5	274
Wealth index quintiles				
Poorest	6.1	153	94.3	54
Second	21.4	159	94.1	108
Middle	14.3	169	99.3	114
Fourth	40.2	150	98.9	95
Richest	41.8	142	99.1	140
Total	**24.2**	**774**	**97.5**	**511**

** MICS indicator 59; MDG indicator 7b*

*** MICS indicator 58*

Table is based on estimated age as of the beginning of the school year.

An asterisk '' indicates figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses '( )' are based on 25-49 unweighted cases.*

The ratio of girls to boys attending primary and JSS education is provided in Table ED.7. These ratios are better known as the Gender Parity Index (GPI). The ratios are obtained from net attendance ratios rather than gross attendance ratios. Gross attendance ratios often provide an erroneous description of the GPI as the majority of over-aged children attending primary education tend to be boys. However, as shown by the data presented in Table ED.4A, gender differential is diminishing.

Table ED.7: Education gender parity

Ratio of girls to boys attending primary education and ratio of girls to boys attending secondary education, Ghana, 2006

Background characteristics	Primary school net attendance ratio (NAR)		Gender parity index (GPI) for primary school NAR*	Secondary school net attendance ratio (NAR)		Gender parity index (GPI) for secondary school NAR*
	Girls	Boys		Girls	Boys	
Region						
Western	80.7	83.6	0.97	56.8	45.6	1.24
Central	78.2	73.1	1.07	47.4	48.5	0.98
Greater Accra	86.8	86.9	1.00	58.3	67.1	0.87
Volta	69.1	72.3	0.96	28.3	43.4	0.65
Eastern	84.4	84.2	1.00	45.3	44.2	1.02
Ashanti	83.2	84.1	0.99	48.5	57.2	0.85
Brong Ahafo	80.0	75.0	1.07	41.2	37.1	1.11
Northern	52.2	57.0	0.92	27.8	29.8	0.93
Upper East	71.0	69.4	1.02	32.1	22.9	1.40
Upper West	65.2	56.0	1.16	28.8	24.0	1.20
Residence						
Urban	84.4	84.4	1.00	55.7	59.3	0.94
Rural	69.6	70.6	0.99	35.2	36.0	0.98
Wealth index quintiles						
Poorest	49.1	54.5	0.90	15.5	17.9	0.86
Second	72.6	73.2	0.99	33.4	37.7	0.89
Middle	84.0	78.3	1.07	41.5	46.3	0.90
Fourth	83.9	86.6	0.97	52.3	54.4	0.96
Richest	93.1	95.2	0.98	69.0	74.7	0.92
Total	**75.3**	**75.4**	**1.00**	**44.9**	**45.2**	**0.99**

** MICS indicator 61; MDG indicator 9*

Table based on estimated age as of the beginning of the school year.

Table ED.7 shows that the gender parity index for primary and JSS are both high and almost the same (1.00 and 0.99). This indicates that there is no difference in school attendance between boys and girls in both primary and JSS. The gender parity index for primary school shows slight differences for background characteristics, particularly with regard to the poorest quintile.

Literacy

One of *the World Fit for Children* goals is to attain adult literacy. Adult literacy is also an MDG indicator, relating to both men and women. In MICS, literacy was assessed on the ability of women and men to read a short simple statement or on school attendance. The questions on literacy were asked only of respondents who had not attended school or attended primary or middle/JSS. The percent literate is presented in Table ED.8 for respondents aged 15-24 (see Table HH.4A for 15-49 year olds).

Table ED.8: Adult literacy

Percentage of women and men aged 15-24 years that are literate, Ghana 2006

Background characteristic	Women			Men		
	Percentage literate *	Percentage not known	Number aged 15-24 years	Percentage literate *	Percentage not known	Number aged 15-24 years
Region						
Western	70.8	0.0	238	86.0	0.0	71
Central	68.4	0.0	187	74.4	0.0	63
Greater Accra	87.6	0.0	464	89.7	0.0	125
Volta	58.1	1.7	168	65.4	1.4	65
Eastern	65.7	0.0	296	69.4	0.0	96
Ashanti	75.1	0.0	344	90.2	0.8	122
Brong Ahafo	72.2	0.0	224	85.7	0.0	76
Northern	36.9	0.0	261	49.7	0.0	100
Upper East	42.3	0.0	72	(49.5)	(1.7)	30
Upper West	(37.9)	(0.0)	39	*	*	14
Residence						
Urban	81.5	0.3	1,098	89.7	0.6	333
Rural	55.4	0.0	1,195	64.4	0.1	428
Education						
None	0.0	0.0	295	0.0	0.7	73
Primary	12.1	0.6	502	20.3	0.0	143
Middle/JSS	100.0	0.0	975	100.0	0.5	363
Secondary+	100.0	0.0	520	100.0	0.0	182
Age						
15-19	71.0	0.2	1,218	73.3	0.0	471
20-24	64.3	0.0	1,075	78.9	0.8	290
Wealth index quintiles						
Poorest	30.2	0.0	340	38.4	0.4	136
Second	51.7	0.0	384	63.4	0.0	130
Middle	64.2	0.2	462	80.7	0.0	158
Fourth	80.0	0.4	514	88.7	1.0	184
Richest	92.3	0.0	593	97.3	0.0	153
Total	67.9	0.1	2,293	75.4	0.3	761

** MICS Indicator 60; MDG Indicator 8*

An asterisk '' indicates figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses '( )' are based on 25-49 unweighted cases.*

It seems that young women are closing the gap in literacy levels. While 75 percent of men aged 15-24 are literate, women follow closely behind at 68 percent. There is a strong relationship between wealth and literacy levels; 92 percent of women and 97 percent of men categorised in the richest wealth quintile are literate, compared with only 30 percent of women and 38 percent of men in the poorest wealth quintile.

More than four in five women and men in urban areas are literate, compared to only just above half of women and less than two-thirds of men in the rural areas. Regional variations in the level of literacy are marked, ranging from a high of 88 percent among women in Greater Accra to a low of 37 percent among women in the Northern Region. Nine in ten men in Ashanti Region are literate, compared with only half in the Northern and Upper East Regions.

XI. Child Protection

Birth Registration

The Convention on the Rights of the Child states that every child has the right to a name and a nationality and the right to protection from being deprived of his or her identity. Birth registration is a fundamental means of securing these rights for children. *The World Fit for Children* states the goal to develop systems to ensure the registration of every child at or shortly after birth, and fulfil his or her right to acquire a name and a nationality, in accordance with national laws and relevant international instruments. The indicator is the percentage of children under five years of age whose birth is registered.

The births of 51 percent of children under five years in Ghana have been registered (Table CP.1). There are no significant variations in birth registration across sex of children; however, there is a significant discrepancy between urban and rural, at 69 and 42 percent registration respectively. Children in Greater Accra are more likely to be registered than children in all other regions. However, only Eastern Region is remarkably low with just 38 percent of births registered. The likelihood of birth registration is skewed towards higher maternal educational level and household wealth index. Only 41 percent of births to mothers with no education are registered.

Asked to identify reasons for not registering births, respondents identify cost of registration, travel distance, and lack of knowledge as main reasons. Cost is particularly dominant in urban areas, whereas cost, travel distance and lack of knowledge play equally significant roles in rural areas.

Child Labour

Article 32 of the Convention on the Rights of the Child says: "States Parties recognize the right of the child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development...". *The World Fit for Children* mentions nine strategies to combat child labour and the MDGs call for the protection of children against exploitation. In the MICS questionnaire, a number of questions addressed the issue of child labour, that is, children 5-14 years of age involved in labour activities. A child is considered to be involved in child labour activities at the moment of the survey if during the week preceding the survey the following are observed:

- Ages 5-11: at least one hour of economic work or 28 hours of domestic work per week.
- Ages 12-14: at least 14 hours of economic work or 28 hours of domestic work per week.

This definition allows differentiation between child labour and child work to identify the type of work that should be eliminated. As such, the estimate provided here is a minimum of the prevalence of child labour since some children may be involved in hazardous labour activities for a number of hours that could be less than the numbers specified in the criteria explained above. Table CP.2 presents the results regarding child labour by the type of work. Percentages do not add up to the total child labour as children may be involved in more than one type of work.

Table CP.1: Birth registration

Percent distribution of children aged 0-59 months by whether birth is registered and main reasons for non-registration among those not registered, Ghana, 2006

Background characteristic	Birth is registered *	Don't know if birth is registered	Number of children aged 0-59 months	Birth is not registered because: Costs too much	Must travel too far	Didn't know child should be registered	Late, didn't want to pay fine	Doesn't know where to register	Other	Don't know	Missing	Total	Number of children aged 0-59 months without birth registration
Sex													
Male	52.2	0.7	1,789	27.0	20.7	18.5	2.9	12.7	13.3	4.5	0.4	100.0	868
Female	50.7	0.8	1,678	28.6	20.3	21.2	3.7	11.9	10.3	3.2	0.8	100.0	830
Region													
Western	48.3	0.2	347	24.1	21.8	20.8	12.0	14.4	2.6	4.3	0.0	100.0	180
Central	52.3	0.6	302	27.2	21.4	14.9	9.4	12.0	13.4	0.9	0.7	100.0	144
Greater Accra	71.8	0.7	448	36.9	23.0	14.2	3.3	6.7	9.9	4.8	1.3	100.0	127
Volta	46.5	1.9	261	19.6	22.3	7.4	0.0	13.9	24.9	12.0	0.0	100.0	141
Eastern	38.3	0.8	463	28.0	13.3	18.5	0.6	12.4	23.5	2.4	1.3	100.0	288
Ashanti	56.2	0.5	506	32.2	20.0	16.9	1.5	11.1	15.7	2.8	0.0	100.0	224
Brong Ahafo	49.4	0.7	311	35.5	21.7	17.7	5.8	10.4	6.6	2.2	0.0	100.0	158
Northern	46.6	0.7	579	20.1	25.3	30.0	0.5	16.8	3.2	3.8	0.4	100.0	313
Upper East	53.2	2.0	146	38.6	21.1	23.1	0.4	5.0	3.5	5.9	2.6	100.0	70
Upper West	50.1	0.3	105	30.7	11.3	38.2	0.5	8.9	7.1	2.5	0.7	100.0	52
Residence													
Urban	68.5	0.5	1,236	34.6	15.2	15.7	4.8	8.6	17.4	3.3	0.4	100.0	393
Rural	42.0	0.9	2,231	25.8	22.1	21.0	2.8	13.4	10.2	4.1	0.6	100.0	1,305
Age													
0-11 months	44.1	0.0	715	21.1	22.3	19.4	2.0	11.9	20.3	2.4	0.5	100.0	404
12-23 months	59.8	0.2	706	25.5	22.1	23.4	3.1	10.5	12.3	1.6	1.5	100.0	289
24-35 months	57.1	1.3	667	30.1	16.7	19.8	4.9	12.6	10.2	5.1	0.6	100.0	288
36-47 months	51.9	0.6	718	29.4	22.6	18.8	2.9	14.5	6.4	5.3	0.1	100.0	347
48-59 months	44.3	1.8	661	33.5	18.2	18.5	3.9	11.8	8.5	5.1	0.4	100.0	370
Mother's/Caretaker's education													
None	41.4	0.8	1,343	25.8	20.2	27.2	2.6	14.5	5.6	3.6	0.4	100.0	792
Primary	48.0	1.3	753	27.9	20.1	13.2	3.6	13.6	16.7	4.4	0.5	100.0	395
Middle/JSS	59.5	0.5	1,120	30.2	20.3	14.6	4.2	8.2	16.9	4.4	1.1	100.0	458
Secondary+	79.4	0.0	251	35.2	29.4	3.9	1.7	5.6	24.3	0.0	0.0	100.0	53
Wealth index quintiles													
Poorest	30.3	0.7	786	24.2	25.2	23.8	2.1	14.8	5.9	3.6	0.4	100.0	549
Second	39.7	0.7	830	28.5	18.1	23.6	3.3	10.4	12.9	3.0	0.2	100.0	503
Middle	57.0	1.0	684	30.4	18.9	13.5	3.4	11.3	14.6	6.7	1.2	100.0	300
Fourth	62.1	0.8	623	33.7	15.6	12.5	6.2	11.8	16.7	2.9	0.7	100.0	236
Richest	80.7	0.4	544	22.7	22.9	15.6	2.2	12.3	19.1	4.0	1.2	100.0	109
Total	**51.4**	**0.8**	**3,467**	**27.8**	**20.5**	**19.8**	**3.3**	**12.3**	**11.8**	**3.9**	**0.6**	**100.0**	**1,698**

** MICS Indicator 62*

Table CP.2: Child labour

Percentage of children aged 5-14 years who are involved in child labour activities by type of work, Ghana, 2006

Background characteristic	Working outside household		Household chores for 28+ hours/week	Working for family business	Total child labour *	Number of children aged 5-14 years
	Paid work	Unpaid work				
Sex						
Male	3.3	5.8	1.5	27.6	33.8	3,464
Female	3.2	6.9	2.3	26.3	34.0	3,350
Region						
Western	8.1	1.7	1.5	23.0	29.0	701
Central	6.3	0.2	1.1	17.9	23.2	563
Greater Accra	3.4	11.7	1.7	6.7	21.6	853
Volta	3.2	4.0	4.5	19.0	25.3	562
Eastern	2.5	6.8	1.7	29.1	37.0	768
Ashanti	1.3	7.4	0.8	24.9	31.2	1,044
Brong Ahafo	0.7	1.3	0.8	38.9	40.4	656
Northern	2.2	8.7	1.0	37.7	43.6	1,102
Upper East	2.9	13.3	5.0	46.7	53.5	359
Upper West	4.3	6.3	8.6	43.4	50.1	204
Residence						
Urban	2.3	6.1	1.4	11.8	19.7	2,559
Rural	3.8	6.5	2.2	36.1	42.5	4,254
Age						
5-11 years	4.2	8.6	1.4	31.2	39.1	4,723
12-14 years	1.1	1.0	3.1	17.5	22.1	2,091
School participation						
Yes	3.1	6.2	1.8	25.1	32.2	5,662
No	3.8	6.8	2.6	36.3	42.4	1,151
Mother's/Caretaker's education						
None	2.9	7.0	2.6	34.6	40.9	3,142
Primary	4.5	4.7	1.9	26.6	34.2	1,218
Middle/JSS	3.4	7.2	1.1	20.6	28.6	1,939
Secondary+	2.0	2.6	0.6	5.5	10.4	514
Wealth index quintiles						
Poorest	2.6	8.1	2.7	41.9	47.9	1,551
Second	4.0	6.6	2.5	40.7	46.1	1,454
Middle	4.2	4.0	1.6	24.3	30.8	1,426
Fourth	3.4	5.8	1.3	15.6	24.0	1,260
Richest	1.8	6.9	1.1	4.7	13.7	1,122
Total	**3.2**	**6.3**	**1.9**	**27.0**	**33.9**	**6,813**

** MICS Indicator 71*

While it may be noted that relatively few children are engaged outside the household (3 and 6 percent in paid and unpaid work, respectively), over a quarter of children are working for the family business.

Looking at all types of work, 34 percent of children 5-14 are engaged in child labour. There is no difference by sex as regards child labour, however, significant differences are observed

between urban / rural levels of 20 and 43 percent, as well as regional differences as shown on the map.

Young children aged 5-11 years are more likely to be engaged in child labour than children aged 12-14 years. Living conditions of the household influence the level of child labour (48 percent for poorest and only 14 percent for the richest).

Figure CP.1: Percent of children aged 5-14 years engaged in child labour by region, Ghana, 2006

Table CP.3 presents the percentage of children classified as student labourers or as labourer students. Student labourers are the children attending school that were involved in child labour activities in the week prior to the survey. More specifically, of the 83 percent of the children 5-14 years of age attending school, 32 percent are also involved in child labour activities. On the other hand, out of the 34 percent of the children classified as child labourers, the majority of them are also attending school (79 percent).

The proportion of children who are engaged in child labour and are attending school ranges from 92 percent in the Ashanti Region to 55 percent in Northern Region. On the other hand, the proportion of students who are also involved in child labour activities ranges from 52

percent in the Upper East Region to 21 percent in Greater Accra Region. Generally, child labourers are likely to go to school.

Table CP.3: Labourer students and student labourers

Percentage of children aged 5-14 years who are labourer students and student labourers, Ghana, 2006

Background characteristic	Percentage of children in child labour *	Percentage of children attending school ***	Number of children aged 5-14	Percentage of child labourers who are also attending school **	Number of child labourers aged 5-14	Percentage of students who are also involved in child labour ***	Number of students aged 5-14
Sex							
Male	33.8	83.0	3,464	79.2	1,172	32.3	2,876
Female	34.0	83.2	3,350	78.5	1,138	32.1	2,786
Region							
Western	29.0	91.2	701	90.9	203	28.9	639
Central	23.2	87.1	563	85.4	130	22.7	490
Greater Accra	21.6	91.8	853	87.5	184	20.6	783
Volta	25.3	78.3	562	73.9	142	23.8	440
Eastern	37.0	91.5	768	89.7	284	36.2	703
Ashanti	31.2	94.7	1,044	91.7	326	30.2	989
Brong Ahafo	40.4	86.8	656	89.1	265	41.5	570
Northern	43.6	58.9	1,102	55.4	480	41.0	649
Upper East	53.5	72.7	359	71.2	192	52.4	261
Upper West	50.1	67.7	204	64.6	102	47.8	138
Residence							
Urban	19.7	92.2	2,559	90.6	503	19.3	2,358
Rural	42.5	77.7	4,254	75.6	1,806	41.3	3,304
Age							
5-11 years	39.1	81.7	4,723	79.9	1,848	38.3	3,860
12-14 years	22.1	86.2	2,091	74.7	461	19.1	1,803
Mother's/Caretaker's education							
None	40.9	72.3	3,142	68.5	1,284	38.7	2,271
Primary	34.2	87.6	1,218	86.0	417	33.6	1,067
Middle/JSS	28.6	94.4	1,939	95.7	555	29.0	1,831
Secondary+	10.4	96.0	514	96.3	53	10.4	493
Wealth index quintiles							
Poorest	47.9	57.7	1,551	57.7	743	47.9	895
Second	46.1	83.8	1,454	84.2	671	46.4	1,218
Middle	30.8	91.2	1,426	93.7	439	31.6	1,301
Fourth	24.0	91.5	1,260	88.2	302	23.1	1,153
Richest	13.7	97.6	1,122	97.2	154	13.7	1,095
Total	**33.9**	**83.1**	**6,813**	**78.9**	**2,309**	**32.2**	**5,662**

** MICS Indicator 71*
*** MICS Indicator 72*
**** MICS Indicator 73*

A rural student has twice the chance to be in child labour as its urban peer. As expected, children of poorer households are more prone to be engaged in child labour. Only 58 percent of child labourers in the poorest households also attend school, compared to 84 percent among the second poorest quintile. A significant difference can be observed among student

labourers (48 percent for the poorest quintile and 14 percent for the richest). This is a clear indication that children of poor households are more likely to be pulled away from school.

Child Discipline

As stated in *A World Fit for Children*, "children must be protected against any acts of violence …" and the Millennium Declaration calls for the protection of children against abuse, exploitation and violence. In the MICS 2006 survey, mothers / caretakers of children age 2-14 years were asked a series of questions on the ways parents discipline their children when they misbehave. Out of these questions, the two indicators used to describe aspects of child discipline are: 1) the number of children 2-14 years that experience psychological aggression as punishment ***or*** minor physical punishment ***or*** severe physical punishment; and 2) the number of parents / caretakers of children 2-14 years of age who believe that in order to raise their children properly, they need to physically punish them. For the child discipline module, one child aged 2-14 years per household was selected randomly during fieldwork.

Table CP.4: Child discipline

Percentage of children aged 2-14 years according to method of disciplining the child, Ghana, 2006

	Percentage of children 2-14 years of age who experience:								
Background characteristic	Only non-violent discipline	Psychological punishment	Minor physical punishment	Severe physical punishment	Any psychological or physical punishment *	No discipline or punishment	Missing	Mother/care-taker believes that the child needs to be physically punished	Number of children aged 2-14 years**
Sex									
Male	6.4	84.6	70.7	10.1	90.2	3.1	0.3	43.3	1,912
Female	8.0	82.5	67.9	9.1	88.2	3.3	0.5	41.7	1,885
Region									
Western	11.2	78.3	65.8	4.8	86.4	2.2	0.3	45.1	393
Central	6.1	84.9	67.5	4.5	90.0	3.1	0.7	46.0	330
Greater Accra	5.6	90.5	77.8	8.6	93.7	0.6	0.2	23.6	600
Volta	3.7	90.7	73.5	12.2	95.3	0.0	1.0	20.0	300
Eastern	6.3	86.3	67.2	8.3	90.8	3.0	0.0	53.7	467
Ashanti	8.5	82.0	69.4	10.5	89.8	1.3	0.4	35.5	583
Brong Ahafo	7.5	87.7	76.2	12.1	91.9	0.5	0.0	61.9	362
Northern	7.8	72.8	61.0	14.2	80.0	11.9	0.4	48.0	503
Upper East	9.1	78.0	66.8	12.0	84.9	5.0	1.1	59.7	159
Upper West	6.3	78.8	54.1	7.1	84.3	8.0	1.4	65.8	98
Residence									
Urban	8.0	85.6	70.7	10.1	90.1	1.6	0.3	38.3	1,577
Rural	6.7	82.1	68.3	9.2	88.5	4.3	0.4	45.5	2,220
Age									
2-4 years	5.8	79.4	74.9	5.6	88.0	5.6	0.6	42.0	879
5-9 years	6.1	85.8	75.0	11.1	91.2	2.4	0.3	43.5	1,447
10-14 years	9.2	83.7	60.3	10.5	87.9	2.5	0.4	41.9	1,471
Mother's/Caretaker's education									
None	5.3	82.7	75.1	9.1	89.8	4.5	0.4	44.4	1,863
Primary	8.9	84.6	65.3	10.3	89.1	1.8	0.2	41.6	1,711
Middle/JSS	11.6	81.6	50.6	8.2	84.8	2.6	1.0	33.1	214
Secondary+	*	*	*	*	*	*	*	*	9
Total	**7.2**	**83.5**	**69.3**	**9.6**	**89.2**	**3.2**	**0.4**	**42.5**	**3,797**

** MICS Indicator 74*

*** Table is based on children aged 2-14 years randomly selected during fieldwork (one child selected per household, if any children in the age range) for whom the questions on child discipline were administered*

An asterisk indicates figure is based on fewer than 25 unweighted cases and has been suppressed.

In Ghana, 89 percent of children aged 2-14 years were subjected to at least one form of psychological or physical punishment by their mothers/caretakers or other household members (Table CP.4). Ten percent of children were subjected to severe physical punishment and 69 percent to minor physical punishment. On the other hand, 43 percent of mothers/caretakers believed that children should be physically punished.

Male children were subjected more to both minor and severe physical discipline, though the difference is minimal. Differentials with respect to many of the background variables were relatively small. There are interesting regional observations. The belief in physical punishment is relatively low in Volta Region (20 percent) and Greater Accra Region (24 percent). Severe physical punishment is not likely to be meted to children; the proportion ranges from 14 percent in the Northern Region to 5 percent in Western and Central Regions.

Early Marriage and Polygyny

Marriage before the age of 18 is a reality for some girls. According to UNICEF's worldwide estimates, over 60 million women aged 20-24 were married/in union before the age of 18. Factors that influence child marriage rates include: the state of the country's civil registration system, which provides proof of age for children; the existence of an adequate legislative framework with an accompanying enforcement mechanism to address cases of child marriage; and the existence of customary or religious laws that condone the practice.

In many parts of the world parents encourage the marriage of their daughters while they are still children in hopes that the marriage will benefit them both financially and socially, while also relieving financial burdens on the family. In fact, child marriage is a violation of human rights, compromising the development of girls and often resulting in early pregnancy and social isolation, with little education and poor vocational training reinforcing the gendered nature of poverty. The right to 'free and full' consent to a marriage is recognized in the Universal Declaration of Human Rights - with the recognition that consent cannot be 'free and full' when one of the parties involved is not sufficiently mature to make an informed decision about a life partner. The Convention on the Elimination of all Forms of Discrimination Against Women mentions the right to protection from child marriage in Article 16, which states: "The betrothal and the marriage of a child shall have no legal effect, and all necessary action, including legislation, shall be taken to specify a minimum age for marriage..." While marriage is not considered directly in the Convention on the Rights of the Child, child marriage is linked to other rights - such as the right to express their views freely, the right to protection from all forms of abuse, and the right to be protected from harmful traditional practices - and is frequently addressed by the Committee on the Rights of the Child. Other international agreements related to child marriage are the Convention on Consent to Marriage, Minimum Age for Marriage and Registration of Marriages, the African Charter on the Rights and Welfare of the Child and the Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa. Child marriage was also identified by the Pan-African Forum against the Sexual Exploitation of Children as a type of commercial sexual exploitation of children.

Young married girls are a unique, though often invisible, group. They are often required to perform heavy amounts of domestic work, under pressure to demonstrate fertility, and responsible for raising children while still children themselves. Married girls and child mothers face constrained decision-making and reduced life choices. Boys are also affected by child marriage but the issue impacts girls in far larger numbers and with more intensity. Cohabitation is defined as situations in which a couple lives together as if married; this raises the same human rights concerns as marriage. When a girl lives with a man and takes on the

role of caregiver for him, the assumption is often that she has become an adult woman, even if she has not yet reached the age of 18. Additional concerns due to the informality of the relationship - for example, inheritance, citizenship and social recognition - might make girls in informal unions vulnerable in different ways than those who are in formally recognized marriages.

Research suggests that many factors interact to place a child at risk of marriage. Poverty, protection of girls, family honour and the provision of stability during unstable social periods are considered as significant factors in determining a girl's risk of becoming married while still a child. Women who married at younger ages are more likely to believe that it is sometimes acceptable for a husband to beat his wife and are more likely to experience domestic violence themselves. The age gap between partners is thought to contribute to these abusive power dynamics and to increase the risk of untimely widowhood.

Closely related to the issue of child marriage is the age at which girls become sexually active. Women who are married before the age of 18 tend to have more children than those who marry later in life. Pregnancy-related deaths are known to be a leading cause of mortality for both married and unmarried girls between the ages of 15 and 19, particularly among the youngest of this cohort. There is evidence to suggest that girls who marry at young ages are more likely to marry older men which puts them at increased risk of HIV infection. Parents seek to marry off their girls to protect their honour, and men often seek younger women as wives as a means to avoid choosing a wife who might already be HIV infected. The demand for the young wife to reproduce and the power imbalance resulting from the age differential often lead to very low condom use among such couples.

Two indicators of early marriage are the percentage of women married before 15 years of age and the percentage married before 18 years of age. The percentage of women married at various ages is provided in Table CP.5. Table CP.5A shows the number of women and men in a polygynous union.

In MICS 2006, information on age at first marriage was obtained by asking women the month and the year, or age, at which they started living with their first partner. Older respondents are less likely to recall with accuracy marriage dates and ages, therefore, the data for older respondents should be interpreted with caution.

Four percent of women aged 15-49 in marriage or union were married before aged 15 years and 26 percent of women aged 20-49 married before aged 18 years. The highest proportion of women who married before aged 15 years (8 percent) was in the 30-34 age group and the lowest (2 percent) in the 15-19 age group. The highest proportion (31 percent) who married before aged 18 years was also in the 30-34 age group. Such factors as residing in rural areas, having lower levels of education and being in a lower household wealth index are positively associated with getting married at a younger age. Whilst the highest proportion for women who married or are in union before age 15 years is in the Volta Region (8 percent), the highest proportion who married or are in union before age 18 was in the Upper West Region (37 percent).

Table CP.5: Early marriage

Percentage of women aged 15-49 in marriage or union before their 15th birthday, percentage of women aged 20-49 years in marriage or union before their 18th birthday and the percentage of women aged 15-19 years currently married or in union.

Background characteristic	Percentage married before age 15 *	Number of women aged 15-49 years	Percentage married before age 18 *	Number of women aged 20-49 years	Percentage of women 15-19 years married/in union **	Number of women aged 15-19 years
Region						
Western	4.2	593	27.4	459	7.4	134
Central	2.9	455	22.2	357	6.9	98
Greater Accra	3.0	1,125	17.8	883	1.9	241
Volta	8.0	426	30.1	343	26.7	84
Eastern	2.1	741	20.5	578	9.1	162
Ashanti	4.3	888	27.5	697	10.5	191
Brong Ahafo	6.0	569	31.0	448	3.4	121
Northern	5.8	745	31.0	624	6.6	121
Upper East	5.7	218	36.3	175	(11.4)	43
Upper West	5.4	130	36.9	107	*	22
Residence						
Urban	3.3	2,775	20.5	2,174	4.7	601
Rural	5.3	3,115	30.6	2,498	11.3	617
Age						
15-19	2.1	1,218	na	na	8.1	1,218
20-24	4.3	1,075	22.0	1,075	na	na
15-24	3.1	2,293	na	na	na	na
25-29	3.8	987	22.0	987	na	na
30-34	7.7	777	31.0	777	na	na
35-39	5.1	746	29.9	746	na	na
40-44	6.3	577	30.1	577	na	na
45-49	2.7	509	23.6	509	na	na
Education						
None	7.1	1,549	34.6	1,441	14.0	108
Primary	5.5	1,162	32.4	861	13.1	301
Middle/JSS	3.0	2,237	22.9	1,673	7.1	565
Secondary+	1.6	942	6.8	692	1.7	245
Wealth index quintiles						
Poorest	5.6	954	32.5	770	10.9	184
Second	7.0	1,037	34.5	835	15.3	202
Middle	5.2	1,149	29.0	894	11.2	255
Fourth	2.8	1,298	23.8	1,046	6.1	253
Richest	2.4	1,451	14.6	1,127	1.0	324
Total	**4.4**	**5,890**	**25.9**	**4,672**	**8.1**	**1,218**

** MICS Indicator 67*

*** MICS Indicator 68*

An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

As shown in Table CP.5A, by the age of 25 more than half of women are married or cohabiting with a partner and after 30 years of age over 80 percent of women are in union. For men, by the age of 30 years, half of them are married or cohabiting, and only after the age

of 45, ninety percent are married or cohabiting with a woman. It is observed that early marriage is not as common among men as among women.

Table CP.5A: Marital status and polygyny

Percentage of women and men aged 15-49 who are currently married/in union and percentage who are in polygynous unions

Background characteristic	Women				Men			
	Percentage of women aged 15-49 currently married/in union	Number of women aged 15-49 years	Percentage of women aged 15-49 years in polygynous marriage/union *	Number of women aged 15-49 currently married/in union	Percentage of men aged 15-49 currently married/in union	Number of men aged 15-49 years	Percentage of men aged 15-49 years in polygynous marriage/union	Number of men aged 15-49 currently married/in union
Region								
Western	58.1	593	13.0	345	50.3	176	3.4	89
Central	55.2	455	15.9	251	42.0	122	6.3	51
Greater Accra	46.1	1125	14.7	518	35.4	311	6.0	110
Volta	73.8	426	23.0	315	48.1	135	15.1	65
Eastern	55.9	741	18.9	414	44.4	210	4.4	93
Ashanti	59.2	888	13.2	526	47.4	310	3.0	147
Brong Ahafo	51.6	569	16.2	294	40.1	154	13.1	62
Northern	74.0	745	39.5	551	50.3	231	23.4	116
Upper East	68.7	218	39.3	150	44.2	62	16.6	27
Upper West	77.3	130	44.4	100	(53.6)	35	*	19
Residence								
Urban	50.9	2775	15.1	1412	39.0	767	6.9	299
Rural	65.9	3115	26.1	2053	49.0	977	11.5	479
Age								
15-19	8.1	1218	9.7	98	1.4	471	*	7
20-24	47.8	1075	9.3	514	11.3	290	(8.5)	33
15-24	26.7	2293	9.4	613	5.2	761	(7.1)	40
25-29	74.6	987	18.3	737	50.6	249	2.7	126
30-34	83.2	777	20.1	646	74.7	229	8.2	171
35-39	81.5	746	26.4	608	87.1	181	12.5	158
40-44	80.1	577	28.4	462	84.2	164	9.7	138
45-49	78.3	509	34.1	399	91.1	160	15.5	146
Education								
None	81.2	1549	35.9	1258	62.9	253	21.4	159
Primary	58.1	1162	17.1	676	39.2	265	13.6	104
Middle/JSS	53.6	2237	12.8	1200	43.2	816	6.2	352
Secondary+	34.9	937	8.8	327	39.7	411	3.6	163
Wealth index quintiles								
Poorest	71.4	954	34.1	682	49.3	313	17.7	154
Second	67.7	1037	27.0	703	50.2	287	13.4	144
Middle	57.2	1149	20.8	657	41.5	330	9.0	137
Fourth	54.8	1298	17.3	712	41.6	415	5.3	173
Richest	49.0	1451	9.5	711	42.6	400	4.6	170
Total	**58.8**	**5890**	**21.6**	**3465**	**44.6**	**1,745**	**9.7**	**778**

** MICS Indicator 70*

An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parenthesis are based on 25-49 unweighted cases.

Polygyny (the practice of having more than one wife at the same time) has implications for the frequency of sexual activity and fertility. Married and cohabiting women were asked whether their husbands had other wives, and men were asked if they had more than one wife or cohabiting partner. Table CP.5A shows that 22 percent of currently married women

report being in polygynous unions and 10 percent of men report having more than one wife/partner. The level of polygyny increases with age for women, but not for men; rural women and men are more likely to be in polygynous unions than their urban counterparts. Regional variations are also noticeable: women in the three northern regions are at least 15 percent more likely to report being in polygynous unions than those in other regions; men in Northern Region are most likely to have more than one wife or cohabiting partner. The practice of polygyny is influenced by both education and socio-economic status of men and women.

Another component is the spousal age difference with an indicator being the percentage of married/in union women who are 10 or more years younger than their current spouse. Table CP.6 presents the results on the age difference between husbands and wives.

There are not enough cases of currently married or in union women aged 15-19, therefore data are not shown. Findings indicate that among currently married women age 20-24, as many as 4 in 10 women are married to or have a partner who is 0-4 years older than themselves, and the same proportion (40 percent) is with husbands/partners who are 5-9 years older than female respondents. Less than 1 in 5 women (17 percent) are with a partner or husband 10 or more years older then themselves. Notably, the proportion of women cohabiting with or married to a man who is 10 or more years older is highest in Greater Accra and among women from the richest households. Women with completed secondary or beyond level of education and those in Western region are the least likely to be with a man 10 or more years their senior.

For young women 15-24 years old. in general, the same proportions of women are currently married or are in union with a man who is 0-4 and 5-9 years older (38 and 36 percent, respectively). Almost 1 in every 6 women aged 15-24 is married to a man more than 10 years her senior.

Notably, 22 percent of women aged 15-24 with no education and 19 percent of those from the poorest households do not know their husband's/partner's age.

Table CP.6: Spousal age difference

Percent distribution of currently married/in union women aged 20-24 and 15-24 according to the age difference with their husband or partner, Ghana, 2006

	Percentage of currently married/in union women aged 20-24 whose husband or partner is:						Number of women aged 20-24 years currently married/in union	Percentage of currently married/in union women aged 15-24 whose husband or partner is:						Number of women aged 15-24 years currently married/in union
	Younger	0-4 years older	5-9 years older	10+ years older *	Husband/ partner's age unknown	Total		Younger	0-4 years older	5-9 years older	10+ years older *	Husband/partner's age unknown	Total	
Region														
Western	0	42.8	46.1	9.5	1.5	100	58	1.3	44.3	45	8.1	1.3	100	68
Central	(0)	(35.4)	(48.7)	(13.6)	(2.3)	100	47	(0)	(38.1)	(47.9)	(11.9)	(2)	100	54
Greater Accra	(0)	(33.6)	(34.8)	(29.6)	(1.9)	100	59	(0)	(33)	(36)	(27.5)	(3.5)	100	64
Volta	(5)	(28.9)	(31.7)	(17.9)	(16.5)	100	58	3.6	30.6	34.1	16.9	14.8	100	80
Eastern	(2.3)	(35)	(34.8)	(18.9)	(9)	100	61	1.9	42.9	30.3	17.7	7.2	100	76
Ashanti	1.1	44.6	37	13.6	3.7	100	69	0.8	43.1	39.5	12.3	4.3	100	89
Brong Ahafo	(0)	(54.5)	(29.4)	(13.7)	(2.3)	100	36	0	(51.4)	(31.6)	(14.9)	(2.1)	100	40
Northern	2.9	32.1	28.5	16.1	20.5	100	96	2.6	32	28.2	17.9	19.2	100	104
Upper East	(0)	(31.7)	(22.9)	(17.2)	(28.2)	100	16	0	27.6	24.6	19.9	27.9	100	21
Upper West	(0)	(13.9)	(53.4)	(20.4)	(12.2)	100	13	0	22	47.7	18.9	11.3	100	16
Residence														
Urban	1.3	35.1	40.2	18.3	5	100	178	1.6	35.4	41.6	17	4.3	100	207
Rural	1.6	37.3	33.5	16.1	11.4	100	336	1.3	38.8	33	15.8	11.1	100	406
Mother's Education														
None	1.2	24.7	36.2	15.6	22.3	100	141	1.7	25.8	35.4	15.6	21.6	100	156
Primary	2.2	42	30	18.2	7.6	100	125	1.7	41.1	34.8	15.5	7	100	164
Middle/JSS	0	40.4	38.7	18.4	2.5	100	198	0	42	36.7	18.1	3.1	100	237
Secondary+	(6.7)	(41.4)	(38.2)	(10.6)	3.1	100	50	(6.2)	(42.3)	(37.3)	(11.4)	(2.9)	100	54
Wealth index quintiles														
Poorest	2.5	35.4	28.1	12.5	21.5	100	109	2.1	36.7	28.5	13.8	18.9	100	129
Second	0	44.2	32.9	15.2	7.7	100	106	0.7	44.2	31.5	14.8	8.8	100	137
Middle	3.1	36.3	37.6	19.3	3.7	100	116	2.5	37.5	38.9	16.8	4.3	100	145
Fourth	0	35.5	41.9	13.2	9.3	100	121	0	36.5	41.8	13.4	8.3	100	136
Richest	(2.3)	(28)	(39.5)	(29.8)	0.4	100	62	2.2	28.3	40.8	28.3	0.3	100	65
Total	1.5	36.6	35.8	16.8	9.2	100	514	1.4	37.6	35.9	16.2	8.8	100	613

MICS Indicator 69

Figures in parenthesis are based on 25-49 unweighted cases.

Female Genital Mutilation/Cutting

Female genital mutilation/cutting (FGM/C) is the partial or total removal of the female external genitalia or other injury to the female genital organs. FGM/C is always traumatic with immediate complications including excruciating pain, shock, urine retention, ulceration of the genitals and injury to adjacent tissue. Other complications include septicaemia, infertility, obstructed labour, and even death. FGM/C in Ghana is practised among few groups of people in the three Northern regions and some migrants from the neighbouring countries of Mali, Togo, Niger and Burkina Faso, residing mostly in the southern sector of the country.

Three forms of female genital mutilation have been reported as being practiced, namely: excision, clitoridectomy and infibulation.

The practice transcends religious boundaries, as practitioners of various religious groups perform FGM. The incidence of FGM appears to be declining as a result of the determination of government and other committed non-governmental agencies and organisations to stop this practice.

The procedure is generally carried out on girls between the ages of 4 and 14; it is also done to infants, women who are about to be married and, sometimes, to women who are pregnant with their first child or who have just given birth. It is often performed by traditional practitioners, including 'wanzams' and elderly women, without anaesthesia, using scissors, knives, blades or other sharp objects.

FGM/C is a fundamental violation of human rights and it has been illegal in Ghana since 1994. In the absence of any perceived medical necessity, it subjects girls and women to health risks and has life-threatening consequences. Among those rights violated are the rights to the highest attainable standard of health and to bodily integrity. Furthermore, it could be argued that girls (under 18) cannot be said to give informed consent to such a potentially damaging practice as FGM/C.

In MICS, a series of questions were asked to determine knowledge, prevalence, and details of the type of FGM/C performed. Table CP.7 presents the prevalence of FGM/C among women age 15-49 as well as the woman's attitudes towards FGM/C.

Four percent of women age 15-49 have had some form of FGM/C. The pattern of practice of any form of FGM/C shows a clear regional correlation. The Upper West is dominant with 56 percent, followed by Upper East with 13 percent, while the practice comprises less than 6 percent for all other regions. In absolute figures, Upper West accounts for one third of all women aged 15-49 with any form of FGM/C. Interestingly, only 7 percent of all surveyed women in Upper West believe the practise should continue, which is also the highest among all regions.

While only 4 percent of all surveyed women had any form of FGM the figure varies a great deal between subsets. Less than 3 percent of women aged 15-29 years had any form of FGM, while women above 30 years reported above 5 percent. The practise also relates negatively to level of education and wealth of the family: less educated women and those from poor households are significantly more likely to have gone through any form of FGM/C. The practice is more prevalent in rural areas (6 percent) than in urban areas (2 percent).

Nationally, 93 percent of women believe the practice should be discontinued, whilst 2 percent believe otherwise. Notably, there is almost no difference in likelihood of approving continuation of the practice between those women who have gone through the FGM/C experience (4 percent) and those who have not (4 percent).

Table CP.7: Female genital mutilation / cutting (FGM/C)

Percentage of women aged 15-49 years who have any form of female genital mutilation/cutting (FGM/C) and the percent distribution among

Background characteristic	Had any form of FGM/C*	Number of women aged 15-49 years	Percent distribution of women who believe the practice of FGM/C should:					Number of women aged 15-49 years who have heard of FGM/C
			Continue**	Be discontinued	Depends on situation	Don't know	Total	
Region								
Western	0.8	593	2.4	94.2	0.3	3.0	100.0	428
Central	0.5	455	1.6	91.3	1.7	5.5	100.0	215
Greater Accra	1.0	1,125	0.8	97.2	0.1	1.8	100.0	960
Volta	1.3	426	1.6	93.4	0.0	5.0	100.0	241
Eastern	0.5	741	5.4	88.2	0.4	6.0	100.0	396
Ashanti	2.5	888	1.4	94.6	0.0	3.9	100.0	572
Brong Ahafo	5.7	569	3.4	90.9	2.0	3.7	100.0	468
Northern	5.6	745	2.1	83.5	6.6	7.8	100.0	361
Upper East	12.5	218	3.3	94.7	1.0	1.0	100.0	149
Upper West	56.1	130	6.7	88.7	0.8	3.8	100.0	119
Residence								
Urban	1.7	2,775	1.6	95.6	0.5	2.2	100.0	2,104
Rural	5.7	3,115	3.2	88.9	2.0	6.0	100.0	1,806
Age								
15-19	1.4	1,218	2.4	93.0	0.2	4.4	100.0	768
20-24	2.3	1,075	2.1	93.4	0.5	4.1	100.0	687
25-29	2.7	987	3.3	91.1	2.2	3.5	100.0	668
30-34	5.7	777	3.0	91.2	1.9	3.9	100.0	533
35-49	5.7	746	1.8	93.4	1.1	3.8	100.0	495
40-44	5.1	577	2.5	89.8	1.9	5.9	100.0	389
45-49	7.4	509	0.7	95.7	1.2	2.4	100.0	370
Education								
None	10.5	1,549	3.3	86.5	3.6	6.5	100.0	899
Primary	3.0	1,162	2.2	92.2	0.9	4.6	100.0	646
Middle/JSS	0.7	2,237	2.0	93.8	0.4	3.7	100.0	1,532
Secondary+	1.1	942	1.9	97.2	0.1	0.8	100.0	833
FGM/C experience								
No FGM/C	na	na	4.0	86.5	4.0	5.4	100.0	3,699
Had FGM/C	na	na	3.9	89.3	1.5	5.3	100.0	211
Wealth index quintiles								
Poorest	8.6	954	2.6	90.3	1.4	5.7	100.0	515
Second	7.3	1,037	1.6	94.0	0.6	3.9	100.0	577
Middle	2.6	1,149	1.3	97.0	0.1	1.7	100.0	686
Fourth	1.3	1,298	1.8	93.0	1.3	4.0	100.0	929
Richest	1.3	1,451	12.5	83.6	0.2	3.8	100.0	1,203
Total	**3.8**	**5,890**	**2.3**	**92.5**	**1.2**	**4.0**	**100.0**	**3,910**

** MICS Indicator 63*
*** MICS Indicator 66*
'na' indicates not applicable

Attitudes Toward Domestic Violence

A number of questions were asked of women and men age 15-49 years to assess their attitudes towards whether husbands are justified to hit or beat their wives/partners for various reasons. These questions were asked to have an indication of cultural beliefs that tend to be associated with violence against women by their husbands/partners. The responses to these questions can be found in Tables CP.8 and CP.8A.

Forty-seven percent of all surveyed women and 37 percent of all surveyed men age 15-49 believe that a husband is justified in beating his wife for at least one of the reasons in first 5

columns in respective tables. The largest proportion justifying wife beating are as follows: over half (55 percent) of women think wife beating is justified if the woman has another sexual partner, and almost half (49 percent) think that it is justified if the wife insults her husband. The least justified reason for women is when she burns the food, 14 percent women agree that it is a reason to beat a wife. Among men, the largest proportion of those justifying wife-beating is if she has another sexual partner (43 percent), which is 12 percent less than for women. Similarly to women, men are least likely to justify wife beating if wife burns food.

When we look at all identified reasons, 66 percent of women and 56 percent of men justify wife beating. Overall, the likelihood of acceptance of wife-beating is significantly higher in rural areas compared to urban areas. Additionally, education is related to the acceptance of domestic violence. The higher women's education, the less likely they are to approve wife-beating for any of the reasons, while for men the correlation is not as straightforward. Regionally, acceptance of domestic violence by women is highest in Upper West, Upper East and Northern regions (around 9 in 10 women), which is consistent with findings for men.

Interestingly, overall, men are less likely than women to believe that wife beating is justified for any of the individual specified reasons, see Table CP.8A.

Table CP.8: Attitudes toward domestic violence: women

Percentage of women aged 15-49 years who believe a husband is justified in beating his wife/partner in various circumstances, Ghana, 2006

	Percentage of women aged 15-49 years who believe a husband is justified in beating his wife/partner:											
	When she goes out without telling him	When she neglects the children	When she argues with him	When she refuses sex with him	When she burns the food	For any one of these (first five) reasons*	If she insults him	If she refuses to give him food	If there is another partner	Other reason	For any of these reasons	Number of women aged 15-49 years
Region												
Western	35.5	40.4	22.8	18.0	12.1	53.9	56.7	34.1	54.1	5.0	68.8	593
Central	32.1	32.1	16.4	15.0	8.9	46.1	47.8	20.3	44.3	1.9	62.3	455
Greater Accra	15.3	18.5	14.3	9.5	6.0	27.9	30.8	15.8	41.8	6.4	48.5	1,125
Volta	25.9	33.0	20.1	13.5	17.0	44.7	41.6	28.6	61.0	1.9	70.2	426
Eastern	18.0	19.2	15.6	9.8	7.4	30.8	34.1	17.4	39.0	6.4	50.2	741
Ashanti	25.6	34.3	26.6	18.0	15.9	49.4	50.5	32.1	50.2	4.6	67.2	888
Brong Ahafo	32.9	34.6	32.5	20.4	14.8	48.9	48.6	31.7	56.4	5.1	66.3	569
Northern	46.6	54.7	43.6	41.0	32.4	71.1	78.9	58.1	86.2	3.3	92.0	745
Upper East	29.0	47.0	31.4	31.5	17.3	66.5	71.1	37.6	83.8	5.9	89.6	218
Upper West	48.1	62.0	37.0	38.7	27.9	76.3	72.1	62.1	80.0	13.1	89.6	130
Residence												
Urban	19.8	25.0	18.1	12.5	9.4	35.7	38.1	21.4	43.6	5.3	55.0	2,775
Rural	35.6	40.9	30.0	24.6	18.9	56.5	58.9	38.2	65.1	4.6	75.6	3,115
Age												
15-19	30.9	36.6	27.3	17.9	17.7	50.8	53.1	31.9	56.8	7.7	68.4	1,218
20-24	25.9	32.1	21.5	16.0	11.7	45.4	48.9	26.7	54.2	4.4	65.8	1,075
25-29	28.2	31.4	26.2	21.3	13.3	46.3	46.4	31.1	55.2	3.5	63.6	987
30-34	28.3	33.9	25.0	19.5	15.2	47.9	50.2	31.1	58.3	5.8	69.2	777
35-39	27.1	35.7	24.9	21.4	16.2	46.6	49.3	32.5	54.8	3.2	66.4	746
40-44	26.4	27.8	19.4	18.1	11.9	41.6	47.7	27.9	52.6	4.3	62.5	577
45-49	29.8	34.8	23.5	19.0	13.1	45.0	44.8	30.7	49.4	4.0	62.4	509
Marital/Union status												
Currently married/in union	30.7	36.6	25.9	22.1	16.1	50.1	52.2	33.7	59.6	4.1	69.8	3,465
Formerly married/in union	27.1	28.8	21.4	15.1	9.9	42.6	46.2	25.3	49.2	4.0	63.1	648
Never married/in union	23.6	28.9	22.4	14.1	12.6	41.7	44.0	25.5	48.1	6.8	59.3	1,778
Education												
None	41.3	47.5	35.7	34.0	24.6	64.7	69.2	47.6	74.9	3.6	84.7	1,549
Primary	30.0	33.2	24.7	17.2	14.3	48.0	51.2	29.0	56.6	4.9	69.2	1,162
Middle/JSS	25.3	30.9	22.5	15.1	11.6	43.5	45.1	26.5	50.8	5.8	62.7	2,237
Secondary+	11.3	16.6	9.7	5.3	4.2	23.4	23.0	12.3	29.8	5.1	38.1	937
Wealth index quintiles												
Poorest	44.2	49.5	38.8	35.2	26.8	67.7	72.0	50.2	78.7	3.9	86.7	954
Second	36.5	41.5	29.5	23.4	19.3	57.1	60.3	37.8	64.7	4.3	76.6	1,037
Middle	29.8	34.0	25.1	16.3	13.5	48.5	52.4	32.0	56.9	5.3	69.8	1,149
Fourth	24.0	28.5	20.8	15.6	11.6	41.8	41.3	23.7	48.9	4.5	60.7	1,298
Richest	14.2	21.1	13.7	9.9	5.9	28.6	30.3	16.4	36.2	6.1	46.1	1,451
Total	**28.2**	**33.4**	**24.4**	**18.9**	**14.4**	**46.7**	**49.1**	**30.3**	**55.0**	**4.9**	**65.9**	**5,890**

** MICS Indicator 100*

Table CP.8A: Attitudes toward domestic violence: men

Percentage of men aged 15-49 years who believe a husband is justified in beating his wife/partner in various circumstances, Ghana, 2006

	Percentage of men aged 15-49 years who believe a husband is justified in beating his wife/partner:											
	When she goes out without telling him	When she neglects the children	When she argues with him	When she refuses sex with him	When she burns the food	For any one of these (first five) reasons*	If she insults him	If she refuses to give him food	If there is another partner	Other reason	For any one of all these reasons	Number of men aged 15-49 years
Region	20.8	21.0	15.3	13.6	2.7	34.2	40.9	17.0	36.1	2.5	50.1	176
Western	20.8	21.0	15.3	13.6	2.7	34.2	40.9	17.0	36.1	2.5	50.1	176
Central	21.2	22.0	13.2	4.2	5.6	32.7	38.3	13.2	36.6	3.2	54.4	122
Greater Accra	8.0	12.2	13.6	8.3	6.3	21.8	24.9	8.6	33.3	6.8	41.7	311
Volta	19.0	25.3	16.8	9.1	12.5	35.7	30.0	22.1	39.9	11.1	57.8	135
Eastern	13.1	12.8	10.9	8.2	4.2	23.0	27.9	8.8	33.9	7.3	48.8	210
Ashanti	19.3	22.7	17.4	13.3	7.9	36.8	46.0	16.5	35.5	7.5	57.6	310
Brong Ahafo	21.3	15.3	18.0	9.7	4.5	29.1	29.5	13.6	29.9	10.2	40.9	154
Northern	42.8	43.9	37.8	38.4	25.1	64.4	66.9	48.7	74.0	9.1	82.3	231
Upper East	26.7	51.2	28.8	30.6	14.8	68.4	69.7	33.1	81.5	10.2	89.0	62
Upper West	36.5	51.4	30.9	28.4	21.9	68.6	61.3	43.2	78.6	22.7	90.9	35
Residence												
Urban	13.8	16.3	14.1	9.2	6.0	26.8	31.2	11.6	32.3	8.0	47.3	767
Rural	26.1	28.9	22.5	19.2	12.0	44.2	47.3	25.8	50.5	7.4	63.4	977
Marital/Union Status												
Currently married/ in union	18.4	22.0	15.8	13.8	7.2	32.6	33.6	16.5	37.6	7.1	50.7	778
Formerly married/ in union	16.8	24.3	24.5	13.4	11.6	39.1	38.7	21.9	39.1	9.4	54.3	126
Never married/ in union	23.5	24.6	20.8	16.0	11.0	40.0	46.8	22.1	47.7	8.0	62.0	837
Men's Education												
None	44.2	47.2	37.1	38.6	26.1	63.7	67.2	47.3	70.7	7.1	79.7	253
Primary	29.7	30.6	22.0	12.5	11.2	44.2	46.4	22.5	53.3	7.6	67.3	265
Middle/JSS	17.0	19.0	17.3	12.3	6.4	33.7	39.6	15.6	39.3	7.4	54.4	816
Secondary+	7.8	12.7	8.6	6.5	3.7	20.7	21.0	8.5	24.4	8.7	38.6	411
Wealth index quintiles												
Poorest	39.7	43.2	34.3	33.1	21.4	60.4	64.1	41.3	69.8	8.7	79.7	313
Second	22.5	27.2	19.5	14.8	10.8	41.2	45.9	23.4	52.0	6.6	64.2	287
Middle	25.0	26.7	22.8	12.5	8.5	42.7	40.8	18.3	36.1	9.4	55.9	330
Fourth	16.0	16.1	14.5	10.2	6.2	30.1	34.8	15.1	37.8	6.3	49.7	415
Richest	5.8	9.9	7.3	7.1	3.0	16.2	22.7	5.4	24.3	7.6	39.6	400
Total	**20.7**	**23.4**	**18.8**	**14.8**	**9.3**	**36.6**	**40.2**	**19.5**	**42.5**	**7.7**	**56.3**	**1,745**

** MICS Indicator 100*

Child Disability

One of *the World Fit for Children* goals is to protect children against abuse, exploitation, and violence, including the elimination of discrimination against children with disabilities. For children age 2 through 9 years, a series of questions were asked to assess a number of disabilities/impairments, such as sight impairment, deafness, and difficulties with speech. This approach rests on the concept of functional disability developed by WHO and aims to identify the implications of any impairment or disability for the development of the child (e.g. health, nutrition, education, etc.). Table CP.9 presents the results of these questions.

Sixteen percent of children ages 2-9 years old are reported to have at least one disability. While there are no immediate patterns to be found in urban/rural and wealth quintile, there are regional variations. The two extremes, Volta and Northern Regions, report 27 and 11 percent disabled 2-9 year old children, respectively.

Delay in sitting/standing or walking (4 percent) and no understanding of instructions (4 percent) are the most commonly reported disabilities among children age 2-9 years.

Speech disabilities were asked about for on children age 3-9 years old. Six percent of this age group do not have normal speech according to the mother or caretaker. This figure ranges from 3 percent in Central Region to 10 percent in Greater Accra Region. Speech disability varies from 8 percent in the urban areas to 5 percent in the rural areas. Children in the richest households are more likely to have speech disability (10 percent) than those in the poorest (5 percent).

Children aged 2 years were also targeted on their ability to name at least one object. Nationally, 16 percent were reported by their mothers or caretakers unable, but this number ranges from just 4 percent in Central Region to 37 percent in Upper West Region.

Table CP.9: Child disability

Percentage of children aged 2 -9 years with disability reported by their mother or caretaker, according to the type of disability, Ghana , 2006

Background characteristic	Percentage of children aged 2-9 years with reported disability by type of disability: Delay in sitting, standing or walking	Difficulty seeing, either in the daytime or at night	Appears to have difficulty hearing	No under-standing of instructions	Difficulty in walking, moving arms, weakness or stiffness	Have fits, become rigid, lose conscious-ness	Not learning to do things like other children his/her age	No speaking / cannot be under-stood in words	Appears mentally backward, dull, or slow	Percentage of children aged 2-9 years with at least one reported disability*	Number of children aged 2-9 years	Speech is not normal	Number of children aged 3-9 years	Cannot name at least one object	Number of children aged 2 years
Region															
Western	7.4	3.6	2.0	2.9	2.3	2.6	2.9	5.9	3.3	20.4	528	5.8	467	25.1	62
Central	5.4	1.9	2.5	2.9	1.5	1.5	0.2	2.6	1.9	14.2	484	3.4	434	4.3	50
Greater Accra	2.2	4.0	1.1	4.9	1.6	3.0	2.5	1.6	4.7	18.1	653	9.9	564	8.4	89
Volta	9.6	2.9	1.6	4.9	3.7	4.7	4.8	5.1	2.9	26.5	469	6.4	420	14.7	49
Eastern	6.2	1.6	0.2	3.2	3.0	3.0	0.7	1.2	3.4	16.5	612	7.8	525	12.0	87
Ashanti	2.2	2.4	2.5	6.3	1.2	1.9	3.8	2.1	2.0	15.5	808	5.0	720	20.8	89
Brong Ahafo	1.1	2.8	1.8	4.2	0.4	3.3	1.3	2.4	6.6	14.7	508	6.3	459	33.9	49
Northern	2.3	1.5	2.9	3.0	1.6	1.4	0.8	1.4	3.1	10.7	889	5.1	783	7.0	106
Upper East	2.3	2.0	2.5	4.8	1.2	3.1	3.1	2.7	3.1	14.9	262	6.0	238	25.7	24
Upper West	4.0	2.5	3.1	4.0	1.4	3.0	1.4	4.4	4.7	18.0	177	9.1	155	37.0	22
Residence															
Urban	3.4	2.9	1.7	4.6	1.7	1.9	2.0	2.3	4.9	16.7	1,916	7.9	1,677	13.8	239
Rural	4.4	2.3	2.1	3.8	1.8	3.0	2.2	2.8	2.6	16.3	3,475	5.4	3,088	17.2	387
Age of child															
2-4	4.6	2.9	2.1	4.6	1.6	3.3	2.3	4.3	2.9	18.2	1,926	6.9	1,300	15.9	625
5-6	4.1	2.7	1.9	4.2	1.8	2.8	2.3	1.6	3.3	16.2	1,459	6.1	1,459	-	-
7-9	3.5	1.9	1.9	3.5	1.9	1.8	1.7	1.8	4.0	14.9	2,006	6.0	2,006	-	-
Mother's education															
None	4.3	2.4	2.1	4.4	1.8	3.0	1.9	2.3	3.8	16.4	2,384	5.6	2,148	16.3	236
Primary	3.4	2.7	1.6	3.4	1.5	2.0	2.0	2.7	2.0	14.6	1,090	7.2	951	15.2	139
Middle/JSS	4.6	2.9	2.4	4.0	2.5	2.5	2.6	3.3	3.8	18.3	1,544	5.4	1,341	16.3	203
Secondary +	2.3	2.8	0.8	5.0	0.1	1.7	1.7	1.6	3.6	14.5	373	11.2	326	14.6	47
Wealth index quintiles															
Poorest	2.9	1.8	1.8	2.8	1.4	2.7	1.8	1.8	2.3	13.3	1,282	4.5	1,145	15.8	137
Second	5.5	2.4	3.3	4.7	2.9	3.6	2.1	2.7	3.9	19.2	1,270	5.0	1,124	15.2	146
Middle	4.6	2.6	1.7	4.6	1.9	2.6	2.0	4.3	3.7	16.5	1,103	6.2	975	19.6	128
Fourth	4.1	2.9	1.9	4.9	1.6	2.1	2.4	2.6	3.3	17.9	930	7.0	820	13.3	110
Richest	2.9	3.1	0.6	3.6	0.7	1.3	2.5	1.6	4.3	15.2	806	10.3	700	15.1	105
Total	**4.1**	**2.5**	**2.0**	**4.1**	**1.8**	**2.6**	**2.1**	**2.6**	**3.4**	**16.4**	**5,391**	**6.3**	**4,765**	**15.9**	**625**

** MICS indicator 101*

XII. HIV/AIDS, Sexual Behaviour, and Orphaned and Vulnerable Children

Knowledge of HIV Transmission

The UN General Assembly Special Session on HIV / AIDS (UNGASS) called on governments to improve the knowledge and skills of young people to protect themselves from HIV. The indicators to measure this goal as well as the MDG of reducing HIV infections by half include improving the level of knowledge of HIV and its prevention, and changing behaviours to prevent further spread of the disease. One of the most important prerequisites for reducing the rate of HIV infection is accurate knowledge of how HIV is transmitted and strategies for preventing transmission. Correct information is the first step toward raising awareness and giving people the tools to protect themselves from infection. Misconceptions about HIV are common and can confuse people and hinder prevention efforts. Different regions are likely to have variations in misconceptions although some appear to be universal (for example that sharing food or mosquito bites can transmit HIV).

The HIV module was administered to men and women 15-49 years of age. Table HA.1 shows the knowledge of preventing HIV transmission among both men and women. In Ghana, 98 percent of men and 97 percent of women have heard of AIDS. However, the percentage of men and women who know of all three main ways of preventing HIV transmission is 60 percent and 56 percent for men and women respectively. Eighty-four percent of women and 86 percent of men know transmission can be prevented by having one faithful uninfected sex partner. Prevention of HIV transmission by using condoms every time is known by 77 of percent men and 72 percent of women, while abstaining from sex is known by 78 percent of both men and women. Ninety-six percent of men and 94 percent of women know at least one way to prevent HIV infection. Only a small proportion of both men and women (5 and 6 percent respectively) do not know any of the three ways. Slight urban / rural differentials are observed in the various ways of preventing HIV transmission. Women and men with some schooling and from wealthier households are significantly more likely than those with no schooling to be aware of various preventive methods. Regionally, higher percentages of women and men know that HIV transmission can be prevented by various ways in Greater Accra, Western, Central, Brong Ahafo and Eastern regions, while the lowest level of knowledge can be found in Northern and Upper West regions. Knowledge of all the three main ways of preventing HIV transmission is least in the Upper West Region for both men and women. On the other hand, the highest proportion of men (15 percent) and women (18 percent) who do not know of any way of preventing HIV transmission is registered in the Northern Region.

Table HA.1: Knowledge of preventing HIV transmission

Percentage of men and women aged 15-49 years who know the main ways of preventing HIV transmission, Ghana, 2006

Background Characteristics	Heard of AIDS		Percentage who know transmission can be prevented by: Having only one faithful uninfected sex partner		Using a condom every time		Abstaining from sex		Know all three ways		Knows at least one way		Doesn't know any way		Number of men and women	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Region																
Western	100.0	98.0	88.7	88.0	75.4	74.7	78.8	78.0	59.5	59.7	97.8	95.3	2.2	4.7	176	593
Central	100.0	98.6	89.2	83.8	85.5	77.7	81.9	78.2	68.7	61.4	97.6	94.5	2.4	5.5	122	455
Greater Accra	100.0	99.9	90.5	90.5	80.9	78.4	82.6	84.3	67.1	65.3	98.9	98.3	1.1	1.7	311	1,125
Volta	98.5	97.2	72.9	78.3	71.9	73.5	73.3	72.0	47.9	51.8	91.1	93.0	8.9	7.0	135	426
Eastern	100.0	99.5	89.0	83.6	87.1	75.1	80.3	81.2	66.3	58.5	98.7	95.6	1.3	4.4	210	741
Ashanti	99.6	98.6	87.0	82.7	67.3	67.5	76.2	78.0	49.5	50.1	97.2	94.9	2.8	5.1	310	888
Brong Ahafo	99.3	99.2	95.8	92.4	79.9	74.1	84.6	78.2	69.5	61.7	97.2	98.3	2.8	1.7	154	569
Northern	87.4	85.8	77.8	72.1	72.0	60.4	67.9	67.6	56.9	47.2	84.6	82.0	15.4	18.0	231	745
Upper East	97.7	91.6	87.0	79.4	79.5	69.6	81.5	74.7	64.5	53.3	96.6	89.8	3.4	10.2	62	218
Upper West	(100.0)	98.8	(60.3)	61.3	(66.4)	55.9	(69.7)	66.1	(33.7)	26.4	(93.0)	89.5	(7.0)	10.5	35	130
Residence																
Urban	99.6	99.1	87.7	86.2	78.9	75.6	78.7	79.2	62.7	58.7	97.0	96.0	3.0	4.0	767	2,775
Rural	96.7	95.1	84.9	81.3	75.0	68.9	77.4	76.0	57.5	54.3	94.4	92.0	5.6	8.0	977	3,115
Age																
15-19	95.5	96.9	83.0	84.5	77.5	76.3	80.3	78.7	60.6	59.8	93.1	94.5	6.9	5.5	471	1,218
20-24	97.6	97.3	86.0	84.4	80.5	73.6	78.6	75.9	64.7	56.0	95.9	94.5	4.1	5.5	290	1,075
15-24	96.3	97.1	84.1	84.4	78.7	75.0	79.7	77.4	62.2	58.0	94.2	94.5	5.8	5.5	761	2,293
25-29	99.6	96.2	89.8	81.1	80.2	72.8	77.6	76.4	61.5	55.9	99.1	92.6	0.9	7.4	249	987
30-34	99.6	98.2	88.6	85.6	76.3	72.8	73.2	78.6	57.3	57.6	97.0	95.1	3.0	4.9	229	777
35-39	99.4	96.0	85.5	82.0	76.5	69.1	79.3	79.0	58.9	56.7	97.3	92.7	2.7	7.3	181	746
40-44	97.9	97.3	86.4	85.3	69.8	69.0	77.1	75.6	53.4	52.6	94.4	94.7	5.6	5.3	164	577
45-49	99.6	97.0	86.5	82.1	69.8	63.7	76.5	78.7	57.4	51.7	93.6	92.8	6.4	7.2	160	509
Education																
None	88.3	90.6	74.2	74.4	63.2	59.7	69.6	71.3	47.9	45.9	85.7	86.5	14.3	13.5	253	1,549
Primary	98.5	98.2	83.7	82.6	78.0	72.1	78.8	77.4	58.4	54.0	96.3	95.0	3.7	5.0	265	1,162
Middle/JSS	100.0	99.6	89.6	88.3	80.2	78.8	81.9	81.1	64.2	63.2	97.7	97.2	2.3	2.8	816	2,237
Secondary +	99.6	99.8	88.1	88.7	77.2	76.2	74.7	79.4	59.4	60.3	96.8	96.9	3.2	3.1	411	942
Wealth index quintiles																
Poorest	90.4	87.5	78.1	71.0	68.6	58.0	73.7	69.1	52.4	44.5	88.3	83.8	11.7	16.2	313	954
Second	98.8	97.2	84.3	83.5	76.1	69.2	79.7	77.7	61.3	54.5	95.0	94.1	5.0	5.9	287	1,037
Middle	99.5	98.1	87.2	84.4	73.0	74.0	78.8	76.3	54.0	57.2	97.3	94.5	2.7	5.5	330	1,149
Fourth	100.0	99.6	88.6	86.9	81.1	75.6	79.8	80.0	66.1	59.4	96.6	96.7	3.4	3.3	415	1,298
Richest	100.0	99.8	90.2	88.4	81.0	78.5	77.5	81.7	63.0	62.1	99.0	97.4	1.0	2.6	400	1,451
Total	**98.0**	**97.0**	**86.1**	**83.6**	**76.7**	**72.0**	**78.0**	**77.5**	**59.8**	**56.4**	**95.5**	**93.9**	**4.5**	**6.1**	**1,745**	**5,890**

Figures in parentheses '( )' are based on 25-49 unweighted cases

Table HA.2 presents the percent of respondents (men and women) who can correctly identify misconceptions concerning HIV. The indicator derived from the table is based on the two most common misconceptions in Ghana- that HIV can be transmitted by supernatural means, or by mosquito bites -and that a healthy looking person cannot be infected. The table also provides information on whether respondents know that HIV cannot be transmitted by sharing food, and that HIV can be transmitted by sharing needles.

Of the interviewed respondents, only 41 percent of men and 28 percent of women reject the two most common misconceptions and know that a healthy-looking person can be infected. Sixty-one percent of men and 49 percent of women know that HIV cannot be transmitted by supernatural means, and 64 percent of men and 56 percent of women know that HIV cannot be transmitted by mosquito bites, while 78 and 73 percent of men and women respectively

know that a healthy-looking person can be infected. Eighty percent of men and 76 percent of women know people cannot get the AIDS virus by sharing food with a person who has AIDS. Additionally, almost all women and men in Ghana are aware that HIV can be transmitted by sharing needles (96 percent for men and 95 percent for women).

Table HA.2: Identifying misconceptions about HIV/AIDS

Percentage of men and women aged 15-49 years who correctly identify misconceptions about HIV/AIDS, Ghana, 2006

Background characteristic	Percent who know that: HIV cannot be transmitted by: Option 1: Supernatural means		Option 2: Mosquito bites		A healthy looking person can be infected		Reject two common misconceptions and know a healthy-looking person can be infected		Percent who know that: Option 3: HIV cannot be transmitted by sharing food		Option 4: HIV can be transmitted by sharing needles		Number of men and women	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Region														
Western	61.9	49.2	70.7	58.6	69.4	65.6	39.5	25.4	86.8	79.6	98.6	96.2	176	593
Central	56.4	44.9	62.9	52.6	71.4	71.6	36.8	24.9	73.6	75.2	98.2	96.2	122	455
Greater Accra	63.9	54.5	74.0	72.0	94.1	91.3	52.7	41.9	89.6	90.5	97.0	98.2	311	1,125
Volta	55.9	49.3	50.8	44.6	67.3	56.7	29.1	22.2	74.1	65.9	97.2	95.2	135	426
Eastern	54.7	42.8	57.9	54.1	87.5	76.8	36.6	26.6	78.2	76.4	100.0	97.3	210	741
Ashanti	67.9	49.2	73.0	59.9	81.1	74.9	48.9	29.9	86.5	83.3	97.2	97.0	310	888
Brong Ahafo	65.1	41.7	66.8	55.2	81.1	79.7	44.1	26.3	82.3	75.3	98.7	96.8	154	569
Northern	55.7	46.2	51.2	41.6	65.6	54.6	33.7	20.1	57.4	47.8	84.0	84.4	231	745
Upper East	72.2	58.8	61.3	54.7	61.4	56.6	31.9	26.8	77.2	73.7	94.9	89.3	62	218
Upper West	(60.0)	55.2	(46.4)	35.3	(56.9)	52.9	(27.5)	18.3	(75.6)	61.9	(96.8)	94.2	35	130
Residence														
Urban	66.9	53.3	72.6	66.2	84.7	82.0	49.4	36.5	88.6	86.3	98.2	96.9	767	2,775
Rural	57.1	44.1	57.9	47.2	72.8	64.0	35.0	21.2	72.3	65.8	94.3	93.3	977	3,115
Age														
15-19	62.1	57.2	66.5	64.7	70.2	71.0	40.8	34.3	77.0	80.5	93.4	95.0	471	1,218
20-24	57.8	49.9	67.7	62.6	82.7	74.8	44.4	32.3	84.3	77.2	96.2	95.3	290	1,075
15-24	60.4	53.7	67.0	63.7	75.0	72.8	42.2	33.4	79.8	79.0	94.5	95.2	761	2,293
25-29	66.0	45.6	68.8	53.4	85.3	74.1	47.6	26.4	77.9	74.3	98.1	93.9	249	987
30-34	56.9	48.2	59.3	51.8	77.7	75.2	36.4	28.3	78.8	77.0	96.6	96.1	229	777
35-39	69.0	43.8	61.9	51.0	79.3	67.1	44.7	23.4	81.1	72.4	97.2	94.6	181	746
40-44	54.3	41.1	57.0	51.5	78.7	74.8	32.5	24.0	78.2	68.4	96.3	95.2	164	577
45-49	64.0	45.8	62.4	47.3	79.7	69.4	39.8	22.4	81.0	72.2	97.7	95.3	160	509
Education														
None	39.0	37.5	34.4	37.0	53.5	54.3	15.7	12.9	51.5	53.4	83.6	88.1	253	1,549
Primary	45.0	42.4	53.3	45.5	65.5	70.0	22.2	19.9	67.8	71.0	95.6	96.4	265	1,162
Middle/JSS	63.1	50.4	66.5	64.2	82.5	78.5	41.6	31.8	84.7	85.4	98.4	97.9	816	2,237
Secondary +	82.4	69.5	85.6	81.9	92.3	91.1	68.8	56.4	93.8	93.5	99.2	97.7	411	942
Wealth index quintiles														
Poorest	47.5	37.1	46.6	36.1	59.0	48.9	20.9	11.7	61.3	48.7	87.8	85.3	313	954
Second	52.8	44.3	49.4	44.4	71.8	66.7	28.0	19.0	71.9	65.7	95.2	94.6	287	1,037
Middle	58.9	41.6	66.4	50.8	76.6	71.4	37.4	22.3	78.2	75.7	96.6	96.3	330	1,149
Fourth	66.4	51.0	71.5	61.6	85.0	78.4	51.9	32.4	86.6	85.2	99.4	97.9	415	1,298
Richest	75.3	62.0	79.9	77.2	91.3	87.7	59.1	47.4	92.8	91.1	99.0	98.1	400	1,451
Total	**61.4**	**48.5**	**64.3**	**56.2**	**78.0**	**72.5**	**41.3**	**28.4**	**79.5**	**75.5**	**96.0**	**95.0**	**1,745**	**5,890**

Figures in parenthese s '( )' are based on 25-49 unweighted cases

There are age variations in the level of women and men's misconceptions about HIV / AIDS, with young people being more likely to reject the misconceptions about HIV transmission. As one would expect, women and men with higher levels of schooling, those from the wealthier quintiles, and those in urban areas are more likely to reject the misconceptions.

There is regional variation in the rejection of the two major misconceptions and knowing a healthy-looking person can be infected. Both men (28 percent) and women (18 percent) from the Upper West Region report the lowest level of rejecting the two common misconceptions and knowing that a healthy-looking person can be infected while Greater Accra Region records the highest percent (53 for men and 42 for women).

Comprehensive knowledge of HIV methods and transmission

Table HA.3 summarizes information from Tables HA.1 and HA.2 and presents the percentage of men and women who know 2 ways of preventing HIV transmission and reject three common misconceptions. Overall, 32 percent of men and 21 percent of women were found to have comprehensive knowledge, which is to identify two preventive methods and three misconceptions of HIV and AIDS. There are notable differences in knowledge of HIV / AIDS prevention behaviours. Comprehensive knowledge was higher in urban areas (38 percent for men, 28 percent for women) than rural areas (27 percent for men, 16 percent for women). Men aged 25-29 and women aged 15-19 have the highest comprehensive knowledge on HIV and AIDS. As expected, the percent of both men and women with comprehensive knowledge increases with education and wealth index quintiles. Regional variations in comprehensive knowledge for both men and women is shown in Figure HA.1

Figure HA.1: Comprehensive knowledge (identify 2 preventive methods and 3 misconceptions) by region, Ghana, 2006

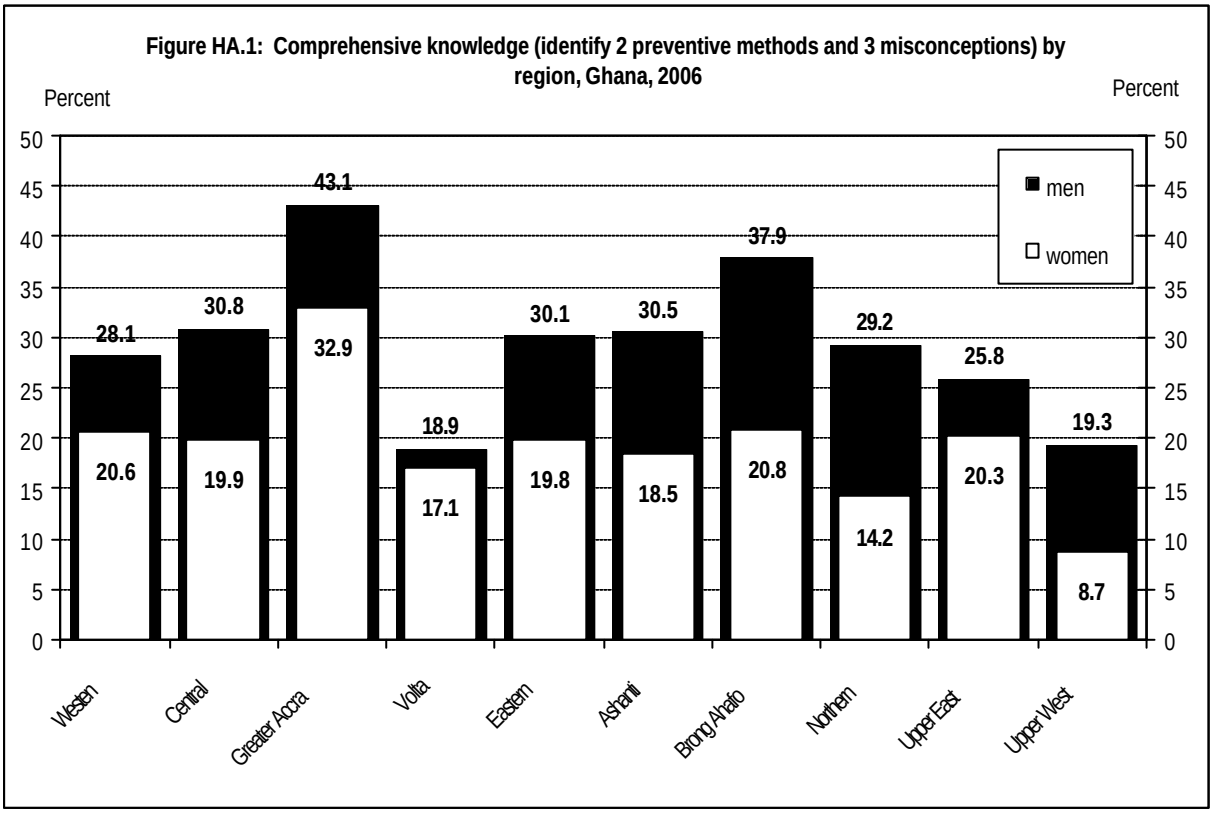


Table HA.3: Comprehensive knowledge of HIV/AIDS transmission

Percentage of men and women aged 15-49 years who have comprehensive knowledge of HIV/AIDS transmission, Ghana, 2006

Background characteristic	Know 2 ways to prevent HIV transmission		Correctly identify 3 misconceptions about HIV transmission		Have comprehensive knowledge (identify 2 prevention methods and 3 misconceptions)*		Number of men and women	
	Men	Women	Men	Women	Men	Women	Men	Women
Region								
Western	70.5	69.2	39.5	25.4	28.1	20.6	176	593
Central	78.0	68.5	36.8	24.9	30.8	19.9	122	455
Greater Accra	74.8	72.0	52.7	41.9	43.1	32.9	311	1,125
Volta	56.5	61.5	29.1	22.2	18.9	17.1	135	426
Eastern	80.1	66.6	36.6	26.6	30.1	19.8	210	741
Ashanti	61.1	58.4	48.9	29.9	30.5	18.5	310	888
Brong Ahafo	79.3	69.9	44.1	26.3	37.9	20.8	154	569
Northern	66.5	52.9	33.7	20.1	29.2	14.2	231	745
Upper East	73.0	61.6	31.9	26.8	25.8	20.3	62	218
Upper West	(41.3)	35.3	(27.5)	18.3	(19.3)	8.7	35	130
Residence								
Urban	72.0	67.6	49.4	36.5	38.1	27.5	767	2,775
Rural	68.3	61.0	35.0	21.2	26.6	15.5	977	3,115
Age								
15-19	69.5	68.2	40.8	34.3	32.2	26.4	471	1,218
20-24	74.3	66.0	44.4	32.3	34.4	23.5	290	1,075
15-24	71.3	67.1	42.2	33.4	33.0	25.1	761	2,293
25-29	73.5	63.5	47.6	26.4	37.2	20.9	249	987
30-34	70.5	65.1	36.4	28.3	27.6	20.7	229	777
35-39	68.3	61.6	44.7	23.4	33.4	18.1	181	746
40-44	64.9	61.8	32.5	24.0	25.3	16.6	164	577
45-49	63.9	57.0	39.8	22.4	26.7	14.4	160	509
Education								
None	55.5	51.4	15.7	12.9	10.6	9.0	253	1,549
Primary	67.8	62.7	22.2	19.9	17.5	13.8	265	1,162
Middle/JSS	74.7	71.5	41.6	31.8	32.8	24.7	816	2,237
Secondary +	70.8	69.5	68.8	56.4	51.5	41.7	411	942
Wealth index quintiles								
Poorest	61.8	49.1	20.9	11.7	16.5	8.2	313	954
Second	69.1	61.8	28.0	19.0	20.1	12.7	287	1,037
Middle	66.5	66.0	37.4	22.3	26.0	16.3	330	1,149
Fourth	75.3	67.8	51.9	32.4	40.3	25.4	415	1,298
Richest	74.2	71.0	59.1	47.4	47.6	35.8	440	1,451
Total	**69.9**	**64.2**	**41.3**	**28.4**	**31.7**	**21.2**	**1,745**	**5,890**

** MICS indicator 82; MDG indicator 19b*

Figures in parentheses '( )' are based on 25-49 unweighted cases.

Knowledge of mother to child transmission

Knowledge of mother-to-child transmission of HIV is also an important first step for women to seek HIV testing when they are pregnant to avoid infection in the baby. Both men and women should know that HIV can be transmitted during pregnancy, delivery, and through breastfeeding. The level of knowledge among men and women age 15-49 years concerning mother-to-child transmission is presented in Table HA.4. Overall, 92 percent of men and 93 percent of women know that HIV can be transmitted from mother to child. About 70 percent of women and men can name all three ways of MTCT, while only 6 percent of men and 4 percent of women did not know of any specific way.

There is not much regional variation for men. Regional variations range from 86 percent for women in Central Region to 60 percent in the Northern Region. Among both women and men, those with secondary and higher levels of education are about 10 percentage points more likely to be aware of all three methods of MTCT than those with no education.

Table HA.4: Knowledge of mother-to-child HIV transmission

Percentage of men and women aged 15-49 years who correctly identify means of HIV transmission from mother to child, Ghana, 2006

Background characteristic	Percentage who know AIDS can be transmitted:													
	From mother to child		During pregnancy		At delivery		Through breastmilk		All three ways*		Did not know any specific way		Number of men and women	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Region														
Western	94.7	93.6	88.6	89.9	73.4	77.6	90.5	89.2	70.1	73.1	5.3	4.4	176	593
Central	92.1	95.0	88.4	88.0	75.5	79.3	88.5	91.9	72.4	86.3	7.9	3.6	122	455
Greater Accra	97.2	97.2	90.3	89.6	79.4	80.8	84.3	86.9	67.9	69.9	2.8	2.7	311	1,125
Volta	94.0	95.3	85.2	87.3	82.6	83.0	88.6	91.5	72.9	76.4	4.5	1.8	135	426
Eastern	96.0	91.7	90.2	81.9	70.0	69.0	86.4	82.7	63.9	62.6	4.0	7.8	210	741
Ashanti	91.3	94.7	85.0	87.3	76.4	79.0	76.2	85.3	64.5	69.6	8.2	3.8	310	888
Brong Ahafo	94.3	93.5	86.4	86.5	84.7	82.0	80.5	86.9	72.4	75.4	5.0	5.7	154	569
Northern	78.2	81.2	76.3	78.9	67.5	64.5	70.9	73.2	61.0	59.7	9.2	4.6	231	745
Upper East	92.7	89.8	89.6	86.0	86.4	81.6	82.5	79.2	76.7	73.0	5.0	1.8	62	218
Upper West	(88.2)	90.5	(79.8)	79.9	(63.7)	72.6	(65.1)	77.8	(49.9)	63.0	(11.8)	8.3	35	130
Residence														
Urban	94.8	95.9	90.4	88.3	80.2	79.8	80.0	86.1	68.2	69.9	4.9	3.2	767	2,775
Rural	89.9	89.8	82.9	84.0	72.6	74.1	83.2	83.7	66.4	69.0	6.8	5.3	977	3,115
Age														
15-19	85.9	91.6	80.4	82.4	68.4	70.9	76.3	81.8	61.3	61.7	9.7	5.3	471	1,218
20-24	92.5	92.2	84.8	85.7	74.3	74.8	80.1	82.2	61.0	66.8	5.1	5.1	290	1,075
15-24	88.4	91.9	82.1	84.0	70.6	72.7	77.8	82.0	61.2	64.1	7.9	5.2	761	2,293
25-29	96.3	91.6	87.9	84.9	77.3	77.3	86.5	84.4	69.0	70.0	3.3	4.6	249	987
30-34	94.4	94.1	91.3	89.0	83.0	79.6	82.4	88.3	73.2	74.5	5.1	4.1	229	777
35-39	94.2	92.5	89.4	87.0	80.8	81.0	84.9	87.7	72.0	75.1	5.2	3.5	181	746
40-44	96.2	93.4	89.3	87.9	76.9	80.7	86.9	86.0	69.6	73.4	1.7	3.9	164	577
45-49	92.7	95.5	89.0	89.3	82.7	79.0	84.2	88.0	76.2	71.7	7.0	1.4	160	509
Education														
None	76.1	84.3	70.7	78.5	63.4	68.2	70.1	77.7	58.8	63.3	12.2	6.3	253	1,549
Primary	86.7	92.6	79.7	84.9	67.3	76.0	77.5	87.7	60.0	70.0	11.9	5.5	265	1,162
Middle/JSS	95.2	96.2	89.2	89.4	79.6	80.1	85.5	88.5	70.8	72.8	4.8	3.4	816	2,237
Secondary +	99.1	98.2	94.0	91.7	82.0	83.9	84.4	84.5	69.7	70.8	0.5	1.6	411	942
Wealth index quintiles														
Poorest	79.6	79.3	76.0	74.4	67.5	64.0	70.3	72.0	59.8	59.3	10.8	8.1	313	954
Second	92.8	92.2	86.1	86.0	75.6	76.0	86.1	86.9	68.8	71.4	6.0	5.0	287	1,037
Middle	91.8	94.6	84.4	87.0	73.7	77.5	83.9	88.3	66.4	71.0	7.7	3.6	330	1,149
Fourth	95.8	96.9	88.0	91.0	79.5	81.5	85.9	89.4	69.7	74.4	4.2	2.6	415	1,298
Richest	97.5	96.4	93.9	88.5	81.0	80.9	81.7	85.2	69.7	69.0	2.5	3.4	400	1,451
Total	**92.1**	**92.7**	**86.2**	**86.0**	**76.0**	**76.8**	**81.8**	**84.9**	**67.2**	**69.4**	**5.9**	**4.3**	**1,745**	**5,890**

** MICS indicator 89*

Note: *Figures in parentheses '( )' are based on 25-49 unweighted cases.*

Attitude towards people living with HIV and AIDS

The indicators on attitudes toward people living with HIV measure stigma and discrimination in the community. Stigma and discrimination are low if respondents report an accepting attitude on the following four questions: 1) would care for family member sick with AIDS; 2) would buy fresh vegetables from a vendor who was HIV positive; 3) thinks that a female teacher who is HIV positive should be allowed to teach in school; and 4) would ***not*** want to keep HIV status of a family member a secret. Table HA.5 presents the attitudes of men and women towards people living with HIV/AIDS. Generally, the percentage of

those with accepting attitudes on all four questions; that is agreeing with none of the discriminatory statements, is low. Only 11 percent of men and 8 percent of women agree with none of the discriminatory statements, hence have an accepting attitude towards persons living with HIV and AIDS. About 9 in 10 women and men agree with at least one of the four discriminatory statements.

Table HA.5: Attitudes toward people living with HIV/AIDS

Percentage of men and women aged 15-49 years who have heard of AIDS who express a discriminatory attitude towards people living with HIV/AIDS, Ghana, 2006.

Background characteristic	Percent of men and women who:												Number of men and women who heard of AIDS	
	Would not care for a family member who was sick with AIDS		If a family member had HIV would want to kept it a secret		Believe that a teacher with HIV should not be allowed to work		Would not buy food from a person with HIV/AIDS		Agree with at least one discriminatory statement		Agree with none of the discriminatory statements*			
	Men	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**
Region														
Western	7.9	10.4	36.9	47.4	40.9	56.0	72.8	78.9	84.9	90.7	15.1	9.3	176	581
Central	11.6	18.8	37.8	47.3	47.6	53.8	73.2	81.9	89.1	93.4	10.9	6.6	122	449
Greater Accra	10.7	11.3	58.2	59.0	31.8	42.7	72.1	71.7	91.3	90.4	8.7	9.6	311	1,123
Volta	19.4	23.1	23.2	37.5	51.4	62.7	71.8	80.4	86.7	91.0	13.3	9.0	133	414
Eastern	18.1	19.9	51.9	59.9	47.8	49.3	68.5	76.2	90.3	94.7	9.7	5.3	210	737
Ashanti	20.6	18.9	61.6	63.3	49.7	46.2	69.4	71.3	90.6	92.7	9.4	7.3	309	876
Brong Ahafo	12.5	13.3	52.0	62.0	46.1	58.0	72.6	78.1	93.2	94.7	6.8	5.3	153	565
Northern	12.3	15.0	25.4	29.4	53.7	56.9	76.3	83.5	86.0	91.6	14.0	8.4	202	639
Upper East	8.0	5.0	42.0	40.5	42.6	46.1	77.4	80.2	89.2	94.3	10.8	5.7	60	200
Upper West	(8.0)	10.4	(53.5)	43.0	(45.1)	56.9	(73.5)	81.5	(88.9)	94.8	(11.1)	5.2	35	128
Residence														
Urban	11.6	11.0	51.7	57.3	33.5	42.2	65.9	69.6	86.4	89.6	13.6	10.4	764	2,751
Rural	16.0	19.3	42.4	47.2	54.4	59.8	77.0	83.6	91.6	95.1	8.4	4.9	945	2,961
Age														
15-19	15.3	17.3	54.1	58.2	53.0	50.4	75.5	77.2	92.6	93.1	7.4	6.9	450	1,181
20-24	13.7	13.2	47.0	52.8	41.6	46.2	70.1	74.3	89.2	91.9	10.8	8.1	283	1,046
15-24	14.7	15.4	51.4	55.6	48.6	48.4	73.4	75.8	91.3	92.5	8.7	7.5	733	2,227
25-29	11.4	16.1	47.8	48.6	45.0	53.0	73.7	77.4	87.9	92.4	12.1	7.6	248	950
30-34	13.2	15.2	41.1	50.6	41.0	52.7	70.6	76.1	90.9	91.7	9.1	8.3	228	763
35-39	17.9	15.1	40.5	48.7	42.3	53.3	73.0	78.5	87.1	92.8	12.9	7.2	180	716
40-44	11.1	16.4	43.0	54.9	41.1	55.7	70.6	79.1	85.5	93.7	14.5	6.3	160	561
45-49	15.0	12.5	41.3	46.8	42.1	51.0	65.8	76.8	86.6	91.2	13.4	8.8	160	494
Education														
None	20.3	18.3	39.4	44.8	60.3	63.7	85.6	85.8	95.2	96.0	4.8	4.0	223	1,403
Primary	19.1	22.2	46.9	52.2	62.9	61.3	81.8	82.7	95.2	94.9	4.8	5.1	261	1,141
Middle/JSS	15.5	13.3	48.4	55.0	46.0	49.6	73.1	75.1	89.8	92.8	10.2	7.2	816	2,227
Secondary +	4.5	7.1	46.7	55.9	23.5	24.7	56.3	60.5	81.4	83.3	18.6	16.7	410	940
Wealth index quintiles														
Poorest	16.8	22.1	42.4	39.7	63.4	67.5	83.9	87.8	94.7	96.2	5.3	3.8	283	835
Second	19.2	21.4	42.7	47.5	57.7	63.9	78.9	87.3	92.4	96.2	7.6	3.8	284	1,008
Middle	18.2	18.3	44.6	54.9	49.2	56.7	71.0	78.7	91.8	93.9	8.2	6.1	328	1,128
Fourth	12.6	10.6	46.6	54.3	38.9	46.2	67.7	71.8	85.2	90.7	14.8	9.3	415	1,293
Richest	6.4	9.0	53.9	58.3	26.2	33.6	64.1	66.4	85.6	88.0	14.4	12.0	400	1,449
Total	**14.0**	**15.3**	**46.6**	**52.1**	**45.1**	**51.3**	**72.1**	**76.9**	**89.3**	**92.4**	**10.7**	**7.6**	**1,710**	**5,712**

** MICS indicator 86*
Figures in parentheses '( )' are based on 25-49 unweighted cases.

Education, wealth, and type of residence are strongly related to negative attitudes towards those who are HIV-positive. Rural residents, less educated people and those in lower wealth quintiles are more likely to have discriminatory attitudes towards people who are HIV

positive as compared to the residents of urban areas, those more educated and from wealthier households. There is however one exception, the level of people who would want to keep the HIV status of their family member secret does not vary much by level of education and wealth quintiles for both men and women. There are regional variations in the likelihood of disagreeing with all of the discriminatory statements among women and men. The survey findings show a high level of stigma among women in Eastern, Brong Ahafo and Upper West regions (only 5 percent agreed with none of the statements), while the lowest level can be found in Western and Greater Accra regions (almost 10 percent). Among men, a high level of stigma can be found in Brong Ahafo, where only 7 percent agreed with none of the discriminatory statements. Fifteen percent of men in Western Region expressed accepting attitudes towards people living with HIV.

Knowledge of facility for HIV testing

Other important indicators are the knowledge of where to be tested for HIV and use of such services. Knowledge of HIV status helps HIV-negative individuals make specific decisions to reduce risk and increase safer sex practices so they can remain disease-free. Findings related to knowledge of an HIV testing facility among men and women, whether they have ever been tested and whether they have been tested in the last 12 months and have been told the test results, are presented in Tables HA.6 and HA.6A.

Fifty-eight percent of men and 48 percent of women know where to be tested, and 9 percent of men and 14 percent of women have actually ever been tested. Among those ever tested for HIV, 48 percent of men and 71 percent of women have been told the result. Only 3 percent of men and 4 percent of women were tested in the last 12 months and received their results. As expected, more people in urban areas compared with rural dwellers know a place to get HIV testing. The higher the educational level and wealth index for both men and women the better the knowledge of a place to get tested and the likelihood of having received an HIV test.

Women in the 25-29 age group and men in the 35-39 age group recorded the highest proportion of having been tested.

Women are more likely to receive HIV testing in Ashanti (18 percent), Brong Ahafo (18 percent) and Greater Accra (16 percent) Regions, while the proportion of men receiving HIV testing is highest in the Brong Ahafo Region (16 percent).

As seen from HA.6 and HA.6A, there are significant variations in HIV testing rates among women and men. This may be mainly due to the fact that women who become pregnant can receive counselling when they attend antenatal clinics and have opportunity to be tested to find out their status.

Table HA.6: Knowledge of a facility for HIV testing and recent testing: Women

Percentage of women aged 15-49 years who know where to get an HIV test, percentage of women who have been tested and those who have been tested and received results in the last 12 months, of those ever tested the percentage who have been told the result, Ghana, 2006

Background characteristic	Know a place to get tested*	Have been tested**	Were tested and received results in the past 12 months	Number of women	If tested, have been told result	Number of women who have ever been tested for HIV
Region						
Western	48.7	12.7	3.1	593	64.3	75
Central	41.9	11.2	3.7	455	80.6	51
Greater Accra	68.4	16.4	4.7	1,125	79.3	184
Volta	30.2	7.6	2.2	426	(61.9)	32
Eastern	49.1	14.6	4.7	741	78.5	108
Ashanti	47.4	18.1	5.0	888	64.6	160
Brong Ahafo	50.9	17.9	5.0	569	69.4	102
Northern	32.3	6.2	1.5	745	(55.6)	46
Upper East	46.8	11.1	4.0	218	*	24
Upper West	38.3	12.6	3.4	130	*	16
Residence						
Urban	59.8	16.1	4.6	2,775	75.1	447
Rural	38.0	11.4	3.3	3,115	65.0	354
Age						
15-19	38.4	4.4	1.8	1,218	4.8	7
20-24	51.7	13.6	4.4	1,075	50.7	16
15-24	44.6	8.7	3.0	2,293	36.6	24
25-29	54.0	20.1	4.7	987	57.2	38
30-34	53.1	18.0	5.2	777	44.5	32
35-39	50.5	17.1	3.7	746	50.7	32
40-44	49.1	14.6	3.2	577	44.4	12
45-49	42.5	10.2	5.0	509	50.2	16
Education						
None	30.9	9.5	2.1	1,549	53.9	147
Primary	37.7	12.6	4.9	1,162	69.1	146
Middle/JSS	53.6	15.5	4.2	2,237	74.2	348
Secondary +	77.5	17.0	4.6	942	79.8	160
Wealth index quintiles						
Poorest	26.3	6.7	1.1	954	54.6	64
Second	34.2	10.3	4.4	1,037	65.3	106
Middle	44.5	14.4	4.1	1,149	62.9	165
Fourth	54.6	15.2	4.0	1,298	72.5	198
Richest	70.1	18.5	5.0	1,451	80.0	268
Total	**48.3**	**13.6**	**3.9**	**5,890**	**70.6**	**801**

** MICS Indicator 87*
*** MICS Indicator 88*
An asterisk indicates figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases

Table HA.6A: Knowledge of a facility for HIV testing and recent testing: Men

Percentage of men aged 15-49 years who know where to get an HIV test, percentage of men who have ever been tested and those who have been tested and received results in the last 12 months, of those tested the percentage who have been told the result, Ghana, 2006

Background characteristic	Know a place to get tested*	Have been tested**	Were tested and received results in the past 12 months***	Number of men	If tested, have been told result	Number of men who have ever been tested for HIV
Region						
Western	59.8	9.8	2.8	176	*	17
Central	49.8	7.3	3.4	122	*	9
Greater Accra	72.9	7.4	1.5	311	*	23
Volta	33.6	5.6	3.4	135	*	7
Eastern	61.3	7.1	1.5	210	*	15
Ashanti	57.6	12.0	5.0	310	(48.0)	37
Brong Ahafo	64.8	15.6	5.7	154	*	24
Northern	48.8	6.4	1.6	231	*	15
Upper East	65.5	7.5	2.1	62	*	5
Upper West	51.4	3.9	1.1	35	*	1
Residence						
Urban	69.6	12.5	3.8	767	48.4	96
Rural	49.3	5.9	2.2	977	48.2	57
Age						
15-19	42.3	1.6	0.4	471	*	7
20-24	56.3	5.7	2.0	290	*	16
15-24	47.7	3.1	1.0	761	*	24
25-29	69.8	15.2	5.7	249	(57.2)	38
30-34	62.0	13.8	6.6	229	(44.5)	32
35-39	69.2	17.8	3.1	181	(50.7)	32
40-44	61.8	7.3	2.1	164	*	12
45-49	68.7	10.0	3.3	160	*	16
Education						
None	35.8	5.3	3.1	253	*	13
Primary	39.3	3.8	2.1	265	*	10
Middle/JSS	58.5	6.7	1.8	816	(48.0)	55
Secondary +	83.7	18.3	5.7	411	47.9	75
Wealth index quintiles						
Poorest	35.5	2.6	1.1	313	*	8
Second	45.6	4.9	2.3	287	*	14
Middle	54.1	6.8	2.9	330	*	23
Fourth	67.8	12.1	4.3	415	40.6	50
Richest	78.6	14.6	3.5	400	55.0	58
Total	**58.2**	**8.8**	**2.9**	**1,745**	**48.3**	**153**

** MICS indicator 87*

** Men who know of a place to get tested for HIV includes those men who have already been tested (HV18=1 or HV15=1).*

*** MICS indicator 88*

**, ** All men included in the denominator, even those who have not heard of AIDS.*

**** The denominator consists of men who have been tested (HV15=1) and the numerator consists of men who have been told the results (HV16=1).*

An asterisk indicates figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases

According to data in Table HA.7, among women who had given birth within the two years preceding the survey, as many as 9 in 10 received antenatal care from a health professional for the last pregnancy. With regard to HIV related medical services, almost half (46 percent) received counselling about HIV prevention. One in five women were tested for HIV during antenatal care and 1 in 10 received the results of the HIV test at the antenatal clinic. Key observations from this table included a somewhat lower provision of HIV prevention information in Volta, Brong Ahafo, and Northern Region. Services provided are directly related to area of residence, education, and wealth, where urban, more educated, and wealthier women are more likely to receive counselling, be tested, and receive results.

Table HA.7: HIV testing and counselling coverage during antenatal care

Percentage of women aged 15-49 years who gave birth in the two years preceding the survey who were offered HIV testing and counselling with their antenatal care, Ghana, 2006

Background characteristic	Percent of women who:					Number of women who gave birth in the 2 years preceding the survey
	Received antenatal care from a health care professional for last pregnancy	Were provided information about HIV prevention during ANC visit*	Were tested for HIV at ANC visit	Received results of HIV test at ANC visit**	Received counselling, were tested and received results	
Region						
Western	89.8	48.6	17.7	7.9	5.9	144
Central	92.8	44.9	12.1	7.8	7.8	105
Greater Accra	93.8	56.4	25.3	14.6	13.8	167
Volta	85.7	33.9	9.3	4.6	4.6	97
Eastern	91.3	41.6	16.5	11.6	10.2	182
Ashanti	97.5	52.3	33.0	16.0	11.0	207
Brong Ahafo	94.5	34.2	26.3	17.7	13.3	107
Northern	89.7	38.1	9.5	4.1	3.8	260
Upper East	90.9	60.4	15.2	7.1	6.5	58
Upper West	(96.0)	(60.3)	(20.0)	(12.9)	(11.3)	37
Residence						
Urban	96.0	56.2	25.3	15.2	12.8	468
Rural	90.1	40.0	15.4	7.8	6.5	897
Age						
15-19	90.7	40.2	13.2	5.0	5.0	89
20-24	90.5	43.0	16.8	9.6	8.6	317
15-24	90.5	42.4	16.0	8.6	7.8	406
25-29	93.8	44.1	20.7	10.9	8.2	380
30-34	94.1	52.0	22.1	13.6	12.3	269
35-39	91.0	49.2	18.8	9.4	7.5	210
40-44	87.8	39.3	17.8	10.6	8.0	75
45-49	(94.1)	(36.4)	(4.6)	(2.1)	(2.1)	25
Education						
None	87.9	36.5	13.1	5.8	5.1	503
Primary	91.4	45.9	16.7	6.7	5.1	300
Middle/JSS	96.4	52.2	25.8	16.9	14.0	465
Secondary +	96.5	59.1	21.4	13.1	11.7	97
Wealth index quintiles						
Poorest	88.4	34.2	10.8	4.3	3.9	313
Second	88.7	37.6	14.1	6.9	5.7	325
Middle	91.6	45.6	22.4	11.4	8.6	260
Fourth	97.1	55.0	27.3	16.4	13.5	267
Richest	97.9	63.5	23.2	15.8	14.4	199
Total	**92.1**	**45.5**	**18.8**	**10.3**	**8.6**	**1,365**

** MICS Indicator 90*
*** MICS Indicator 91*
Figures in parentheses are based on 25-49 unweighted cases.

Sexual Behaviour Related to HIV Transmission

Promoting safer sexual behaviour is critical for reducing HIV prevalence. In most countries over half of new HIV infections are among young people 15-24 years and a change in behaviour among this age group will be especially important to reduce new infections. A module of questions was administered to all women and men to assess their risk of HIV infection. Risk factors for HIV among youth and the general population include sex at an early age, sex with older men, sex with younger women; sex with a non-marital non-cohabitating partner, and failure to use a condom.

The information about sexual behaviours that increase the risk of HIV infection among young women and men is presented in Table HA.8.

Table HA.8: Sexual behaviour that increases risk of HIV infection

Percentage of young women and men aged 15-19 years who had sex before age 15, percentage of young women and men aged 20-24 who had sex before age 18 and percentage of young women aged 15-24 who had sex with a man 10 or more years older, Ghana, 2006.

Background characteristic	Percentage of women/men aged 15-19 who had sex before age 15		Number of women/men aged 15-19 years		Percentage of women/men aged 20-24 who had sex before age 18		Number of women/men aged 20-24 years		Percentage of women aged 15-24 who had sex in the 12 months preceding the survey with a man 10 or more years older **	Number of women who had sex in the 12 months preceding the survey
	Women	Men	Women	Men	Women	Men	Women	Men		
Region										
Western	7.6	0.0	134	39	33.9	33.3	104	33	8.3	116
Central	5.7	2.1	98	41	45.6	26.8	90	22	7.1	104
Greater Accra	8.5	14.0	241	68	27.3	22.8	223	57	15.7	179
Volta	11.3	0.0	84	48	42.8	0.0	84	17	11.8	97
Eastern	7.1	10.6	162	55	40.6	39.2	133	41	12.6	148
Ashanti	6.0	5.0	191	84	35.9	26.8	153	38	12.2	164
Brong Ahafo	1.8	0.0	121	42	37.3	14.9	102	33	8.7	107
Northern	4.5	2.3	121	67	41.8	11.6	140	33	15.1	138
Upper East	(3.9)	2.6	43	19	40.6	38.9	29	11	(14.2)	32
Upper West	*	4.4	22	8	*	8.2	17	6	*	16
Residence										
Urban	4.9	8.2	601	197	29.3	23.9	497	136	12.2	444
Rural	8.0	2.5	617	274	43.7	23.8	578	154	12.0	657
Age										
15-19	6.5	4.8	1,218	471	na	na	na	na	8.2	345
20-24	na	na	na	na	37.0	23.9	1075	290	13.8	756
Education										
None	9.8	0.9	108	40	55.9	26.7	188	34	14.9	186
Primary	10.6	7.1	301	109	54.1	44.4	201	33	13.8	266
Middle/JSS	5.2	3.4	565	237	35.2	30.1	411	126	12.6	456
Secondary+	3.0	7.7	245	85	14.4	7.8	276	97	5.6	193
Wealth index quintiles										
Poorest	6.6	2.3	184	86	53.0	27.6	156	53	11.1	184
Second	9.5	5.1	202	93	46.0	28.6	182	36	13.2	212
Middle	7.9	1.5	255	103	46.7	14.8	207	54	13.0	244
Fourth	6.6	4.8	253	98	32.7	29.8	262	86	9.9	260
Richest	3.4	10.8	324	91	18.4	17.8	268	63	13.5	201
Total	**6.5**	**4.8**	**1,218**	**471**	**37.0**	**23.9**	**1075**	**290**	**12.1**	**1,101**

* MICS Indicator 84
** MICS Indicator 92
An asterisk indicates figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parenthesis are based on 25-49 unweighted cases.
'na' indicates not applicable.

According to data in table HA.8, seven percent of young women and 5 percent of young men ages 15 to 19 had sex by age 15. Among women and men in the 20-24 age group, 37 percent of women and 24 percent of men had sex before the age of 18. Overall, young women have sex earlier than their male counterparts. Level of education and positioning according to wealth index are somewhat related to age at first sex, especially for women. While 1 in 10

women aged 15-19 years with no education had sex before age 15, this is only the case for 3 percent among those with secondary or higher education. For men, there is no clear relationship between education and age at sexual debut. Rural women (8 percent) aged 15-19 years are more likely to have sex before age 15 than their urban counterparts (5 percent). The reverse is the case for men. More urban men (8 percent) had early sex than their rural counterparts (3 percent).

In many societies, young women have sexual relationships with men who are considerably older than they are. This practice can contribute to the wider spread of HIV and other STIs, because if a younger, uninfected partner has sex with an older, infected partner, this can introduce the virus into a younger, uninfected cohort. To investigate this practice, young women were asked the age of their sexual partners in the 12 months preceding the survey. Findings indicate that 12 percent of women aged 15-24 report having had sex with a man ten or more years older than themselves in the 12 months before the survey. While there are no differences in prevalence of age-mixing in sexual relationships by urban and rural areas, women with at least secondary level of education (6 percent) are less likely to have had sex with a partner 10 or more years older.

Table HA.8A summarizes data on sexual initiation. According to the table, six percent of young women and 4 percent of young men aged 15 to 24 had sex by age 15. Overall, young women have sex earlier than their male counterparts. Level of education and positioning according to wealth index are strongly related to age at first sex, especially for women. While 1 in 9 women age 15 to 24 with no education had sex by age 15, the proportion declines to only 2 percent among those with secondary or higher education. For men, the relationship between education and age at sexual debut is not as straightforward. Nine percent of men with only primary education have had sex before the age 15, while only 3-4 percent of men with other levels of education had sex before the age 15. Overall, young women in Central and Ashanti regions and young men in Greater Accra and Eastern regions are slightly more likely to have an earlier sexual debut than their counterparts in other regions.

Table HA.8A: Sexual behaviour that increases risk of HIV infection				
Background characteristic	Percentage of women aged 15-24 who had sex before age 15 *	Number of women aged 15-24 years	Percentage of men aged 15-24 who had sex before age 15 *	Number of men aged 15-24 years
Region				
Western	7.1	238	2.8	71
Central	7.4	187	4.9	63
Greater Accra	5.5	464	7.6	125
Volta	7.2	168	0.0	65
Eastern	5.9	296	7.7	96
Ashanti	7.5	344	5.1	122
Brong Ahafo	3.6	224	0.0	76
Northern	6.5	261	1.6	100
Upper East	5.6	72	1.7	30
Upper West	7.1	39	4.9	14
Area				
Urban	4.5	1,098	5.5	333
Rural	7.9	1,195	3.0	428
Age				
15-19	6.5	1,218	4.8	471
20-24	6.0	1,075	2.8	290
Education				
None	11.2	295	2.6	73
Primary	11.7	502	8.8	143
Middle/JSS	4.3	975	2.8	363
Secondary+	1.8	520	3.6	182
Wealth index quintiles				
Poorest	8.0	340	1.1	138
Second	9.7	387	6.7	129
Middle	7.6	448	3.2	166
Fourth	6.2	525	3.2	177
Richest	2.0	595	6.5	150
Total	**6.3**	**2,293**	**4.1**	**761**

Table HA.9 provides additional information on risky sexual behaviour among youth. It shows that in Ghana, 3 in 5 young women and 2 in 5 young men have ever had sex. Consistent with the previous finding, almost half (48 percent) of women and a third (31 percent) of men had sex in the last 12 months preceding the survey. While young women were more likely than young men to have sex, women are 3 times less likely to report having sex with more than one partner (2 percent) compared to young men (6 percent).

The period between age at first sex and age at marriage is often a time of sexual experimentation. Unfortunately, in the era of HIV / AIDS, it can also be a risky time. Information is shown in Table HA.9A on the percentage of never-married young women and men aged 15-24 years who have not yet engaged in sex, as well as the percentage who had sex in the 12 months preceding the survey and the percentage who used condoms during their most recent sex. Around 6 in 10 never-married young women (56 percent) and men (64 percent) reported that they had never had sex. While the proportion of unmarried youths who have never had sex drops rapidly between age groups 15-19 and 20-24, around a third of women and men in their early 20s reported that they had not yet had sex. Table HH.9A also presents the percentages of never-married young women and men who had sex in the 12 months preceding the survey, as well as the percentage who used a condom the last time they had sex. Approximately a third of never-married respondents age 15-24 had sex in the past 12 months (32 percent of women and 28 percent of men). About 2 in 5 women reported using a condom during last sexual intercourse, and slightly more, 3 in 5 men, reported doing so.

Table HA.9: Condom use and high-risk sex

Percentage of young men and women aged 15-24 years who had high risk sex in the previous year and who used a condom at last high risk sex, Ghana, 2006.

Background characteristic	Ever had sex		Had sex in the last 12 months		Had sex with more than one partner in last 12 months		Number of men and women aged 15-24 years		Percent who had sex with non-marital, non-cohabiting partner*		Number of women aged 15-24 years who had sex in last 12 months		Percent who used a condom at last sex with a non-marital, non-cohabiting partner**		Number of men and women aged 15-24 years who had sex in last 12 months with a non-marital, non-cohabiting partner	
	Men	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**
Region																
Western	49.3	63.1	33.2	48.8	5.3	0.8	71	238	*	54.2	24	116	73.3	30.2	20	63
Central	43.1	59.1	33.0	55.6	5.8	-	63	187	*	52.2	21	104	*	41.0	17	54
Greater Accra	39.4	50.1	31.9	38.5	9.1	2.9	125	464	(97.7)	65.6	40	179	(42.2)	51.3	39	117
Volta	27.1	67.7	22.8	57.8	-	-	65	168	*	40.8	15	97	*	(36.6)	9	39
Eastern	48.2	61.7	39.1	49.9	7.4	2.9	96	296	(81.9)	51.1	38	148	(60.0)	53.0	31	75
Ashanti	27.8	59.9	18.8	47.7	2.1	2.4	122	344	*	55.3	23	164	*	24.9	19	91
Brong Ahafo	48.3	56.5	38.9	47.9	9.9	1.8	76	224	(94.3)	60.1	30	107	(77.0)	39.1	28	64
Northern	39.3	63.0	32.6	52.8	3.3	0.5	100	261	(96.1)	31.8	33	138	(40.4)	(50.7)	31	44
Upper East	(44.1)	57.5	(41.9)	44.3	(9.8)	-	30	72	*	(45.0)	12	32	*	*	12	14
Upper West	*	(55.9)	*	(40.6)	*	(0.7)	14	39	*	*	2	16	*	*	1	4
Residence																
Urban	38.4	51.1	29.3	40.4	6.6	1.5	333	1,098	97.9	62.1	96	444	61.4	45.2	95	276
Rural	40.4	66.1	32.3	54.9	4.8	1.8	428	1,195	80.8	44.3	139	657	50.9	38.2	112	291
Age																
15-19	21.8	35.7	15.0	28.3	1.9	1.9	471.0	1,218	96.1	81.0	71	345	59.7	40.8	68	279
20-24	68.4	85.2	56.9	70.3	11.5	1.4	290	1,075	84.3	38.1	165	756	53.8	42.4	139	288
Education																
None	46.3	73.0	43.0	63.0	3.7	0.4	73	295	(87.3)	24.9	32	186	(23.1)	(33.7)	27	46
Primary	28.3	63.4	22.7	53.0	3.7	1.6	143	502	(75.1)	49.0	33	266	*	28.8	24	130
Middle/JSS	43.0	57.2	32.6	46.7	7.1	1.7	363	975	87.9	53.5	119	456	62.1	43.9	104	244
Secondary +	38.6	49.7	29.4	37.0	4.9	2.5	182	520	95.7	75.9	54	193	69.5	51.6	51	146
Wealth index quintiles																
Poorest	37.7	63.6	32.0	54.2	3.2	0.5	136	340	(86.6)	37.9	44	184	(36.3)	31.1	38	70
Second	39.0	66.2	30.2	55.2	7.0	2.2	130	384	(71.3)	45.5	39	212	(52.4)	32.2	28	97
Middle	38.0	64.5	29.4	52.7	3.5	1.3	158	462	(85.7)	48.2	47	244	(51.9)	33.1	40	117
Fourth	46.3	62.3	36.4	50.6	9.4	2.2	184	514	92.7	55.8	67	260	66.1	49.3	62	145
Richest	35.0	44.1	25.9	33.9	4.0	1.9	153	593	(100.0)	68.5	40	201	(64.2)	52.6	40	138
Total	**39.5**	**58.9**	**31.0**	**48.0**	**5.6**	**1.7**	**761**	**2,293**	**87.9**	**51.5**	**236**	**1,101**	**55.7**	**41.6**	**207**	**567**

** MICS indicator 85*

*** MICS indicator 83; MDG indicator 19a*

An asterisk indicates figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parenthesis are based on 25-49 unweighted cases.

Table HA.9A: Premarital sex and condom use during premarital sex

Background characteristic	Never-married women and men aged 15-24									
	Percentage who have never had sex		Percentage who had sex in the past 12 months		Number of never married men and women		Among those who had sex in the past 12 months, percentage who use a condom at last sex		Number of men and women who had sex in the 12 months preceding the survey	
	Men	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**
Area										
Urban	62.1	59.9	28.9	28.3	330	891	61.4	49.9	95	252
Rural	65.0	51.4	26.7	36.0	391	789	54.7	38.3	104	284
Age										
15-19	79.2	69.9	14.2	22.8	464	1120	61.6	44.8	66	255
20-24	35.6	28.1	52.0	50.2	257	561	56.0	42.8	134	281
Education										
None	59.8	56.1	38.0	34.6	66	139	(25.6)	(31.1)	25	48
Primary	76.0	54.5	18.2	34.1	135	338	(35.7)	32.9	25	115
Middle/JSS	59.9	56.6	29.4	31.4	344	738	64.1	46.9	101	232
Secondary+	63.1	55.8	27.7	30.3	177	466	(72.7)	51.9	49	141
Wealth index quintiles										
Poorest	64.3	57.9	30.1	31.6	130	210	(39.1)	31.5	39	66
Second	69.7	52.6	19.8	36.6	114	252	*	33.2	23	92
Middle	68.8	52.0	23.2	36.3	156	293	(59.1)	39.2	36	106
Fourth	54.1	51.8	35.2	32.8	172	398	62.6	50.6	60	131
Richest	64.2	62.0	27.7	26.7	150	529	(65.8)	53.6	42	141
Total	**63.7**	**55.9**	**27.7**	**31.9**	**722**	**1,681**	**57.9**	**43.8**	**200**	**536**

An asterisk indicates figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

Condom Use

The use of condoms during sex, especially with non-regular partners, is especially important for reducing the spread of HIV. Table HA.9B shows the percentage of sexually-active women and men aged 15-49 who had high risk sex in the previous year and who used condoms at the last high risk sex. Sixty-three percent of men and 67 percent of women had sex in the last 12 months prior to the MICS survey. Among them, 2 percent of women and 13 percent of men had sex with more than one partner; additionally 22 and 40 percent, respectively, had sex with a non regular partner, men were therefore two times more likely than women to engage in higher-risk sex. While half of young women aged 15-24 reported having sex with a non-marital, non-cohabiting partner in the last 12 months before the MICS, almost 9 in 10 young men did (see Table HA.9). With regard to condom use, a third of women aged 15-49 reported condom use during last higher-risk sexual encounter in the year preceding the survey, and more than half (54 percent) of men did. Overall condom use is higher among youth than in the general population. The difference between women and men aged 15-24 in reported condom use rate, at last sex with a non-marital, non-cohabiting partner is 42 and 56 percent, respectively. The likelihood of engaging in higher-risk sex and using a condom increases with the respondents' level of education. Twenty-five percent of women and 33 percent of men aged 15-49 with primary education used a condom during last higher risk sex encounter in the year before the MICS, while 48 percent of women and 60 percent of men with secondary and higher levels of education used a condom.

Male respondents in the MICS 2006 were asked whether they had paid money in exchange for sex in the last 12 months, as paid sex is considered a special category of higher-risk sex. They were also asked about condom use at these sexual encounters. While the reported prevalence of commercial sex is very low, men age 25 to 29 are more likely to have had commercial sex in the 12 months preceding the survey, than other men. Since the number of men who reported having sex with prostitutes is so small, it is not possible to confidently explain differentials in condom use by social and demographic characteristics (data not shown).

Table HA.9B: High-risk sex and condom use at last high-risk sex

Percentage of men and women aged 15-49 years who had high risk sex in the previous year and who used a condom at last high risk sex, Ghana, 2006

Background characteristic	Had sex in the last 12 months		Had sex with more than one partner in last 12 months		Percent who had sex with non-marital, non-cohabiting partner*		Number aged 15-49 years who had sex in last 12 months		Percent who used a condom at last sex with a non-marital, non-cohabiting partner**		Number aged 15-49 years who had sex in last 12 months with a non-marital, non-cohabiting partner	
	Men	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**
Region												
Western	70.3	67.3	6.4	0.8	33.3	23.5	124	399	(61.6)	22.7	41	94
Central	63.8	71.2	21.3	0.8	46.4	24.2	78	324	(24.1)	35.2	36	78
Greater Accra	62.4	61.1	18.1	3.3	51.9	29.4	194	687	53.1	37.7	101	202
Volta	54.6	75.5	8.0	0.9	28.7	15.7	74	322	*	34.2	21	50
Eastern	65.3	65.6	18.7	2.9	43.3	24.2	137	486	48.6	39.6	59	118
Ashanti	61.0	68.6	10.1	2.4	32.4	21.0	189	610	54.2	23.1	61	128
Brong Ahafo	65.0	68.1	15.9	1.5	48.1	27.5	100	388	(73.2)	27.2	48	107
Northern	65.9	70.1	9.1	0.3	35.6	11.5	152	522	42.3	45.7	54	60
Upper East	(62.8)	65.3	(10.8)	0.6	(45.3)	13.7	39	143	*	*	18	20
Upper West	*	63.0	*	0.6	*	6.6	19	82	*	*	3	5
Residence												
Urban	61.4	62.0	14.4	2.2	46.0	27.6	471	1,722	56.9	33.5	217	475
Rural	64.9	71.9	12.4	1.4	35.6	17.2	635	2,239	50.1	33.2	226	386
Age												
15-19	15.0	28.3	12.9	6.8	96.1	81.0	71	345	59.7	40.8	68	279
20-24	56.9	70.3	20.2	2.0	84.3	38.1	165	756	53.8	42.4	139	288
25-29	82.7	80.0	14.2	2.3	48.0	16.1	206	790	64.7	22.9	99	127
30-34	86.5	85.0	13.1	0.8	28.7	9.3	198	660	43.3	17.7	57	61
35-39	92.9	80.1	15.9	0.4	25.1	8.0	168	597	(47.3)	(10.9)	42	48
40-44	90.2	78.7	7.6	1.0	16.5	7.6	148	455	*	(16.4)	24	35
45-49	93.2	70.3	7.2	0.0	8.8	6.7	150	358	*	*	13	24
Education												
None	73.7	76.8	7.7	0.4	27.2	9.0	186	1,189	30.9	20.4	51	107
Primary	54.1	67.7	15.8	1.4	36.1	21.8	143	787	32.7	24.7	52	172
Middle/JSS	65.0	66.4	13.5	2.2	42.0	25.7	530	1,485	59.8	33.0	223	382
Secondary +	59.9	53.1	15.3	4.1	47.9	40.2	246	500	60.2	48.4	118	201
Wealth index quintiles												
Poorest	63.7	71.1	9.7	0.6	32.2	13.1	199	678	33.9	25.7	64	89
Second	62.6	72.2	12.6	1.9	31.7	17.0	180	749	47.0	27.2	57	127
Middle	60.3	68.4	13.9	1.7	39.6	24.8	199	786	50.6	24.4	79	195
Fourth	65.1	66.8	14.8	2.1	48.8	26.8	270	868	64.0	37.8	132	233
Richest	64.4	60.6	14.3	2.2	43.2	24.8	258	880	57.7	43.3	111	218
Total	**63.4**	**67.2**	**13.2**	**1.7**	**40.1**	**21.7**	**1,106**	**3,961**	**53.5**	**33.4**	**443**	**861**

An asterisk indicates figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

Orphaned and Vulnerable Children

As the HIV epidemic progresses, more and more children are becoming orphaned and vulnerable because of AIDS. Children who are orphaned or in vulnerable households may be at increased risk of neglect or exploitation if the parents are not available to assist them. Monitoring the variations in different outcomes for orphans and vulnerable children and comparing them to their peers provides a measure of how well communities and governments are responding to their needs.

To monitor these variations, a measurable definition of orphaned and vulnerable children needed to be created. The UNAIDS Monitoring and Evaluation Reference Group developed a proxy definition of children who have been affected by adult morbidity and mortality. This should capture many of the children affected by AIDS in countries where a significant proportion of the adults are HIV infected. This definition classifies children as orphaned and vulnerable if they have experienced the death of either parent, if either parent is chronically ill, or if an adult (aged 18-59) in the household either died (after being chronically ill) or was chronically ill in the year prior to the survey.

Table HA.10: Children's living arrangements and orphanhood

Percent distribution of children aged 0-17 years according to living arrangements, percentage of children aged 0-17 years in households not living with a biological parent and percentage of children who are orphans, Ghana, 2006

Background characteristic	Living with both parents	Living with neither parent				Living with mother only		Living with father only		Impossible to determine	Total	Not living with a biological parent*	One or both parents dead**	Number of children
		Only father alive	Only mother alive	Both are alive	Both are dead	Father alive	Father dead	Mother alive	Mother dead					
Sex														
Male	61.4	0.9	1.4	9.5	0.8	17.0	3.9	4.0	0.8	0.1	100.0	12.0	7.5	6,061
Female	58.1	1.1	1.5	12.9	1.2	17.8	3.7	2.9	0.6	0.3	100.0	16.7	8.1	5,742
Region														
Western	56.2	0.7	0.9	9.0	1.8	21.3	5.8	2.7	0.9	0.5	100.0	12.1	9.8	1,198
Central	47.9	2.1	1.3	13.8	0.6	26.4	4.5	2.9	0.5	0.2	100.0	17.2	8.7	992
Greater Accra	48.0	1.2	2.1	15.2	1.1	22.1	3.9	5.6	0.4	0.5	100.0	19.1	8.4	1,560
Volta	60.3	1.7	2.7	11.9	0.3	14.4	2.9	4.7	0.8	0.3	100.0	16.3	8.2	933
Eastern	49.9	1.1	1.8	15.0	0.3	22.8	4.0	3.9	1.2	0.2	100.0	17.4	8.0	1,437
Ashanti	56.1	1.1	1.4	11.9	2.2	18.8	5.0	3.0	0.3	0.0	100.0	16.2	9.8	1,773
Brong Ahafo	55.9	1.0	1.4	13.0	1.1	22.2	2.4	2.1	0.7	0.1	100.0	16.2	6.5	1,117
Northern	83.9	0.2	0.7	4.4	0.6	4.6	1.5	3.3	0.7	0.1	100.0	5.7	3.7	1,877
Upper East	75.6	0.4	1.3	7.1	0.9	5.9	5.7	2.2	0.9	0.1	100.0	9.2	8.7	575
Upper West	71.9	0.4	1.2	10.2	0.2	8.1	3.9	3.0	0.6	0.3	100.0	11.8	6.4	340
Residence														
Urban	51.3	1.2	1.4	14.1	1.1	21.5	4.0	4.5	0.5	0.3	100.0	17.3	8.1	4,485
Rural	64.9	0.9	1.5	9.5	0.9	14.9	3.7	2.8	0.8	0.2	100.0	12.4	7.6	7,317
Age														
0-4 years	68.7	0.4	0.4	4.1	0.2	23.2	1.7	1.0	0.1	0.1	100.0	5.2	2.9	3,283
5-9 years	60.9	0.8	1.4	12.4	0.8	15.8	3.2	3.9	0.7	0.2	100.0	15.3	6.9	3,465
10-14 years	55.4	1.3	2.0	14.7	1.6	13.9	5.3	4.6	1.0	0.1	100.0	19.5	11.2	3,348
15-17 years	46.3	2.2	3.0	16.5	2.1	16.1	6.7	5.4	1.1	0.7	100.0	19.3	12.2	1,706
Wealth index quintiles														
Poorest	16.8	0.1	0.2	1.3	0.1	2.0	0.9	0.6	0.2	0.0	100.0	7.7	6.9	2,623
Second	13.6	0.3	0.2	2.0	0.2	3.5	0.9	0.6	0.2	0.0	100.0	12.2	7.9	2,540
Middle	9.9	0.2	0.3	2.9	0.2	5.5	0.9	0.8	0.2	0.0	100.0	16.5	8.1	2,455
Fourth	9.9	0.2	0.3	2.5	0.2	4.0	0.6	0.6	0.1	0.0	100.0	17.0	7.3	2,167
Richest	9.4	0.2	0.4	2.6	0.3	2.5	0.6	0.9	0.1	0.1	100.0	19.6	8.7	2,017
Total	**59.8**	**1.0**	**1.5**	**11.2**	**1.0**	**17.4**	**3.8**	**3.5**	**0.7**	**0.2**	**100.0**	**14.3**	**7.7**	**11,803**

** MICS indicator 78*

*** MICS indicator 75*

The frequency of children living with neither parent, mother only, and father only is presented in Table HA.10. This table shows the distribution by sex, region, place of residence, age, and wealth index.

Fourteen percent of all children under 18 are not living with a biological parent and 8 percent of all children have one or both parents dead. Only 60 percent of children under 18 are living with both their parents; 21 percent live with only their mother, 4 percent live with only their father, and 15 percent live with neither parent.

MICS 2006 did not collect information to determine all factors of vulnerability. With an estimated HIV/AIDS prevalence rate of 2.2 percent (GDHS 2003), the MICS 2006 sample size is simply too small to produce statistically sound estimates. This is visible in Table HA.11 below, where school attendance among orphaned 10-14 year olds is compared to that of their peers.

In the age group, 1.5 percent of children have lost both their mother and father and have a school attendance rate of 89 percent. This is a surprising result, as it is slightly higher than for children with both parents alive and living with at least one of them, whose school attendance rate is 88 percent.

Table HA.11: School attendance of orphaned children

School attendance of children aged 10-14 years by orphanhood, Ghana, 2006

Background characteristic	Percent of children whose mother and father have died	School attendance rate of children whose mother and father have died	Percent of children of whom both parents are alive and child is living with at least one parent	School attendance rate of children of whom both parents are alive and child is living with at least one parent	Double orphans to non orphans school attendance ratio*	Total number of children aged 10-14 years
Sex						
Male	1.5	(87.8)	76.9	86.7	(1.01)	1,710
Female	1.6	(90.1)	70.9	84.7	(1.06)	1,639
Area						
Urban	1.5	(88.9)	69.3	95.4	(0.93)	1,344
Rural	1.6	(89.0)	77.1	80.0	(1.11)	2,004
Wealth index quintiles						
Poorest	0.9	*	84.9	58.6	*	712
Second	1.7	*	75.0	90.4	*	638
Middle	1.2	*	72.3	94.8	*	709
Fourth	1.2	*	70.3	94.7	*	656
Richest	2.9	*	66.4	98.8	*	633
Total	**1.5**	**88.9**	**73.2**	**87.7**	**1.02**	**3,348**

** MICS Indicator 77; MDG Indicator 20*

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Annex A – Sample design

The major features of sample design are described in this appendix. Sample design features include target sample size, sample allocation, sample frame and listing, choice of domains, sampling stages, stratification, and the calculation of sample weights.

The primary objective of the sample design for the MICS 2006 was to produce statistically reliable estimates of most indicators, at the national level, for urban and rural areas, and for the 10 regions with a minimum of 500 selected households in each region. Urban and rural areas in each of the 10 regions were defined as the sampling strata but each area is not a separated domain.

A multi-stage, stratified cluster sampling approach was used for the selection of the survey sample.

Sample Size and Sample Allocation

The sample size for MICS 2006 was calculated as 6,300 households using basically the same number of clusters selected for GDHS 2003. The resulting number of households from this exercise was a minimum of about 500 (except for Upper West Region) households which is the sample size needed in each region. The average cluster size in MICS 2006 was determined as 20 households (except in rural clusters in Northern, Upper East and Upper West Regions with 25 households) based on a number of considerations, including the budget available, and the time that would be needed per team to complete one cluster. Dividing the total number of households by the number of households per cluster, it was calculated that the selection of a minimum of about 25 clusters would be needed in each region.

The allocation of the total sample size to each of the ten regions follows almost the same as allocation the GDHS 2003. Therefore, a minimum of 25 clusters was allocated to each region, with the final sample size calculated at 6,300 households and 300 clusters in total. In each region, the clusters (primary sampling units) were distributed to urban and rural domains, proportional to the size of urban and rural populations in that region. The table below shows the allocation of clusters to the sampling domains.

Table SD.1: Allocation of sample clusters (primary sampling units) to sampling domains

Region	N clusters	Urban clusters	Rural clusters
Western	29	11	18
Central	26	10	16
Greater Accra	43	38	5
Volta	24	6	18
Eastern	32	11	21
Ashanti	47	24	23
Brong Ahafo	24	9	15
Northern	30	8	22
Upper East	24	4	20
Upper West	21	3	18
Total	**300**	**124**	**176**

Sampling Frame and Selection of Clusters

The frame for MICS 2006 is the GDHS 2003 sample frame (also being a sub sample of the 660 clusters for the Ghana Living Standard Survey GLSS-5), selected systematically and with PPS (probability proportional to size). The first stage of sampling was thus completed by selecting the required number of enumeration areas from each of the urban and rural areas separately, as well as for each of the ten regions separately

Listing Activities

Since the sample frame (the 2000 Population and Housing Census) was not up to date, household lists in all selected enumeration areas were updated prior to the selection of households during DHS 2003 and the 2005/2006 GLSS 5 samples. A complete household listing exercise covering all the GLSS 5 EAs was carried out May through July 2005 with a few selected EAs listed early 2006. At the second stage of selection, a systematic sa mpling of households was done from such list

Selection of Households

Lists of households were prepared by the listing teams in the field for each enumeration area. The households were then sequentially numbered from 1 to n (the total number of households in each enumeration area) at the Ghana Statistical Service, where selection of 20 households in each enumeration area was carried out using systematic selection procedures.

Calculation of Sample Weights

The MICS 2006 sample is not self-weighted. Essentially, by allocating a non-proportionally numbers of households to each of the regions, different sampling fractions were used in each region since the size of the regions varied. For this reason, sample weights were calculated and these were used in the subsequent analyses of the survey data.

The major component of the weight is the reciprocal of the sampling fraction employed in selecting the number of sample households in that particular sampling domain:

$W_h = 1 / f_h$

The term *fh*, the sampling fraction at the *h-th* stratum, is the product of probabilities of selection at every stage in each sampling domain:

$f_h = P_{1h} * P_{2h} * P_{3h}$

where P_{ih} is the probability of selection of the sampling unit in the *i-th* stage for the *h-th* sampling domain, i.e.,

P_{1h} is the selection probability in the GLLS 5 survey;
P_{2h} is the sub selection rate for clusters used in the 2005 Ghana survey from GLLS 5 survey; and
P_{3h} is the sub selection rate for households in the cluster.

Since the estimated numbers of households per enumeration area prior to the first stage selection (selection of primary sampling units) and the updated number of households per EA were different, individual sampling fractions for households in each EA (cluster) were calculated. The sampling fractions for households in each EA therefore included the probability of selection of the EA in that particular sampling domain and the probability of selection of a household in the sample EA.

A second component which has to be taken into account in the calculation of sample weights is the level of non-response for the household and individual interviews. The adjustment for household non-response is equal to the inverse value of:

RR = Number of interviewed households / Number of occupied households listed

After the completion of fieldwork, response rates were calculated for each sampling domain. These were used to adjust the sample weights calculated for each cluster. Response rates in MICS 2006 are shown in Table HH.1 in this report.

Similarly, the adjustment for non-response at the individual level (women, men, and under-5 children) is equal to the inverse value of:

RR = Completed women's (or under-5's) questionnaires / Eligible women (or under-5s)

Numbers of eligible women, men, and under-5 children were obtained from the household listing in the Household Questionnaire in households where interviews were completed.

The unadjusted weights for the households were calculated by multiplying the above factors for each enumeration area. These weights were then standardized (or normalized), one purpose of which is to make the sum of the interviewed sample units equal the total sample size at the national level. Normalization is performed by multiplying the aforementioned unadjusted weights by the ratio of the number of completed households to the total unadjusted weighted number of households. A similar standardization procedure was followed in obtaining standardized weights for the women's, men's, and under-5's questionnaires.

Sample weights were appended to all data sets and analyses were performed by weighting each household, woman, man or under-5 with these sample weights.

Annex B – Personnel

Management Team

Dr. Grace Bediako	...	Project Director (GSS)
Dr. Edward Addai	...	Project Director (MoH)
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Mr. Rochester Appiah Kusi Boateng	...	Data Processing Supervisor
Mr. Albert Frimpong-Ampofo	...	Asst. Data Processing Supervisor
Rev. Mrs. Emma Sepah	...	Field Coordinator / Researcher
Mr. Francis Yankey	...	Field Coordinator / Researcher
Mr. Samuel Bosomprah	...	Researcher (MoH)
Mr. Augustine Botwe	...	Researcher / Monitoring and Evalation Officer (MoH)

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Mr. Emmanuel Larbi	...	Ghana AIDS Commission
Mrs. Esi Amoaful	...	Nutrition Department (GHS)
Dr. Mrs. Henrietta Odoi-Agyarko	...	Public Health (GHS)
Dr. Patrick K. Aboagye	...	Ghana Health Service
Dr. Mrs. Constance Bart-Plange	...	National Malaria Control Prog. (GHS)
Dr. Okoampa Archer	...	Min. of Manpower Youth & Employment
Mrs. Exonam Aku Agyapon-Ntra	...	Births and Deaths Registry
Mr. Sylvester Kyei-Gyamfi	...	Dpt. of Children (MOWAC)

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Mrs. Betty-love Cobbinah	...	Asst. Project Accountant
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Ms. Hannah Frempong-Konadu	...	Asst. Project Secretary
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Mr. Prosper Tagoe	...	Asst. Transport Officer
Mr. Emmanuel Odei	...	Stores

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Annex C – Sampling errors

The sample of respondents selected in MICS2006 is only one of the samples that could have been selected from the same population, using the same design and size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability between all possible samples. The extent of variability is not known exactly, but can be estimated statistically from the survey results.

The following sampling error measures are presented in this appendix for each of the selected indicators:

- Standard error (*se*): Sampling errors are usually measured in terms of standard errors for particular indicators (means, proportions etc). Standard error is the square root of the variance. The Taylor linearization method is used for the estimation of standard errors.
- Coefficient of variation (*se* / *r*) is the ratio of the standard error to the value of the indicator
- Design effect (*deff*) is the ratio of the actual variance of an indicator, under the sampling method used in the survey, to the variance calculated under the assumption of simple random sampling. The square root of the design effect (*deft*) is used to show the efficiency of the sample design. A *deft* value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a *deft* value above 1.0 indicates the increase in the standard error due to the use of a more complex sample design.
- Confidence limits are calculated to show the interval within which the true value for the population can be reasonably assumed to fall. For any given statistic calculated from the survey, the value of that statistics will fall within a range of plus or minus two times the standard error ($p + 2.se$ or $p - 2.se$) of the statistic in 95 percent of all possible samples of identical size and design.

For the calculation of sampling errors from MICS data, SPSS Complex Samples module has been used. The results are shown in the tables that follow. In addition to the sampling error measures described above, the tables also include weighted and unweighted counts of denominators for each indicator.

Sampling errors are calculated for indicators of primary interest, for the national total, for the regions, and for urban and rural areas. All indicators presented here are in the form of proportions. Table SE.1 shows the list of indicators for which sampling errors are calculated, including the base population (denominator) for each indicator. Tables SE.2 to SE.14 show the calculated sampling errors.

Table SE.1: Indicators selected for sampling error calculations

List of indicators selected for sampling error calculations, and base populations (denominators) for each indicator, Ghana, 2006

MICS Indicator		Base Population
	HOUSEHOLDS	
30	Household availability of insecticide treated nets	All households
41	Iodized salt consumption	All households
74	Child discipline	Children aged 2-14 years selected
	HOUSEHOLD MEMBERS	
11	Use of improved drinking water sources	All household members
12	Use of improved sanitation facilities	All household members
55	Net primary school attendance rate	Children of primary school age
56	Net secondary school attendance rate	Children of secondary school age
59	Primary completion rate	Children of primary school completion age
71	Child labour	Children aged 5-14 years
75	Prevalence of orphans	Children aged under 18
76	Prevalence of vulnerable children	Children aged under 18
	WOMEN	
4	Skilled attendant at delivery	Women aged 15-49 years with a live birth in the last 2 years
20	Antenatal care	Women aged 15-49 years with a live birth in the last 2 years
21	Contraceptive prevalence	Women aged 15-49 currently married/in union
60	Adult literacy	Women aged 15-24 years
63	Prevalence of female genital mutilation/cutting (FGM/C)	Women aged 15-49 years
67	Marriage before age 18	Women aged 20-49 years
70	Polygyny	Women aged 15-49 years currently married or in union
82	Comprehensive knowledge about HIV prevention among young people	Women aged 15-24 years
83	Condom use with non-regular partners	Women aged 15-24 years that had a non-marital, non-cohabiting partner in the last 12 months
84	Age at first sex among young people	Women aged 15-24 years
86	Attitude towards people with HIV/AIDS	Women aged 15-49 years
88	Women who have been tested for HIV	Women aged 15-49 years
89	Knowledge of mother- to-child transmission of HIV	Women aged 15-49 years
	MEN	
60	Adult literacy	Men aged 15-24 years
82	Comprehensive knowledge about HIV prevention among young people	Men aged 15-24 years
83	Condom use with non-regular partners	Men aged 15-24 years that had a non-marital, non-cohabiting partner in the last 12 months
84	Age at first sex among young people	Men aged 15-24 years
86	Attitude towards people with HIV/AIDS	Men aged 15-49 years
88	Women who have been tested for HIV	Men aged 15-49 years
89	Knowledge of mother- to-child transmission of HIV	Men aged 15-49 years

UNDER-5s		
6	Underweight prevalence	Children under age 5
25	Tuberculosis immunization coverage	Children aged 12-23 months
26	Polio immunization coverage	Children aged 12-23 months
27	Immunization coverage for DPT	Children aged 12-23 months
28	Measles immunization coverage	Children aged 12-23 months
31	Fully immunized children	Children aged 12-23 months
-	Acute respiratory infection in last two weeks	Children under age 5
22	Antibiotic treatment of suspected pneumonia	Children under age 5 with suspected pneumonia in the last 2 weeks
-	Diarrhoea in last two weeks	Children under age 5
35	Received ORT or increased fluids and continued feeding	Children under age 5 with diarrhoea in the last 2 weeks
37	Under-fives sleeping under insecticide treated nets	Children under age 5
-	Fever in last two weeks	Children under age 5
39	Antimalarial treatment	Children under age 5 with fever in the last 2 weeks
46	Support for learning	Children under age 5
62	Birth registration	Children under age 5

Table SE.2: Sampling errors: Total sample

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Ghana, 2006

	Table	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se*/*r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2*se*	*r* + 2*se*
HOUSEHOLDS										
Household availability of ITNs	CH.10	0.187	0.008	0.041	2.255	1.502	5,939	5,939	0.172	0.202
Iodized salt consumption (MICS)	NU.5	0.324	0.012	0.037	3.789	1.947	5,893	5,895	0.300	0.347
Child discipline	CP.4	0.892	0.007	0.008	1.894	1.376	3,797	3,942	0.878	0.905
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	EN.1	0.781	0.016	0.020	8.341	2.888	24,947	5,939	0.750	0.812
Use of improved sanitation facilities	EN.5	0.607	0.018	0.029	7.765	2.787	24,947	5,939	0.572	0.642
Net primary school attendance rate	ED.3	0.753	0.018	0.024	7.616	2.760	4,037	4,483	0.718	0.789
Net secondary school attendance rate	ED.4	0.451	0.016	0.035	3.697	1.923	3,661	3,779	0.420	0.482
Primary completion rate	ED.6	0.242	0.018	0.073	1.449	1.204	774	840	0.207	0.278
Child labour	CP.2	0.339	0.010	0.030	3.343	1.828	6,813	7,452	0.319	0.359
Prevalence of orphans	HA.10	0.077	0.004	0.058	3.556	1.886	11,803	12,742	0.069	0.086
WOMEN										
Skilled attendant at delivery	RH.4	0.497	0.021	0.042	2.504	1.583	1,365	1,459	0.456	0.538
Antenatal care	RH.2	0.921	0.008	0.009	1.293	1.137	1,365	1,459	0.905	0.937
Contraceptive prevalence	RH.1	0.166	0.009	0.053	2.066	1.437	3,465	3,627	0.149	0.184
Adult literacy	ED.8	0.679	0.017	0.025	3.011	1.735	2,293	2,209	0.644	0.713
Prevalence of female genital mutilation/cutting (FGM/C)	CP.7	0.038	0.004	0.110	2.785	1.669	5,890	5,889	0.030	0.046
Marriage before age 18	CP.5	0.259	0.008	0.031	1.587	1.260	4,672	4,689	0.243	0.275
Polygyny	CP.5A	0.216	0.012	0.057	3.266	1.807	3,465	3,627	0.192	0.241
Comprehensive knowledge about HIV prevention among young people	HA.3	0.251	0.013	0.051	1.950	1.396	2,293	2,209	0.225	0.276
Condom use with non-regular partners	HA.9	0.416	0.024	0.058	1.218	1.104	567	518	0.368	0.464
Age at first sex among young people	HA.8	0.065	0.008	0.127	1.353	1.163	1,218	1,200	0.048	0.082
Attitude towards people with HIV/AIDS	HA.5	0.076	0.005	0.060	1.660	1.288	5,712	5,694	0.067	0.085
Women who have been tested for HIV	HA.6	0.136	0.006	0.043	1.707	1.306	5,890	5,889	0.124	0.148
Knowledge of mother- to-child transmission of HIV	HA.4	0.694	0.010	0.015	2.916	1.708	5,890	5,889	0.674	0.715

MEN										
Adult literacy	ED.8	0.754	0.028	0.038	3.263	1.806	761	754	0.698	0.811
Polygyny	CP.5A	0.097	0.011	0.113	1.097	1.047	778	802	0.076	0.119
Comprehensive knowledge about HIV prevention among young people	HA.3	0.330	0.022	0.067	1.664	1.290	761	754	0.286	0.375
Condom use with non-regular partners	HA.9	0.557	0.028	0.050	0.642	0.801	207	203	0.501	0.613
Age at first sex among young people	HA.8	0.048	0.011	0.222	1.192	1.092	471	475	0.027	0.070
Attitude towards people with HIV/AIDS	HA.5	0.107	0.010	0.090	1.677	1.295	1,710	1,716	0.088	0.126
Men who have been tested for HIV	HA.6A	0.088	0.009	0.099	1.642	1.281	1,745	1,742	0.071	0.105
Knowledge of mother- to-child transmission of HIV	HA.4	0.672	0.017	0.025	2.278	1.509	1,745	1,742	0.638	0.706
UNDER-5s										
Underweight prevalence	NU.1	0.178	0.009	0.048	1.580	1.257	3,166	3,148	0.160	0.195
Tuberculosis immunization coverage	CH.2	0.943	0.011	0.012	1.612	1.270	706	715	0.921	0.965
Polio immunization coverage	CH.2	0.824	0.017	0.021	1.434	1.197	706	715	0.790	0.858
Immunization coverage for DPT	CH.2	0.835	0.016	0.019	1.330	1.153	706	715	0.803	0.867
Measles immunization coverage	CH.2	0.854	0.014	0.017	1.190	1.091	706	715	0.825	0.883
Fully immunized children	CH.2	0.734	0.018	0.024	1.175	1.084	706	715	0.698	0.770
Acute respiratory infection in last two weeks	CH.6	0.050	0.004	0.088	1.412	1.188	3,467	3,468	0.042	0.059
Antibiotic treatment of suspected pneumonia	CH.7	0.329	0.026	0.079	0.562	0.750	175	187	0.277	0.380
Diarrhoea in last two weeks	CH.4	0.154	0.007	0.048	1.485	1.218	3,467	3,468	0.139	0.169
Received ORT or increased fluids and continued feeding	CH.5	0.286	0.017	0.061	0.847	0.921	535	571	0.251	0.320
Under-fives sleeping under insecticide treated nets	CH.11	0.218	0.011	0.052	2.660	1.631	3,467	3,468	0.196	0.241
Fever in last two weeks	CH.12	0.224	0.010	0.044	1.967	1.402	3,467	3,468	0.204	0.243
Antimalarial treatment	CH.12	0.483	0.025	0.052	2.001	1.415	775	796	0.433	0.533
Support for learning	CD.1	0.393	0.012	0.029	1.947	1.395	3,467	3,468	0.370	0.417
Birth registration	CP.1	0.514	0.016	0.030	3.378	1.838	3,467	3,468	0.483	0.545

Table SE.3: Sampling errors: Urban areas

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Ghana, 2006

	Table	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se*/*r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2*se*	*r* + 2*se*
HOUSEHOLDS										
Household availability of ITNs	CH.10	0.153	0.011	0.074	2.275	1.508	2,692	2,327	0.130	0.175
Iodized salt consumption	NU.5	0.446	0.017	0.039	2.783	1.668	2,668	2,308	0.412	0.481
Child discipline	CP.4	0.901	0.009	0.010	1.241	1.114	1,577	1,372	0.883	0.919
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	EN.1	0.907	0.013	0.014	4.734	2.176	10,315	2,327	0.881	0.933
Use of improved sanitation facilities	EN.5	0.826	0.017	0.020	4.591	2.143	10,315	2,327	0.792	0.860
Net primary school attendance rate	ED.3	0.844	0.014	0.016	1.885	1.373	1,476	1,342	0.817	0.872
Net secondary school attendance rate	ED.4	0.574	0.018	0.031	1.893	1.376	1,585	1,424	0.538	0.610
Primary completion rate	ED.6	0.366	0.031	0.085	1.178	1.085	315	283	0.303	0.428
Child labour	CP.2	0.197	0.013	0.069	2.651	1.628	2,559	2,299	0.170	0.224
Prevalence of orphans	HA.10	0.081	0.006	0.075	1.976	1.406	4,485	4,011	0.068	0.093
WOMEN										
Skilled attendant at delivery	RH.5	0.769	0.023	0.030	1.251	1.118	468	416	0.723	0.816
Antenatal care	RH.2	0.960	0.012	0.013	1.571	1.253	468	416	0.936	0.984
Contraceptive prevalence	RH.1	0.213	0.013	0.059	1.159	1.076	1,412	1,215	0.188	0.239
Adult literacy	ED.8	0.815	0.018	0.022	1.924	1.387	1,098	941	0.780	0.850
Prevalence of female genital mutilation/cutting (FGM/C)	CP.7	0.017	0.004	0.211	1.830	1.353	2,775	2,385	0.010	0.024
Marriage before age 18	CP.5	0.205	0.011	0.055	1.441	1.200	2,174	1,856	0.183	0.228
Polygyny	CP.5A	0.151	0.012	0.082	1.457	1.207	1,412	1,215	0.126	0.176
Comprehensive knowledge about HIV prevention among young people	HA.3	0.312	0.017	0.055	1.302	1.141	1,098	941	0.278	0.347
Condom use with non-regular partners	HA.9	0.452	0.036	0.080	1.161	1.078	276	223	0.380	0.524
Age at first sex among young people	HA.8	0.049	0.011	0.218	1.302	1.141	601	529	0.028	0.071
Attitude towards people with HIV/AIDS	HA.5	0.104	0.007	0.065	1.181	1.087	2,751	2,364	0.091	0.118
Women who have been tested for HIV	HA.6	0.161	0.008	0.052	1.254	1.120	2,775	2,385	0.144	0.178
Knowledge of mother- to-child transmission of HIV	HA.4	0.699	0.011	0.016	1.356	1.165	2,775	2,385	0.677	0.721

MEN										
Adult literacy	ED.8	0.897	0.020	0.022	1.195	1.093	333	287	0.857	0.936
Polygyny	CP.5	0.069	0.016	0.229	1.009	1.005	299	262	0.037	0.100
Comprehensive knowledge about HIV prevention among young people	HA.3	0.418	0.029	0.069	0.967	0.983	333	287	0.360	0.475
Condom use with non-regular partners	HA.9	0.614	0.034	0.055	0.378	0.615	95	79	0.546	0.681
Age at first sex among young people	HA.8	0.082	0.022	0.265	1.071	1.035	197	172	0.038	0.125
Attitude towards people with HIV/AIDS	HA.5	0.136	0.016	0.119	1.458	1.207	764	657	0.103	0.168
Men who have been tested for HIV	HA.6A	0.125	0.015	0.118	1.323	1.150	767	659	0.096	0.155
Knowledge of mother- to-child transmission of HIV	HA.4	0.682	0.021	0.031	1.328	1.153	767	659	0.640	0.723
UNDER-5s										
Underweight prevalence	NU.1	0.115	0.010	0.090	0.993	0.997	1,159	951	0.094	0.136
Tuberculosis immunization coverage	CH.2	0.967	0.011	0.011	0.770	0.877	237	202	0.945	0.989
Polio immunization coverage	CH.2	0.854	0.023	0.027	0.841	0.917	237	202	0.809	0.900
Immunization coverage for DPT	CH.2	0.876	0.023	0.026	0.963	0.981	237	202	0.831	0.922
Measles immunization coverage	CH.2	0.881	0.026	0.029	1.248	1.117	237	202	0.830	0.932
Fully immunized children	CH.2	0.776	0.030	0.038	1.008	1.004	237	202	0.717	0.835
Acute respiratory infection in last two weeks	CH.6	0.038	0.007	0.190	1.438	1.199	1,236	1,012	0.024	0.052
Antibiotic treatment of suspected pneumonia	CH.7	0.304	0.038	0.124	0.237	0.487	47	36	0.228	0.380
Diarrhoea in last two weeks	CH.4	0.147	0.013	0.089	1.387	1.178	1,236	1,012	0.121	0.173
Received ORT or increased fluids and continued feeding	CH.5	0.291	0.027	0.093	0.521	0.722	182	149	0.237	0.345
Under-fives sleeping under insecticide treated nets	CH.11	0.164	0.017	0.103	2.098	1.448	1,236	1,012	0.131	0.198
Fever in last two weeks	CH.12	0.197	0.015	0.076	1.419	1.191	1,236	1,012	0.167	0.227
Antimalarial treatment	CH.12	0.580	0.038	0.066	1.207	1.098	243	201	0.503	0.657
Support for learning	CD.1	0.497	0.019	0.039	1.532	1.238	1,236	1,012	0.458	0.536
Birth registration	CP.1	0.685	0.018	0.026	1.445	1.202	1,236	1,012	0.649	0.720

Table SE.4: Sampling errors: Rural areas

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Ghana, 2006

	Table	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se*/*r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2*se*	*r* + 2*se*
HOUSEHOLDS										
Household availability of ITNs	CH.10	0.216	0.011	0.049	2.385	1.544	3,247	3,612	0.194	0.237
Iodized salt consumption	NU.5	0.222	0.015	0.068	4.689	2.165	3,225	3,587	0.192	0.253
Child discipline	CP.4	0.885	0.010	0.011	2.327	1.525	2,220	2,570	0.866	0.905
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	EN.1	0.691	0.025	0.036	10.759	3.280	14,632	3,612	0.641	0.742
Use of improved sanitation facilities	EN.5	0.453	0.025	0.055	9.114	3.019	14,632	3,612	0.403	0.503
Net primary school attendance rate	ED.3	0.701	0.026	0.037	9.858	3.140	2,561	3,141	0.650	0.752
Net secondary school attendance rate	ED.4	0.357	0.022	0.061	4.810	2.193	2,076	2,355	0.313	0.400
Primary completion rate	ED.6	0.158	0.017	0.110	1.259	1.122	459	557	0.123	0.192
Child labour	CP.2	0.425	0.013	0.030	3.421	1.850	4,254	5,153	0.399	0.450
Prevalence of orphans	HA.10	0.076	0.006	0.082	4.752	2.180	7,317	8,731	0.063	0.088
WOMEN										
Skilled attendant at delivery	RH.4	0.355	0.027	0.076	3.345	1.829	897	1,043	0.301	0.409
Antenatal care	RH.2	0.901	0.011	0.012	1.318	1.148	897	1,043	0.880	0.922
Contraceptive prevalence	RH.1	0.134	0.012	0.086	2.755	1.660	2,053	2,412	0.111	0.157
Adult literacy	ED.8	0.554	0.025	0.045	3.200	1.789	1,195	1,268	0.504	0.604
Prevalence of female genital mutilation/cutting (FGM/C)	CP.7	0.057	0.007	0.129	3.503	1.872	3,115	3,504	0.042	0.071
Marriage before age 18	CP.5	0.306	0.011	0.035	1.539	1.241	2,498	2,833	0.285	0.328
Polygyny	CP.5A	0.261	0.018	0.069	4.042	2.010	2,053	2,412	0.225	0.297
Comprehensive knowledge about HIV prevention among young people	HA.3	0.194	0.017	0.090	2.452	1.566	1,195	1,268	0.159	0.229
Condom use with non-regular partners	HA.9	0.382	0.030	0.079	1.130	1.063	291	295	0.322	0.442
Age at first sex among young people	HA.8	0.080	0.012	0.155	1.400	1.183	617	671	0.055	0.105
Attitude towards people with HIV/AIDS	HA.5	0.049	0.006	0.117	2.350	1.533	2,961	3,330	0.038	0.061
Women who have been tested for HIV	HA.6	0.114	0.008	0.071	2.254	1.501	3,115	3,504	0.098	0.130

Knowledge of mother- to-child transmission of HIV	HA.4	0.690	0.017	0.024	4.572	2.138	3,115	3,504	0.657	0.724
MEN										
Adult literacy	ED.8	0.644	0.044	0.068	3.916	1.979	428	467	0.556	0.732
Polygyny	CP.5A	0.115	0.015	0.127	1.128	1.062	479	540	0.086	0.145
Comprehensive knowledge about HIV prevention among young people	HA.3	0.262	0.030	0.115	2.186	1.479	428	467	0.202	0.323
Condom use with non-regular partners	HA.9	0.509	0.043	0.084	0.902	0.949	112	124	0.423	0.595
Age at first sex among young people	HA.8	0.025	0.009	0.357	0.973	0.986	274	303	0.007	0.042
Attitude towards people with HIV/AIDS	HA.5	0.084	0.012	0.141	1.908	1.381	945	1,059	0.060	0.107
Men who have been tested for HIV	HA.6A	0.059	0.010	0.175	2.066	1.437	977	1,083	0.038	0.079
Knowledge of mother- to-child transmission of HIV	HA.4	0.664	0.025	0.038	3.101	1.761	977	1,083	0.613	0.714
UNDER-5s										
Underweight prevalence	NU.1	0.214	0.012	0.054	1.759	1.326	2,006	2,197	0.190	0.237
Tuberculosis immunization coverage	CH.2	0.931	0.016	0.017	1.913	1.383	469	513	0.899	0.962
Polio immunization coverage	CH.2	0.809	0.023	0.029	1.792	1.339	469	513	0.763	0.856
Immunization coverage for DPT	CH.2	0.814	0.021	0.026	1.537	1.240	469	513	0.771	0.857
Measles immunization coverage	CH.2	0.840	0.017	0.021	1.154	1.074	469	513	0.805	0.875
Fully immunized children	CH.2	0.712	0.023	0.032	1.276	1.130	469	513	0.667	0.757
Acute respiratory infection in last two weeks	CH.6	0.057	0.005	0.096	1.362	1.167	2,231	2,456	0.046	0.068
Antibiotic treatment of suspected pneumonia	CH.7	0.337	0.032	0.095	0.695	0.833	128	151	0.273	0.402
Diarrhoea in last two weeks	CH.4	0.158	0.009	0.057	1.510	1.229	2,231	2,456	0.140	0.176
Received ORT or increased fluids and continued feeding	CH.5	0.283	0.022	0.079	1.048	1.024	353	422	0.238	0.328
Under-fives sleeping under insecticide treated nets	CH.11	0.248	0.015	0.060	2.934	1.713	2,231	2,456	0.219	0.278
Fever in last two weeks	CH.12	0.238	0.013	0.054	2.243	1.498	2,231	2,456	0.212	0.264
Antimalarial treatment	CH.12	0.439	0.032	0.072	2.402	1.550	531	595	0.376	0.502
Support for learning	CD.1	0.336	0.014	0.041	2.045	1.430	2,231	2,456	0.309	0.363
Birth registration	CP.1	0.420	0.021	0.049	4.343	2.084	2,231	2,456	0.378	0.461

Table SE.5: Sampling errors: Western Region

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Ghana, 2006

	Table	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se*/*r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2*se*	*r* + 2*se*
HOUSEHOLDS										
Household availability of ITNs	CH.10	0.080	0.012	0.155	1.167	1.080	617	561	0.055	0.105
Iodized salt consumption	NU.5	0.400	0.052	0.131	6.275	2.505	606	553	0.296	0.505
Child discipline	CP.4	0.864	0.023	0.027	1.645	1.283	393	354	0.817	0.910
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	EN.1	0.832	0.043	0.052	7.488	2.736	2,451	561	0.746	0.918
Use of improved sanitation facilities	EN.5	0.759	0.047	0.063	6.904	2.628	2,451	561	0.664	0.854
Net primary school attendance rate	ED.3	0.822	0.027	0.033	1.806	1.344	404	365	0.768	0.876
Net secondary school attendance rate	ED.4	0.515	0.042	0.082	2.354	1.534	377	327	0.430	0.600
Primary completion rate	ED.6	0.243	0.055	0.226	1.248	1.117	87	77	0.133	0.353
Child labour	CP.2	0.290	0.031	0.107	2.938	1.714	701	630	0.228	0.352
Prevalence of orphans	HA.10	0.098	0.014	0.145	2.531	1.591	1,198	1,099	0.070	0.127
WOMEN										
Skilled attendant at delivery	RH.4	0.396	0.062	0.157	2.209	1.486	144	137	0.271	0.520
Antenatal care	RH.2	0.898	0.023	0.026	0.783	0.885	144	137	0.852	0.944
Contraceptive prevalence	RH.1	0.086	0.022	0.259	1.976	1.406	345	315	0.041	0.130
Adult literacy	ED.8	0.708	0.048	0.068	2.430	1.559	238	215	0.611	0.805
Prevalence of female genital mutilation/cutting (FGM/C)	CP.7	0.008	0.003	0.438	0.789	0.888	593	537	0.001	0.014
Marriage before age 18	CP.5	0.274	0.018	0.065	0.662	0.813	459	418	0.238	0.309
Polygyny	CP.5A	0.130	0.014	0.110	0.570	0.755	345	315	0.101	0.158
Comprehensive knowledge about HIV prevention among young people	HA.3	0.211	0.037	0.175	1.741	1.320	238	215	0.137	0.284
Condom use with non-regular partners	HA.9	0.302	0.047	0.157	0.605	0.778	63	58	0.208	0.397
Age at first sex among young people	HA.8	0.076	0.028	0.371	1.324	1.151	134	119	0.020	0.131
Attitude towards people with HIV/AIDS	HA.5	0.093	0.017	0.189	1.903	1.380	581	525	0.058	0.128
Women who have been tested for HIV	HA.6	0.127	0.014	0.107	0.889	0.943	593	537	0.100	0.154
Knowledge of mother- to-child transmission of HIV	HA.4	0.731	0.016	0.022	0.718	0.847	593	537	0.699	0.764

MEN										
Adult literacy	ED.8	0.644	0.044	0.068	3.916	1.979	428	467	0.556	0.732
Polygyny	CP.5A	0.034	0.018	0.523	0.743	0.862	89	79	0.000	0.069
Comprehensive knowledge about HIV prevention among young people	HA.3	0.262	0.030	0.115	2.186	1.479	428	467	0.202	0.323
Condom use with non-regular partners	HA.9	0.509	0.043	0.084	0.902	0.949	112	124	0.423	0.595
Age at first sex among young people	HA.8	0.025	0.009	0.357	0.973	0.986	274	303	0.007	0.042
Attitude towards people with HIV/AIDS	HA.5	0.084	0.012	0.141	1.908	1.381	945	1,059	0.060	0.107
Men who have been tested for HIV	HA.6A	0.059	0.010	0.175	2.066	1.437	977	1,083	0.038	0.079
Knowledge of mother- to-child transmission of HIV	HA.4	0.664	0.025	0.038	3.101	1.761	977	1,083	0.613	0.714
UNDER-5s										
Underweight prevalence	NU.1	0.146	0.030	0.204	2.055	1.433	326	292	0.086	0.205
Tuberculosis immunization coverage	CH.2	0.921	0.026	0.029	0.652	0.808	78	69	0.868	0.974
Polio immunization coverage	CH.2	0.860	0.048	0.056	1.315	1.147	78	69	0.763	0.956
Immunization coverage for DPT	CH.2	0.861	0.053	0.061	1.568	1.252	78	69	0.756	0.966
Measles immunization coverage	CH.2	0.915	0.036	0.039	1.131	1.064	78	69	0.842	0.987
Fully immunized children	CH.2	0.816	0.060	0.074	1.635	1.279	78	69	0.696	0.936
Acute respiratory infection in last two weeks	CH.6	0.026	0.008	0.317	0.857	0.926	347	316	0.010	0.043
Antibiotic treatment of suspected pneumonia	CH.7	0.763	0.066	0.087	0.218	0.467	9	10	0.631	0.896
Diarrhoea in last two weeks	CH.4	0.106	0.011	0.105	0.412	0.642	347	316	0.083	0.128
Received ORT or increased fluids and continued feeding	CH.5	0.228	0.064	0.279	0.828	0.910	37	37	0.100	0.355
Under-fives sleeping under insecticide treated nets	CH.11	0.115	0.022	0.187	1.436	1.198	347	316	0.072	0.158
Fever in last two weeks	CH.12	0.234	0.038	0.164	2.602	1.613	347	316	0.157	0.311
Antimalarial treatment	CH.12	0.462	0.063	0.136	1.184	1.088	81	76	0.336	0.587
Support for learning	CD.1	0.585	0.037	0.063	1.774	1.332	347	316	0.511	0.659
Birth registration	CP.1	0.483	0.052	0.108	3.466	1.862	347	316	0.379	0.588

Table SE.6: Sampling errors: Central Region

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Ghana, 2006

	Table	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se*/*r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2*se*	*r* + 2*se*
HOUSEHOLDS										
Household availability of ITNs	CH.10	0.147	0.019	0.129	1.472	1.213	576	510	0.109	0.185
Iodized salt consumption	NU.5	0.167	0.028	0.170	2.927	1.711	571	506	0.110	0.224
Child discipline	CP.4	0.900	0.025	0.028	2.077	1.441	330	301	0.851	0.950
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	EN.1	0.802	0.035	0.044	3.996	1.999	2,024	510	0.732	0.873
Use of improved sanitation facilities	EN.5	0.627	0.040	0.064	3.500	1.871	2,024	510	0.546	0.707
Net primary school attendance rate	ED.3	0.756	0.037	0.049	2.317	1.522	343	316	0.682	0.829
Net secondary school attendance rate	ED.4	0.480	0.036	0.074	1.347	1.161	292	266	0.408	0.551
Primary completion rate	ED.6	0.198	0.063	0.317	1.341	1.158	59	55	0.072	0.324
Child labour	CP.2	0.232	0.032	0.136	2.880	1.697	563	517	0.169	0.295
Prevalence of orphans	HA.10	0.087	0.016	0.180	2.789	1.670	992	912	0.056	0.118
WOMEN										
Skilled attendant at delivery	RH.4	0.436	0.039	0.090	0.625	0.791	105	101	0.357	0.514
Antenatal care	RH.2	0.928	0.023	0.025	0.817	0.904	105	101	0.881	0.974
Contraceptive prevalence	RH.1	0.226	0.029	0.128	1.146	1.070	251	239	0.168	0.284
Adult literacy	ED.8	0.684	0.031	0.045	0.745	0.863	187	174	0.623	0.745
Prevalence of female genital mutilation/cutting (FGM/C)	CP.7	0.005	0.004	0.729	1.108	1.053	455	426	0.000	0.012
Marriage before age 18	CP.5	0.222	0.026	0.116	1.277	1.130	357	335	0.170	0.273
Polygyny	CP.5A	0.159	0.022	0.138	0.861	0.928	251	239	0.115	0.203
Comprehensive knowledge about HIV prevention among young people	HA.3	0.277	0.035	0.128	1.078	1.038	187	174	0.206	0.347
Condom use with non-regular partners	HA.9	0.410	0.032	0.078	0.208	0.457	54	50	0.345	0.474
Age at first sex among young people	HA.8	0.057	0.022	0.390	0.821	0.906	98	91	0.012	0.101
Attitude towards people with HIV/AIDS	HA.5	0.066	0.017	0.253	1.910	1.382	449	420	0.033	0.100
Women who have been tested for HIV	HA.6	0.112	0.027	0.242	3.122	1.767	455	426	0.058	0.166
Knowledge of mother- to-child transmission of HIV	HA.4	0.763	0.019	0.025	0.873	0.934	455	426	0.724	0.801

MEN										
Adult literacy	ED.8	0.744	0.051	0.069	0.798	0.893	63	59	0.641	0.846
Polygyny	CP.5A	0.063	0.026	0.419	0.616	0.785	51	53	0.010	0.116
Comprehensive knowledge about HIV prevention among young people	HA.3	0.397	0.095	0.240	2.190	1.480	63	59	0.207	0.587
Condom use with non-regular partners	HA.9	0.349	0.114	0.326	0.856	0.925	17	16	0.121	0.577
Age at first sex among young people	HA.8	0.021	0.021	1.007	0.803	0.896	41	38	-0.021	0.063
Attitude towards people with HIV/AIDS	HA.5	0.109	0.046	0.426	2.593	1.610	122	118	0.016	0.202
Men who have been tested for HIV	HA.6A	0.073	0.024	0.331	1.009	1.005	122	118	0.025	0.121
Knowledge of mother- to-child transmission of HIV	HA.4	0.724	0.035	0.048	0.701	0.837	122	118	0.655	0.793
UNDER-5s										
Underweight prevalence	NU.1	0.163	0.029	0.179	1.445	1.202	267	232	0.105	0.222
Tuberculosis immunization coverage	CH.2	0.853	0.090	0.106	2.746	1.657	45	43	0.673	1.000
Polio immunization coverage	CH.2	0.691	0.061	0.088	0.727	0.853	45	43	0.569	0.812
Immunization coverage for DPT	CH.2	0.710	0.060	0.084	0.730	0.854	45	43	0.590	0.829
Measles immunization coverage	CH.2	0.686	0.060	0.087	0.700	0.836	45	43	0.566	0.805
Fully immunized children	CH.2	0.618	0.064	0.104	0.731	0.855	45	43	0.490	0.746
Acute respiratory infection in last two weeks	CH.6	0.034	0.011	0.313	0.901	0.949	302	262	0.013	0.055
Antibiotic treatment of suspected pneumonia	CH.7	0.504	0.008	0.016	0.002	0.046	10	9	0.488	0.520
Diarrhoea in last two weeks	CH.4	0.107	0.019	0.178	0.988	0.994	302	262	0.069	0.145
Received ORT or increased fluids and continued feeding	CH.5	0.162	0.054	0.333	0.537	0.733	32	26	0.054	0.270
Under-fives sleeping under insecticide treated nets	CH.11	0.198	0.043	0.218	3.056	1.748	302	262	0.112	0.284
Fever in last two weeks	CH.12	0.168	0.028	0.167	1.479	1.216	302	262	0.112	0.225
Antimalarial treatment	CH.12	0.465	0.091	0.196	1.369	1.170	51	42	0.283	0.647
Support for learning	CD.1	0.297	0.041	0.136	2.052	1.433	302	262	0.216	0.378
Birth registration	CP.1	0.523	0.040	0.076	1.654	1.286	302	262	0.444	0.603

Table SE.7: Sampling errors: Greater Accra Region

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Ghana, 2006

	Table	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se*/*r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2*se*	*r* + 2*se*
HOUSEHOLDS										
Household availability of ITNs	CH.10	0.129	0.015	0.117	1.628	1.276	1,004	802	0.099	0.159
Iodized salt consumption	NU.5	0.493	0.028	0.058	2.554	1.598	997	796	0.436	0.549
Child discipline	CP.4	0.937	0.009	0.010	0.631	0.794	600	469	0.919	0.955
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	EN.1	0.880	0.035	0.040	9.498	3.082	3,911	802	0.810	0.951
Use of improved sanitation facilities	EN.5	0.854	0.036	0.042	8.244	2.871	3,911	802	0.782	0.925
Net primary school attendance rate	ED.3	0.868	0.023	0.027	1.865	1.366	489	402	0.822	0.915
Net secondary school attendance rate	ED.4	0.624	0.031	0.050	1.979	1.407	577	477	0.561	0.686
Primary completion rate	ED.6	0.442	0.060	0.136	1.264	1.124	106	87	0.321	0.562
Child labour	CP.2	0.216	0.024	0.111	2.305	1.518	853	686	0.168	0.264
Prevalence of orphans	HA.10	0.084	0.011	0.136	2.108	1.452	1,560	1,244	0.061	0.107
WOMEN										
Skilled attendant at delivery	RH.4	0.830	0.041	0.049	1.480	1.217	167	128	0.749	0.911
Antenatal care	RH.2	0.938	0.026	0.028	1.479	1.216	167	128	0.886	0.990
Contraceptive prevalence	RH.1	0.288	0.019	0.066	0.692	0.832	518	393	0.250	0.326
Adult literacy	ED.8	0.876	0.021	0.024	1.370	1.171	464	352	0.834	0.917
Prevalence of female genital mutilation/cutting (FGM/C)	CP.7	0.010	0.005	0.436	1.704	1.305	1,125	859	0.001	0.019
Marriage before age 18	CP.5	0.178	0.016	0.089	1.152	1.073	883	672	0.146	0.210
Polygyny	CP.5A	0.147	0.025	0.171	1.981	1.407	518	393	0.097	0.197
Comprehensive knowledge about HIV prevention among young people	HA.3	0.370	0.021	0.057	0.664	0.815	464	352	0.328	0.412
Condom use with non-regular partners	HA.9	0.513	0.054	0.106	0.978	0.989	117	84	0.404	0.621
Age at first sex among young people	HA.8	0.085	0.025	0.289	1.443	1.201	241	187	0.036	0.134
Attitude towards people with HIV/AIDS	HA.5	0.096	0.010	0.109	1.079	1.039	1,123	858	0.075	0.117
Women who have been tested for HIV	HA.6	0.164	0.016	0.095	1.512	1.230	1,125	859	0.133	0.195
Knowledge of mother- to-child transmission of HIV	HA.4	0.699	0.016	0.023	1.033	1.016	1,125	859	0.667	0.731

MEN										
Adult literacy	ED.8	0.897	0.036	0.040	1.357	1.165	125	97	0.824	0.969
Polygyny	CP.5A	0.060	0.030	0.501	1.310	1.144	110	83	0.000	0.120
Comprehensive knowledge about HIV prevention among young people	HA.3	0.434	0.037	0.086	0.540	0.735	125	97	0.359	0.508
Condom use with non-regular partners	HA.9	0.422	0.029	0.068	0.083	0.289	39	26	0.364	0.479
Age at first sex among young people	HA.8	0.140	0.046	0.332	0.968	0.984	68	55	0.047	0.233
Attitude towards people with HIV/AIDS	HA.5	0.087	0.025	0.291	1.895	1.377	311	237	0.036	0.137
Men who have been tested for HIV	HA.6A	0.074	0.022	0.291	1.602	1.266	311	237	0.031	0.118
Knowledge of mother- to-child transmission of HIV	HA.4	0.679	0.032	0.047	1.124	1.060	311	237	0.614	0.743
UNDER-5s										
Underweight prevalence	NU.1	0.077	0.019	0.247	1.509	1.228	406	296	0.039	0.116
Tuberculosis immunization coverage	CH.2	0.981	0.006	0.006	0.115	0.339	84	64	0.969	0.993
Polio immunization coverage	CH.2	0.808	0.041	0.051	0.699	0.836	84	64	0.725	0.891
Immunization coverage for DPT	CH.2	0.850	0.045	0.052	0.983	0.991	84	64	0.761	0.939
Measles immunization coverage	CH.2	0.894	0.047	0.053	1.469	1.212	84	64	0.800	0.988
Fully immunized children	CH.2	0.744	0.049	0.066	0.787	0.887	84	64	0.647	0.842
Acute respiratory infection in last two weeks	CH.6	0.040	0.012	0.314	1.316	1.147	448	326	0.015	0.064
Antibiotic treatment of suspected pneumonia	CH.7	0.390	0.052	0.133	0.135	0.368	18	13	0.286	0.494
Diarrhoea in last two weeks	CH.4	0.115	0.024	0.206	1.792	1.339	448	326	0.068	0.162
Received ORT or increased fluids and continued feeding	CH.5	0.194	0.019	0.097	0.076	0.275	52	34	0.157	0.232
Under-fives sleeping under insecticide treated nets	CH.11	0.163	0.025	0.157	1.549	1.245	448	326	0.112	0.213
Fever in last two weeks	CH.12	0.175	0.029	0.167	1.917	1.385	448	326	0.116	0.233
Antimalarial treatment	CH.12	0.663	0.033	0.050	0.232	0.481	78	49	0.597	0.728
Support for learning	CD.1	0.573	0.037	0.065	1.842	1.357	448	326	0.498	0.647
Birth registration	CP.1	0.718	0.026	0.036	1.064	1.032	448	326	0.667	0.770

Table SE.8: Sampling errors: Volta Region

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Ghana, 2006

	Table	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se/r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2se	*r + 2se*
HOUSEHOLDS										
Household availability of ITNs	CH.10	0.230	0.020	0.086	0.984	0.992	486	447	0.190	0.269
Iodized salt consumption	NU.5	0.120	0.036	0.303	5.570	2.360	483	444	0.047	0.193
Child discipline	CP.4	0.953	0.011	0.012	0.775	0.881	300	288	0.931	0.975
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	EN.1	0.527	0.060	0.115	6.529	2.555	1,978	447	0.407	0.648
Use of improved sanitation facilities	EN.5	0.388	0.065	0.167	7.857	2.803	1,978	447	0.259	0.518
Net primary school attendance rate	ED.3	0.708	0.032	0.046	1.584	1.259	314	312	0.643	0.773
Net secondary school attendance rate	ED.4	0.363	0.040	0.109	1.808	1.345	286	266	0.284	0.443
Primary completion rate	ED.6	0.301	0.053	0.178	0.775	0.880	59	58	0.194	0.408
Child labour	CP.2	0.253	0.031	0.124	2.806	1.675	562	543	0.190	0.315
Prevalence of orphans	HA.10	0.082	0.019	0.227	4.147	2.036	933	903	0.045	0.119
WOMEN										
Skilled attendant at delivery	RH.4	0.446	0.035	0.079	0.460	0.678	97	93	0.376	0.517
Antenatal care	RH.2	0.857	0.048	0.056	1.742	1.320	97	93	0.761	0.953
Contraceptive prevalence	RH.1	0.134	0.017	0.124	0.662	0.814	315	277	0.101	0.168
Adult literacy	ED.8	0.581	0.041	0.071	1.012	1.006	168	146	0.499	0.663
Prevalence of female genital mutilation/cutting (FGM/C)	CP.7	0.013	0.007	0.528	1.352	1.163	426	375	0.000	0.026
Marriage before age 18	CP.5	0.301	0.026	0.085	0.931	0.965	343	299	0.250	0.353
Polygyny	CP.5A	0.230	0.016	0.070	0.410	0.640	315	277	0.198	0.263
Comprehensive knowledge about HIV prevention among young people	HA.3	0.216	0.047	0.219	1.916	1.384	168	146	0.122	0.311
Condom use with non-regular partners	HA.9	0.366	0.095	0.259	1.318	1.148	39	35	0.176	0.555
Age at first sex among young people	HA.8	0.113	0.047	0.413	1.630	1.277	84	76	0.020	0.206
Attitude towards people with HIV/AIDS	HA.5	0.090	0.016	0.173	1.069	1.034	414	364	0.059	0.121
Woen who have been tested for HIV	HA.6	0.076	0.015	0.192	1.135	1.065	426	375	0.047	0.105
Knowledge of mother- to-child transmission of HIV	HA.4	0.764	0.020	0.026	0.839	0.916	426	375	0.724	0.804

MEN										
Adult literacy	ED.8	0.654	0.062	0.095	0.958	0.979	65	57	0.529	0.778
Polygyny	CP.5A	0.151	0.048	0.317	1.021	1.011	65	58	0.055	0.247
Comprehensive knowledge about HIV prevention among young people	HA.3	0.230	0.049	0.213	0.763	0.874	65	57	0.132	0.329
Condom use with non-regular partners	HA.9	0.532	0.000	0.000	0.000	0.000	9	8	0.532	0.532
Age at first sex among young people	HA.8	0.000	0.000	.	.	.	48	42	0.000	0.000
Attitude towards people with HIV/AIDS	HA.5	0.133	0.046	0.349	2.149	1.466	133	116	0.040	0.226
Men who have been tested for HIV	HA.6A	0.056	0.026	0.461	1.462	1.209	135	118	0.004	0.107
Knowledge of mother- to-child transmission of HIV	HA.4	0.729	0.036	0.050	0.786	0.887	135	118	0.657	0.802
UNDER-5s										
Underweight prevalence	NU.1	0.203	0.036	0.176	1.655	1.286	231	211	0.132	0.274
Tuberculosis immunization coverage	CH.2	0.860	0.058	0.067	1.242	1.114	48	46	0.745	0.976
Polio immunization coverage	CH.2	0.637	0.066	0.103	0.836	0.914	48	46	0.506	0.768
Immunization coverage for DPT	CH.2	0.642	0.059	0.092	0.682	0.826	48	46	0.524	0.760
Measles immunization coverage	CH.2	0.763	0.061	0.080	0.925	0.962	48	46	0.641	0.885
Fully immunized children	CH.2	0.557	0.069	0.124	0.864	0.929	48	46	0.419	0.694
Acute respiratory infection in last two weeks	CH.6	0.055	0.015	0.276	1.036	1.018	261	236	0.024	0.085
Antibiotic treatment of suspected pneumonia	CH.7	0.394	0.184	0.466	1.695	1.302	14	13	0.027	0.761
Diarrhoea in last two weeks	CH.4	0.086	0.013	0.146	0.474	0.688	261	236	0.061	0.111
Received ORT or increased fluids and continued feeding	CH.5	0.150	0.072	0.479	0.847	0.920	22	22	0.006	0.293
Under-fives sleeping under insecticide treated nets	CH.11	0.215	0.037	0.172	1.909	1.382	261	236	0.141	0.289
Fever in last two weeks	CH.12	0.171	0.036	0.209	2.133	1.461	261	236	0.100	0.243
Antimalarial treatment	CH.12	0.576	0.068	0.119	0.844	0.918	45	45	0.439	0.713
Support for learning	CD.1	0.280	0.018	0.065	0.382	0.618	261	236	0.244	0.316
Birth registration	CP.1	0.465	0.042	0.090	1.653	1.286	261	236	0.382	0.549

Table SE.9: Sampling errors: Eastern Region

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Ghana, 2006

	Table	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se*/*r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2*se*	*r* + 2*se*
HOUSEHOLDS										
Household availability of ITNs	CH.10	0.170	0.027	0.162	3.148	1.774	758	589	0.115	0.225
Iodized salt consumption	NU.5	0.189	0.030	0.158	3.381	1.839	754	586	0.129	0.248
Child discipline	CP.4	0.908	0.014	0.015	0.810	0.900	467	372	0.881	0.935
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	EN.1	0.664	0.045	0.068	5.329	2.308	3,099	589	0.574	0.754
Use of improved sanitation facilities	EN.5	0.496	0.047	0.095	5.190	2.278	3,099	589	0.402	0.590
Net primary school attendance rate	ED.3	0.843	0.029	0.035	2.385	1.544	460	367	0.785	0.902
Net secondary school attendance rate	ED.4	0.447	0.032	0.071	1.502	1.225	473	372	0.384	0.510
Primary completion rate	ED.6	0.225	0.046	0.204	0.849	0.921	94	71	0.133	0.317
Child labour	CP.2	0.370	0.024	0.064	1.485	1.219	768	611	0.322	0.417
Prevalence of orphans	HA.10	0.080	0.009	0.108	1.157	1.076	1,437	1,139	0.063	0.097
WOMEN										
Skilled attendant at delivery	RH.4	0.388	0.044	0.114	1.126	1.061	182	137	0.300	0.477
Antenatal care	RH.2	0.913	0.022	0.024	0.806	0.898	182	137	0.870	0.956
Contraceptive prevalence	RH.1	0.179	0.033	0.186	2.376	1.542	414	317	0.113	0.246
Adult literacy	ED.8	0.657	0.033	0.050	1.091	1.045	296	228	0.591	0.722
Prevalence of female genital mutilation/cutting (FGM/C)	CP.7	0.005	0.003	0.598	1.036	1.018	741	565	0.000	0.011
Marriage before age 18	CP.5	0.205	0.016	0.076	0.649	0.806	578	441	0.174	0.236
Polygyny	CP.5A	0.189	0.037	0.196	2.822	1.680	414	317	0.115	0.263
Comprehensive knowledge about HIV prevention among young people	HA.3	0.233	0.042	0.179	2.217	1.489	296	228	0.149	0.316
Condom use with non-regular partners	HA.9	0.530	0.069	0.131	1.101	1.049	75	58	0.392	0.669
Age at first sex among young people	HA.8	0.071	0.020	0.278	0.728	0.853	162	124	0.031	0.111
Attitude towards people with HIV/AIDS	HA.5	0.053	0.008	0.145	0.663	0.815	737	562	0.038	0.069
Women who have been tested for HIV	HA.6	0.146	0.019	0.128	1.595	1.263	741	565	0.109	0.184
Knowledge of mother- to-child transmission of HIV	HA.4	0.626	0.022	0.035	1.153	1.074	741	565	0.582	0.669

MEN										
Adult literacy	ED.8	0.694	0.057	0.083	1.130	1.063	96	74	0.580	0.809
Polygyny	CP.5A	0.044	0.023	0.530	0.943	0.971	93	74	0.000	0.091
Comprehensive knowledge about HIV prevention among young people	HA.3	0.328	0.061	0.186	1.229	1.109	96	74	0.206	0.450
Condom use with non-regular partners	HA.9	0.600	0.106	0.177	1.036	1.018	31	23	0.388	0.813
Age at first sex among young people	HA.8	0.106	0.046	0.439	0.955	0.977	55	43	0.013	0.198
Attitude towards people with HIV/AIDS	HA.5	0.097	0.021	0.220	0.847	0.920	210	164	0.054	0.140
Men who have been tested for HIV	HA.6A	0.071	0.020	0.285	1.012	1.006	210	164	0.030	0.111
Knowledge of mother- to-child transmission of HIV	HA.4	0.639	0.046	0.073	1.520	1.233	210	164	0.546	0.731
UNDER-5s										
Underweight prevalence	NU.1	0.178	0.017	0.093	0.591	0.769	430	314	0.145	0.212
Tuberculosis immunization coverage	CH.2	0.939	0.037	0.039	1.667	1.291	102	72	0.866	1.000
Polio immunization coverage	CH.2	0.883	0.054	0.061	2.024	1.423	102	72	0.775	0.992
Immunization coverage for DPT	CH.2	0.851	0.052	0.061	1.523	1.234	102	72	0.747	0.956
Measles immunization coverage	CH.2	0.831	0.045	0.055	1.038	1.019	102	72	0.740	0.922
Fully immunized children	CH.2	0.762	0.049	0.064	0.932	0.965	102	72	0.664	0.859
Acute respiratory infection in last two weeks	CH.6	0.094	0.016	0.174	1.053	1.026	463	337	0.061	0.127
Antibiotic treatment of suspected pneumonia	CH.7	0.215	0.073	0.339	0.947	0.973	43	31	0.069	0.361
Diarrhoea in last two weeks	CH.4	0.145	0.022	0.152	1.318	1.148	463	337	0.101	0.189
Received ORT or increased fluids and continued feeding	CH.5	0.217	0.044	0.204	0.542	0.736	67	48	0.129	0.306
Under-fives sleeping under insecticide treated nets	CH.11	0.249	0.037	0.147	2.411	1.553	463	337	0.176	0.323
Fever in last two weeks	CH.12	0.207	0.028	0.134	1.567	1.252	463	337	0.152	0.263
Antimalarial treatment	CH.12	0.321	0.042	0.130	0.579	0.761	96	73	0.238	0.405
Support for learning	CD.1	0.348	0.040	0.116	2.405	1.551	463	337	0.267	0.428
Birth registration	CP.1	0.383	0.045	0.118	2.888	1.699	463	337	0.293	0.473

Table SE.10: Sampling errors: Ashanti Region

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Ghana, 2006

	Table	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se*/*r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2*se*	*r* + 2*se*
HOUSEHOLDS										
Household availability of ITNs	CH.10	0.200	0.016	0.081	1.432	1.197	988	881	0.168	0.233
Iodized salt consumption	NU.5	0.477	0.025	0.052	2.163	1.471	978	871	0.428	0.527
Child discipline	CP.4	0.898	0.015	0.017	1.314	1.146	583	523	0.867	0.928
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	EN.1	0.900	0.029	0.032	8.351	2.890	3,854	881	0.842	0.959
Use of improved sanitation facilities	EN.5	0.870	0.015	0.017	1.744	1.321	3,854	881	0.840	0.900
Net primary school attendance rate	ED.3	0.836	0.018	0.022	1.355	1.164	624	571	0.800	0.872
Net secondary school attendance rate	ED.4	0.528	0.024	0.046	1.185	1.088	548	509	0.480	0.577
Primary completion rate	ED.6	0.292	0.028	0.097	0.421	0.649	118	109	0.235	0.348
Child labour	CP.2	0.312	0.022	0.070	2.124	1.457	1,044	954	0.268	0.356
Prevalence of orphans	HA.10	0.098	0.013	0.135	3.189	1.786	1,773	1,612	0.072	0.125
WOMEN										
Skilled attendant at delivery	RH.4	0.605	0.041	0.068	1.302	1.141	207	183	0.522	0.688
Antenatal care	RH.2	0.975	0.011	0.011	0.874	0.935	207	183	0.953	0.996
Contraceptive prevalence	RH.1	0.182	0.020	0.112	1.323	1.150	526	473	0.141	0.223
Adult literacy	ED.8	0.751	0.039	0.051	2.480	1.575	344	312	0.674	0.828
Prevalence of female genital mutilation/cutting (FGM/C)	CP.7	0.025	0.007	0.293	1.755	1.325	888	808	0.010	0.039
Marriage before age 18	CP.5	0.275	0.022	0.081	1.558	1.248	697	631	0.231	0.319
Polygyny	CP.5A	0.132	0.020	0.150	1.615	1.271	526	473	0.092	0.171
Comprehensive knowledge about HIV prevention among young people	HA.3	0.211	0.027	0.128	1.361	1.167	344	312	0.157	0.265
Condom use with non-regular partners	HA.9	0.249	0.055	0.219	1.272	1.128	91	81	0.140	0.359
Age at first sex among young people	HA.8	0.060	0.020	0.333	1.246	1.116	191	177	0.020	0.100
Attitude towards people with HIV/AIDS	HA.5	0.073	0.011	0.149	1.399	1.183	876	797	0.051	0.095
Women who have been tested for HIV	HA.6	0.181	0.013	0.073	0.938	0.968	888	808	0.154	0.207
Knowledge of mother- to-child transmission of HIV	HA.4	0.696	0.020	0.029	1.511	1.229	888	808	0.656	0.736

MEN										
Adult literacy	ED.8	0.902	0.024	0.027	0.707	0.841	122	108	0.853	0.950
Polygyny	CP.5A	0.030	0.013	0.440	0.778	0.882	147	129	0.004	0.057
Comprehensive knowledge about HIV prevention among young people	HA.3	0.291	0.034	0.118	0.607	0.779	122	108	0.222	0.359
Condom use with non-regular partners	HA.9	0.532	0.122	0.229	0.959	0.979	19	17	0.288	0.777
Age at first sex among young people	HA.8	0.050	0.026	0.513	0.997	0.999	84	73	-0.001	0.101
Attitude towards people with HIV/AIDS	HA.5	0.094	0.019	0.205	1.180	1.087	309	271	0.055	0.133
Men who have been tested for HIV	HA.6A	0.120	0.020	0.167	1.025	1.012	310	272	0.080	0.160
Knowledge of mother- to-child transmission of HIV	HA.4	0.645	0.026	0.040	0.804	0.897	310	272	0.592	0.697
UNDER-5s										
Underweight prevalence	NU.1	0.173	0.021	0.123	1.219	1.104	468	383	0.130	0.216
Tuberculosis immunization coverage	CH.2	0.986	0.014	0.014	1.259	1.122	110	91	0.958	1.000
Polio immunization coverage	CH.2	0.906	0.030	0.033	0.949	0.974	110	91	0.846	0.966
Immunization coverage for DPT	CH.2	0.919	0.029	0.032	1.034	1.017	110	91	0.860	0.977
Measles immunization coverage	CH.2	0.954	0.023	0.024	1.100	1.049	110	91	0.907	1.000
Fully immunized children	CH.2	0.832	0.035	0.042	0.776	0.881	110	91	0.762	0.901
Acute respiratory infection in last two weeks	CH.6	0.039	0.010	0.252	1.079	1.039	506	415	0.019	0.059
Antibiotic treatment of suspected pneumonia	CH.7	0.292	0.083	0.285	0.503	0.710	20	16	0.126	0.459
Diarrhoea in last two weeks	CH.4	0.169	0.021	0.126	1.331	1.154	506	415	0.126	0.211
Received ORT or increased fluids and continued feeding	CH.5	0.317	0.054	0.171	0.929	0.964	86	69	0.209	0.426
Under-fives sleeping under insecticide treated nets	CH.11	0.218	0.034	0.158	2.872	1.695	506	415	0.150	0.287
Fever in last two weeks	CH.12	0.209	0.023	0.108	1.276	1.129	506	415	0.164	0.254
Antimalarial treatment	CH.12	0.354	0.058	0.163	1.173	1.083	106	82	0.239	0.469
Support for learning	CD.1	0.488	0.021	0.043	0.745	0.863	506	415	0.446	0.531
Birth registration	CP.1	0.559	0.040	0.071	2.646	1.627	506	415	0.480	0.639

Table SE.11: Sampling errors: Brong Ahafo Region

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Ghana, 2006

	Table	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se*/*r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2*se*	*r* + 2*se*
HOUSEHOLDS										
Household availability of ITNs	CH.10	0.283	0.032	0.113	2.216	1.489	552	442	0.219	0.347
Iodized salt consumption	NU.5	0.528	0.021	0.041	0.806	0.898	546	438	0.485	0.571
Child discipline	CP.4	0.919	0.023	0.025	2.056	1.434	362	296	0.874	0.965
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	EN.1	0.717	0.081	0.113	14.275	3.778	2,295	442	0.555	0.879
Use of improved sanitation facilities	EN.5	0.791	0.029	0.037	2.261	1.504	2,295	442	0.733	0.849
Net primary school attendance rate	ED.3	0.771	0.041	0.053	3.039	1.743	382	317	0.689	0.854
Net secondary school attendance rate	ED.4	0.393	0.036	0.092	1.561	1.249	359	287	0.321	0.465
Primary completion rate	ED.6	0.183	0.067	0.363	1.718	1.311	71	59	0.050	0.317
Child labour	CP.2	0.404	0.048	0.118	5.085	2.255	656	539	0.309	0.500
Prevalence of orphans	HA.10	0.065	0.012	0.190	2.296	1.515	1,117	918	0.040	0.090
WOMEN										
Skilled attendant at delivery	RH.4	0.581	0.041	0.071	0.622	0.789	107	91	0.499	0.663
Antenatal care	RH.2	0.945	0.021	0.022	0.740	0.860	107	91	0.904	0.986
Contraceptive prevalence	RH.1	0.171	0.034	0.200	1.958	1.399	294	238	0.103	0.239
Adult literacy	ED.8	0.722	0.036	0.050	1.158	1.076	224	177	0.650	0.795
Prevalence of female genital mutilation/cutting (FGM/C)	CP.7	0.057	0.014	0.256	1.771	1.331	569	452	0.028	0.086
Marriage before age 18	CP.5	0.310	0.038	0.123	2.379	1.542	448	353	0.234	0.386
Polygyny	CP.5A	0.162	0.023	0.139	0.887	0.942	294	238	0.117	0.207
Comprehensive knowledge about HIV prevention among young people	HA.3	0.251	0.048	0.192	2.183	1.478	224	177	0.155	0.348
Condom use with non-regular partners	HA.9	0.391	0.105	0.270	2.242	1.497	64	49	0.180	0.602
Age at first sex among young people	HA.8	0.018	0.013	0.713	0.932	0.965	121	99	0.000	0.045
Attitude towards people with HIV/AIDS	HA.5	0.053	0.012	0.232	1.346	1.160	565	448	0.028	0.077
Women who have been tested for HIV	HA.6	0.179	0.017	0.097	0.933	0.966	569	452	0.145	0.214
Knowledge of mother- to-child transmission of HIV	HA.4	0.754	0.024	0.031	1.353	1.163	569	452	0.707	0.801

MEN										
Adult literacy	ED.8	0.857	0.042	0.049	0.805	0.897	76	57	0.774	0.941
Polygyny	CP.5A	0.131	0.040	0.303	0.694	0.833	62	51	0.052	0.211
Comprehensive knowledge about HIV prevention among young people	HA.3	0.447	0.083	0.186	1.566	1.251	76	57	0.281	0.613
Condom use with non-regular partners	HA.9	0.770	0.037	0.048	0.145	0.381	28	20	0.696	0.844
Age at first sex among young people	HA.8	0.000	0.000	.	.	.	42	33	0.000	0.000
Attitude towards people with HIV/AIDS	HA.5	0.068	0.023	0.334	0.961	0.980	153	119	0.023	0.113
Men who have been tested for HIV	HA.6A	0.156	0.039	0.247	1.347	1.161	154	120	0.079	0.233
Knowledge of mother- to-child transmission of HIV	HA.4	0.724	0.061	0.085	2.238	1.496	154	120	0.601	0.847
UNDER-5s										
Underweight prevalence	NU.1	0.133	0.025	0.189	1.211	1.101	288	223	0.083	0.183
Tuberculosis immunization coverage	CH.2	0.979	0.021	0.021	0.900	0.949	56	44	0.938	1.000
Polio immunization coverage	CH.2	0.805	0.056	0.070	0.873	0.934	56	44	0.692	0.918
Immunization coverage for DPT	CH.2	0.894	0.051	0.057	1.179	1.086	56	44	0.791	0.996
Measles immunization coverage	CH.2	0.784	0.065	0.083	1.068	1.034	56	44	0.654	0.913
Fully immunized children	CH.2	0.650	0.092	0.141	1.599	1.264	56	44	0.467	0.834
Acute respiratory infection in last two weeks	CH.6	0.044	0.012	0.283	0.881	0.939	311	242	0.019	0.068
Antibiotic treatment of suspected pneumonia	CH.7	0.221	0.023	0.106	0.032	0.179	14	11	0.174	0.268
Diarrhoea in last two weeks	CH.4	0.188	0.035	0.187	1.955	1.398	311	242	0.118	0.259
Received ORT or increased fluids and continued feeding	CH.5	0.485	0.055	0.113	0.543	0.737	59	46	0.375	0.595
Under-fives sleeping under insecticide treated nets	CH.11	0.257	0.043	0.167	2.336	1.528	311	242	0.171	0.343
Fever in last two weeks	CH.12	0.225	0.027	0.121	1.029	1.014	311	242	0.170	0.279
Antimalarial treatment	CH.12	0.488	0.077	0.158	1.280	1.131	70	55	0.334	0.642
Support for learning	CD.1	0.332	0.039	0.116	1.621	1.273	311	242	0.254	0.409
Birth registration	CP.1	0.494	0.042	0.085	1.707	1.307	311	242	0.410	0.578

Table SE.12: Sampling errors: Northern Region

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Ghana, 2006

	Table	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se*/*r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2*se*	*r* + 2*se*
HOUSEHOLDS										
Household availability of ITNs	CH.10	0.240	0.031	0.130	3.583	1.893	630	673	0.178	0.303
Iodized salt consumption	NU.5	0.114	0.030	0.263	5.976	2.445	630	673	0.054	0.174
Child discipline	CP.4	0.800	0.023	0.029	1.790	1.338	503	530	0.754	0.847
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	EN.1	0.730	0.050	0.069	8.681	2.946	3,549	673	0.630	0.831
Use of improved sanitation facilities	EN.5	0.251	0.059	0.234	12.259	3.501	3,549	673	0.134	0.368
Net primary school attendance rate	ED.3	0.546	0.075	0.137	16.102	4.013	672	717	0.396	0.695
Net secondary school attendance rate	ED.4	0.290	0.059	0.205	8.737	2.956	499	513	0.171	0.408
Primary completion rate	ED.6	0.135	0.049	0.359	2.413	1.554	111	121	0.038	0.232
Child labour	CP.2	0.436	0.020	0.045	1.843	1.358	1,102	1,173	0.396	0.475
Prevalence of orphans	HA.10	0.037	0.010	0.277	5.817	2.412	1,877	1,996	0.016	0.057
WOMEN										
Skilled attendant at delivery	RH.4	0.380	0.076	0.199	6.850	2.617	260	282	0.229	0.532
Antenatal care	RH.2	0.897	0.024	0.026	1.684	1.298	260	282	0.849	0.944
Contraceptive prevalence	RH.1	0.083	0.021	0.257	3.475	1.864	551	578	0.040	0.126
Adult literacy	ED.8	0.369	0.071	0.192	5.981	2.446	261	277	0.227	0.511
Prevalence of female genital mutilation/cutting (FGM/C)	CP.7	0.056	0.026	0.468	10.177	3.190	745	788	0.004	0.108
Marriage before age 18	CP.5	0.310	0.024	0.077	1.737	1.318	624	652	0.262	0.358
Polygyny	CP.5A	0.395	0.046	0.117	5.114	2.261	551	578	0.303	0.487
Comprehensive knowledge about HIV prevention among young people	HA.3	0.164	0.044	0.267	3.839	1.959	261	277	0.076	0.251
Condom use with non-regular partners	HA.9	0.507	0.063	0.124	0.805	0.897	44	52	0.381	0.632
Age at first sex among young people	HA.8	0.045	0.019	0.417	1.110	1.053	121	136	0.008	0.083
Attitude towards people with HIV/AIDS	HA.5	0.084	0.018	0.216	3.018	1.737	639	702	0.048	0.121
Women who have been tested for HIV	HA.6	0.062	0.014	0.216	2.453	1.566	745	788	0.035	0.089
Knowledge of mother- to-child transmission of HIV	HA.4	0.597	0.054	0.090	9.517	3.085	745	788	0.489	0.705

MEN										
Adult literacy	ED.8	0.497	0.135	0.272	7.542	2.746	100	104	0.226	0.767
Polygyny	CP.5A	0.234	0.045	0.193	1.390	1.179	116	123	0.144	0.325
Comprehensive knowledge about HIV prevention among young people	HA.3	0.279	0.073	0.263	2.749	1.658	100	104	0.132	0.426
Condom use with non-regular partners	HA.9	0.404	0.047	0.116	0.329	0.574	31	37	0.310	0.497
Age at first sex among young people	HA.8	0.023	0.019	0.790	1.050	1.025	66	71	-0.014	0.061
Attitude towards people with HIV/AIDS	HA.5	0.140	0.030	0.214	1.701	1.304	202	229	0.080	0.200
Men who have been tested for HIV	HA.6A	0.064	0.023	0.357	2.137	1.462	231	247	0.018	0.109
Knowledge of mother- to-child transmission of HIV	HA.4	0.610	0.081	0.132	6.728	2.594	231	247	0.449	0.771
UNDER-5s										
Underweight prevalence	NU.1	0.268	0.026	0.097	1.796	1.340	529	526	0.216	0.320
Tuberculosis immunization coverage	CH.2	0.934	0.026	0.028	1.507	1.228	135	137	0.882	0.986
Polio immunization coverage	CH.2	0.796	0.047	0.059	1.866	1.366	135	137	0.702	0.891
Immunization coverage for DPT	CH.2	0.783	0.043	0.055	1.497	1.223	135	137	0.697	0.870
Measles immunization coverage	CH.2	0.832	0.031	0.037	0.930	0.964	135	137	0.771	0.894
Fully immunized children	CH.2	0.677	0.041	0.061	1.045	1.022	135	137	0.595	0.759
Acute respiratory infection in last two weeks	CH.6	0.056	0.014	0.241	1.997	1.413	579	578	0.029	0.084
Antibiotic treatment of suspected pneumonia	CH.7	0.303	0.022	0.074	0.083	0.289	33	36	0.258	0.348
Diarrhoea in last two weeks	CH.4	0.224	0.019	0.086	1.226	1.107	579	578	0.185	0.262
Received ORT or increased fluids and continued feeding	CH.5	0.327	0.040	0.121	0.931	0.965	129	132	0.248	0.406
Under-fives sleeping under insecticide treated nets	CH.11	0.219	0.027	0.121	2.376	1.541	579	578	0.166	0.272
Fever in last two weeks	CH.12	0.317	0.023	0.073	1.436	1.198	579	578	0.270	0.363
Antimalarial treatment	CH.12	0.566	0.087	0.153	5.486	2.342	183	180	0.393	0.740
Support for learning	CD.1	0.234	0.028	0.120	2.543	1.595	579	578	0.177	0.290
Birth registration	CP.1	0.466	0.053	0.114	6.553	2.560	579	578	0.360	0.572

Table SE.13: Sampling errors: Upper East Region

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Ghana, 2006

	Table	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se*/*r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2*se*	*r* + 2*se*
HOUSEHOLDS										
Household availability of ITNs	CH.10	0.306	0.037	0.119	3.517	1.875	202	561	0.233	0.379
Iodized salt consumption	NU.5	0.123	0.030	0.243	4.593	2.143	201	557	0.063	0.183
Child discipline	CP.4	0.849	0.016	0.018	0.836	0.914	159	444	0.818	0.880
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	EN.1	0.831	0.030	0.036	3.670	1.916	1,134	561	0.771	0.892
Use of improved sanitation facilities	EN.5	0.175	0.049	0.281	9.358	3.059	1,134	561	0.077	0.273
Net primary school attendance rate	ED.3	0.702	0.036	0.051	3.909	1.977	222	630	0.630	0.774
Net secondary school attendance rate	ED.4	0.266	0.036	0.135	3.102	1.761	171	467	0.194	0.338
Primary completion rate	ED.6	0.109	0.032	0.293	1.270	1.127	43	122	0.045	0.173
Child labour	CP.2	0.535	0.026	0.048	2.712	1.647	359	1,022	0.483	0.586
Prevalence of orphans	HA.10	0.087	0.016	0.181	5.098	2.258	575	1,632	0.056	0.119
WOMEN										
Skilled attendant at delivery	RH.4	0.441	0.067	0.151	2.948	1.717	58	164	0.307	0.574
Antenatal care	RH.2	0.909	0.025	0.028	1.259	1.122	58	164	0.859	0.960
Contraceptive prevalence	RH.1	0.150	0.019	0.126	1.191	1.091	150	423	0.112	0.188
Adult literacy	ED.8	0.423	0.051	0.121	2.021	1.422	72	189	0.320	0.525
Prevalence of female genital mutilation/cutting (FGM/C)	CP.7	0.125	0.023	0.180	2.768	1.664	218	598	0.080	0.170
Marriage before age 18	CP.5	0.363	0.027	0.075	1.555	1.247	175	489	0.309	0.418
Polygyny	CP.5A	0.393	0.033	0.085	1.973	1.404	150	423	0.326	0.460
Comprehensive knowledge about HIV prevention among young people	HA.3	0.261	0.038	0.146	1.408	1.187	72	189	0.185	0.337
Condom use with non-regular partners	HA.9	0.569	0.082	0.144	0.984	0.992	14	37	0.405	0.733
Age at first sex among young people	HA.8	0.039	0.023	0.581	1.484	1.218	43	109	0.000	0.085
Attitude towards people with HIV/AIDS	HA.5	0.057	0.009	0.151	0.743	0.862	200	544	0.039	0.074
Women who have been tested for HIV	HA.6	0.111	0.020	0.177	2.339	1.530	218	598	0.072	0.151
Knowledge of mother- to-child transmission of HIV	HA.4	0.730	0.034	0.046	3.450	1.857	218	598	0.663	0.798

MEN										
Adult literacy	ED.8	0.495	0.058	0.117	1.105	1.051	30	84	0.379	0.610
Polygyny	CP.5A	0.166	0.038	0.232	0.865	0.930	27	82	0.089	0.243
Comprehensive knowledge about HIV prevention among young people	HA.3	0.217	0.038	0.173	0.689	0.830	30	84	0.142	0.292
Condom use with non-regular partners	HA.9	0.892	0.046	0.052	0.742	0.861	12	34	0.799	0.985
Age at first sex among young people	HA.8	0.026	0.008	0.292	0.119	0.346	19	54	0.011	0.041
Attitude towards people with HIV/AIDS	HA.5	0.108	0.025	0.232	1.119	1.058	60	174	0.058	0.157
Men who have been tested for HIV	HA.6A	0.075	0.024	0.327	1.523	1.234	62	178	0.026	0.123
Knowledge of mother- to-child transmission of HIV	HA.4	0.767	0.034	0.045	1.163	1.079	62	178	0.698	0.835
UNDER-5s										
Underweight prevalence	NU.1	0.291	0.033	0.115	1.850	1.360	127	344	0.224	0.357
Tuberculosis immunization coverage	CH.2	0.963	0.025	0.026	1.467	1.211	31	83	0.913	1.000
Polio immunization coverage	CH.2	0.885	0.053	0.060	2.297	1.516	31	83	0.778	0.992
Immunization coverage for DPT	CH.2	0.927	0.035	0.038	1.464	1.210	31	83	0.857	0.996
Measles immunization coverage	CH.2	0.882	0.035	0.039	0.948	0.973	31	83	0.812	0.951
Fully immunized children	CH.2	0.826	0.051	0.061	1.457	1.207	31	83	0.725	0.927
Acute respiratory infection in last two weeks	CH.6	0.041	0.009	0.209	0.722	0.850	146	389	0.024	0.058
Antibiotic treatment of suspected pneumonia	CH.7	0.554	0.116	0.209	0.920	0.959	6	18	0.323	0.785
Diarrhoea in last two weeks	CH.4	0.217	0.031	0.144	2.236	1.495	146	389	0.155	0.280
Received ORT or increased fluids and continued feeding	CH.5	0.295	0.044	0.150	0.809	0.899	32	87	0.207	0.383
Under-fives sleeping under insecticide treated nets	CH.11	0.393	0.043	0.109	2.975	1.725	146	389	0.307	0.478
Fever in last two weeks	CH.12	0.270	0.027	0.099	1.403	1.184	146	389	0.217	0.323
Antimalarial treatment	CH.12	0.529	0.049	0.092	0.957	0.978	39	101	0.431	0.626
Support for learning	CD.1	0.385	0.030	0.077	1.431	1.196	146	389	0.326	0.444
Birth registration	CP.1	0.532	0.054	0.101	4.464	2.113	146	389	0.425	0.639

Table SE.14: Sampling errors: Upper West Region

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Ghana, 2006

	Table	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se*/*r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2*se*	*r* + 2*se*
HOUSEHOLDS										
Household availability of ITNs	CH.10	0.317	0.037	0.116	2.971	1.724	126	473	0.243	0.391
Iodized salt consumption	NU.5	0.208	0.043	0.204	5.148	2.269	126	471	0.123	0.293
Child discipline	CP.4	0.843	0.027	0.032	1.958	1.399	98	365	0.789	0.896
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	EN.1	0.948	0.017	0.018	2.801	1.674	652	473	0.914	0.982
Use of improved sanitation facilities	EN.5	0.172	0.051	0.296	8.599	2.932	652	473	0.070	0.274
Net primary school attendance rate	ED.3	0.604	0.033	0.054	2.158	1.469	128	486	0.539	0.670
Net secondary school attendance rate	ED.4	0.261	0.046	0.176	3.216	1.793	79	295	0.169	0.353
Primary completion rate	ED.6	0.050	0.028	0.559	1.327	1.152	23	81	0.000	0.107
Child labour	CP.2	0.501	0.030	0.059	2.739	1.655	204	777	0.442	0.561
Prevalence of orphans	HA.10	0.064	0.010	0.158	2.189	1.479	340	1,287	0.043	0.084
WOMEN										
Skilled attendant at delivery	RH.4	0.291	0.055	0.188	2.064	1.437	37	143	0.181	0.400
Antenatal care	RH.2	0.960	0.022	0.022	1.733	1.317	37	143	0.917	1.000
Contraceptive prevalence	RH.1	0.093	0.020	0.213	1.723	1.313	100	374	0.053	0.132
Adult literacy	ED.8	0.379	0.078	0.205	3.531	1.879	39	139	0.224	0.534
Prevalence of female genital mutilation/cutting (FGM/C)	CP.7	0.561	0.043	0.076	3.525	1.878	130	481	0.476	0.646
Marriage before age 18	CP.5	0.369	0.036	0.097	2.176	1.475	107	399	0.298	0.441
Polygyny	CP.5A	0.444	0.027	0.061	1.127	1.062	100	374	0.390	0.499
Comprehensive knowledge about HIV prevention among young people	HA.3	0.136	0.045	0.327	2.326	1.525	39	139	0.047	0.225
Condom use with non-regular partners	HA.9	0.382	0.074	0.195	0.305	0.552	4	14	0.233	0.531
Age at first sex among young people	HA.8	0.054	0.025	0.453	0.955	0.977	22	82	0.005	0.104
Attitude towards people with HIV/AIDS	HA.5	0.052	0.012	0.235	1.439	1.200	128	474	0.028	0.077
Women who have been tested for HIV	HA.6	0.126	0.009	0.075	0.391	0.625	130	481	0.107	0.145
Knowledge of mother- to-child transmission of HIV	HA.4	0.630	0.025	0.040	1.328	1.152	130	481	0.579	0.681

MEN										
Adult literacy	ED.8	0.413	0.054	0.132	0.647	0.804	14	54	0.304	0.522
Polygyny	CP.5A	0.259	0.031	0.120	0.345	0.588	19	70	0.197	0.321
Comprehensive knowledge about HIV prevention among young people	HA.3	0.132	0.084	0.638	3.279	1.811	14	54	0.000	0.300
Condom use with non-regular partners	HA.9	0.252	0.244	0.968	1.583	1.258	1	6	0.000	0.741
Age at first sex among young people	HA.8	0.044	0.043	0.989	1.301	1.141	8	30	0.000	0.131
Attitude towards people with HIV/AIDS	HA.5	0.111	0.032	0.290	1.396	1.182	35	134	0.046	0.175
Men who have been tested for HIV	HA.6A	0.039	0.020	0.514	1.413	1.189	35	134	0.000	0.078
Knowledge of mother- to-child transmission of HIV	HA.4	0.499	0.047	0.094	1.179	1.086	35	134	0.405	0.593
UNDER-5s										
Underweight prevalence	NU.1	0.191	0.030	0.157	1.895	1.376	94	327	0.131	0.251
Tuberculosis immunization coverage	CH.2	0.973	0.003	0.003	0.023	0.152	18	66	0.967	0.979
Polio immunization coverage	CH.2	0.924	0.026	0.029	0.643	0.802	18	66	0.871	0.977
Immunization coverage for DPT	CH.2	0.929	0.017	0.019	0.297	0.545	18	66	0.895	0.964
Measles immunization coverage	CH.2	0.915	0.023	0.025	0.449	0.670	18	66	0.869	0.962
Fully immunized children	CH.2	0.865	0.036	0.042	0.741	0.861	18	66	0.792	0.938
Acute respiratory infection in last two weeks	CH.6	0.074	0.023	0.305	2.725	1.651	105	367	0.029	0.119
Antibiotic treatment of suspected pneumonia	CH.7	0.174	0.027	0.156	0.148	0.385	8	30	0.120	0.229
Diarrhoea in last two weeks	CH.4	0.187	0.027	0.142	1.696	1.302	105	367	0.134	0.240
Received ORT or increased fluids and continued feeding	CH.5	0.206	0.063	0.307	1.690	1.300	20	70	0.079	0.332
Under-fives sleeping under insecticide treated nets	CH.11	0.371	0.044	0.117	2.985	1.728	105	367	0.284	0.459
Fever in last two weeks	CH.12	0.244	0.029	0.120	1.702	1.305	105	367	0.185	0.302
Antimalarial treatment	CH.12	0.344	0.060	0.174	1.469	1.212	26	93	0.224	0.465
Support for learning	CD.1	0.376	0.040	0.108	2.557	1.599	105	367	0.295	0.457
Birth registration	CP.1	0.501	0.040	0.080	2.376	1.541	105	367	0.420	0.581

Annex D – Data quality tables

Table DQ.1: Age distribution of household population

Single-year distribution of household population by sex (weighted), Ghana, 2006

	Male		Female			Male		Female	
	Number	Percent	Number	Percent		Number	Percent	Number	Percent
Age					**Age**				
0	353	2.9	335	2.6	41	76	0.6	64	0.5
1	337	2.8	333	2.6	42	143	1.2	168	1.3
2	335	2.7	291	2.3	43	86	0.7	64	0.5
3	351	2.9	321	2.5	44	91	0.7	89	0.7
4	319	2.6	310	2.4	45	150	1.2	181	1.4
5	344	2.8	324	2.5	46	97	0.8	89	0.7
6	407	3.3	385	3.0	47	83	0.7	71	0.6
7	366	3.0	338	2.6	48	97	0.8	89	0.7
8	311	2.6	351	2.8	49	86	0.7	94	0.7
9	326	2.7	313	2.5	50	83	0.7	99	0.8
10	391	3.2	341	2.7	51	42	0.3	93	0.7
11	268	2.2	258	2.0	52	75	0.6	129	1.0
12	409	3.4	364	2.9	53	62	0.5	78	0.6
13	322	2.6	327	2.6	54	80	0.7	108	0.8
14	319	2.6	348	2.7	55	66	0.5	101	0.8
15	336	2.8	295	2.3	56	67	0.5	69	0.5
16	294	2.4	292	2.3	57	59	0.5	55	0.4
17	273	2.2	216	1.7	58	52	0.4	67	0.5
18	343	2.8	295	2.3	59	34	0.3	25	0.2
19	230	1.9	197	1.5	60	80	0.7	110	0.9
20	268	2.2	264	2.1	61	25	0.2	12	0.1
21	178	1.5	195	1.5	62	65	0.5	58	0.5
22	192	1.6	237	1.9	63	25	0.2	23	0.2
23	173	1.4	218	1.7	64	44	0.4	38	0.3
24	170	1.4	211	1.6	65	55	0.5	99	0.8
25	191	1.6	258	2.0	66	27	0.2	21	0.2
26	164	1.3	195	1.5	67	39	0.3	39	0.3
27	148	1.2	186	1.5	68	35	0.3	37	0.3
28	189	1.5	226	1.8	69	16	0.1	25	0.2
29	138	1.1	161	1.3	70	45	0.4	69	0.5
30	207	1.7	213	1.7	71	29	0.2	21	0.2
31	105	0.9	106	0.8	72	33	0.3	32	0.3
32	173	1.4	189	1.5	73	19	0.2	14	0.1
33	102	0.8	135	1.1	74	15	0.1	12	0.1
34	117	1.0	153	1.2	75	37	0.3	29	0.2
35	178	1.5	226	1.8	76	13	0.1	21	0.2
36	105	0.9	139	1.1	77	9	0.1	8	0.1
37	94	0.8	126	1.0	78	13	0.1	11	0.1
38	115	0.9	187	1.5	79	14	0.1	5	0.0
39	86	0.7	118	0.9	80+	94	0.8	140	1.1
40	143	1.2	203	1.6	DK/missing	49	0.4	36	0.3
Total						**12,175**	**100.0**	**12,771**	**100.0**

Table DQ.2: Age distribution of eligible and interviewed women

Household population of women age 10-54, interviewed women age 15-49, and percentage of eligible women who were interviewed (weighted), by five-year age group, Ghana, 2006

	Household population of women age 10-54	Interviewed women age 15-49		Percentage of eligible women interviewed
	Number	Number	Percent	
Age				
10-14	1,639	na	na	na
15-19	1,295	1,205	20.8	93.0
20-24	1,126	1,047	18.1	93.0
25-29	1,026	981	16.9	95.6
30-34	797	758	13.1	95.2
35-39	797	739	12.7	92.7
40-44	589	566	9.8	96.1
45-49	524	500	8.6	95.5
50-54	508	na	na	na
15-49	**6,153**	**5,796**	**100.0**	**94.2**

'na' indicates not applicable

Table DQ.2A: Age distribution of eligible and interviewed men

Household population of men age 10-54, interviewed men age 15-49, and percentage of eligible men who were interviewed (weighted), by five-year age group, Ghana, 2006

	Household population of men age 10-54	Interviewed men age 15-49		Percentage of eligible men interviewed
	Number	Number	Percent	
Age				
10-14	543	na	na	na
15-19	498	464	26.9	93.2
20-24	336	294	17.0	87.6
25-29	261	245	14.1	93.6
30-34	253	226	13.1	89.3
35-39	197	174	10.1	88.3
40-44	193	167	9.7	86.6
45-49	173	159	9.2	91.8
50-54	112	na	na	na
15-49	**1,912**	**1,729**	**100.0**	**90.4**

'na' indicates not applicable

Table DQ.3: Age distribution of eligible and interviewed under-5s

Household population of children age 0-7, children whose mothers/caretakers were interviewed, and percentage of under-5 children whose mothers/caretakers were interviewed (weighted), by five-year age group, Ghana, 2006

	Household population of children age 0-7	Interviewed children age 0-4		Percentage of eligible children interviewed
	Number	Number	Percent	
Age				
0	688	675	21.0	98.1
1	670	648	20.2	96.8
2	625	615	19.1	98.3
3	671	660	20.6	98.3
4	629	614	19.1	97.6
5	668	na	na	na
6	791	na	na	na
7	704	na	na	na
0-4	**3,283**	**3,212**	**100.0**	**97.8**

'na' indicates not applicable

Table DQ.4: Age distribution of under-5 children

Age distribution of under-5 children by 3-month groups (weighted), Ghana, 2006

	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
Age in months						
0-2	74	4.1	74	4.4	148	4.3
3-5	128	7.1	108	6.4	235	6.8
6-8	91	5.1	71	4.3	162	4.7
9-11	75	4.2	95	5.6	169	4.9
12-14	75	4.2	95	5.7	170	4.9
15-17	117	6.5	87	5.2	204	5.9
18-20	77	4.3	80	4.8	157	4.5
21-23	82	4.6	92	5.5	174	5.0
24-26	91	5.1	73	4.3	164	4.7
27-29	117	6.5	97	5.8	214	6.2
30-32	87	4.9	59	3.5	147	4.2
33-35	67	3.8	75	4.5	142	4.1
36-38	80	4.5	97	5.8	177	5.1
39-41	115	6.4	105	6.3	220	6.3
42-44	89	5.0	74	4.4	163	4.7
45-47	91	5.1	67	4.0	158	4.5
48-50	78	4.4	98	5.8	176	5.1
51-53	102	5.7	93	5.5	195	5.6
54-56	89	5.0	80	4.7	168	4.9
57-59	63	3.5	59	3.5	122	3.5
Total	**1,789**	**100.0**	**1,678**	**100.0**	**3,467**	**100.0**

Table DQ.5: Heaping on ages and periods

Age and period ratios at boundaries of eligibility by type of information collected (Household questionnaire, weighted), Ghana, 2006

	Age and period ratios			Eligibility boundary	
	Male	Female	Total	(lower/upper)	Module/ Questions
Age in household questionnaire					
1	0.99	1.04	1.01		
2	0.98	0.92	0.95	Lower	Child discipline and child disability
3	1.05	1.04	1.05		
4	0.94	0.97	0.96	Upper	Under-5 questionnaire
5	0.96	0.95	0.96	Lower	Child labour and education
6	1.09	1.10	1.10		
8	0.93	1.05	0.99		
9	0.95	0.93	0.94	Upper	Child discipline
10	1.19	1.12	1.16		
13	0.92	0.94	0.93		
14	0.98	1.08	1.03	Upper	Child labour and child discipline
15	1.06	0.95	1.01	Lower	Individual's questionnaire
16	0.98	1.09	1.03		
17	0.90	0.81	0.86	Upper	Orphaned and vulnerable children
18	0.97	0.92	0.94		
23	0.97	0.98	0.98		
24	0.96	0.92	0.94	Upper	Education
25	1.09	1.17	1.13		
48	1.09	1.05	1.07		
49	0.97	1.00	0.99	Upper	Individual's questionnaire
50	1.17	1.04	1.10		
Age in individual's questionnaire					
23	1.00	0.91			
24	1.06	1.01		Upper	Sexual behaviour
25	0.77	1.11			
Months since last birth in women's questionnaire					
6-11	na	0.92	na		
12-17	na	1.08	na		
18-23	na	0.95	na	Upper	Maternal and child health
24-29	na	1.13	na		
30-35	na	0.80	na		

'na' indicates not applicable

Table DQ.6: Completeness of reporting

Percentage of observations missing information for selected questions and indicators (weighted), Ghana, 2006

	Percent with missing information	Number
Household		
Salt testing	0.2	5,939
Women		
Month of birth only	41.1	5,890
Month and year of birth	0.0	5,890
Month of first birth only	21.6	3,939
Month and year of first birth	5.0	3,939
Completed years since first birth	0.0	205
Month of last birth only	9.8	3,939
Month and year of last birth	0.4	3,939
Month of first marriage only	58.8	4,112
Month and year of first marriage	11.7	4,112
Age at first marriage/union	0.5	4,112
Age at first intercourse	0.0	2,293
Time since last intercourse	0.1	1,350
Men		
Age at first intercourse	0.0	761
Time since last intercourse	0.0	301
Under-5		
Month of birth under-5 only	4.4	3,467
Month and year of birth under-5	0.2	3,467
Weight	2.0	3,467
Height	0.0	3,467
Height or weight	2.0	3,467

Table DQ.7: Presence of mother in the household and the person interviewed for the under-5 questionnaire

Distribution of children under five by presence of mother in household and the person interviewed for under-5 questionnaire (weighted), Ghana, 2006

	Mother in the household					Mother not in the household				
	Mother interviewed	Father interviewed	Other adult female interviewed	Other adult male interviewed	Child (<15) interv iewed	Father interviewed	Other adult female interviewed	Other adult male interviewed	Total	Number of children aged 0-4 years
Age										
0	98.1	0.5	0.4	0.3	0.0	0.0	0.7	0.0	100.0	688
1	93.9	0.5	1.3	0.0	0.1	0.1	4.1	0.0	100.0	670
2	92.0	0.4	0.9	0.0	0.5	0.4	5.4	0.3	100.0	625
3	89.4	0.4	1.0	0.0	0.0	0.7	8.0	0.5	100.0	671
4	87.4	0.4	0.2	0.0	0.2	0.9	10.4	0.6	100.0	629
Total	**92.2**	**0.4**	**0.8**	**0.1**	**0.2**	**0.4**	**5.7**	**0.3**	**100.0**	**3,283**

Table DQ.8: School attendance by single age

Distribution of household population age 4-24 by educational level and grade attended in the current year, Ghana, 2006

		Primary School							Middle/JSS											
	Pre-School	DK	P1	P2	P3	P4	P5	P6	DK	JS1	JS2	JS3	Secondary/ SSS	Voc./ Comm./ Tech.	Post Secondary	Tertiary	DK	Not attending school	Total	Number
Age																				
4	58.4	0.0	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.8	100.0	629
5	60.4	0.0	8.4	0.7	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.2	100.0	668
6	49.5	0.0	23.7	4.1	0.4	0.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	21.7	100.0	791
7	32.5	0.0	28.9	14.5	4.3	0.4	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.2	100.0	704
8	16.2	0.3	27.3	26.2	10.3	4.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	15.0	100.0	662
9	7.0	0.2	18.3	28.5	19.9	9.2	2.9	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.7	100.0	639
10	3.1	0.0	11.2	19.9	23.2	17.5	7.5	1.6	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.1	100.0	732
11	1.0	0.2	5.4	13.5	16.9	24.0	17.6	8.0	0.0	1.9	0.4	0.2	0.0	0.0	0.0	0.0	0.0	10.9	100.0	526
12	1.2	0.0	3.0	7.1	14.3	20.3	18.6	15.3	0.0	7.1	1.5	0.3	0.0	0.0	0.0	0.0	0.0	11.3	100.0	774
13	0.5	0.0	2.1	5.2	8.9	10.3	16.3	17.9	0.2	14.2	7.2	1.5	0.3	0.0	0.0	0.0	0.0	15.5	100.0	650
14	0.2	0.0	0.7	2.4	3.5	9.9	12.8	16.1	0.0	15.8	13.3	9.8	0.6	0.0	0.0	0.0	0.0	14.9	100.0	667
15	0.0	0.0	0.1	1.5	2.8	5.0	7.6	13.0	0.1	15.4	16.9	13.6	3.0	0.0	0.0	0.0	0.0	21.1	100.0	631
16	0.0	0.0	0.2	0.5	1.9	2.2	4.6	5.2	0.0	10.9	18.8	16.4	14.0	0.5	0.0	0.0	0.0	24.9	100.0	586
17	0.0	0.0	0.0	0.2	0.5	2.5	3.1	4.2	0.0	8.9	12.3	16.2	21.2	0.2	0.0	0.0	0.0	30.7	100.0	489
18	0.0	0.0	0.3	0.4	0.4	0.3	1.7	2.0	0.0	4.8	6.9	9.7	21.4	0.9	0.0	0.5	0.2	50.4	100.0	638
19	0.0	0.0	0.0	0.0	0.3	0.0	0.5	2.9	0.0	2.5	6.0	4.5	19.9	1.6	0.6	1.5	0.0	59.8	100.0	427
20	0.0	0.0	0.1	0.2	0.3	0.1	0.1	1.5	0.0	0.9	1.6	4.4	12.5	2.0	0.2	1.4	0.1	74.6	100.0	532
21	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.9	0.0	0.7	1.0	2.4	9.3	1.3	0.9	2.8	0.0	80.5	100.0	374
22	0.4	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.3	1.5	1.2	5.0	0.6	0.8	3.1	0.0	86.8	100.0	429
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.6	2.9	0.5	0.9	3.9	0.0	91.1	100.0	391
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.5	0.8	1.7	1.8	1.1	3.1	0.0	90.9	100.0	380
Total	**12.9**	**0.0**	**7.3**	**6.8**	**5.8**	**5.6**	**5.0**	**4.6**	**0.0**	**4.2**	**4.2**	**3.8**	**4.6**	**0.4**	**0.1**	**0.5**	**0.0**	**34.0**	**100.0**	**12,320**

Table DQ.9: Sex ratio at birth among children ever born and living

Sex ratio at birth among children ever born, children living, and deceased children by age of women (weighted), Ghana, 2006

	Children ever born			Children living			Children deceased			
	Number of sons	Number of daughters	Sex ratio	Number of sons	Number of daughters	Sex ratio	Number of sons	Number of daughters	Sex ratio	Number of women
Age										
15-19	61	59	1.03	56	52	1.07	5	7	0.71	1,218
20-24	457	449	1.02	414	403	1.03	43	46	0.93	1,075
25-29	1,001	902	1.11	879	824	1.07	122	78	1.56	987
30-34	1,277	1,231	1.04	1,116	1,128	0.99	161	102	1.57	777
35-39	1,720	1,479	1.16	1,509	1,284	1.17	211	195	1.08	746
40-44	1,567	1,451	1.08	1,347	1,275	1.06	220	176	1.24	577
45-49	1,442	1,399	1.03	1,201	1,202	1.00	241	197	1.23	509
Total	**7,524**	**6,970**	**1.08**	**6,522**	**6,168**	**1.06**	**1,002**	**802**	**1.25**	**5,890**

Table DQ.10: Distribution of women by time since last birth

Distribution of women aged 15-49 years with at least one live birth (weighted), by months since last birth, Ghana, 2006

	Number	Percent		Number	Percent
Months since last birth			**Months since last birth**		
0	17	0.9	18	43	2.4
1	60	3.3	19	58	3.2
2	72	4.0	20	41	2.3
3	68	3.8	21	40	2.2
4	77	4.3	22	61	3.4
5	73	4.0	23	50	2.8
6	73	4.1	24	36	2.0
7	45	2.5	25	47	2.6
8	40	2.2	26	49	2.7
9	60	3.3	27	56	3.1
10	44	2.5	28	56	3.1
11	54	3.0	29	45	2.5
12	52	2.9	30	28	1.5
13	52	2.9	31	33	1.8
14	53	3.0	32	42	2.3
15	60	3.4	33	38	2.1
16	69	3.8	34	28	1.6
17	57	3.2	35	19	1.1
Total				**1,800**	**100.0**

Annex E – Indicators

Indicators for Global and National Reporting

The global indicators on the following pages are included in MICS 2006. The indicators were selected because data relevant to them can be collected through household surveys and because they respond to the monitoring needs for global goals established in the Millennium Declaration, the World Fit for Children Declaration and Plan of Action, the World Summit for Children and a number of other global commitments, and they respond to a number of national monitoring needs, i.e. GPRS II, Programme of Work of MoH, M&E framework of Ghana AIDS Commission, etc.

The list includes a brief description of the numerator and denominator of each indicator. The international commitments to which each of the indicators apply is noted using the following abbreviations:

WSC	World Summit for Children
MDG	Millennium Development Goal, and Indicator (I)
WFFC	World Fit for Children Declaration and Plan of Action, Major Goal (MG) or Strategy / Action (SA)
Abuja	The Abuja Declaration of the African Summit on Malaria
UNGASS	United Nations General Assembly Special Session on HIV / AIDS

Almost every table in the report refers to this list for easy reference of computation method. A further reference is placed in footnotes to allow the reader to investigate the link to the actual questionnaires (provided in Appendix F)

Definitions of Indicators

INDICATOR	NUMERATOR	DENOMINATOR	WSC	MDG	WFFC	Other
HEALTHY LIVES						
1. *Under-five mortality rate*[7]	Probability of dying by exact age 5 years		1	4 I 13	MG A	
2. *Infant mortality rate*[7]	Probability of dying by exact age 1 year		1	4 I 14	MG A	
4. *Skilled attendant at delivery*	Number of women aged 15-49 years with a birth in the 2 years preceding the survey that were attended during childbirth by skilled health personnel[8]	Total number of women surveyed aged 15-49 years with a birth in the 2 years preceding the survey[9]	11	5 I 17	MG B SA 6	
5. *Institutional deliveries*	Number of women aged 15-49 years with a birth in the 2 years preceding the survey that delivered in a health facility[10]	Total number of women surveyed aged 15-49 years with a birth in 2 years preceding the survey[11]			MG B SA 6	
6. *Underweight prevalence*	Number of children under age five that fall below minus two standard deviations from the median weight for age of the NCHS/WHO standard (moderate and severe); number that fall below minus three standard deviations (severe)	Total number of children under age five that were weighed[12]	3	1 I 4	MG C	
7. *Stunting prevalence*	Number of children under age five that fall below minus two standard deviations from the median height for age of the NCHS/WHO standard (moderate and severe); number that fall below minus three standard deviations (severe)	Total number of children under age five measured[13]	3		MG C	
8. *Wasting prevalence*	Number of children under age five that fall below minus two standard deviations from the median weight for height of the NCHS/WHO standard (moderate and severe); number that fall below minus three standard deviations (severe)	Total number of children under age five weighed and measured[14]	3		MG C	
9. *Low-birthweight infants*	Number of last live births in the 2 years preceding the survey weighing below 2,500 grams[15]	Total number of last live births in the 2 years preceding the survey[16]	12		MG C	

[7] The under-five and infant mortality rates are obtained via a calculation that uses as input a table on numbers of women, children ever born, and proportion dead by age of women. Numbers for this table are obtained from the Child Mortality module.
[8] Maternal and Newborn Health module, MN7=A, B, C.
[9] Child Mortality module, total women with a birth in the last 2 years, CM12 = Yes.
[10] Maternal and Newborn Health module, MN8=21-26 OR 31-36.
[11] See footnote 9.
[12] Anthropometry module, AN1. Children with out-of-range weights for age are omitted from calculations.
[13] Anthropometry module, AN2. Children with out-of-range heights for age are omitted from calculations.
[14] Anthropometry module, AN1 and AN2. Children with out-of-range weights for height are omitted from calculations.
[15] Maternal and Newborn Health module, MN11. See www.childinfo.org for further information on the tabulation of prevalence of low birthweight.

INDICATOR	NUMERATOR	DENOMINATOR	WSC	MDG	WFFC	Other
HEALTHY LIVES						
10. Infants weighed at birth	Number of last live births in the 2 years preceding the survey that were weighed at birth[17]	Total number of last live births in the 2 years preceding the survey[18]			MG C	
11. Use of improved drinking water sources	Number of household members living in households[19] using improved sources[20] of drinking water	Total number of household members in households surveyed	4	7 I 30	MG D SA 23	
12. Use of improved sanitation facilities	Number of household members[21] using improved sanitation facilities[22]	Total number of household members in households surveyed	5	7 I 31	MG D SA 23	
13. Water treatment	Number of household members using water that has been treated[23]	Total number of household members in households surveyed			SA 23	
14. Disposal of child's faeces	Number of children under age three whose (last) stools were disposed of safely[24]	Total number of children under age three surveyed			SA 23	
15. Exclusive breastfeeding rate	Number of infants aged 0-5 months that are exclusively breastfed[25]	Total number of infants aged 0-5 months surveyed	16		SA 5	
16. Continued breastfeeding rate	Number of infants aged 12-15 months, and 20-23 months, that are currently breastfeeding[26]	Total number of children aged 12-15 months and 20-23 months surveyed	16		SA 5	
17. Timely complementary feeding rate	Number of infants aged 6-9 months that are receiving breastmilk and complementary foods[27]	Total number of infants aged 6-9 months surveyed			SA 5	

[16] See footnote 9.
[17] Maternal and Newborn Health module, MN10=1.
[18] See footnote 4.
[19] This indicator is obtained by weighting the number of households by the number of household members (HH11).
[20] Water and Sanitation module, WS1=11, 12, 13, 21, 31, 41, 81, 91 OR (WS1=91 AND WS2=11, 12, 13, 21, 31, 41, 81, 91).
[21] See footnote 19.
[22] Water and Sanitation module, WS7=11, 12, 13, 21, 22.
[23] Water and Sanitation module, WS6=A, B, D, E.
[24] Care of Illness module, CA13=1 OR 2.
[25] Children still breastfed (Breastfeeding module, BF2=1) AND no other food given (answer must be 2 (No) for BF3B, C, D, E, F, G and H; only BF3A =1 is permissible).
[26] Breastfeeding module, BF2=1.
[27] Children still breastfed (Breastfeeding module, BF2=1) AND complementary foods given in the last 24 hours (BF3H=1), even if also given other breastmilk substitutes.

INDICATOR	NUMERATOR	DENOMINATOR	WSC	MDG	WFFC	Other
HEALTHY LIVES						
18. Frequency of complementary feeding	Number of infants aged 6-11 months that receive breastmilk and complementary food at least the minimum recommended number of times per day (two times per day for infants aged 6-8 months, three times per day for infants aged 9-11 months)[28]	Total number of infants aged 6-11 months surveyed			SA 5	
19. Adequately fed infants	Number of infants aged 0-11 months that are appropriately fed: infants aged 0-5 months that are exclusively breastfed and infants aged 6-11 months that are breastfed and ate solid or semi-solid foods the appropriate number of times (see above) yesterday[29]	Total number of infants aged 0-11 months surveyed			SA 5	
20. Antenatal care	Number of women aged 15-49 years that were attended at least once during pregnancy in the 2 years preceding the survey by skilled health personnel[30]	Total number of women surveyed aged 15-49 years with a birth in the 2 years preceding the survey[31]	9 11		SA 6	
21. Contraceptive prevalence	Number of women currently married or in union aged 15-49 years that are using (or whose partner is using) a contraceptive method (either modern or traditional)[32]	Total number of women aged 15-49 years that are currently married or in union[33]	10	6 I 19c	SA 1 SA 3	
22. Antibiotic treatment of suspected pneumonia	Number of children aged 0-59 months with suspected pneumonia in the previous 2 weeks receiving antibiotics[34]	Total number of children aged 0-59 months with suspected pneumonia in the previous 2 weeks[35]			SA 11	
23. Care-seeking for suspected pneumonia	Number of children aged 0-59 months with suspected pneumonia in the previous 2 weeks that are taken to an appropriate health provider[36]	Total number of children aged 0-59 months with suspected pneumonia in the previous 2 weeks[37]	24		SA 11	
24. Solid fuels	Number of residents in households that use solid fuels (wood, charcoal, crop residues and dung) as the primary source of domestic energy to cook[38]	Total number of residents in households surveyed		7 I 29	SA 11	

[28] Breastfeeding module, (BF2=1 AND BF5>=2) for infants aged 6-8 months OR (BF2=1 AND BF5>=3) for infants aged 9-11 months.
[29] See footnotes 25 and 28.
[30] Maternal and Newborn Health module, MN2=A, B, C.
[31] See footnote 9.
[32] Marriage module, MA1=1 OR 2 AND Contraception module, CP2=1.
[33] Marriage module, MA1=1 OR 2.
[34] Care of Illness module, CA5=1 AND CA6=1 AND (CA7=1 OR 3) AND CA11=A.
[35] Care of Illness module, CA5=1 AND CA6=1 AND (CA7=1 OR 3).
[36] Care of Illness module, CA5=1 AND CA6=1 AND (CA7=1 OR 3) AND having seen an appropriate health provider, CA8=1 AND (CA9=A-H, I-J, L-O) (excludes pharmacy).
[37] See footnote 35.
[38] Household Characteristics module, HC6 = 23, 31, 32, 41, OR 51.

INDICATOR	NUMERATOR	DENOMINATOR	WSC	MDG	WFFC	Other
HEALTHY LIVES						
25. Tuberculosis immunization coverage	Number of children aged 12-23 months receiving BCG vaccine before their first birthday[39]	Total number of children aged 12-23 months surveyed	22		SA 7	
26. Polio immunization coverage	Number of children aged 12-23 months receiving Polio3 vaccine before their first birthday	Total number of children aged 12-23 months surveyed	22		SA 7	
27. Immunization coverage for diphtheria, pertussis and tetanus (DPT)	Number of children aged 12-23 months receiving DPT3 vaccine before their first birthday	Total number of children aged 12-23 months surveyed	22		SA 7	
28. Measles immunization coverage	Number of children aged 12-23 months receiving measles vaccine before their first birthday	Total number of children aged 12-23months surveyed	22	4 I 15	SA 7	
29. Hepatitis B immunization coverage	Number of children aged 12-23 months immunized against hepatitis before their first birthday	Total number of children aged 12-23 months surveyed			SA 7	
30. Yellow fever immunization coverage	Number of children aged 12-23 months immunized against yellow fever before their first birthday	Total number of children aged 12-23 months surveyed			SA 7	
31. Fully immunized children	Number of children aged 12-23[40] months receiving (DPT)HH1-3, Polio1-3, BCG and MMR vaccines before their first birthday	Total number of children aged 12-23[40] months surveyed			SA 7	
32. Neonatal tetanus protection	Number of mothers with live births in the previous year that were given at least two doses of tetanus toxoid (TT) vaccine within the appropriate interval prior to giving birth[41]	Total number of women surveyed aged 15-49 years with a birth in the year preceding the survey[42]	22		SA 7	

[39] Total number of children aged 12-23 months vaccinated with BCG before their first birthday, as validated by a card or mother's recall. To estimate the number of children without a card to have received the vaccine before their first birthday, the proportion of vaccinations given during the first year of life is assumed to be the same as for the proportion of children with a card that received the vaccine before their first birthday. The same estimation approach is also used for indicators on Polio, (DPT)HH, measles, and yellow fever vaccines (indicators 26-30).

[40] See footnote **Error! Bookmark not defined.**.

[41] Tetanus Toxoid module: numerator is all mothers with live births in the previous year with
(1) two TT doses during the pregnancy (TT3>=2) OR
(2) one TT dose during the pregnancy and at least one TT dose prior to the pregnancy (TT3=1 AND TT6>=1) OR
(3) at least two TT doses prior to the pregnancy of which the last dose was less than 3 years before the birth (TT6>=2 AND (CM11-TT7{TT8})<3) OR
(4) with three doses within the 5 years before the pregnancy (TT6>=3 AND (CM11-TT7{TT8})<5) OR
(5) with four doses with the last dose less than 10 years before the pregnancy (TT6>=4 AND ((CM11-TT7{TT8})<10) OR
(6) with five doses or more ever (TT6>=5).

[42] Birth in the year preceding the survey: that is, if the date of the interview (Women's Information Panel, WM6) minus the date of birth of the child (Child Mortality module, CM11) is less than 1 year.

INDICATOR	NUMERATOR	DENOMINATOR	WSC	MDG	WFFC	Other
HEALTHY LIVES						
33. *Use of oral rehydration therapy (ORT)*	Number of children aged 0-59 months with diarrhoea in the previous 2 weeks that received oral rehydration salts and/or an appropriate household solution[43]	Total number of children aged 0-59 months with diarrhoea[44] in the previous 2 weeks	25		SA 11	
34. *Home management of diarrhoea*	Number of children aged 0-59 months with diarrhoea in the previous 2 weeks that received more fluids AND continued eating somewhat less, the same or more food[45]	Total number of children aged 0-59 months with diarrhoea in the previous 2 weeks[46]	23		SA 11	
35. *Received ORT or increased fluids and continued feeding*	Number of children aged 0-59 months with diarrhoea that received ORT (oral rehydration salts or an appropriate household solution) or received more fluids AND continued eating somewhat less, the same or more food[47]	Total number of children aged 0-59 months with diarrhoea in the previous 2 weeks[48]			SA 11	
36. *Household availability of insecticide-treated nets (ITNs)*	Number of households with at least one mosquito net, either permanently treated or treated within the previous year[49]	Total number of households surveyed			SA 12	Abuja
37. *Under-fives sleeping under insecticide-treated nets*	Number of children aged 0-59 months that slept under an insecticide-treated mosquito net the previous night[50]	Total number of children aged 0-59 months surveyed		6 I 22	SA 12	Abuja

[43] Care of Illness module, CA1=1 AND (CA2A=1 OR CA2B=1 OR CA2C=1).

[44] If CA1=8 (don't know if child has had diarrhoea in past 2 weeks), the child is omitted from subsequent calculations.

[45] Care of Illness module, CA1=1 AND CA3 = 3 AND (CA4=3, 4, OR 5).

[46] See footnote 43.

[47] Care of Illness module, CA1=1 AND ((CA2A=1 OR CA2B=1 OR CA2C = 1) OR CA3 = 3) AND (CA4=3, 4, OR 5).

[48] See footnote 43.

[49] Insecticide-treated Net module:
(1) long-lasting net (TN3L1=1 OR TN3L2=1) OR
(2) pre-treated net obtained in the previous 12 months ((TN3P1=1 OR TN3P2=1) AND TN6<12) OR
(3) other net obtained in previous 12 months and pre-treated ((TN3O1=1 OR TN3O2=1 OR TN3X=1 OR TN3Z=1) AND TN5=1 AND TN6<12) OR
(4) pre-treated or other net treated in the previous 12 months ((TN3P1=1 OR TN3P2=1 OR TN3O1=1 OR TN3O2=1 OR TN3X=1 OR TN3Z=1) AND TN7=1 AND TN8<12)).
Please note that the definition in of an ITN in MICS differ from that of previous rounds of DHS

[50] Malaria module:
(1) long-lasting net (ML12=11 OR 12) OR
(2) pre-treated net obtained in the previous 12 months ((ML12=21 OR 22) AND ML11<12) OR
(3) other net obtained in the previous 12 months and already treated (ML11<12 AND ML13=1) OR
(4) net was treated within the last 12 months (ML14=1 AND ML15 <12).
Please note that the definition in of an ITN in MICS differ from that of previous rounds of DHS

INDICATOR	NUMERATOR	DENOMINATOR	WSC	MDG	WFFC	Other
HEALTHY LIVES						
38. Under-fives sleeping under mosquito nets	Number of children aged 0-59 months that slept under a mosquito net the previous night[51]	Total number of children aged 0-59 months surveyed			SA 12	
39. Antimalarial treatment (under- fives)	Number of children aged 0-59 months reported to have had fever in the previous 2 weeks that were treated with an appropriate antimalarial within 24 hours of onset[52]	Total number of children aged 0-59 months reported to have had fever in the previous 2 weeks[53]		6 I 22	SA 12	
40. Intermittent preventive malaria treatment (pregnant women)	Number of women receiving appropriate intermittent medication to prevent malaria (defined as at least 2 doses of SP/Fansidar) during the last pregnancy, leading to a live birth within the 2 years preceding the survey[54]	Total number of women that have had a live birth within the 2 years preceding the survey[55]			SA 12	Abuja
41. Iodized salt consumption	Number of households with salt testing 15 parts per million or more of iodine/iodate[56]	Total number of households surveyed[57]	14		SA 22	
42. Vitamin A supplementation (under-fives)	Number of children aged 6-59 months receiving at least one high-dose vitamin A supplement in the previous 6 months[58]	Total number of children aged 6-59 months surveyed	15		SA 22	
43. Vitamin A supplementation (post-partum mothers)	Number of women with a live birth in the 2 years preceding the survey that received a high-dose vitamin A supplement within 8 weeks after birth[59]	Total number of women that had a live birth in the 2 years preceding the survey[60]	15		SA 22	
44. Content of antenatal care	Number of women with a live birth in the 2 years preceding the survey that received antenatal care during the last pregnancy[61]	Total number of women with a live birth in the 2 years preceding the survey[62]			SA 6	
45. Timely initiation of breastfeeding	Number of women with a live birth in the 2 years preceding the survey that put the newborn infant to the breast within 1 hour of birth[63]	Total number of women with a live birth in the 2 years preceding the survey[64]			SA 5	

[51] Malaria module, ML10=1.
[52] Malaria module, ML1=1 AND (ML4=A-H OR ML7=A–H) AND (ML9=0 OR 1).
[53] Malaria module, ML1=1.
[54] Maternal and Newborn Health module for malaria-affected countries, MN6B=A AND MN6D>=2.
[55] See footnote 9.
[56] Salt Iodization module, SI1=3.
[57] If a household has salt, but it is not tested (Salt Iodization module, SI1=7), these households are omitted from the denominator.
[58] Vitamin A module, VA1=1 AND VA2<6.
[59] Maternal and Newborn Health module, MN1=1.
[60] See footnote 9.
[61] Maternal and Newborn Health module, proportions calculated separately: total number of women that were weighed, had their blood pressure taken, gave a urine sample, or gave a blood sample: MN3A=1; MN3B=1; MN3C=1; MN3D=1.
[62] See footnote 9.

INDICATOR	NUMERATOR	DENOMINATOR	WSC	MDG	WFFC	Other
HEALTHY LIVES						
46. Support for learning	Number of children aged 0-59 months living in households in which an adult has engaged in four or more activities to promote learning and school readiness in the past 3 days[65]	Total number of children aged 0-59 months surveyed			SA 10	
47. Father's support for learning	Number of children aged 0-59 months whose father has engaged in one or more activities to promote learning and school readiness in the past 3 days[66]	Total number of children aged 0-59 months			SA 10	
48. Support for learning: children's books	Number of households with three or more children's books[67]	Total number of households surveyed			SA 10	
49. Support for learning: non-children's books	Number of households with three or more non-children's books[68]	Total number of households surveyed			SA 10	
50. Support for learning: materials for play	Number of households with three or more materials intended for play[69]	Total number of households surveyed			SA 10	
51. Non-adult care	Number of children aged 0-59 months left alone or in the care of another child younger than 10 years of age in the past week[70]	Total number of children aged 0-59 months surveyed			SA 10	

[63] Maternal and Newborn Health module, MN13=000 (immediately) OR 100 (less than 1 hour).
[64] See footnote 9.
[65] Birth Registration and Early Learning module, sum of responses (BR8A–BR8F<>'Y') >=4.
[66] Birth Registration and Early Learning module, sum of responses (BR8A–BR8F='B') >=1.
[67] Child Development optional module, CE1>=3.
[68] Child Development optional module, CE2>=3.
[69] Child Development optional module, CE3 contains 3 or more of A, B, C, D.
[70] Child Development optional module, number of responses where CE4>00 or number of responses where CE5>00.

INDICATOR	NUMERATOR	DENOMINATOR	WSC	MDG	WFFC	Other
EDUCATION						
52. Pre-school attendance	Number of children aged 36-59 months that attend some form of early childhood education programme[71]	Total number of children aged 36-59 months surveyed	26		MG A	
53. School readiness	Number of children in first grade that attended some form of pre-school the previous year[72]	Total number of children in the first grade surveyed[73]			MG A	
54. Net intake rate in primary education	Number of children of school-entry age that are currently attending first grade[74]	Total number of children of primary- school entry age surveyed	6		MG B	
55. Net primary school attendance rate	Number of children of primary-school age currently attending primary or secondary school [75]	Total number of children of primary- school age surveyed	6	2 I 6	MG B	
56. Net secondary school attendance rate	Number of children of secondary-school age currently attending secondary school or higher [76]	Total number of children of secondary-school age surveyed			MG C	
57. Children reaching grade five	Proportion of children entering the first grade of primary school that eventually reach grade five[77]		6	2 I 7	MG D	
58. Transition rate to secondary school	Number of children that were in the last grade of primary school during the previous school year that attend secondary school[78]	Total number of children that were in the last grade of primary school during the previous school year surveyed[79]			MG C	
59. Primary completion rate	Number of children (of any age) attending the last grade of primary school (excluding repeaters)[80]	Total number of children of primary school completion age (age appropriate to final grade of primary school) surveyed[81]	6	2 I 7b	MG D	
60. Adult literacy rate	Number of women aged 15-24 years that are able to read a short simple statement about everyday life[82]	Total number of women aged 15-24 years surveyed	7	2 I 8	MG F	

[71] Birth Registration and Early Learning module, UF11=3-4 years AND BR6=1.
[72] Education module, ED6 Level=1, Grade=1 AND ED8 Level=0.
[73] Education module, ED6 Level=1, Grade=1.
[74] Select children of primary-school entry age (for example, HL5=6); Education module, ED4=1 AND ED6 Level=1, Grade=1.
[75] Select children of primary-school age (for example, HL5=6-11); Education module, ED6 Level=1 or 2.
[76] Select children of secondary-school age (for example, HL5=12-17); Education module, ED6 Level = 2 or 3.
[77] This indicator is calculated using transition probabilities for the cohort of children in the sample, which are derived from the Education module ED4 to ED8.
[78] Education module, ED8 Level=1, Grade=*(final grade of primary school, for example, 6)* AND ED6 Level=2.
[79] Education module, ED8 Level=1, Grade=(final grade of primary school, for example, 6).
[80] Education module, ED6 Level=1, Grade=(final grade of primary school, or example, 6) AND ED8 Level=1, Grade<>(final grade of primary school).
[81] Select children of the age appropriate to final grade of primary school, for example, HL5=11.
[82] Women's Information Panel, WM14=3 OR WM11=2 OR 3.

INDICATOR	NUMERATOR	DENOMINATOR	WSC	MDG	WFFC	Other
EDUCATION						
61. Gender parity index	Proportion of girls in primary and secondary education[83]	Proportion of boys in primary and secondary education[84]		3 I 9	MG C	

[83] Select girls, HL4=2, calculate net attendance rate using Education module, primary ED6=1; secondary ED6=2; higher ED6=3.

[84] Select boys, HL4=1, calculate net attendance rate using Education module, primary ED6=1; secondary ED6=2; higher ED6=3.

INDICATOR	NUMERATOR	DENOMINATOR	WSC	MDG	WFFC	Other
CHILD PROTECTION						
62. Birth registration	Number of children aged 0-59 months whose births are reported registered[85]	Total number of children aged 0-59 months surveyed			SA 1	
63. Prevalence of female genital mutilation/cutting (FGM/C)	Number of women aged 15-49 years that reported undergoing any form of genital mutilation/cutting[86]	Total number of women aged 15-49 years surveyed			SA 9	
66. Approval for FGM/C	Number of women aged 15-49 years favouring the continuation of female genital mutilation/cutting[87]	Total number of women aged 15-49 years surveyed			SA 9	
67. Marriage before age 15 and age 18	Number of women that were first married or in union by the exact age of 15[88] and the exact age of 18,[89] by age groups	Total number of women aged 15-49 years and 20-49 years surveyed, by age groups			SA 9	
68. Young women aged 15-19 years currently married or in union	Number of women aged 15-19 years currently married or in union[90]	Total number of women aged 15-19 years surveyed			SA 9	
69. Spousal age difference	Number of women married/in union aged 15-19 years and 20-24 years with a difference in age of 10 or more years between them and their current spouse[91]	Total number of women aged 15-19 and 20-24 years surveyed that are currently married or in union[92]			SA 9	
70. Polygyny	Number of women in a polygynous union[93]	Total number of women aged 15-49 years surveyed that are currently married or in union[94]			SA 9	
71. Child labour	Number of children aged 5-14 years that are involved in child labour[95]	Total number of children aged 5-14 years surveyed			SA 35	
72. Labourer students	Number of children aged 5-14 years involved in child labour activities that	Total number of children aged 5-14 years involved in			SA 36	

[85] Birth Registration and Early Learning module, BR1=1 OR BR2=1.
[86] Female Genital Mutilation/Cutting optional module, FG3=1.
[87] Female Genital Mutilation/Cutting optional module, FG16=1.
[88] Marriage module, (MA6-WM8<15) OR (MA8<15). Calculate using century month codes (CMC) using analysis software. Disaggregate by age groups from 15-19 … 45-49.
[89] Marriage module, (MA6-WM8<18) OR (MA8<18). Calculate using century month codes (CMC) using analysis software. Disaggregate by age groups from 20-24 … 45-49.
[90] Marriage module, MA1=1 OR 2.
[91] Marriage module, MA2<>98 AND ((MA2-(WM6-WM8)>=10) OR (MA2-WM9>=10).
[92] Marriage module, exclude women with MA2=98.
[93] Marriage module optional questions for countries where polygamy exists, MA2A=1.
[94] Marriage module, MA1=1 OR 2.
[95] Child Labour module:
(1) Economic activity: ((CL3=1 OR CL3=2 OR CL8=1) AND CL4+CL9>=MinHours) OR
(2) Domestic chores: (CL6=1 AND CL7>=28 Hours)
For children aged 5-11 years, MinHours=1; for children aged 12-14 years, MinHours=14.

INDICATOR	NUMERATOR	DENOMINATOR	WSC	MDG	WFFC	Other
CHILD PROTECTION						
	attend school[96]	child labour activities[97]				
73. Student labourers	Number of children aged 5-14 years attending school that are involved in child labour activities[98]	Total number of children aged 5-14 years attending school[99]			SA 36	
74. Child discipline	Number of children aged 2-14 years that (1) experience only non-violent aggression, (2) experience psychological aggression as punishment, (3) experience minor physical punishment, (4) experience severe physical punishment[100]	Total number of children aged 2-14 years selected and surveyed[101]			SA 2	

[96] Child Labour module, as defined in footnote 95 AND Education module, ED4 =1.
[97] Child Labour module, as defined in footnote 95.
[98] Child Labour and Education modules, Child Labour module, as defined in footnote 95 AND Education module, ED4 =1.
[99] Education module, ED4=1.
[100] Child Discipline module.
(1) (CD12A=1 OR CD12B=1 OR CD12E=1) AND (CD12C, CD12D, CD12F, CD12G, CD12H, CD12I, CD12J, AND CD12K=2).
(2) (CD12D=1 OR CD12H=1)
(3) (CD12C=1 OR CD12F=1 OR CD12G=1 OR CD12J=1)
(4) (CD12I=1 OR CD12K=1).
[101] Note that only one child aged 2-14 years is selected in each household for the Child Discipline module.

INDICATOR	NUMERATOR	DENOMINATOR	WSC	MDG	WFFC	Other
HIV/AIDS						
75. Prevalence of orphans	Number of children under age 18 with at least one dead parent[102]	Total number of children under age 18 surveyed			MG C	
76. School attendance of orphans versus non-orphans	Proportion of double orphans (both mother and father dead) aged 10-14 years attending school[103]	Proportion of children aged 10-14 years, both of whose parents are alive, that are living with at least one parent and are attending school [104]		6 I 20	SA 10	UN-GASS
77. Children's living arrangements	Number of children aged 0-17 years not living with a biological parent[105]	Total number of children aged 0-17 years surveyed			SA 11	
82. Comprehensive knowledge about HIV prevention among young people	Number of women aged 15-24 years that correctly identify two ways of avoiding HIV infection and reject three common misconceptions about HIV transmission[106]	Total number of women aged 15-24 years surveyed		6 I 19b	SA 2	UN-GASS
83. Condom use with non-regular partners	Number of women aged 15-24 years reporting the use of a condom during sexual intercourse with their last non-marital, non-cohabiting sex partner in the previous 12 months [107]	Total number of women aged 15-24 years surveyed that had a non-marital, non-cohabiting partner in the previous 12 months [108]		6 I 19a	SA 2	UN-GASS
84. Age at first sex among young people	Number of women aged 15-24 years that have had sex before age 15[109]	Total number of women aged 15-24 surveyed			SA 2	
85. Higher risk sex in the last year	Number of sexually active women aged 15-24 years that have had sex with a non-marital, non-cohabitating partner in the previous 12 months [110]	Total number of women aged 15-24 that were sexually active in the previous 12 months [111]			SA 4	
86. Attitude towards people with HIV/AIDS	Number of women expressing acceptance on all four questions about people with HIV or AIDS[112]	Total number of women surveyed			SA 7	

[102] Household Listing module, HL9=2 OR HL11=2.
[103] Household Listing module, numerator is (HL9=2 OR HL11=2) AND ED4=1, denominator is (HL9=2 OR HL11=2).
[104] Household Listing module, numerator is (HL9=1 AND HL11=1 AND (HL10<>00 OR HL12<>00)) AND ED4=1, denominator is (HL9=1 AND HL11=1 AND (HL10<>00 OR HL12<>00)).
[105] Household Listing module, (HL9=2 OR HL10=00) AND (HL11=2 OR HL12=00), that is, mother is not living or not living in same household AND father is not living or not living in same household.
[106] HIV/AIDS module, (HA2=1 AND HA4=1) (Note: these answers reflect correct understanding of how HIV infection can be prevented) AND (HA3=2 AND HA5=2 AND HA8=1) (Note: these answers reflect rejection of the three common misconceptions about HIV transmission.)
[107] Sexual Behaviour module, SB2<>4 AND ((SB3=1 AND SB4<>1) OR (SB7=1 AND SB8<>1)). This indicator should be presented disaggregated by 15-19, 20-24 and 15-24-year-old age groups.
[108] Sexual Behaviour module, SB2<>4 AND (SB4<>1 OR SB8<>1).
[109] Sexual Behaviour module, SB1<>0 AND (SB1<15 (sex before age 15) OR (SB1=95 (first sex at marriage) AND ((MA6-WM8)<15) OR MA8<15)) (marriage before age 15)).
[110] Sexual Behaviour module, SB2<>4 AND (SB4<>1 OR SB8<>1).
[111] Sexual Behaviour module, SB2<>4.
[112] HIV/AIDS module, HA10=1 AND HA11=1 AND HA12=2 AND HA13=1.

INDICATOR	NUMERATOR	DENOMINATOR	WSC	MDG	WFFC	Other
HIV/AIDS						
87. Women who know where to be tested for HIV	Number of women that state knowledge of a place to be tested[113]	Total number of women surveyed			MG B	
88. Women who have been tested for HIV	Number of women that report being tested for HIV[114]	Total number of women surveyed			MG B	
89. Knowledge of mother-to-child transmission of HIV	Number of women that correctly identify all three means of vertical transmission[115]	Total number of women surveyed			MG B	
90. Counselling coverage for the prevention of mother-to-child transmission of HIV	Number of women that gave birth in the previous 24 months and received antenatal care reporting that they received counselling on HIV/AIDS during this care[116]	Total number of women that gave birth in the previous 24 months surveyed			MG B	
91. Testing coverage for the prevention of mother-to-child transmission of HIV	Number of women that gave birth in the previous 24 months and received antenatal care reporting that they received the results of an HIV test during this care[117]	Total number of women that gave birth in the previous 24 months surveyed			MG B	
92. Age-mixing among sexual partners	Number of women aged 15-24 years that had sex in the past 12 months with a partner who was 10 or more years older than they were[118]	Total number of sexually active women aged 15-24 years surveyed[119]			SA 4	

[113] HIV/AIDS module, HA18=1 or HA15=1 or Maternal and Newborn Health module, MN5=1.
[114] HIV/AIDS module and Maternal and Newborn Health module, HA15=1 OR MN5=1.
[115] HIV/AIDS module, HA9A=1 AND HA9B=1 AND HA9C=1.
[116] Maternal and Newborn Health module, MN4=1.
[117] Maternal and Newborn Health module, MN6=1.
[118] Sexual Behaviour module, SB2<>4 AND ((SB5-WM9)>=10 OR (SB9-WM9>=10)). This indicator includes any sexual partner, marital/cohabiting or non-marital/non-cohabiting.
[119] Sexual Behaviour module, SB2<>4.

INDICATOR	NUMERATOR	DENOMINATOR	WSC	MDG	WFFC	Other
ADDITIONAL INDICATORS						
94. Durability of housing	Number of household members living in urban dwellings that are not considered durable[120]	Number of urban household members in households surveyed				
96. Source of supplies	Number of children (or households) for whom supplies were obtained from public providers,[121] presented separately for each type of supply: insecticide-treated mosquito nets, oral rehydration salts, antibiotics and antimalarials	Total number of children (or households) for whom supplies were obtained[122]				
97. Cost of supplies	Median cost of supplies obtained,[123] presented separately for each type of supply and whether sourced from public or private providers: insecticide-treated mosquito nets, oral rehydration salts, antibiotics and antimalarials.	Total number of children (or households) for whom supplies were obtained[124]				

[120] Security of Tenure and Durability of Housing module and Household Characteristics module:
(1) Natural floor material (HC3=11-19) AND poor condition of dwelling (two or more of HC15I=A-F), OR
(2) Vulnerable to accidents due to both issues: HC15J=A AND B, OR
(3) Located in a hazardous location, (four or more of HC15H=A-I).
[121] Source and Cost of Supplies module:
(1) Source of insecticide-treated nets as defined in footnote 49 AND TN3A=11-19
(2) Source of oral rehydration salts, CA4B=11-19
(3) Source of antibiotics, CA11B=11-19
(4) Source of antimalarials, ML9A=11-19.
[122] Source and Cost of Supplies module:
(1) Use of insecticide-treated nets as defined in footnote 49
(2) Use of oral rehydration salts, CA2A=1
(3) Use of antibiotics, CA11=A
(4) Use of antimalarials, ML4=A-H OR ML7=A-H.
[123] Source and Cost of Supplies module:
(1) Cost of insecticide-treated nets as defined in footnote 49, and TN3B
(2) Cost of oral rehydration salts, CA4C
(3) Cost of antibiotics, CA11C
(4) Cost of antimalarials, ML9B.
[124] Source and Cost of Supplies module:
(1) Use of insecticide-treated nets as defined in footnote 49
(2) Use of oral rehydration salts, CA2A=1
(3) Use of antibiotics, CA11=A
(4) Use of antimalarials, ML4=A-H OR ML7=A-H.

INDICATOR	NUMERATOR	DENOMINATOR	WSC	MDG	WFFC	Other
ADDITIONAL INDICATORS						
100. Attitudes towards domestic violence	Number of women that consider that a husband/partner is justified in hitting or beating his wife in at least one of the following circumstances: (1) she goes out without telling him,[125] (2) she neglects the children,[126] (3) she argues with him,[127] (4) she refuses sex with him, [128] (5) she burns the food[129]	Total number of women surveyed			SA6	
101. Child disability	Number of children aged 2-9 years with at least one of nine reported disabilities[130]: (1) delay in sitting, standing or walking, (2) difficulty seeing, either in the daytime or at night, (3) appears to have difficulty hearing, (4) difficulty in understanding instructions, (5) difficulty walking or moving arms or has weakness or stiffness of limbs, (6) has fits, becomes rigid, loses consciousness, (7) does not learn to do things like other children his/her age, (8) cannot speak or cannot be understood in words, (9) appears mentally backward, dull or slow	Total number of children aged 2-9 surveyed			SA3	

[125] Attitudes Towards Domestic Violence module: DV1A=1.
[126] Attitudes Towards Domestic Violence module: DV1B=1.
[127] Attitudes Towards Domestic Violence module: DV1C=1.
[128] Attitudes Towards Domestic Violence module: DV1D=1.
[129] Attitudes Towards Domestic Violence module: DV1E=1.
[130] Child Disability module: DA3=1 or DA4=1 or DA5=1 or DA6=2 or DA7=1 or DA8=1 or DA9=2 or DA10=2 or DA13=1.

Annex F – Questionnaires

Questionnaires

The four questionnaires employed in MICS 2006 are presented on the following pages in the following order:

Household Questionnaire
Woman's Questionnaire
Under five Questionnaire
Man's Questionnaire

household questionnaire

Good ……! My name is …… and I am here on behalf of the Ghana Statistical Service and Ministry of Health. We are working on a nationwide survey concerned with family health and education. We would very much appreciate your participation in this survey. The interview will take about 20 minutes. All the information we obtain will remain strictly confidential and your answers will never be identified. During this time I would like to speak with the household head and all mothers or others who take care of children in the household.

May I start now? *IF PERMISSION IS GIVEN, BEGIN THE INTERVIEW.*

IDENTIFICATION PANEL	**HH**
HH1. LOCALITY NAME _____ CLUSTER NUMBER: ☐☐☐	HH2. HOUSEHOLD NUMBER: ☐☐
HH3. INTERVIEWER NAME _____ NUMBER: ☐☐	HH4. SUPERVISOR NAME _____ NUMBER: ☐☐
HH5. DAY/MONTH/YEAR OF INTERVIEW ☐☐ ☐☐ **2 0 0 6**	
HH6. AREA: URBAN ..... 1 RURAL 2	HH7. REGION ☐☐ HH7A. DISTRICT ☐☐
HH 8. NAME OF HEAD OF HOUSEHOLD: _____	
AFTER ALL QUESTIONNAIRES FOR THE HOUSEHOLD HAVE BEEN COMPLETED, FILL IN THE FOLLOWING INFORMATION.	
HH9. RESULT OF HOUSEHOLD INTERVIEW: COMPLETED ..... 1 NOT AT HOME ..... 2 REFUSED ..... 3 HOUSEHOLD NOT FOUND/STRUCTURE DESTROYED ..... 4 OTHER (*specify*) _____ 6	HH10. RESPONDENT TO HOUSEHOLD QUESTIONNAIRE: NAME: _____ LINE NO: ☐☐ HH11. TOTAL NUMBER OF HOUSEHOLD MEMBERS: ☐☐
HH12. NO. OF WOMEN ELIGIBLE FOR INTERVIEW: ☐☐	HH13. NO. OF WOMEN QUESTIONNAIRES COMPLETED: ☐☐
HH14. NO. OF CHILDREN UNDER AGE 5: ☐☐	HH15. NO. OF UNDER 5 QUESTIONNAIRES COMPLETED: ☐☐
HH15A. HOUSEHOLD SELECTED FOR MAN'S INTERVIEW: ***(CIRCLE)*** YES=1 NO=2 ⇩	HH15B. NUMBER OF MEN ELIGIBLE FOR INTERVIEW: ☐☐
	HH15C. NUMBER OF MEN QUESTIONNAIRES COMPLETED: ☐☐
INTERVIEWER/SUPERVISOR NOTES: *USE THIS SPACE TO RECORD NOTES ABOUT THE INTERVIEW WITH THIS HOUSEHOLD, SUCH AS CALL-BACK TIMES, INCOMPLETE INDIVIDUAL INTERVIEW FORMS, NUMBER OF ATTEMPTS TO RE-VISIT, ETC..*	
HH16. DATA ENTRY CLERK: ☐☐	

MODULE 1: HOUSEHOLD LISTING FORM **HL**

First, please tell me the name of each person who usually lives here or spent the last night in this household, starting with the head of the household.

LIST THE HEAD OF THE HOUSEHOLD IN LINE 01. LIST ALL HOUSEHOLD MEMBERS (HL2), THEIR RELATIONSHIP TO THE HEAD OF HOUSEHOLD (HL3), AND THEIR SEX (HL4). THEN ASK: **Are there any others who live here, even if they are not at home now? (These may include children currently in school or at work).** *IF YES, COMPLETE LISTING. THEN, ASK QUESTIONS STARTING WITH HL5 FOR EACH PERSON AT A TIME. ADD A CONTINUATION SHEET IT THERE ARE MORE THAN 15 HOUSEHOLD MEMBERS. TICK HERE IF CONTINUATION SHEET USED* ☐

					ELIGIBLE FOR:			
					WOMEN'S INTERVIEW	MEN'S INTERVIEW	WORKING CHILDREN	UNDER-5 INTERVIEW
HL1.	HL2. *Name*	*HL3. What is the relation-ship of (NAME) to the head of the house-hold?	HL4. Is (NAME) male or female? 1 MALE 2 FEM.	HL5. How old is (NAME)? How old was (NAME) on his/her last birthday? *RECORD IN COMPLETED YEARS* 98=DK	HL6. *CIRCLE LINE NO. IF WOMAN IS AGE 15-49*	HL6A. ***CHECK 15A:*** *IF HOUSEHOLD SELECTED FOR MAN'S INTERVIEW: CIRCLE LINE NO. IF MAN IS AGE 15-49*	HL7. FOR EACH CHILD AGE 5-14: Who is the mother or primary caretaker of this child? RECORD LINE NO. OF MOTHER/ CARE-TAKER	HL8. *FOR EACH CHILD UNDER 5:* Who is the mother or primary caretaker of this child? *RECORD LINE NO. OF MOTHER/ CARETAKER*
LINE	NAME	REL.	M F	AGE	15-49	15-49	MOTHER/CARETAKER	MOTHER/ CARETAKER
01			1 2		01	01		
02			1 2		02	02		
03			1 2		03	03		
04			1 2		04	04		
05			1 2		05	05		
06			1 2		06	06		
07			1 2		07	07		
08			1 2		08	08		
09			1 2		09	09		
10			1 2		10	10		
11			1 2		11	11		
12			1 2		12	12		
13			1 2		13	13		
14			1 2		14	14		
15			1 2		15	15		

Are there any other persons living here – even if they are not members of your family or do not have parents living in this household? Including children at work or at school? *IF YES, INSERT CHILD'S NAME AND COMPLETE FORM. THEN, COMPLETE THE TOTALS BELOW.*

	WOMEN 15-49	MEN 15-49	CHILDREN 5-14	UNDER 5S
TOTALS				

NOW FOR EACH WOMAN AGE 15-49 YEARS, WRITE HER NAME AND LINE NUMBER AND OTHER IDENTIFYING INFORMATION IN THE INFORMATION PANEL OF THE WOMEN'S QUESTIONNAIRE. FOR EACH CHILD UNDER AGE 5, WRITE HIS/HER NAME AND LINE NUMBER AND THE LINE NUMBER OF HIS/HER MOTHER OR CARETAKER IN THE INFORMATION PANEL OF THE QUESTIONNAIRE FOR CHILDREN UNDER FIVE. IN SELECTED HOUSEHOLD FOR EACH MAN AGE 15-49 YEARS, WRITE HIS NAME AND LINE NUMBER AND OTHER IDENTIFYING INFORMATION IN THE INFORMATION PANEL OF THE MEN'S QUESTIONNAIRE. YOU SHOULD NOW HAVE A SEPARATE QUESTIONNAIRE FOR EACH ELIGIBLE WOMAN AND EACH CHILD UNDER FIVE IN THE HOUSEHOLD AND MALE WHERE APPROPRIATE.

CHECK: HL5=CHILD(REN) 0-17 YEARS ⇨ CONTINUE

CHECK: HL5=NO CHILD 0-17 YEARS ⇨ ED1

*FOR CHILDREN AGE **0-17** YEARS*
ASK HL9 – HL12

HL1. *LINE NO.*	HL9. Is (NAME'S) biological mother alive? 1 YES 2 NO⇨ HL11 8 DK⇨ HL11	HL10. *IF ALIVE:* Does (NAME'S) biological mother live in this household? IF YES: What is her name? *RECORD LINE NO. OF MOTHER OR CODE 00 FOR 'NO'*	HL11. Is (NAME'S) biological father alive? 1 YES 2 NO↘ NEXT MEMBER 8 DK↘ NEXT MEMBER	HL12. *IF ALIVE:* Does (NAME'S) biological father live in this household? IF YES: What is his name? *RECORD LINE NO. OF FATHER OR 00 FOR 'NO'*
LINE	MOTHER Y N DK	MOTHER'S LINE NO.	FATHER Y N DK	FATHER'S LINE NO.
01	1 2 8	___ ___	1 2 8	___ ___
02	1 2 8	___ ___	1 2 8	___ ___
03	1 2 8	___ ___	1 2 8	___ ___
04	1 2 8	___ ___	1 2 8	___ ___
05	1 2 8	___ ___	1 2 8	___ ___
06	1 2 8	___ ___	1 2 8	___ ___
07	1 2 8	___ ___	1 2 8	___ ___
08	1 2 8	___ ___	1 2 8	___ ___
09	1 2 8	___ ___	1 2 8	___ ___
10	1 2 8	___ ___	1 2 8	___ ___
11	1 2 8	___ ___	1 2 8	___ ___
12	1 2 8	___ ___	1 2 8	___ ___
13	1 2 8	___ ___	1 2 8	___ ___
14	1 2 8	___ ___	1 2 8	___ ___
15	1 2 8	___ ___	1 2 8	___ ___

****CODES FOR HL3: RELATIONSHIP TO HEAD OF HOUSEHOLD***

01 = Head
02 = Wife or Husband/ Cohabiting partner
03 = Son or Daughter
04 = Son or Daughter-In-Law
05 = Grandchild
06 = Parent
07 = Parent-In-Law
08 = Brother or Sister
09 = Brother or Sister-In-Law
10 = Co Wife
11 = Other Relative *(specify)*
12 = Adopted/Foster/Stepchild
13 = Not Related
98 = Don't Know

MODULE 2: EDUCATION **ED**

ASK QUESTIONS FOR HOUSEHOLD MEMBERS AGE 3 YEARS AND ABOVE

ED1. *LINE NO.*	ED1A. Name	ED2. Has (NAME) ever attended school or pre-school? 1 YES 2 NO ⇘ NEXT MEMBER	ED3. What is the highest level of school (NAME) attended? What is the highest grade (NAME) completed at this level? **LEVEL:** 00 = PRE-SCHOOL 10 = PRIMARY 20 = MIDDLE/JSS 30 = SECONDARY/SSS 40 = VOC./COMM/TECH 50 = POST SEC (NURSING/TEACHER TR. 60 = TERTIARY 96 = OTHER (*specify*) 98 = DK **GRADE:** 98 = DK *IF LESS THAN 1 GRADE, ENTER 00.*	

LINE	COPY NAMES FROM HL2	SCHOOL YES	SCHOOL NO	LEVEL		GRADE	
01		1	2				
02		1	2				
03		1	2				
04		1	2				
05		1	2				
06		1	2				
07		1	2				
08		1	2				
09		1	2				
10		1	2				
11		1	2				
12		1	2				
13		1	2				
14		1	2				
15		1	2				

FOR HOUSEHOLD MEMBERS AGE 3-24 YEARS

ED1. *LINE NO.* *PLEACE CIRCLE MEM-BER ID.*	ED4. During the (*2005-2006)* school year, did (NAME) attend school or pre-school at any time? 1 YES 2 NO⇨ ED7	ED5. Since last (*day of the week*), how many days did (NAME) attend school? *INSERT NUMBER OF DAYS IN SPACE BELOW*.	ED6. During this/that school year, which level and grade is/was (NAME) attending? **LEVEL:** 00 = PRE-SCHOOL 10 = PRIMARY 20 = MIDDLE/JSS 30 = SECONDARY/SSS 40 = VOC./COMM/TECH 50 = POST SEC 60 = TERTIARY 96 = OTHER (*specify*) 98 = DK **GRADE:** 98 = DK	ED7. Did (NAME) attend school or pre-school at any time during the previous school year, that is *(2004-2005)*? 1 YES 2 NO↘ NEXT MEMBER 8 DK↘ NEXT MEMBER	ED8. During that previous school year, which level and grade did (NAME) attend? **LEVEL:** 00 = PRE-SCHOOL 10 = PRIMARY 20 = MIDDLE/JSS 30 = SECONDARY/SSS 40 = VOC./COMM/TECH 50 = POST SEC 60 = TERTIARY 96 = OTHER (*specify*) 98 = DK **GRADE:** 98 = DK

LINE	SCHOOL YES NO	DAYS	LEVEL		GRADE		SCHOOL Y N DK	LEVEL		GRADE	
01	1 2	___					1 2 8				
02	1 2	___					1 2 8				
03	1 2	___					1 2 8				
04	1 2	___					1 2 8				
05	1 2	___					1 2 8				
06	1 2	___					1 2 8				
07	1 2	___					1 2 8				
08	1 2	___					1 2 8				
09	1 2	___					1 2 8				
10	1 2	___					1 2 8				
11	1 2	___					1 2 8				
12	1 2	___					1 2 8				
13	1 2	___					1 2 8				
14	1 2	___					1 2 8				
15	1 2	___					1 2 8				

MODULE 3: WATER AND SANITATION		WS
WS1. What is the main source of drinking water for members of your household?	**PIPED WATER** Piped into dwelling.....11 Piped into yard or plot .....12 Public tap/standpipe .....13 Borehole.....21 **DUG WELL** Protected well .....31 Unprotected well.....32 Spring .....41 Rainwater collection .....42 Tanker-truck .....51 Cart with small tank/drum .....61 **SURFACE WATER** River/stream.....71 Dam/lake/pond/canal/ irrigation channel) .....72 Sachet water .....81 Bottled water .....91 Other (*specify*) _____96	11⇨WS5 12⇨WS5
WS2. What is the main source of water used by your household for other purposes such as cooking and handwashing?	**PIPED WATER** Piped into dwelling.....11 Piped into yard or plot .....12 Public tap/standpipe .....13 Borehole.....21 **DUG WELL** Protected well .....31 Unprotected well.....32 Spring .....41 Rainwater collection .....42 Tanker-truck .....51 Cart with small tank/drum .....61 **SURFACE WATER** River/stream.....71 Dam/lake/pond/canal/ irrigation channel .....72 Sachet water .....81 Bottled water .....91 Other (*specify*) _____96	11⇨WS5 12⇨WS5
WS3. How long does it take to go there, get water, and come back?	No. of minutes .....☐☐☐ Water on premises .....995 DK 998	995⇨WS5
WS4. Who usually goes to this source to fetch the water for your household? *PROBE:* Is this person under age 15? What sex? *CIRCLE CODE THAT BEST DESCRIBES THIS PERSON.*	Adult woman.....11 Adult man .....12 Female (under 15) .....13 Male (under 15) .....14 Children (both sexes).....15 Adult woman + child(ren).....16 Adult man + child(ren).....17 Other *(specify)* .....96 DK 98	

WS5. Do you treat your water in any way to make it safer to drink?	Yes ..... 1 No..... 2 DK 8	 2⇨WS7 8⇨WS7
WS6. What do you usually do to the water to make it safer to drink? Anything else? *RECORD ALL ITEMS MENTIONED.*	Boil .....A Add bleach/chlorine/alloy .....B Strain it through a cloth.....C Use water filter (ceramic, sand, composite, etc.).....D Solar disinfection .....E Let it stand and settle .....F Other (*specify*) _____ X DK ..... Z	
WS7. What kind of toilet facility do members of your household usually use? *IF "FLUSH" OR "POUR FLUSH", PROBE:* Where does it flush to? *IF NECESSARY, ASK PERMISSION TO OBSERVE THE FACILITY.*	Flush/pour flush Flush to piped sewer system.....11 Flush to septic tank .....12 Flush to pit (latrine) .....13 Ventilated Improved Pit latrine (VIP).....21 Pit latrine with slab .....22 Pit latrine without slab/open pit.....23 Bucket.....41 No facilities (bush/beach, etc) .....95 Other (*specify*) _____96	 95⇨ WS10 96⇨ WS10
WS8. Do you share this facility with other households?	Yes ..... 1 No..... 2	 2⇨ WS10
WS9. How many households in total use this toilet facility?	No. of households (if less than 10) **0** ☐ Ten or more households .....10 DK 98	
WS10. How does your household dispose of refuse (solid waste)?	Collected.....11 Dump into public container .....21 Public dump.....22 Dump elsewhere .....23 Burned by household .....31 Buried by household .....32 Other (*specify*) _____96	
WS10A. How does your household dispose of liquid waste?	Through the sewerage system ..... 1 Thrown into gutter..... 2 Thrown onto compound ..... 3 Thrown onto outside compound ..... 4 Other (*specify*) _____6	

MODULE 4: HOUSEHOLD CHARACTERISTICS		HC
HC1A. What is the religious affiliation of the head of this household?	Catholic.....11 Protestant.....12 Pentecostal/Charismatic.....13 Deeper Life.....14 Jehovah Witness.....15 SDA.....16 Moslem.....21 Traditional.....31 Spiritualist.....32 No Religion.....41 Other (*specify*) _____96 DK.....98	
HC1B. What is the mother tongue/native language of the head of this household?	Asante.....11 Fanti.....12 Akuapem.....13 Sefwi.....14 Brong.....15 Nzema.....16 Ga.....21 Dangme.....22 Ewe.....31 Guan.....41 Buli.....51 Mamprusi.....52 Frafra/Gruni.....53 Kassene.....54 Dagbani.....55 Wali/Dagari.....56 Sissala.....57 Other language (*specify*)_____96 DK.....98	
HC1C. To which ethnic group does the head of this household belong?	Akan.....11 Ga/Dangme.....12 Ewe.....13 Guan.....14 Gruma.....15 Mole Dagbani.....21 Grusi.....22 Mande.....23 Other ethnic group (*specify*) _____96 DK.....98	
HC2. How many rooms in this household are used for sleeping?	No. of rooms..... ☐☐	

HC3. Main material of the dwelling floor: *RECORD OBSERVATION.*	Earth/mud/mud bricks.....11 Wood.....21 Stone.....31 Burnt bricks.....32 Cement/concrete.....41 Vinyl tiles .....42 Ceramic/marble tiles/porcelain.....43 Terrazzo .....44 Other (*specify*) _____ 96	
HC4. Main material of the roof. *RECORD OBSERVATION.*	Thatch/palm leaf/raffia .....11 Bamboo.....12 Mud/mud bricks/earth .....21 Wood.....31 Corrugated metal sheet.....41 Slate/asbestos .....42 Cement/concrete.....51 Roofing tiles .....61 Other (*specify*) _____96	
HC5. Main material of the walls. *(RECORD OBSERVATION)*	Palm leaves/thatch (grass)/raffia.....11 Mud/mud brick/earth.....21 Bamboo.....31 Wood .....32 Metal sheet or slate/asbestos .....41 Landcrete.....51 Burnt bricks.....61 Cement blocks/concrete.....71 Stone.....72 Other (*specify*) _____96	
HC6. What type of fuel does your household mainly use for cooking?	Electricity.....11 Liquefied Petroleum Gas (LPG) .....21 Biogas.....22 Kerosene.....23 Charcoal.....31 Wood .....32 Crop residue/sawdust.....41 Animal waste.....51 None, no cooking.....61 Other (*specify*) _____96	11⇨HC8 21⇨HC8 22⇨HC8 61⇨HC9
HC7. In this household, is food cooked on an open fire, an open stove or a closed stove? *PROBE FOR TYPE.*	Open fire..... 1 Open stove/coal pot ..... 2 Closed stove..... 3 Other (*specify*) _____6	
HC8. Is the cooking usually done in the house, in a separate building, or outdoors?	In the house..... 1 In a separate building..... 2 Outdoors ..... 3 Other (*specify*) _____6	

HC9. Does your household have: Electricity? Radio? Television? Computer Clock Mobile telephone? Fixed land line? Refrigerator? Video deck? Freezer DVD/VCD? Wood furniture?	Yes No Electricity..... 1 2 Radio ..... 1 2 Television ..... 1 2 Computer ..... 1 2 Clock..... 1 2 Mobile Telephone ..... 1 2 Fixed land line ..... 1 2 Refrigerator ..... 1 2 Video deck ..... 1 2 Freezer ..... 1 2 DVD/VCD..... 1 2 Wood furniture 1 2	
HC10. Does any member of your household own: Bicycle? Motorcycle or scooter? Animal-drawn cart? Car or truck? Canoe/Boat without a motor? Canoe/Boat with a motor?	Yes No Bicycle ..... 1 2 Motorcycle/Scooter ..... 1 2 Animal drawn-cart ..... 1 2 Car/Truck ..... 1 2 Canoe/Boat without a motor..... 1 2 Canoe/Boat with a motor 1 2	
HC11. Does any member of this household own any land that can be used for agriculture?	Yes ..... 1 No..... 2	2⇨HC13
HC12. How many hectares/acres/plots of agricultural land do members of this household own? IF MORE THAN 97, RECORD 97 IN RESPECTIVE BOXES.	Hectares..... 1 ☐☐ Acres ..... 2 ☐☐ Plots ..... 3 ☐☐ DK 998	
HC13. Does this household own any livestock, herds, farm animals or poultry?	Yes ..... 1 No..... 2	2⇨ HC15H
HC14. How many of the following animals does this household have? Cattle? Horses, Donkeys, or Mules? Goats? Sheep? Pig? Other farm animal (*specify)* Chickens? Other poultry? (*specify)* Other? *(specify)* IF NONE, RECORD '0000'. IF MORE THAN 9997, RECORD '9997'. IF UNKNOWN, RECORD ' '9998'.	Cattle..... ☐☐☐☐ Horses, Donkeys, or Mules. ☐☐☐☐ Goats ..... ☐☐☐☐ Sheep..... ☐☐☐☐ Pigs ..... ☐☐☐☐ Other farm animal..... ☐☐☐☐ Chickens..... ☐☐☐☐ Other poultry..... ☐☐☐☐ Other (specify) ..... ☐☐☐☐	

HC15H. Dwelling located in or near: OBSERVE, AND CIRCLE ALL ITEMS THAT DESCRIBE THE LOCATION OF DWELLING.	Landslide area....A Flood-prone area ....B River bank ....C Steep hill ....D Garbage heap/pile ....E Industrial pollution area ....F Railway line ....G Power plant ....H Flyover....I Public toilet....J Poultry farm....K Piggery/Pen....L Mining/Quarrying ....M Along the coast line....N None of the above....Y	
HC15I. Condition of dwelling: RECORD OBSERVATION. RECORD ALL THAT APPLY.	Cracks/openings in walls ....A No windows ....B Windows with broken glass/no glass ....C Visible holes in the roof ....D Incomplete roof....E Insecure door ....F No netting....G None of the above....Y	
HC15J. Dwelling surroundings: RECORD OBSERVATION. RECORD ALL THAT APPLY.	Very narrow passage between houses instead of road ....A Too many power cables connecting to neighborhood's main distribution post....B Choked drain ....C Stagnant water ....D Bushy surrounding ....E None of the above....Y	

MODULE 5: INSECTICIDE TREATED MOSQUITO NETS		TN
TN1. Does your household have any mosquito net that can be used while sleeping?	Yes ..... 1 No 2	2⇨NEXT MODULE
TN2. How many mosquito nets does your household have? *IF 7 OR MORE NETS, RECORD '7'.*	Number of nets ..... ☐	
TN3. Is the net (are any of the nets) any of the following brands: *READ EACH BRAND NAME, SHOW PICTURE CARD, AND CIRCLE CODES FOR YES OR NO FOR EACH BRAND. IF POSSIBLE, OBSERVE THE NET TO VERIFY BRAND.*	Y N DK	
LONG-LASTING TREATED NETS:	Long-lasting treated nets:	
TN3L1. Olyset?	Olyset 1 2 8	
TN3L2. Permanet	Permanet 1 2 8	
PRE-TREATED NETS:	Pre-treated nets:	
TN3P1. Dawa?	Dawa 1 2 8	
TN3P2. Dawa Plus?	Dawa Plus 1 2 8	
OTHER NETS:	Other nets:	
TN3O1. MOH Treated net?	MOH Treated net 1 2 8	
TN3O2. Calico net?	Calico net 1 2 8	
TN3O3. Second-hand net?	Second-hand net 1 2 8	
TN3O4. Other (*specify*)?	Other *(specify)*_____ 1 2 8	
TN3O4. DK brand	DK brand 1 2 8	
TN3A. Where did you get the (NAME OF NET HIGHEST IN THE LIST OF NETS AVAILABLE IN THE HOUSEHOLD, IN TN3) mosquito net? ASK QUESTION IN RELATION TO THE MOST EFFECTIVE MOSQUITO NET AVAILABLE IN THE HOUSEHOLD (CHECK TN3). IF THERE IS MORE THAN ONE NET IN THE SAME CATEGORY, ASK QUESTION REFERRING TO THE MOST RECENTLY OBTAINED NET.	Public sector Govt. hospital/clinic ..... 11 Govt. health centre ..... 12 Govt. health post ..... 13 Village health worker/CBA ..... 14 Mobile/outreach clinic ..... 15 Other public (*specify*) ..... 16 Private medical sector Private hospital/clinic ..... 21 Private physician ..... 22 Private pharmacy ..... 23 Mobile clinic ..... 24 Other private medical (*specify*) ..... 26 Other source Relative or friend ..... 31 Chemical shop ..... 32 Traditional practitioner ..... 33 Other (*specify*) ..... 96 DK 98	

TN3B. How much did you pay for the (*NAME OF NET HIGHEST IN THE LIST OF NETS AVAILABLE IN THE HOUSEHOLD, IN TN3)* mosquito net? ASK QUESTION IN RELATION TO THE MOST RECENT MOSQUITO NET AVAILABLE IN THE HOUSEHOLD (CHECK TN3). IF THERE IS MORE THAN ONE NET IN THE SAME CATEGORY, ASK QUESTION REFERRING TO THE MOST RECENTLY OBTAINED NET.	Cedis ..... ☐☐☐☐☐☐ Free ..... 999996 DK 999998	
TN4. ***CHECK TN3*** *FOR BRAND OF NET(S). GO THROUGH THE ABOVE LIST IN ORDER UNTIL* ***ONE*** *BOX IS CHECKED AND FOLLOW INSTRUCTIONS:* *1.* ☐ *LONG-LASTING TREATED NET (OLYSET OR PERMANET) MENTIONED?* ⇨ *GO TO NEXT MODULE* *2.* ☐ *PRE-TREATED NET (DAWA OR DAWA PLUS) MENTIONED?* ⇨ *GO TO TN6* *3.* ☐ *OTHER NET (MOH TREATED, CALICO OR SECOND-HAND, OR OTHER (SPECIFY) MENTIONED?* ⇨ *CONTINUE WITH TN5*		
TN5. When you got the (most recent) net, was it already treated with an insecticide to kill or repel mosquitoes?	Yes ..... 1 No..... 2 DK/not sure 8	
TN6. How many months ago was the (most recent) net obtained? *IF LESS THAN 1 MONTH AGO, RECORD '00'.* *IF ANSWER IS "12 MONTHS" OR "1 YEAR", PROBE TO DETERMINE IF NET WAS OBTAINED EXACTLY 12 MONTHS AGO OR EARLIER OR LATER.*	Months ago ..... ☐☐ More than 24 months ago .....95 Not sure 98	
TN7. Since you got the net(s) has it (have any of these nets) ever been soaked or dipped in a liquid to kill/repel mosquitoes?	Yes ..... 1 No..... 2 DK 8	2⇨NEXT MODULE 8⇨NEXT MODULE
TN8. How long ago was the most recent soaking/dipping done? *IF LESS THAN 1 MONTH, RECORD '00'.* *IF ANSWER IS "12 MONTHS" OR "1 YEAR", PROBE TO DETERMINE IF NET WAS TREATED EXACTLY 12 MONTHS AGO OR EARLIER OR LATER.*	Months ago ..... ☐☐ More than 24 months ago .....95 Not sure 98	

MODULE 6: WORKING CHILDREN — CL

*TO BE ADMINISTERED TO MOTHER/CARETAKER OF EACH CHILD IN THE HOUSEHOLD **AGE 5-14 YEARS**. FOR HOUSEHOLD MEMBERS BELOW AGE 5 OR ABOVE AGE 14, LEAVE ROWS BLANK.*

Now I would like to ask about any work children in this household may do.

CL1. *Line no.* *COPY FROM HL1* CIRCLE LINE NO. OF APPLICA-BLE CHILD	CL2. *NAME* COPY FROM HL2 ON A RESPECTIVE LINE	CL3. During the past week, did (*NAME*) do any kind of work for someone who is not a member of this household? *IF YES*: for pay in cash or kind? 1 YES, FOR PAY (CASH OR KIND) 2 YES, UNPAID 3 NO ⇨ **TO CL5**	CL4. *IF YES:* Since last (*DAY OF THE WEEK*), about how many hours did he/she do this work for someone who is not a member of this household? INCLUDE ALL HOURS AT ALL JOBS. IF LESS THAN 1 HOUR, RECORD '00' ***RECORD RESPONSE THEN ⇨ CL.6***	CL5. At any time during the past year, did (*NAME*) do any kind of work for someone who is not a member of this household? *IF YES*: for pay in cash or kind? 1 YES, FOR PAY (CASH OR KIND) 2 YES, UNPAID 3 NO	CL6. During the past week, did (*NAME*) help with household chores such as shopping, collecting firewood, cleaning, fetching water, or caring for children? 1 YES 2 NO ⇨ **TO CL8**	CL7. *IF YES*: Since last (*DAY OF THE WEEK*), about how many hours did he/she spend doing these chores?	CL8. During the past week, did (*NAME*) do any other family work (on the farm or in a business or selling goods in the street, road side or market?) 1 YES 2 NO ⇘ NEXT MEMBER	CL9. *IF YES*: Since last (*DAY OF THE WEEK*), about how many hours did he/she do this work?
LINE NO.	NAME	PD UNPD NO	NO. HOURS	PD UP N	Y N	NO. HOURS	Y N	NO. HOURS
01		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___
02		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___
03		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___
04		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___
05		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___
06		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___
07		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___
08		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___
09		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___
10		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___
11		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___
12		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___
13		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___
14		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___

15		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___

MODULE 7: CHILD DISCIPLINE

table 1: childREN AgED 2-14 YEARS ELIGIBLE for child Discipline questions

REVIEW THE HOUSEHOLD LISTING AND LIST EACH OF THE CHILDREN AGED 2-14 YEARS BELOW IN ORDER ACCORDING TO THEIR LINE NUMBER (HL1). DO NOT INCLUDE OTHER HOUSEHOLD MEMBERS OUTSIDE OF THE AGE RANGE 2-14 YEARS. RECORD THE LINE NUMBER, NAME, SEX, AGE, AND THE LINE NUMBER OF THE MOTHER OR CARETAKER FOR EACH CHILD. THEN RECORD THE TOTAL NUMBER OF CHILDREN AGED 2-14 IN THE BOX PROVIDED (CD7).

CD1. Rank no.	CD2. Line No. from HL1.		CD3. Name from HL2.	CD4. Sex from HL4.	CD5. Age from HL5.		CD6. Line no. of mother/ caretaker from HL7 or HL8.	
	LINE NO.		NAME	SEX	CHILD'S AGE		LINE NO.	
01								
02								
03								
04								
05								
06								
07								
08								
CD7.	TOTAL CHILDREN AGED 2-14 YEARS							

IF THERE IS ONLY ONE CHILD AGE 2-14 YEARS IN THE HOUSEHOLD, THEN SKIP TABLE 2 AND GO TO CD11.

table 2: selection of random child for child Discipline questions

USE THIS TABLE TO SELECT ONE CHILD BETWEEN THE AGES OF 2 AND 14 YEARS, IF THERE IS MORE THAN ONE CHILD IN THAT AGE RANGE IN THE HOUSEHOLD. LOOK FOR THE LAST DIGIT OF THE HOUSEHOLD NUMBER FROM THE COVER PAGE. THIS IS THE NUMBER OF THE ROW YOU SHOULD GO TO IN THE TABLE BELOW. CHECK THE TOTAL NUMBER OF ELIGIBLE CHILDREN (2-14) IN CD7 ABOVE. THIS IS THE NUMBER OF THE COLUMN YOU SHOULD GO TO. FIND THE BOX WHERE THE ROW AND THE COLUMN MEET AND CIRCLE THE NUMBER THAT APPEARS IN THE BOX. THIS IS THE RANK NUMBER OF THE CHILD ABOUT WHOM THE QUESTIONS WILL BE ASKED. RECORD THE RANK NUMBER IN CD9 BELOW. FINALLY, RECORD THE LINE NUMBER AND NAME OF THE SELECTED CHILD IN CD11 ON THE NEXT PAGE. THEN, FIND THE MOTHER OR PRIMARY CARETAKER OF THAT CHILD, AND ASK THE QUESTIONS, BEGINNING WITH CD12.

CD8.	**TOTAL NUMBER OF CHILDREN (2-14) IN THE HOUSEHOLD**							
Last digit of the household number	1	2	3	4	5	6	7	8+
0	1	2	2	4	3	6	5	4
1	1	1	3	1	4	1	6	5
2	1	2	1	2	5	2	7	6
3	1	1	2	3	1	3	1	7
4	1	2	3	4	2	4	2	8
5	1	1	1	1	3	5	3	1
6	1	2	2	2	4	6	4	2
7	1	1	3	3	5	1	5	3
8	1	2	1	4	1	2	6	4
9	1	1	2	1	2	3	7	5

CD9. *RECORD THE RANK NUMBER OF THE SELECTED CHILD*	RANK NUMBER OF CHILD ..... ☐☐

MODULE 7: CHILD DISCIPLINE (cont'd.)		**CD**
*IDENTIFY ELIGIBLE CHILD **AGED 2 TO 14 YEARS** IN THE HOUSEHOLD USING THE TABLES ON THE PRECEDING PAGE, ACCORDING TO YOUR INSTRUCTIONS. ASK TO INTERVIEW THE MOTHER OR PRIMARY CARETAKER OF THE SELECTED CHILD (IDENTIFIED BY THE LINE NUMBER IN CD6).*		
CD11. *WRITE NAME AND LINE NO. OF THE CHILD SELECTED FOR THE MODULE FROM CD3 AND CD2, BASED ON THE RANK NUMBER IN CD9.*	NAME: _____ LINE NUMBER: ..... ☐☐	
CD12. All adults use certain ways to teach children the right behaviour or to address a behaviour problem. I will read various methods that are used and I want you to tell me if you or anyone else in your household has used this method with (*NAME*) in the past month.		
CD12A. Took away privileges, forbade something *(NAME)* liked or did not allow him/her to leave house).	Yes ..... 1 No..... 2	
CD12B. Counselling/Explained why something (the behavior) was wrong.	Yes ..... 1 No..... 2	
CD12C. Shook him/her.	Yes ..... 1 No..... 2	
CD12D. Shouted, yelled at or screamed at him/her.	Yes ..... 1 No..... 2	
CD12E. Gave him/her something else to do.	Yes ..... 1 No..... 2	
CD12F. Spanked, hit or slapped him/her on the bottom with bare hand.	Yes ..... 1 No..... 2	
CD12G. Hit him/her on the bottom or elsewhere on the body with something like a belt, hairbrush, stick or other hard object.	Yes ..... 1 No..... 2	
CD12H. Called him/her dumb, lazy, or another name, etc.	Yes ..... 1 No..... 2	
CD12I. Hit or slapped him/her on the face, head or ears.	Yes ..... 1 No..... 2	
CD12J. Hit or slapped him/her on the hand, arm, or leg.	Yes ..... 1 No..... 2	
CD12K. Beat him/her up with an implement (hit over and over as hard as one could).	Yes ..... 1 No..... 2	
CD13. Do you believe that in order to bring up (raise, educate) (*NAME*) properly, you need to physically punish him/her?	Yes ..... 1 No..... 2 Don't know/No opinion..... 8	

MODULE 8: DISABILITY — DA

*TO BE ADMINISTERED TO CARETAKERS OF ALL CHILDREN **AGED 2 TO 9 YEARS** LIVING IN THE HOUSEHOLD. FOR HOUSEHOLD MEMBERS BELOW AGE 2 OR ABOVE AGE 9, LEAVE ROWS BLANK*

I would like to ask you if any child in this household aged 2 to 9 years has any of the health conditions I am going to mention to you.

DA1. *Line no.*	DA2. *CHILD'S NAME*	DA3. Compared with other children, does or did (*NAME*) have any serious delay in sitting, standing, or walking?	DA4. Compared with other children, does (*NAME*) have difficulty seeing, either in the daytime or at night?	DA5. Does (*NAME*) appear to have difficulty hearing? (uses hearing aid, hears with difficulty, completely deaf?)	DA6. When you tell (*NAME*) to do something, does he/she seem to understand what you are saying?	DA7. Does (*NAME*) have difficulty in walking or moving his/her arms or does he/she have weakness and/or stiffness in the arms or legs?	DA8. Does (*NAME*) sometimes have fits, become rigid, or lose consc-iousness?	DA9. Does (*NAME*) learn to do things like other children his/her age?	DA10. Does (*NAME*) speak at all (can he/she make him or herself understood in words; can say any recognizable words)?	DA11. ***3-9 YEARS:*** Is (*NAME'S*) speech in any way different from normal (not clear enough to be understood by people other than the immediate family)? ⇨ **DA13**	DA12. ***AGE 2-ONLY:*** Can (*NAME*) name at least one object (for example, an animal, a toy, a cup, a spoon)?	DA13. Compared with other children of the same age, does (*NAME*) appear in any way mentally backward, dull or slow?
LINE	NAME	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
01		1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
02		1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
03		1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
04		1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
05		1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
06		1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
07		1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
08		1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
09		1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
10		1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
11		1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
12		1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
13		1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
14		1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
15		1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2

MODULE 9: SALT IODIZATION — SI

SI1. We would like to check whether the salt used in your household is iodized. May I see a sample of the salt used to cook the main meal eaten by members of your household last night? *ONCE YOU HAVE EXAMINED THE SALT, CIRCLE NUMBER THAT CORRESPONDS TO TEST OUTCOME.*	Not iodized 0 PPM .....1 Less than 15 PPM .....2 15 PPM or more .....3 No salt in home .....4 Salt not tested 5	

SI2. *DOES ANY ELIGIBLE WOMAN AGE 15-49 RESIDE IN THE HOUSEHOLD?*
CHECK HOUSEHOLD LISTING, COLUMN HL6. *YOU SHOULD HAVE A QUESTIONNAIRE WITH THE INFORMATION PANEL FILLED IN FOR EACH ELIGIBLE WOMAN.*

☐ *YES.* ⇨ *GO TO QUESTIONNAIRE FOR INDIVIDUAL WOMEN*
TO ADMINISTER THE QUESTIONNAIRE TO THE FIRST ELIGIBLE WOMAN.

☐ *NO.* ⇨ *CONTINUE.*

SI2A. ***CHECK HOUSEHOLD LISTING, COLUMN HL6A.*** *IF HOUSEHOLD IS SELECTED FOR MAN'S INTERVIEW, DOES ANY ELIGIBLE MAN AGE 15-49 RESIDE IN THE HOUSEHOLD? YOU SHOULD HAVE A QUESTIONNAIRE WITH THE INFORMATION PANEL FILLED IN FOR EACH ELIGIBLE MAN.*

☐ *YES.* ⇨ *GO TO QUESTIONNAIRE FOR INDIVIDUAL MEN TO ADMINISTER THE QUESTIONNAIRE TO THE FIRST ELIGIBLE MAN.*

☐ *NO.* ⇨ *CONTINUE.*

SI3. *DOES ANY CHILD UNDER THE AGE OF 5 RESIDE IN THE HOUSEHOLD?*
CHECK HOUSEHOLD LISTING, COLUMN HL8. *YOU SHOULD HAVE A QUESTIONNAIRE WITH THE INFORMATION PANEL FILLED IN FOR EACH ELIGIBLE CHILD.*

☐ *YES.* ⇨ *GO TO QUESTIONNAIRE FOR CHILDREN UNDER FIVE*
TO ADMINISTER THE QUESTIONNAIRE TO MOTHER OR CARETAKER OF THE FIRST ELIGIBLE CHILD.

☐ *NO.* ⇨ *END THE INTERVIEW BY THANKING THE RESPONDENT FOR HIS/HER COOPERATION.*

GATHER TOGETHER ALL QUESTIONNAIRES FOR THIS HOUSEHOLD AND TALLY THE NUMBER OF INTERVIEWS COMPLETED ON THE COVER PAGE.

IDENTIFICATION PANEL	**WM**
THIS MODULE IS TO BE ADMINISTERED TO ALL WOMEN AGE 15 THROUGH 49 (SEE COLUMN HL6 OF HH LISTING). ***FILL IN ONE FORM FOR EACH ELIGIBLE WOMAN*** *FILL IN THE CLUSTER AND HOUSEHOLD NUMBER, AND THE NAME AND LINE NUMBER OF THE WOMAN IN THE SPACE BELOW.* *FILL IN YOUR NAME, NUMBER AND THE DATE.*	
WM1. CLUSTER NUMBER: ☐☐☐	WM2. HOUSEHOLD NUMBER: ☐☐
WM3. WOMAN'S NAME: _____	WM4. WOMAN'S LINE NUMBER: ☐☐
WM5. INTERVIEWER NAME AND NUMBER: _____ ☐☐	WM6. DAY/MONTH/YEAR OF INTERVIEW: ☐☐ ☐☐ **2 0 0 6**
WM7. RESULT OF WOMEN'S INTERVIEW	COMPLETED.....1 NOT AT HOME.....2 REFUSED.....3 PARTLY COMPLETED.....4 INCAPACITATED.....5 OTHER (*specify*) _____ 6

REPEAT GREETING IF NOT ALREADY READ TO THIS WOMAN:

Good ……..! My name is …… and I am here on behalf of the Ghana Statistical Service and Ministry of Health. We are working on a nationwide survey concerned with family health and education. You have been selected as one of the respondents to this survey and we would very much appreciate your participation. The interview will take about 30 minutes. All the information we obtain will remain strictly confidential and your answers will never be identified.

IF PERMISSION IS GIVEN, BEGIN THE INTERVIEW. IF THE WOMAN DOES NOT AGREE TO CONTINUE, THANK HER, COMPLETE WM7, AND GO TO THE NEXT INTERVIEW. DISCUSS THIS RESULT WITH YOUR SUPERVISOR FOR A FUTURE REVISIT.

WM8. In what month and year were you born?	DATE OF BIRTH: Month..... ☐☐ DK month.....98 Year ..... ☐☐☐☐ DK year.....9998	
WM9. How old were you at your last birthday?	AGE (IN COMPLETED YEARS)..... ☐☐	
WM10. Have you ever attended school?	Yes.....1 No 2	 2⇨WM14

WM11. What is the highest level of school you attended: primary, secondary, or higher?	Primary ..... 10 Middle/JSS..... 20 Secondary/SSS..... 30 Voc./Comm./Tech. ..... 40 Post Sec ..... 50 Tertiary ..... 60 Other (specify)..... 96 DK..... 98	
WM12. What is the highest grade you completed at that level?	Grade ..... ☐☐	
WM13. ***CHECK WM11:*** ☐ *SECONDARY/VOC./TECH./COMM. OR HIGHER.* ⇨ *GO TO WM15* ☐ *PRIMARY/MIDDLE/JSS.* ⇨ *CONTINUE WITH WM14*		
WM14. Now I would like you to read this sentence to me. *SHOW SENTENCES TO RESPONDENT.* *IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE:* Can you read part of the sentence to me? *EXAMPLE SENTENCES FOR LITERACY TEST:* *1. The child is reading a book.* *2. The rains came late this year.* *3. Parents must care for their children.* *4. Farming is hard work.*	Cannot read at all ..... 1 Able to read only parts of sentence..... 2 Able to read whole sentence ..... 3 No sentence in required language _____ 4 *(specify language)* Blind/mute, visually/speech impaired 5	
WM15. What is your religion?	Catholic ..... 11 Protestant ..... 12 Pentecostal/Charismatic ..... 13 Deeper Life ..... 14 Jehovah Witness ..... 15 SDA..... 16 Moslem..... 21 Traditional ..... 31 Spiritualist ..... 32 No Religion ..... 41 Other (*specify*) _____ 96	
WM16. To which ethnic group do you belong?	Akan..... 11 Ga/Dangme ..... 12 Ewe ..... 13 Guan ..... 14 Gruma ..... 15 Mole Dagbani ..... 21 Grusi ..... 22 Mande ..... 23 Other ethnic group (*specify*) _____ 96	

MODULE 1: INFANT/CHILD MORTALITY — CM

THIS MODULE IS TO BE ADMINISTERED TO ALL WOMEN AGE 15-49.
*ALL QUESTIONS REFER ONLY TO **LIVE** BIRTHS.*

CM1. Now I would like to ask about all the births you have had during your life. Have you ever given birth? *IF "NO" PROBE BY ASKING:* I mean, to a child who ever breathed or cried or showed other signs of life – even if he or she lived only a few minutes or hours?	Yes.....1 No 2	2⇨ MARRIAGE /UNION MODULE
CM2A. What was the date of your first birth? I mean the very first time you gave birth, even if the child is no longer living, or whose father is not your current partner. *SKIP TO CM3 ONLY IF YEAR OF FIRST BIRTH IS GIVEN. OTHERWISE, CONTINUE WITH CM2B.*	Date of first birth Day ..... ☐☐ DK day .....98 Month ..... ☐☐ DK month.....98 Year ..... ☐☐☐☐ DK year 9998	 ⇨CM3 ⇩CM2B
CM2B. How many years ago did you have your first birth?	Completed years since first birth..... ☐☐	
CM3. Do you have any sons or daughters to whom you have given birth who are now living with you?	Yes.....1 No 2	2⇨CM5
CM4. How many sons live with you? How many daughters live with you? (IF NONE, WRITE 00)	Sons at home ..... ☐☐ Daughters at home ..... ☐☐	
CM5. Do you have any sons or daughters to whom you have given birth who are alive but do not live with you?	Yes.....1 No 2	2⇨CM7
CM6. How many sons are alive but do not live with you? How many daughters are alive but do not live with you? (IF NONE, WRITE 00)	Sons elsewhere..... ☐☐ Daughters elsewhere ..... ☐☐	
CM7. Have you ever given birth to a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	Yes.....1 No 2	 2⇨CM9
CM8. How many boys have died? How many girls have died?	Boys dead..... ☐☐ Girls dead ..... ☐☐	
CM9. *SUM ANSWERS TO CM4, CM6, AND CM8.*	Sum..... ☐☐	

CM10. Just to make sure that I have this right, you have had in total (*TOTAL NUMBER*) births during your life. Is this correct?

☐ *YES.* ⇨ *GO TO CM11*

☐ *NO.* ⇨ *CHECK RESPONSES AND MAKE CORRECTIONS BEFORE PROCEEDING TO CM11*

CM11. Of these (*TOTAL NUMBER*) births you have had, when did you deliver the last one (even if he or she has died)? *IF DAY IS NOT KNOWN, ENTER '98' IN SPACE FOR DAY.*	**Date of last birth:** Day ..... ☐☐ DK day ..... 98 Month ..... ☐☐ DK month..... 98 Year ..... ☐☐☐☐ DK year 9998	
CM12. ***CHECK CM11:*** *DID THE WOMAN'S LAST BIRTH OCCUR WITHIN THE LAST 2 YEARS, THAT IS, SINCE (DAY AND MONTH OF INTERVIEW IN 2004)?* *IF CHILD HAS DIED, TAKE SPECIAL CARE WHEN REFERRING TO THIS CHILD BY NAME IN THE FOLLOWING MODULES.* ☐ *NO LIVE BIRTH IN LAST2 YEARS.* ⇨ *GO TO MARRIAGE/UNION MODULE.* ☐ *YES, LIVE BIRTH IN LAST 2 YEARS.* ⇨ *CONTINUE WITH CM13* *NAME OF CHILD*_____		
CM13. At the time you became pregnant with (*NAME*), did you want to become pregnant then, did you want to wait until later, or did you want no (more) children at all?	Then ..... 1 Later ..... 2 No more 3	

MODULE 2: TETANUS TOXOID (TT) — TT

THIS MODULE IS TO BE ADMINISTERED TO ALL WOMEN WITH A LIVE BIRTH IN THE 2 YEARS PRECEDING DATE OF INTERVIEW.

TT1. Do you have a card or other document with your own immunizations listed? *IF A CARD IS PRESENTED, USE IT TO ASSIST WITH ANSWERS TO THE FOLLOWING QUESTIONS.*	Yes (card seen) ..... 1 Yes (card not seen) ..... 2 No ..... 3 DK 8	
TT2. When you were pregnant with your last child, did you receive any injection to prevent him or her from getting tetanus, that is convulsions after birth (an anti-tetanus shot, an injection at the top of the arm or shoulder)?	Yes ..... 1 No ..... 2 DK 8	 2⇨TT5 8⇨TT5
TT3. *IF YES:* How many times did you receive this anti-tetanus injection during your last pregnancy?	No. of times ..... ☐☐ DK 98	 98⇨ TT5
TT4. *HOW MANY TT DOSES DURING LAST PREGNANCY WERE REPORTED IN TT3?* ☐ *AT LEAST TWO TT INJECTIONS DURING LAST PREGNANCY.* ⇨ *GO TO NEXT MODULE* ☐ *FEWER THAN TWO TT INJECTIONS DURING LAST PREGNANCY.* ⇨ *CONTINUE WITH TT5*		
TT5. Did you receive any tetanus toxoid injection at any time before your last pregnancy?	Yes ..... 1 No ..... 2 DK 8	 2⇨NEXT MODULE 8⇨NEXT MODULE
TT6. How many times did you receive it?	No. of times ..... ☐☐	
TT7. In what month and year did you receive the last anti-tetanus injection before that last pregnancy? *SKIP TO NEXT MODULE ONLY IF YEAR OF INJECTION IS GIVEN. OTHERWISE, CONTINUE WITH TT8.*	Month ..... ☐☐ DK month ..... 98 Year ..... ☐☐☐☐ DK year 9998	 ⇨NEXT MODULE ⇩TT8
TT8. How many years ago did you receive the last anti-tetanus injection before that last pregnancy?	Years ago ..... ☐☐	

MODULE 3: MATERNAL AND NEWBORN HEALTH — MN

THIS MODULE IS TO BE ADMINISTERED TO ALL WOMEN WITH A LIVE BIRTH IN THE 2 YEARS PRECEDING DATE OF INTERVIEW. CHECK CHILD MORTALITY MODULE CM12 AND RECORD NAME OF LAST-BORN CHILD HERE _____. USE THIS CHILD'S NAME IN THE FOLLOWING QUESTIONS, WHERE INDICATED.

MN1. In the first two months after your last birth [*THE BIRTH OF NAME*], did you receive a Vitamin A dose like this? *SHOW 200,000 IU CAPSULES.*	Yes ..... 1 No ..... 2 DK 8	
MN2. Did you see anyone for antenatal care for this pregnancy? *IF YES*: Whom did you see? Anyone else? *PROBE FOR THE TYPE OF PERSON SEEN AND CIRCLE ALL ANSWERS GIVEN.*	Health professional: Doctor ..... A Nurse/midwife ..... B Auxiliary midwife ..... C Other person Trained Traditional birth attendant ..... E Untrained Traditional birth attendant ..... F Community health worker ..... G Relative/friend ..... H Other (*specify*) _____ X No one ..... Y	Y⇨MN7
MN2AA. How many months pregnant were you when you first received antenatal care for this pregnancy?	Months ..... ☐☐ Don't Know 98	
MN2BB. How many times did you receive antenatal care during this pregnancy?	Number of times ..... ☐☐ Don't Know 98	
MN3. As part of your antenatal care, were any of the following done at least once?	Yes / No	
MN3A. Were you weighed?	Weight 1 2	
MN3B. Was your blood pressure measured?	Blood pressure 1 2	
MN3C. Did you give a urine sample?	Urine sample 1 2	
MN3D. Was your blood sample taken?	Blood sample 1 2	
MN4. During any of the antenatal visits for the pregnancy, were you given any information or counseled about HIV/AIDS virus?	Yes ..... 1 No ..... 2 DK 8	
MN5. I don't want to know the results, but were you tested for HIV/AIDS as part of your antenatal care?	Yes ..... 1 No ..... 2 DK 8	2⇨MN6A 8⇨MN6A
MN5A. When was the last time you were tested?	Less than 12 months ..... 1 12-23 months ..... 2 2 years or more 3	

MN6. I don't want to know the results, but did you get the results of the test?	Yes.....1 No .....2 DK.....8	
MN6A. During this pregnancy, did you take any medicine in order to prevent you from getting malaria?	Yes.....1 No .....2 DK.....8	 2⇨MN6H 8⇨MN6H
MN6B. Which medicines did you take to prevent malaria? *CIRCLE ALL MEDICINES TAKEN. IF TYPE OF MEDICINE IS NOT DETERMINED, SHOW TYPICAL ANTI-MALARIA TO RESPONDENT.*	SP/Fansidar ..... A Chloroquine ..... B Other (*specify*)_____ X DK.....Z	
MN6C. ***CHECK MN6B*** *FOR MEDICINE TAKEN:* ☐ *SP/FANSIDAR TAKEN.⇨ CONTINUE WITH MN6CA* ☐ *SP/FANSIDAR NOT TAKEN.⇨ GO TO MN6H*		
MN6CA. How many months were you pregnant when you first took SP/Fansidar?	Up to 3 months.....1 3 – 8 months .....2 After 8 months.....3	
MN6D. How many times did you take SP/Fansidar during this pregnancy to prevent malaria?	Number of times ..... ☐☐	
MN6E. Was it taken in presence of health worker?	Yes.....1 No 2	
MN6F. Did you experience any side effects?	Yes.....1 No 2	 2⇨MN6H
MN6G. What kind of side effects did you experience?	Skin rashes ..... A Swellings of face, hands, feet, etc..... B Itching..... C Yellow colouration of urine/eyes ..... D Other (*specify)* _____ X	
MN6H. During pregnancy did you sleep in treated net?	Yes.....1 No 2	
MN7. Who assisted with the delivery of your last child (*NAME*)? Anyone else? *PROBE FOR THE TYPE OF PERSON ASSISTING AND CIRCLE ALL ANSWERS GIVEN.*	Health professional: Doctor ..... A Nurse/midwife..... B Auxiliary midwife ..... C Other person Trained Traditional birth attendant..... E Untrained Traditional birth attendant.....F Community health worker ..... G Relative/friend..... H Other (*specify*)_____ X No one..... Y	

MN8. Where did you give birth to (*NAME*)? *IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE BELOW. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE.* _____ *(NAME OF PLACE)*	Home Your home ..... 11 Other home ..... 12 Public sector Govt. hospital/polyclinic ..... 21 Govt. clinic/health centre ..... 22 Other public (*specify*) _____ 26 Private Medical Sector Private hospital ..... 31 Private clinic ..... 32 Private maternity home ..... 33 Other private (*specify*) _____ 36 Other (*specify*)_____ 96	
MN9. In your opinion when your last child (*NAME*) was born, was he/she very large, larger than average, average, smaller than average, or very small?	Very large ..... 1 Larger than average ..... 2 Average ..... 3 Smaller than average ..... 4 Very small ..... 5 DK 8	
MN10. Was (*NAME*) weighed at birth?	Yes ..... 1 No ..... 2 DK 8	2⇨MN12 8⇨MN12
MN11. How much did (*NAME*) weigh? *RECORD WEIGHT FROM HEALTH CARD, IF AVAILABLE.*	From card ..... 1 (kgs) ☐☐•☐☐ From recall ..... 2 (kgs) ☐☐•☐☐ DK 99998	
MN12. Did you ever breastfeed (*NAME*)?	Yes ..... 1 No 2	2⇨ NEXT MODULE
MN13. How long after birth did you first put (*NAME*) to the breast? *IF LESS THAN 1 HOUR, RECORD '00' HOURS.* *IF LESS THAN 24 HOURS, RECORD HOURS.* *OTHERWISE, RECORD DAYS.*	Immediately ..... 000 Hours ..... 1 ☐☐ *or* Days ..... 2 ☐☐ Don't know/remember 998	

MODULE 4: MARRIAGE/UNION		**MA**
MA1. Are you currently married or living together with a man as if married?	Yes, currently married ..... 1 Yes, living with a man ..... 2 No, not in union 3	 3⇨MA3
MA2. How old was your husband/partner on his last birthday?	Age in years ..... ☐☐ DK 98	
MA2A. Besides yourself, does your husband/partner have any other wives?	Yes ..... 1 No 2	 2⇨MA5
MA2B. How many other wives does he have?	Number ..... ☐☐ DK 98	⇨MA5 98⇨MA5
MA3. Have you ever been married or lived together with a man?	Yes, formerly married ..... 1 Yes, formerly lived with a man ..... 2 No 3	 3⇨NEXT MODULE
MA4. What is your marital status now: are you widowed, divorced or separated?	Widowed ..... 1 Divorced ..... 2 Separated 3	
MA5. Have you been married or lived with a man only once or more than once?	Only once ..... 1 More than once 2	
MA6. In what month and year did you first marry or start living with a man as if married?	Month ..... ☐☐ DK month ..... 98 Year ..... ☐☐☐☐ DK year 9998	
MA7. ***CHECK MA6:*** ☐ *BOTH MONTH AND YEAR OF MARRIAGE/UNION KNOWN?* ⇨ *GO TO NEXT MODULE* ☐ *EITHER MONTH OR YEAR OF MARRIAGE/UNION NOT KNOWN?* ⇨ *CONTINUE WITH MA8*		
MA8. How old were you when you started living with your first husband/partner?	Age in years ..... ☐☐	

MODULE 5: SECURITY OF TENURE FOR THE WOMEN		ST
ST1. Do you feel secure from eviction from this dwelling?	Yes ..... 1 No ..... 2 DK 8	1⇨NEXT MODULE 8⇨NEXT MODULE
ST1A. What is your reason for being insecure?	Husband is sole provider .....11 Marriage not registered/recognised.....12 No where to go .....13 Can't afford accommodation .....14 Not working .....15 No source of income 16 Emotional distress.....17 Other (*specify)*.....96	

MODULE 6: CONTRACEPTION		CP
CP1. I would like to talk with you about another subject – family planning – and your reproductive health. Are you pregnant now?	Yes, currently pregnant ..... 1 No ..... 2 Unsure or DK 8	1⇨ CP4B
CP2. Some people use various ways or methods to delay or avoid a pregnancy. Are you currently doing something or using any method to delay or avoid getting pregnant?	Yes ..... 1 No 2	2⇨ NEXT MODULE
CP3. Which method are you using? *DO NOT PROMPT.* *IF MORE THAN ONE METHOD IS MENTIONED, CIRCLE EACH ONE.*	Female sterilization ..... A Male sterilization ..... B Pill ..... C IUD ..... D Injections ..... E Implants ..... F Male condom ..... G Female condom ..... H Diaphragm ..... I Foam/jelly ..... J Lactational amenorrhoea method (LAM) ..... K Periodic abstinence ..... L Withdrawal ..... M Other (*specify*) _____ X	
CP4A. Now I would like to ask some questions about the future. Would you like to have (a/another) child, or would you prefer not to have any (more) children? CP4B. *IF CURRENTLY PREGNANT:* Now I would like to ask some questions about the future. After the child you are now expecting, would you like to have another child, or would you prefer not to have any (more) children?	Have (a/another) child ..... 1 No more/none ..... 2 Says she cannot get pregnant ..... 3 Undecided/don't know 8	2⇨CP4D 3⇨NEXT MODULE 8⇨CP4D
CP4C. How long would you like to wait before the birth of (a/another) child?	Months ..... 1 ☐☐ Years ..... 2 ☐☐ Soon/now ..... 993 Says she cannot get pregnant ..... 994 After marriage ..... 995 Other ..... 996 Don't know 998	994⇨NEXT MODULE
CP4D. **CHECK CP1:** ☐ *CURRENTLY PREGNANT?* ⇨ *GO TO NEXT MODULE* ☐ *NOT CURRENTLY PREGNANT OR UNSURE?* ⇨ *CONTINUE WITH CP4E*		
CP4E. Do you think you are physically able to get pregnant at this time?	Yes ..... 1 No ..... 2 DK 8	

MODULE 7: FEMALE GENITAL MUTILATION/CUTTING		FG
FG1. Have you ever heard of female circumcision?	Yes.....1 No 2	1⇨FG3
FG2. In a number of countries, there is a practice in which a girl may have part of her genitals cut. Have you ever heard about this practice?	Yes.....1 No 2	2⇨NEXT MODULE
FG3. Have you yourself ever been circumcised?	Yes.....1 No 2	2⇨FG8
FG4. Now I would like to ask you what was done to you at this time. Was any flesh removed from the genital area?	Yes.....1 No .....2 DK.....8	1⇨FG6
FG5. Was the genital area just nicked without removing any flesh?	Yes.....1 No .....2 DK.....8	
FG6. Was the genital area sewn closed (or 'sealed')?	Yes.....1 No .....2 DK.....8	
FG7. Who circumcised you?	Traditional persons Traditional 'circumciser' ..... 11 Trained TBA ..... 12 Untrained TBA ..... 13 Other traditional (*specify*)_____ 16 Health professional Doctor ..... 21 Nurse/midwife ..... 22 Other health professional (*specify*)_____ 26 DK..... 98	
FG8. *THE FOLLOWING QUESTIONS APPLY ONLY TO WOMEN WHO HAVE AT LEAST ONE LIVING DAUGHTER.* ***CHECK CM4 AND CM6****, CHILD MORTALITY MODULE: WOMAN HAS LIVING DAUGHTER?* ☐ *YES.* ⇨ *CONTINUE WITH FG9* ☐ *NO.* ⇨ *GO TO FG16*		
FG9. Have any of your daughters been circumcised? IF YES, how many?	Number of daughters circumcised: . ☐☐ No daughters circumcised 00	00⇨FG16
FG10. To which of your daughters did this happen most recently? *RECORD THE DAUGHTER'S NAME.*	Name of daughter: _____	
FG11. Now I would like to ask you what was done to (NAME) at that time. Was any flesh removed from the genital area?	Yes.....1 No .....2 DK.....8	1⇨FG13
FG12. Was the genital area just nicked without removing any flesh?	Yes.....1 No .....2 DK.....8	

FG13. Was the genital area sewn closed (or 'sealed')?	Yes.....1 No .....2 DK.....8	
FG14. How old was (*NAME*) when this occurred? *IF THE RESPONDENT DOES NOT KNOW THE AGE, PROBE TO GET AN ESTIMATE.*	Daughter's age at circumcision..... ☐☐ DK..... 98	
FG15. Who did the circumcision?	Traditional persons Traditional 'circumciser' ..... 11 Trained TBA ..... 12 Untrained TBA ..... 13 Other traditional (*specify*) _____ 16 Health professional Doctor ..... 21 Nurse/midwife ..... 22 Other health professional (*specify*) _____ 26 DK..... 98	
FG16. Do you think this practice should be continued or should it be discontinued?	Continued .....1 Discontinued .....2 Depends .....3 DK.....8	2⇨FG16B 8⇨ NEXT MODULE
FG16A. What is your reason why it should be continued?	Religious .....1 Traditional .....2 Other *(specify)* _____ 6	1⇨ NEXT MODULE 2⇨ NEXT MODULE 6⇨ NEXT MODULE
FG16B. What is your reason to discontinue?	Religious ..... A Traditional ..... B Infertility..... C Infection ..... D Difficulty in labour ..... E Other *(specify)*.....X	

MODULE 8: ATTITUDE TOWARDS DOMESTIC VIOLENCE					DV
DV1. Sometimes a husband is annoyed or angered by things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations:		Yes	No	DK	
DV1A. If she goes out with out telling him?	Goes out without telling.....	1	2	8	
DV1B. If she neglects the children?	Neglects children	1	2	8	
DV1C. If she argues with him?	Argues	1	2	8	
DV1D. If she refuses sex with him?	Refuses sex	1	2	8	
DV1E. If she burns the food?	Burns food	1	2	8	
DV1F. If she insults him?	Insults.....	1	2	8	
DV1G. If she refuses to give him food?	Refuses to give food.....	1	2	8	
DV1H. If there is another partner?	Another partner	1	2	8	
DV1H. Other (specify)	Other (specify) _____	1	2	8	

MODULE 9: SEXUAL BEHAVIOUR (WOMEN AGE 15-49)		SB
CHECK FOR THE PRESENCE OF OTHERS. BEFORE CONTINUING, ENSURE PRIVACY.		
SB1. Now I need to ask you some questions about sexual activity in order to gain a better understanding of some family life issues. The information you supply will remain strictly confidential. How old were you when you first had sexual intercourse (if ever)?	Never had intercourse..... 00 Age in years at first sex..... ☐☐ First time when started living with (first) husband/partner..... 95	00⇨NEXT MODULE
SB2. When was the last time you had sexual intercourse? *RECORD 'YEARS AGO' ONLY IF LAST INTERCOURSE WAS ONE OR MORE YEARS AGO. IF 12 MONTHS OR MORE THE ANSWER MUST BE RECORDED IN YEARS.*	Days ago ..... 1 ☐☐ Weeks ago..... 2 ☐☐ Months ago..... 3 ☐☐ Years ago ..... 4 ☐☐	4⇨NEXT MODULE
SB3. The last time you had sexual intercourse was a condom used?	Yes..... 1 No 2	2⇨SB4
SB3A. What was the main reason why you use the condom?	To prevent STD/HIV ..... 1 To prevent pregnancy..... 2 To prevent both STD/HIV and pregnancy..... 3 Did not trust partner/felt partner had other partners ..... 4 Partner requested/insisted ..... 5 Other (*specify*)_____ 6 DK..... 8	
SB4. What is your relationship to the man with whom you last had sexual intercourse? *IF MAN IS 'BOYFRIEND' OR 'FIANCÉE', ASK:* Was your boyfriend/fiancée living with you when you last had sex? *IF 'YES', CIRCLE 1 .IF 'NO', CIRCLE 2.*	Spouse / cohabiting partner..... 1 Man is boyfriend / fiancée ..... 2 Other friend..... 3 Casual acquaintance ..... 4 Commercial sex worker..... 5 Other (*specify*)_____ 6	1⇨SB6
SB5. How old is this person? *IF RESPONSE IS DK, PROBE:* About how old is this person?	Age of sexual partner..... ☐☐ DK..... 98	
SB6. Have you had sex with any other man in the last 12 months?	Yes..... 1 No 2	2⇨NEXT MODULE

SB7. The last time you had sexual intercourse with this other man, was a condom used?	Yes.....1 No 2	
SB8. What is your relationship to this man? *IF MAN IS 'BOYFRIEND' OR 'FIANCÉE', ASK:* Was your boyfriend/fiancée living with you when you last had sex? *IF 'YES', CIRCLE 1. IF 'NO', CIRCLE 2.*	Spouse / cohabiting partner.....1 Man is boyfriend / fiancée .....2 Other friend.....3 Casual acquaintance .....4 Commercial sex worker.....5 Other (*specify*)_____ 6	1⇨SB10
SB9. How old is this person? *IF RESPONSE IS DK, PROBE:* About how old is this person?	Age of sexual partner..... ☐☐ DK..... 98	
SB10. Other than these two men, have you had sex with any other man in the last 12 months?	Yes.....1 No 2	2⇨NEXT MODULE
SB11. In total, with how many different men have you had sex in the last 12 months?	No. of partners ..... ☐☐	

MODULE 10: HIV/AIDS (WOMEN AGE 15-49)		HA
HA1. Now I would like to talk with you about something else. Have you ever heard of the virus HIV or an illness called AIDS?	Yes.....1 No 2	 2⇨ END INTERVIEW
HA2. Can people protect themselves from getting infected with the AIDS virus by having one sex partner who is not infected and also has no other partners?	Yes.....1 No .....2 DK.....8	
HA3. Can people get infected with the AIDS virus because of witchcraft or other supernatural means?	Yes.....1 No .....2 DK.....8	
HA4. Can people reduce their chance(s) of getting the AIDS virus by using a condom every time they have sex?	Yes.....1 No .....2 DK.....8	
HA5. Can people get the AIDS virus from mosquito bites?	Yes.....1 No .....2 DK.....8	
HA6. Can people reduce their chance(s) of getting infected with the AIDS virus by not having sex at all?	Yes.....1 No .....2 DK.....8	
HA7. Can people get the AIDS virus by sharing food with a person who has AIDS?	Yes.....1 No .....2 DK.....8	
HA7A. Can people get the AIDS virus by getting injections with a needle that was already used by someone else?	Yes.....1 No .....2 DK.....8	
HA8. Is it possible for a healthy-looking person to have the AIDS virus?	Yes.....1 No .....2 DK.....8	
HA9. Can the AIDS virus be transmitted from a mother to a baby:	Yes No DK	
HA9A. During pregnancy?	During pregnancy 1 2 8	
HA9B. During delivery?	During delivery 1 2 8	
HA9C. By breastfeeding?	By breastfeeding 1 2 8	
HA10. If a female teacher has the AIDS virus but is not sick, should she be allowed to continue teaching in school?	Yes.....1 No .....2 DK/not sure/depends 8	
HA10A. If a male teacher has the AIDS virus but is not sick, should he be allowed to continue teaching in school?	Yes.....1 No .....2 DK/not sure/depends 8	

HA11. Would you buy fresh vegetables from a shopkeeper or vendor if you knew that this person had the AIDS virus?	Yes.....1 No .....2 DK/not sure/depends 8	
HA12. If a member of your family became infected with the AIDS virus, would you want it to remain a secret?	Yes.....1 No .....2 DK/not sure/depends 8	
HA13. If a member of your family became sick with the AIDS virus, would you be willing to care for him or her in your household?	Yes.....1 No .....2 DK/not sure/depends 8	
HA14. ***CHECK MN5**: TESTED FOR HIV DURING ANTENATAL CARE?* ☐ *YES.* ⇨ *GO TO HA18A* ☐ *NO.* ⇨ *CONTINUE WITH HA15*		
HA15. I do not want to know the results, but have you ever been tested to see if you have HIV, the virus that causes AIDS?	Yes.....1 No 2	2⇨HA18
HA15A. When was the last time you were tested?	Less than 12 months .....1 12-23 months .....2 2 years or more 3	
HA16. I do not want you to tell me the results of the test, but have you been told the results?	Yes.....1 No 2	
HA17. Did you, yourself, ask for the test, was it offered to you and you accepted, or was it required?	Asked for the test .....1 Offered and accepted .....2 Required 3	2⇨ END INTERVIEW
HA18. At this time, do you know of a place where you can go to get such a test to see if you have the AIDS virus?	Yes.....1 No 2	2⇨ END INTERVIEW
HA18A. *IF TESTED FOR HIV DURING ANTENATAL CARE:* Other than at the antenatal clinic, do you know of a place where you can go to get a test to see if you have the AIDS virus?	Yes.....1 No 2	

FOLLOW INSTRUCTIONS IN YOUR INTERVIEWER'S MANUAL.

IDENTIFICATION PANEL	**UF**
THIS QUESTIONNAIRE IS TO BE ADMINISTERED TO ALL MOTHERS OR CARETAKERS (SEE HOUSEHOLD LISTING, COLUMN HL8) WHO CARE FOR A CHILD THAT LIVES WITH THEM AND IS UNDER THE AGE OF 5 YEARS (SEE HOUSEHOLD LISTING, COLUMN HL5). ***A SEPARATE QUESTIONNAIRE SHOULD BE USED FOR EACH ELIGIBLE CHILD.*** *FILL IN THE CLUSTER AND HOUSEHOLD NUMBER, AND NAMES AND LINE NUMBERS OF THE CHILD AND THE MOTHER/CARETAKER IN THE SPACE BELOW. INSERT YOUR OWN NAME AND NUMBER, AND THE DATE.*	
UF1. CLUSTER NUMBER: ☐☐☐	UF2. HOUSEHOLD NUMBER: ☐☐
UF3. CHILD'S NAME: _____	UF4. CHILD'S LINE NUMBER: ☐☐
UF5. MOTHER'S/CARETAKER'S NAME: _____	UF6. MOTHER'S/CARETAKER'S LINE NUMBER: ☐☐
UF7. INTERVIEWER'S NAME AND NUMBER: _____ ☐☐	UF8. DAY/MONTH/YEAR OF INTERVIEW: ☐☐ ☐☐ **2 0 0 6**
UF9. RESULT OF INTERVIEW FOR CHILDREN UNDER 5 *(CODES REFER TO MOTHER/CARETAKER.)*	COMPLETED ..... 1 NOT AT HOME ..... 2 REFUSED ..... 3 PARTLY COMPLETED ..... 4 INCAPACITATED ..... 5 OTHER (specify) _____ 6

REPEAT GREETING IF NOT ALREADY READ TO THIS WOMAN:

Good ……..! My name is …… and I am here on behalf of the Ghana Statistical Service and Ministry of Health. We are working on a nationwide survey concerned with family health and education. You have been selected as one of the respondents to this survey and we would very much appreciate your participation. The interview will take about 20 minutes. All the information we obtain will remain strictly confidential and your answers will never be identified.

IF PERMISSION IS GIVEN, BEGIN THE INTERVIEW. IF THE RESPONDENT DOES NOT AGREE TO CONTINUE, THANK HIM/HER AND GO TO THE NEXT INTERVIEW. DISCUSS THIS RESULT WITH YOUR SUPERVISOR FOR A FUTURE REVISIT.

UF10. Now I would like to ask you some questions about the health of each child under the age of 5 in your care, who lives with you now. Now I want to ask you about (*NAME*). In what month and year was (*NAME*) born? *PROBE:* What is his/her birthday? *IF THE MOTHER/CARETAKER KNOWS THE EXACT BIRTH DATE, ALSO ENTER THE DAY; OTHERWISE, CIRCLE 98 FOR DAY.*	Date of birth: Day ..... ☐☐ DK day ..... 98 Month..... ☐☐ DK month ..... 98 Year ..... ☐☐☐☐ DK year 9998	
UF11. How old was (*NAME*) at his/her last birthday? *RECORD AGE IN COMPLETED YEARS.*	Age in completed years..... ☐☐	

MODULE 1: BIRTH REGISTRATION AND EARLY LEARNING		BR
BR1. Has (*NAME'S*) birth been registered with the Births and Deaths Registry?	Yes.....1 No .....2 DK.....8	 2⇨BR3
BR2. Does (*NAME*) have a birth certificate? May I see it?	Yes, seen.....1 Yes, not seen .....2 No .....3 DK.....8	1⇨BR5 2⇨BR5
BR3. Why is (*NAME*) birth not registered?	Costs too much .....1 Must travel too far.....2 Did not know it should be registered .....3 Did not want to pay fine.....4 Do not know where to register .....5 Other (*specify*)_____ 6 DK.....8	 5⇨BR5
BR4. Do you know where to register your child's birth?	Yes.....1 No 2	
BR5. ***CHECK AGE OF CHILD IN UF11:*** *CHILD IS 3 OR 4 YEARS OLD?* ☐ *YES.* ⇨ *CONTINUE WITH BR6* ☐ *NO.* ⇨ *GO TO BR8*		
BR6. Does (*NAME*) attend any organized learning or early childhood education programme, such as a private or government facility, including kindergarten or community child care?	Yes.....1 No .....2 DK.....8	 2⇨BR8 8⇨BR8
BR7. Within the last seven days, about how many hours did (*NAME*) attend?	No. of hours ..... ☐☐	
BR8. In the past 3 days, did you or any household member over 15 years of age engage in any of the following activities with (*NAME*): *IF YES, ASK:* who engaged in this activity with the child - the mother, the child's father or another adult member of the household (including the caretaker/respondent)? *CIRCLE ALL THAT APPLY.*		

		Mother	Father	Other	No one
BR8A. Read books or look at picture books with (*NAME*)?	Books	A	B	X	Y
BR8B. Tell stories to/with (*NAME*)?	Stories	A	B	X	Y
BR8C. Sing songs to/with (*NAME*)?	Songs	A	B	X	Y
BR8D. Take (*NAME*) outside the home, compound, yard or enclosure?	Take outside	A	B	X	Y
BR8E. Play with (*NAME*)?	Play with	A	B	X	Y
BR8F. Spend time with (*NAME*) naming, counting, and/or drawing things?	Spend time with	A	B	X	Y

MODULE 2: CHILDHOOD EDUCATION		CE
QUESTION CE1 IS TO BE ADMINISTERED ONLY ONCE TO EACH CARETAKER		
CE1. How many books are there in the household? Please include schoolbooks, but not other books meant for children, such as picture books *IF 'NONE' ENTER 0*	Number of non-children's books ..... 0 ☐ Ten or more non-children's books 10	
CE2. How many children's books or picture books do you have for (*NAME*)? *IF 'NONE' ENTER 0*	Number of children's books ..... 0 ☐ Ten or more books 10	
CE3. I am interested in learning about the things that (*NAME*) plays with when he/she is at home. What does (*NAME*) play with? Does he/she play with Household objects, such as bowls, plates, cups or pots? Objects and materials found outside the living quarters, such as sticks, rocks, animals, shells, or leaves? Homemade toys, such as dolls, cars and other toys made at home? Toys purchased from a store? *IF THE RESPONDENT SAYS "<u>YES</u>" TO ANY OF THE PROMPTED CATEGORIES, THEN PROBE TO LEARN SPECIFICALLY WHAT THE CHILD PLAYS WITH TO ASCERTAIN THE RESPONSE* *CODE Y IF CHILD DOES NOT PLAY WITH ANY OF THE ITEMS MENTIONED.*	Household objects (bowls, plates, cups, pots) ..... A Objects and materials found outside the living quarters (sticks, rocks, animals, shells, leaves) ..... B Homemade toys (dolls, cars and other toys made at home) C Toys purchased from a store ..... D No playthings mentioned..... Y	
CE4. Sometimes adults taking care of children have to leave the house to go shopping, wash clothes, or for other reasons and have to leave young children with others. since last (*DAY OF THE WEEK*) how many times was (*NAME*) left in the care of another child (that is, someone less than 10 years old)? *IF 'NONE' ENTER 00*	Number of times ..... ☐☐	
CE5. In the past week, how many times was (*NAME*) left alone? *IF 'NONE' ENTER 00*	Number of times ..... ☐☐	

MODULE 3: VITAMIN A – CHILDREN 6 MONTHS AND OLDER		VA
VA1. Has (*NAME*) ever received a vitamin A capsule (supplement) like this one? *SHOW CAPSULES:* *100,000 IU FOR THOSE 6-11 MONTHS OLD,* ***(BLUE)*** *200,000 IU FOR THOSE 12-59 MONTHS OLD.* ***(RED)***.	Yes.....1 No .....2 DK.....8	 2⇨NEXT MODULE 8⇨NEXT MODULE
VA2. How many months ago did (*NAME*) take the last dose?	Months ago..... ☐☐ DK.....98	
VA3. Where did (*NAME*) get this last dose?	On routine visit to health facility/CHPS .....1 Sick child visit to health facility .....2 National Immunization Day campaign .....3 Child health week .....4 Outreach clinics.....5 Other (*specify*)_____ 6 DK.....8	
VA3A. How many times did (*NAME*) receive capsule(s) in the last 12 months?	Number of times ..... ☐	

MODULE 4: BREASTFEEDING		BF
BF1. Has (*NAME*) ever been breastfed?	Yes.....1 No 2	 2⇨BF3
BF2. Is *(NAME)* still being breastfed?	Yes.....1 No .....2 DK.....8	1⇨BF3 8⇨BF3
BF2A. For how many months did you breastfed *(NAME)*?	Months ..... ☐☐ DK..... 98	
BF2B. Was (*NAME*) breastfed yesterday?	Yes.....1 No 2	
BF3. Since this time yesterday, did he/she receive any of the following: *READ EACH ITEM ALOUD AND RECORD RESPONSE BEFORE PROCEEDING TO THE NEXT ITEM*.	Y N DK	
BF3A. Vitamin, mineral supplements (Abidec, Minadex, etc)?	A. Vitamin supplements 1 2 8	
BF3B. Plain water?	B. Plain water 1 2 8	
BF3C. Sweetened, flavoured water or fruit juice or tea or infusion?	C. Sweetened water or juice..... 1 2 8	
BF3D. ORS?	D. ORS 1 2 8	
BF3E. Infant formula (e.g. SMA, Lactogen)?	E. Infant formula..... 1 2 8	
BF3F. Tinned, powdered or fresh milk?	F. Milk..... 1 2 8	
BF3G. Any other liquids (e.g. coconut water)?	G. Other liquids 1 2 8	
BF3H. Solid or semi-solid (mushy) food?	H. Solid or semi-solid food 1 2 8	
BF4. ***CHECK BF3H:*** *CHILD RECEIVED SOLID OR SEMI-SOLID (MUSHY) FOOD?* ☐ *YES.* ⇨ *CONTINUE WITH BF5* ☐ *NO OR DK.* ⇨ *GO TO NEXT MODULE*		
BF5. Since this time yesterday, how many times did (*NAME*) eat solid, semisolid, or soft foods other than liquids? *IF 7 OR MORE TIMES, RECORD '7'.*	No. of times..... ☐ Don't know..... 8	

MODULE 5: CARE OF ILLNESS		**CA**
CA1. Has (*NAME*) had diarrhoea in the last two weeks, that is, since (*DAY OF THE WEEK*) of the week before last? *DIARRHOEA IS DETERMINED AS PERCEIVED BY MOTHER OR CARETAKER, OR AS THREE OR MORE LOOSE OR WATERY STOOLS PER DAY, OR BLOOD IN STOOL.*	Yes.....1 No .....2 DK.....8	 2⇨CA5 8⇨CA5
CA2. During this last episode of diarrhoea, did (*NAME*) drink any of the following: *READ EACH ITEM ALOUD AND RECORD RESPONSE BEFORE PROCEEDING TO THE NEXT ITEM.*	Yes No DK	
CA2A. A fluid made from a special packet called (*ORS*)?	A. Fluid from ORS packet..... 1 2 8	
CA2B. Government-recommended homemade fluid (sugar-salt solution)?	B. Recommended homemade fluid .. 1 2 8	
CA3. During (*NAME'S*) illness, did he/she drink much less, about the same, or more than usual?	Much less or none .....1 About the same (or somewhat less).....2 More .....3 DK.....8	
CA4. During (*NAME'S*) illness, did he/she eat less, about the same, or more food than usual? *IF "LESS", PROBE:* much less or a little less?	None .....1 Much less .....2 Somewhat less.....3 About the same .....4 More .....5 DK.....8	
CA4A. *Check CA2A: ORS packet used?* ☐ *Yes.*⇨ *Continue with CA4B* ☐ *No.*⇨ *Go to CA5*		
CA4B. Where did you get the *(ORS PACKET FROM CA2A)?*	Public sector Govt. hospital/polyclinic ..... 11 Govt. health centre..... 12 Govt. health post..... 13 Village health worker..... 14 Mobile/outreach clinic..... 15 Other public (*specify*)..... 16 Private medical sector Private hospital/clinic..... 21 Private physician..... 22 Private pharmacy ..... 23 Mobile clinic ..... 24 Other private medical (*specify*) _____ 26 Other source Relative or friend..... 31 Shop ..... 32 Traditional practitioner ..... 33 Other (*specify*)..... 96 DK..... 98	

CA4C. How much did you pay for the *(ORS PACKET FROM CA2A)?*	Cedis ..... ☐☐☐☐☐☐ Free.....999996 DK.....999998	
CA5. Has (*NAME*) had an illness with a cough at any time in the last two weeks, that is, since (*DAY OF THE WEEK*) of the week before last?	Yes.....1 No .....2 DK.....8	 2⇨CA12 8⇨CA12
CA6. When (*NAME*) had an illness with a cough, did he/she breathe faster than usual with short, quick breaths or have difficulty breathing?	Yes.....1 No .....2 DK.....8	 2⇨CA12 8⇨CA12
CA7. Were the symptoms due to a problem in the chest or a blocked nose?	Problem in chest.....1 Blocked nose .....2 Both.....3 Other (*specify*)_____ 6 DK.....8	 2⇨CA12 6⇨CA12
CA8. Did you seek advice or treatment for the illness outside the home?	Yes.....1 No .....2 DK.....8	 2⇨CA10 8⇨CA10
CA9. From where did you seek care? Anywhere else? *CIRCLE ALL PROVIDERS MENTIONED, BUT DO NOT PROMPT WITH ANY SUGGESTIONS.* *IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE BELOW. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE.* _____ *(NAME OF PLACE)*	Public sector Govt. hospital/polyclinic ..... A Govt. health centre..... B Govt. health post..... C Village health worker..... D Mobile/outreach clinic..... E Other public (*specify*) _____ H Private medical sector Private hospital/clinic.....I Private physician.....J Private pharmacy ..... K Mobile clinic .....L Other private medical (*specify*) _____O Other source Relative or friend..... P Chemical shop ..... Q Traditional practitioner ..... R Drug peddlers ..... S Other (*specify*)_____ X	
CA10. Was (*NAME*) given medicine to treat this illness?	Yes.....1 No .....2 DK.....8	 2⇨CA12 8⇨CA12
CA11. What medicine was (*NAME*) given? *CIRCLE ALL MEDICINES GIVEN.*	Antibiotic..... A Paracetamol/Panadol/Acetaminophen ..... P Aspirin ..... Q Ibuprofen ..... R Other (*specify*)_____ X DK.....Z	

CA11A. ***CHECK CA11:*** *ANTIBIOTIC GIVEN?* ☐ *YES.*⇨ *CONTINUE WITH CA11B* ☐ *NO.*⇨ *GO TO CA12*		
CA11B. Where did you get the antibiotic?	Public sector Govt. hospital/polyclinic..... 11 Govt. health centre ..... 12 Govt. health post ..... 13 Village health worker..... 14 Mobile/outreach clinic..... 15 Other public (*specify*)_____ 16 Private medical sector Private hospital/clinic ..... 21 Private physician ..... 22 Private pharmacy ..... 23 Mobile clinic ..... 24 Other private medical (*specify*) _____ 26 Other source Relative or friend ..... 31 Chemical shop ..... 32 Traditional practitioner ..... 33 Drug peddlers..... 34 Other (*specify*) _____ 96 DK..... 98	
CA11C. How much did you pay for the antibiotic?	Cedis..... ☐☐☐☐☐☐ Free.....999996 DK.....999998	
CA12. ***CHECK UF11:*** *CHILD AGED UNDER 3?* ☐ *YES.* ⇨ *CONTINUE WITH CA13* ☐ *NO.* ⇨ *GO TO CA14*		
CA13. The last time *(NAME)* passed stools, what was done to dispose of the stools?	Child used toilet/latrine..... 11 Put/rinsed into toilet or latrine ..... 12 Put/rinsed into drain or ditch..... 13 Thrown into garbage (solid waste) ..... 14 Buried..... 15 Left in the open ..... 16 Other (*specify*)_____ 96 DK..... 98	

ASK THE FOLLOWING QUESTION (CA14) ONLY ONCE FOR EACH MOTHER/CARETAKER. CA14. Sometimes children have severe illnesses and should be taken immediately to a health facility. What types of symptoms would cause you to take your child to a health facility right away? *KEEP ASKING FOR MORE SIGNS OR SYMPTOMS UNTIL THE MOTHER/CARETAKER CANNOT RECALL ANY ADDITIONAL SYMPTOMS.* *CIRCLE ALL SYMPTOMS MENTIONED,* *BUT DO NOT PROMPT WITH ANY SUGGESTIONS.*	Child not able to drink or breastfeed..... A Child becomes sicker..... B Child develops a fever ..... C Child has fast breathing ..... D Child has difficult breathing ..... E Child has blood in stool.....F Child is drinking poorly..... G Other (*specify*)_____ X Other (*specify*)_____ Y Other (*specify*)_____ Z	

MODULE 6: MALARIA FOR UNDER-FIVES		ML
ML1. In the last two weeks, that is, since (*DAY OF THE WEEK*) of the week before last, has (*NAME*) been ill with a fever?	Yes ..... 1 No ..... 2 DK 8	 2⇨ML10 8⇨ML10
ML2. Was (*NAME*) seen at a health facility during this illness?	Yes ..... 1 No ..... 2 DK 8	 2⇨ML6 8⇨ML6
ML3. Did (*NAME*) take a medicine for fever or malaria that was provided or prescribed at the health facility?	Yes ..... 1 No ..... 2 DK 8	 2⇨ML5 8⇨ML5
ML4. What medicine did (*NAME*) take that was provided or prescribed at the health facility? *CIRCLE ALL MEDICINES MENTIONED.*	Anti-malarials: SP/Fansidar ..... A Chloroquine ..... B Amodiaquine/camoquine ..... C Quinine ..... D Artemisinin-based combinations ..... E Other anti-malarial (*specify*) _____ H Other medications: Paracetamol/Panadol/Acetaminophen ... P Aspirin ..... Q Ibuprofen ..... R Other (*specify*) _____ X DK ..... Z	
ML5. Was (*NAME*) given medicine for the fever or malaria before being taken to the health facility?	Yes ..... 1 No ..... 2 DK 8	1⇨ML7 2⇨ML8 8⇨ML8
ML6. Was (*NAME*) given medicine for fever or malaria during this illness?	Yes ..... 1 No ..... 2 DK 8	 2⇨ML8 8⇨ML8
ML7. What medicine was (*NAME*) given? *CIRCLE ALL MEDICINES GIVEN. ASK TO SEE THE MEDICATION IF TYPE IS NOT KNOWN. IF TYPE OF MEDICATION IS STILL NOT DETERMINED, SHOW TYPICAL ANTI-MALARIALS TO RESPONDENT.*	Anti-malarials: SP/Fansidar ..... A Chloroquine ..... B Amodiaquine/camoquine ..... C Quinine ..... D Artemisinin-based combinations ..... E Other anti-malarial *(specify)* _____ H Other medications: Paracetamol/Panadol/Acetaminophen ... P Aspirin ..... Q Ibuprofen ..... R Other (*specify*) _____ X DK ..... Z	
ML8. ***CHECK ML4 AND ML7:*** *ANTI-MALARIAL MENTIONED (CODES A - H)?* ☐ *YES.* ⇨ *CONTINUE WITH ML9* ☐ *NO.* ⇨ *GO TO ML10*		
ML9. How long after the fever started did	Same day 0	

(*NAME)* first take (*NAME OF ANTI-MALARIAL FROM ML4 or ML7*)? *IF MULTIPLE ANTI-MALARIALS MENTIONED IN ML4 OR ML7, NAME ALL ANTI-MALARIAL MEDICINES MENTIONED.* *RECORD THE CODE FOR THE DAY ON WHICH THE FIRST ANTI-MALARIAL WAS GIVEN.*	Next day ..... 1 2 days after the fever ..... 2 3 days after the fever ..... 3 4 or more days after the fever..... 4 DK..... 8	
ML9A. Where did you get the (*NAME OF ANTI-MALARIAL FROM ML4 or ML7*)? *IF MORE THAN ONE ANTI-MALARIAL IS MENTIONE D IN ML4 OR ML7, REFER TO THE FIRST ANTI-MALARIAL GIVEN FOR THE FEVER (THE ANTI-MALARIAL GIVEN ON THE DAY RECORDED IN ML9).*	Public sector Govt. hospital ..... 11 Govt. health centre ..... 12 Govt. health post ..... 13 Village health worker..... 14 Mobile/outreach clinic..... 15 Other public (*specify*)_____ 16 Private medical sector Private hospital/clinic ..... 21 Private physician ..... 22 Private pharmacy ..... 23 Mobile clinic ..... 24 Other private medical (*specify*) _____ 26 Other source Relative or friend ..... 31 Chemical shop ..... 32 Traditional practitioner ..... 33 Drug peddlers..... 34 Other (*specify*) _____ 96 DK..... 98	
ML9B. How much did you pay for the (*NAME OF ANTI-MALARIAL FROM ML4 or ML7*)? *REFER TO THE SAME ANTI-MALARIAL A S IN ML9A ABOVE*	Cedis..... ☐☐☐☐☐☐ Free.....999996 DK.....999998	
ML10. Did (*NAME*) sleep under a mosquito net last night?	Yes..... 1 No ..... 2 DK..... 8	2⇨NEXT MODULE 8⇨NEXT MODULE
ML11. How long ago did your household obtain the mosquito net? *IF LESS THAN 1 MONTH, RECORD '00'.* *IF ANSWER IS "12 MONTHS" OR "1 YEAR", PROBE TO DETERMINE IF NET WAS TREATED EXACTLY 12 MONTHS AGO OR EARLIER OR LATER.*	Months ago..... ☐☐ More than 24 months ago ..... 95 Not sure 98	

ML12. What brand is this net? *IF THE RESPONDENT DOES NOT KNOW THE BRAND OF THE NET, SHOW PICTORIALS, OR IF POSSIBLE, OBSERVE THE NET.* LONG LASTING TREATED NETS: *Olyset* *Permanet* PRE-TREATED NETS: *Dawa* *Dawa Plus* OTHER NETS: *MOH Treated net* *Calico net* *Second-hand net* Other *(specify)* *DK brand*	Long lasting treated net: Olyset ..... 11 Permanet ..... 12 Pre-treated net: Dawa ..... 21 Dawa Plus ..... 22 Other net: MOH Treated net ..... 31 Calico net ..... 32 Second-hand net ..... 36 Other *(specify)*..... *96* DK brand 98	11⇨NEXT MODULE 12⇨NEXT MODULE 21⇨ML14 22⇨ML14
ML13. When you got that net, was it already treated with an insecticide to kill or repel mosquitoes?	Yes.....1 No .....2 DK/not sure 8	
ML14. Since you got the mosquito net, was it ever soaked or dipped in a liquid to kill/repel mosquitoes or bugs?	Yes.....1 No .....2 DK.....8	2⇨ NEXT MODULE 8⇨ NEXT MODULE
ML15. How long ago was the net last soaked or dipped? *IF LESS THAN 1 MONTH, RECORD '00'.* *IF ANSWER IS "12 MONTHS" OR "1 YEAR", PROBE TO DETERMINE IF NET WAS TREATED EXACTLY 12 MONTHS AGO OR EARLIER OR LATER.*	Months ago..... ☐☐ More than 24 months ago ..... 95 DK..... 98	

MODULE 7: IMMUNIZATION — IM

IF AN IMMUNIZATION CARD IS AVAILABLE, COPY THE DATES IN IM2-IM8 FOR EACH TYPE OF IMMUNIZATION OR VITAMIN A DOSE RECORDED ON THE CARD. IM10-IM18 ARE FOR RECORDING VACCINATIONS THAT ARE NOT RECORDED ON THE CARD. IM10-IM18 WILL ONLY BE ASKED WHEN A CARD IS NOT AVAILABLE.

IM1. Is there a vaccination card for (*NAME*)?		Yes, seen ..... 1 Yes, not seen ..... 2 No 3	 2⇨IM10 3⇨IM10

(a) *COPY DATES FOR EACH VACCINATION FROM THE CARD.* (b) *WRITE '44' IN DAY COLUMN IF CARD SHOWS THAT VACCINATION WAS GIVEN BUT NO DATE RECORDED.*		Date of Immunization: DAY		MONTH		YEAR				
IM2. BCG	BCG									
IM3A. Polio at birth	OPV0									
IM3B. Polio 1	OPV1									
IM3C. Polio 2	OPV2									
IM3D. Polio 3	OPV3									
IM4A. DPT1	DPT1									
IM4B. DPT2	DPT2									
IM4C. DPT3	DPT3									
IM5A. HepB1Hib (or DPTHepB1Hib)	(DPT)HH1									
IM5B. HepB2Hib (or DPTHepB2Hib)	(DPT)HH2									
IM5C. HepB3Hib (or DPTHepB3Hib)	(DPT)HH3									
IM6. Measles (or MMR)	Measles									
IM7. Yellow Fever	YF									
IM8A. Vitamin A (1)	VitA1									
IM8B. Vitamin A (2)	VitA2									

IM9. In addition to the vaccinations and vitamin A capsules shown on this card, did (*NAME*) receive any other vaccinations – including vaccinations received in campaigns or immunization days? *RECORD 'YES' ONLY IF RESPONDENT MENTIONS BCG, OPV 0-3, DPT 1-3, HEPATITIS B 1-3, MEASLES, YELLOW FEVER VACCINE (S), OR VITAMIN A SUPPLEMENTS.*	Yes ..... 1 *(PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN ON IM2 TO IM8B.)* No ..... 2 DK 8	 1⇨IM19 2⇨IM19 8⇨IM19
IM10. Has (*NAME*) ever received any vaccinations to prevent him/her from getting diseases, including vaccinations received in a campaign or immunization day?	Yes ..... 1 No ..... 2 DK 8	 2⇨IM19 8⇨IM19

IM11. Has (*NAME*) ever been given a BCG vaccination against tuberculosis – that is, an injection in the arm or shoulder that caused a scar?	Yes.....1 No .....2 DK.....8	
IM12. Has (*NAME*) ever been given any "vaccination drops in the mouth" to protect him/her from getting diseases – that is, polio?	Yes.....1 No .....2 DK.....8	 2⇨IM15 8⇨IM15
IM13. How old was he/she when the first dose was given – just after birth (within two weeks) or later?	Just after birth (within two weeks).....1 Later.....2	
IM14. How many times has he/she been given these drops?	No. of times..... ☐☐	
IM15. Has (*NAME*) ever been given "DPT or [DPT]HH vaccination injections" – that is, an injection in the thigh – to prevent him/her from getting tetanus, whooping cough, diphtheria? (sometimes given at the same time as polio)	Yes.....1 No .....2 DK.....8	 2⇨IM17 8⇨IM17
IM16. How many times?	No. of times..... ☐☐	
IM17. Has (*NAME*) ever been given "Measles vaccination injections" – that is, a shot in the arm at the age of **9** months or older - to prevent him/her from getting measles?	Yes.....1 No .....2 DK.....8	
IM18. Has (*NAME*) ever been given "Yellow Fever vaccination injections" – that is, a shot in the arm at the age of **9** months or older - to prevent him/her from getting yellow fever? (sometimes given at the same time as measles)	Yes.....1 No .....2 DK.....8	
IM19. Please tell me if (*NAME*) has benefited from any of the following campaigns, national immunization in the last year and/or vitamin A or child health week:	Y N DK	
IM19A. National Immunization last year	National Immunization 1 2 8	
IM19B. Vitamin A campaign	Vitamin A..... 1 2 8	
IM19C. Child health week	Child health..... 1 2 8	

IM20. *DOES ANOTHER ELIGIBLE CHILD RESIDE IN THE HOUSEHOLD FOR WHOM THIS RESPONDENT IS MOTHER/CARETAKER?* ***CHECK HOUSEHOLD LISTING, COLUMN HL8.***

☐ *YES.* ⇨ *END THE CURRENT QUESTIONNAIRE AND THEN GO TO QUESTIONNAIRE FOR CHILDREN UNDER FIVE TO ADMINISTER THE QUESTIONNAIRE FOR THE NEXT ELIGIBLE CHILD.*

☐ *NO.* ⇨ *END THE INTERVIEW WITH THIS RESPONDENT BY THANKING HIM/HER FOR HIS/HER COOPERATION.*

IF THIS IS THE LAST ELIGIBLE CHILD IN THE HOUSEHOLD, GO ON TO ANTHROPOMETRY MODULE.

MODULE 8: ANTHROPOMETRY — AN

AFTER QUESTIONNAIRES FOR ALL CHILDREN ARE COMPLETE, THE MEASURER WEIGHS AND MEASURES EACH CHILD. RECORD WEIGHT AND LENGTH/HEIGHT BELOW, TAKING CARE TO RECORD THE MEASUREMENTS ON THE CORRECT QUESTIONNAIRE FOR EACH CHILD. CHECK THE CHILD'S NAME AND LINE NUMBER ON THE HOUSEHOLD LISTING BEFORE RECORDING MEASUREMENTS.

AN1. Child's weight.	Kilograms (kg) ..... ☐☐.☐	
AN2. Child's length or height. ***CHECK AGE OF CHILD IN UF11:*** ☐ *CHILD UNDER 2 YEARS OLD.* ⇨ *MEASURE LENGTH (LYING DOWN).* ☐ *CHILD AGE 2 OR MORE YEARS.* ⇨ *MEASURE HEIGHT (STANDING UP).*	Length (cm) Lying down .....1 ☐☐☐.☐ Height (cm) Standing up ..... 2 ☐☐☐.☐	
AN3. Measurer's identification code.	Measurer code ..... ☐☐	
AN4. Result of measurement.	Measured..... 1 Not present ..... 2 Refused..... 3 ☐ Other (*specify*)_____ 6	

AN5. *IS THERE ANOTHER CHILD IN THE HOUSEHOLD WHO IS ELIGIBLE FOR MEASUREMENT?*

☐ *YES.* ⇨ *RECORD MEASUREMENTS FOR NEXT CHILD.*

☐ *NO.* ⇨ *END THE INTERVIEW WITH THIS HOUSEHOLD BY THANKING ALL PARTICIPANTS FOR THEIR COOPERATION.*

GATHER TOGETHER ALL QUESTIONNAIRES FOR THIS HOUSEHOLD AND CHECK THAT ALL IDENTIFICATION NUMBERS ARE INSERTED ON EACH PAGE. TALLY ON THE HOUSEHOLD INFORMATION PANEL THE NUMBER OF INTERVIEWS COMPLETED.

IDENTIFICATION PANEL	**MM**
THIS MODULE IS TO BE ADMINISTERED TO ALL MEN AGE 15 THROUGH 49 (SEE COLUMN HL7 OF HH LISTING). ***FILL IN ONE FORM FOR EACH ELIGIBLE MAN*** *FILL IN THE CLUSTER AND HOUSEHOLD NUMBER, AND THE NAME AND LINE NUMBER OF THE MANIN THE SPACE BELOW. FILL IN YOUR NAME, NUMBER AND THE DATE.*	
MM1. CLUSTER NUMBER: ☐☐☐	MM2. HOUSEHOLD NUMBER: ☐☐
MM3. MAN'S NAME: _____	MM4. MAN'S LINE NUMBER: ☐☐
MM5. INTERVIEWER NAME AND NUMBER: _____ ☐☐	MM6. DAY/MONTH/YEAR OF INTERVIEW: ☐☐ ☐☐ **2 0 0 6**
MM7. RESULT OF MEN'S INTERVIEW	COMPLETED.....1 NOT AT HOME.....2 REFUSED.....3 PARTLY COMPLETED.....4 INCAPACITATED .....5 OTHER (*specify*) _____ 6

REPEAT GREETING IF NOT ALREADY READ TO THIS MAN:

Good ……..! My name is …… and I am here on behalf of the Ghana Statistical Service and Ministry of Health. We are working on a nationwide survey concerned with family health and education. You have been selected as one of the respondents to this survey and we would very much appreciate your participation. The interview will take about 15 minutes. All the information we obtain will remain strictly confidential and your answers will never be identified.

IF PERMISSION IS GIVEN, BEGIN THE INTERVIEW. IF THE MAN DOES NOT AGREE TO CONTINUE, THANK HIM, COMPLETE MM7, AND GO TO THE NEXT INTERVIEW. DISCUSS THIS RESULT WITH YOUR SUPERVISOR FOR A FUTURE REVISIT.

MM8. In what month and year were you born?	DATE OF BIRTH: Month..... ☐☐ DK month.....98 Year ..... ☐☐☐☐ DK year..... 9998	
MM9. How old were you at your last birthday?	AGE (IN COMPLETED YEARS)..... ☐☐	
MM10. Have you ever attended school?	Yes.....1 No 2	 2⇨MM14

MM11. What is the highest level of school you attended: primary, secondary, or higher?	Primary ..... 10 Middle/JSS..... 20 Secondary/SSS..... 30 Voc/Comm/Tech..... 40 Post Sec ..... 50 Tertiary ..... 60 Other (*specify)*..... 96 DK..... 98	
MM12. What is the highest grade you completed at that level?	Grade ..... ☐☐	
MM13. ***CHECK MM11:*** ☐ *SECONDARY/VOC./TECH./COMM. OR HIGHER.* ⇨ *GO TO MM15* ☐ *PRIMARY/MIDDLE OR JSS.* ⇨ *CONTINUE WITH MM14*		
MM14. Now I would like you to read this sentence to me. *SHOW SENTENCES TO RESPONDENT.* *IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE:* Can you read part of the sentence to me? *EXAMPLE SENTENCES FOR LITERACY TEST:* *1. The child is reading a book.* *2. The rains came late this year.* *3. Parents must care for their children.* *4. Farming is hard work.*	Cannot read at all ..... 1 Able to read only parts of sentence..... 2 Able to read whole sentence ..... 3 No sentence in required language _____ 4 *(specify language)* Blind/mute, visually/speech impaired 5	
MM14A Have you ever participated in a literacy programme or any other programme that involves learning to read or write (non-formal education)?	Yes..... 1 No 2	
MM15. What is your religion?	Catholic ..... 11 Protestant ..... 12 Pentecostal/Charismatic ..... 13 Deeper Life ..... 14 Jehovah Witness ..... 15 SDA..... 16 Moslem..... 21 Traditional ..... 31 Spiritualist ..... 32 No Religion ..... 41 Other (*specify*) _____ 96	
MM16. To which ethnic group do you belong?	Akan..... 11 Ga/Dangme ..... 12 Ewe..... 13 Guan ..... 14 Gruma ..... 15 Mole Dagbani ..... 21 Grusi ..... 22 Mande ..... 23 Other ethnic group (*specify*) _____ 96	

MODULE 1: REPRODUCTION — RM

THIS MODULE IS TO BE ADMINISTERED TO ALL MEN AGE 15-49.
ALL QUESTIONS REFER ONLY TO LIVE BIRTHS.

RM1. Now I would like to ask about any children you have had. I am interested only in the children that are biologically yours. Have you ever fathered any children with any woman?	Yes.....1 No 2	2⇨NEXT MODULE
RM2A. When was your first child born? I mean the very first time you have a child, even if the child is no longer living, or whose mother is a woman other than your current partner?	Date of first birth: Month..... ☐☐ DK month .....98 Year ..... ☐☐☐☐ DK year 9998	
RM2B. How many years ago was your first child born?	Years ago ..... ☐☐	
RM3. Do you have any sons or daughters that you have fathered who are now living with you?	Yes.....1 No 2	2⇨RM5
RM4. How many sons live with you? How many daughters live with you? IF NONE, WRITE '00'.	Sons at home ..... ☐☐ Daughters at home ..... ☐☐	
RM5. Do you have any sons or daughters you have fathered who are alive but do not live with you?	Yes.....1 No 2	2⇨RM7
RM6. How many sons are alive but do not live with you? How many daughters are alive but do not live with you? IF NONE, WRITE '00'.	Sons elsewhere..... ☐☐ Daughters elsewhere ..... ☐☐	
RM7. Have you ever fathered a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	Yes.....1 No 2	2⇨RM9
RM8. How many boys have died? How many girls have died?	Boys dead..... ☐☐ Girls dead ..... ☐☐	
RM9. *SUM ANSWERS TO RM4, RM6, AND RM8.*	Sum..... ☐☐	
RM10. Just to make sure that I have this right, you have fathered (*TOTAL NUMBER*) of children during your life. Is this correct? ☐ *Yes.* ⇨ *GO TO RM11* ☐ *No.* ⇨ *CHECK RESPONSES AND MAKE CORRECTIONS BEFORE PROCEEDING TO RM11*		

RM11. **CHECK RM9** ☐ *HAS NOT HAD ANY CHILDREN ⇨ GO TO NEXT MODULE* ☐ *HAS HAD ONLY ONE CHILD ⇨ GO TO NEXT MODULE* ☐ *HAS HAD MORE THAN ONE CHILD ⇨ GO TO RM12*		
RM12. Do the children that you have fathered all have the same biological mother?	Yes.....1 No 2	1⇨NEXT MODULE
RM13. In all how many women have you fathered children with?	Number of women ..... ☐☐	

MODULE 2: MARRIAGE/UNION		MA
MA1. Are you currently married or living together with a woman?	Yes, currently married ..... 1 Yes, living with a woman ..... 2 No, not in union 3	 2⇨MA4 3⇨MA6
MA2. Do you have one wife or more than one wife? IF ONLY ONE WIFE, ENTER '01' IF MORE THAN ONE, ASK: How many wives do you currently have?	Number..... ☐☐	
MA3. Are there any other women with whom you live as if married?	Yes..... 1 No 2	 2⇨MA5
MA4. Are you living with one (*OTHER*) woman or more than one (*OTHER*) woman as if married? IF ONE LIVE-IN PARTNER, ENTER '01'. IF MORE THAN ONE, ASK: How many women are you living with as if you were married?	Number of live-in partners ..... ☐☐	
MA5. Apart from the woman/women you have already mentioned, do you currently have any other regular or occasional sexual partners?	Regular partner(s) only ..... 1 Occasional partner(s) only ..... 2 Regular and occasional partner ..... 3 No other partner 4	- + ¦ ⇨MA9 ¦ - +
MA6. Do you currently have regular, occasional, or no sexual partners?	Regular partner(s) only ..... 1 Occasional partner(s) only ..... 2 Regular and occasional partner ..... 3 No sexual partner 4	
MA7. Have you ever been married or lived with a woman?	Yes, used to be married..... 1 Yes, lived with a woman..... 2 Yes, both ..... 3 No 4	 2⇨NEXT MODULE 4⇨NEXT MODULE
MA8. What is your marital status now: are you widowed, divorced, or separated?	Widowed..... 1 Divorced ..... 2 Separated..... 3	- + ¦ ⇨NEXT - + MODULE
WRITE THE LINE NUMBERS FROM THE HOUSEHOLD QUESTIONNAIRE FOR EACH WIFE/PARTNER REPORTED IN MA 2 AND MA4 ONLY. IF A WIFE/PARTNER IS NOT LISTED IN THE HOUSEHOLD SCHEDULE, ENTER '00' IN THE LINE NUMBER BOXES. THE NUMBER OF LINES FILLED IN MUST BE EQUAL TO THE NUMBER OF WIVES AND PARTNERS. (IF RESPONDENT HAS MORE THAN FIVEWIVES/PARTNERS USE ADDITIONAL QUESTIONNAIRE(S).		
MA9 **CHECK MA2 AND MA4** IF SUM OF MA2 AND MA4 = 01, ASK: Please tell me the name of your wife/partner.	IF SUM OF MA2 AND Ma4 > 01, ASK: Please tell me the name of each wife/partner that you live with as if married, starting with the one you lived with first.	 WIFE= 1 PARTNER = 2
NAME 1_____ 2_____ 3_____ 4_____	LINE NUMBER IN HH. QUEST ☐☐ ☐☐ ☐☐ ☐☐	 ☐ ☐ ☐ ☐


5

MODULE 3: SEXUAL BEHAVIOUR		SB
CHECK FOR THE PRESENCE OF OTHERS. BEFORE CONTINUING, ENSURE PRIVACY.		
SB1. Now I need to ask you some questions about sexual activity in order to gain a better understanding of some family life issues. The information you supply will remain strictly confidential. How old were you when you first had sexual intercourse (if ever)?	Never had intercourse..... 00 Age in years at first sex..... ☐☐ First time when started living with (first) wife/partner 95	00⇨NEXT MODULE
SB2. When was the last time you had sexual intercourse? *RECORD 'YEARS AGO' ONLY IF LAST INTERCOURSE WAS ONE OR MORE YEARS AGO. IF 12 MONTHS OR MORE THE ANSWER MUST BE RECORDED IN YEARS.*	Days ago ..... 1 ☐☐ Weeks ago..... 2 ☐☐ Months ago..... 3 ☐☐ Years ago ..... 4 ☐☐	4⇨NEXT MODULE
SB3. The last time you had sexual intercourse was a condom used?	Yes..... 1 No 2	2⇨SB4
SB3A. What was the main reason why you used the condom?	To prevent STD/HIV ..... 1 To prevent pregnancy ..... 2 To prevent both STD/HIV and pregnancy..... 3 Did not trust partner/felt partner had other partners ..... 4 Partner requested/insisted ..... 5 Other (*specify*)_____ 6 DK..... 8	
SB4. What is your relationship to the woman with whom you last had sexual intercourse? *IF WOMAN IS 'GIRLFRIEND' OR 'FIANCÉE', ASK:* Was your girlfriend/fiancée living with you when you last had sex? *IF 'YES', CIRCLE 1. IF 'NO', CIRCLE 2.*	Spouse / cohabiting partner..... 1 Woman is girlfriend / fiancée ..... 2 Other friend..... 3 Casual acquaintance ..... 4 Commercial sex worker..... 5 Other (*specify*)_____ 6	1⇨SB6
SB5. How old is this person? *IF RESPONSE IS DK, PROBE:* About how old is this person?	Age of sexual partner..... ☐☐ DK..... 98	
SB6. Have you had sex with any other woman in the last 12 months?	Yes..... 1 No 2	2⇨NEXT MODULE
SB7. The last time you had sexual intercourse with this other woman, was a condom used?	Yes..... 1 No 2	2⇨SB8

SB7A. What was the main reason why you use the condom?	To prevent STD/HIV .....1 To prevent pregnancy .....2 To prevent both STD/HIV and pregnancy .....3 Did not trust partner/felt partner had other partners .....4 Partner requested/insisted .....5 Other (*specify*)_____ 6 DK 8	
SB8. What is your relationship to this woman? *IF WOMAN IS 'GIRLFRIEND' OR 'FIANCÉE', ASK:* Was your girlfriend/fiancé living with you when you last had sex? *IF 'YES', CIRCLE 1. IF 'NO', CIRCLE 2.*	Spouse / cohabiting partner .....1 Woman is girlfriend / fiancée .....2 Other friend .....3 Casual acquaintance .....4 Commercial sex worker .....5 Other (*specify*)_____ 6	1⇨SB10
SB9. How old is this person? *IF RESPONSE IS DK, PROBE:* About how old is this person?	Age of sexual partner..... ☐☐ DK 98	
SB10. Other than these two women, have you had sex with any other woman in the last 12 months?	Yes .....1 No 2	2⇨NEXT MODULE
SB11. In total, with how many different women have you had sex in the last 12 months?	No. of partners ..... ☐☐	
SB11A. Was a condom used every time you had sexual intercourse in the last 12 months?	Yes .....1 No 2	
SB11B. Do you think that (*ANY OF*) your sexual partner(s) has (have) other sexual partners?	Yes .....1 No .....2 DK 8	
SB12. Have you ever had sex with a commercial sex worker?	Yes .....1 No 2	2⇨NEXT MODULE
SB 13. How long ago was the last time you had sex with a commercial sex worker?	Days ago .....1 ☐☐ Weeks ago .....2 ☐☐ Months ago .....3 ☐☐ Years ago .....4 ☐☐	4⇨NEXT MODULE
SB14. The last time that you paid for sex, was a condom used?	Yes .....1 No 2	

MODULE 4: HIV/AIDS

HA1. Now I would like to talk with you about something else. Have you ever heard of the virus HIV or an illness called AIDS?	Yes ..... 1 No 2	2⇨ NEXT MODULE
HA2. Can people protect themselves from getting infected with the AIDS virus by having one sex partner who is not infected and also has no other partners?	Yes ..... 1 No ..... 2 DK 8	
HA3. Can people get infected with the AIDS virus because of witchcraft or other supernatural means?	Yes ..... 1 No ..... 2 DK 8	
HA4. Can people reduce their chance of getting the AIDS virus by using a condom every time they have sex?	Yes ..... 1 No ..... 2 DK 8	
HA5. Can people get the AIDS virus from mosquito bites?	Yes ..... 1 No ..... 2 DK 8	
HA6. Can people reduce their chance of getting infected with the AIDS virus by not having sex at all?	Yes ..... 1 No ..... 2 DK 8	
HA7. Can people get the AIDS virus by sharing food with a person who has AIDS?	Yes ..... 1 No ..... 2 DK 8	
HA7A. Can people get the AIDS virus by getting injections with a needle that was already used by someone else?	Yes ..... 1 No ..... 2 DK 8	
HA8. Is it possible for a healthy-looking person to have the AIDS virus?	Yes ..... 1 No ..... 2 DK 8	
HA9. Can the AIDS virus be transmitted from a mother to a baby?	Yes No DK	
HA9A. During pregnancy?	During pregnancy 1 2 8	
HA9B. During delivery?	During delivery 1 2 8	
HA9C. By breastfeeding?	By breastfeeding 1 2 8	
HA10. If a female teacher has the AIDS virus but is not sick, should she be allowed to continue teaching in school?	Yes ..... 1 No ..... 2 DK/not sure/depends 8	
HA10A. If a male teacher has the AIDS virus but is not sick, should he be allowed to continue teaching in school?	Yes ..... 1 No ..... 2 DK/not sure/depends 8	
HA11. Would you buy fresh vegetables from a shopkeeper or vendor if you knew that this person had the AIDS virus?	Yes ..... 1 No ..... 2 DK/not sure/depends 8	
HA12. If a member of your family became infected with the AIDS virus, would you want it to remain a secret?	Yes ..... 1 No ..... 2 DK/not sure/depends 8	
HA13. If a member of your family became sick with the AIDS virus, would you be willing to care for him or her in your household?	Yes ..... 1 No ..... 2 DK/not sure/depends 8	

HA14. I do not want to know the results, but have you ever been tested to see if you have HIV, the virus that causes AIDS?	Yes.....1 No 2	 2⇨HA18

HA14A. When was the last time you were tested?	Less than 12 months ..... 1 12-23 months ..... 2 2 years or more 3	
HA15. I do not want you to tell me the results of the test, but have you been told the results?	Yes ..... 1 No 2	
HA16. Did you, yourself, ask for the test, was it offered and you accepted, or was it required?	Asked for the test ..... 1 Offered and accepted ..... 2 Required 3	
HA17. Where did you go for the test? *IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE.* _____ (Name of place)	Public sector Govt. hospital/polyclinic ..... 11 Govt. health centre ..... 12 Govt. health post ..... 13 Village health worker ..... 14 Mobile/outreach clinic ..... 15 Other public (*specify*) ..... 16 Private medical sector Private hospital/clinic ..... 21 Private physician ..... 22 Private pharmacy ..... 23 Mobile clinic ..... 24 Other private medical (*specify*) _____ 26 Other source Relative or friend ..... 31 Shop ..... 32 Traditional practitioner ..... 33 Other (*specify*) ..... 96 DK 98	
HA18. At this time, do you know of a place where you can go to get such a test to see if you have the AIDS virus?	Yes ..... 1 No 2	

MODULE 5: SEXUALLY TRANSMITTED INFECTIONS

ST1. CHECK HA1: (Apart from AIDS), have you heard about other infections that can be transmitted through sexual contact?	Yes ..... 1 No 2	 2⇨ ST4
ST2. If a man has a sexually transmitted disease, what signs or symptoms might he have? Any others? *RECORD ALL SYMPTOMS MENTIONED.*	Abdominal pain ..... A Genital discharge/dripping ..... B Foul smelling discharge ..... C Burning pain on urination ..... D Redness/inflammation in genital area ..... E Swelling in genital area ..... F Genital sores/ulcers ..... G Genital warts ..... H Genital itching ..... I Blood in urine ..... J Loss of weight ..... K Impotence ..... L Other (specify) _____ W Other (specify) _____ X No symptoms ..... Y Don't know ..... Z	
ST3. If a woman has a sexually transmitted disease, what signs or symptoms might she have? Any others? *RECORD ALL SYMPTOMS MENTIONED.*	Abdominal pain ..... A Genital discharge/dripping ..... B Foul smelling discharge ..... C Burning pain on urination ..... D Redness/inflammation in genital area ..... E Swelling in genital area ..... F Genital sores/ulcers ..... G Genital warts ..... H Genital itching ..... I Blood in urine ..... J Loss of weight ..... K Hard to get pregnant/have a child ..... L Other (specify) _____ W Other (specify) _____ X No symptoms ..... Y Don't know ..... Z	

ST4. ***CHECK SB1:*** *EVER HAD SEX?* ☐ *YES.* ⇨ *GO TO ST5.* ☐ NO ⇨ GO TO NEXT MODULE		
ST5. ***CHECK ST1:*** *HAS HEARD ABOUT INFECTION TRANSMITTED THROUGH SEXUAL CONTACT?* ☐ *YES.* ⇨ *GO TO ST6.* ☐ *NO.* ⇨ *GO TO ST7.*		
CHECK FOR THE PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		
ST6. Now I would like to ask you some questions about your health in the last 12 months. During the last 12 months, have you had a disease which you got through sexual contact?	Yes ..... 1 No ..... 2 Don't know 8	
ST7. Sometimes, men experience an abnormal discharge from their penis. During the last 12 months, have you had an abnormal discharge from your penis?	Yes ..... 1 No ..... 2 Don't know 8	
ST8. Sometimes men have a sore or ulcer on or near their penis. During the last 12 months, have you had a sore or ulcer on or near your penis?	Yes ..... 1 No ..... 2 Don't know 8	
ST9. ***CHECK ST8:*** *HAS HAD AN INFECTION OR A SYMPTOM OF SEXUALLY TRANSMITTED DISEASE??* ☐ *YES.* ⇨ *GO TO ST10.* ☐ NO. ⇨ GO TO NEXT MODULE		
ST10. The last time you had (problem(s) from (ST6/ST7/ST8), did you seek any kind of advice or treatment?	Yes ..... 1 No 2	2⇨ NEXT MODULE
ST11. Where did you go? Any other place? *RECORD ALL SOURCES MENTIONED.* *PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S).*	Public sector Govt. hospital/polyclinic ..... A Govt. health centre ..... B Govt. health post ..... C Village health worker ..... D Mobile/outreach clinic ..... E Other public (*specify*) _____ H Private medical sector Private hospital/clinic ..... Private physician ..... J Private pharmacy ..... K Mobile clinic ..... L Other private medical (*specify*) _____ O Other source Relative or friend ..... P Chemical shop ..... Q Traditional practitioner ..... R	

	Drug peddlers ..... S Other (*specify*) _____ X	

MODULE 6: ATTITUDES TOWARD DOMESTIC VIOLENCE

DV1. Sometimes a husband is annoyed or angered by things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations:		Yes	No	D
DV1A. If she goes out without telling him?	Goes out without telling.....	1	2	
DV1B. If she neglects the children?	Neglects children	1	2	
DV1C. If she argues with him?	Argues	1	2	
DV1D. If she refuses sex with him?	Refuses sex	1	2	
DV1E. If she burns the food?	Burns food	1	2	
DV1F. If she insults him?	Insults	1	2	
DV1G. If she refuses to give him food?	Refuses to give food.....	1	2	
DV1H. If there is another partner?	Another partner	1	2	
DV1I. Other *(specify)*	Other *(specify)* _____	1	2	