

# Kenya

## Eastern Province

### Meru North District

Monitoring the situation of children and women

## Multiple Indicator Cluster Survey 2008



Kenya National  
Bureau of Statistics



United Nations  
Children's Fund



# Meru North District



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The Meru North District Multiple Indicator Cluster Survey (MICS) of Kenya was carried by the Kenya National Bureau of Statistics (KNBS). Financial and technical support was provided by the United Nations Children's Fund (UNICEF).

The survey was conducted as part of the third round of MICS surveys (MICS3), carried out around the world in more than 50 countries in 2005-2006, following the first two rounds of MICS surveys that were conducted in 1995 and the year 2000. Survey tools are based on the models and standards developed by the global MICS project, designed to collect information on the situation of children and women in countries around the world. Additional information on the global MICS project may be obtained from [www.childinfo.org](http://www.childinfo.org).

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## List of Abbreviations

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<b>AIDS</b>	Acquired Immune Deficiency Syndrome
<b>BCG</b>	Bacillus Calmette Guérin (Tuberculosis)
<b>CSPro</b>	Census and Survey Processing System
<b>DPT</b>	Diphtheria Pertussis Tetanus
<b>DSO</b>	District Statistical Officer
<b>EPI</b>	Expanded Programme on Immunization
<b>ERS</b>	Economic Recovery Strategy
<b>FGM/C</b>	Female Genital Mutilation/Cutting
<b>GoK</b>	Government of Kenya
<b>GPI</b>	Gender Parity Index
<b>HIV</b>	Human Immunodeficiency Virus
<b>IDD</b>	Iodine Deficiency Disorders
<b>IPT</b>	Intermittent Preventive treatment
<b>ITN</b>	Insecticide Treated Net
<b>IUD</b>	Intrauterine Device
<b>KESSP</b>	Kenya Education Sector Support Programme
<b>KNBS</b>	Kenya National Bureau of Statistics
<b>LAM</b>	Lactational Amenorrhea Method
<b>MDGs</b>	Millennium Development Goals
<b>MICS</b>	Multiple Indicator Cluster Survey
<b>MOH</b>	Ministry of Health
<b>NAR</b>	Net Attendance Rate
<b>NPA</b>	National Programme of Action
<b>ORT</b>	Oral Rehydration Treatment
<b>PPM</b>	Parts Per Million
<b>PRS</b>	Poverty Reduction Strategy
<b>SPSS</b>	Statistical Package for Social Sciences
<b>UNDP</b>	United Nations Development Programme
<b>UNFPA</b>	United Nations Population Fund
<b>UNGASS</b>	United Nations General Assembly Special Session on HIV/AIDS
<b>UNAIDS</b>	United Nations Programme on HIV/AIDS
<b>UNICEF</b>	United Nations Children's Fund
<b>U5MR</b>	Under 5 Mortality Rate
<b>WFFC</b>	World Fit for Children
<b>WHO</b>	World Health Organization
<b>WSC</b>	World Summit of Children

## Foreword

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The 2008 Meru North district Multiple Indicator Cluster Survey (MICS) is one of the largest district representative sample survey conducted in the district. The survey covered 1,154 households selected using appropriate statistical procedures.

The objective of the district level MICS is to provide estimates relating to the well being of children and women at the district level, in order to enable policymakers, planners, researchers and program managers to take actions based on credible evidence. For the 2008 MICS, information on specific areas such as reproductive health, child mortality, child health, nutrition, child protection, water and sanitation, education, HIV/AIDS and orphans were collected.

The results indicate that the infant and child mortality rates in Meru North district are not very high, and the district also has a high proportion of under-weight children. It is also worth noting that the proportion of children 0-5 months exclusively breastfed is one of the lowest in the country.

I wish to acknowledge the efforts of various organizations and individuals who contributed immensely towards the success of the survey. First, I would like to acknowledge the technical and financial assistance from the United Nations Children's Fund (UNICEF). I acknowledge the hard work and dedication of the staff of the Kenya National Bureau of Statistics (KNBS) and the staff of UNICEF for successfully completing the survey and making results available.

Finally, I am grateful to the respondents who generously gave their time to provide the information and allowing the survey teams to measure the weights and heights of children below 5 years of age, that form the basis of this report.



Anthony K.M. Kilele, MBS  
**Director General**  
**Kenya National Bureau of Statistics**

## Executive Summary

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The Meru North district Multiple Indicator Cluster Survey (MICS) is a representative sample survey drawn using the 1999 Census of Kenya Enumeration Areas (EAs) as the sampling frame. The 50 enumeration areas were sampled using the probability proportional to size (PPS) sampling methodology, and information from a total of 1,154 households were collected using structured questionnaires. The Meru North district MICS is the largest household sample survey ever conducted in the district.

The survey used a two stage design and at the EA level households were stratified into two, one households with a child below 3 years and the other with no children below 3 years at the time of household listing<sup>1</sup>. The stratification at EA level was done to reduce the standard errors of children and women based estimates. The data was collected by two teams comprising of 5 members each, 1 supervisor, 1 editor/measurer and 3 investigators.

The survey was implemented by the Kenya National Bureau of Statistics (KNBS), with the support from UNICEF Kenya. The summary of findings from the survey are presented below.

### Child Mortality

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The under-five mortality rate and the infant mortality rate were calculated using the birth history data during the 10 year period preceding the survey. The under-five mortality rate is 35 per 1,000 live births and infant mortality rate is 28 per 1,000 live births.

### Nutritional Status and Breastfeeding

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About one in every five children (21 per cent) aged 6-59 months in Meru North are severely or moderately underweight. The proportion of stunted children was high at 31 per cent.

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<sup>1</sup> The household listing was carried out by three teams, each team comprised of a lister and mapper.

The number of children reported to have been timely breastfed (given breast milk within an hour of birth) was substantially high at 80 per cent while only 19 per cent of children aged 0-5 months were exclusively breastfed.

The proportion of children weighed at the time of birth was 60 per cent.

Ninety four per cent of the households were using iodized salt for cooking.

### Immunization

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Only 53 per cent of children aged 12-23 months received full vaccination (BCG, 3 doses of Polio, 3 doses of DPT+HepB+Hib and measles) before reaching age 12 months. BCG is reportedly given to 95 per cent of children age 12-23 months and the measles is received by only 71 per cent, this shows a very high dropout rate. Sixty seven per cent of mothers who gave birth during the two years preceding the survey received tetanus toxoid (TT) injection.

### Care of illness

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Only 31 per cent of children with diarrhoea during the 2 weeks preceding the survey received oral re-hydration therapy and 17 per cent reported home management of diarrhoea. About six out of eleven children who had suspected pneumonia reportedly sought treatment and 48 per cent were given antibiotic treatment.

### Malaria prevention

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In Meru North, 54 per cent of the households have at least one insecticide treated mosquito net, and 47 per cent of children below 5 years sleep under a treated net. Fifty six per cent of children under five with fever during the two weeks preceding the survey were given anti-malarial treatment. Only 45 per cent of women who gave birth during the two years preceding the survey reported intermittent preventive treatment for malaria.

## Water and sanitation

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Sixty four per cent of the Meru North population is using drinking water from an improved source and 44 per cent reported treating the drinking water. Only 53 per cent of the population is using improved sanitation facilities and in 87 per cent of cases, child stool is disposed safely.

## Reproductive health

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The total fertility rate in Meru North for the 3-year period preceding the survey was 4.6 children per woman. Teenage pregnancy is 20 per cent, i.e., proportion of women age 15-19 years who began child bearing. Ninety one per cent of mothers who gave birth in the past 2 years had an antenatal check-up and 61 per cent of deliveries happened in an institution. Forty per cent of women aged 20-49 years are married before reaching age 18 years, and 11 per cent of women age 15-19 years are currently married or in union.

## Education

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In Meru North, only 56 per cent of the primary school entry age children are attending primary school. The net primary school attendance rate is 88 per cent and that of secondary is only 15 per cent. Female adult literacy rate in Meru North is 71 per cent.

## Child protection

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Registration of births for children below five years in Meru North district is relatively high at 76 per cent. Child labour was reported by nine per cent of children aged 5-14 years in the district. A very high proportion (82 per cent)

of children aged between 2-14 years received some psychological or physical punishment during one month prior to the survey.

## HIV and AIDS

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Only 97 per cent of young women aged between 15-24 years in Meru North district have comprehensive knowledge about HIV prevention. About one in three (36 per cent) women have knowledge about mother-to-child transmission of HIV. A high percentage (92 per cent) of women aged 15-49 years reported that they had been tested for HIV. Eighty two per cent of women who delivered a child in the last 2 years received counselling on prevention of mother-to-child transmission of HIV and 85 per cent had the HIV test done.

## Orphans and vulnerable children

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One in eleven children below 18 years (nine per cent) in Meru North is an orphan and 1 in 13 is a vulnerable child. Slightly more than nine per cent of children under 18 years do not live with any biological parent.

## Female genital mutilation/cutting (FGM/C) and domestic violence

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About 93 per cent of women aged between 15-49 years in Meru North have heard about FGM/C, while 62 per cent had some form of FGM/C. Sixty nine per cent of women in Meru North believe that a husband can beat their wife if she goes out without telling him or she neglects children or she argues with him or she refuses to have sex with him or she burns the food.

# Summary Table of Findings

## Multiple Indicator Cluster Surveys (MICS) and Millennium Development Goals (MDG) Indicators, Meru North, Eastern Province Kenya, 2008

Topic	MICS Indicator Number	MDG Indicator Number	Indicator	Value & Unit	
CHILD MORTALITY					
Child mortality	1	13	Under-five mortality rate	35	per thousand
	2	14	Infant mortality rate	28	per thousand
NUTRITION					
Nutritional status			Underweight prevalence (below -2 SD)	21.3	per cent
			Stunting prevalence (below -2 SD)	30.8	per cent
			Wasting prevalence (below -2 SD)	3.2	per cent
Breastfeeding	45		Timely initiation of breastfeeding	80.2	per cent
	15		Exclusive breastfeeding rate	18.6	per cent
	16		Continued breastfeeding rate at 12-15 months	96.2	per cent
			at 20-23 months	66.3	per cent
	17		Timely complementary feeding rate	98.4	per cent
	18		Frequency of complementary feeding	89.7	per cent
	19		Adequately fed infants	53.4	per cent
Salt iodization	41		Iodized salt consumption	94.3	per cent
Vitamin A	42		Vitamin A supplementation (under-fives)	24.8	per cent
	43		Vitamin A supplementation (post-partum mothers)	37.1	per cent
Low birth weight	9		Low birth weight infants	7.7	per cent
	10		Infants weighed at birth	60.1	per cent
CHILD HEALTH					
Immunization	25		Tuberculosis immunization coverage (by 12 months)	95.1	per cent
	26		Polio immunization coverage (by 12 months)	70.0	per cent
	27		DPT immunization coverage (by 12 months)	82.7	per cent
	28	15	Measles immunization coverage (by 12 months)	70.6	per cent
	31		Fully immunized children (by 12 months)	52.5	per cent
Tetanus toxoid	32		Neonatal tetanus protection	67.0	per cent
Care of illness	33		Use of oral Rehydration therapy (ORT)	30.6	per cent
	34		Home management of diarrhoea	20.2	per cent
	35		Received ORT or increased fluids, and continued feeding	23.4	per cent
	23		Care seeking for suspected pneumonia	54.1	per cent
	22		Antibiotic treatment of suspected pneumonia	48.1	per cent
Solid fuel use	24	29	Solid fuels	96.6	per cent
Malaria	36		Households having insecticide-treated nets (ITNs)	53.6	per cent
	37	22	Under-fives sleeping under insecticide-treated nets	46.9	per cent
	38		Under-fives sleeping under mosquito nets	47.1	per cent
	39	22	Ant malarial treatment (under-fives)	56.2	per cent
	40		Intermittent preventive malaria treatment (pregnant women)	44.8	per cent

Topic	MICS Indicator Number	MDG Indicator Number	Indicator	Value & Unit	
ENVIRONMENT					
Water and Sanitation	11	30	Use of improved drinking water sources	64.4	per cent
	13		Water treatment	44.3	per cent
	12	31	Use of improved sanitation facilities	90.7	per cent
	14		Disposal of child's faeces	86.9	per cent
REPRODUCTIVE HEALTH					
Contraception and unmet need	21	19 c	Contraceptive prevalence	49.6	per cent
	98		Unmet need for family planning	3.4	per cent
Maternal and newborn health	20		Antenatal care	91.3	per cent
	44		Content of antenatal care		
			Blood test taken	84.4	per cent
			Blood pressure measured	84.4	per cent
			Urine specimen taken	60.2	per cent
			Weight measured	89.4	per cent
	4	17	Skilled attendant at delivery	62.4	per cent
	5		Institutional deliveries	61.3	per cent
			Total fertility rate	4.6	Rate
EDUCATION					
Education	52		Pre-school attendance	24.9	per cent
	53		School readiness	69.2	per cent
	54		Net intake rate in primary education	56.0	per cent
	55	6	Net primary school attendance rate	88.2	per cent
	56		Net secondary school attendance rate	15.3	per cent
			Adult literacy rate (female)	71.4	per cent
CHILD PROTECTION					
Birth registration	62		Birth registration	76.1	per cent
Child labour	71		Child labour	8.8	per cent
	72		Labourer students	92.4	per cent
	73		Student labourers	8.7	per cent
Child discipline	74		Any psychological/physical punishment	82.4	per cent
Early marriage and polygyny	67		Marriage before age 15	9.9	per cent
			Marriage before age 18	39.6	per cent
	68		Young women aged 15-19 currently married/in union	11.8	per cent
Female genital mutilation/	66		Approval for FGM/C	3.3	per cent
Cutting	63		Prevalence of female genital mutilation/cutting (FGM/C)	62.1	per cent
	64		Prevalence of extreme form of FGM/C	1.0	per cent
	65		FGM/C prevalence among daughters	9.6	per cent
Domestic violence	100		Attitudes towards domestic violence	68.8	per cent

Topic	MICS Indicator Number	MDG Indicator Number	Indicator	Value & Unit	
HIV/AIDS, SEXUAL BEHAVIOUR, AND ORPHANED AND VULNERABLE CHILDREN					
HIV/AIDS knowledge and attitudes	82	19 b	Comprehensive knowledge about HIV prevention among young people	46.4	per cent
	89		Knowledge of mother- to-child transmission of HIV	96.7	per cent
	86		Attitude towards people with HIV/AIDS	33.5	per cent
	87		Women who know where to be tested for HIV	91.5	per cent
	88		Women who have been tested for HIV	53.8	per cent
	90		Counselling coverage for the prevention of mother-to-child transmission of HIV	81.7	per cent
	91		Testing coverage for the prevention of mother-to-child transmission of HIV	85.4	per cent
Support to orphaned and vulnerable children	75		Prevalence of orphans	8.7	per cent
	78		Children's living arrangements	8.8	per cent
	76		Prevalence of vulnerable children	12.3	per cent
	77	20	School attendance of orphans versus non-orphans	0.98	ratio
	81		External support to children orphaned and made vulnerable by HIV/AIDS	21.2	per cent

## 1.1 Background

This report is based on the Meru North district Multiple Indicator Cluster Survey (MICS), conducted in 2008 by the Kenya National Bureau of Statistics. The survey provides valuable information on the situation of children and women in Meru North, and was based, in large part, on the needs 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. All the above commitments build upon promises made by the international community at the 1990 World Summit for Children.

In signing these international agreements, governments committed themselves to improving conditions for their children and to monitoring progress towards that end. UNICEF was assigned a supporting role in this task (see Box 1).

### BOX 1: 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 sub national 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.”

Kenya is committed to improving the welfare of its people particularly women and children who tend to be more vulnerable to social-economic hardships. With regard to children, the Government of Kenya (GOK) formulated the National Programme of Action (NPA) for children in 1992 soon after the World Summit for Children (WSC) which was held in 1990. The main objective of this programme was to identify issues affecting children and the strategies to address them. Measuring indicators of progress towards declared goals through proper monitoring and evaluation of projects/programmes and other interventions e.g. emergency response and humanitarian assistance are vital components of the NPA.



Proper monitoring and evaluation of targeted projects and programmes by the government and development partners requires a wide range of data to track progress towards achievement of desired outcomes. In this respect, MICS 2008 data and information from the district will be helpful in appraising national programmes such as; Poverty Reduction Strategy (PRS), Economic Recovery Strategy (ERS), and Kenya Education Sector Support Programme (KESSP) 2005-2010 among others.

The GOK /UNICEF programme has a sizeable component of production of high quality and sufficiently disaggregated data for effective child friendly policy formulation and programme implementation.

## 1.2 Survey Objectives

The primary objectives of the 2008 Meru North district Multiple Indicator Cluster Survey were to:

- Provide up-to-date information for assessing the situation of children and women in Meru North District ;
- Furnish data needed for monitoring progress toward goals established in the Millennium Declaration, the goals of A World Fit For Children (WFFC), and other internationally agreed upon goals, as a basis for future action;
- Contribute to the improvement of data and monitoring systems in Kenya and to strengthen technical expertise in the design, implementation, and analysis of such systems.

## 2.1 Sample Design

The sample for the Meru North district Multiple Indicator Cluster Survey (MICS) was designed to provide estimates on a large number of indicators on the situation of children and women at the district level. The sample selection utilized a two stage design. In the first stage, 50 clusters (census enumeration areas) were selected with probability proportional to population size. From the selected clusters, a household listing was carried out. After the household listing, all households were stratified into two groups; first strata having children below 3 years and second strata not having children below 3 years. From each selected cluster (EA), a circular systematic sample of 16 households from stratum one and 8 households from stratum two was drawn using a random start. The selection procedure does not allow for self-weighting as a result, sample weights are used in this report. A more detailed description of the sample design can be found in Appendix A.

## 2.2 Questionnaires

Three sets of questionnaires were used in the survey: 1) a household questionnaire which was used to collect information on all *de jure* household members, the household, and the dwelling; 2) a women's questionnaire administered in each household to all women aged 15-49 years; and 3) an under-5 questionnaire, administered to mothers or caretakers of all children under 5 years living in the household. The questionnaires included the following modules:

The Household questionnaire included the following modules:

- Household Listing
- Education
- Water and Sanitation
- Malaria-related questions
- Child Labour
- Child Discipline
- Salt Iodization

The questionnaire for Individual Women administered to all women aged 15-49 years living in the households included the following modules:

- Child Mortality
- Tetanus Toxoid
- Maternal and Newborn Health
- Marriage and Union
- Contraception
- Attitudes Towards Domestic Violence
- Female Genital Mutilation/Cutting
- HIV knowledge

The questionnaire for children Under-Five was administered to mothers or caretakers of children under 5 years of age<sup>2</sup> living in the households. In cases where the mother was not listed in the household roster, a primary caretaker for the child was identified and interviewed. The questionnaire included the following modules:

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

The questionnaires are based on the MICS 3 model questionnaire<sup>3</sup>. The English versions of MICS model, questionnaires were translated into Kiswahili, Borana, Kamba, Meru, and Embu languages.

In addition to the administration of questionnaires, fieldwork teams tested the salt used for cooking in the households for iodine content, and measured the weights and heights of children aged 0-59 months. Details and findings of these measurements are provided in the respective sections of the report.

## 2.3 Training and Fieldwork

Training for the fieldwork was conducted in two parts; 3 days training for the mapping and listing teams and 12 days training for the main survey teams in June 2008. Training methodology included lectures on interviewing techniques and the contents of the questionnaires, and mock interviews between trainees to gain practice in asking questions. Towards the end of the training period, trainees spent one full day in practice interviewing in different locations of Meru North district.

The household listing was carried out by 3 teams; each was comprised of a lister and mapper. These three teams were supervised by the District statistical officer (DSO) and the whole listing operation was being monitored by the district co-ordinator located at KNBS headquarters.

Two teams collected the data. Each was comprised of 3 interviewers, one driver, one editor/measurer and a supervisor. Fieldwork began at the end June 2008 and was concluded in August 2008.

## 2.4 Data Processing

Data were entered using the CSPro software. All questionnaires were double entered and internal consistency checks were performed to ensure quality control. Two supervisors monitored this whole process. Procedures and standard programs developed under the global MICS 3 project were adapted to the modified questionnaire and used throughout data processing period. Data processing began simultaneously with data collection in July 2008 and was completed in September 2008. Data were analysed using the Statistical Package for Social Sciences (SPSS) software program, and the model syntax and tabulation plans developed by UNICEF were customized for this purpose.

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<sup>2</sup> The terms “children under 5”, “children age 0-4 years”, and “children aged 0-59 months” are used interchangeably in this report.

<sup>3</sup> The model MICS3 questionnaire can be found at [www.childinfo.org](http://www.childinfo.org), or in UNICEF, 2006.

## 3.1 Sample Coverage

Table 3.1 (HH.1) provides information on the sample coverage. A total of 1200 households were selected out of which 1,197 were occupied. Among these, 1,154 were successfully interviewed giving a household response rate of 96 per cent. In the interviewed households, 1,323 women (age 15-49) were identified but only 1,208 were successfully interviewed, yielding a response rate of 91 per cent. In addition, 1,131 children under age five were listed in the household questionnaire. Questionnaires were completed for 1,106 of these children, which corresponds to a response rate of 98 per cent. Overall response rates of 88 and 94 per cents were realised for women and under 5 children interviews, respectively.

<b>Table 3.1 (HH.1): Results of household and individual interviews</b>	
Number of households, women, and children under 5 by results of the interviews, and household, women's and under-five's response rates, MICS Meru North district, Kenya 2008	
<b>Number of households</b>	
Sampled ( $H_s$ )	1200
Occupied ( $H_o$ )	1197
Interviewed ( $H_i$ )	1154
Response rate ( $H_r$ )	96.4
<b>Number of women</b>	
Eligible ( $W_e$ )	1323
Interviewed ( $W_i$ )	1208
Response rate ( $W_r$ )	91.3
Overall response rate ( $W_{or}$ )	88.0
<b>Number of children under 5</b>	
Eligible ( $C_e$ )	1131
Information collected ( $C_i$ )	1106
Response rate ( $C_r$ )	97.8
Overall response rate ( $C_{or}$ )	94.3
$H_r = H_i / H_o$ (where $H_o$ is HH8 = 1, 2, 3 or 6) $W_r = W_i / W_e$ ; $W_{or} = W_r \times H_r$ ; $C_r = C_i / C_e$ ; $C_{or} = C_r \times H_r$	
<b>Note:</b> This table is un-weighted, however all other tables presented in this report are weighted unless mentioned otherwise.	

## 3.2 Characteristics of Households

The age and sex distribution of survey respondents is provided in Table 3.2 (HH.2) and in Figure 3.1 (HH.1). In the 1,154 households successfully interviewed, 5,323 household members were listed. Of these, 2,539 were males and 2,784 were females. This translates to 91 males per 100 females. Forty six per cent of the total population is under 15 years and about half are aged 15-64 years. The population aged 0-17 years is 52 per cent implying a high child dependency ratio.

**Table 3.2 (HH.2): Household age distribution by sex**

Percentage distribution of the household population by five-year age groups and dependency age groups, and number of children aged 0-17 years, by sex, MICS Meru North district , Kenya 2008

Characteristics	Males		Females		Total	
	Number	Per cent	Number	Per cent	Number	Per cent
<b>Age</b>						
0-4	425	16.7	435	15.6	860	16.1
5-9	418	16.5	441	15.8	859	16.1
10-14	365	14.4	359	12.9	724	13.6
15-19	233	9.2	292	10.5	525	9.9
20-24	216	8.5	311	11.2	527	9.9
25-29	185	7.3	214	7.7	399	7.5
30-34	145	5.7	154	5.5	299	5.6
35-39	124	4.9	122	4.4	246	4.6
40-44	90	3.5	99	3.6	189	3.5
45-49	83	3.3	68	2.5	152	2.8
50-54	61	2.4	81	2.9	141	2.7
55-59	47	1.9	70	2.5	118	2.2
60-64	50	2.0	40	1.4	90	1.7
65-69	19	0.8	30	1.1	49	0.9
70+	64	2.5	62	2.2	125	2.4
Missing/DK	14	0.6	7	0.3	21	0.4
<b>Dependency age groups</b>						
< 15	1207	47.6	1235	44.4	2442	45.9
15-64	1235	48.6	1451	52.1	2685	50.4
65 +	83	3.3	91	3.3	174	3.3
Missing/DK	14	0.6	7	0.3	21	0.4
Children aged 0-17	1347	53.0	1419	51.0	2766	52.0
Adults 18+ /Missing/ DK	1192	47.0	1365	49.0	2557	48.0
<b>Total</b>	<b>2539</b>	<b>100.0</b>	<b>2784</b>	<b>100.0</b>	<b>5323</b>	<b>100.0</b>

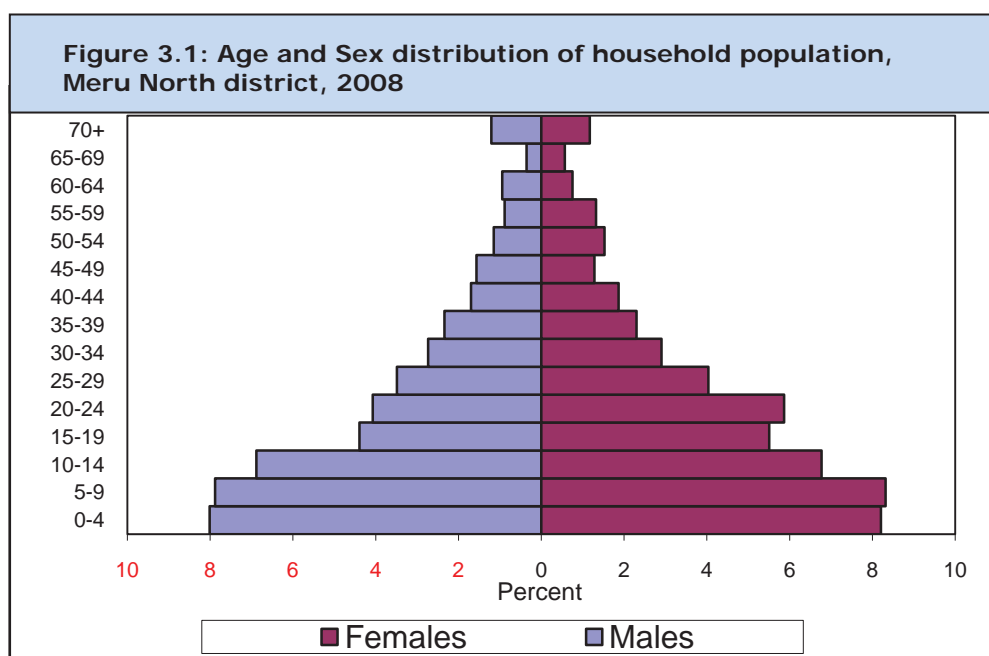


Table 3.3 (HH.3) provides information on demographic characteristics of the households. Majority of the households are headed by men (73 per cent) and about a third are headed by women. The average household size is 4.9. About 10 per cent of the households have only one member. Fifty five per cent of the households have at least one child below 5 years of age and 82 per cent have at least one child below 18 years of age. Four out of five households have at least one woman in the reproductive age group (15-49 years).

Table 3.3 (HH.3): Household composition			
Percentage distribution of households by selected characteristics, MICS Meru North District, Kenya 2008			
Characteristics	Weighted per cent	Number of households	
		Weighted	Un-weighted
<b>Sex of household head</b>			
Male	72.8	840	870
Female	27.2	314	284
<b>Number of household members</b>			
1	10.3	119	75
2-3	24.6	284	271
4-5	32.7	377	386
6-7	19.8	228	250
8-9	9.9	114	132
10+	(2.8)	32	40
<b>Mean household size</b>	4.91	NA	NA
<b>Total</b>	<b>100.0</b>	<b>1154</b>	<b>1154</b>
At least one child aged < 18 years	81.7	1152	1153
At least one child aged < 5 years	54.7	1154	1154
At least one woman aged 15-49 years	78.8	1154	1154
( ) Based on figures between 25 -50 un-weighted cases			

### 3.3 Characteristics of Female Respondents

Tables 3.4 (HH.4) provides information on the background characteristics of female respondents aged 15-49 years namely: age, marital status, motherhood status, education<sup>4</sup>, and household wealth index<sup>5</sup>. One quarter of the female population is in the age group 20-24 years. Sixty one per cent are currently married while slightly over one quarter have never been married. Twenty six per cent have never had a child, while majority of women (73 per cent) have primary level education.

Table 3.4 (HH.4): Women's background characteristics			
Percentage distribution of women aged 15-49 years by background characteristics, MICS Meru North district, Kenya 2008			
Characteristics	Weighted percentage	Number of women	
		Weighted	Un-weighted
Age			
15-19	18.6	225	210
20-24	24.9	301	322
25-29	18.0	217	231
30-34	13.3	161	167
35-39	10.7	129	134
40-44	8.5	103	82
45-49	6.0	72	62
Marital/Union status			
Currently married/in union	60.6	732	802
Formerly married/in union	11.5	139	111
Never married/in union	27.9	337	295
Motherhood status			
Ever gave birth	74.3	898	957
Never gave birth	25.7	310	251
Education			
None	13.8	167	148
Primary	73.1	883	928
Secondary +	13.0	157	130
Wealth index			
Low	13.9	167	174
Medium	49.0	592	637
High	37.1	448	397
Total	100.0	1208	1208

<sup>4</sup> Unless otherwise stated, "education" refers to educational level attended by the respondent throughout this report when it is used as a background variable.

<sup>5</sup> 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: number of sleeping rooms, type of floor, type of roof, type of walls, type of fuel used for cooking, electricity, radio, television, telephone (mobile or land line), refrigerator, computer, internet connection, watch, bicycle, motorcycle or scooter, animal drawn cart, car or truck, boat with motor, source of drinking water and type of sanitation). Each household was then weighted by the number of household members, and the household population was divided into three groups, 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.

### 3.4 Characteristics of Children below Five years

Table 3.5 (HH.5) presents background characteristics of children under 5 years of age. The female children are slightly over half of the total population of children. About 11 per cent are aged 0-5 months and eight per cent are 6-11 months old. Majority of children are aged 24-35 months. About 74 per cent of children have mothers who are educated up to a primary level. However, 16 per cent of all children have mothers with no education. Most of the children are from medium wealth index households, while 14 per cent of the children are from low wealth index households.

Table 3.5 (HH.5): Children's background characteristics			
Percentage distribution of children under five years of age by background characteristics, MICS Meru North District, Kenya 2008			
Characteristics	Weighted percentage	Number of under-5 children	
		Weighted	Un-weighted
<b>Sex</b>			
Male	49.1	543	539
Female	50.9	563	567
<b>Age</b>			
< 6 months	10.5	117	127
6-11 months	8.3	91	97
12-23 months	18.7	207	230
24-35 months	22.8	252	262
36-47 months	20.7	229	204
48-59 months	19.0	210	186
<b>Mother's education</b>			
None	16.0	177	165
Primary	73.7	815	840
Secondary +	10.1	112	99
<b>Wealth index</b>			
Low	14.4	160	164
Medium	54.7	605	617
High	30.8	341	325
<b>Total</b>	<b>100.0</b>	<b>1106</b>	<b>1106</b>



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. The MDGs called for the reduction in under-five mortality by two-thirds between 1990 and 2015. Monitoring progress towards this goal is an important objective. In this survey, direct mortality estimation method was used to estimate the levels of child mortality based on information derived from birth histories. The birth histories collected from women aged 15-49 years included information on total number of children ever born and living by sex and date of birth of each child born alive. If the child was not alive at the time of survey, information on age of the child at the time of death was obtained. This estimation method is also used by the Demographic and Health Surveys (DHS) worldwide including that of Kenya Demographic and Health Survey (KDHS). This allows comparison of MICS estimates with those obtained from the Demographic and Health Surveys.

The estimates of the mortality level measures are defined as follows:

- infant mortality: the probability of dying before the first birthday.
- under-five mortality (U5MR): the probability of dying before the fifth birthday.
- neonatal mortality: the probability of dying before one month of life.
- post neonatal mortality: the probability of dying between one month and one year of life.
- child mortality: probability of dying between the first and fifth year of life

All mortality measures are expressed as deaths per 1,000 live births, except for child mortality which is expressed per 1,000 children surviving up to 12 months of age.

Though, direct estimates of mortality obtained from birth histories are one of the best, the quality of these mortality estimates depend on the completeness of information obtained in the birth histories. In many cases women tend to avoid reporting their dead children and this underestimates the mortality levels.

## 4.1 Levels of Childhood Mortality

Table 4.1 provides estimates of childhood mortality for the ten year periods preceding the survey. The infant mortality rate is 28 deaths per 1,000 live births, while the probability of dying before the fifth birthday (under-5 mortality rate (U5MR)) is 35 per thousand live births. Majority of the childhood deaths occur in the first year of life, while 43 per cent of deaths in the first year of life occur in the first month of life.

**Table 4.1: Child mortality**

Infant, neonatal, post-neonatal, child and under-five mortality rates for 10-year period preceding the survey, MICS Meru North district, Kenya 2008

Periods of analysis of 10 years	Infant mortality rate	Neonatal mortality rate	Post-neonatal mortality rate	Child mortality rate	Under-five mortality rate
0-9	28	12	15	8	35
10-19	21	12	9	14	34

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

Malnutrition is associated with more than half of all childhood deaths worldwide. Undernourished children are more likely to die from common childhood ailments, and for those who survive, they tend to experience recurring sicknesses and faltering growth. Three-quarters of children who die from causes related to malnutrition are only mildly or moderately malnourished – hence showing no outward sign of their vulnerability. The millennium development target is to reduce by half the proportion of people who suffer from hunger between 1990 and 2015. The World Fit for Children goal is to reduce the prevalence of malnutrition among children under five years of age by at least one-third (between 2000 and 2010), with special attention to children under 2 years of age. A reduction in the prevalence of malnutrition will assist in the goal to reduce child mortality.

## 5.1 Nutritional Status

In a well-nourished population, there is a reference distribution of height and weight for children under age 5. The extent of under-nourishment in a population can be gauged by comparing measures of nutritional status of children in a given population to that of the reference population. This report adopts WHO/CDC/NCHS reference. Three standard indices of physical growth that describe nutritional status of children under 5 are: weight-for-age (underweight), height-for-age (stunting) and weight-for-height (wasting). Each of the three nutritional status indicators is expressed in standard deviation (often referred to as z-scores) from the median of the reference population.

Weight-for-age (or *underweight*) is a measure of both acute and chronic malnutrition. Children whose weight-for-age is more than two standard deviations below the median of the reference population are considered moderately or severely underweight while those whose weight-for-age is more than three standard deviations below the median are classified as severely underweight.

Height-for-age (or *stunting*) is a measure of linear growth. Children whose height-for-age is more than two standard deviations below the median of the reference population are considered short for their age and are classified as moderately or severely stunted. Those whose height-for-age is more than three standard deviations below 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 recurrent or chronic illness.

Finally, children whose weight-for-height (or *wasting*) is more than two standard deviations below the median of the reference population are classified as moderately or severely wasted, while those who fall more than three standard deviations below 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. In district level MICS 2008, weights and heights of all children age 6-59 months were measured using anthropometric equipment recommended by UNICEF (UNICEF, 2006). Findings in this section are based on the results of these measurements.

Table 5.1 (NU.1) shows the distribution of children classified into each of the above categories. However, for the measure weight-for-height, the proportion with weight-for-height above 2 standard deviations from the median of the reference population is included. Such children are considered to be overweight. The information presented in the table excludes children who were not weighed or measured (about two per cent) and those whose measurements are outside a plausible range. Thus, 3 per cent of children are excluded from the analysis (not measured or age information missing or flagged as outliers).

**Table 5.1 (NU.1): Child malnourishment**

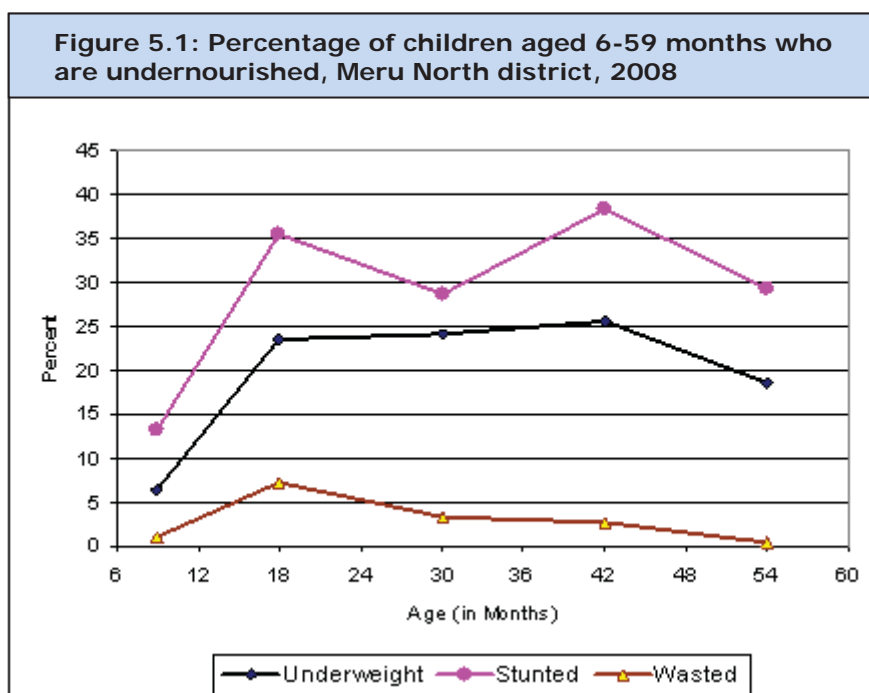
Percentage of children aged 6-59 months who are severely or moderately malnourished, Meru North district, Kenya 2008

Characteristics	Weight-for-age		Height-for-age		Weight-for-height			Number of children aged 6-59 months
	% below - 2 SD	% below - 3 SD	% below - 2 SD	% below - 3 SD	% below - 2 SD	% below - 3 SD	% above + 2 SD	
<b>Sex</b>								
Male	22.4	3.6	30.0	10.2	5.5	0.2	0.6	443
Female	20.2	2.3	31.5	10.0	1.0	0.1	0.7	463
<b>Age</b>								
6-11 months	4.8	0.0	13.3	2.6	0.0	0.0	1.7	89
12-23 months	23.5	5.5	35.6	10.8	7.3	0.5	0.5	194
24-35 months	24.2	2.3	28.6	9.7	3.4	0.3	0.0	227
36-47 months	25.6	3.4	38.4	13.9	2.6	0.0	0.4	197
48-59 months	18.5	2.1	29.4	9.6	0.5	0.0	0.5	191
<b>Mother's education</b>								
None	17.2	2.1	32.4	9.0	3.6	0.7	0.0	134
Primary	23.4	3.2	32.2	11.4	3.2	0.0	0.8	676
Secondary +	12.4	2.3	18.7	2.3	2.8	0.7	0.0	94
<b>Wealth index</b>								
Low	26.9	3.9	41.9	16.7	0.5	0.0	0.0	125
Medium	23.8	3.8	33.0	11.1	4.8	0.3	0.5	500
High	14.2	0.9	21.9	5.4	1.4	0.0	1.3	280
<b>Total</b>	<b>21.3</b>	<b>2.9</b>	<b>30.8</b>	<b>10.1</b>	<b>3.2</b>	<b>0.2</b>	<b>0.7</b>	<b>905</b>

Columns 1 and 2 refer to children whose weight for age z-scores (i.e., the exact number of standard deviations from the median) fall below -2 standard deviations (moderately underweight) and -3 standard deviations (severely underweight) from the median weight for age of the NCHS reference population. Columns 3 and 4 refer to children whose height for age z-scores fall below -2 standard deviations (moderately stunted or short for their age) and -3 standard deviations (severely stunted or short for their age) from the median height for age of the reference population. Stunted children are considered as chronically undernourished. Columns 5 and 6 refer to children whose weight for height z-scores fall -2 standard deviations (moderately wasted) or -3 standard deviations (severely wasted) from the weight for height of the reference population. Wasting is usually the result of a recent nutritional deficiency. The table also includes the percentage of children who are overweight, which takes into account those children whose weight for height is above 2 standard deviations from the median of the reference population.

The per cent 'below -2 standard deviations' includes those who fall -3 standard deviations below the median. Children whose height or weight is missing are excluded from the calculations. If height and weight data are missing for more than 10 per cent of under-five children, caution should be exercised in the interpretation of the results. In addition, children for whom the indices are out of range are omitted.

Nearly one in five (21 per cent) children aged 6-59 months in Meru North are moderately underweight (Table 5.1 (NU.1)). Thirty one per cent are moderately stunted or too short for their age and 10 per cent are severely stunted or too short for their age.



The proportion of underweight and stunted children is lower for those with mothers who have secondary or higher education levels versus children whose mothers have no education. The proportional differences in children who are underweight and stunted across gender were generally comparable. The proportion of children who are stunted or underweight reduced with increasing levels of household wealth index. The age pattern shows that the proportion of children who are stunted or underweight is low among young children (age 6-11 months). Wasting is more common among children aged 12-23 months (Figure 5.1). This pattern is expected and is related to the age at which many children cease to be breastfed and are exposed to contamination from water, food and the playing environment.

## 5.2 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 deficiency and is unsafe if clean water is not readily available. The World Fit for Children goal states 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.

WHO/UNICEF recommend the following breastfeeding practices:

- Exclusive breastfeeding for first six months
- Continued breastfeeding for two years or more
- Safe, appropriate and adequate complementary foods beginning at 6 months
- Frequency of complementary feeding: 2 times per day for 6-8 month olds; 3 times per day for 9-11 month olds

It is also recommended that breastfeeding be initiated within one hour of birth.

The indicators of recommended child feeding practices are as follows:

- Exclusive breastfeeding rate (< 6 months & < 4 months)
- Timely complementary feeding rate (6-9 months)
- Continued breastfeeding rate (12-15 & 20-23 months)
- Timely initiation of breastfeeding (within 1 hour of birth)
- Frequency of complementary feeding (6-11 months)
- Adequately fed infants (0-11 months)

Table 5.2 (NU.2) provides information on the proportion of women who started breastfeeding their infants within one hour of birth and within one day of birth (which includes those who started within one hour) respectively. About 96 per cent of mothers start breastfeeding their new born within one day of birth and 80 per cent do so within one hour of birth. Women with primary education are more likely to initiate breastfeeding within one day of birth.

**Table 5.2 (NU.2): Initial breastfeeding**

Percentage of women aged 15-49 years with a birth in the two years preceding the survey who breastfed their baby within one hour of birth and within one day of birth, MICS Meru North district, Kenya 2008

Characteristics	Percentage who started breastfeeding within one hour of birth	Percentage who started breastfeeding within one day of birth	Number of women with a live birth in the two years preceding the survey
<b>Months since birth</b>			
< 6 months	77.0	95.4	87
6-11 months	80.8	98.1	91
12-23 months	80.9	95.9	157
<b>Mother's education</b>			
None	(78.5)	(100.0)	38
Primary	80.3	95.8	277
Secondary +	(80.8)	(97.9)	26
<b>Wealth index</b>			
Low	78.6	91.9	51
Medium	83.7	98.9	194
High	74.0	93.9	96
<b>Total</b>	<b>80.2</b>	<b>96.4</b>	<b>341</b>
( ) Based on figures between 25 -50 un-weighted cases			

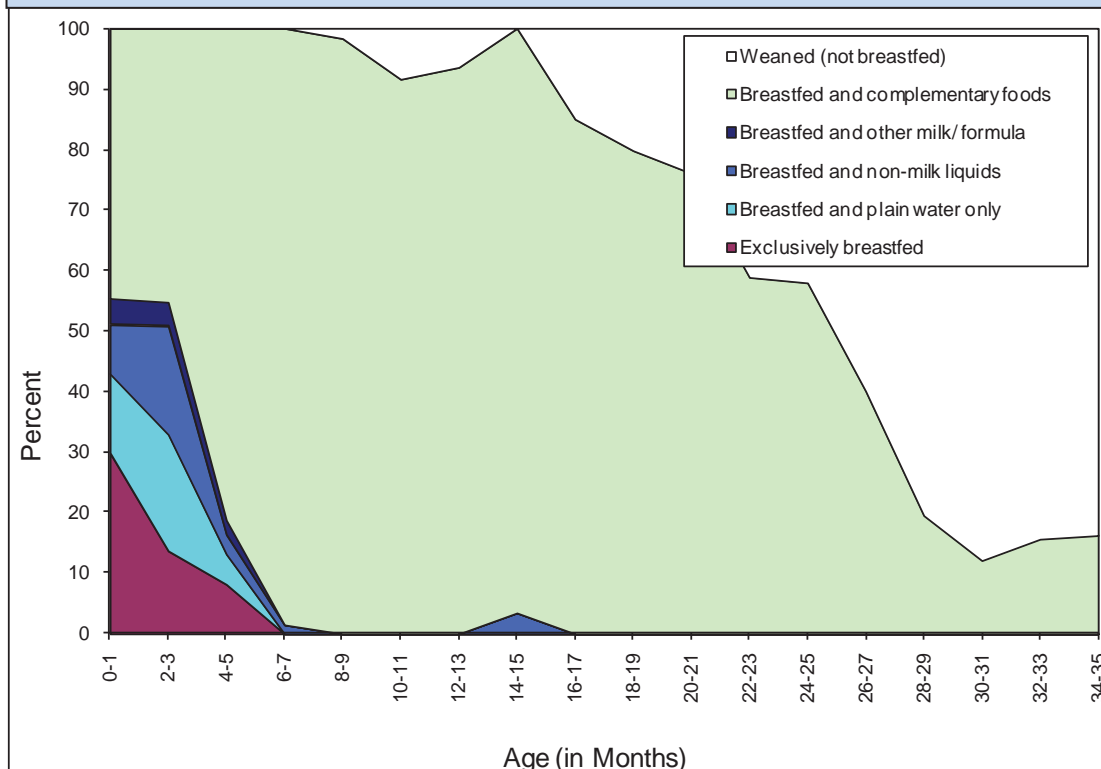
Tables 5.3a and 5.3b (NU.3) show breastfeeding status and complimentary feeding of children as reported by mothers/caretakers. 'Exclusively breastfed' refers to infants who received only breast milk or breast milk and vitamins, mineral supplements, or medicine. Table 5.3a (NU.3) shows exclusive breastfeeding of infants during the first six months of life (separately for 0-3 months and 0-5 months).

Nineteen per cent of children aged 0-3 months are exclusively breastfed. However, when the age bracket is extended to less than six months, only 15 per cent are exclusively breastfed. The proportion of girls aged 0-3 months who are exclusively breastfed is 20 per cent versus 17 per cent for boys. During the ages of 0-5 months, an equal proportion of both boys and girls was exclusively breastfed (15 per cent)

<b>Table 5.3a (NU.3): Breastfeeding</b>				
Percentage of living children according to breastfeeding status at each age group, MICS Meru North district, 2008				
Characteristics	Children age 0-3 months		Children age 0-5 months	
	Percentage exclusively breastfed	Number of children	Percentage exclusively breastfed	Number of children
<b>Sex</b>				
Male	(17.2)	39	15.3	52
Female	(20.4)	31	(15.3)	49
<b>Mother's education</b>				
None	(*)	5	(*)	14
Primary	17.9	59	13.7	82
Secondary +	(*)	5	(*)	6
<b>Wealth index</b>				
Low	27.6	9	(*)	14
Medium	(20.4)	35	16.1	52
High	(12.9)	25	(13.1)	35
<b>Total</b>	<b>18.6</b>	<b>69</b>	<b>15.3</b>	<b>101</b>
<p><b>Note:</b> Breastfeeding status is based on mother's or caretaker's reports of children's consumption in the 24 hours prior to the interview. Exclusive breastfeeding refers to children who receive only breast milk, or breast milk and vitamins, mineral supplements, or medicine.</p> <p>(*): Based on less than 25 un-weighted cases, hence not shown.            ( ): Based on figures between 25 -50 un-weighted cases</p>				

Figure 5.2 shows the detailed pattern of breastfeeding by child's age in months. Even at the early ages, majority of children are receiving liquids or foods other than breast milk. At age 6-9 months, 98 per cent of children are receiving breast milk and solid or semi-solid foods. During the ages 12-15 months, 96 per cent of children are still breastfed and at the ages 20-23 months, 66 per cent are still breastfed. However, the results for 0-5 months' cohort show similar proportions of boys and girls being exclusively breastfed.

**Figure 5.2: Infant feeding patterns by age: Percentage distribution of children aged less than 3 years by feeding pattern and age group, Meru North district, 2008**



Details of complementary feeding of children aged 6-9 months and continued breastfeeding of children at 12-15 and 20-23 months of age are presented in Table 5.3b (NU.3). The results show that for children aged 12-15 months, 96 per cent are still breastfeeding, while for those aged 20-23 months the figure is 66 per cent. This implies that as infants grow older than two years, mothers tend to reduce or stop breastfeeding and wean the children to other foods.

**Table 5.3b (NU.3): Complementary feeding**

Percentage of children according to breastfeeding status by age group, MICS Meru North district, 2008

Characteristics	Children age 6-9 months		Children age 12-15 months		Children age 20-23 months	
	Percentage receiving breast milk and solid/mushy food	Number of children	Percentage breastfed	Number of children	Percentage breastfed	Number of children
<b>Sex</b>						
Male	100.0	33	(*)	23	(66.5)	32
Female	97.1	40	(96.1)	44	(66.2)	34
<b>Mother's education</b>						
None	(*)	4	(*)	8	(*)	10
Primary	98	58	96.9	53	69.7	50
Secondary +	(*)	10	(*)	6	(*)	6
<b>Wealth index</b>						
Low	(*)	10	(*)	8	(*)	11
Medium	98.6	42	97.9	45	62.7	39
High	(*)	21	(*)	15	(*)	17
<b>Total</b>	<b>98.4</b>	<b>73</b>	<b>96.2</b>	<b>67</b>	<b>66.3</b>	<b>66</b>
(*) : Based on less than 25 un-weighted cases, hence not shown						
() : Based on figures between 25 -50 un-weighted cases						

The adequacy of infant feeding (children under 12 months of age) is presented in Table 5.4 (NU.4). A different criterion of adequate feeding is 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.

Majority of children under five months of age in Meru North district are not receiving adequate nutrition. In this age group (0-5 months), only 15 per cent of children are currently exclusively breastfed and therefore adequately fed. The proportion of children who are adequately fed among those less than 6 months is lower among households from high wealth index (13 per cent) than for those from low wealth index households (18 per cent).

Among the older age groups, a different picture emerges. For example, majority of children aged 6-8 months (94 per cent) are adequately fed, while the figure for adequately fed among children aged 9-11 months is 84 per cent. Among all children aged 0-11 months the figure for those who are appropriately fed is 53 per cent. The figures are generally comparable for all age categories in terms of sex differences in the proportions of appropriate or adequate feeding. However, the patterns by mother's education attainment show that children whose mothers have higher education tend to be more adequately fed. One exception is the proportion of 0-11 month old infants who are appropriately fed, here the figure is lower among children from the high wealth index households (45 per cent) compared to those from medium (57 per cent) and low wealth index households (58 per cent).



**Table 5.4 (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, MICS Meru North district, 2008

Characteristics	Percentage of infants					Number of infants aged 0-11 months
	0-5 months exclusively breastfed	6-8 months who received breast milk and complementary food at least 2 times in prior 24 hours	9-11 months who received breast milk and complementary food at least 3 times in prior 24 hours	6-11 months who received breast milk and complementary food at least the minimum recommended number of times per day	0-11 months who were appropriately fed	
<b>Sex</b>						
Male	15.3	96.1	89.8	92.8	53.6	104
Female	15.3	93.0	76.4	86.8	53.2	104
<b>Mother's education</b>						
None	(*)	(*)	(*)	(*)	37.8	22
Primary	13.7	92.8	91.9	92.4	53.8	167
Secondary +	(*)	(*)	(*)	(*)	66.6	19
<b>Wealth index</b>						
Low	(17.8)	(100.0)	(100.0)	(100.0)	(58.2)	28
Medium	16.1	97.3	82.6	90.8	56.8	115
High	13.1	85.4	(78.9)	82.4	45.3	65
<b>Total</b>	<b>15.3</b>	<b>94.3</b>	<b>84.0</b>	<b>89.7</b>	<b>53.4</b>	<b>208</b>
( * ): Based on less than 25 un-weighted cases, hence not shown.						
( ) : Based on figures between 25 -50 un-weighted cases						

### 5.3 Salt Iodization

Iodine Deficiency Disorders (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 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 impaired work performance. The international goal was to achieve sustainable elimination of iodine deficiency by 2005. The indicator is the percentage of households consuming adequately iodized salt ( $\geq 15$  parts per million).

In about 94 per cent of households, salt used for cooking was tested for iodine content by using salt test kits and testing for the presence of potassium iodide. Table 5.5 (NU.5) shows that five per cent of households did not have any cooking salt available, which is a small proportion of households in Meru North district. In 94 per cent of households with salt, salt was found to contain 15 parts per million (ppm) or more of iodine, i.e., adequately iodized salt. Not much variation is observed in the use pattern of iodized salt by household wealth index.

Table 5.5 (NU.5): Iodized salt consumption							
Percentage of households consuming adequately iodized salt, MICS Meru North district, 2008							
Wealth index	Percentage of households in which salt was tested	Number of households interviewed	Percentage of households with			Total	Number of households in which salt was tested or with no salt
			No salt	Salt test result			
				< 15 PPM	15+ PPM*		
Low	91.0	201	8.4	0.0	91.6	100.0	199
Medium	94.3	576	5.3	1.0	93.7	100.0	574
High	96.1	377	3.2	0.0	96.8	100.0	375
Total	94.3	1154	5.2	0.5	94.3	100.0	1148

## 5.4 Vitamin A Supplements

Vitamin A is essential for eye health and proper functioning of the immune system. It is found in foods such as milk, liver, eggs, red and orange-coloured fruits, red palm oil and green leafy vegetables, although the amount of vitamin A readily available to the body from these sources varies widely. In developing countries, vitamin A is largely consumed in the form of fruits and vegetables, and hence daily per capita intake is often insufficient to meet dietary requirements. Inadequate intakes are further compromised by increased requirements for the vitamin as children grow or during periods of illness, as well as increased losses during common childhood infections. As a result, vitamin A deficiency is quite prevalent in the developing countries and particularly in countries with the highest numbers of under-five deaths.

The 1990 World Summit for Children set the goal of virtual elimination of vitamin A deficiency and its consequences, including blindness, by the year 2000. This goal was also endorsed at the *Policy Conference on Ending Hidden Hunger* in 1991, the 1992 *International Conference on Nutrition*, and the *UN General Assembly's Special Session on Children* in 2002. The critical role of vitamin A for child health and immune function also makes provision of vitamin A a primary component of child survival efforts and therefore critical to the achievement of the fourth Millennium Development Goal: a two-thirds reduction in under-five mortality by the year 2015.

For countries with vitamin A deficiency problems, current international recommendations call for administering a high-dose vitamin A supplementation every four to six months, targeted to all children between the ages of six to 59 months living in affected areas. Providing young children with two high-dose vitamin A capsules a year is a safe, cost-effective, and an 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. For countries with vitamin A supplementation programs, the definition of the indicator is the percentage of children aged 6-59 months receiving at least one high dose vitamin A supplement in the last six months.

Based on UNICEF/WHO guidelines, the Ministry of Health, Government of Kenya recommends that children aged 6-11 months be given one high dose Vitamin A capsules and children aged 12-59 months should be given a vitamin A capsule every 6 months. In some parts of the country, Vitamin A capsules are linked to immunization services and are given when the child has contact with these services after six months of age. It is also recommended that mothers take a Vitamin A supplement within eight weeks of giving birth due to increased vitamin A requirements during pregnancy and lactation.

Within the six months prior to the survey, 25 per cent of children aged 6-59 months received a high dose vitamin A supplement (Table 5.6 (NU.6)). This is still a low proportion and efforts should be made to reach at least half of the children. About 34 per cent did not receive the supplement in the last 6 months but did receive one prior to that period. Eight per cent of children received a vitamin A supplement at some time in the past but their mother/caretaker was unable to specify when. vitamin A supplementation coverage is generally comparable among male and female children.

<b>Table 5.6 (NU.6) Children's Vitamin A Supplementation</b>							
Percentage distribution of children aged 6-59 months by whether they have received a high dose vitamin A supplement in the last 6 months, Meru North district, 2008							
Characteristics	Percentage of children who received vitamin A:			Not sure if received vitamin A	Never received vitamin A	Total	Number of children aged 6-59 months
	Within last 6 months*	Prior to last 6 months	Not sure when				
<b>Sex</b>							
Male	25.7	35.1	8.1	0.6	30.0	100.0	491
Female	24.0	32.3	7.8	1.2	34.8	100.0	514
<b>Age</b>							
6-11 months	45.9	1.9	1.9	0.0	50.3	100.0	91
12-23 months	32.7	27.1	4.2	1.1	34.9	100.0	207
24-35 months	23.6	37.7	6.6	0.8	31.3	100.0	252
36-47 months	19.9	39.6	9.7	1.3	29.5	100.0	229
48-59 months	16.0	45.0	14.4	0.9	23.7	100.0	210
<b>Mother's education</b>							
None	17.8	31.7	10.6	2.9	37.0	100.0	163
Primary	25.4	33.9	7.3	0.6	32.8	100.0	733
Secondary +	32.2	35.3	7.0	0.0	25.5	100.0	106
<b>Wealth index</b>							
Low	13.8	30.7	16.6	2.5	36.4	100.0	145
Medium	25.8	30.1	5.5	0.6	38.0	100.0	553
High	28.2	41.4	8.2	0.7	21.5	100.0	307
<b>Total</b>	<b>24.8</b>	<b>33.6</b>	<b>7.9</b>	<b>0.9</b>	<b>32.7</b>	<b>100.0</b>	<b>1005</b>

The age pattern of vitamin A supplementation shows that the proportion of children receiving the supplement in the last six months declines with increasing age. However, the proportion of children receiving the supplement increases with the level of education of the mother and also by increasing levels of the household wealth index.

Vitamin A supplements for new mothers is an important indicator towards child survival goals. Women should receive the supplement while breastfeeding since it helps to replenish their stores which may have been depleted during pregnancy. In Meru North district, two out of five mothers (37 per cent) with a birth in the previous two years before the survey received a vitamin A supplement within eight weeks of giving birth (Table 5.7 (NU.7)). The proportion of mothers receiving vitamin A increases with increasing levels of the mother's education and also by household wealth index.

**Table 5.7 (NU.7): Post-partum mothers' vitamin A supplementation**

Percentage of women aged 15-49 years with a live birth in the 2 years preceding the survey by whether they received a high dose vitamin A supplement before the infant was 8 weeks old, MICS Meru North, 2008

Characteristics	Received vitamin A supplement*	Not sure if received vitamin A	Number of women aged 15-49 years
<b>Education</b>			
None	(30.1)	(0.0)	38
Primary	37.3	1.0	277
Secondary +	(44.1)	(0.0)	(26)
<b>Wealth index</b>			
Low	33.5	2.5	51
Medium	35.9	0.4	194
High	41.4	0.7	96
<b>Total</b>	<b>37.1</b>	<b>0.8</b>	<b>341</b>
The numerator includes all women who say they received a vitamin A dose in the first two months after their last birth (even if their last birth was less than two months prior to the interview). The denominator includes women who had a live birth in the two years preceding the date of interview.			

## 5.5 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) carries a range of grave health risks for children. Babies who are born underweight 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 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, which affects their performance in school and their work capabilities as adults.

In the developing world, low birth weight stems primarily from the mother's poor health and nutrition. Three factors have most impact: the mother's poor nutritional status before conception, short stature (due mostly to under nutrition and infections during her childhood), and poor nutrition during the pregnancy. Inadequate weight gain during pregnancy is particularly important since it accounts for a large proportion of foetal growth retardation. Moreover, diseases such as diarrhoea and malaria, which are common in many developing countries, can significantly impair foetal growth if the mother becomes infected while pregnant. In the industrialized world, cigarette smoking during pregnancy is the leading cause of low birth weight. In developed and developing countries alike, teenagers who give birth when their own bodies have not yet matured, run the risk of bearing underweight babies.

One of the major challenges in measuring the incidence of low birth weight is the fact that more than half of infants in the developing world are not weighed. In the past, most estimates of low birth weight for developing countries were based on data compiled from health facilities. However, these estimates are biased for most developing countries because the majority of newborns are not delivered in facilities, and those who are weighed represent only a small sample of all births. Because many infants are never 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<sup>6</sup>.

<sup>6</sup> For a detailed description of the methodology, see Boerma, Weinstein, Rutstein and Sommerfelt, 1996.

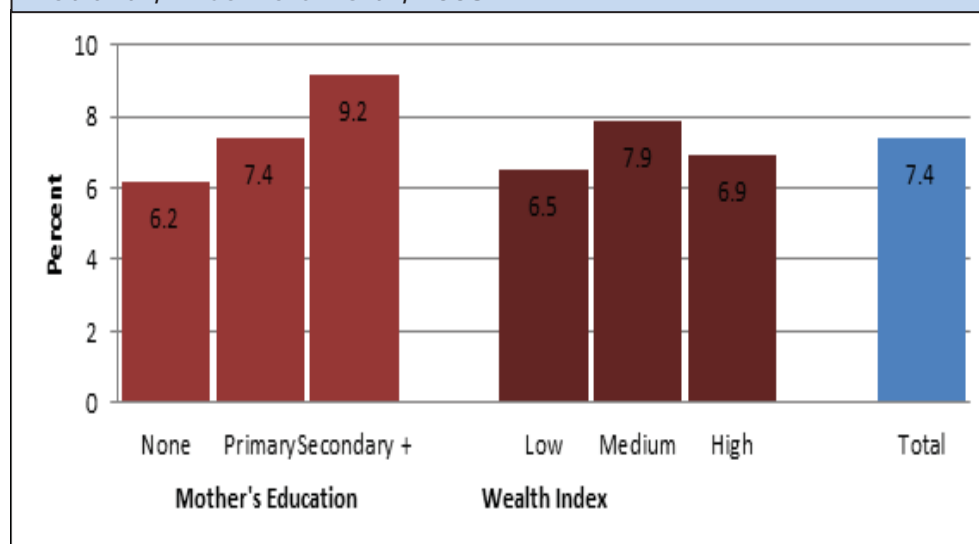
About 61 per cent of births were weighed at birth and seven per cent of infants weighed less than 2,500 grams at birth (Table 5.8 (NU.8)). The proportion of children under-weight (less than 2,500 grams) was 9 per cent among children with mothers who attained secondary or higher level of education and about six and seven per cent for those with no education and primary level, respectively. The corresponding results for wealth index shows the highest proportion of underweight children coming from the medium wealth index households and the lowest among the low wealth index households (Figure 5.3).

**Table 5.8 (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, MICS Meru North district, 2008

Characteristics	Percentage of live births:		Number of live births
	Below 2500 grams	Weighed at birth	
<b>Mother's education</b>			
None	6.2	48.5	38
Primary	7.4	59.0	277
Secondary +	(9.2)	(94.7)	26
<b>Wealth index</b>			
Low	6.5	36.1	51
Medium	7.9	56.6	194
High	6.9	81.6	96
<b>Total</b>	<b>7.4</b>	<b>60.6</b>	<b>341</b>

**Figure 5.3 Percentage of infants weighing less than 2,500 grams at birth, MICS Meru North, 2008.**



## 5.6 Food Relief

As a result of the periodic food shortages occasioned by drought, the country has over time become a net food importer. These food imports which include cereals such as maize, rice and wheat are meant for commercial purposes. In addition, the country obtains food aid which is distributed through the provincial administration to sections of the population who may have been affected by drought. The government, through the National Cereals & Produce Board (NCPB) also maintains

strategic reserves of about 3 million bags of maize which is mainly for relief purposes. Meru North district experiences periodic food shortages and hence has from time to time been a beneficiary of food relief. As shown in Table 5.9, about 7 per cent of the registered households received food supplies one month before the survey and about 13 per cent received between 4-6 months. In the district none of the households reported selling the free food they received. Nearly 57 per cent of households received their last food relief six months before the survey.

<b>Table 5.9 (NU11): Food relief</b>									
Percentage of households registered as beneficiary of food distribution program, and of those that registered time of last receipt of food and whether meeting their full requirement or not, MICS Meru North district, 2008									
Wealth index	Percentage of households registered as beneficiary of food distribution	Total number of households	Percentage of households by time last receipt of food distribution				Total per cent	Percentage of households reporting supply meeting all their food needs	Number of households registered as beneficiary of food distribution
			Within one month	Between 1-3 months	Between 4-6 months	After 6 months			
Low	(*)	201	(*)	(*)	(*)	(*)	(*)	(*)	17
Medium	(*)	576	(*)	(*)	(*)	(*)	(*)	(*)	17
High	(*)	377	(*)	(*)	(*)	(*)	(*)	(*)	2
<b>Total</b>	<b>3.1</b>	<b>1154</b>	<b>6.6</b>	<b>13.1</b>	<b>12.8</b>	<b>57.2</b>	<b>100.0</b>	<b>0.7</b>	<b>36</b>
(*) Based on figures less than 25 un-weighted cases.									

## 6.1 Immunization

The Millennium Development Goal (MDG) 4 seeks to reduce child mortality by two thirds between 1990 and 2015. Immunization plays a key part 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 not reached 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 achieve full immunization of children less than one year of age at 90 per cent nationally, with at least 80 per cent coverage in every district or equivalent administrative unit. The Kenya Expanded Programme on Immunizations (KEPI) and the *Malezi Bora* (A comprehensive initiative to protect child health in Kenya) campaigns are playing key roles in this regard.

In Kenya, and in accordance with the ministry of health guidelines, a child should receive a BCG vaccination to protect him/her against tuberculosis, three doses of DPT to protect against diphtheria, pertussis and tetanus and three doses of Polio vaccine by the age of 12 months. The measles vaccine should be administered by the age of 9 months. This is in accordance with the UNICEF and WHO guidelines.

For MICS 2008, mothers or care givers of children below five years of age were asked to provide vaccination cards and interviewers copied vaccination information from the cards onto the questionnaire. However, if the child did not have a card, the mother was asked to recall whether or not the child had received each of the vaccinations and, for DPT and Polio, the number of times. The immunization coverage shown in this report includes information from cards as well as re-call unless mentioned otherwise.

Table 6.1 (CH.1) shows the distribution of children aged 12-23 months who were immunized against childhood diseases at any time before the survey and before the first birthday. The denominator for the table comprises only children aged 12-23 months and so information pertains to only children old enough to be fully vaccinated. In the top panel, the numerator includes all children who were vaccinated at any time before the survey according to the vaccination card or the mother's report. In the bottom panel, only those who were vaccinated before their first birthday, as recommended, are included. For children without vaccination cards, the proportion of vaccinations given before the first birthday is assumed to be the same as for children with vaccination cards.

Overall, 79 per cent of children had health cards, and most children aged 12-23 months (98 per cent) received a BCG vaccination by the age of 12 months. For DPT, 95 per cent received the first dose but the proportion declines marginally for subsequent doses (Figure 6.1). Similarly, 92 per cent of children received Polio 1 by age 12 months and this declines to 70 per cent by the third dose. The coverage for measles vaccine by 12 months is lower than for the other vaccines at 71 per cent. This is primarily because, although 81 per cent of children received the vaccine, only 71 per cent received it by their first birthday. As a result, the percentage of children who had received all the recommended vaccinations by their first birthday is only 53 per cent. Three per cent of the children did not receive any vaccines. This low percentage of full vaccination coverage can be a contributory factor to poor child survival in the district.

**Table 6.1 (CH.1): Vaccinations among children**

Percentage of children aged 12-23 months immunized against childhood diseases at any time before the survey and before the first birthday, MICS Meru North district, 2008

Vaccinated at any time before the survey	Percentage of children who received:											Number of children aged 12-23 months
	BCG	DPT1	DPT2	DPT3	Polio0	Polio1	Polio2	Polio3	Measles	All(*)	None	
According to: Vaccination card	77.2	78.6	75.6	69.4	48.8	77.9	76.0	66.4	59.7	58.8	0.0	207
Mother's report	17.9	17.0	16.4	13.8	11.6	15.0	12.3	4.5	21.4	3.1	3.4	207
Either	95.1	95.6	92.0	83.2	60.4	92.9	88.3	71.0	81.1	61.9	3.4	207
Vaccinated by 12 months of age	95.1	95.1	91.1	82.7	60.4	92.4	87.8	70.0	70.6	52.5	3.4	207

Total number of 12-23 month olds vaccinated with BCG, (OPV3, DPT3, Measles, HepB, or HiB) before 12 months, as validated by card or mother's recall. To estimate the number of children without a card to have received vaccine before 1<sup>st</sup> 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 1<sup>st</sup> birthday.

(\*)Children who received 'all' vaccinations are those who have received 3 doses of DPT, 3 doses of Polio (excluding Polio 0), BCG, and Measles.

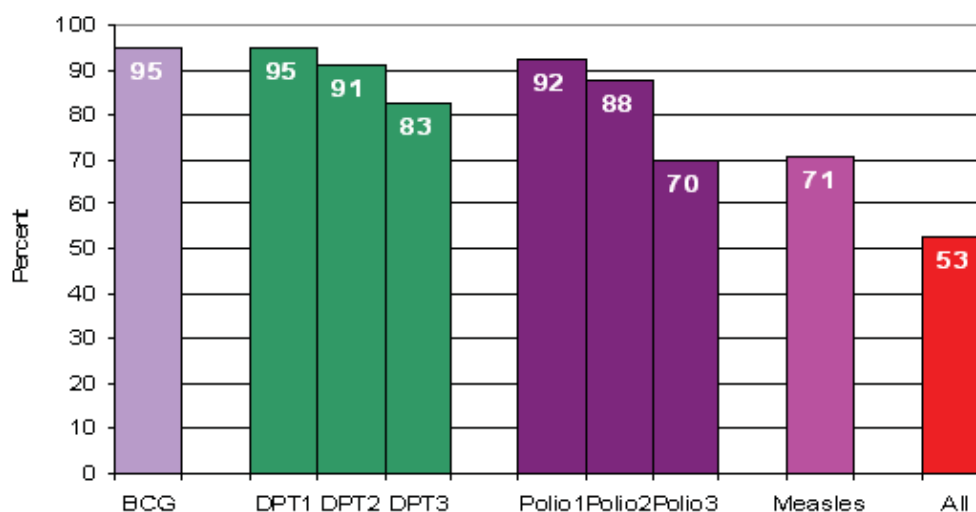
**Figure 6.1: Percentage of children aged 12-23 months who received the recommended vaccinations by 12 months, Meru North district, 2008**



Table 6.2 (CH.2) shows vaccination coverage rates among children aged 12-23 months by background characteristics. The figures indicate children receiving the vaccinations at any time up to the date of the survey, and are based on information from both the vaccination cards and mothers'/caretakers' reports. The coverage of BCG, DPT1 and Polio 1 is near universal; however, the coverage of DPT3 and Polio3 drops by 13 per cent and 22 per cent respectively. Eighty one per cent of children aged 12-23 months received the measles vaccination, however, only 62 per cent of them are fully immunized. Immunization coverage among male children is lower than that of females by two percentage points. The proportion of children immunized increases with increasing levels of mother's education and household wealth index.

Table 6.2 (CH.2): Vaccinations by background characteristics													
Percentage of children aged 12-23 months currently vaccinated against childhood diseases, MICS Meru North district, 2008													
	Percentage of children who received:										Per cent with health card	Number of children aged 12-23 months	
Characteristics	BCG	DPT 1	DPT 2	DPT 3	Polio 0	Polio 1	Polio 2	Polio 3	Measles	All	None		
<b>Sex</b>													
Male	93.4	94.6	92.6	82.5	65.3	91.8	87.6	68.6	81.7	60.9	4.3	77.9	96
Female	96.6	96.4	91.5	83.9	56	93.9	88.9	73.1	80.6	62.7	2.7	79.4	111
<b>Mother's education</b>													
None	(91.4	(93.9	(89.1	(79.2	(62.8	(87.2	(82.4	(61.5	(82.2	(52.3	(6.1	(72.8	30
Primary	95.1	95.3	91.4	82.6	57.8	93.0	87.7	70.1	80.2	61.6	3.4	77.5	154
Secondary +	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	23
<b>Wealth index</b>													
Low	(94.9	(97.5	(86.5	(77.2	(62.0	(92.4	(84.3	(63.1	(70.7	(36.9	(2.5	(77.9	27
Medium	93.9	94.9	90.7	80.4	56.5	91.6	86.8	68.6	83.8	64.7	4.3	76.4	128
High	98.2	96.3	98.2	93.2	68.9	96.3	94.1	80.9	80.1	68.0	1.8	84.6	52
<b>Total</b>	<b>95.1</b>	<b>95.6</b>	<b>92.0</b>	<b>83.2</b>	<b>60.4</b>	<b>92.9</b>	<b>88.3</b>	<b>71.0</b>	<b>81.1</b>	<b>61.9</b>	<b>3.4</b>	<b>78.7</b>	<b>207</b>
<b>Note:</b> The calculation is the same as the top panel of Table 6.1 (i.e., the child's age at vaccination is not taken into account). Children who were vaccinated at any time before the survey are included in the numerator.													
(*) Based on figures less than 25 un-weighted cases.													
( ) Based on figures 25-50 un-weighted cases													

## 6.2 Tetanus Toxoid

One of the MDGs is to reduce by three quarters the maternal mortality ratio, with one strategy being to eliminate maternal tetanus. A similar goal seeks to reduce the incidence of neonatal tetanus to less than 1 case of neonatal tetanus per 1,000 live births in every district. A World Fit for Children goal was to eliminate maternal and neonatal tetanus by 2005.

In prevention of maternal and neonatal tetanus, the strategy is to ensure that all pregnant women receive at least two doses of tetanus toxoid vaccine. However, if women have not received two doses of the vaccine during 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 6.3 (CH.3) shows the protection status from tetanus of women who had a live birth within the last 12 months. About 67 per cent of women who had a birth during the 2 years preceding the survey had adequate protection against tetanus. Tetanus coverage increases with increasing levels of mother's educational attainment. Younger (15-19 years) and older women (above age 35) are less likely to be protected compared to women in the middle age group.

<b>Table 6.3 (CH.3): Neonatal tetanus protection</b>							
Percentage of mothers with a birth in the last 12 months protected against neonatal tetanus, MICS Meru North district, 2008							
Characteristics	Percentage of mothers with a birth in the last 12 months who:					Protected against tetanus(*)	Number of mothers
	Received at least 2 doses during last pregnancy	Received at least 2 doses, the last within prior 3 years	Received at least 3 doses, last within prior 5 years	Received at least 4 doses, last within prior 10 years	Received at least 5 doses during lifetime		
<b>Age</b>							
15-19	(56.1)	(4.6)	(0.0)	(0.0)	(0.0)	(60.7)	30
20.-24	61.8	6.5	0.0	0.0	0.0	68.3	111
25-29	67.1	4.7	0.0	0.0	0.0	71.8	89
30-34	56.3	12.1	0.0	0.0	0.0	68.4	56
35-49	50.7	7.7	0.0	0.0	0.0	58.3	55
<b>Education</b>							
None	(55.4)	(5.9)	(0.0)	(0.0)	(0.0)	(61.4)	38
Primary	59.2	7.2	0.0	0.0	0.0	66.4	277
Secondary +	(75.9)	(5.3)	(0.0)	(0.0)	(0.0)	(81.2)	26
<b>Wealth index</b>							
Low	58.9	7.3	0.0	0.0	0.0	66.1	51
Medium	59.6	7.7	0.0	0.0	0.0	67.3	194
High	61.6	5.2	0.0	0.0	0.0	66.8	96
<b>Total</b>	<b>60.1</b>	<b>6.9</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>67.0</b>	<b>341</b>
Tetanus toxoid injections are given to women during pregnancy to protect infants from neonatal tetanus, a major cause of infant death that is due primarily to unsanitary conditions during childbirth. Two doses of tetanus toxoid during pregnancy offer full protection. However, if a woman was vaccinated during a previous pregnancy, she may only need a booster to give full protection. Five doses are thought to provide lifetime protection.							
( ) Based on figures 25-50 un-weighted cases.							

## 6.3 Oral Rehydration Treatment

Diarrhoea is the second leading cause of death among children below five years 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. Several goals have been specified to reduce incidence of diarrhoea among children. A World Fit for Children called for a 50 per cent reduction in the number of deaths due to diarrhoea among children under five by 2010. It also called for a reduction in the incidence of diarrhoea by 25 per cent. The indicators for reduction and management of diarrhoea are:

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

In the MICS 2008 questionnaire, mothers (or caretakers) were asked to report whether their child had diarrhoea in the two weeks prior to the survey. In case a child was reported to have had diarrhoea, a series of questions were asked 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.

Table 6.4 (CH.4) shows the percentage distribution of children with diarrhoea and the various types of oral rehydration treatment administered to them during the episode of diarrhoea. Since mothers were able to name more than one type of liquid, the percentages do not necessarily add up to 100 per cent. Slightly more than 9 per cent of all children below five years old had diarrhoea in the two weeks preceding the survey. The peak of diarrhoea prevalence occurs in the weaning period (6-23 months). About 8 per cent of the children with diarrhoea received fluids from ORS packets; 12 per cent received pre-packaged ORS fluids, and about 15 per cent received recommended homemade fluids. About 31 per cent of children with diarrhoea received oral rehydration therapy (ORT) which is either RHF or ORS. However, majority of children with diarrhoea (69 per cent) did not receive any treatment.

<b>Table 6.4 (CH.4): Oral rehydration treatment</b>								
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), MICS Meru North district, 2008								
Characteristics	Had diarrhoea in last two weeks	Number of children aged 0-59 months	Children with diarrhoea who received:				ORT Use Rate	Number of children aged 0-59 months with diarrhoea
			Fluid from ORS packet	Recommended homemade fluid	Pre-packaged ORS fluid	No treatment		
<b>Sex</b>								
Male	10.3	543	9.9	12.0	8.0	72.1	27.9	56
Female	8.3	563	6.3	17.7	16.3	66.3	33.7	47
<b>Age</b>								
<6 months	3.1	117	(*)	(*)	(*)	(*)	(*)	4
6-11 months	19.5	91	9.8	29.3	32.1	47.4	(*)	18
12-23 months	15.8	207	(9.8)	(10.3)	(5.2)	(74.7)	(25.3)	33
24-35 months	7.8	251	(*)	(*)	(*)	(*)	(*)	20
36-47 months	6.8	224	(*)	(*)	(*)	(*)	(*)	15
48-59 months	6.2	210	(*)	(*)	(*)	(*)	(*)	13
<b>Mother's education</b>								
None	8.7	177	(*)	(*)	(*)	(*)	(*)	15
Primary	9.8	815	9.6	14.5	12.5	68.6	31.4	80
Secondary +	5.8	112	(*)	(*)	(*)	(*)	(*)	7
<b>Wealth index</b>								
Low	10.4	160	(*)	(*)	(*)	(*)	((*)0	17
Medium	10.8	605	7.7	12.4	9.4	75.6	24.4	65
High	6.0	341	(*)	(*)	(*)	(*)	(*)	21
<b>Total</b>	<b>9.3</b>	<b>1106</b>	<b>8.3</b>	<b>14.6</b>	<b>11.8</b>	<b>69.4</b>	<b>30.6</b>	<b>103</b>
<b>Note:</b> The percentages receiving various treatments will not add to 100 since some children may have received more than one type of treatment. The ORT use rate includes those who received oral rehydration salts from a packet or any appropriate household solution or pre-packaged ORS fluid. (*) Based on less than 25 un-weighted cases. ( ) Based on figures 25-50 un-weighted cases.								

Among children under five years who had diarrhoea during the two weeks preceding the survey, 47 per cent received increased fluid intake, while 52 per cent maintained their usual diet (Table 6.5 (CH.5)). Forty seven per cent of the children continued with their normal feeding but 52 per cent had reduced food and drinks intake during their illness. Twenty three per cent of children received increased food and fluids intake, during their illness. A higher proportion of children belonging to households of medium wealth index received ORT or increased fluids and continued feeding.

Table 6.5 (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, MICS Meru North district, Kenya 2008									
		Number of children aged 0-59 months	Children with diarrhoea who:				Received ORT or increased fluids AND continued feeding	Number of children aged 0-59 months with diarrhoea	
Characteristics	Had diarrhoea in last two weeks		Drank more	Drank the same or less	Ate somewhat less, same or more	Ate much less or none			Home management of diarrhea
<b>Sex</b>									
Male	10.3	543	38.7	59.6	45.0	53.4	14.9	18.5	56
Female	8.3	563	55.8	42.5	48.8	51.2	26.6	29.3	47
<b>Age</b>									
0-11 months	8.8	187	(*)	(*)	(*)	(*)	(*)	(*)	16
12-23 months	17.1	212	51.9	48.1	34.4	65.6	10.4	13.0	36
24-35 months	7.8	250	(*)	(*)	(*)	(*)	(*)	(*)	20
36-47 months	7.4	240	(*)	(*)	(*)	(*)	(*)	(*)	15
48-59 months	6.0	217	(*)	(*)	(*)	(*)	(*)	(*)	13
<b>Mother's education</b>									
None	8.7	177	(*)	(*)	(*)	(*)	(*)	(*)	15
Primary	9.8	815	48.5	49.4	49.4	49.5	21.8	25.2	80
Secondary +	5.8	112	(*)	(*)	(*)	(*)	(*)	(*)	7
<b>Wealth index</b>									
Low	10.4	160	(*)	(*)	(*)	(*)	(*)	(*)	17
Medium	10.8	605	47.6	51.2	50.8	49.2	25.5	26.6	65
High	6.0	341	(*)	(*)	(*)	(*)	(*)	(*)	21
<b>Total</b>	<b>9.3</b>	<b>1106</b>	<b>46.5</b>	<b>51.9</b>	<b>46.7</b>	<b>52.4</b>	<b>20.2</b>	<b>23.4</b>	<b>103</b>
(*): Based on less than 25 un-weighted cases, hence not shown.									

## 6.4 Care Seeking and Antibiotic Treatment of Pneumonia

Pneumonia is the leading cause of death in children and the use of antibiotics among children below five years 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 not due to a problem in the chest and a blocked nose. The following indicators are used to examine both the prevalence and care seeking behaviour:

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

Table 6.6 (CH.6) presents information regarding the prevalence of suspected pneumonia among children aged 0-59 months. Eighteen per cent of children aged 0-59 months were reported to have had acute respiratory infection (symptoms of pneumonia) during the two weeks preceding the survey. Among these children with suspected symptoms of pneumonia, 54 per cent were taken to an appropriate health service provider. Only 13 per cent were taken to a government facility, while about 27 per cent received services from private health facilities.

Majority of children with suspected pneumonia were in the 12-23 month age group. Overall, younger children are more likely to be taken to an appropriate provider than older children who were sick. Slightly more female children are taken to an appropriate health service provider. The proportion of children receiving care from an appropriate health service provider was highest for those from households categorised as high wealth index (80 per cent) compared to other wealth households.

Table 6.6 (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, MICS Meru North district, 2008															
Characteristic	Had acute respiratory infection <sup>1</sup>	Number of children aged 0-59 months	Public sources					Private sources					Number of children aged 0-59 months with suspected pneumonia		
			Govt. Hospital	Govt. health centre	Govt. health post	Other public	Private hospital/clinic	Private physician	Pharmacy	Other private	Relative or friend	Shop		Trad. Practitioner	Any appropriate provider
<b>Sex</b>															
Male	19.9	543	7.4	12.6	3.9	0.0	26.4	0.0	3.7	1.7	0.0	2.5	0.0	52.0	
Female	16.3	563	5.5	14.3	4.9	0.0	26.9	0.0	5.6	4.9	0.0	5.6	0.0	56.5	
<b>Age</b>															
0-11 months	13.0	187	(14.8)	(10.0)	3.2	(0.0)	(42.9)	(0.0)	(3.8)	.(00)	(0.0)	(6.3)	(0.0)	70.9	
12-23 months	22.3	212	4.2	10.4	1.7	9.0	26.9	0.0	6.8	6.1	0.0	0.0	0.0	49.2	
24-35 months	19.8	250	6.9	17.7	5.6	0.0	27.1	0.0	1.8	0.0	0.0	5.5	0.0	57.3	
36-47 months	17.8	240	(8.0)	(11.2)	(4.0)	(0.0)	(24.8)	.(00)	(5.3)	(8.1)	(0.0)	(6.5)	(0.0)	(56.2)	
48-59 months	16.5	217	(1.7)	(16.3)	(7.5)	(0.0)	(16.7)	(0.0)	(3.8)	(0.0)	(0.0)	(1.9)	(0.0)	(42.2)	
<b>Mother's education</b>															
None	18.1	177	(10.8)	(8.6)	(8.3)	(0.0)	(15.6)	(0.0)	(2.9)	(5.8)	(0.0)	(5.5)	(0.0)	(49.1)	
Primary	18.7	815	6.3	14.8	3.3	0.0	25.8	0.0	5.4	2.9	0.0	3.9	0.0	53.2	
Secondary +	13.5	112	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	
<b>Wealth index</b>															
Low	24.6	160	(0.0)	(7.9)	(0.0)	(1.2)	(22.6)	(0.0)	(6.6)	(4.3)	(0.0)	(7.6)	(0.0)	(34.8)	
Medium	18.1	605	7.9	13.3	4.6	0.0	19.4	0.0	5.9	3.6	0.0	3.0	0.0	48.8	
High	14.9	341	8.5	17.9	0.0	0.0	45.2	0.0	0.0	1.3	0.0	3.0	0.0	80.3	
<b>Total</b>	<b>18.0</b>	<b>1106</b>	<b>6.5</b>	<b>13.4</b>	<b>4.4</b>	<b>0.0</b>	<b>26.6</b>	<b>0.0</b>	<b>4.6</b>	<b>3.2</b>	<b>0.0</b>	<b>3.9</b>	<b>0.0</b>	<b>54.1</b>	
Other; Includes village health worker or mobile/outreach clinic.															
<b>Note:</b> The percentages taken to various providers will not add to 100 since some children may have been taken to see more than one type of provider.															
(*) Based on less than 25 un-weighted cases, hence not shown.															
() Figures are based on 25 -49 un-weighted cases															

Table 6.7 (CH.7) presents the use of antibiotics for the treatment of suspected pneumonia cases among children below five years by background characteristics for Meru North district. Nearly half (48 per cent) of children under 5 years of age with suspected pneumonia received an antibiotic during the two weeks prior to the survey. The results indicate that nearly half of all mothers or caregivers who have children with suspected pneumonia take prompt action for treatment.

<b>Table 6.7 (CH.7): Antibiotic treatment of pneumonia</b>		
Percentage of children aged 0-59 months with suspected pneumonia who received antibiotic treatment, MICS Meru North district, 2008		
Characteristics	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
<b>Sex</b>		
Male	47.6	108
Female	48.7	92
<b>Age</b>		
0-11 months	(46.9)	24
12-23 months	41.4	47
24-35 months	56.7	49
36-47 months	(45.2)	43
48-59 months	(49.4)	36
<b>Mother's education</b>		
None	(49.8)	32
Primary	48.4	153
Secondary +	(*)	15
<b>Wealth index</b>		
Low	(45.1)	39
Medium	41.4	109
High	64.9	51
<b>Total</b>	<b>48.1</b>	<b>200</b>
(*) Based on less than 25 un-weighted cases, hence not shown. ( ) Figures are based on 25 -49 un-weighted cases		

Issues related to knowledge of danger signs of pneumonia are presented in Table 6.8 (CH.7A). Mothers' knowledge of the danger signs is an important determinant of care-seeking behaviour. Only 20 per cent of women know of the two danger signs of pneumonia – fast and difficult breathing—symptoms that are potential indicators of advanced levels of the infection among children. The most commonly identified symptom for taking a child to a health facility by the mother/caretaker is developing fever (81 per cent).

Twenty nine per cent of mothers/caretaker identified fast breathing and 28 per cent of mothers identified difficult breathing as symptoms for taking children immediately to a health care provider. This knowledge level show that nearly one third of women have good knowledge of the symptoms of pneumonia in the district.

**Table 6.8 (CH.7A): Knowledge of the two danger signs of pneumonia**

Percentage of mothers/caretakers of children aged 0-59 months by knowledge 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, MICS Meru North district, 2008

Characteristics	Percentage of mothers/caretakers of children aged 0-59 months who think that a child should be taken immediately to a health facility if the child:								Mothers/ caretakers who recognize the two danger signs of pneumonia(*)	Number of mothers/ caretakers of children aged 0-59 months
	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		
<b>Mother's education</b>										
None	19.6	29.2	79.1	31.6	30.0	17.9	21.3	51.4	19.3	177
Primary	34.0	28.6	80.8	27.9	26.8	21.0	24.3	58.6	19.7	815
Secondary +	22.3	29.4	84.4	35.0	33.4	20.8	21.8	59.6	25.3	112
<b>Wealth index</b>										
Low	32.5	29.0	82.6	30.8	20.2	20.7	24.5	58.8	17.1	160
Medium	31.9	29.9	80.7	29.1	27.2	20.1	25.6	58.4	21.5	605
High	26.8	26.6	80.4	28.3	32.9	20.8	19.3	55.7	19.2	341
<b>Total</b>	<b>30.4</b>	<b>28.8</b>	<b>80.8</b>	<b>29.1</b>	<b>27.9</b>	<b>20.4</b>	<b>23.5</b>	<b>57.6</b>	<b>20.1</b>	<b>1106</b>
(*) Percentage of mothers/caretakers who state fast and difficult breathing as signs for taking a child to a health facility immediately										
<b>Note:</b> The percentages will not add to 100 since some mothers/caretakers may have indicated more than one symptom.										

## 6.5 Solid Fuel Use

More than 3 billion people around the world rely on solid fuels (biomass and coal) for their basic energy needs, including cooking and heating. Cooking and heating with solid fuels leads to high levels of indoor smoke, a complex mix of health-damaging pollutants. The main problem with the use of solid fuels is products of incomplete combustion, including carbon monoxide (CO), polycyclic aromatic hydrocarbons, sulphur dioxide (SO<sub>2</sub>), and other toxic elements. Use of solid fuels increases the risks of acute respiratory illness, pneumonia, chronic obstructive lung disease, cancer, and possibly tuberculosis, low birth weight, cataracts and asthma. The primary indicator is the proportion of the population using solid fuels as the primary source of domestic energy for cooking.

Overall, the use of solid fuels for cooking is near universal in Meru North district, with 97 per cent of the households using them (Table 6.9 (CH.8)). Differentials with respect to household wealth index show that use of solid fuel is marginally lower among high wealth index households and higher among the others. The most common source of solid fuels is wood that is mostly required for cooking purposes.



**Table 6.9 (CH.8): Solid fuel use**

Percentage distribution of households according to type of cooking fuel, and percentage of households using solid fuels for cooking, MICS Meru North, 2008

Characteristic	Percentage of households using:									Solid fuels for cooking (*)	Number of households
	Liquified Petroleum Gas (LPG)	Natural Gas	Bio-gas	Kero-sene	Char-coal	Wood	Straw, shrub, grass	Other source	Total		
Education of household head											
None	2.9	0.0	0.0	0.0	8.4	88.3	0.4	0.0	100.0	97.1	371
Primary	0	0.1	0.2	0.8	8.1	88.9	0.2	1.6	100.0	97.3	664
Secondary +	2.9	0.6	0.0	6.4	15.1	75.6	0.0	0.0	100.0	90.7	115
Wealth index											
Low	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	100.0	201
Medium	0.0	0.0	0.0	0.0	1.4	97.7	0.5	0.4	100.0	99.6	576
High	3.7	0.4	0.4	3.4	25.4	64.8	0.0	2.3	100.0	90.2	377
Total	1.2	0.1	0.1	1.1	9.0	87.3	0.3	0.9	100.0	96.6	1154

## 6.6 Malaria

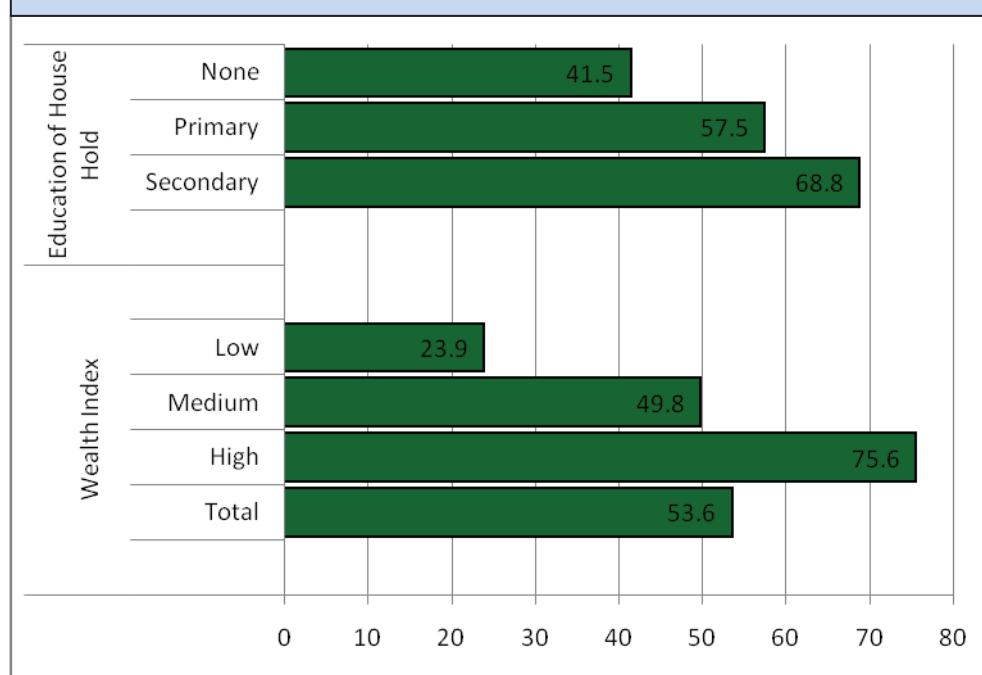
Malaria is one of the leading causes of death among children under age five. It also contributes to anaemia in children and is a common cause of school absenteeism. Preventive measures, especially the use of Insecticide Treated Mosquito Nets (ITNs) can dramatically reduce malaria mortality rates among 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. Also, children recovering from malaria should be given extra liquids and food while, for younger children, breastfeeding should continue.

In the survey, information was sought on the availability and use of bednets, both at household level and among children under five years of age, as well as anti-malarial treatment, and intermittent preventive treatment for malaria. The survey results indicate that 54 per cent of households have at least one insecticide treated net (Table 6.10 (CH.10)). Twenty three per cent of the households reported to have two or more mosquito nets and each household in Meru North district has an average of 2 mosquito nets. Use of mosquito nets is higher in households whose heads have higher levels of education and also among those grouped as high wealth index (see Figure 6.2).

**Table 6.10 (CH.10): Availability of insecticide treated nets**

Percentage of households with at least one insecticide treated net (ITN), Meru North district, 2008

Characteristics	Percentage of households with			Mean number of mosquito nets per household	Number of households
	at least one mosquito net	Two or more mosquito nets	at least one insecticide treated net (ITN)(*)		
Education of household head					
None	42.1	17.7	41.5	1.7	367
Primary	57.8	23.6	57.5	1.5	666
Secondary +	68.8	40.5	68.8	1.9	114
Wealth index					
Low	24.9	5.7	23.9	1.3	203
Medium	50.1	18.8	49.8	1.5	575
High	75.6	40.2	75.6	1.8	373
Total	53.9	23.4	53.6	1.6	1151

**Figure 6.2 Percentage of households with at least one treated mosquito net, MICS, Meru North, 2008**

In addition to collecting information on ownership of mosquito nets, MICS 2008 also collected information on the use of nets, by finding out how many children slept under bed nets. Results indicate that 47 per cent of children under the age of five slept under a mosquito net the night prior to the survey, while almost a similar number slept under insecticide treated nets (Table 6.11 (CH.11)). There were no significant gender disparities in ITN use among children under five.

<b>Table 6.11 (CH.11): Children sleeping under bed nets</b>							
Percentage of children aged 0-59 months who slept under an insecticide treated net during the previous night, Meru North district, 2008							
Characteristics	Percentage of children who:						Number of children aged 0-59 months
	Slept under a bed net	Slept 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 bed net	
<b>Sex</b>							
Male	45.7	45.5	0.2	0.0	0.0	54.3	543
Female	48.5	48.3	0.1	0.0	0.0	51.3	563
<b>Age</b>							
0-11 months	49.3	49.3	0.0	0.0	0.0	50.7	187
12-23 months	52.0	52.0	0.0	0.0	0.0	48.0	212
24-35 months	49.2	49.2	0.0	0.0	0.0	50.8	250
36-47 months	40.8	40.5	0.2	0.0	0.0	58.7	240.0
48-59 months	44.8	44.3	0.5	0.0	0.0	55.2	218
<b>Wealth index</b>							
Low	25.6	25.6	0.0	0.0	0.0	73.7	160
Medium	43.0	42.9	0.1	0.0	0.0	57.0	605
High	64.3	64.0	0.3	0.0	0.0	35.7	341
<b>Total</b>	<b>47.1</b>	<b>46.9</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>52.8</b>	<b>1106.0</b>

Questions on the prevalence and treatment of fever were asked for all children under age five. Slightly more than one in five (23 per cent) children under five years of age were ill with fever in the two weeks prior to the survey (Table 6.12 (CH.12)). Fever prevalence declined with age and peaked at 11-23 months. A slightly higher proportion of female children reported to have fever compared with their male counterparts. However, differentials by age, mother's education and wealth index remained comparable.

Mothers were asked to report all of the medicines given to a child to treat the fever, including both medicines given at home and medicines given or prescribed at a health facility.

Overall, only 56 per cent of children with fever in the last two weeks were treated with an "appropriate" anti-malarial drug and 43 per cent received anti-malarial drugs within 24 hours of onset of symptoms. Children belonging to mothers having education up to secondary or higher are more likely to receive an appropriate anti-malarial drug as well as receiving them within 24 hours of onset of symptoms. Results for wealth index show that children belonging to high wealth index are likely to receive any appropriate anti-malaria treatment as well as receiving them within 24 hours of onset of symptoms.

In addition, the most common anti-malarial drug given to children was amodiaquine, while paracetamol is the most common 'other medication' given to the children. Fifteen per cent of children with fever were given SP/fansidar and 22 per cent received amodiaquine. Only 10 per cent received artemisinin combination therapy. Additionally, 51 per cent of children were given other medicines that were not anti-malarials, including anti-pyretics such as paracetamol, aspirin, or ibuprofen.

Table 6.12 (CH.12) : Treatment of children with anti-malarial drugs														
Percentage of children aged 0-59 months who were ill with fever in the last two weeks who received anti-malarial drugs, Meru North district, 2008														
Characteristics	Had a fever in last two weeks	Number of children aged 0-59 months	Anti-malarials:							Other medications:				
			Fansidar	SP/Chloroquine	Amodiaquine	Quinine	Artemisinin based combination	Other anti-malarial	Any appropriate anti-malarial drug	Paracetamol / Panado / Acetaminophen	Aspirin	Ibuprofen	Other	Don't know
Sex														
Male	21.6	543	17.7	4.2	14.3	14.4	6.7	5.2	55.2	35.9	2.2	4.3	5.1	3.2
Female	23.4	563	11.9	1.4	29.4	5.8	12	4.1	57.2	34.4	2.5	9.4	8.4	2.7
Age														
0-11 months	15.4	187	(14.8)	(0.0)	(23.4)	(3.1)	(9.7)	(18.2)	(57.7)	(24.2)	(0.0)	(2.4)	(9.2)	(0.0)
12-23 months	28.2	212	9.1	6.1	23.8	15.6	5.7	2.6	60.0	28.7	1.6	7.0	7.9	1.0
24-35 months	22.1	250	20.2	2.9	25.0	14.5	4.7	5.3	61.3	48.2	1.4	21.7	10.1	1.9
36-47 months	21.8	240	18.0	0.0	31.1	2.8	11.3	1.8	54.7	36.0	8.0	0.0	4.0	5.2
48-59 months	24.2	217	11.5	2.9	8.4	9.4	16.9	1.5	47.5	33.7	0.0	1.1	3.7	5.5
Mother's education														
None	19.5	177	(4.9)	(0.0)	(13.8)	(14.6)	(13.5)	(2.7)	(49.5)	(30.2)	(5.4)	(1.7)	(10)	(3.0)
Primary	22.9	815	15.0	3.6	23.6	8.1	6.6	4.1	53.1	36.9	2.2	7.8	5.5	3.3
Secondary +	25.0	112	24.1	0.0	24.1	15.8	24.2	10.3	85.8	29.4	0.0	8.2	12.3	0.0
Wealth index														
Low	27.8	160	21.4	1.6	37.8	3.8	4.3	2.3	64.7	38.0	4.2	12.0	1.6	0.0
Medium	21.8	605	12.1	2.8	18.5	11.5	5.9	5.1	48.7	35.2	2.3	6.3	8.6	3.9
High	21.1	341	15.1	3.4	19.6	10.8	19.2	5.1	64.8	33.2	1.3	5.2	6.9	2.9
Total	22.5	1106	14.6	2.7	22.3	9.9	9.5	4.6	56.2	35.1	2.4	7.0	6.8	2.9
(*) The percentages given various drugs will not add to 100 since some children may have been given more than one type of drug. (*) : Based on less than 25 un-weighted cases, hence not shown. ( ) : Figures are based on 25 -49 un-weighted cases														

Pregnant women living in places where malaria is highly prevalent are four times more likely than other adults to get malaria and twice as likely to die from the disease. Once infected, pregnant women risk developing anemia, premature delivery and stillbirth. Their babies are likely to be of low birth weight, which makes them unlikely to survive their first year of life. For this reason, steps are taken to protect pregnant women by distributing insecticide-treated mosquito nets and treatment during antenatal check-ups with drugs that prevent malaria infection (Intermittent preventive treatment or IPT).

In Meru North district MICS, women were asked about any medicines they had received in their last pregnancy during the 2 years preceding the survey. Women are considered to have received intermittent preventive treatment if they have received at least 2 doses of SP/Fansidar during pregnancy. Intermittent preventive treatment for malaria in pregnant women who gave birth in the two years preceding the survey is presented in Table 6.13 (CH.13).

Forty five per cent of mothers who delivered a child during the two year period preceding the survey received medicine to prevent malaria during pregnancy. Twenty two per cent received SP/Fansidar only once while 12 per cent received fansidar two or more times. The differentials in wealth index show that the proportion of women using medicine to prevent malaria during pregnancy is highest among those from the high wealth index households and lowest for those from the low wealth index category.

Table 6.13 (CH.13): Intermittent preventive treatment for malaria							
Percentage of women aged 15-49 years who gave birth during the two years preceding the survey who received intermittent preventive therapy (IPT) for malaria during pregnancy, Meru North district, 2008							
Characteristics	Percentage of pregnant women who took:						Number of women who gave birth in prior two years
	Medicine to prevent malaria during pregnancy	SP/Fansidar only one time	SP/Fansidar two or more times(*)	Chloroquine	Other medicines	Don't know	
<b>Education</b>							
None	47.2	28.3	7.3	0	11.2	0	38
Primary	44.4	22	12.8	1.4	4	3.2	277
Secondary +	46.1	18	14.7	5.4	6.7	0	26
<b>Wealth index</b>							
Low	38.1	24.7	6.5	1.7	1	2.8	51
Medium	40.5	21.4	10.9	1.3	4.1	1.7	194
High	56.9	23.1	18.4	1.8	8.9	4.2	96
<b>Total</b>	<b>44.8</b>	<b>22.4</b>	<b>12.3</b>	<b>1.5</b>	<b>5</b>	<b>2.6</b>	<b>341</b>

## 7.1 Water

Safe drinking water is a basic necessity for good health. Unsafe drinking water can be a significant carrier of diseases such as cholera, typhoid, and schistosomiasis. Drinking water can also be tainted with chemical, physical and radiological contaminants which carry harmful effects on human health. In addition to its association with diseases, access to drinking water may be particularly important for women and children especially in rural areas, where they bear the primary responsibility for carrying water, often for long distances.

The MDG goal is to reduce by half the proportion of people without sustainable access to safe drinking water and basic sanitation by 2015. A World Fit for Children goal calls for a reduction in the proportion of households without access to hygienic sanitation facilities and affordable and safe drinking water by at least one-third.

The following indicators were used in MICS 2008 to assess the water and sanitation situation.

### Water

- Use of improved drinking water sources
- Use of adequate water treatment method
- Time to the source of drinking water
- Person collecting drinking water

### Sanitation

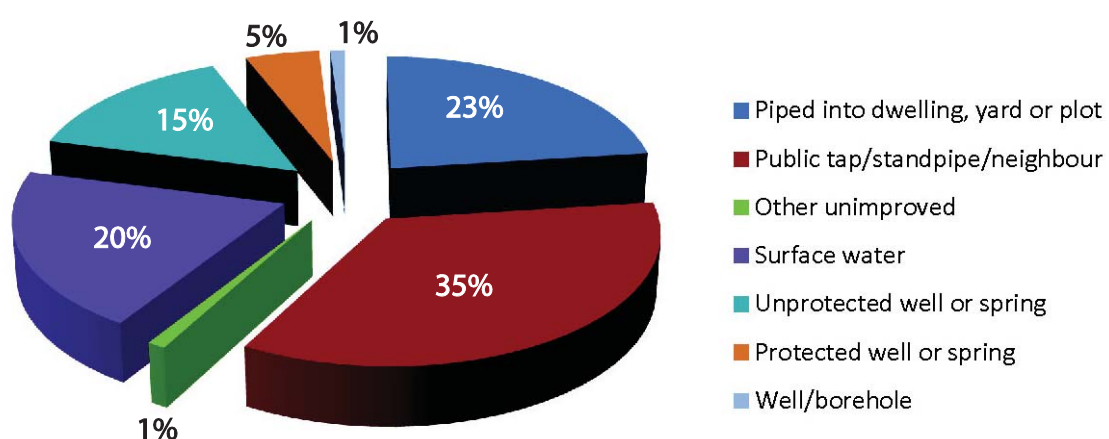
- Use of improved sanitation facilities
- Sanitary disposal of child's faeces

The distribution of the population by source of drinking water is shown in Table 7.1 (EN.1) and Figure 7.1. The population using improved sources of drinking water are those using any of the following types of supply: piped water (into dwelling, yard or plot), public tap/ standpipe, tube well/borehole, protected well, protected spring, stored rainwater. Bottled water is considered as an improved water source only if the household is using it for other purposes, such as hand washing and cooking. In Meru North district, 63 per cent of the population use an improved source of drinking water. The proportion using an improved source of drinking water increases with educational attainment of the household head.

Percentage distribution of household population according to main source of drinking water and percentage of household population using improved drinking water sources, Meru North district, 2008

## Environment

**Figure 7.1: Percentage distribution of households by source of drinking water, Meru North district, 2008**



Households were asked of ways they treat water at home to make it safer to drink (i.e. boiling, adding bleach or chlorine, using a water filter, and using solar disinfection are considered as proper treatment of drinking water). Use of in-house water treatment is presented in Table 7.2 (EN.2). About one in every three households drink appropriately treated water. Three per cent of the households reported adding chlorine or bleaching as a method for water treatment; while 35 per cent reported that they boil the drinking water.

The results show however that, over 64 per cent of the households in Meru North district do not treat drinking water that is used in the household.



**Table 7.2 (EN.2): Household water treatment**

Percentage distribution of household population according to drinking water treatment method used in the household, and percentage of household population that applied an appropriate water treatment method, Meru North district, Kenya 2008

Characteristics	Water treatment method used in the household					All drinking water sources		Improved drinking water sources		Unimproved drinking water sources	
	None	Boil	Add bleach/chlorine	Strain through a cloth	Use water filter	Let it stand and settle	Other	Appropriate water treatment method	Number of household members	Appropriate water treatment method	Number of household members
<b>Education of household head</b>											
None	74.9	22.8	2.8	0.3	0.0	0.0	0.0	25.1	1554	29.2	617
Primary	61.1	38.0	2.3	0.0	0.0	0.0	0.1	38.8	3192	45.3	1382
Secondary +	48.4	48.2	7.9	1.1	0.0	0.0	0.0	51.6	560	65.2	365
<b>Wealth index</b>											
Low	81.4	18.6	0.0	0.7	0.0	0.0	0.0	18.6	846	29.9	131
Medium	68	31.4	1.9	0.2	0.0	0.0	0.1	32.0	2698	31.3	920
High	49.3	47.1	6.3	0.0	0.0	0.0	0.1	50.6	1783	54.9	1317
<b>Total</b>	<b>63.9</b>	<b>34.6</b>	<b>3.0</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>36.1</b>	<b>5327</b>	<b>44.3</b>	<b>2368</b>

Note that multiple response categories may be used and responses may total to more than 100 per cent.

**2958**

Table 7.3 (EN.3) shows the time taken to fetch water and the person who usually fetches water. These results refer to one roundtrip from home to a drinking water source. Information on the number of trips made in one day was not collected. In Meru North district, 25 per cent of households have drinking water source within the premises.

For 19 per cent of all households, it takes less than 15 minutes to get to the water source and bring water; 14 per cent spend 15-30 minutes; 17 per cent spend 30-60 minutes. One quarter (25 per cent) of households spend more than one hour to get to the water source and bring water. Excluding those households with water on the premises, the average time to the source to bring drinking water is 51 minutes. The differentials by household characteristics show that, 16 per cent of households from medium wealth index have drinking water facility within their premises, while 52 per cent of households from high wealth index have the facility within their premises.

Table 7.3 (EN.3): Time to source of water									
Percentage 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, Meru North district, 2008									
Characteristics	Time to source of drinking water						Total	Mean time to source of drinking water(*)	Number of households
	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	Don't know			
<b>Education of household head</b>									
None	25.0	15.8	15.1	16.8	27.2	0.1	100.0	56.3	371
Primary	22.3	20.8	14.5	18.2	24.2	0.0	100.0	46.7	664
Secondary +	41.1	15.7	8.4	9.7	25.1	0.0	100.0	57.8	115
<b>Wealth index</b>									
Low	1.3	24.1	23.0	18.1	33.6	0.0	100.0	51.8	201
Medium	15.6	21.6	13.7	21.0	28.1	0.0	100.0	52.1	576
High	52.2	11.5	9.8	9.9	16.6	0.1	100.0	45.5	377
<b>Total</b>	<b>25.1</b>	<b>18.7</b>	<b>14.0</b>	<b>16.9</b>	<b>25.3</b>	<b>0.0</b>	<b>100.0</b>	<b>50.7</b>	<b>1154</b>
(*)The mean time to source of drinking water is calculated based on those households that do not have water on the premises.									

Table 7.4 (EN.3) shows that for the majority of households, an adult female is usually the person collecting the water, when the source of drinking water is not within the premises. Adult men collect water in only 7 per cent of cases. For 17 per cent of the cases, an adult female and a child below 15 years together collect the drinking water and in 7 per cent of the cases a male and a child below 15 years together collect drinking water. However, in 15 per cent of the cases, an adult female and an adult male member together collect the drinking water. For most of the households in Meru North district, it is the responsibility of women to provide water for the household especially in situations where there is no water within the household premises.

Table 7.4 (EN.4): Person collecting water									
Percentage distribution of households according to the person collecting drinking water used in the household, Meru North district, 2008									
Characteristics	Person collecting drinking water(*)								Number of households
	Adult woman	Adult man	Female child under age 15	Male child under age 15	Adult woman and child	Adult man and child	Adult man and woman	Don't know	
<b>Education of household head</b>									
None	68.6	6.1	7.9	8.3	9.6	1.5	2.5	0.0	371
Primary	70.3	7.7	8.2	3.5	8.9	0.5	1.5	0.0	664
Secondary +	57.2	3.5	6.1	1.5	6.8	0.5	2.2	0.0	115
<b>Wealth index</b>									
Low	89.5	7.5	11.9	9.7	13.7	1.3	1.0	0.0	201
Medium	77.8	6.8	8.2	4.9	9.5	1.1	1.7	0.0	576
High	43.0	6.1	5.2	2.2	5.5	0.2	2.6	0.0	377
<b>Total</b>	<b>68.5</b>	<b>6.7</b>	<b>7.9</b>	<b>4.9</b>	<b>8.9</b>	<b>0.9</b>	<b>1.9</b>	<b>0.0</b>	<b>1154</b>
(*)Total per cent may add to more than 100 due to multiple responses.									

## 7.2 Sanitation

Inadequate disposal of human excreta and personal hygiene is associated with a range of diseases including diarrhoea diseases and cholera. Improved sanitation facilities for excreta disposal include: flush or pour flush to a piped sewer system; septic tank; latrine; ventilated improved pit latrine; pit latrine with slab and composting toilet.

Fifty two per cent of the population of Meru North district live in households using improved sanitation facilities (Table 7.5 (EN.5)). The use of improved sanitation facilities is positively related with household wealth index. About 57 per cent of households in Meru North district have appropriate sanitation although some households use improved methods such as piped sewer system, pit latrines and composting toilet, while others are using traditional methods such as open pits, buckets, or hanging latrines. About 38 per cent of the population use pit latrines without slab or an open pit; this is the most common unimproved sanitation method. The most common improved sanitation method in the district is the ventilated improved pit latrine.



Safe disposal of a child's faeces is the act of disposing off stool from a child using a toilet or by rinsing the stool into a toilet or latrine. Disposal of faeces from children aged 0-2 years is presented in Table 7.6 (EN.6). In 87 per cent of the cases, stool of children aged 0-2 years is disposed off safely and majority reported putting the stool in the toilet/latrine as the mode of disposal.

**Table 7.6 (EN.6): Disposal of child's faeces**

Percentage 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, Meru North district, 2008

Characteristics	Place of disposal of child's faeces									Proportion of children whose stools are disposed of safely	Number of children aged 0-2 years
	Child used toilet	Put/rinsed into toilet or latrine	Put/rinsed into drain or ditch	Thrown into garbage	Buried	Left in the open	Other	Don't know/missing	Total		
Mother's education											
None	7.7	72.0	0.6	5.8	0.0	6.4	7.5	0.0	100.0	79.7	98
Primary	4.0	82.9	0.6	1.8	0.3	3.5	6.0	1.0	100.0	86.9	520
Secondary +	5.8	93.1	0.0	1.1	0.0	0.0	0.0	0.0	100.0	98.9	62
Wealth index											
Low	1.6	74.2	1.2	9	0.6	7.6	5.7	0.0	100.0	75.8	96
Medium	4.1	83.9	0.2	1.2	0.2	4.1	5.6	0.8	100.0	88.0	380
High	7.3	82.9	1.0	1.1	0	0.9	5.8	1.1	100.0	90.2	205
Total	4.7	82.2	0.6	2.3	0.2	3.6	5.7	0.8	100.0	86.9	681

Table 7.7 (EN.7) presents information on use of improved water sources and sanitation. About two out of three households use improved sources of drinking water and sanitary means of excreta disposal. The use of improved sources of drinking water and sanitation increases with household wealth index. For example, one in every five households belonging to low wealth index use improved sources of drinking water and sanitary means of excreta disposal as opposed to four in every five in case of high wealth index households.

Table 7.7 (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, Meru North district, 2008				
Characteristics	Percentage of household population:			Number of household members
	Using improved sources of drinking water	Using sanitary means of excreta disposal	Using improved sources of drinking water and using sanitary means of excreta disposal	
Education of household head				
None	61.9	92.2	56.4	1554
Primary	62.9	90.8	55.9	3192
Secondary +	78.3	88.0	66.2	560
Wealth index				
Low	39.3	73.5	22.3	846
Medium	58.5	94.7	54.1	2698
High	85.2	92.8	78.2	1783
Total	64.4	90.7	57.1	5327

This chapter presents information about fertility, marriage, contraception, unmet need for contraceptives and antenatal care collected in the Meru North district MICS 2008.

## 8.1 Fertility

Achieving national goals is directly linked to the fertility and resources available to support its population. Studies have shown that, in most of the developing countries resources are meagre to support their populations.

In MICS 2008, births histories from women aged 15-49 years from the sampled households were collected to measure the fertility level. Birth histories include details of all children ever born to a woman, such as child's name, sex, month and year of birth, survival status of child and if dead, the age at death.

Table 8.1 (RH.1) presents the estimates of current fertility levels for the three-year period preceding the survey, which corresponds to the period from mid-2005 to mid-2008. The current fertility as shown by the table is provided as the age-specific fertility rates (ASFRs) and total fertility rate (TFR). ASFR's are calculated by dividing the number of births to women in a specific age group by the number of years lived during a given period, the TFR is defined as the average number of children a woman would have if she went through her entire reproductive period (15-49 years) reproducing at the prevailing ASFR.

<b>Table 8.1 (RH.1): Fertility</b>	
Age specific fertility rates (ASFR) and total fertility rate (TFR) for the 3-year period preceding the survey, Meru North district, 2008	
Age group	Total
15-19	124
20-24	193
25-29	217
30-34	177
35-39	113
40-44	76
45-49	21
<b>TFR</b>	<b>4.6</b>
TFR: Total fertility rate for women age 15-49 years expressed per woman.	

The total fertility rate is 4.6 and the birth rate in this district peaks between age 25-29 years. An analysis of the age-specific fertility rates show that 45 per cent of the total fertility rate is contributed by women aged 20-29 years and the contribution of older women 40-49 years is less than 10 per cent. The contribution of adolescent age groups, i.e., 15-19 years to total fertility is about 13 per cent.

Table 8.2 presents the percentage distribution of all women and those currently married by number of ever born and living. It provides information on lifetime fertility. The mean number of children ever born to all women age 15-49 years is 3.1 and that of surviving children is 2.8. However, the mean number of children ever born to currently married women aged 15-49 years is 3.9 and that of surviving is 3.8. About 8 per cent of women aged 40-49 years who are currently married do not have any live births. The proportion of currently married women with no children in this age group is

a proxy indicator for the level of infertility. On the other hand, 29 per cent of the currently married women aged 45-49 years have 8 or more children ever born, representing previous high fertility regime in the district.

**Table 8.2: Children ever born and living**

Percentage distribution of all women and currently married women by number of children ever born, and mean number of children ever born and living, according to age groups, Meru North district, 2008

Age group	Number of children ever born										Number of women	Mean number of children	
	0	1	2	3	4	5	6	7	8+	Total		Ever born	Living
All women													
15-19	85.4	12.6	0.8	0.8	0.4	0.0	0.0	0.0	0.0	100.0	246	0.17	0.17
20-24	22.8	29.4	26.9	17.3	3.0	0.5	0.0	0.0	0.0	100.0	198	1.50	1.34
25-29	3.1	9.8	25.0	30.8	24.6	4.5	2.2	0.0	0.0	100.0	224	2.87	2.60
30-34	3.8	4.3	5.9	22.7	23.2	20.5	13.5	3.8	2.2	100.0	183	4.05	3.63
35-39	1.8	4.8	3.0	13.3	20.5	18.1	15.1	12.7	10.8	100.0	167	4.93	4.35
40-44	0.0	4.0	2.0	2.0	14.9	16.8	5.9	21.8	32.7	100.0	101	6.39	5.72
45-49	4.2	0.0	2.1	3.2	12.6	21.1	8.4	11.6	36.8	100.0	96	6.53	5.65
Total	22.8	10.8	10.8	14.3	13.7	9.5	5.7	5.0	7.4	100.0	1215	3.14	2.80
Currently Married Women													
15-19	13.3	78.6	4.9	3.3	0.0	0.0	0.0	0.0	0.0	100.0	27	1.0	.9
20-24	5.7	40.3	35.9	12.0	5.0	1.2	0.0	0.0	0.0	100.0	172	1.8	1.7
25-29	.5	9.8	27.5	34.2	16.8	9.7	1.6	0.0	0.0	100.0	164	3.0	2.8
30-34	2.9	5.3	6.4	23.8	22.6	22.1	7.6	7.0	2.3	100.0	125	4.1	4.0
35-39	2.9	5.3		12.9	9.5	16.9	23.8	15.4	13.3	100.0	103	5.6	5.4
40-44	4.6	1.7	1.1	15.9	11.8	14.2	9.5	22.3	19.0	100.0	80	6.5	6.3
45-49	2.9		2.7	5.2	18.6	16.3	14.8	10.9	28.6	100.0	61	7.0	6.9
Total	3.6	16.4	16.2	18.6	13.0	11.5	7.3	6.7	6.7	100.0	732	3.9	3.8

## 8.2 Teenage Pregnancy and Motherhood

Reducing the number of pregnancies among adolescents is one of the flagship programs of the Government of Kenya. Information regarding teenage pregnancy and motherhood is presented in Table 8.3 by selected background characteristics. Eighteen per cent of women aged 15-19 years have given birth to at least one child. The proportion having a live birth by women's age is higher among the older age groups. While only 2 per cent of the teenagers are pregnant with the first child, nearly 2 per cent are pregnant with the first child by age 15. The proportion that has begun childbearing by age rises from about 2 per cent by age 15 to 47 per cent by exact age 19.

The proportion of those initiating childbearing decreases with increasing levels of education. However, proportional differences in the levels of teenagers initiating childbearing show higher levels among those from medium wealth index households (25 per cent) versus those from the low wealth index households (11 per cent).



<b>Table 8.3: Teenage pregnancy and motherhood</b>				
Percentage of women aged 15-19 years who are mothers or pregnant with their first child and percentage who have begun child bearing, Meru North district, 2008				
Characteristics	Percentage who		Percentage who	Number of
	Have had a live birth	Are pregnant with first child	have begun child bearing	women
<b>Age</b>				
15	0.0	1.8	1.8	43
16	10.8	0.0	10.8	51
17	4.4	1.5	5.9	41
18	28.2	5.3	33.4	51
19	45.3	2.0	47.2	39
<b>Education</b>				
None	55.1	0.0	55.1	10
Primary	18.0	2.7	20.7	175
Secondary +	6.2	0.0	6.2	40
<b>Wealth index</b>				
Low	8.9	2.2	11.0	36
Medium	21.7	3.6	25.4	111
High	15.6	0.0	15.6	79
<b>Total</b>	<b>17.6</b>	<b>2.1</b>	<b>19.7</b>	<b>225</b>
(*): Based on less than 25 un-weighted cases. (:): Figures are based on 25 -49 un-weighted cases.				

### 8.3 Contraception

Appropriate family planning is important to the health of women and children as it has many benefits. First an appropriate family planning prevents pregnancies that are too early or too late. Secondly, it helps to space the period between births, and thirdly family planning enables a couple to control the number of children they desire. A World Fit for Children goal is to ensure access by all couples to information and services to prevent pregnancies that are too early, too closely spaced, too late or too many.

Information on current use of contraception among currently married women of reproductive age is presented in Table 8.4 (RH.1). About 51 per cent of currently married women are using any method of contraception. About half of currently married women use any modern method with only 1 per cent relying on traditional methods. The most popular method is the injection (38 per cent) followed by pill (8 per cent).

The use of any method of contraception in this district declines with age. About 60 per cent of married women aged 15-19 use modern methods of contraception, compared to only 27 per cent among women aged 45-49. The use of injections is also popular among younger women. Nearly 48 per cent of women in the age group 15-19 and 49 per cent from 20 -24 age group use injections. The use of contraception increases by education and also by household wealth index.

Table 8.4 (RH.1): Use of contraception																		
Percentage of women aged 15-49 years currently married or in union who are using (or whose partner is using) a contraceptive method, Meru North district, 2008																		
Percentage of women (currently married or in union) who are using:																		
Not using any method		Female sterilization	Male sterilization	Pill	IUD	Injections	Implants	Condom	Female condom	Diaphragm/foam/jelly	LAM	Periodic abstinence	Other	Total	Any modern method	Any traditional method	Any method(*)	Number of women
Characteristics																		
Age																		
15-19	(39.6)	(0.0)	(0.0)	(4.8)	(0.0)	(47.9)	(0.0)	(7.8)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	100.0	(60.4)	(0.0)	(60.4)	27
20-24	39.5	0.0	0.4	10.7	0.0	48.8	0.3	0.0	0.0	0.3	0.0	0.0	0.0	100.0	60.5	0.0	60.5	172
25-29	47.4	0.7	0.0	7.4	2.0	40.4	0.9	0.0	0.0	0.0	1.2	1.2	0.0	100.0	51.4	1.2	52.6	164
30-34	39.6	0.4	0.0	7.7	3.3	43.4	1.9	1.2	0.0	1.2	1.2	1.2	0.0	100.0	59.2	1.2	60.4	125
35-39	57.9	0.0	0.0	6.3	0.0	33.6	0.7	0.7	0.0	0.0	0.8	0.8	0.0	100.0	41.3	0.8	42.1	103
40-44	61.7	0.5	0.0	10.0	0.0	18.8	1.3	0.0	0.0	1.1	6.6	6.6	0.0	100.0	31.7	6.6	38.3	80
45-49	72.9	2.1	0.0	6.4	5.0	13.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	27.1	0.0	27.1	61
Number of living children (*)(*)																		
0	88.9	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	(*)	(*)	27
1	41.5	0.0	0.6	6.0	1.5	45.6	2.3	1.5	0.0	0.4	0.6	0.0	0.0	100.0	57.9	0.6	58.5	128
2	39.4	0.9	0.0	11.6	0.5	46.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	100.0	60.6	0.0	60.6	115
3	43.5	1.2	0.0	8.4	1.0	41.5	0.5	0.0	0.0	0.5	3.4	0.0	0.0	100.0	53.2	3.4	56.5	147
4+	55.0	0.2	0.0	7.7	2.0	32.3	0.5	0.5	0.0	0.5	1.3	0.9	0.0	100.0	43.8	1.3	45.0	315
Education																		
None	64.0	0.6	0.0	5.6	0.0	20.6	3.2	1.0	0.7	4.4	1.0	0.0	0.0	100.0	31.7	4.4	36.0	121
Primary	48.0	0.3	0.1	8.9	1.4	40.0	0.2	0.4	0.3	.05	0.4	0.5	0.0	100.0	51.5	0.5	52.0	547
Secondary +	30.9	1.6	0.0	7.1	4.8	48.8	2.0	1.2	0.8	2.6	1.2	0.5	0.0	100.0	66.5	2.6	69.1	63
Wealth index																		
Low	67.0	0.0	0.0	7.2	0.0	25.0	0.0	0.8	0.0	0.0	0.8	1.1	0.0	100.0	33.0	0.0	33.0	81
Medium	52.3	0.5	0.2	7.3	1.3	37.1	0.0	0.4	0.2	0.6	0.4	0.0	0.0	100.0	47.0	0.6	47.7	367
High	39.8	0.6	0.0	9.6	2.0	41.8	2.2	0.7	0.8	2.6	0.7	0.0	0.0	100.0	57.6	2.6	60.2	284
Total	49.1	0.5	0.1	8.2	1.4	37.6	0.8	0.6	0.0	0.4	1.3	0.4	0.0	100.0	49.6	1.3	50.9	732
<b>Note:</b> Male sterilization, female condoms and withdrawal method are used by less than 0.05 per cent and are not shown. (*) : Based on less than 25 un-weighted cases, hence not shown. ( ) : Figures are based on 25 -49 un-weighted cases																		

## 8.4 Unmet Need

Unmet need<sup>7</sup> for contraception refers to fecund women who are not using any method of contraception, but who wish to postpone the next birth or who wish to stop childbearing altogether. Unmet need is identified in MICS 2008 by using a set of questions eliciting current behaviours and preferences pertaining to contraceptive use, fecundity, and fertility preferences.

Women with an unmet need for spacing includes women who are currently married (or in union), fecund (are currently pregnant or think that they are physically able to become pregnant), currently not using contraception, and want to space their births. Pregnant women are considered to want to space their births when they did not want the child at the time they got pregnant. Women who are not pregnant are classified in this category if they want to have another child, but want to have the child at least two years later, or after marriage.

Women with an unmet need for limiting are those who are currently married (or in union), fecund (are currently pregnant or think that they are physically able to become pregnant), currently not using contraception, and want to limit their births. The latter group includes women who are currently pregnant but had not wanted the pregnancy at all, and women who are not currently pregnant but do not want to have another child. Total unmet need for contraception is simply the sum of unmet need for spacing and unmet need for limiting.

Table 8.5(RH.2) shows the results of the survey on contraception, unmet need, and the demand for contraception satisfied. Percentage of demand for contraception satisfied is defined as the proportion of women currently married or in union who are currently using contraception out of the total demand for contraception. The total demand for contraception includes women who currently have an unmet need (for spacing or limiting), plus those who are currently using contraception.

The unmet need for contraception is about 3 per cent in Meru North district. Overall, among those wanting to use contraception, 94 per cent are currently using them or their demands are met. Differentials by wealth index show that a higher proportion of women with an unmet need are from the low wealth index households compared with women from the high wealth index households.

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<sup>7</sup> Unmet need measurement in MICS is somewhat different than that used in other household surveys, such as the Demographic and Health Surveys (DHS). In DHS, more detailed information is collected on postpartum amenorrhoea, and sexual activity. Results from the two types of surveys are strictly not comparable.

**Table 8.5 (RH.2): Unmet need for contraception**

Percentage of women aged 15-49 years currently married or in union with an unmet need for family planning and percentage of demand for contraception satisfied, Meru North district, 2008

Characteristics	Current use of contraception	Unmet need for contraception			Number of women currently married or in union	Percentage of demand for contraception satisfied	Number of women currently married or in union with need for contraception
		For spacing	For limiting	Total			
Age							
15-19	60.4	(*)	(*)	16.1	27	79.0	20
20-24	60.5	(2.7)	(0.0)	2.7	172	95.7	109
25-29	52.6	(0.4)	(2.6)	2.9	164	94.7	91
30-34	60.4	(3.5)	(0.5)	2.9	125	93.9	80
35-39	42.1	(*)	(*)	4.0	103	87.2	50
40-44	38.3	(*)	(*)	6.2	80	100	31
45-49	(27.1)	(*)	(*)	0.0	61	(100)	17
Education							
None	36.0	0.0	0.6	0.6	121	98.3	44
Primary	52.0	2.5	1.8	4.3	547	92.4	308
Secondary +	69.1	1.3	0.0	1.3	63	98.1	45
Wealth index							
Low	33.0	4.6	2.4	7.0	81	82.5	32
Medium	47.7	1.7	0.9	2.5	367	94.9	184
High	60.2	1.6	1.9	3.5	284	94.4	181
Total	50.9	2.0	1.4	3.4	732	93.7	397

Unmet need for spacing is defined as women who are fecund and not currently using contraception and want to space their births. Unmet need to limit is defined as women who are fecund and not currently using contraception and want to limit their births. Proportion of demand satisfied is defined as the proportion of currently married or in union women who are currently using contraception of the total demand for contraception.

(\*): Based on less than 25 un-weighted cases.

( ): Figures are based on 25 -49 un-weighted cases

## 8.5 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 infants. 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 inform 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 sexually transmitted infections (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 to prevent infections (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 care services.

WHO recommends a minimum of four antenatal visits based on a review of the effectiveness of different models of antenatal care. WHO guidelines are specific on the content of antenatal care visits, which include:

- Blood pressure measurement
- Urine testing for bacteriuria and proteinuria
- Blood testing to detect syphilis and severe anemia
- Weight/height measurement (optional)

The type of personnel providing antenatal care to women aged 15-49 years who gave birth in the two years preceding the survey are presented in Table 8.6 (RH.3). Coverage of antenatal care by any skilled personnel (a doctor, nurse, or midwife) is relatively high in Meru North district with 91 per cent of women receiving antenatal care at least once during the pregnancy.

About 7 per cent of women who gave birth in the two years preceding the survey did not receive any antenatal care at all. For women receiving antenatal care, majority got care from doctors (58 per cent) and midwives (34 per cent).

Table 8.6 (RH.3): Antenatal care provider								
Percentage distribution of women aged 15-49 who gave birth in the two years preceding the survey by type of personnel providing antenatal care, MICS Meru North district, Kenya 2008								
Characteristics	Person providing antenatal care(*)					Total	Antenatal care by any skilled personnel (*)	Number of women who gave birth in the preceding two years
	Medical doctor	Nurse/ midwife	Traditional birth attendant	Other	No antenatal care			
Age								
15-19	45.9	50.3	0.0	0.0	3.8	100	96.2	30
20-24	59.1	34.5	0.8	1.3	4.2	100	93.7	111
25-29	65.4	29.1	0.0	0.0	5.5	100	94.5	89
30-34	61.1	31.9	1.0	0.0	6.0	100	92.9	56
35-39	39.9	36.7	1.6	2.2	19.6	100	76.6	38
40-44	55.4	25.8	0.0	0.0	18.8	100	81.2	14
45-49	41.5	19.7	0.0	0.0	38.7	100	61.3	3
Education								
None	57.1	27.2	2.2	0.0	13.5	100.0	84.3	38
Primary	57.4	34.3	0.9	0.3	7.0	100.0	91.7	277
Secondary +	58.3	38.8	0.0	0.0	2.9	100.0	97.1	26
Wealth index								
Low	51.9	31.5	1.7	0.0	13.3	100.0	83.3	51
Medium	57.5	32.9	0.3	0.7	8.5	100.0	90.4	194
High	60.4	36.9	0.6	0.0	2.0	100.0	97.3	96
Total	57.5	33.8	0.4	0.7	7.4	100.0	91.3	341
(*) Skilled health personnel include doctors, nurses, midwives, and auxiliary midwives.								
(*) (*) If the respondent mentioned more than one provider, only the most qualified provider is considered								

Table 8.7 (RH.4) shows the types of antenatal care services that pregnant women received in Meru North district. Among women who gave birth to a child during the two years preceding the survey, 84 per cent reported that their blood sample was taken during antenatal care visits, 84 per cent reported that their blood pressure was checked, 60 per cent reported that urine specimen were taken, and 89 per cent had weight measurements taken..

Overall, younger pregnant women are more likely to receive most of the services compared to their older counterparts. The differentials by education level of mothers clearly show an increasing proportion of those receiving all the different types of services with increasing levels of education. Similarly, the proportion of women receiving all services increases with increasing levels of the household wealth index.

<b>Table 8.7 (RH.4): Antenatal care</b>						
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, MICS Meru North district, 2008						
Characteristics	Percentage of pregnant women receiving ANC one or more times during pregnancy	Percentage of pregnant women who had:				Number of women who gave birth in two years preceding survey
		Blood test taken(*)	Blood pressure measured(*)	Urine specimen taken(*)	Weight measured(*)	
<b>Age</b>						
15-19	96.2	94.4	88.4	48.5	93.6	30
20-24	95.8	91.7	85.3	65.7	92.1	111
25-29	94.5	79.2	87.4	60.6	92.5	89
30-34	94.0	86.4	88.5	69.3	91.7	56
35-49	79.7	70.7	71.4	45.4	74.2	55
40-44	81.2	64.8	70.7	32.4	70.7	14
45-49	61.3	61.3	61.3	39.5	61.3	3
<b>Education</b>						
None	86.5	79.3	77.5	55.5	80.6	38
Primary	93.0	83.9	84.7	58.9	90.0	277
Secondary +	97.1	97.1	90.7	80.8	95.0	26
<b>Wealth index</b>						
Low	86.7	76.7	78.4	50.1	81.5	51
Medium	91.5	81.2	82.1	56.8	88.0	194
High	98.0	95.1	92.2	72.4	96.3	96
<b>Total</b>	<b>92.6</b>	<b>84.4</b>	<b>84.4</b>	<b>60.2</b>	<b>89.4</b>	<b>341</b>
(*) Proportions are calculated separately: Total number of women weighed, blood pressure measured, gave urine sample, and gave blood sample.						
(*) : Based on less than 25 un-weighted cases.						
() : Figures are based on 25 -49 un-weighted cases						

## 8.6 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 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 the proportion of institutional deliveries. The skilled attendant at delivery indicator is also used to track progress towards the Millennium Development target of reducing maternal mortality ratio by three quarters between 1990 and 2015.

The MICS 2008 included a number of questions to assess the proportion of births attended to by a skilled attendant. A skilled attendant includes a doctor, nurse, midwife or auxiliary midwife. Table 8.8 (RH.5) shows the distribution of women aged 15-49 with a birth in the two years preceding the survey by type of personnel assisting at delivery.

Majority of the women (62 per cent) who had births during the two year preceding the MICS 2008, were assisted by skilled attendants. In addition, 61 per cent of the births were delivered in a health facility. Younger women are more likely to deliver in a health facility or to be assisted by skilled attendant compared to older women. Delivery in a health facility increases with increasing levels of education of the woman and also by increasing levels of the household wealth index. The most common skilled health personnel attending births include nurses or midwives (38 per cent) followed by doctors (25 per cent). Only 4 per cent of deliveries were assisted by a traditional birth attendant while about 29 per cent of deliveries are attended too by either a relative or friend. A smaller number (three per cent) of the deliveries were unassisted.

**Table 8.8 (RH.5): Assistance during delivery**

Percentage distribution of women aged 15-49 with a birth in two years preceding the survey by type of personnel assisting at delivery, MICS Meru North district, 2008

Characteristics	Person assisting at delivery							Total	Any skilled personnel (*)	Delivered in health facility	Number of women who gave birth in preceding two years
	Medical doctor	Nurse/ midwife	Traditional birth attendant	Community health worker	Relative /friend	Other	No attendant				
<b>Age</b>											
15-19	(36.6)	(56.4)	(1.8)	(0)	(5.2)	(0)	(0)	100	(93)	(93)	30
20-24	28.3	51.0	1.7	0.0	17.2	1.2	0.6	100	79.3	77.8	111
25-29	31.1	23.7	4.8	0.0	37.5	0.7	2.3	100	54.8	53.3	89
30-34	14.2	30.8	9.1	1.0	38.9	1.1	4.9	100	44.9	43.4	56
35-49	13.1	29.1	4.0	1.1	39.4	3.7	9.6	100	42.2	42.2	55
40-44	17.0	25.8	0.0	0.0	44.2	3.6	9.4	100	42.9	42.9	14
45-49	0.0	0.0	39.5	0.0	40.8	0.0	19.7	100	0.0	0.0	3
<b>Education</b>											
None	20.8	31.4	5.0	0.0	40.1	1.4	1.4	100	52.2	52.2	38
Primary	23.4	37.5	4.4	0.4	29.2	1.5	3.7	100	60.8	59.4	277
Secondary +	(48.9)	(45.8)	(0)	(0)	(5.3)	(0)	(0)	100	(94.7)	(94.7)	26
<b>Wealth index</b>											
Low	11.9	27.1	8.8	0.0	46.1	0.0	6.2	100	38.9	37.8	51
Medium	27.9	31.2	4.9	0.3	31.2	1.6	2.8	100	59.1	57.8	194
High	25.9	55.7	0.0	0.6	14.1	1.6	2.1	100	81.6	80.7	96
<b>Total</b>	<b>25.0</b>	<b>37.5</b>	<b>4.1</b>	<b>0.4</b>	<b>28.6</b>	<b>1.3</b>	<b>3.1</b>	<b>100</b>	<b>62.4</b>	<b>61.3</b>	<b>341</b>

(\*) Skilled health personnel include doctors, nurses, midwives, and auxiliary midwives.

(\*): Based on less than 25 un-weighted cases.

( ): Figures are based on 25 -49 un-weighted cases

## 9.1 Child Learning

It is well recognized that a period of rapid brain development occurs in the first 3-4 years of life, and the quality of home care is a 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.

In about three out of five children (58 per cent) below five years, an adult engaged in about four activities that promote learning and school readiness during the 3 days preceding the survey (Table 9.1 (CD.1)). The average number of activities that adults engaged in with children was 4, with 58 per cent of household members engaging children in some of the above mentioned activities.

The table also indicates that the father's involvement in such activities was somewhat limited. Father's involvement with one or more activities was only 28 per cent, with an average of 0.6 activities. This may be partially explained by the observation that a considerable proportion of children (27 per cent) were living in a household without their natural fathers.



**Table 9.1 (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 ,MICS Meru North district, 2008

Characteristics	Percentage of children aged 0-59 months					Number 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 engaged in with the child	Living in a household without their natural father	
<b>Sex</b>						
Male	59.7	4.0	31	0.6	28.3	543
Female	56.9	3.8	24.1	0.5	25.4	563
<b>Age</b>						
0-23 months	25.1	2.6	18.7	0.3	24.4	415
24-59 months	78.2	4.7	32.8	0.7	28.3	691
<b>Mother's education</b>						
None	58.2	3.9	21.9	0.4	41.8	177
Primary	57.1	3.8	28.3	0.6	22.0	815
Secondary +	68.1	4.4	30.6	0.8	37.1	112
<b>Father's education</b>						
None	56.9	3.9	30.9	0.7	0.0	117
Primary	57.7	3.9	36.6	0.7	0.0	591
Secondary +	60.6	4.0	36.7	0.9	0.0	96
Father not in HH	59.6	3.9	4.9	0.1	100.0	297
<b>Wealth index</b>						
Low	58.3	3.8	18.0	0.3	35.6	160
Medium	54.6	3.8	24.9	0.5	27.2	605
High	64.8	4.1	36.6	0.9	21.9	341
<b>Total</b>	<b>58.3</b>	<b>3.9</b>	<b>27.5</b>	<b>0.6</b>	<b>26.8</b>	<b>1106</b>
* Any adult has engaged in 4 or more activities to promote learning and school readiness in the past 3 days.						
** Father has provided one or more activities to promote learning and school readiness.						

### 10.1 Pre-school Attendance and School Readiness

Pre-school education attendance in an organized learning or child education program is important for the readiness of children to further schooling. One of the World Fit for Children goals is the promotion of early childhood education. Twenty five per cent of children aged 36-59 months are attending pre-school (Table 10.1 (ED.1)). Forty five per cent of children living in high wealth index households attend pre-school compared to less than 20 per cent of children from low wealth index households.

**Table 10.1 (ED.1): Early childhood education**

Percentage of children aged 36-59 months who are attending some form of organized early childhood education programme and percentage of first graders who attended pre-school, MICS Meru North district, 2008

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 preschool program in previous year	Number of children attending first grade
<b>Sex</b>				
Male	(23.6)	207	(61)	41
Female	(26.1)	232	(78.2)	38
<b>Age of child</b>				
36-47 months	(*)	229	(*)	(*)
48-59 months	(*)	210	(*)	(*)
6 years*	(*)	(*)	69.2	79
<b>Mother's education</b>				
None	32.5	78	(*)	10
Primary	21.9	321	(*)	65
Secondary +	(*)	39	(*)	4
<b>Wealth index</b>				
Low	(*)	65	(*)	8
Medium	(18.4)	234	(64.0)	41
High	(44.9)	140	(82.4)	30
<b>Total</b>	<b>24.9</b>	<b>439</b>	<b>69.2</b>	<b>79</b>
(*) Based on less than 25 un-weighted cases.				
() Based 25-50 un-weighted cases				

The proportion of children in the first grade of primary school who attended pre-school the previous year is an important indicator of school readiness. Overall, 69 per cent of children who are currently aged 6 and attending the first grade of primary school were reportedly attending pre-school the previous year. The proportion among males is much lower (61 per cent) than females (78 per cent).

## 10.2 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.

The following indicators are used to track the achievement of this goal at primary and secondary levels respectively.

- 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)

The indicators of school progression include:

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

Table 10.2 (ED.2) shows the distribution of children of primary school entry (6 years old) in the district at the time of survey. Fifty six per cent of children of primary school entry were attending the first grade of primary school. More female children were attending the first grade (57 per cent) compared with male children (55 per cent). The proportion of children attending primary school improves with increasing levels of the household wealth index and education level of the mother.

<b>Table 10.2 (ED.2): Primary school entry</b>		
Percentage of children of primary school entry age (6 years old) attending grade 1, MICS Meru North district, 2008		
Characteristics	Percentage of children of primary school entry age currently attending grade 1	Number of children of primary school entry age
<b>Sex</b>		
Male	55.4	84
Female	56.8	79
<b>Mother's education</b>		
None	(37.8)	35
Primary	60.3	121
Secondary +	(*)	6
<b>Wealth index</b>		
Low	(36.7)	31
Medium	52.3	87
High	(76.5)	45
<b>Total</b>	<b>56.0</b>	<b>163</b>
(): Based on 25-50 un-weighted cases. (* ) Based on less than 25 un-weighted cases.		

Table 10.3 (ED.3) provides the percentage distribution of children of primary school age attending primary or secondary school. The majority of children of primary school age are attending school (88 per cent). Female children have a slight advantage over their male counterparts, with attendance rates of 90 and 87 per cent, respectively. Attendance ratios are on average high for all children irrespective of the education levels of the mother but slightly higher if the mother is more educated. A similar pattern is observed for attendance ratios by household wealth index. Overall, about 12 per cent of children in Meru North are not attending primary school when they should be attending.

<b>Table 10.3 (ED.3): Primary school net attendance ratio</b>						
Percentage of children of primary school age (6 – 13 years) attending primary or secondary school (NAR), MICS Meru North district, 2008						
Characteristics	Net attendance ratio*			Number of children		
	Male	Female	Total	Male	Female	Total
<b>Age</b>						
6	61.3	60.6	60.9	84	79	163
7	72.5	80.0	76.2	79	79	157
8	89.3	93.7	91.4	87	79	166
9	92.9	94.5	93.8	72	93	164
10	94.6	95.8	95.1	100	68	167
11	98.6	98.9	98.8	62	71	133
12	95.6	96.9	96.3	61	67	128
13	92.0	99.1	95.6	74	76	150
<b>Mother's education</b>						
None	82.8	90.6	86.5	165	150	315
Primary	88.0	88.9	88.5	425	419	844
Secondary +	89.5	93.8	92.1	26	40	66
<b>Wealth index</b>						
Low	81.5	85.6	83.4	113	101	214
Medium	85.7	85.8	85.7	307	305	612
High	90.7	97.4	94.1	197	205	402
<b>Total</b>	<b>86.5</b>	<b>89.7</b>	<b>88.2</b>	<b>618</b>	<b>610</b>	<b>1229</b>
* The primary school net attendance ratio (NAR) is the percentage of children of primary school age that are attending primary or secondary school. Children of primary school age (6-13 years) currently attending primary or secondary school are included in the numerator. All children of primary school age are included in the denominator.						

The secondary school net attendance ratio is presented in Table 10.4 (ED.4). Only 15 per cent of children of secondary school age (14 - 17 years) are actually attending secondary school in the district. The remaining 85 per cent are either out of school or attending primary school. Gender differentials in secondary school attendance are very apparent and in favour of girls. Twenty one per cent of secondary school age females are in secondary schools compared with only 9 per cent of males. As expected, the higher the socio-economic status of the household, the higher the proportion of children attending secondary schools.

**Table 10.4 (ED.4): Secondary school net attendance ratio**

Percentage of children of secondary school age (14 – 17 years) attending secondary school or higher (NAR), MICS Meru North district, Kenya 2008

Characteristics	Net attendance ratio			Number of children		
	Male	Female	Total	Male	Female	Total
<b>Age</b>						
14	3.0	9.3	6.4	68	77	145
15	6.1	22.6	14.7	53	58	110
16	8.3	25.3	17.8	54	68	122
17	25.0	27.8	26.8	33	59	92
<b>Mother's education</b>						
None	9.8	17.7	13.5	70	61	131
Primary	7.6	16.2	12.7	106	154	259
Secondary +	(*)	(*)	(*)	9	16	25
Mother not in HH	4.7	24.8	16.5	22	31	53
<b>Wealth index</b>						
Low	1.3	1.5	1.4	34	39	73
Medium	5.5	10.7	8.4	107	130	237
High	17.5	42.0	31.8	67	94	160
<b>Total</b>	<b>8.7</b>	<b>20.5</b>	<b>15.3</b>	<b>208</b>	<b>262</b>	<b>470</b>
* The secondary school net attendance ratio (NAR) is the percentage of children of secondary school age that are attending secondary school or higher. Children of secondary school age currently attending secondary school or higher are included in the numerator. All children of secondary school age are included in the denominator.						

Table 10.5 (ED.4W) presents the proportion of secondary school-age children (14-17 years) who are attending primary school. Two out of five (46 per cent) children of secondary school age are attending primary school. The proportion is higher among males compared to female children (46 versus 36 per cent respectively). This indicates high levels of late entry into primary school or high proportion of children repeating classes.

The proportion of secondary school-age children (14-17 years) who are attending primary school declines with increasing levels of education of the mother as well household wealth index.

<b>Table 10.5 (ED.4w): Secondary school age children attending primary school</b>						
Percentage of children of secondary school age (14 – 17 years) attending primary school, MICS Meru North district, 2008						
Characteristics	Percentage attending primary school			Number of children		
	Male	Female	Total	Male	Female	Total
<b>Age</b>						
14	72.1	53.5	62.2	68	77	145
15	38.4	34.6	36.4	53	58	110
16	35.1	19.3	26.2	54	68	122
17	23.5	31.6	28.7	33	59	92
<b>Mother's education</b>						
None	54.4	43.7	49.4	70.0	61.0	131.0
Primary	46.8	38.7	42.0	106.0	154.0	259.0
Secondary +	(*)	(*)	(*)	9.0	16.0	25.0
Mother not in HH	24.3	8.9	15.3	22.0	31.0	53.0
<b>Wealth index</b>						
Low	49.2	44.0	46.4	34.0	39.0	73.0
Medium	53.3	40.3	46.2	107.0	130.0	236.8
High	33.3	25.5	28.7	67.0	94.0	160.0
<b>Total</b>	<b>46.2</b>	<b>35.5</b>	<b>40.3</b>	<b>208.0</b>	<b>262.0</b>	<b>470.0</b>
* Children of secondary school age currently attending primary school are included in the numerator. All children of secondary school age are included in the denominator. (*): Based on less than 25 un-weighted cases. (): Based on 25-50 un-weighted cases						

The ratio of girls to boys attending primary and secondary education is provided in Table 10.6 (ED.7). These ratios are also known as the Gender Parity Index (GPI). The ratios included here are obtained from net attendance ratios rather than gross attendance ratios. The gender parity index for primary school is close to 1.04, indicating not much of a difference in the attendance of girls and boys to primary school. However, the indicator increases to 2.37 for secondary education, indicating more girls attending secondary schools compared to boys. At secondary school level, the attendance ratio (GPI) increases with the level of wealth index of the household and educational level of the mother. However, a very striking difference is observed in the school attendance for boys with respect to the household wealth index, the secondary school net attendance ratio for boys who are from low wealth index households is only 1.3 compared with 17.5 among boys who are from high wealth index households.

**Table 10.6 (ED.7): Education gender parity**

Ratio of girls to boys attending primary education and ratio of girls to boys attending secondary education, MICS Meru North district, 2008

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	
<b>Sex</b>						
Male	NA	86.5	NA	NA	8.7	NA
Female	89.7	NA	NA	20.5	NA	NA
<b>Mother's education</b>						
None	90.6	82.8	1.09	17.7	9.8	1.81
Primary	88.9	88.0	1.01	16.2	7.6	2.15
Secondary +	93.8	89.5	1.05	64.7	23.6	2.73
<b>Wealth index</b>						
Low	85.6	81.5	1.05	1.5	1.3	1.20
Medium	85.8	85.7	1.00	10.7	5.5	1.94
High	97.4	90.7	1.07	42.0	17.5	2.41
<b>Total</b>	<b>89.7</b>	<b>86.5</b>	<b>1.04</b>	<b>20.5</b>	<b>8.7</b>	<b>2.37</b>

\* The gender parity index (GPI) is the ratio of female to male net attendance ratios (primary or secondary). The primary and secondary net attendance ratios are presented in tables ED.3 and ED.4.

### 10.3 Adult Literacy

One of the World Fit for Children goals is to achieve adult literacy. Adult literacy is also an MDG indicator, relating to both men and women. In MICS 2008, since only a woman's questionnaire was administered, the results are based only on females aged 15-24. Literacy was assessed on the ability of women to read a short simple statement or on school attendance. The percentage of literate women aged 15-24 is presented in Table 10.7 (ED.8). Seventy one per cent of women aged 15-24 years are literate. The proportion of literate women is higher among younger women aged 15-19 years (79 per cent) compared to older women aged 20-24 years (66 per cent). The level of literacy increases with increasing levels of the household wealth index.

<b>Table 10.7 (ED.8): Adult literacy</b>			
Percentage of women aged 15-24 years that are literate*, MICS Meru North district, 2008			
Characteristics	Percentage literate*	Percentage not known**	Number of women aged 15-24 years
<b>Education</b>			
None	(30.5)	(0)	37
Primary	68.9	0	400
Secondary +	100	0	89
<b>Age</b>			
15-19	79.0	0	225
20-24	65.8	0	301
<b>Wealth index</b>			
Low	55.0	0	53
Medium	65.6	0	285
High	85.0	0	187
<b>Total</b>	<b>71.4</b>	<b>0</b>	<b>526</b>
<p>* Percentage of women aged 15-24 years who are able to read a short simple statement about everyday life or who attended secondary or higher education.</p> <p>** The percentage not known includes those for whom no sentence in the required language was available or for whom no response was reported. If the percentage of the population for whom literacy status is not known exceeds 10 per cent in any category, caution should be exercised in the interpretation of the results.</p> <p>() :based on 25-50 un-weighted cases</p>			



## 11.1 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 goal is 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 5 years of age whose birth is registered. Table 11.1 (CP.1) shows the percentage distribution of children aged 0-59 months by whether their birth is registered and reasons for non-registration.

<b>Table 11.1 (CP.1): Birth registration</b>											
Percentage distribution of children aged 0-59 months by whether birth is registered and reasons for non-registration, MICS Meru North district, 2008											
Characteristic	Birth is Registered	Number of children aged 0-59 months	Birth is not registered because:							Total	Number of children aged 0-59 months without birth registration
			Costs too much	Must travel too far	Didn't know child should be registered	Late, did not want to pay fine	Doesn't know where to register	Other	Don't know		
<b>Sex</b>											
Male	77.0	543	6.3	1.0	61.6	18.0	18.0	10.6	2.4	100.0	92
Female	75.2	563	1.1	4.7	63.9	16.8	16.8	9.6	4.0	100.0	113
<b>Age</b>											
0-11 months	75.4	187	0.0	8.7	54.9	25.8	22.2	10.2	4.1	100.0	40
12-23 months	73.8	212	(10.4)	(.0)	(59.4)	(10.1)	(15.7)	(15.7)	(.0)	100.0	43
24-35 months	78.1	250	(4.3)	(4.6)	(69.1)	(14.8)	(14.9)	(7.1)	(.0)	100.0	40
36-47 months	70.7	240	(0)	(1.7)	(68.0)	(17.5)	(16.1)	(5.7)	(8.4)	100.0	53
48-59 months	82.7	217	(4.1)	(.0)	(61.0)	(19.1)	(18.7)	(14.7)	(2.1)	100.0	28
<b>Mother's education</b>											
None	69.6	177	0	2.0	71.5	16.8	16.8	4.8	4.9	100.0	46
Primary	76.5	815	4.5	3.0	60.3	17.3	17.3	12.0	2.9	100.0	154
Secondary +	(*)	112	(*)	(*)	(*)	(*)	(*)	(*)	(*)	100.0	5
<b>Wealth index</b>											
Low	61.9	160	10.1	0.0	69	18	18.0	1.8	1.2	100.0	52
Medium	76.7	605	1.0	3.9	55.3	19.3	19.3	15.2	5.3	100.0	115
High	81.7	341	(1.6)	(4.6)	(77.7)	(10.4)	(10.4)	(5.8)	(.0)	100.0	38
<b>Total</b>	<b>76.1</b>	<b>1106</b>	<b>3.4</b>	<b>3.0</b>	<b>62.9</b>	<b>17.3</b>	<b>17.3</b>	<b>10.0</b>	<b>3.3</b>	<b>100.0</b>	<b>205</b>

Slightly over three quarters of children (76 per cent) in the district have their births registered. There are slight variations in birth registration across sex, age, and mother's education categories. Majority of those who had not registered their births reported that they did not know that birth registration is necessary. Among those whose births are not registered, cost and travel distance do not appear to be the main reasons for not registering the birth.

## 11.2 Child Labour

Article 32 of the Convention on the Rights of the Child states: "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 2008 questionnaire, a number of questions were asked on the issue of child labour, that is, children 5-14 years of age involved in labour activities. A child (5-14 years) is considered to be involved in child labour activities at the time of the survey if during the week preceding the survey: the child spent at least one hour of economic work or 28 hours of domestic work per week (for ages 5-11 years) or at least 14 hours of economic work or 28 hours of domestic work per week (for those aged 12-14 years).

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 11.2 (CP.2) presents the results of child labour by type of work. The percentages do not add up to the total child labour as children may be involved in more than one type of work. Nine per cent of children aged 5-14 years are engaged in child labour.

The proportion of male children involved in child labour is slightly higher than female children (10 per cent versus seven per cent). Younger children (5-11 years) are more likely to be involved in child labour compared to those aged 12-14 years. About nine per cent of the children involved in child labour are not attending school. The prevalence of child labour is relatively comparable for all children irrespective of the mother's level of education.

**Table 11.2 (CP.2): Child labour**

Percentage of children aged 5-14 years who are involved in child labour activities by type of work, MICS Meru North district, 2008

Characteristics	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				
<b>Sex</b>						
Male	0.8	1.9	1.0	7.3	10.3	782
Female	0.3	2.4	0.8	4.7	7.2	800
<b>Age</b>						
5-11 years	0.7	2.9	1.0	7.9	11.3	1159
12-14 years	0.1	0.2	0.5	0.7	1.8	423
<b>School participation</b>						
Yes	0.4	2.2	0.8	6.2	8.7	1464
No	1.7	2.2	1.3	3.0	8.9	119
<b>Mother's education</b>						
None	0.6	1.2	1.4	4.6	8.1	382
Primary	0.4	2.2	0.7	6.8	9.0	1107
Secondary +	1.2	6.3	0.0	2.2	9.7	90
<b>Wealth index</b>						
Low	0.7	2.6	0.0	5.0	7.6	279
Medium	0.8	2.5	1.6	6.1	9.8	795
High	0.0	1.3	0.1	6.3	7.8	509
<b>Total</b>	<b>0.5</b>	<b>2.2</b>	<b>0.9</b>	<b>6.0</b>	<b>8.8</b>	<b>1582</b>

\* The table is based on the responses to a series of questions in the child labour module which is administered to the mother/caretaker of each child in the household 5-14 years of age. The numerator to estimate the child labour percentage includes: (a) children 5-11 years of age that during the week preceding the survey did at least one hour of economic activity or at least 28 hours of domestic chores, and (b) children 12-14 years of age that during the week preceding the survey did at least 14 hours of economic activity or at least 28 hours of domestic chores.

Table 11.3 (CP.3) presents the proportion of children classified as 'student labourers' or as 'labourer students'. Student labourers are children attending school that were involved in child labour activities at the time of the surveys. More specifically, of the 93 per cent of children 5-14 years of age attending school, nine per cent are also involved in some form of child labour activities. On the other hand, out of the nine per cent of children classified as child labourers, majority of them are also attending school (92 per cent). No substantial differentials exist between male and female children.

**Table 11.3 (CP.3): Labourer students and student labourers**

Percentage of children aged 5-14 years who are labourer students and student labourers, MICS Meru North district, 2008

Characteristics	Percentage of children in child labour*	Percentage of children attending school	Number of children 5-14 years of age	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
<b>Sex</b>							
Male	10.3	92.1	782	91.1	81	10.2	720
Female	7.2	92.9	800	94.2	58	7.3	744
<b>Age</b>							
5-9 years	11.3	91.7	1159	95.1	131	11.7	1063
10-14 years	1.8	94.8	423	45.4	8	0.9	401
<b>Mother's education</b>							
None	8.1	91.1	382	84.9	31	7.5	348
Primary	9.0	92.5	1107	94.0	99	9.1	1024
Secondary +	9.7	98.7	90	100	9	9.8	88
<b>Wealth index</b>							
Low	7.6	89	279	93.7	21	8.0	248
Medium	9.8	91.2	795	90.0	78	9.6	725
High	7.8	96.4	509	96.4	40	7.8	491
<b>Total</b>	<b>8.8</b>	<b>92.5</b>	<b>1582</b>	<b>92.4</b>	<b>139</b>	<b>8.7</b>	<b>1464</b>

\* The table is based on the responses to a series of questions in the child labour module which is administered to the caretaker of each child in the household 5-14 years of age. The numerator to estimate the child labour percentage includes: (a) children 5-11 years of age that during the week preceding the survey did at least one hour of economic activity or at least 28 hours of domestic chores, and (b) children 12-14 years of age that during the week preceding the survey did at least 14 hours of economic activity or at least 28 hours of domestic chores.

\*\* Labourer students: Number of children 5-14 years of age involved in child labour activities that are also attending school divided by the total number of children 5-14 years of age involved in child labour activities.

\*\*\*\* Student labourers: Number of children 5-14 years of age attending school that are also involved in child labour activities divided by the total number of children 5-14 attending school.

### 11.3 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 survey, mothers/caretakers of children age 2-14 years were asked a series of questions on the ways parents tend to use to discipline their children when they misbehave. In the child discipline module, one child aged 2-14 per household was selected randomly during fieldwork. 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;
- 2) The number of parents/caretakers of children 2-14 years of age that believe that in order to raise their children properly, they need to physically punish them.

About 82 per cent 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 11.4 (CP.4)). More importantly, 11 per cent of children were subjected to severe physical punishment. Surprisingly, a high proportion (61 per cent) of mothers/caretakers believe that children should be physically punished, which corroborates with the proportion of children who were subjected to minor physical punishment (74 per cent).

**Table 11.4 (CP.4): Child discipline**

Percentage of children aged 2-14 years according to method of disciplining the child, MICS Meru North District, 2008

Characteristics	Percentage of children 2-14 years of age who experience:							Mother/ caretaker believes that the child needs to be physically punished	Number of children aged 2-14 years**
	Type of punishment								
	Only non- violent discipline	Psycho- -logical	Minor physical	Severe physical	Any psychological or physical	No discipline or punishment	Missing		
<b>Sex</b>									
Male	13.3	64.8	76.3	11.7	83.7	3.0	0	64.5	1033
Female	16.6	62.4	71.3	9.6	81.1	2.3	0	57.5	1025
<b>Age</b>									
2-4 years	15.5	60.7	72.2	10.6	81.9	2.5	0	63	534
5-9 years	15.8	62.1	73.4	10.5	80.0	4.2	0	61.3	835
10-14 years	13.5	67.6	75.6	10.9	85.7	0.8	0	59.2	689
<b>Mother's education</b>									
None	16.4	69.0	69.7	14.5	80.6	3.0	0	72.3	466
Primary	14.1	62.5	74.8	9.1	83.2	2.7	0	58.1	1461
Secondary +	19.9	55.0	77	14.3	80.1	0.0	0	51.9	126
<b>Wealth index</b>									
Low	22.5	58.9	70.2	10.4	75.6	1.9	0	60.7	349
Medium	12.2	66.4	77.7	12.6	85.8	2.0	0	63.6	1043
High	15.3	61.6	69.7	7.7	80.8	3.9	0	57.1	667
<b>Total</b>	<b>15.0</b>	<b>63.6</b>	<b>73.8</b>	<b>10.6</b>	<b>82.4</b>	<b>2.6</b>	<b>0</b>	<b>61</b>	<b>2058</b>
** 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.									

Differentials with respect to many of the background variables were relatively small. Children aged 5-9 years were more likely to receive any punishment compared with their younger and older counterparts. However, girls were less likely to receive severe punishment compared to boys (9 per cent and 12 per cent), respectively. Overall, only 15 per cent of children aged 2-14 years did not receive any form of punishment.

## 11.4 Early Marriage

According to UNICEF's worldwide estimates, over 60 million women aged 20-24 were married/in union before the age of 18 years. 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 the hope that the marriage will benefit them both financially and socially, while also relieving financial burdens on the family. 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* and 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 often perform heavy amounts of domestic work, are under pressure to demonstrate fertility, and responsible for raising children while still children themselves, have 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 - when a couple lives together as if married - 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.

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 infected. The demand for young wives to reproduce and the power imbalance resulting from the age differential often lead to very low condom use among such couples.

The information on early marriage is presented in Table 11.5 (CP.5). In Meru North, 10 per cent of women aged 15-49 years got married before reaching age 15. Early marriage (marriage before age 15) increases with age except for age group 45-49 years. The prevalence of early marriage declines with an increase in educational level of the woman and also by improvements in the household wealth index.

Forty per cent of women aged 15-49 years were married or in union before their 18<sup>th</sup> birthday. About 11 per cent of women aged 15- 19 years are currently married or in some form of union, indicating that one in every ten teenage girls is married in Meru North district .

**Table 11.5 (CP.5): Early marriage**

Percentage of women aged 15-49 years in marriage or union before their 15th birthday, percentage of women aged 20-49 years in marriage or union before their 18th birthday, and percentage of women aged 15-19 years currently married or in union, MICS Meru North district, 2008

Characteristics	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 married/in union**	Number of women aged 15-19 years
<b>Age</b>						
15-19	3.2	225	NA	NA	(11.8)	27
20-24	8.3	301	35.4	301	(*)	NA
25-29	5.8	217	35.8	217	(*)	NA
30-34	15.0	161	39.9	161	(*)	NA
35-39	17.7	129	42.5	129	(*)	NA
40-45	23.1	103	55.4	103	(*)	NA
45-49	4.9	72	40.0	72	(*)	NA
<b>Education</b>						
None	15.7	167	35.2	157	NS	10
Primary	9.9	883	44.6	708	11.6	175
Secondary +	3.3	157	15.0	117	1.9	40
<b>Wealth index</b>						
Low	11.6	167	44.9	132	5.9	36
Medium	11.3	592	40.0	482	13.5	111
High	7.2	448	37.1	370	12.0	79
<b>Total</b>	<b>9.9</b>	<b>1208</b>	<b>39.6</b>	<b>983</b>	<b>11.8</b>	<b>225</b>
(*) Based on figures less than 25 un-weighted cases.						

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 are 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. The age gap between partners is thought to contribute to these abusive power dynamics and to increase the risk of untimely widowhood. Table 11.6 (CP.6) presents the results of the age difference between husbands and wives.

Slightly more than one in seven young married (13 per cent) women aged 15-24 years in Meru North have a partner who is 10 or more years older than them. In about 47 per cent of cases, the partner is less than 5 year older and in 38 per cent of cases the partner is 5-9 years older.



<b>Table 11.6 (CP.6): Spousal age difference</b>							
Percentage distribution of currently married/in union women aged 15-19 and 20-24 years according to the age difference with their husband or partner, MICS Meru North district, 2008							
Characteristics	Percentage of currently married/in union women whose husband or partner is:					Total	Number of women currently married/ in union
	Younger	0-4 years older	5-9 years older	10+ years older*	Husband's age unknown		
<b>Age</b>							
15-19	(0.0)	(18.4)	(59.70)	(21.90)	(0.0)	100.0	27
20-24	1.6	50.8	34.6	12.1	0.0	100.0	172
<b>Total</b>	<b>1.4</b>	<b>46.5</b>	<b>37.9</b>	<b>13.4</b>	<b>0.9</b>	<b>100.0</b>	<b>199</b>
( ) Based on figures 25-50.							

## 11.5 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. 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 midwives and barbers, without anaesthesia, using scissors, razor blades or broken glass.

FGM/C is a fundamental violation of human rights. 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 2008, a series of questions were asked to determine knowledge of FGM/C, prevalence of FGM/C, and details of the type of FGM/C performed. Tables 11.7 and 11.8 (CP.7) presents the prevalence of FGM/C among women and the type and extent of the procedure as well as the woman's attitudes towards FGM/C. In Meru North, almost all the women aged 15-49 years heard about FGM/C and about 62 per cent reported that they had undergone some form FGM/C.

The proportion of those who experienced any form of FGM/C was nearly equal for women with no education and those with up to primary level education (both at 67 per cent). However, there is a marked drop in the proportion of women who had any form of FGM/C for women with secondary level education (only 27 per cent). The proportion of women who had an FGM/C declines with increasing levels of the household wealth index. For example, while the proportion was 74 per cent for women from low wealth index households, the corresponding figure for those from the high wealth index households was 49 per cent.

Among women who had undergone FGM/C, one per cent had an extreme form of FGM/C, (i.e., both the removal of flesh from the genital area and sewing closed the genital area).



**Table 11.7 (CP.7): Female genital mutilation/cutting (FGM/C)**

Percentage of women aged 15-49 years who have heard about female genital mutilation/cutting (FGM/C), had any form of FGM/C, type of FGM/C among those who have had FGM/C, the percentage who have had the extreme form of FGM/C (infibulation), MICS Meru North district, 2008

Characteristics	Heard about FGM/C	Had any form of FGM/C*	Number of women aged 15-49 years	Percentage of women with FGM/C who:					Had an extreme form of FGM/C**	Number of women with FGM/C
				Had flesh removed	Were nicked	Were sewn closed	Form of FGM/C not determined	Total		
Age										
15-19	97.3	22.9	225	NS	NS	NS	NS	100.0	NS	51
20-24	100.0	52.8	301	99.0	0	0.5	0.5	100	0.5	159
25-29	99.8	70.4	217	98.0	0	2	0.0	100	2	153
30-34	100.0	80.4	161	98.5	0.4	0.7	0.4	100	0.7	130
35-39	100.0	83.1	129	98.8	0	0.7	0.5	100	0.7	107
40-44	100.0	83.3	103	98.2	0	1.8	0	100	1.8	86
45-49	100.0	90.3	72	98.7	0	1.3	0	100	1.3	65
Education										
None	100.0	67.0	167	98.0	0.5	0.8	0.8	100	0.8	112
Primary	99.3	67.4	883	98.7	0	1.2	0.2	100	1.2	595
Secondary +	99.7	27.4	157	100	0	0	0	100	0	43
Wealth index										
Low	98.3	74.0	167	98.3	0	0.6	1.1	100	0.6	124
Medium	99.7	69.0	592	99.2	0.1	0.6	0.1	100	0.6	409
High	99.5	48.6	448	97.9	0	2.1	0.0	100	2.1	218
Total	99.5	62.1	1208	98.6	1	0.3	0.3	100	1.0	751

\* Women aged 15-49 reporting they had any type of female genital mutilation/cutting. Individual forms of FGM/C include the removal of flesh from the genital area, the nicking of the flesh of the genital area and sewing closed the genital area.

\*\* Extreme form of FGM/C (infibulation) is defined as both the removal of flesh from the genital area AND sewing closed the genital area.

All those who have heard about FGM/C were asked about their attitude towards whether the practice should be continued or not and the results are presented in Table 11.8. (CP.7). Most of the women in Meru North district want FGM/C to be discontinued, but only three per cent approve of the practise and want it to continue.

Table 11.8 (CP.7): Attitude towards Female genital mutilation/cutting (FGM/C)						
Percentage distribution of women age 15-49 years who have heard about FGM/C according to attitudes towards whether the practice of FGM/C should be continued, MICS Meru North district, 2008						
	Percentage distribution of women age 15-49 years who believe the practice of FGM/C should:					Number of women aged 15-49 years who have heard of FGM/C
Characteristics	Continue	Be discontinued	Depends on situation	Don't know	Total	
<b>Age</b>						
15-19	5.9	91.2	2.0	0.9	100	219
20-24	2.1	95.4	2.3	0.3	100	301
25-29	4.6	94.8	0.6	0.0	100	217
30-34	1.3	96.9	1.8	0.0	100	161
35-39	3.2	91.8	4.4	0.7	100	129
40-44	3.1	95.9	1.0	0.0	100	103
45-49	2.4	95.2	2.3	0.0	100	72
<b>Education</b>						
None	3.9	93.3	2.7	0.0	100	167
Primary	3.8	93.8	2.0	0.4	100	876
Secondary +	0.0	98.8	1.2	0.0	100	157
<b>FGM/C experience</b>						
No	1.3	96.3	1.7	0.8	100	451
Yes	4.6	93.3	2.1	0.0	100	751
<b>Wealth index</b>						
Low	5.5	91.1	3.4	0.0	100	165
Medium	4.2	93	2.3	0.5	100	591
High	1.4	97.5	1.0	0.1	100	446
<b>Total</b>	<b>3.3</b>	<b>94.4</b>	<b>2.0</b>	<b>0.3</b>	<b>100</b>	<b>1201</b>

Table 11.9 (CP.8) presents the prevalence and extent of FGM/C performed on daughters of the respondents. All women aged 15-49 years with at least one daughter were asked whether their daughter had undergone FGM/C or not, 10 per cent reported that their daughter(s) have undergone that practice. The educational attainment of the mother seems to play a role in whether the daughter undergoes FGM/C. For example, twenty six per cent of women without education reported that their daughters have undergone FGM/C practice compared to seven per cent among daughters with mothers who have attained a primary education level. This may be a clear indication of the importance of education in overcoming the practice of FGM/C.

<b>Table 11.9 (CP.8): Female genital mutilation/cutting (FGM/C) among daughters</b>						
Percentage of women with at least one living daughter who has had female genital mutilation (FGM/C) and the percentage by type of FGM/C of the daughters, Kenya, MICS Meru North district, 2008						
Characteristics	Daughter had any form of FGM/C *	Number of women aged 15-49 years	Percentage of women whose daughters:	Total	Daughter had an extreme form of FGM/C	Number of women aged 15-49 years with at least one living daughter who had FGM/C
<b>Age of women</b>						
15-24	0.0	145	0.0	0.0	0.0	0
25-34	0.0	299	0.0	0.0	0.0	0
35-49'	25.0	277	100.0	100.0	0.0	69
<b>Education</b>						
None	25.7	117	100.0	100.0	0.0	30
Primary	7.2	547	100.0	100.0	0.0	39
Secondary +	0.0	55	0.0	0.0	0.0	0
Ever circumcised					0.0	0
Yes	12.2	565	100.0	100.0	0.0	69
No	0.0	156	0.0	0.0	0.0	0
<b>Wealth index</b>						
Lowest	7.6	98	100.0	100.0	0.0	7
Middle	12.4	361	100.0	100.0	0.0	45
Upper	6.5	262	100.0	100.0	0.0	17
<b>Total</b>	<b>9.6</b>	<b>721</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>	<b>69</b>

## 11.6 Domestic Violence

A number of questions were addressed to women aged 15-49 years to assess their attitudes towards whether husbands are justified to hit or beat their wives/partners for a variety of scenarios. These questions were asked to have an indication of cultural beliefs that tend to be associated with the prevalence of violence against women by their husbands/partners. The main assumption here is that women that agree with the statements indicating that husbands/partners are justified to beat their wives/partners under the situations described in reality tend to be abused by their own husbands/partners. The responses to these questions can be found in Table 11.10 (CP.9).

Women aged 15-49 were asked to state if their husbands were justified in beating them under various circumstances (see Table 11.10). The circumstances included; going out without telling him, neglecting the children, arguing with the husband, refusing to have sex with him, or burning food.

Table 11.10 (CP.9): Attitudes toward domestic violence							
Percentage of women aged 15-49 years who believe a husband is justified in beating his wife/partner in various circumstances, MICS Meru North district, 2008							
Characteristics	Percentage of women aged 15-49 years who believe a husband is justified in beating his wife/partner:						Number of women aged 15-49 years
	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 of these reasons*	
Age							
15-19	37.1	50.6	31.0	23.6	10.7	58.9	225
20-24	27.8	54.7	37.4	31.4	13.0	69.2	301
25-29	36.4	51.7	34.2	30.8	18.7	68.8	217
30-34	35.1	49.5	48.2	32.2	14.0	72.7	161
35-39	36.3	52.4	50.0	35.1	19.3	76.6	129
40-44	37.4	58.1	43.0	28.5	15.0	71.8	103
45-49	37.3	55.6	50.3	41.1	17.3	70.8	72
Marital/Union status							
Currently married/ in union	36.4	56.0	43.8	32.9	15.7	74.1	732
Formerly married/ in union	34.1	47.7	48.7	38.0	22.6	71.9	139
Never married/ in union	29.9	47.9	27.0	22.9	9.7	55.8	337
Education							
None	32.6	49.4	45.6	31.3	16.3	66.8	167
Primary	37.3	55.1	40.9	32.2	15.6	72.0	883
Secondary +	19.0	42.9	25.6	20.6	8.1	52.2	157
Wealth index							
Low	41.2	55.5	41.9	38.5	16.1	72.2	167
Medium	37.7	54.2	44.0	34.5	18.0	71.0	592
High	27.4	49.8	33.1	22.8	10.1	64.6	448
Total	34.3	52.8	39.7	30.7	14.8	68.8	1208

Sixty nine per cent of women reportedly believe that the husband is justified in beating the wife if she goes out without telling him; when she neglects the children; when she argues with him; when she refuses sex with him or when she burns food. Majority of women believe that a woman should be beaten if she neglects the children, while few women support beating if a woman has burnt food.

Interestingly, a higher percentage of women with primary level education approve beating (72 per cent) than their counterparts without education (67 per cent). However, the proportion of women with at least secondary education who approve of beating is much lower (52 per cent).

### 12.1 Knowledge of HIV Transmission and Condom Use

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 young people the tools to protect them from infection. Misconceptions about HIV are common and can confuse young 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 can transmit HIV or mosquito bites can transmit HIV). 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 for measuring this goal as well as the MDG goal on 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. The HIV module was administered to women aged 15-49 years in MICS 2008.

One measure which is both an MDG and UNGASS indicator is the percentage of young women who have comprehensive and correct knowledge of HIV prevention and transmission. Women were asked whether they knew of the three main ways of HIV transmission – having only one faithful uninfected partner, using a condom every time, and abstaining from sex. The results are presented in Table 12.1 (HA.1).

In Meru North, virtually all of the interviewed women (99.9 per cent) have heard of AIDS. However, the percentage of women who know of all three main ways of preventing HIV transmission is only 46 per cent. Eighty four per cent of women know that having one faithful uninfected sex partner can prevent transmission; another 61 per cent know of using a condom every time, and 77 per cent know of abstaining from sex as main ways of preventing HIV transmission.

Knowledge of at least one way to prevent transmission of HIV among women in Meru North is near universal (94 per cent) and only six per cent of women do not know any of the three ways of preventing transmission of HIV. Surprisingly, the proportion of women with good level of knowledge about all three methods of preventing transmission of HIV was highest among women with primary level education and lowest for women who attained secondary education. A similar pattern was observed by household wealth index, where the proportion was highest among women from the poorest households and lowest among those from high wealth index households.

**Table 12.1 (HA.1): Knowledge of preventing HIV transmission**

Percentage of women aged 15-49 years who know the main ways of preventing HIV transmission, MICS Meru North district, 2008

Characteristics	Heard of AIDS	Percentage who know transmission can be prevented by:			Knows all three ways	Knows at least one way	Doesn't know any way	Number of women
		Having only one faithful uninfected sex partner	Using a condom every time	Abstaining from sex				
<b>Age</b>								
15-19	99.7	83.8	56.7	77.7	43.9	94.9	5.1	225
20-24	99.7	83.5	57.3	76.9	44.0	93.3	6.7	301
25-29	100.0	81.8	63.4	72.6	46.7	91.5	8.5	217
30-34	100.0	85.6	67.9	80.9	55.0	94.9	5.1	161
35-39	100.0	80.1	67.0	75.0	48.3	93.6	6.4	129
40-44	100.0	86.0	59.5	78.0	47.8	93.0	7.0	103
45-49	100.0	86.8	52.0	81.8	38.0	95.5	4.5	72
<b>Education</b>								
None	100.0	81.7	59.0	76.3	44.6	93.2	6.8	167
Primary	99.8	82.4	61.3	77.7	47.8	92.6	7.4	883
Secondary +	100.0	91.7	59.0	73.6	40.9	99.4	0.6	157
<b>Wealth index</b>								
Low	99.5	79.8	61.2	78.5	49.9	89.6	10.4	167
Medium	99.9	84.5	61.5	78.6	48.4	94.0	6.0	592
High	100.0	83.7	59.3	74.3	42.3	94.6	5.4	448
<b>Total</b>	<b>99.9</b>	<b>83.6</b>	<b>60.6</b>	<b>77.0</b>	<b>46.4</b>	<b>93.6</b>	<b>6.4</b>	<b>1208</b>

**Note:** This table is based on all women age 15-49 years

Table 12.2 (HA.2) presents the proportion of women who can correctly identify misconceptions concerning HIV transmission. The indicator is based on the two most common and relevant misconceptions, that HIV can be transmitted by supernatural means and that it can be transmitted through mosquito bites. The table also provides information on whether women know that HIV cannot be transmitted by sharing food, and that HIV can be transmitted by sharing needles.

**Table 12.2 (HA.2): Identifying misconceptions about HIV/AIDS**

Percentage of women aged 15-49 years who correctly identify misconceptions about HIV/AIDS, MICS Meru North district, Kenya 2008

Characteristics	Percentage who know that: HIV cannot be transmitted by:		A healthy looking person can be infected	Reject two most common misconception s and know a healthy- looking person can be infected	Percentage who know that:		Number of women
	Option 1: Supernatural means	Option 2: Mosquito bites			Option 3: HIV cannot be transmitted by sharing food	Option 4: HIV can be transmitted by sharing needles	
<b>Age</b>							
15-19	94.1	78.7	89.1	70.7	93.5	98.1	225
20-24	92.0	71.3	96.7	64.6	90.4	99.0	301
25-29	95.3	74.5	93.2	67.8	92.6	98.2	217
30-34	91.9	71.1	94.8	68.0	93.9	98.9	161
35-39	95.9	70.1	96.4	65.2	89.0	100.0	129
40-44	92.3	67.3	95.7	60.8	83.9	100.0	103
45-49	84.3	69.9	96.4	61.1	83.3	99.4	72
<b>Education</b>							
None	90.0	73.4	93.9	67.5	86.9	99.2	167
Primary	92.9	69.1	93.8	62.5	90.3	98.6	883
Secondary +	96.0	92.3	98.2	86.9	96.7	100.0	157
<b>Wealth index</b>							
Low	89.3	69.9	89.5	60.4	90.3	97.9	167
Medium	92.7	71.6	93.6	65	88.8	98.8	592
High	94.6	75.1	96.9	70.2	93.4	99.3	448
<b>Total</b>	<b>92.9</b>	<b>72.7</b>	<b>94.3</b>	<b>66.3</b>	<b>90.7</b>	<b>98.9</b>	<b>1208</b>

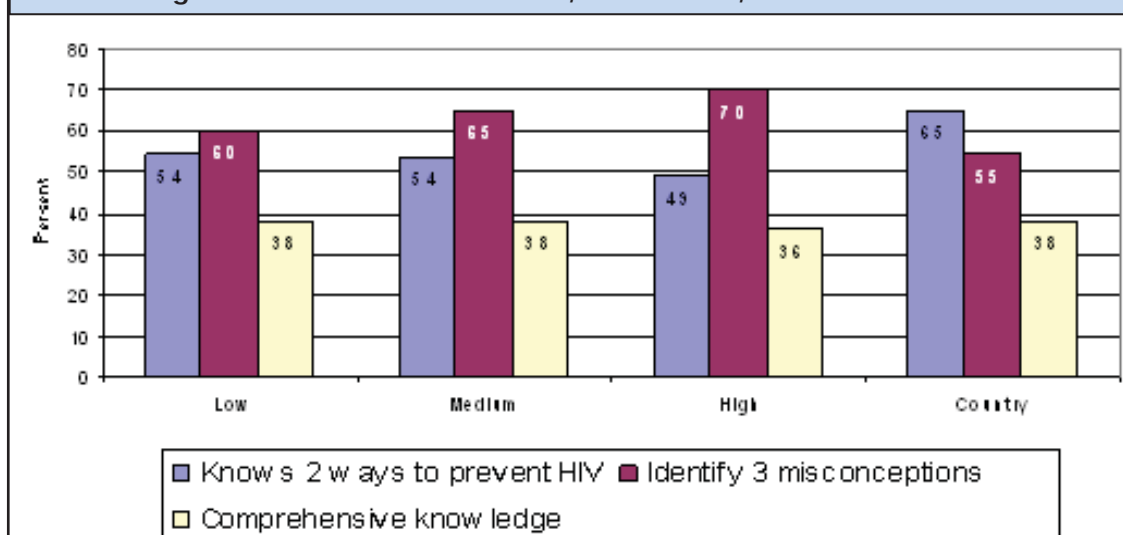
**Note:** This table is based on all women age 15-49 years

Among the interviewed women, 66 per cent reject the two most common misconceptions and know that a healthy-looking person can be infected. Ninety three per cent of women know that HIV cannot be transmitted by supernatural means, and 91 per cent of women know that HIV cannot be transmitted by sharing food. This shows that while women may be aware of misconceptions on the mode of transmission, about two in five women in Meru North district may not know that a healthy looking person can be infected.

From the table it is evident that a higher proportion of educated women have correct knowledge about HIV/AIDS compared with those with no education or those who have attained primary level education. For example, 63 per cent of women with primary education rejected the two most common misconceptions and know that a healthy-looking person can be infected compared to 87 per cent among those educated up to secondary or higher.

As expected, the proportion of women with comprehensive knowledge increases with the level of household wealth index (Figure HA.1) and woman's education level.

**Figure 12.1 (HA1): Percentage of women who have comprehensive knowledge of HIV/AIDS transmission, Meru North, 2008**



**Table 12.3 (HA.3): Comprehensive knowledge of HIV/AIDS transmission**

Percentage of women aged 15-49 years who have comprehensive knowledge of HIV/AIDS transmission, MICS Meru North district, Kenya 2008

Characteristics	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 women
<b>Age</b>				
15-19	48.3	70.7	37.3	225
20-24	49.4	64.6	32.7	301
15-24	48.9	67.2	34.7	526
25-29	53.6	67.8	40.8	217
30-34	59.0	68.0	43.4	161
35-39	53.5	65.2	35.7	129
40-44	57.1	60.8	40.7	103
45-49	44.8	61.1	30.8	72
<b>Education</b>				
None	50.3	67.5	36.9	167
Primary	52.6	62.5	36.1	883
Secondary +	51.2	86.9	44.9	157
<b>Wealth index</b>				
Low	54.1	60.4	38.1	167
Medium	53.7	65.0	37.8	592
High	49.1	70.2	36.4	448
<b>Total</b>	<b>52.1</b>	<b>66.3</b>	<b>37.3</b>	<b>1208</b>

Table 12.3 (HA.3) shows that only 38 per cent of women have comprehensive knowledge about HIV transmission. While more women can identify the three misconceptions about HIV transmission, fewer women know two ways to prevent HIV 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 of the baby. Women should know that HIV can be transmitted during pregnancy, delivery, and through breastfeeding. The level of knowledge among women aged 15-49 years concerning mother-to-child transmission is presented in Table 12.4 (HA.4).

Overall, 97 per cent of women know that HIV can be transmitted from mother to child and 36 per cent of women know the three way of this mode of transmission. Three per cent of women did not know of any specific way.

Contrary to expectations, the proportion of women who have correct knowledge of all three ways regarding mother-to-child transmission of HIV by level of education was comparable, although lowest for women with primary level education at 34 per cent, and also remained comparable by levels of household wealth index.

<b>Table 12.4 (HA.4): Knowledge of mother-to-child HIV transmission</b>							
Percentage of women aged 15-49 years who correctly identify means of HIV transmission from mother to child, MICS Meru North district, Kenya 2008							
Characteristics	Know AIDS can be transmitted from mother to child	Percentage who know AIDS can be transmitted:				Did not know any specific way	Number of women
		During pregnancy	At delivery	Through breast milk	All three ways		
<b>Age</b>							
15-19	88.2	43.5	62.3	83.9	31.8	11.5	225
20-24	99.2	43.6	66.1	98.5	33.2	0.5	301
25-29	96.3	47.8	71.6	94.4	38.6	3.7	217
30-34	99.3	48.0	76.6	98.3	41.1	0.7	161
35-39	99.5	51.5	73.0	99	43.7	0.5	129
40-44	99.3	46.1	63.6	95.5	36.1	0.7	103
45-49	100.0	37.8	56.9	95.8	28.6	0.0	72
<b>Education</b>							
None	99.2	47.8	71.5	97.6	40.1	0.8	167
Primary	95.8	44.7	65.4	93.8	34.1	4.0	883
Secondary +	99.1	48.1	76.4	96.4	41.8	0.9	157
<b>Wealth index</b>							
Low	96.5	46.9	68.1	95.2	36.7	3.0	167
Medium	96.4	46.1	63.7	94.1	34.5	3.5	592
High	97.3	44.5	72.9	95.2	37.8	2.7	448
<b>Total</b>	<b>96.7</b>	<b>45.6</b>	<b>67.7</b>	<b>94.7</b>	<b>36.1</b>	<b>3.1</b>	<b>1208</b>

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 who is 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 12.5 (HA.5) presents the attitudes of women towards people living with HIV/AIDS. Among women who have heard about HIV/AIDS, four per cent of the women reported that they will not care for a family member who is sick with HIV/AIDS, 36 per cent reported that if a family member is sick with HIV/AIDS they would like to keep it a secret, 34 per cent believe that a teacher should not be allowed to work if he/she has HIV/AIDS, 32 per cent will not buy food from a person who has HIV/AIDS. Overall, 34 per cent of women in Meru North district would discriminate against persons living with HIV.

<b>Table 12.5 (HA.5): Attitudes toward people living with HIV/AIDS</b>							
Percentage of women aged 15-49 years who have heard of AIDS who express a discriminatory attitude towards people living with HIV/AIDS, MICS Meru North district, Kenya 2008							
Characteristics	Percentage of women who:						Number of women who have heard of AIDS
	Would not care for a family member who was sick with AIDS	If a family member had HIV would want to keep 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	
<b>Age</b>							
15-19	4.1	35.3	30.5	29.1	61.8	38.2	224
20-24	4.9	38.0	31.6	34.0	68.3	31.7	300
25-29	3.4	36.9	39.1	30.0	67.4	32.6	217
30-34	4.0	36.7	35.1	28.2	66.5	33.5	161
35-39	3.9	35.7	30.7	35.4	69.1	30.9	129
40-44	3.8	28.9	40.3	31.6	64.5	35.5	103
45-49	3.9	37.0	37.1	33.3	69.5	30.5	72
<b>Education</b>							
None	5.0	40.9	38.8	32.2	71.8	28.2	167
Primary	4.2	36.6	37.3	33.7	68.8	31.2	881
Secondary +	2.7	27.1	12.4	17.9	47.9	52.1	157
<b>Wealth index</b>							
Middle	6.1	40.5	44.4	39.5	73.8	26.2	167
Fourth	5.4	33.7	39.4	36.9	69.4	30.6	592
Richest	1.7	37.4	23.5	21.4	60.0	40.0	448
<b>Total</b>	<b>4.1</b>	<b>36.0</b>	<b>34.2</b>	<b>31.5</b>	<b>66.5</b>	<b>33.5</b>	<b>1206</b>
<b>Note:</b> This table is based on women who have heard of AIDS.							

Another important indicator for combating HIV/AIDS is the knowledge of where to be tested for HIV and use of such services. Questions related to knowledge among women of a facility for HIV testing and whether they have ever been tested is presented in Table 12.6 (HA.6). Most of the women in Meru North know where to be tested (93 per cent), while 54 per cent have actually been tested. Among women who have been tested for HIV, a large proportion received the results (98 per cent).

Differentials by level of education and wealth index show that the proportion of women with knowledge about various aspects related to HIV testing is generally comparable for all levels of education and household wealth index.

<b>Table 12.6 (HA.6): Knowledge of a facility for HIV testing</b>					
Percentage of women aged 15-49 years who know where to get an HIV test, percentage of women who have been tested and, of those tested the percentage who have been told the result, MICS Meru North district, Kenya 2008					
Characteristics	Know a place to get tested (*)	Have been tested (*) (*)	Number of women	If tested, have been told result	Number of women who have been tested for HIV
<b>Age</b>					
15-19	81.7	21.4	225	(100)	48
20-24	97.0	64.6	301	96.2	194
25-29	95.5	75.2	217	98.4	163
30-34	92.1	67.3	161	97.8	108
35-39	95.7	57.7	129	99.1	74
40-44	(86.9)	(40.3)	(103)	(98.2)	42
45-49	(*)	(*)	(*)	(*)	19
<b>Education</b>					
None	91.7	45.9	167	95.7	76
Primary	89.9	55.0	883	97.6	486
Secondary +	100.0	54.4	157	99.1	85
<b>Wealth index</b>					
Low	83.0	40.9	167	98.0	68
Medium	92.8	51.5	592	96.9	305
High	92.9	61.5	448	98.3	276
<b>Total</b>	<b>91.5</b>	<b>53.8</b>	<b>1208</b>	<b>97.6</b>	<b>649</b>
(*) Women who know of a place to get tested for HIV include those women who have already been tested, including those tested during antenatal care.					
(*) (*) Women who have been tested for HIV includes those tested during antenatal care.					
The first two columns of the table include all women in the denominator, even those who have not heard of AIDS. In the fourth column, the denominator consists of women who have been tested and the numerator consists of women who have been told the results.					

Among women who gave birth within the two years preceding the survey, the percentage who received counselling and HIV testing during antenatal care is presented in Table 12.7 (HA.7).

**Table 12.7 (HA.7): HIV testing and counseling 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 counseling with their antenatal care, MICS Meru North district, Kenya 2008

Characteristics	Percentage 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	
<b>Age</b>					
15-19	(96.2)	(70.7)	(90.7)	(90.7)	30
20-24	93.7	86.2	92.1	89.9	111
25-29	94.5	86.1	90.1	89.1	89
30-34	92.9	85.3	86.4	83.5	56
35-49	77.0	68.1	70.9	69.5	55
<b>Education</b>					
None	84.3	73.6	74.0	71.8	38
Primary	91.7	82.6	88.2	86.7	277
Secondary +	(97.1)	(83.8)	(94.1)	(91.2)	26
<b>Wealth index</b>					
Low	83.3	76.5	80.6	79.0	51
Medium	90.4	79.2	84.3	83.4	194
High	97.3	89.6	96.1	92.9	96
<b>Total</b>	<b>91.3</b>	<b>81.7</b>	<b>87.1</b>	<b>85.4</b>	<b>341</b>

In Meru North district, 91 per cent of mothers received antenatal care from a health professional, but only 82 per cent of them were provided information about HIV prevention and were actually tested for HIV during the antenatal care visit. Among women who were tested for HIV, 85 per cent received the results of the HIV test.

Women from high wealth index households were more likely to have received antenatal care from a health facility and to be tested for HIV than those from the low wealth index households.

## 12.2 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 living 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 gives us 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 years) in the household either died (after being chronically ill) or was chronically ill in the year prior to the survey.

The results of living arrangements and orphanhood status is presented in Table 12.8 (HA.10). Two thirds (67 per cent) of children aged 0-17 years in Meru North live with both parents and nine per cent are not living with a biological parent. More than one out of six children (16 per cent) lives with only the mother though the father is alive. Similarly, nine per cent of children are orphans. In addition, the proportion of children not living with parents increases with age of the child.

**Table 12.8 (HA.10): Children's living arrangements and orphan hood**

Percentage 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, MICS Meru North district, Kenya 2008

Characteristics	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					
<b>Sex</b>														
Male	65.6	0.8	1.0	6.3	1.3	15.6	5.5	2.4	0.7	0.8	100	9.3	9.3	1347
Female	67.3	1.5	0.5	5.2	1.1	16.3	4.8	1.9	0.3	1.2	100	8.3	8.1	1419
<b>Age</b>														
0-4 years	71.5	0	0.2	4.5	0.1	19.4	1.7	1.5	0.1	1.0	100	4.8	2.2	860
5-9 years	68.4	1.1	1.1	6.9	0.3	13.4	4.6	2.3	0.8	1.2	100	9.4	7.9	859
10-14 years	61.0	2.0	0.7	6.1	2.4	15.6	8.4	2.9	0.3	0.6	100	11.3	13.9	724
15-17 years	60.3	2.3	1.0	5.5	3.6	14.7	8.3	2.0	1.1	1.4	100	12.4	16.4	324
<b>Wealth index</b>														
Low	56.5	1.5	1.4	6.9	3.2	18.5	9.8	1.5	0.2	0.6	100	13	16.1	453
Medium	66.1	0.8	0.4	6.1	0.9	17.1	5.0	2.1	0.9	0.6	100	8.2	8.0	1427
High	72.1	1.4	1.0	4.6	0.6	13	2.9	2.6	0.0	1.8	100	7.6	6.0	886
<b>Total</b>	<b>66.5</b>	<b>1.1</b>	<b>0.7</b>	<b>5.8</b>	<b>1.2</b>	<b>16</b>	<b>5.1</b>	<b>2.2</b>	<b>0.5</b>	<b>1.0</b>	<b>100</b>	<b>8.8</b>	<b>8.7</b>	<b>2766</b>

(\*)Children who are not living with at least one biological parent, either because the parents live elsewhere or because the parents are dead.

(\*)(\*)Children for whom one or both biological parents are dead.

The denominator in this table is children age 0-17 years enumerated in the household listing.

Table 12.9 (HA.11) shows the percentage of orphaned and vulnerable children aged 0-17 years. Slightly more than one per cent of the children aged 0-17 years had a chronically ill parent or an adult death in their household who was sick for 3 or more months during the year preceding the death. Twelve per cent of the children lived in a household with an adult member chronically ill for 3 or more months during the year preceding the survey. Overall, 19 per cent of children aged 0-17 years in Meru North district are orphaned and vulnerable. About 12 per cent of the children live in a household where the parent is chronically ill or had an adult death during the year preceding the survey or have a chronically ill adult member. The proportion of children with one or both parents dead increases with age, for example two per cent of the children aged 0-4 years have one or both parents dead compared with 16 per cent among children aged 15-17 years.

One of the measures developed for the assessment of the status of orphaned and vulnerable children relative to their peers, looks at the school attendance of children 10-14 for children who have lost both parents (double orphans) versus children whose parents are alive (and who live with at least one of these parents). If children whose parents have died do not have the same access to school as their peers, then families and schools are not ensuring that these children's rights are met.

<b>Table 12.9 (HA.11): Prevalence of orphan hood and vulnerability among children</b>							
Percentage of children aged 0-17 years who are orphaned or vulnerable due to AIDS, Meru North district, Kenya 2008							
Characteristics	Chronically ill parent	Adult death in household	Chronically ill adult in household	Vulnerable children (*)	One or both parents dead (*)	Orphans and vulnerable children	Number of children aged 0-17 years
<b>Sex</b>							
Male	0.3	0.5	11.5	12.3	9.3	19.7	1347
Female	0.5	0.9	11.5	12.4	8.1	19.1	1419
<b>Age</b>							
0-4 years	0.4	0.7	9.6	10.5	2.2	12.5	860
5-9 years	0.6	0.7	12.2	13.2	7.9	19.2	859
10-14 years	0.2	0.6	12.4	12.9	13.9	24.9	724
15-17 years	0.6	0.8	12.8	13.8	16.4	26.1	324
<b>Wealth index</b>							
Low	0.7	0.0	11.6	11.9	16.1	25.4	453
Medium	0.4	0.8	11.7	12.6	8.0	18.9	1427
High	0.3	1.0	11.2	12.2	6.0	17.2	886
<b>Total</b>	<b>0.4</b>	<b>0.7</b>	<b>11.5</b>	<b>12.3</b>	<b>8.7</b>	<b>19.4</b>	<b>2766</b>
<p>The columns of the table are produced as follows:</p> <p>1) Either parent has been chronically ill for 3 of the 12 months preceding the survey</p> <p>2) Adult death in the household after a chronic illness of 3 of the 12 months preceding the survey</p> <p>3) Any adult in the household has been sick for 3 of the 12 months preceding the survey</p> <p>4) A vulnerable child is defined as a child who lives in a household where any of the preceding 3 conditions is true.</p> <p>5) A child is an orphan if one or both of his/her biological parents is dead</p> <p>6) Orphaned or vulnerable children are those defined in columns 4 or 5.</p> <p>7) Total number of children aged 0-17 years as enumerated in the household listing.</p> <p>An orphan is a child aged 0-17 years who has lost one or both parents</p>							

In Meru North district, two per cent of the children aged 10-14 years have lost both parents (Table 12.10 (HA.12)). Almost all children who lost at least one parent are currently attending school. School attendance among children aged 10-14 years who have not lost a parent and live with at least one of the parents is at 80 per cent. Therefore, in terms of school attendance, orphans in Meru North are not so disadvantaged compared to children who are non-orphaned.

<b>Table 12.10 (HA.12): School attendance of orphaned and vulnerable children</b> School attendance of children aged 10-14 years by orphan hood and vulnerability due to AIDS, MICS Meru North, 2008									
Characteristics	Percentage of children whose mother and father have died	School attendance rate of children whose mother and father have died	Percentage of children 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 (*)	Per cent of children who are orphaned or vulnerable	School attendance of children who are orphaned or vulnerable	Per cent of children who are <u>not</u> orphaned or vulnerable	Total number of children aged 10-14 years
<b>Sex</b>									
Male	3.2	94.3	80.0	96.8	0.97	25.9	94.8	74.1	365
Female	1.6	100	78.9	97.5	1.03	23.8	95.7	76.2	359
<b>Wealth index</b>									
Low	8.3	100	70.3	96.9	1.03	28.9	95.2	71.1	121
Medium	1.4	87.3	79.7	95.7	0.91	24.9	92.5	75.1	367
High	0.9	100	83.7	99.3	1.01	22.7	100	77.3	236
<b>Total</b>	<b>2.4</b>	<b>96.1</b>	<b>79.5</b>	<b>97.1</b>	<b>0.99</b>	<b>24.9</b>	<b>95.3</b>	<b>75.1</b>	<b>724</b>
A double orphan is a child whose mother and father have both died. Orphaned and vulnerable children due to AIDS (OVC) includes children whose mother or father have died (regardless of cause), who live in a household with a chronically ill adult, whose parents are chronically ill, or who live in a household where an adult who was chronically ill has died in the past year.									



In many countries few services are available to families that have taken in children who are orphaned or vulnerable. Community-based organizations and governments need to be sure that families are supported to care for these children. The level and types of support provided to households caring for children orphaned and vulnerable due to AIDS is presented in Table 12.11 (HA.13).

Table 12.11 (HA.13): Support for children orphaned and vulnerable due to AIDS								
Percentage of children aged 0-17 years orphaned or made vulnerable due to AIDS whose households receive free basic external support in caring for the child, MICS Meru North district, 2008								
Characteristics	Percentage of orphans and vulnerable children whose households received:							Number of children orphaned or vulnerable aged 0-17 years
	Medical support (in last 12 months)	Emotional and psychosocial support (in last 3 months)	Social/ material support (in last 3 months)	Educational support (in last 12 months)	Any support(*)	All types of support	No support at all	
<b>Sex</b>								
Male	0.6	6.5	0.4	16.1	21.5	0.0	78.5	266
Female	2.0	8.1	1.7	15.8	20.9	1.2	79.1	271
<b>Age</b>								
0-4 years	0.0	5.2	0.0	NA	5.2	0.0	94.8	107
5-9 years	0.3	6.6	1.4	19.9	25.8	0.0	74.2	165
10-14 years	3.2	8.9	1.9	23.7	28.2	1.9	71.8	180
15-17 years	0.9	8.2	0.0	12.1	17.7	0.0	82.3	85
<b>Wealth index</b>								
Low	0.0	1.9	0.0	18.2	20.1	0.0	79.9	115
Medium	0.9	8.6	1.5	11.4	17.5	0.6	82.5	269
High	2.9	9.3	1.1	22.3	28.6	1.1	71.4	153
<b>Total</b>	<b>1.3</b>	<b>7.3</b>	<b>1.1</b>	<b>16.0</b>	<b>21.2</b>	<b>0.6</b>	<b>78.8</b>	<b>537</b>
Orphaned and vulnerable children due to AIDS (OVC) includes children whose mother or father have died (regardless of cause), who live in a household with a chronically ill adult, whose parents are chronically ill, or who live in a household where an adult who was chronically ill has died in the past year.								
NA: Not applicable.								

Most of the households with orphaned and vulnerable children (79 per cent) did not receive any external support for caring for the children. However, about four per cent of households received medical support during the year preceding the survey. About 16 per cent of the orphaned or vulnerable children received educational support. Overall, 21 per cent of the orphaned and vulnerable children received some form of support.

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## Appendix A: Sample Design

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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 Meru North Multiple Indicator Cluster Survey (MICS) was to produce statistically reliable estimates of most indicators, at the district level. A two-stage, cluster sampling approach was used for the selection of the survey sample. Further, the households were stratified into two groups one with a child below 3 years (stratum-1) and the other without a child below 3 years (stratum-2) at the time of household listing, and more households from stratum-1 were selected to get more children in the sample from less number of households. The cluster level stratification was done to net more children and mothers who have given birth during the last few years into the sample.

### Sample Size and Sample Allocation

The target sample size for the Meru North MICS was calculated as 1,200 households. For the calculation of the sample size, the key indicator used was the immunization coverage among children age 12-23 months. The following formula was used to estimate the required sample size for these indicators:

$$n = \frac{[4(r)(1-r)(f)(1.1)]}{[(0.12r)^2(p)(n_h)]}$$

Where

- $n$  is the required sample size, expressed as number of households
- 4 is a factor to achieve the 95 per cent level of confidence
- $r$  is the predicted or anticipated prevalence (coverage rate) of the indicator
- 1.1 is the factor necessary to raise the sample size by 10 per cent for non-response
- $f$  is the shortened symbol for *deff* (design effect)
- $0.12r$  is the margin of error to be tolerated at the 95 per cent level of confidence, defined as 12 per cent of  $r$  (relative sampling error of  $r$ )
- $p$  is the proportion of the total population upon which the indicator,  $r$ , is based
- $n_h$  is the average household size.

For the calculation,  $r$  (the immunization coverage) was assumed to be 65 percent. The value of *deff* (design effect) was taken as 1.3 based on estimates from previous surveys,  $p$  (percentage of children aged 12-23 months in the total population) was taken as 3.2 percent, and  $n_h$  (average household size) was taken as 4.4 households.

The resulting number of households from this exercise was 1,519 households which is the sample size needed. But, by adopting the second level stratification the total number of households to be selected was 1,080. However, it was decided to sample 1,200 households. The average cluster size was determined as 24 households (16 from stratum-1 and 8 from stratum-2), based on a number of considerations, including the budget available, and the time that would be needed per team to complete one cluster. This implies a total of 50 clusters for the district.

## Sampling Frame and Selection of Clusters

The 1999 census frame was used for the selection of clusters. Census enumeration areas (EAs) were defined as primary sampling units (PSUs), and were selected using systematic PPS (probability proportional to size) sampling procedures, based on the estimated sizes of the enumeration areas from the 1999 Population Census.

## Listing and Mapping Activities

Since the sample frame (the 1999 Population Census) was not up to date, household lists in all selected enumeration areas were updated prior to the selection of households. For this purpose, listing and mapping teams were formed, who visited each enumeration area, and listed the occupied households. The households were stratified into two, one having a child below 3 years and the other without a child below 3 years.

The listing and mapping teams were oriented in a 3 day training program in Embu, which include class room sessions and field practice. The training was facilitated by experts from KNBS and UNICEF. The district listing and mapping team consists of 3 teams; each team has a lister and a mapper. The teams were supervised by the District Statistical Officer (DSO) on a daily basis, who also attended the 3 days training program. One team was given two days to list an EA<sup>8</sup> and segmentation was allowed for larger EAs with more than 200 households.

## Selection of Households

Lists of households were prepared by the listing teams in the field for each enumeration area. The households were grouped into two strata based on whether the household has a child below 3 years or not. The households were then sequentially numbered from 1 to  $n_1$  and  $n_2$ , where  $n_1$  is the total number of households in stratum-1 (i.e., with a child below 3 years) and  $n_2$  is the total number of households in stratum-2 (i.e., without a child below 3 years) ( $n_1 + n_2$  is the total number of households in each enumeration area) at the District Statistical Office, where selection of 16 households from stratum-1 and 8 households from stratum-2 were carried out using systematic selection procedures using a random start.

## Calculation of Sample Weights

The Meru North Multiple Indicator Cluster Survey sample is not self-weighted at cluster level due to cluster level stratification. Therefore, for separate weights were calculated for each of the strata within a cluster and they were normalized at the district level. The sample weight or multiplier computation formula is given below:

$$\frac{Zd}{nd} \times \frac{1}{zdi} \times sdi \times \frac{Hdji}{hdji}$$

Where,

$Zd$  = total population of the district 'd',

$nd$  = total number of clusters in district 'd',

$zdi$  = number of households in the  $i$ th cluster of district 'd',

$sdi$  = number of segments in the  $i$ th cluster of district 'd',

$Hdji$  = total number of households listed in the  $j$ th stratum of  $i$ th cluster in the district 'd', and

$hdji$  = number of households surveyed in the  $j$ th stratum of  $i$ th cluster in the district 'd'.

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<sup>8</sup> For all sampled EAs, both EA and Sub-location maps were developed by the cartography division of KNBS. These maps were provided to the listing and mapping teams to identify the boundaries of EA's accurately and also to map the structures in them.

As mentioned earlier, 50 clusters were selected from the Meru North district 2009 Census EA list using the PPS sampling methodology. However, we have computed final multipliers after combining 4-5 clusters because of small sample size in some of the cluster level strata.

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 district 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 and under-5's questionnaires. For the anthropometry additional weights were computed using the non-response for anthropometry section.

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

## Appendix B: List of Personnel Involved in the Survey

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### **Project Director**

Mr. A. K. M. Kilele, Director General, KNBS

### **Technical Co-ordinators**

Mr. James Gatungu, KNBS

Mr. Christopher Omolo, KNBS

### **Cluster Development Co-ordinator**

Mr. Njoroge Ng'ethe

### **Supervisor**

Ronald Mathooko

### **Enumerators**

Rhoda Karambu

Francis Kimathi Muriangi

Robert Mathenge Mutwiri

Joyce Kawira

Florence Muriithi

Francis Kamau

### **Data Collection Co-ordinator**

Mr. Benjamin Muchiri

### **Supervisors**

Jephew Gitari Ngari Kathuru

Hellen Kobia

Zipporah Karimi

### **Field Editors**

Edith Karimi Mwendwa

Faith Njeri Njoroge

Teresia Wanjugu Wambugu

### **Research Assistants**

Humphrey Maina Kariuki

Dorcas Mumbi

Jane Karimi

Winfred Kagwiria Karuma

Caroline Gakii Kibundu

Christine Kathure Kobia

Penina Kawira

Kaburu Enock Kathurima

Jackline Nkirote

## Appendix C: Estimates of Sampling Errors

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The sample of respondents selected in the Meru North Multiple Indicator Cluster Survey 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 Version 14 Complex Samples module has been used, except for the under-five mortality and infant mortality, where CSPro program is 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 at the district level. 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.9 show the calculated sampling errors.

Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Un-weighted Count	Confidence limits
Iodized salt consumption	0.9433	0.00869	1.622	1.274	1,690	1,148	0.926 0.961
Child discipline	0.8382	0.01816	2.210	1.487	1,262	910	0.802 0.875
Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Un-weighted Count	Confidence limits
Use of improved drinking water sources	0.4433	0.04335	43.237	6.575	7,840	5,679	0.357 0.530
Use of improved sanitation facilities	0.5239	0.02775	17.531	4.187	7,840	5,679	0.468 0.579
Net primary school attendance rate	0.8807	0.01169	1.688	1.299	1,809	1,299	0.857 0.904
Net secondary school attendance rate	0.1529	0.02764	2.754	1.660	692	468	0.098 0.208
Primary completion rate	0.0000	0.00000	.	.	220	150	0.000 0.000
Child labour	0.0876	0.01169	2.875	1.696	2,331	1,683	0.064 0.111
Prevalence of orphans	0.0868	0.01017	4.083	2.021	4,074	3,128	0.066 0.107
Prevalence of vulnerable children	0.1235	0.01507	6.562	2.562	4,074	3,128	0.093 0.154
Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Un-weighted Count	Confidence limits
Skilled attendant at delivery	0.6244	0.03487	2.400	1.549	517	464	0.555 0.694
Antenatal care	0.9131	0.01419	1.174	1.084	517	464	0.885 0.941
Contraceptive prevalence	0.5090	0.03105	3.091	1.758	1,108	802	0.447 0.571
Adult literacy	0.7145	0.02259	1.328	1.152	796	532	0.669 0.760
Prevalence of FGM/C	0.6215	0.02455	3.093	1.759	1,829	1,208	0.572 0.671
Marriage before age 18	0.3538	0.03377	1.602	1.266	455	322	0.286 0.421
Comprehensive knowledge about HIV prevention among young people	0.3733	0.02070	2.211	1.487	1,829	1,208	0.332 0.415
Attitudes towards people with HIV/AIDS	0.3349	0.01598	1.381	1.175	1,827	1,206	0.303 0.367
Women who have been tested for HIV	0.5376	0.01890	1.735	1.317	1,829	1,208	0.500 0.575
Knowledge of mother-to-child transmission of HIV	0.3606	0.02210	2.556	1.599	1,829	1,208	0.316 0.405



	Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Un-weighted Count	Confidence limits
Underweight prevalence	0.2986	0.02173	0.073	2.318	1.522	1,657	1,029	0.255 0.342
Tuberculosis immunization coverage	0.9513	0.01750	0.018	1.516	1.231	337	230	0.916 0.986
Polio immunization coverage	0.7057	0.03175	0.045	1.111	1.054	337	230	0.642 0.769
Immunization coverage for DPT	0.8278	0.02658	0.032	1.135	1.065	337	230	0.775 0.881
Measles immunization coverage	0.8066	0.03352	0.042	1.649	1.284	337	230	0.740 0.874
Fully immunized children	0.6153	0.03362	0.055	1.094	1.046	337	230	0.548 0.683
Acute respiratory infection in last two weeks	0.1805	0.01465	0.081	1.603	1.266	1,801	1,106	0.151 0.210
Antibiotic treatment of suspected pneumonia	0.4811	0.04761	0.099	1.861	1.364	325	206	0.386 0.576
Diarrhoea in last two weeks	0.0929	0.01066	0.115	1.489	1.220	1,801	1,106	0.072 0.114
Received ORT or increased fluids and continued feeding	0.2336	0.04679	0.200	1.369	1.170	167	113	0.140 0.327
Fever in last two weeks	0.2249	0.02097	0.093	2.789	1.670	1,801	1,106	0.183 0.267
Antimalarial treatment	0.4330	0.05012	0.116	2.415	1.554	405	237	0.333 0.533
Support for learning	0.5829	0.01862	0.032	1.575	1.255	1,801	1,106	0.546 0.620
Birth registration	0.7611	0.02184	0.029	2.900	1.703	1,801	1,106	0.717 0.805

## Appendix D: Data Quality Tables

Table DQ.2: Age distribution of eligible and interviewed women, Meru North District					
		Household population of women age 10-54	Interviewed women age 15-49		4
		Number	Number	Percent	Percentage of eligible women interviewed
<b>Age</b>	10-14	359	.	.	.
	15-19	292	212	18.7	72.8
	20-24	311	288	25.4	92.5
	25-29	214	201	17.7	93.9
	30-34	154	152	13.4	98.5
	35-39	122	122	10.7	100.0
	40-44	99	94	8.3	95.4
	45-49	68	66	5.8	96.5
	50-54	81	.	.	.
<b>Total</b>	<b>15-49</b>	<b>1260</b>	<b>1135</b>	<b>100.0</b>	<b>90.1</b>

## Appendix E: MICS Indicators - Numerators and Denominators

INDICATOR	NUMERATOR	DENOMINATOR
1 Under-five mortality rate	Probability of dying by exact age 5 years	
2 Infant mortality rate	Probability of dying by exact age 1 year	
3 Maternal mortality ratio	Number of deaths of women from pregnancy-related causes in a given year	Number of live births in the year (expressed per 100,000 births)
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	Total number of women surveyed aged 15-49 years with a birth in the 2 years preceding the survey
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	Total number of women surveyed aged 15-49 years with a birth in 2 years preceding the survey
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
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
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
9 Low-birth weight infants	Number of last live births in the 2 years preceding the survey weighing below 2,500 grams	Total number of last live births in the 2 years preceding the survey
10 Infants weighed at birth	Number of last live births in the 2 years preceding the survey that were weighed at birth	Total number of last live births in the 2 years preceding the survey
11 Use of improved drinking water sources	Number of household members living in households using improved sources of drinking water	Total number of household members in households surveyed
12 Use of improved sanitation facilities	Number of household members using improved sanitation facilities	Total number of household members in households surveyed
13 Water treatment	Number of household members using water that has been treated	Total number of household members in households surveyed
14 Disposal of child's faeces	Number of children under age three whose (last) stools were disposed of safely	Total number of children under age three surveyed
15 Exclusive breastfeeding rate	Number of infants aged 0-5 months that are exclusively breastfed	Total number of infants aged 0-5 months surveyed

INDICATOR	NUMERATOR	DENOMINATOR
16 Continued breastfeeding rate	Number of infants aged 12-15 months, and 20-23 months, that are currently breastfeeding	Total number of children aged 12-15 months and 20-23 months surveyed
17 Timely complementary feeding rate	Number of infants aged 6-9 months that are receiving breast milk and complementary foods	Total number of infants aged 6-9 months surveyed
18 Frequency of complementary feeding	Number of infants aged 6-11 months that receive breast milk 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)	Total number of infants aged 6-11 months surveyed
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	Total number of infants aged 0-11 months surveyed
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	Total number of women surveyed aged 15-49 years with a birth in the 2 years preceding the survey
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)	Total number of women aged 15-49 years that are currently married or in union
22 Antibiotic treatment of suspected pneumonia	Number of children aged 0-59 months with suspected pneumonia in the previous 2 weeks receiving antibiotics	Total number of children aged 0-59 months with suspected pneumonia in the previous 2 weeks
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	Total number of children aged 0-59 months with suspected pneumonia in the previous 2 weeks
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	Total number of residents in households surveyed
25 Tuberculosis immunization coverage	Number of children aged 12-23 months receiving BCG vaccine before their first birthday	Total number of children aged 12-23 months surveyed
26 Polio immunization coverage	Number of children aged 12-23 months receiving OPV3 vaccine before their first birthday	Total number of children aged 12-23 months surveyed
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
28 Measles immunization coverage	Number of children aged 12-23 months receiving measles vaccine before their first birthday	Total number of children aged 12-23 months surveyed
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
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

INDICATOR	NUMERATOR	DENOMINATOR
31 Fully immunized children	Number of children aged 12-23 months receiving DPT1-3, OPV-1-3, BCG and measles vaccines before their first birthday	Total number of children aged 12-23 months surveyed
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	Total number of women surveyed aged 15-49 years with a birth in the year preceding the survey
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	Total number of children aged 0-59 months with diarrhoea in the previous 2 weeks
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	Total number of children aged 0-59 months with diarrhoea in the previous 2 weeks
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	Total number of children aged 0-59 months with diarrhoea in the previous 2 weeks
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	Total number of households surveyed
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	Total number of children aged 0-59 months surveyed
38 Under-fives sleeping under mosquito nets	Number of children aged 0-59 months that slept under a mosquito net the previous night	Total number of children aged 0-59 months surveyed
39 Anti-malarial 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 anti-malarial within 24 hours of onset	Total number of children aged 0-59 months reported to have had fever in the previous 2 weeks
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	Total number of women that have had a live birth within the 2 years preceding the survey
41 Iodized salt consumption	Number of households with salt testing 15 parts per million or more of iodine/iodate	Total number of households surveyed
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	Total number of children aged 6-59 months surveyed
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	Total number of women that had a live birth in the 2 years preceding the survey
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	Total number of women with a live birth in the 2 years preceding the survey
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	Total number of women with a live birth in the 2 years preceding the survey
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	Total number of children aged 0-59 months surveyed

INDICATOR	NUMERATOR	DENOMINATOR
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	Total number of children aged 0-59 months
48 Support for learning: children's books	Number of households with three or more children's books	Total number of households surveyed
49 Support for learning: non-children's books	Number of households with three or more non-children's books	Total number of households surveyed
50 Support for learning: materials for play	Number of households with three or more materials intended for play	Total number of households surveyed
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	Total number of children aged 0-59 months surveyed
52 Pre-school attendance	Number of children aged 36-59 months that attend some form of early childhood education programme	Total number of children aged 36-59 months surveyed
53 School readiness	Number of children in first grade that attended some form of pre-school the previous year	Total number of children in the first grade surveyed
54 Net intake rate in primary education	Number of children of school-entry age that are currently attending first grade	Total number of children of primary- school entry age surveyed
55 Net primary school attendance rate	Number of children of primary-school age currently attending primary or secondary school	Total number of children of primary- school age surveyed
56 Net secondary school attendance rate	Number of children of secondary-school age currently attending secondary school or higher	Total number of children of secondary-school age surveyed
57 Children reaching grade five	Proportion of children entering the first grade of primary school that eventually reach grade five	
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	Total number of children that were in the last grade of primary school during the previous school year surveyed
59 Primary completion rate	Number of children (of any age) attending the last grade of primary school (excluding repeaters)	Total number of children of primary school completion age (age appropriate to final grade of primary school) surveyed
60 Adult literacy rate	Number of women aged 15-24 years that are able to read a short simple statement about everyday life	Total number of women aged 15-24 years surveyed
61 Gender parity index	Proportion of girls in primary and secondary education	Proportion of boys in primary and secondary education
62 Birth registration	Number of children aged 0-59 months whose births are reported registered	Total number of children aged 0-59 months surveyed
63 Prevalence of female genital mutilation/cutting (FGM/C)	Number of women aged 15-49 years that reported undergoing <u>any</u> form of genital mutilation/cutting	Total number of women aged 15-49 years surveyed

INDICATOR	NUMERATOR	DENOMINATOR
64 Prevalence of extreme form of FGM/C	Number of women aged 15-49 years that reported undergoing an extreme form of genital mutilation/cutting (such as infibulation)	Total number of women aged 15-49 years surveyed
65 Prevalence of FGM/C among daughters	Number of women aged 15-49 years that reported that at least one daughter had undergone female genital mutilation/cutting	Total number of women aged 15-49 years surveyed that have at least one living daughter
66 Approval for FGM/C	Number of women aged 15-49 years favouring the continuation of female genital mutilation/cutting	Total number of women aged 15-49 years surveyed
67 Marriage before age 15 and age 18	Number of women that were first married or in union by the exact age of 15 and the exact age of 18, by age groups	Total number of women aged 15-49 years and 20-49 years surveyed, by age groups
68 Young women aged 15-19 years currently married or in union	Number of women aged 15-19 years currently married or in union	Total number of women aged 15-19 years surveyed
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	Total number of women aged 15-19 and 20-24 years surveyed that are currently married or in union
70 Polygyny	Number of women in a polygynous union	Total number of women aged 15-49 years surveyed that are currently married or in union
71 Child labour	Number of children aged 5-14 years that are involved in child labour	Total number of children aged 5-14 years surveyed
72 Labourer students	Number of children aged 5-14 years involved in child labour activities that attend school	Total number of children aged 5-14 years involved in child labour activities
73 Student labourers	Number of children aged 5-14 years attending school that are involved in child labour activities	Total number of children aged 5-14 years attending school
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	Total number of children aged 2-14 years selected and surveyed
75 Prevalence of orphans	Number of children under age 18 with at least one dead parent	Total number of children under age 18 surveyed
76 Prevalence of vulnerable children	Number of children under age 18 that have a chronically ill parent, that live in a household where an adult aged 18-59 years has died in the past year, or that live in a household where an adult aged 18-59 years has been chronically ill in the past year	Total number of children under age 18 surveyed
77 School attendance of orphans versus non-orphans	Proportion of double orphans (both mother and father dead) aged 10-14 years attending school	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
78 Children's living arrangements	Number of children aged 0-17 years not living with a biological parent	Total number of children aged 0-17 years surveyed

INDICATOR	NUMERATOR	DENOMINATOR
79 Malnutrition among children orphaned and made vulnerable by HIV/AIDS	Proportion of orphaned or vulnerable children under age five that are moderately or severely underweight, of all orphaned and vulnerable children under age five that are weighed	Proportion of children not classified as orphaned or vulnerable under age five that are moderately or severely underweight, of all children not classified as orphaned or vulnerable under age five that are weighed
80 Early sex among children orphaned and made vulnerable by HIV/AIDS	Proportion of orphaned and vulnerable children aged 15-17 years that had sex before age 15, of all orphaned and vulnerable children aged 15-17 years surveyed	Proportion of children not classified as orphaned or vulnerable aged 15-17 years that had sex before age 15, of all children not classified as orphaned or vulnerable aged 15-17 years surveyed
81 External support to children orphaned and made vulnerable by HIV/AIDS	Number of orphaned and vulnerable children under age 18 whose households received free basic external support in caring for the child	Number of orphaned and vulnerable children under age 18 surveyed
82 Comprehensive knowledge about HIV prevention among young people	Number of women aged 15-24 years that correctly identify two ways of avoiding HIV transmission	Total number of women aged 15-24 years surveyed
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	Total number of women aged 15-24 years surveyed that had a non-marital, non-cohabiting partner in the previous 12 months
84 Age at first sex among young people	Number of women aged 15-24 years that have had sex before age 15	Total number of women aged 15-24 surveyed
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	Total number of women aged 15-24 that were sexually active in the previous 12 months
86 Attitude towards people with HIV/AIDS	Number of women expressing acceptance on all four questions about people with HIV or AIDS	Total number of women surveyed
87 Women who know where to be tested for HIV	Number of women that state knowledge of a place to be tested	Total number of women surveyed
88 Women who have been tested for HIV	Number of women that report being tested for HIV	Total number of women surveyed
89 Knowledge of mother-to-child transmission of HIV	Number of women that correctly identify all three means of vertical transmission	Total number of women surveyed
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	Total number of women that gave birth in the previous 24 months surveyed
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	Total number of women that gave birth in the previous 24 months surveyed



INDICATOR	NUMERATOR	DENOMINATOR
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	Total number of sexually active women aged 15-24 years surveyed
93 Security of tenure	Number of household members living in urban households that lack formal documentation for their residence or that feel at risk of eviction	Number of urban household members in households surveyed
94 Durability of housing	Number of household members living in urban dwellings that are not considered durable	Number of urban household members in households surveyed
95 Slum household	Number of household members living in urban slums	Number of household members in urban households surveyed
96 Source of supplies	Number of children (or households) for whom supplies were obtained from public providers, presented separately for each type of supply: insecticide-treated mosquito nets, oral Rehydration salts, antibiotics and anti-malarials	Total number of children (or households) for whom supplies were obtained
97 Cost of supplies	Median cost of supplies obtained, presented separately for each type of supply and whether sourced from public or private providers: insecticide-treated mosquito nets, oral Rehydration salts, antibiotics and anti-malarials.	Total number of children (or households) for whom supplies were obtained
98 Unmet need for family planning	Number of women that are currently married or in union that are fecund and want to space their births or limit the number of children they have and that are not currently using contraception	Total number of women interviewed that are currently married or in union
99 Demand satisfied for family planning	Number of women currently married or in union that are currently using contraception	Number of women currently married or in union that have an unmet need for contraception or that are currently using contraception
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, (2) she neglects the children, (3) she argues with him, (4) she refuses sex with him, (5) she burns the food	Total number of women surveyed
101 Child disability	Number of children aged 2-9 years with at least one of nine reported disabilities: (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

## Appendix F: Questionnaires



### FORM-A: HOUSEHOLD

H1. Identification				ENGLISH	
#	Question		Options		
HH-A	Province Name & Code _____		<input type="text"/>		
HH-B	District Name & Code _____		<input type="text"/> <input type="text"/>		
HH1	Cluster Name & Number	<input type="text"/> <input type="text"/>	HH-C	Stratum [Child < 3 = 1/Other = 2] <input type="text"/>	
HH2	HH No.		<input type="text"/> <input type="text"/> <input type="text"/>		
HH3	Interviewer's Name & No. _____		<input type="text"/> <input type="text"/> <input type="text"/>		
HH4	Supervisor Name & No. _____		<input type="text"/> <input type="text"/> <input type="text"/>		
HH5	Day/Month/Year of Interview		<input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		
HH6	Urban/Rural (Urban=1, Rural=2)		<input type="text"/>		
HH7	Name of the Head of the HH (To be filled-in after completing Section H.2)		_____		
HH8 to HH14 be filled-in after all questions for the HH have been completed					
HH8	Result of HH interview		Completed ..... 1 Not at home ..... 2 Refused ..... 3 HH not found/destroyed ..... 4 Other ( <i>specify</i> ..... ) .. 6		
HH9	Respondent to HH Form: Name: _____		Line No.:		<input type="text"/> <input type="text"/>
HH10	Total No. of HH members		<input type="text"/> <input type="text"/>		
HH11	No. of women 15-49 eligible	<input type="text"/> <input type="text"/>	HH12	No. of women 15-49 forms completed	<input type="text"/> <input type="text"/>
HH13	No. of children < 5 eligible	<input type="text"/> <input type="text"/>	HH14	No. of children < 5 forms completed	<input type="text"/> <input type="text"/>
HH16	Editor: Name and Code	<input type="text"/> <input type="text"/> <input type="text"/>	HH17	Data Entry: Name and Code	<input type="text"/> <input type="text"/>

## **Introduction/Consent**

HELLO. MY NAME IS (.....) AND I AM WORKING WITH THE KENYA NATIONAL BUREAU OF STATISTICS (KNBS), NAIROBI. WE ARE DOING A SURVEY TO COLLECT INFORMATION ABOUT FAMILY HEALTH AND EDUCATION, FOCUSING ON CHILDREN AND WOMEN, WITH UNICEF SUPPORT. I WOULD LIKE TO TALK TO YOU ABOUT THIS. THE INTERVIEW WILL TAKE ABOUT 30 MINUTES. ALL THE INFORMATION WE OBTAIN WILL REMAIN STRICTLY CONFIDENTIAL AND EVENTUALLY BE ANONYMOUS. DURING THIS TIME I WOULD LIKE TO SPEAK WITH THE HOUSEHOLD HEAD AND MOTHER OR OTHERS WHO TAKE CARE OF CHILDREN IN THE HOUSEHOLD.

THE INFORMATION YOU PROVIDE WILL HELP THE GOVERNMENT AND DEVELOPMENT AGENCIES IN PLANNING AND IMPLEMENTING DEVELOPMENTAL PROGRAMS.

MAY I START THE INTERVIEW NOW?

H.2: HH Member Listing										HL													
List the head of the HH in line 01. List all HH members (HL2), their relationship to the HH head (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 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 if there is more than 15 members. Tick here if continuation sheet used <input type="checkbox"/>										For children age 0-17 year ask HL9 to HL12A													
Eligible for :										If age 18-59													
										Women Interview		Child Labor		Under-5 Interview									
HL1 LINE NO.	HL2 FIRST, PLEASE TELL ME THE NAME OF EACH PERSON WHO USUALLY LIVES IN THIS HOUSEHOLD, STARTING WITH THE HEAD OF THE HH?	HL3 WHAT IS THE RELATIONSHIP OF (name) TO THE HEAD OF THE HH?	HL4 IS (name) MALE OR FEMALE? 1 MALE 2 FEMALE	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]	HL7 [For child age 5-14 years] WHO IS THE MOTHER OR PRIMARY CARETAKER OF (name)? [record line no. of mother/ caretaker]	HL8 [For child < 5] WHO IS THE MOTHER OR PRIMARY CARETAKER OF (name)? [record line no. of mother/ caretaker]	HL9 IS (name's) MOTHER ALIVE? 1-YES 2- NO <del>SL</del> HL11 8-DK <del>SL</del> HL11	HL10 [If alive:] DOES (name's) MOTHER LIVE IN THIS HH? [Record line no. of mother or 00 for 'no']	HL10A [If '00' in HL10] HAS (name's) MOTHER BEEN VERY SICK FOR AT LEAST 3 MONTHS IN THE PAST 12 MONTHS	HL11 IS (name's) NATURAL FATHER ALIVE? 1 YES 2- NO <del>SL</del> NEXT LINE 8-DK <del>SL</del> NEXT LINE	HL12 [If alive:] DOES (name's) NATURAL FATHER LIVE IN THIS HH? [Record line no. of father or 00 for 'no']	HL12A [If '00' in HL12] HAS (name's) FATHER BEEN VERY SICK FOR AT LEAST 3 MONTHS IN THE PAST 12 MONTHS										
Line	Name	Relation	M	F	Age	15-49	Mother/CT	Mother/CT	Y	N	DK	Y	N	DK	Y	N	DK						
01		0 1	1	2	<input type="text"/>	01	<input type="text"/>	<input type="text"/>	1	2	8	<input type="text"/>	<input type="text"/>	1	2	8	<input type="text"/>						
02		<input type="text"/>	1	2	<input type="text"/>	02	<input type="text"/>	<input type="text"/>	1	2	8	<input type="text"/>	<input type="text"/>	1	2	8	<input type="text"/>						
03		<input type="text"/>	1	2	<input type="text"/>	03	<input type="text"/>	<input type="text"/>	1	2	8	<input type="text"/>	<input type="text"/>	1	2	8	<input type="text"/>						
04		<input type="text"/>	1	2	<input type="text"/>	04	<input type="text"/>	<input type="text"/>	1	2	8	<input type="text"/>	<input type="text"/>	1	2	8	<input type="text"/>						
05		<input type="text"/>	1	2	<input type="text"/>	05	<input type="text"/>	<input type="text"/>	1	2	8	<input type="text"/>	<input type="text"/>	1	2	8	<input type="text"/>						
06		<input type="text"/>	1	2	<input type="text"/>	06	<input type="text"/>	<input type="text"/>	1	2	8	<input type="text"/>	<input type="text"/>	1	2	8	<input type="text"/>						
07		<input type="text"/>	1	2	<input type="text"/>	07	<input type="text"/>	<input type="text"/>	1	2	8	<input type="text"/>	<input type="text"/>	1	2	8	<input type="text"/>						
08		<input type="text"/>	1	2	<input type="text"/>	08	<input type="text"/>	<input type="text"/>	1	2	8	<input type="text"/>	<input type="text"/>	1	2	8	<input type="text"/>						
09		<input type="text"/>	1	2	<input type="text"/>	09	<input type="text"/>	<input type="text"/>	1	2	8	<input type="text"/>	<input type="text"/>	1	2	8	<input type="text"/>						



Eligible for :										If age 18-59		For children age 0-17 year ask HL9 to HL12A													
Women Interview		Child Labor		Under-5 Interview		HL5		HL6		HL7		HL8		HL9		HL10		HL10A		HL11		HL12		HL12A	
HL1 LINE NO.	HL2 FIRST, PLEASE TELL ME THE NAME OF EACH PERSON WHO USUALLY LIVES IN THIS HOUSEHOLD, STARTING WITH THE HEAD OF THE HH?	HL3 WHAT IS THE RELATIONSHIP OF THE HH?	HL4 IS (name) MALE OR FEMALE?	HL5 HOW OLD IS (name)?	HL6 [Circle line no. if woman is age 15-49]	HL7 [For child age 5-14 years]	HL8 [For child <5]	HL9 IS (name's) MOTHER ALIVE?	HL10A [If '00' in HL10]	HL11 IS (name's) FATHER ALIVE?	HL12 [If alive]	HL12A [If '00' in HL12]													
Line	Name	Relation	M F	Age	15-49	Mother/CT	Mother/CT	Very sick (1)	Y N DK	Y N DK	Y N DK	Y N DK													
10			1 2		10			1 2 8	Y N DK	Y N DK	Y N DK	Y N DK													
11			1 2		11			1 2 8	Y N DK	Y N DK	Y N DK	Y N DK													
12			1 2		12			1 2 8	Y N DK	Y N DK	Y N DK	Y N DK													
13			1 2		13			1 2 8	Y N DK	Y N DK	Y N DK	Y N DK													
14			1 2		14			1 2 8	Y N DK	Y N DK	Y N DK	Y N DK													
15			1 2		15			1 2 8	Y N DK	Y N DK	Y N DK	Y N DK													
ARE THERE ANY OTHER PERSONS LIVING HERE - EVEN IF THEY ARE NOT MEMBERS OF YOUR FAMILY OR DO NOT HAVE PARENTS LIVING IN THIS HH? INCLUDING CHILDREN AT SCHOOL OR WORK? [If yes, insert child's name and complete the information. Fill in the totals below.]													TOTALS												

Codes for HL3 : Relationship to the Head of HH:

- 01 - Head
- 02 - Wife or Husband
- 03 - Son or Daughter
- 04 - Son-in-law or daughter-in-law
- 05 - Grand child

- 12 - Niece/Nephew by marriage
- 13 - Other relative
- 14 - Adopted/Foster/Step child
- 15 - Not related
- 98 - Don't know

- 06 - Parent
- 07 - Parent-in-law
- 08 - Brother or Sister
- 09 - Brother-in-law or sister-in-law
- 10 - Uncle/Aunt
- 11 - Niece/Nephew by blood

H.3: Education (For all age 5 and above)													ED			
For members age 5 and above				Members age 5-24 years only												
ED1 Line No.	ED1A Name	ED1B How old is (name)?  How old was (name) on his/her last birthday?  [Record completed years]	ED2 HAS (name) EVER ATTENDED SCHOOL OR PRE- SCHOOL?  1 Yes 2 No ⇨ Next Line	ED3 WHAT IS THE HIGHEST LEVEL OF SCHOOL (name) ATTENDED? WHAT IS THE HIGHEST CLASS (name) COMPLETED AT THIS LEVEL?  If < 1 grade, enter 00	ED4 DURING THIS (2008) SCHOOL YEAR, DID (name) ATTEND SCHOOL OR PRE-SCHOOL ANY TIME?  1 Yes 2 No ⇨ED7	ED5 SINCE LAST (DAY OF THE WEEK), HOW MANY DAYS DID (name) ATTEND SCHOOL?  [Record no. of days]	ED6 DURING THIS SCHOOL YEAR 2008, WHICH LEVEL AND CLASS IS (name) ATTENDING?	ED7 DID (name) ATTEND SCHOOL OR PRESCHOOL AT ANY TIME DURING THE PREVIOUS SCHOOL YEAR 2007?	ED8 DURING THAT PREVIOUS SCHOOL YEAR 2007, WHICH LEVEL AND CLASS DID (name) ATTENDED?							
Line	Name	Age	Y	N	Level	Grade	Y	N	Days	Level	Grade	Y	N	DK	Level	Grade
			1	2			1	2				1	2	8		
			1	2			1	2				1	2	8		
			1	2			1	2				1	2	8		
			1	2			1	2				1	2	8		
			1	2			1	2				1	2	8		
			1	2			1	2				1	2	8		
			1	2			1	2				1	2	8		
			1	2			1	2				1	2	8		
			1	2			1	2				1	2	8		
			1	2			1	2				1	2	8		
			1	2			1	2				1	2	8		
			1	2			1	2				1	2	8		
			1	2			1	2				1	2	8		
			1	2			1	2				1	2	8		
			1	2			1	2				1	2	8		
			1	2			1	2				1	2	8		

CODES FOR ED3, ED6 & ED8

0 - Pre-School

1 - Primary

2 - Post-Primary, Vocational

3 - Secondary, 'A' Level

4 - College – Middle Level

5 - University

6 - Non-standard curriculum

8 – Don't know

H.4: Water & Sanitation			WS
#	Question	Options	Skip
WS1	WHAT IS THE MAIN SOURCE OF DRINKING WATER FOR MEMBERS OF YOUR HOUSEHOLD?	<u>Piped water</u> Piped into dwelling .....11 Piped into yard or plot.....12 Public tap/standpipe.....13 Pipe water from neighbour's house.....14 Tubewell/borehole with hand-pump .....21 Tubewell/borehole with powered pump .....22 <u>Dug well</u> Protected well .....31 Unprotected well .....32 <u>Water from spring</u> Protected spring.....41 Unprotected spring .....42 Rainwater collection .....51 Tanker-truck .....61 Cart with small tank/drum .....71 Surface water (river, stream, dam, lake, pond, canal, irrigation channel) .....81 Bottled water .....91 Other ( <i>specify</i> _____) .....96	11⇒WS5 12⇒WS5  13-81 ⇒WS3  96⇒WS3
WS2	WHAT IS THE MAIN SOURCE OF WATER USED BY YOUR HOUSEHOLD FOR OTHER PURPOSES SUCH AS COOKING AND HANDWASHING?	<u>Piped water</u> Piped into dwelling .....11 Piped into yard or plot.....12 Public tap/standpipe.....13 Pipe water from neighbour's house .....14 Tubewell/borehole with hand-pump .....21 Tubewell/borehole with powered pump .....22 <u>Dug well</u> Protected well .....31 Unprotected well .....32 <u>Water from spring</u> Protected spring .....41 Unprotected spring .....42 Rainwater collection .....51 Tanker-truck .....61 Cart with small tank/drum .....71 Surface water (river, stream, dam, lake, pond, canal, irrigation channel) .....81 Other ( <i>specify</i> _____) ..... 96	11⇒WS5 12⇒WS5
WS3	HOW LONG DOES IT TAKE TO GO THERE, GET WATER AND COME BACK?  [Code '900' for over 15+ hours]	No. of minutes ..... <input type="text"/> <input type="text"/> <input type="text"/> <b>Water on premises</b> ..... 995 Don't know ..... 998	995⇒WS4A
WS4	WHO USUALLY GOES TO THIS SOURCE TO FETCH THE WATER FOR YOUR HH?  <b>Probe:</b> IS THIS PERSON UNDER AGE 15? WHAT SEX?	Adult woman (15+ years) ..... A Adult man (15+ years) ..... B Female child (under 15) ..... C Male child (under 15) ..... D Don't know ..... Z	

H.4: Water & Sanitation			WS
#	Question	Options	Skip
WS4A	WHAT IS THE MAIN TYPE OF CONTAINER USED FOR STORING DRINKING WATER IN THIS HOUSEHOLD?	Jerry can/Narrow neck container with lid .... 1 Jerry can/Narrow neck container without lid ..... 2 Open container with lid ..... 3 Open container without lid ..... 4 Others (specify _____) ..... 6	
WS4B	DURING THE LAST 12 MONTHS, DOES THIS HOUSEHOLD RECEIVE ANY CANS/CONTAINER THROUGH FREE DISTRIBUTION?	Yes ..... 1 No ..... 2 Don't know ..... 8	
WS5	DO YOU TREAT YOUR WATER IN ANY WAY TO MAKE IT SAFER TO DRINK?	Yes ..... 1 No ..... 2 Don't know ..... 8	2⇒WS7 8⇒WS7
WS6	WHAT DO YOU USUALLY DO TO THE WATER TO MAKE IT SAFER TO DRINK?  ANYTHING ELSE?  <i>[Record all items mentioned]</i>	Boil ..... A Add bleach/chlorine ..... B Strain it through a cloth ..... C Use water filter (ceramic, sand, composite, etc.) ..... D Solar dis-infection ..... E Let it stand and settle ..... F Other (specify _____) ..... X Don't know ..... Z	
WS7	WHAT KIND OF TOILET FACILITY DO MEMBERS OF YOUR HOUSEHOLD USUALLY USE?  <b>If “flush” or “pour flush”: WHERE DOES IT FLUSH TO?</b>  <b>[Ask for permission &amp; observe the facility]</b>	<u>Flush / pour flush</u> Flush to piped sewer system ..... 11 Flush to septic tank ..... 12 Flush to pit (latrine) ..... 13 Flush to somewhere else ..... 14 Flush to unknown place/not sure/DK where to flush ..... 15 <u>Pit latrine</u> Ventilated Improved Pit latrine ..... 21 Pit latrine with slab ..... 22 Pit latrine without slab/open pit ..... 23 Pit latrine with slab & cover ..... 24 Pit latrine with slab & foot rest ..... 25 Pit latrine with slab, cover & foot rest ..... 26 Composting toilet ..... 31 Bucket ..... 41 Hanging toilet/hanging latrine ..... 51 <b>No facilities or bush or field..... 95</b> Other (specify) ..... 96	95⇒ WS11
WS8	DO YOU SHARE THIS FACILITY WITH OTHER HHs?	Yes ..... 1 No ..... 2	2⇒ WS10
WS9	HOW MANY HHs IN TOTAL USE THIS TOILET FACILITY?	No. of HHs (if less than 10) ..... <input type="text"/> Ten or more HHs ..... 10 DK ..... 98	



H.4: Water & Sanitation			WS
#	Question	Options	Skip
WS10	DO YOU HAVE A HAND-WASHING FACILITY OUTSIDE THE TOILET?  [Ask for permission & observe the facility]	Seen the facility filled with water ..... 1 Seen the facility but no water ..... 2 Not seen ..... 3 No facility ..... 4	
WS11	HOW DO MEMBERS OF YOUR HOUSEHOLD MAINLY GET RID OF THE GARBAGE (RUBBISH)?	Dumped in street/empty plot ..... 01 Garbage burnt ..... 02 Garbage buried ..... 03 Thrown in pit ..... 04 Composted ..... 05 Community disposal point ..... 06 Regular collection by government ..... 07 Infrequent collection by government ..... 08 Pays for private collection ..... 09 Other (specify ..... ) ..... 96	

H.5: Household Characteristics			HC
#	Question	Options	Skip
HC1.A	WHAT IS THE RELIGION OF THE HEAD OF THIS HH?	Catholic ..... 1 Other Christian ..... 2 Muslim ..... 3 No Religion ..... 8 Others (specify) ..... 9	
HC1.B	WHAT IS THE MOTHER TONGUE/NATIVE LANGUAGE OF THE HEAD OF THIS HOUSEHOLD?	Kiswahili ..... 01 Embu ..... 02 Kalenjin ..... 03 Kamba ..... 04 Kikuyu ..... 05 Kisii ..... 06 Luhya ..... 07 Luo ..... 08 Maasai ..... 09 Meru ..... 10 Mijikenda ..... 11 Somali ..... 12 Other (specify ..... ) ..... 96	
HC2	HOW MANY ROOMS IN THIS HH ARE USED FOR SLEEPING?	No. of rooms ..... <input type="text"/> <input type="text"/>	
HC3	<b>Observe and record:</b>  Main material of the dwelling <b>floor</b> :	<u>Natural floor</u> Earth/sand ..... 11 Dung ..... 12 <u>Rudimentary floor</u> Wood planks ..... 21 Palm/bamboo ..... 22 <u>Finished floor</u> Parquet or polished wood ..... 31 Vinyl or asphalt strips ..... 32 Ceramic tiles ..... 33 Cement ..... 34 Carpet ..... 35 Other (specify ..... ) ..... 96	
HC4	<b>Observe and record:</b>  Main material of the <b>roof</b> :	<u>Natural roofing</u> No Roof ..... 11 Thatch/palm leaf ..... 12 Sod ..... 13 <u>Rudimentary Roofing</u> Rustic mat ..... 21 Palm/bamboo ..... 22 Wood planks ..... 23 <u>Finished roofing</u> Metal ..... 31 Wood ..... 32 Calamine/cement fiber ..... 33 Ceramic tiles ..... 34 Cement ..... 35 Roofing shingles ..... 36 Other (specify ..... ) ..... 96	

H.5: Household Characteristics			HC
#	Question	Options	Skip
HC5	<b>Observe and record:</b>  Main material of the walls:	<u>Natural walls</u> No walls ..... 11 Cane/palm/trunks ..... 12 Mud/dirt ..... 13 <u>Rudimentary walls</u> Bamboo with mud ..... 21 Stone with mud ..... 22 Uncovered adobe ..... 23 Plywood ..... 24 Carton ..... 25 Reused wood ..... 26 <u>Finished walls</u> Cement ..... 31 Stone with lime/cement ..... 32 Bricks ..... 33 Cement blocks ..... 34 Covered adobe ..... 35 Wood planks/shingles ..... 36 Other ( <i>specify</i> ..... ) .... 96	
HC6	WHAT TYPE OF FUEL DOES YOUR HH MAINLY USE FOR COOKING?	<b>Electricity</b> ..... <b>01</b> <b>Liquid Propane Gas (LPG)</b> ..... <b>02</b> <b>Natural gas</b> ..... <b>03</b> <b>Biogas</b> ..... <b>04</b>  Kerosene ..... 05 Coal / Lignite ..... 06 Charcoal ..... 07 Wood ..... 08 Straw/shrubs/grass ..... 09 Animal dung ..... 10 Agricultural crop residue ..... 11 Other ( <i>specify</i> ..... ) .... 96	01 ⇒ HC8 02 ⇒ HC8 03 ⇒ HC8 04 ⇒ HC8
HC7	IN THIS HH, IS FOOD COOKED ON AN OPEN FIRE, AN OPEN STOVE OR A CLOSED STOVE?  <b>Probe for type</b>	Open fire ..... 1 Open stove ..... 2 <b>Closed stove</b> ..... <b>3</b> <b>Other (<i>specify</i> ..... ) .... 6</b>	3 ⇒ HC8 6 ⇒ HC8
HC7A	DOES THE FIRE/STOVE HAVE A CHIMNEY OR A HOOD?	Yes ..... 1 No ..... 2	
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 ( <i>specify</i> ..... ) .. 6	

H.5: Household Characteristics				HC
#	Question	Options		Skip
HC9	DOES YOUR HOUSEHOLD HAVE	Yes	No	
	A. ELECTRICITY? .....	1	2	
	B. RADIO? .....	1	2	
	C. TELEVISION? .....	1	2	
	D. MOBILE TELEPHONE? .....	1	2	
	E. TELEPHONE (LAND LINE)? .....	1	2	
	F. REFRIGERATOR? .....	1	2	
	G. COMPUTER? .....	1	2	
	H. INTERNET CONNECTION? .....	1	2	
HC10	DOES ANY MEMBER OF YOUR HH OWN:			
	A. WATCH? .....	1	2	
	B. BICYCLE? .....	1	2	
	C. MOTORCYCLE OR SCOOTER? .....	1	2	
	D. AN ANIMAL DRAWN CART? .....	1	2	
	E. A CAR OR TRUCK? .....	1	2	
	F. A 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		
HC12	DOES THIS HH OWN ANY LIVESTOCK, HERDS, OR FARM ANIMALS?	Yes ..... 1 No ..... 2		

H.6: Use of Mosquito Net			TN
#	Question	Options	Skip
TN1	DOES YOUR HOUSEHOLD HAVE ANY MOSQUITO NETS THAT CAN BE USED WHILE SLEEPING?	Yes ..... 1 No ..... 2	2 ⇒ (H.7)
TN2	HOW MANY MOSQUITO NETS DOES YOUR HH HAVE? [If 7 or more nets, record '7']	Number of nets ..... <input type="text"/>	
	Ask the respondent to show you the nets in the household, if more than 2, tell them to show the two recently obtained ones.	<b>Most Recent [Net #1]</b>	<b>Last But One [Net #2]</b>
TN3	MAY I HAVE A LOOK AT THE TWO NET(S) YOU HAVE OBTAINED LAST, TO ESTABLISH THE BRAND?	Observed ..... 1 Not observed ..... 2	Observed ..... 1 Not observed ..... 2
TN4	HOW MANY MONTHS AGO DID YOUR HOUSEHOLD ACQUIRE THE <u>LAST/LAST BUT ONE</u> MOSQUITO NET?  [If answer is "12 months" or "1 year", probe to determine if net was obtained exactly 12 months ago or earlier or later.]	No of Months ..... <input type="text"/> <input type="text"/> More than 3 years ..... 95 Don't know/not sure ..... 98	No of Months ..... <input type="text"/> <input type="text"/> More than 3 years ..... 95 Don't know/not sure ..... 98
TN5	<b>Observe the brand/type of mosquito net.</b>  If not observed ask:  WHAT BRAND IS THE NET?	<u>Long lasting nets</u> Permanet ..... 1 ⇒ TN8 Olyset ..... 2 ⇒ TN8 <u>Other nets</u> Supanet ..... 3 Other(sp ..... ) ... 8 Don't know ..... 9	<u>Long lasting nets</u> Permanet ..... 1 ⇒ TN8 Olyset ..... 2 ⇒ TN8 <u>Other nets</u> Supanet ..... 3 Other(sp ..... ) ... 8 Don't know ..... 9
TN6	SINCE YOU GOT THIS MOSQUITO NET, WAS IT EVER SOAKED OR DIPPED IN A LIQUID TO KILL OR REPEL MOSQUITOS?	Yes ..... 1 No ..... 2 ⇒ TN8 Don't know ..... 9 ⇒ TN8	Yes ..... 1 No ..... 2 ⇒ TN8 Don't know ..... 9 ⇒ TN8
TN7	HOW MANY MONTHS AGO WAS THIS NET LAST DIPPED OR SOAKED?  [If answer is "12 months" or "1 year", probe to determine if net was dipped or soaked exactly 12 months ago or earlier or later.]	No of Months ..... <input type="text"/> <input type="text"/> More than 2 years ..... 95 Don't know/not sure ..... 98	No of Months ..... <input type="text"/> <input type="text"/> More than 2 years ..... 95 Don't know/not sure ..... 98
TN8	DID ANYONE SLEPT UNDER THIS MOSQUITO NET LAST NIGHT?  If 'yes', WHO SLEPT UNDER THIS NET LAST NIGHT? ANY ONE ELSE?  [Record the person's line number from the household schedule]  [If more than 4 persons slept under a net, record the details of children and women first]  [If guest, code '77' and none, code '00']	<u>Name</u> <u>Line No</u> 1 ..... <input type="text"/> <input type="text"/> 2 ..... <input type="text"/> <input type="text"/> 3 ..... <input type="text"/> <input type="text"/> 4 ..... <input type="text"/> <input type="text"/>	<u>Name</u> <u>Line No</u> 1 ..... <input type="text"/> <input type="text"/> 2 ..... <input type="text"/> <input type="text"/> 3 ..... <input type="text"/> <input type="text"/> 4 ..... <input type="text"/> <input type="text"/>

H.7: Orphan-hood/Vulnerability			OV
#	Question	Options	SKIP
OV1	<b>Check HL5 (in section H.2): Any children 0-17?</b> <input type="checkbox"/> <b>Yes</b> ⇒ Continue to OV2 <input type="checkbox"/> <b>No</b> ⇒ Next Section [H.10]		
OV2	I WOULD LIKE YOU TO THINK BACK OVER THE PAST 12 MONTHS. HAS ANY USUAL MEMBER OF YOUR HH DIED IN THE LAST 12 MONTHS?	Yes ..... 1 No ..... 2	2⇒OV5
OV3	(OF THOSE WHO DIED IN THE PAST 12 MONTHS) WERE ANY OF THESE PEOPLE BETWEEN THE AGES OF 18 AND 59 YEARS?	Yes ..... 1 No ..... 2	2⇒OV5
OV4	(OF THOSE WHO DIED IN THE PAST 12 MONTHS AND WERE BETWEEN THE AGES OF 18 AND 59 YRS.) WERE ANY OF THESE PEOPLE SERIOUSLY ILL FOR 3 OF THE 12 MONTHS BEFORE HE/SHE DIED?	Yes ..... 1 No ..... 2	1⇒OV8
OV5	<b>Check the following in the HH Listing</b> <b>1. Check totals for HL9 and HL11</b> <input type="checkbox"/> At least one mother or father dead ⇒ OV8 <input type="checkbox"/> No mother or father dead <b>2. Check total for HL8A</b> <input type="checkbox"/> At least one adult aged 18-59 very sick 3 of last 12 months ⇒ OV8 <input type="checkbox"/> No adult aged 18-59 very sick 3 of last 12 months <b>3. Check totals for HL10A and HL12A</b> <input type="checkbox"/> At least one mother or father ill 3 of last 12 months ⇒ OV8 <input type="checkbox"/> No mother or father ill 3 of last 12 months ⇒ Go to Section H.8		



H.7: Orphan-hood					OV
OV8	List all children aged 0-17 Years. Record names, line numbers and ages of all children, beginning with the first child and continue in order in which listed in the HH Listing section. Use a continuation sheet if there are more than 4 children aged 0-17 years. Ask all questions for one child before moving to the next child.				
	Name (from HL2)	1 <sup>ST</sup> CHILD	2 <sup>ND</sup> CHILD	3 <sup>RD</sup> CHILD	4 <sup>TH</sup> CHILD
	Line number (from HL1)	_____	_____	_____	_____
	Age (from HL5)	_____	_____	_____	_____
OV9	I WOULD LIKE TO ASK YOU ABOUT ANY FORMAL, ORGANIZED HELP OR SUPPORT THAT YOUR HH MAY HAVE RECEIVED FOR (name) AND FOR WHICH YOU DID NOT HAVE TO PAY. BY FORMAL ORGANIZED SUPPORT I MEAN HELP PROVIDED BY SOMEONE WORKING FOR A PROGRAM. THIS PROGRAM COULD BE GOVERNMENT, PRIVATE, RELIGIOUS, CHARITY, OR COMMUNITY-BASED. REMEMBER THIS SHOULD BE SUPPORT FOR WHICH YOU DID NOT PAY.				
OV10	NOW I WOULD LIKE TO ASK YOU ABOUT THE SUPPORT YOUR HH RECEIVED FOR (name). IN THE LAST 12 MONTHS, HAS YOUR HH RECEIVED ANY MEDICAL SUPPORT FOR (name), SUCH AS MEDICAL CARE, SUPPLIES OR MEDICINE?	Yes.....1 No.....2 DK.....8	Yes.....1 No.....2 DK.....8	Yes.....1 No.....2 DK.....8	Yes.....1 No.....2 DK.....8
OV11	IN THE LAST 12 MONTHS, HAS YOUR HH RECEIVED ANY EMOTIONAL OR PSYCHOLOGICAL SUPPORT FOR (name), SUCH AS COMPANIONSHIP, COUNSELING FROM A TRAINED COUNSELOR, OR SPIRITUAL SUPPORT, WHICH YOU RECEIVED AT HOME?	Yes.....1 No.....2 DK.....8 2 or 8 ⇒ OV13	Yes.....1 No.....2 DK.....8 2 or 8 ⇒ OV13	Yes.....1 No.....2 DK.....8 2 or 8 ⇒ OV13	Yes.....1 No.....2 DK.....8 2 or 8 ⇒ OV13
OV12	DID YOUR HH RECEIVE ANY OF THIS SUPPORT FOR (name), IN THE PAST 3 MONTHS?	Yes.....1 No.....2 DK.....8	Yes.....1 No.....2 DK.....8	Yes.....1 No.....2 DK.....8	Yes.....1 No.....2 DK.....8
OV13	IN THE LAST 12 MONTHS, HAS YOUR HH RECEIVED ANY MATERIAL SUPPORT FOR (name), SUCH AS CLOTHING, FOOD OR FINANCIAL SUPPORT?	Yes.....1 No.....2 DK.....8 2 or 8 ⇒ OV15	Yes.....1 No.....2 DK.....8 2 or 8 ⇒ OV15	Yes.....1 No.....2 DK.....8 2 or 8 ⇒ OV15	Yes.....1 No.....2 DK.....8 2 or 8 ⇒ OV15
OV14	DID YOUR HH RECEIVE ANY OF THIS SUPPORT FOR (name), IN THE PAST 3 MONTHS?	Yes.....1 No.....2 DK.....8	Yes.....1 No.....2 DK.....8	Yes.....1 No.....2 DK.....8	Yes.....1 No.....2 DK.....8
OV15	IN THE LAST 12 MONTHS, HAS YOUR HH RECEIVED ANY SOCIAL SUPPORT FOR (name), SUCH AS HELP IN HH WORK, TRAINING FOR A CAREGIVER, OR LEGAL SERVICES?	Yes.....1 No.....2 DK.....8 2 or 8 ⇒ OV17	Yes.....1 No.....2 DK.....8 2 or 8 ⇒ OV17	Yes.....1 No.....2 DK.....8 2 or 8 ⇒ OV17	Yes.....1 No.....2 DK.....8 2 or 8 ⇒ OV17
OV16	DID YOUR HH RECEIVE ANY OF THIS SUPPORT FOR (name), IN THE PAST 3 MONTHS?	Yes.....1 No.....2 DK.....8	Yes.....1 No.....2 DK.....8	Yes.....1 No.....2 DK.....8	Yes.....1 No.....2 DK.....8
OV17	<b>Check OV8: Age of the child 5-17 Yr?</b>	<input type="checkbox"/> Yes ⇒ OV18 <input type="checkbox"/> No ⇒ Next child	<input type="checkbox"/> Yes ⇒ OV18 <input type="checkbox"/> No ⇒ Next child	<input type="checkbox"/> Yes ⇒ OV18 <input type="checkbox"/> No ⇒ Next child	<input type="checkbox"/> Yes ⇒ OV18 <input type="checkbox"/> No ⇒ Next child
OV18	IN THE LAST 12 MONTHS, HAS YOUR HH RECEIVED ANY SUPPORT FOR (name's) SCHOOLING, SUCH AS ALLOWANCE, FREE ADMISSION, BOOKS OR SUPPLIES?	Yes.....1 No.....2 DK.....8	Yes.....1 No.....2 DK.....8	Yes.....1 No.....2 DK.....8	Yes.....1 No.....2 DK.....8

H.8: Child Labour (for 5-14 years of age only)												CL		
To be administered to mother/caretaker of each child in the HH age 5 through 14 years. NOW, I WOULD LIKE TO ASK ABOUT ANY WORK CHILDREN IN THIS HH MAY DO.														
Line No.	CL2 Name	CL3 DURING THE PAST WEEK, DID (name) DO ANY KIND OF WORK FOR SOMEONE, WHO IS NOT A MEMBER OF THIS HH?  <b>If Yes:</b> FOR PAY IN CASH OR KIND?  1=Yes, for pay (cash or kind) 2=Yes, unpaid 3=No ⇒ CL5			CL4 SINCE LAST (day of the week), ABOUT HOW MANY HOURS DID (name) DO THIS WORK FOR SOMEONE WHO IS NOT A MEMBER OF THIS HH?  <i>[If more than one job, include all hours at all jobs]</i>  <b>Record &amp; skip to ⇒ CL6</b>		CL5 AT ANY TIME DURING THE PAST YEAR, DID (name) DO ANY KIND OF WORK FOR SOMEONE WHO IS NOT A MEMBER OF THIS HH?  <b>If Yes:</b> 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 HH CHORES SUCH AS SHOPPING, COLLECTING FIREWOOD, CLEANING, FETCHING WATER OR CARING FOR CHILDREN?  1= Yes 2= No ⇒ CL8		CL7 SINCE LAST (day of the week), ABOUT HOW MANY HOURS DID (name) 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?)  1=Yes 2=No ⇒ Next Line	CL9 SINCE LAST (day of the week), ABOUT HOW MANY HOURS DID (name) DO THIS WORK?	
		Yes Paid	Yes Unpaid	No	No. of hours	Yes Paid	Yes Unpaid	No	Yes	No	No. of hours	Yes	No	No. of hours
		1	2	3				1	2	3	1	2		
		1	2	3				1	2	3	1	2		
		1	2	3				1	2	3	1	2		
		1	2	3				1	2	3	1	2		
		1	2	3				1	2	3	1	2		
		1	2	3				1	2	3	1	2		
		1	2	3				1	2	3	1	2		
		1	2	3				1	2	3	1	2		
		1	2	3				1	2	3	1	2		



H.9: Child Discipline						CD		
Review the household listing and list all children aged 2-14 years below in order according to their line number (HL1). Do not include other HH 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). (write the name, sex, age and the mother/caretaker line no. only for the eligible child)								
CD1 Rank	CD2 Line No. from HL1	CD3 Name from HL2	CD4 Sex from HL4 M      F		CD5 Age from HL5	CD6 Line no. of mother/ caretaker from HL7/HL8	CD7	
01	__ __		1	2	__ __	__ __		
02	__ __		1	2	__ __	__ __		
03	__ __		1	2	__ __	__ __		
04	__ __		1	2	__ __	__ __		
05	__ __		1	2	__ __	__ __		
06	__ __		1	2	__ __	__ __		
07	__ __		1	2	__ __	__ __		
08	__ __		1	2	__ __	__ __		
<b>Total children aged 2-14 years in the HH</b>							__ __	
If there is only one child age 2-14 years in the household, then go to CD11 to administer child discipline questions.								
<b>Random Selection Of Child</b>								
Use the grid below 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	Number of Eligible Children in the Household							
Last digit of HH. No.	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 child.....							

## H.9: Child Discipline CD

Review the household listing and list all children aged 2-14 years below in order according to their line number (HL1). Do not include other HH 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). (write the name, sex, age and the mother/caretaker line no. only for the eligible child)

CD1 Rank	CD2 Line No. from HL1	CD3 Name from HL2	CD4 Sex from HL4 M      F	CD5 Age from HL5	CD6 Line no. of mother/ caretaker from HL7/HL8	CD7
01	__ __		1    2	__ __	__ __	
02	__ __		1    2	__ __	__ __	
03	__ __		1    2	__ __	__ __	
04	__ __		1    2	__ __	__ __	
05	__ __		1    2	__ __	__ __	
06	__ __		1    2	__ __	__ __	
07	__ __		1    2	__ __	__ __	
08	__ __		1    2	__ __	__ __	
<b>Total children aged 2-14 years in the HH</b>						__ __

If there is only one child age 2-14 years in the household, then go to CD11 to administer child discipline questions.

### Random Selection Of Child

Use the grid below 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	Number of Eligible Children in the Household							
Last digit of HH. No.	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 child.....	__ __
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H.9: Child Discipline			CD
Identify eligible child aged 2-14 in the household using the tables on the preceding page. Request and interview the mother or primary caretaker of the selected child (identified by the line number in CD6).			
#	Question	Options	Skip
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 No.: ..... <input type="text"/> <input type="text"/> .....	
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	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 LIKE THAT.	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	
CD12l	PINCH HIM/HER.	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	

H.10: Food Relief			FR
#	Question	Options	Skip
FR1	ARE YOU REGISTERED AS A BENEFICIARY OF FOOD DISTRIBUTION PROGRAM?	Yes..... 1 No ..... 2	2⇒ FR6
FR2	HOW LONG AGO WAS THE LAST RATION?	No. of weeks ..... 1 <input type="text"/> <input type="text"/> No. of months..... 2 <input type="text"/> <input type="text"/>	
FR3	DOES THE FOOD AID MEET ALL THE FOOD NEEDS OF THE HOUSEHOLD?	Yes..... 1 No ..... 2 Don't Know..... 8	
FR4	DO MEMBERS OF THE HOUSEHOLD SELL FOOD TO OBTAIN MONEY TO MEET OTHER NEEDS?	Yes..... 1 No ..... 2 Don't Know ..... 8	2⇒ FR6 8⇒ FR6
FR5	DOES THE PRICE THE HOUSEHOLD RECEIVE FOR THIS FOOD EQUAL MARKET RATES?	Much Less..... 1 Roughly the Same..... 2 Much More ..... 3 Don't Know..... 8	
FR6	IS ANY OF YOUR CHILDREN REGISTERED IN THE CHILD FEEDING PROGRAM?	Yes..... 1 No ..... 2	
FR7	HAS THE HOUSEHOLD BEEN DISPLACED ANY TIME DURING THE PAST 12 MONTHS?	Yes..... 1 No ..... 2	

H.11: Salt Iodization			SI
#	Question	Options	Skip
SL1	<p>WE WOULD LIKE TO CHECK WHETHER THE SALT USED IN YOUR HH IS IODIZED. MAY I SEE A SAMPLE OF THE SALT USED TO COOK THE MAIN MEAL EATEN BY MEMBERS OF YOUR HH LAST NIGHT?</p> <p>[Once you have examined the salt, circle number that corresponds to test outcome]</p>	<p>Not iodized .....1</p> <p>Less than 15 ppm.....2</p> <p>15 ppm and more .....3</p> <p>No salt at home .....6</p> <p>Salt not tested .....7</p>	<p>2⇒ SL2</p> <p>3⇒ SL2</p> <p>3⇒ SL2</p> <p>3⇒ SL2</p>
SL1A	TYPE OF SALT	<p>Crystal.....1</p> <p>Powder.....2</p> <p>Other (Specify.....).....9</p>	
SL2	<p><b>Check HL6:</b> Does any eligible woman age 15-49 in the HH? You should have a Form with the Woman ID filled in for each eligible woman.</p> <p><input type="checkbox"/> Yes ⇒ Go to WOMAN 15-49 FORM to administer the questions to the first eligible woman.</p> <p><input type="checkbox"/> No ⇒ Continue to SL3.</p>		
SL3	<p><b>Check HL8:</b> Does any child under the age of 5 in the HH? You should have a Form with the Under-Five ID filled in for each eligible child.</p> <p><input type="checkbox"/> Yes ⇒ Go to CHILD &lt; 5 FORM to administer the Form to mother or caretaker of the first eligible child.</p> <p><input type="checkbox"/> No ⇒ End the interview by thanking the respondent for his/her cooperation.</p> <p>Gather together all Forms for this household and tally the number of Forms completed on the cover page.</p>		

**Interviewer's Remarks:**

**Supervisor's Remarks:**

**FORM-B: WOMAN AGE 15-49 YEARS**

W.1: Identification Panel		ENGLISH
<b>This Form is to be administered to all women age 15-49 years (See Column HL6 in the HH Form). Fill in one Form for each eligible woman.</b>		
WM-A	Province Name and Code: _____	<input type="text"/>
WM-B	District Name and Code: _____	<input type="text"/> <input type="text"/>
WM1	Cluster Name and Number _____	<input type="text"/> <input type="text"/>
WM-C	Stratum code:            HH with child < 3 = 1 Other HHs         = 2	<input type="text"/>
WM2	HH No. _____	<input type="text"/> <input type="text"/> <input type="text"/>
WM3	Name of the woman (from FORM-A: HL2) _____	
WM4	Line no. of woman (from FORM-A: HL1) _____	<input type="text"/> <input type="text"/>
WM5	Interviewer's Name & Code _____	<input type="text"/> <input type="text"/> <input type="text"/>
WM6	Day/Month/Year of interview	<input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
WM7	Result of interview for woman	Completed ..... 1 Not at home ..... 2 Refused ..... 3 Partly completed ..... 4 Incapacitated ..... 5 Other (Specify _____) ..... 6
<u>Remarks if any:</u>   		

**Read, if the respondent has not responded to any other Forms**

### **Introduction/Consent**

HELLO. MY NAME IS (.....) AND I AM WORKING WITH THE KENYA NATIONAL BUREAU OF STATISTICS (KNBS), NAIROBI. WE ARE DOING A SURVEY TO COLLECT INFORMATION ABOUT FAMILY HEALTH AND EDUCATION, FOCUSING ON CHILDREN AND WOMEN, WITH UNICEF SUPPORT. I WOULD LIKE TO TALK TO YOU ABOUT THIS. THE INTERVIEW WILL TAKE ABOUT 30 MINUTES. ALL THE INFORMATION WE OBTAIN WILL REMAIN STRICTLY CONFIDENTIAL AND EVENTUALLY BE ANONYMOUS.

THE INFORMATION YOU PROVIDE WILL HELP THE GOVERNMENT AND DEVELOPMENT AGENCIES IN PLANNING AND IMPLEMENTING DEVELOPMENTAL PROGRAMS.

MAY I START THE INTERVIEW NOW?



## ENGLISH

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.

## KISWAHILI

1. Mtoto anasoma kitabu.
2. Mvua ilichelewa mwaka huu.
3. Nilazima wazazi watunze watoto wao.
4. Ukilima ni kazi ngumu.

W.2: Woman Information			WI
#	Question	Options	Skip
WM8	IN WHAT MONTH AND YEAR WERE YOU BORN?  [Date of birth]	Month ..... <input type="text"/> <input type="text"/> DK Month ..... 98 Year ..... <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> DK Year ..... 9998	
WM9	HOW OLD WERE YOU AT YOUR LAST BIRTHDAY?	Age in completed years ..... <input type="text"/> <input type="text"/>	
WM10	HAVE YOU EVER ATTENDED SCHOOL OR PRE-SCHOOL?	Yes ..... 1 No ..... 2	2⇒WM14
WM11	WHAT IS THE HIGHEST LEVEL OF SCHOOL YOU ATTENDED?	Pre-School ..... 0 Primary ..... 1 Post-Primary, Vocational ..... 2 Secondary, 'A' Level ..... 3 College – Middle Level ..... 4 University ..... 5 Non-standard curriculum ..... 6	
WM12	WHAT IS THE HIGHEST GRADE YOU COMPLETED AT THAT LEVEL?	Grade ..... <input type="text"/> <input type="text"/>	
WM13	<b>Check WM11: Level of schooling</b> <input type="checkbox"/> <b>Secondary/College/University (codes 3 or 4 or 5)</b> ⇒ WM15 <input type="checkbox"/> <b>Other</b> ⇒ Continue to WM14		
WM14	NOW I WOULD LIKE YOU TO READ THIS SENTENCE TO ME.  [Show language test card to respondent]	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	HOW OFTEN DO YOU LISTEN TO RADIO?	Almost everyday ..... 1 At least once a week ..... 2 At least once a month ..... 3 Rarely/Never ..... 4	
WM16	HOW OFTEN DO YOU WATCH TELEVISION?	Almost everyday ..... 1 At least once a week ..... 2 At least once a month ..... 3 Rarely/Never ..... 4	
WM17	HOW OFTEN DO YOU READ NEWSPAPERS?	Almost everyday ..... 1 At least once a week ..... 2 At least once a month ..... 3 Rarely/Never ..... 4	

W.3: Child Mortality			CM
#	Question	Options	Skip
<b>To be administered to all women age 15-49. All questions refer to LIVE births only.</b>			
CM1	NOW I WOULD LIKE TO ASK ABOUT ALL THE BIRTHS YOU HAVE HAD DURING YOUR LIFE. HAVE YOU EVER GIVEN BIRTH?  <b>If "No" probe by asking:</b> 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⇒(W.6)
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?	A. Sons at home ..... <input type="text"/> <input type="text"/>  B. Daughters at home ..... <input type="text"/> <input type="text"/>	
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?	A. Sons elsewhere ..... <input type="text"/> <input type="text"/>  B. Daughters elsewhere ..... <input type="text"/> <input type="text"/>	
CM7	HAVE YOU EVER GIVEN BIRTH TO A BOY OR GIRL WHO WAS BORN ALIVE BUT LATER DIED? <b>If "No" probe by asking:</b> ANY BABY WHO EVER BREATHED OR CRIED OR SHOWED OTHER SIGNS OF LIFE BUT DID NOT SURVIVE – EVEN IF HE OR SHE LIVED ONLY A FEW MINUTES OR HOURS?	Yes ..... 1 No ..... 2	2⇒CM9
CM8	HOW MANY BOYS HAVE DIED?  HOW MANY GIRLS HAVE DIED?	A. Boys dead ..... <input type="text"/> <input type="text"/>  B. Girls dead ..... <input type="text"/> <input type="text"/>	
CM9	<b>Sum answers to CM4, CM6, &amp; CM8.</b>	Sum ..... <input type="text"/> <input type="text"/>	
CM10	<b>JUST TO MAKE SURE THAT I HAVE THIS RIGHT, YOU HAVE HAD IN TOTAL _____ BIRTHS DURING YOUR LIFE. IS THIS CORRECT?</b> <input type="checkbox"/> Yes    ⇒ Continue to W.3a (next page). <input type="checkbox"/> No     ⇒ Check responses and make corrections before proceeding to W.3a		



## BH

Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had. Record names of all the births in BH1. Record twins and triplets on separate lines.

BH1	BH2	BH3	BH4	BH5	BH6	BH7	BH8	BH9	BH10
#	WHAT NAME WAS GIVEN TO YOUR (FIRST/ NEXT) BABY?	WERE ANY OF THESE BIRTHS TWINS?	IN WHAT MONTH AND YEAR WAS (name) BORN?  Probe: WHAT IS HIS/HER BIRTHDAY? Month ____ Year ____ □□/□□□□	IS (name) STILL ALIVE?  Yes ... 1 No..... 2 ⇒ BH9	HOW OLD WAS (name) AT HIS/HER LAST BIRTHDAY? [Record age in completed years]  □□	IS (name) LIVING WITH YOU?  Y ... 1 N ... 2	Record HH line number of child  □□ ⇒ next line	How OLD WAS (name) WHEN HE/SHE DIED?  How MANY MONTHS OLD WAS (name)? [Record days if less than 1 month; months if less than 2 years; or years]  Days.....1 Month.....2 Year .....3  □□	WERE THERE ANY OTHER LIVE BIRTHS BETWEEN (name) of (previous birth) AND (name)?
01		Sing ... 1 Mult... 2		Yes ... 1 No..... 2 ⇒ BH9	□□	Y ... 1 N ... 2	□□ ⇒ next line	□□	
02		Sing ... 1 Mult... 2		Yes ... 1 No..... 2 ⇒ BH9	□□	Y ... 1 N ... 2	□□ ⇒ BH10	□□	Yes ..... 1 [Add] No..... 2 [Next]
03		Sing ... 1 Mult... 2		Yes ... 1 No..... 2 ⇒ BH9	□□	Y ... 1 N ... 2	□□ ⇒ BH10	□□	Yes ..... 1 [Add] No..... 2 [Next]
04		Sing ... 1 Mult... 2		Yes ... 1 No..... 2 ⇒ BH9	□□	Y ... 1 N ... 2	□□ ⇒ BH10	□□	Yes ..... 1 [Add] No..... 2 [Next]
05		Sing ... 1 Mult... 2		Yes ... 1 No..... 2 ⇒ BH9	□□	Y ... 1 N ... 2	□□ ⇒ BH10	□□	Yes ..... 1 [Add] No..... 2 [Next]
06		Sing ... 1 Mult... 2		Yes ... 1 No..... 2 ⇒ BH9	□□	Y ... 1 N ... 2	□□ ⇒ BH10	□□	Yes ..... 1 [Add] No..... 2 [Next]
07		Sing ... 1 Mult... 2		Yes ... 1 No..... 2 ⇒ BH9	□□	Y ... 1 N ... 2	□□ ⇒ BH10	□□	Yes ..... 1 [Add] No..... 2 [Next]
08		Sing ... 1 Mult... 2		Yes ... 1 No..... 2 ⇒ BH9	□□	Y ... 1 N ... 2	□□ ⇒ BH10	□□	Yes ..... 1 [Add] No..... 2 [Next]

W.3a: Birth History										BH		
NOW I WOULD LIKE TO RECORD THE NAMES OF ALL YOUR BIRTHS, WHETHER STILL ALIVE OR NOT, STARTING WITH THE FIRST ONE YOU HAD. Record names of all the births in BH1. Record twins and triplets on separate lines.												
BH1	BH2	BH3	BH4	BH5	BH6	BH7	BH8	BH9	BH10			
#	WHAT NAME WAS GIVEN TO YOUR (FIRST/ NEXT) BABY?	WERE ANY OF THESE BIRTHS TWINS?	IS (name) A BOY OR GIRL?	IN WHAT MONTH AND YEAR WAS (name) BORN? Probe: WHAT IS HIS/HER BIRTHDAY?	IS (name) STILL ALIVE?	HOW OLD WAS (name) AT HIS/HER LAST BIRTHDAY? [Record age in completed years]	IS (name) LIVING WITH YOU?	Record HH line number of child [Record '00' if child not listed in HH]	If dead: HOW OLD WAS (name) WHEN HE/SHE DIED? HOW MANY MONTHS OLD WAS (name)? [Record days if less than 1 month; months if less than 2 years; or years]	WERE THERE ANY OTHER LIVE BIRTHS BETWEEN (name) of (previous birth) AND (name)?		
09		Sing .. 1 Mult ... 2	Boy ... 1 Girl ... 2	Month: <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Year: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Yes ... 1 No ... 2 ⇒ BH9	<input type="text"/> <input type="text"/>	Y ... 1 N ... 2	<input type="text"/> <input type="text"/> ⇒ BH10	Days ... 1 Month ... 2 Year ... 3	Yes ... 1 [Add] No ... 2 [Next]		
10		Sing .. 1 Mult ... 2	Boy ... 1 Girl ... 2	Month: <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Year: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Yes ... 1 No ... 2 ⇒ BH9	<input type="text"/> <input type="text"/>	Y ... 1 N ... 2	<input type="text"/> <input type="text"/> ⇒ BH10	Days ... 1 Month ... 2 Year ... 3	Yes ... 1 [Add] No ... 2 [Next]		
11		Sing .. 1 Mult ... 2	Boy ... 1 Girl ... 2	Month: <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Year: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Yes ... 1 No ... 2 ⇒ BH9	<input type="text"/> <input type="text"/>	Y ... 1 N ... 2	<input type="text"/> <input type="text"/> ⇒ BH10	Days ... 1 Month ... 2 Year ... 3	Yes ... 1 [Add] No ... 2 [Next]		
12		Sing .. 1 Mult ... 2	Boy ... 1 Girl ... 2	Month: <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Year: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Yes ... 1 No ... 2 ⇒ BH9	<input type="text"/> <input type="text"/>	Y ... 1 N ... 2	<input type="text"/> <input type="text"/> ⇒ BH10	Days ... 1 Month ... 2 Year ... 3	Yes ... 1 [Add] No ... 2 [Next]		
BH11	HAVE YOU HAD ANY LIVE BIRTHS SINCE THE BIRTH OF (name of last birth)? If yes, record birth(s)											Yes ..... 1 No ..... 2
BH12	Compare CM9 with number of births in history above and mark: <input type="checkbox"/> Numbers are different ⇒ Probe and reconcile <input type="checkbox"/> Numbers are same											Check: For all birth: Year of birth is recorded ..... <input type="checkbox"/> For each living child: Current age is recorded ..... <input type="checkbox"/> For each dead child: Age of death is recorded ..... <input type="checkbox"/> For age at death 12 months or 1 year: Probe to ..... <input type="checkbox"/> determine exact number of months

W.3a: Birth History			BH
BH13	SOME PREGNANCIES END BEFORE FULL TERM AS A MISCARRIAGE OR AN ABORTION, WHILE OTHERS MAY RESULT IN A STILLBIRTH. HAVE YOU HAD A MISCARRIAGE OR ABORTION?	Yes..... 1 No ..... 2	2⇒ BH15
BH14	IN ALL HOW MANY PREGNANCIES DID YOU HAVE THAT ENDED IN A MISCARRIAGE OR AN ABORTION?	Miscarriages/abortions ..... <input type="text"/> <input type="text"/> DK..... 98	
BH15	HAVE YOU HAD A STILLBIRTH?	Yes..... 1 No ..... 2	2⇒ CM12
BH16	IN ALL HOW MANY PREGNANCIES DID YOU HAVE THAT ENDED IN A STILLBIRTH?	Still births ..... <input type="text"/> <input type="text"/> DK..... 98	
CM12	<p><b>Check BH4 of last birth:</b> Did the woman's last birth occur within the last 2 years, that is, since (day and month of interview in 2006)? If child has died, take special care when referring to this child by name in the following sections.</p> <p><input type="checkbox"/> No live birth in last 2 years ⇒ MARRIAGE/UNION Section [W.6]</p> <p><input type="checkbox"/> Yes, live birth in last 2 years ⇒ Continue to CM13</p> <p>Name of child: _____</p>		
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	

W.4: Tetanus Toxoid			TT
#	Question	Options	Skip
<b>This section is to be administered to all women with a live birth in the 2 years preceding the date of interview.</b>			
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, WHICH IS CONVULSIONS AFTER BIRTH (AN ANTI-TETANUS SHOT, AN INJECTION AT THE TOP OF THE ARM OR SHOULDER OR THIGH)?	Yes ..... 1 No ..... 2 DK ..... 8	2⇒ TT5 8⇒ TT5
TT3	HOW MANY TIMES DID YOU RECEIVE THIS ANTI-TETANUS INJECTION DURING YOUR LAST PREGNANCY?	No. of times ..... <input type="text"/> <input type="text"/> DK ..... 98	98⇒ TT5
TT4	<b>Check: How many TT doses during last pregnancy were reported in TT3?</b>	At least 2 TT inj. during last pregnancy ..... 1 Fewer than 2 TT inj. during last preg ..... 2	1⇒ (W.5)
TT5	DID YOU RECEIVE ANY TT INJECTION AT ANY TIME BEFORE YOUR LAST PREGNANCY?	Yes ..... 1 No ..... 2 DK ..... 8	2⇒ (W.5) 8⇒ (W.5)
TT6	HOW MANY TIMES DID YOU RECEIVE IT?	No. of times ..... <input type="text"/> <input type="text"/>	
TT7	IN WHAT MONTH AND YEAR DID YOU RECEIVE THE LAST ANTI-TETANUS INJECTION BEFORE THAT LAST PREGNANCY?  Skip to next section only if year of injection is given. Otherwise, continue with TT8.	Month ..... <input type="text"/> <input type="text"/> DK month ..... 98  Year ..... <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> DK year ..... 9998	Skip to (W.5)
TT8	HOW MANY YEARS AGO DID YOU RECEIVE THE LAST ANTI-TETANUS INJECTION BEFORE THAT LAST PREGNANCY?	Years ago ..... <input type="text"/> <input type="text"/>	



W.5: Maternal and Newborn Health			MN
#	Question	Options	Skip
This section is to be administered to all women with a live birth in the 2 years preceding date of interview. Check CM12 (in section W.3a) 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 capsule or dispenser (Red).	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/Clinical Officer .....A Nurse/Midwife .....B Other person: Traditional birth attendant .....F Community health worker .....G Relative/friend .....H Other (specify.....) .....X No one .....Y	Y⇒MN6A
MN2A	HOW MANY TIMES DID YOU RECEIVE ANTENATAL CARE DURING THIS PREGNANCY?	No. of times..... Don't know .....98	
MN2B	DURING THIS PREGNANCY, WERE YOU GIVEN OR DID YOU BUY ANY IRON TABLETS? [Show Tablets]	Yes .....1 No .....2 Don't know .....8	2⇒MN3 8⇒MN3
MN2C	DURING THE WHOLE PREGNANCY, FOR HOW MANY DAYS DID YOU TAKE THE TABLETS? [If the answer is not numeric, probe for approximate number of days]	No. of days ..... Don't know .....998	
MN3	AS PART OF YOUR ANTENATAL CARE, WERE ANY OF THE FOLLOWING DONE AT LEAST ONCE?	Y N	
	MN3A. WERE YOU WEIGHED?	Weighed ..... 1 2	
	MN3B. WAS YOUR BLOOD PRESSURE MEASURED?	Blood pressure..... 1 2	
	MN3C. DID YOU GIVE A URINE SAMPLE?	Urine sample..... 1 2	
	MN3D. DID YOU GIVE A BLOOD SAMPLE?	Blood sample ..... 1 2	
MN4	DURING ANY OF THE ANTENATAL VISITS FOR THE PREGNANCY, WERE YOU GIVEN ANY INFORMATION OR COUNSELED ABOUT AIDS OR THE AIDS VIRUS?	Yes .....1 No .....2 Don't know .....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 Don't know .....8	2⇒MN6A 8⇒MN6A
MN6	I DON'T WANT TO KNOW THE RESULTS, BUT DID YOU GET THE RESULTS OF THE TEST?	Yes .....1 No .....2 Don't know .....8	
MN6A	DURING THIS PREGNANCY, DID YOU TAKE ANY MEDICINE IN ORDER TO PREVENT YOU FROM GETTING MALARIA?	Yes .....1 No .....2 Don't know .....8	2⇒MN7 8⇒MN7



W.5: Maternal and Newborn Health			MN
#	Question	Options	Skip
MN6B	WHICH MEDICINES DID YOU TAKE TO PREVENT MALARIA?  [Circle all medicines taken. If type of medicine is not determined, <b>show typical anti-malarial</b> to the respondent]	SP/Fansidar ..... A Chloroquine ..... B Others (specify ..... ) .. X DK ..... Z	If 'A' is not circled, skip to MN7
MN6C	HOW MANY TIMES DID YOU TAKE SP/FANSIDAR DURING THIS PREGNANCY TO PREVENT MALARIA?	Number of times ..... <input type="text"/> <input type="text"/>	
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/Clinical Officer ..... A Nurse/Midwife ..... B Other person: 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 the facility 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 ..... 21 Govt. clinic/health center ..... 22 CHAM ..... 23 Other public (specify ..... ) ..... 26 Private Medical Sector Private hospital ..... 31 Private clinic ..... 32 Private maternity home ..... 33 Other pvt. medical (specify ..... ) ..... 36 Other (specify ..... ) ..... 96	
MN8A	AFTER (name) WAS BORN, DID A HEALTH PROFESSIONAL OR A TRADITIONAL BIRTH ATTENDANT CHECK ON YOUR HEALTH?	Yes ..... 1 No ..... 2 DK ..... 8	2⇒ MN8D 8⇒ MN8D
MN8B	HOW MANY DAYS OR WEEKS AFTER DELIVERY DID THE FIRST CHECK TAKE PLACE?  [Record '00' days if same day]	Days after delivery ..... 1 Weeks after delivery ..... 2 Don't Know ..... 998	<input type="text"/> <input type="text"/>
MN8C	WHO CHECKED ON YOUR HEALTH AT THAT TIME?  [Probe for most qualified person]	Health professional: Doctor/Clinical Officer ..... 11 Nurse/Midwife ..... 12 Other person: Traditional birth attendant ..... 21 Community health worker ..... 22 Other (specify ..... ) ..... 96	

W.5: Maternal and Newborn Health			MN
#	Question	Options	Skip
MN8D	<b>Check MN8 for place of birth:</b> <input type="checkbox"/> <b>Birth at home (Code 11 or 12)</b> ⇒ <b>Continue to MN8E</b> <input type="checkbox"/> <b>Otherwise</b> ⇒ <b>Skip to MN9</b>		
MN8E	IN THE TWO MONTHS AFTER <i>(name)</i> WAS BORN, DID ANY HEALTH CARE PROVIDER OR A TRADITIONAL BIRTH ATTENDANT CHECK ON HIS/HER HEALTH?	Yes .....1 No .....2 DK .....8	2⇒ MN9 8⇒ MN9
MN8F	HOW MANY HOURS, DAYS OR WEEKS AFTER THE BIRTH OF <i>(name)</i> DID THE FIRST CHECK TAKE PLACE?  [If less than one day, record in hours. If less than one week, record in days.]	Hours after birth ..... 1 Days after birth ..... 2 Weeks after birth..... 3  Don't Know .....998	<div style="border: 1px solid black; width: 30px; height: 30px; display: inline-block; margin-right: 10px;"></div> <div style="border: 1px solid black; width: 30px; height: 30px; display: inline-block;"></div>
MN8G	WHO CHECKED ON <i>(name)</i> 'S HEALTH AT THAT TIME?  [Probe for most qualified person]	<u>Health professional:</u> Doctor/Clinical Officer .....11 Nurse/Midwife .....12 <u>Other person:</u> Traditional birth attendant .....21 Community health worker .....22 Other ( <i>specify</i> .....) ....96	
MN8H	WHERE DID THIS FIRST CHECK OF <i>(name)</i> TAKE PLACE?  [Probe to identify the type of source and circle the appropriate code.  If unable to determine if a hospital, health centre or clinic is public or private medical, write the name of the place]  <div style="border: 1px solid black; width: 100%; height: 20px; margin-top: 10px;"></div> (NAME OF THE PLACE)	<u>Home</u> Your home .....11 Other home .....12 <u>Public sector</u> Govt. hospital.....21 Govt. clinic/health center .....22 CHAM .....23 Other public ( <i>specify</i> .....) .....26 <u>Private Medical Sector</u> Private hospital .....31 Private clinic.....32 Private maternity home.....33 Other pvt. medical ( <i>specify</i> .....) ....36 Other ( <i>specify</i> .....) ..96	
MN9	WHEN YOUR LAST CHILD <i>(name)</i> 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 <i>(name)</i> WEIGHED AT BIRTH?	Yes .....1 No .....2 DK .....8	2⇒ MN12 8⇒ MN12

W.5: Maternal and Newborn Health			MN
#	Question	Options	Skip
MN11	HOW MUCH DID <i>(name)</i> WEIGH?  [Record weight from health card, if available]	Card.....1 Re-call .....2 (Record in Kgs) Don't know.....99998  <div> <div></div> <div>.</div> <div></div> <div></div> <div></div> </div>	
MN12	DID YOU EVER BREASTFEED <i>(name)</i> ?	Yes .....1 No.....2	2⇒ (W.6)
MN13	HOW LONG AFTER BIRTH DID YOU FIRST PUT <i>(name)</i> TO THE BREAST?  If less than 1 hour, record '00' hours. If less than 24 hours, record hours. Otherwise, record days.	Immediately .....000  Hours after .....1 Days after .....2 Don't know/remember.....998  <div> <div></div> <div></div> </div>	
MN14	DID <i>(name)</i> RECEIVE ANYTHING ELSE BEFORE STARTING TO BREASTFEED?	Yes .....1 No.....2 Don't know .....8	2⇒ (W.6) 8⇒ (W.6)
MN15	DID <i>(name)</i> RECEIVE ANY OF THE FOLLOWING:	Yes      No	
	MN15A. PLAIN WATER?	Plain water .....1      2	
	MN15B. MINERAL WATER?	Mineral water .....1      2	
	MN15C. SWEETENED, FLAVOURED WATER?	Sweetened/Flavored water .....1      2	
	MN15D. FRUIT JUICE OR TEA?	Fruit juice or tea .....1      2	
	MN15E. ANYTHING ELSE?	Other (specify.....) ...1      2	

W.6: Marriage/Union			MA
#	Question	Options	Skip
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 ..... <input type="text"/> <input type="text"/> DK ..... 98	SKIP TO ⇒ 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⇒(W.7)
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 <u>FIRST</u> MARRY OR START LIVING WITH A MAN AS IF MARRIED?	Month ..... <input type="text"/> <input type="text"/> DK month ..... 98 Year ..... <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> DK year ..... 9998	
MA7	<b>Check MA6: For month and year of marriage</b> <input type="checkbox"/> Both Month and year of marriage are known? ⇒ Next Section (W.7) <input type="checkbox"/> Either month or year of marriage/union <u>not</u> known? ⇒ Continue to MA8		
MA8	HOW OLD WERE YOU WHEN YOU STARTED LIVING WITH YOUR FIRST HUSBAND/PARTNER?	Age in years ..... <input type="text"/> <input type="text"/>	

W.7: Contraception and Unmet Need			CP
#	Question	Options	Skip
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 Don't know .....8	2⇒ CP2 8⇒ CP2
CP1A	AT THE TIME YOU BECAME PREGNANT DID YOU WANT TO BECOME PREGNANT <u>THEN</u> , DID YOU WANT TO WAIT UNTIL <u>LATER</u> , OR DID YOU <u>NOT WANT</u> TO HAVE ANY MORE CHILDREN?	Then .....1 Later .....2 Not want more children .....3	1⇒ CP4 2⇒ CP4 3⇒ CP4
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⇒ CP6
CP3	WHICH METHOD ARE YOU USING?  Do not prompt.  If more than one method is mentioned, circle each one.	Female sterilization/Tubeligation ..... A Male sterilization/Vasectomy ..... B Pill ..... C IUD/coil ..... D Injections ..... E Implants ..... F Condom ..... G Female condom ..... H Diaphragm ..... I Lactational amenorrhoea method (LAM) ..... J Periodic abstinence ..... K Withdrawal ..... L Other (specify.....) ... X	
CP4	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?  if currently pregnant: AFTER THE CHILD YOU ARE NOW EXPECTING. WOULD YOU LIKE TO HAVE ANOTHER CHILD OR YOU WOULD 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⇒ CP6 3⇒ (W.8) 8⇒ CP6
CP5	HOW LONG WOULD YOU LIKE TO WAIT BEFORE THE BIRTH OF (A/ANOTHER) CHILD?	Months..... 1 <input type="text"/> <input type="text"/> Years ..... 2 <input type="text"/> <input type="text"/>  Soon/now.....993 Says she cannot get pregnant.....994 After marriage .....995 Other.....996 Don't know .....998	994⇒ (W.8)
CP6	<b>Check CP1: Pregnancy status</b> <input type="checkbox"/> <b>Currently pregnant (code = 1)</b> ⇒ <b>Next Section (W.8)</b> <input type="checkbox"/> <b>Not currently pregnant</b> ⇒ <b>Continue to CP7</b>		
CP7	DO YOU THINK YOU ARE PHYSICALLY ABLE TO GET PREGNANT AT THIS TIME?	Yes .....1 No .....2 Don't know .....3	

W.8: Female Genital Mutilation/Cutting			FG
#	Question	Options	Skip
FG1	HAVE YOU EVER HEARD OF FEMALE CIRCUMCISION?	Yes .....1 No .....2	1⇒FG3
FG2	IN A NUMBER OF COMMUNITIES, 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⇒(W.9)
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?	<u>TRADITIONAL PERSONS</u> Traditional 'circumciser' .....11 Traditional birth attendant .....12 Other traditional ( <i>specify</i> .....) ..16 <u>HEALTH PROFESSIONAL</u> Doctor .....21 Nurse/midwife .....22 Other health professional ( <i>specify</i> .....) ..26 Don't know .....98	
FG8	<b>Check CM4 and CM6 (in Section W.3): Woman has living daughter?</b> <input type="checkbox"/> Yes, has living daughter ⇒ Continue with FG9 <input type="checkbox"/> No living daughter ⇒ Go to FG16		
FG9	HAVE ANY OF YOUR DAUGHTERS BEEN CIRCUMCISED?  If yes, HOW MANY?	No. of daughters circumcised ..... <input type="text"/> <input type="text"/> 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 ( <i>name</i> ) AT THAT TIME. WAS ANY FLESH REMOVED FROM THE GENITAL AREA?	Yes .....1 No .....2 DK .....8	1⇒FG13

W.8: Female Genital Mutilation/Cutting			FG
#	Question	Options	Skip
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..... <input type="text"/> <input type="text"/> Don't know .....98	
FG15	WHO DID THE CIRCUMCISION FOR (name)?	<u>TRADITIONAL PERSONS</u> Traditional 'circumciser' .....11 Traditional birth attendant.....12 Other traditional ( <i>specify</i> .....) ..16 <u>HEALTH PROFESSIONAL</u> Doctor .....21 Nurse/midwife .....22 Other health professional ( <i>specify</i> .....) ..26 Don't know .....98	
FG16	DO YOU THINK THIS PRACTICE SHOULD BE CONTINUED OR SHOULD IT BE DISCONTINUED?	Continued .....1 Discontinued .....2 Depends .....3 DK.....8	

W.9: Domestic Violence			DV
#	Question	Options	Skip
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 the children ..... 1 2 8	
	DV1C. IF SHE ARGUES WITH HIM?	Argues with husband ..... 1 2 8	
	DV1D. IF SHE REFUSES SEX WITH HIM?	Refuses sex ..... 1 2 8	
	DV1E. IF SHE BURNS THE FOOD?	Burns the food ..... 1 2 8	



W.10: HIV/AIDS			HA
#	Question	Options	Skip
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
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 Don't know ..... 8	
HA3	Can people get infected with the AIDS virus because of witchcraft or other supernatural means?	Yes ..... 1 No ..... 2 Don't know ..... 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 Don't know ..... 8	
HA5	Can people get the AIDS virus from mosquito bites?	Yes ..... 1 No ..... 2 Don't know ..... 8	
HA6	Can people reduce their chance of getting infected with the AIDS virus by not having sex at all?	Yes ..... 1 No ..... 2 Don't know ..... 8	
HA7	Can people get the AIDS virus by sharing food with a person who has AIDS?	Yes ..... 1 No ..... 2 Don't know ..... 8	
HA7A	Can people get the AIDS virus by getting injections with a needle that was already used by an infected person?	Yes ..... 1 No ..... 2 Don't know ..... 8	
HA8	Is it possible for a healthy-looking person to have the AIDS virus?	Yes ..... 1 No ..... 2 Don't know ..... 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 Don't know/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 Don't know/not sure/depends ..... 8	

W.10: HIV/AIDS			HA
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 Don't know/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 HH?	Yes ..... 1 No ..... 2 Don't know/not sure/depends ..... 8	
HA14	<b>Check MN5 (in Section W.5): Tested for HIV during antenatal care?</b> <input type="checkbox"/> Yes ⇒ HA19 <input type="checkbox"/> No ⇒ Continue to 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
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?	<b>Asked for the test..... 1</b> <b>Offered and accepted..... 2</b> <b>Required..... 3</b>	<b>END</b>
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	<b>END</b>
HA19	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	

**-: Check, whether the Form has any gaps, if yes, fill-in those gaps and thank the respondent for spending time and providing valuable information; and go to the next respondent :-**

Remarks/Observations by the Supervisor/Editor/Coordinators:

**FORM-C: CHILD BELOW 5 YEARS**

C.1: General Information		ENGLISH	
This FORM is to be administered to all mothers/caretakers (See Column HL8 of HH Listing Form) who care for a child that lives with them and is under the age of 5 years (See Column HL5 of HH Listing Form). Use a separate Form for each eligible child.			
UF-A	Province Name & Code. _____	_____	
UF-B	District Name & Code. _____	_____	
UF1	Cluster Name and Number _____	UF-C	Stratum Code: [Child < 3 = 1/Other = 2] _____
UF2	HH No. _____	_____	
UF4	Child Name & Line No. _____	_____	
UF6	Mother/Caretaker Name & Line No. _____	_____	
UF7	Interviewer's Name & Code _____	_____	
UF8	Day/Month/Year of interview _____	____/____/____	
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	
<u>Remarks</u>			

**Read, if the respondent has not responded to any other Forms**

### **Introduction/Consent**

HELLO. MY NAME IS (.....) AND I AM WORKING WITH THE KENYA NATIONAL BUREAU OF STATISTICS (KNBS), NAIROBI. WE ARE DOING A SURVEY TO COLLECT INFORMATION ABOUT FAMILY HEALTH AND EDUCATION, FOCUSING ON CHILDREN AND WOMEN, WITH UNICEF SUPPORT. I WOULD LIKE TO TALK TO YOU ABOUT THIS. THE INTERVIEW WILL TAKE ABOUT 20 MINUTES. ALL THE INFORMATION WE OBTAIN WILL REMAIN STRICTLY CONFIDENTIAL AND EVENTUALLY BE ANONYMOUS. DURING THIS TIME I WOULD LIKE TO SPEAK TO YOU ABOUT YOUR CHILDREN AND/OR CHILDREN YOU TAKE CARE IN THIS HOUSEHOLD.

THE INFORMATION YOU PROVIDE WILL HELP THE GOVERNMENT AND DEVELOPMENT AGENCIES IN PLANNING AND IMPLEMENTING DEVELOPMENTAL PROGRAMS.

MAY I START THE INTERVIEW NOW?

UF10	<p>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/IN THIS HH NOW.</p> <p>NOW I WANT TO ASK YOU ABOUT <i>(name)</i>. IN WHAT MONTH AND YEAR WAS <i>(name)</i> BORN?</p> <p><b>Probe:</b> WHAT IS HIS/HER BIRTHDAY? DOES HE/SHE HAVE A BIRTH CERTIFICATE?</p> <p>[If the mother/caretaker knows the exact birth date, also enter the day; otherwise, circle 98 for day]</p>	<p><b>Date of birth:</b></p> <p>Day ..... <input type="text"/> <input type="text"/></p> <p>Don't know the day of birth ..... 98</p> <p>Month ..... <input type="text"/> <input type="text"/></p> <p>Year ..... <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p>
UF11	<p>HOW MANY MONTHS OLD IS <i>(name)</i>?</p> <p>[Record age in completed months]</p>	<p>Age in months ..... <input type="text"/> <input type="text"/></p>

C.2: Birth Registration and Early Learning			BR
#	Question	Options	Skip
BR1	DOES <i>(name)</i> HAVE A BIRTH CERTIFICATE?	<b>Yes, seen</b> ..... 1 <b>Yes, not seen</b> ..... 2 <b>No</b> ..... 3 <b>Don't know</b> ..... 8	1⇒ BR5 2⇒ BR5
	MAY I SEE IT?		
BR2	HAS <i>(name's)</i> BIRTH BEEN REGISTERED WITH THE CIVIL AUTHORITIES?	<b>Yes</b> ..... 1 <b>No</b> ..... 2 <b>Don't know</b> ..... 8	1⇒ BR5 8⇒ BR4
BR3	WHY IS <i>(name's)</i> 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 Does not know where to register ..... 5 Other ( <i>specify</i> ..... ) .. 6 Don't know ..... 8	
BR4	DO YOU KNOW HOW TO REGISTER YOUR CHILD'S BIRTH?	<b>Yes</b> ..... 1 <b>No</b> ..... 2	
BR4A	DO YOU KNOW WHERE TO REGISTER YOUR CHILD'S BIRTH?	<b>Yes</b> ..... 1 <b>No</b> ..... 2	
BR5	<b>Check UF11 (age of the child): Child is 36-59 months old?</b> <input type="checkbox"/> <b>Yes</b> ⇒ Continue to BR6 <input type="checkbox"/> <b>No</b> ⇒ Go to BR8		
BR6	DOES <i>(name)</i> ATTEND ANY ORGANIZED LEARNING OR EARLY CHILDHOOD EDUCATION PROGRAMME, SUCH AS A PRIVATE OR GOVERNMENT FACILITY, INCLUDING KINDERGARTEN OR COMMUNITY CHILD CARE?	<b>Yes</b> ..... 1 <b>No</b> ..... 2 <b>Don't know</b> ..... 8	2⇒ BR7A 8⇒ BR8
BR7	WITHIN THE LAST SEVEN DAYS, ABOUT HOW MANY HOURS DID <i>(name)</i> ATTEND?	No. of Hours ..... <input type="text"/> <input type="text"/>	<b>Skip to BR8</b>

C.2: Birth Registration and Early Learning					BR
BR7A	WHAT IS THE MAIN REASON FOR (name) NOT ATTENDING ANY PRE-SCHOOL LEARNING/EARLY CHILDHOOD EDUCATION PROGRAM?	No facility nearby..... 1 The facility is not good ..... 2 No money to pay the fees/expensive ..... 3 Child is too young..... 4 Other (specify _____) .... 6 Don't know ..... 8			
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):  <b>If yes, ask:</b> 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)? <i>Circle all that apply.</i>				
		Mother	Father	Other	None
BR8a	READ BOOKS OR LOOK AT PICTURE BOOKS WITH (name)?	A	B	X	Y
BR8b	TELL STORIES TO (name)?	A	B	X	Y
BR8c	SING SONGS WITH (name)?	A	B	X	Y
BR8d	TAKE (name) OUTSIDE THE HOME, COMPOUND, YARD OR ENCLOSURE?	A	B	X	Y
BR8e	PLAY WITH (name)?	A	B	X	Y
BR8f	SPEND TIME WITH (name) NAMING, COUNTING, AND/OR DRAWING THINGS?	A	B	X	Y

C.3: Vitamin A			VA
#	Question	Options	Skip
VA1	HAS (name) EVER RECEIVED A VITAMIN A CAPSULE (SUPPLEMENT) LIKE THIS ONE?  SHOW CAPSULE OR DISPENSER FOR DIFFERENT DOSES: 100,000 IU FOR THOSE 6-11 MONTHS OLD (BLUE/YELLOW) 200,000 IU FOR THOSE 12-59 MONTHS OLD (RED)	Yes ..... 1 No ..... 2 Child below 6 months old ..... 3 Don't know ..... 8	2⇒ (C.4) 3⇒ (C.4) 8⇒ (C.4)
VA2	HOW MANY MONTHS AGO DID (name) TAKE THE LAST DOSE?	Months..... <input type="text"/> <input type="text"/> Don't know ..... 98	
VA3	WHERE DID (name) GET THIS LAST DOSE?	On routine visit to health facility ..... 1 Sick child visit to health facility ..... 2 National Immunization/Vit. A Campaign ..... 3 Other (Specify _____) ... 6 Don't know ..... 8	



C.4: Breastfeeding			BF	
#	Question	Options	Skip	
BF1	HAS (name) EVER BEEN BREASTFED?	Yes ..... 1 No ..... 2 Don't know ..... 8	2⇒ BF3 8⇒ BF3	
BF1a	HOW LONG AFTER BIRTH WAS (name) PUT TO THE BREAST FOR THE FIRST TIME?	Immediately after birth ..... 000  Hours ..... 1 <input type="text"/> <input type="text"/> Days ..... 2 <input type="text"/> <input type="text"/> Don't know ..... 998		
BF2	IS HE/SHE STILL BEING BREASTFED?	Yes ..... 1 No ..... 2 Don't know ..... 8	1⇒ BF2b 8⇒ BF3	
BF2a	FOR HOW MANY MONTHS DID (name) BREASTFEED?	Months ..... <input type="text"/> <input type="text"/> Don't know ..... 98	Skip to BF3	
BF2b	SINCE THIS TIME YESTERDAY, HOW MANY TIMES HAS (name) BREASTFED?  (If answer is not numeric, probe for approximate number)	Times Breastfed ..... <input type="text"/> <input type="text"/> Don't know ..... 98		
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)			
	Item	Yes	No	DK
	BF3A. VITAMIN, MINERAL SUPPLEMENTS OR MEDICINE?	1	2	8
	BF3B. PLAIN WATER?	1	2	8
	BF3C. SWEETENED, FLAVOURED WATER OR FRUIT JUICE OR TEA OR INFUSION?	1	2	8
	BF3D. ORAL REHYDRATION SOLUTION (ORS)?	1	2	8
	BF3E. INFANT FORMULA?	1	2	8
	BF3F. TINNED, POWDERED OR FRESH MILK?	1	2	8
	BF3G. ANY OTHER LIQUIDS?	1	2	8
	BF3H. SOLID OR SEMI-SOLID (MUSHY) FOOD?	1	2	8
BF4	<b>Check BF3H. Child received solid or semi-solid (mushy) food?</b> <input type="checkbox"/> Yes      ⇒ Continue to BF5 <input type="checkbox"/> No or DK      ⇒ Next Section (C.5)			



C.4: Breastfeeding			BF
#	Question	Options	Skip
BF5	<p>SINCE THIS TIME YESTERDAY, HOW MANY TIMES DID <i>(name)</i> EAT SOLID, SEMISOLID OR SOFT FOODS OTHER THAN LIQUIDS?</p> <p><i>(If 7 or more times, record 7)</i></p>	<p>No. of times ..... <input type="text"/></p> <p>Don't know .....8</p>	
BF5a	<p>AT WHAT AGE DID <i>(name)</i> START RECIVING WATER OTHER THAN BREASTMILK?</p> <p><i>(If 7 or more months old, record 7)</i></p>	<p>Age in months ..... <input type="text"/></p> <p>Don't know .....8</p>	
BF5b	<p>AT WHAT AGE DID <i>(name)</i> START RECIVING SOLID OR SEMI-SOLID FOOD?</p> <p><i>(If 15 or more months old, record 15)</i></p>	<p>Age in months ..... <input type="text"/> <input type="text"/></p> <p>Don't know .....98</p>	

C.5: Care of Childhood Illness				CI	
#	Question	Options			Skip
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 Don't know .....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.				
	Item	Yes	No	DK	
	CA2A. A FLUID MADE FROM A SPECIAL PACKET CALLED (local name for ORS packet solution)?	1	2	8	
	CA2B. GOVERNMENT-RECOMMENDED HOMEMADE FLUID?	1	2	8	
	CA2C. A PRE-PACKAGED ORS FLUID FOR DIARRHOEA?	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 Don't know .....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 Don't know .....8			
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 Don't know .....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 Don't know .....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 Don't know .....8			2⇒ CA12  6⇒ CA12
CA8	DID YOU SEEK ADVICE OR TREATMENT FOR THE ILLNESS OUTSIDE THE HOME?	Yes .....1 No.....2 Don't know .....8			2⇒ CA10 8⇒ CA10

C.5: Care of Childhood Illness		CI
CA9	<p>FROM WHERE DID YOU SEEK CARE?</p> <p>ANYWHERE ELSE?</p> <p>[Circle all providers mentioned, but do NOT prompt with any suggestions]</p> <p>[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.]</p> <p>_____</p> <p>(NAME OF PLACE)</p>	<p><b>Public sector</b></p> <p>Govt. hospital.....A</p> <p>Govt. health centre.....B</p> <p>Govt. health post.....C</p> <p>Village health worker.....D</p> <p>Mobile/outreach clinic.....E</p> <p>Other public (specify.....).....H</p> <p><b>Private medical sector</b></p> <p>Private hospital/clinic.....I</p> <p>Private physician.....J</p> <p>Private pharmacy.....K</p> <p>Mobile clinic.....L</p> <p>Other private (specify.....).....O</p> <p><b>Other source</b></p> <p>Relative or friend.....P</p> <p>Shop.....Q</p> <p>Traditional practitioner.....R</p> <p>Other (specify.....).....X</p>
CA10	<p>WAS (<i>name</i>) GIVEN MEDICINE TO TREAT THIS ILLNESS?</p>	<p>Yes.....1</p> <p>No.....2</p> <p>Don't know.....8</p> <p>2⇒ CA12 8⇒ CA12</p>
CA11	<p>WHAT MEDICINE WAS (<i>name</i>) GIVEN?</p> <p>(Circle all medicines given)</p>	<p>Antibiotic.....A</p> <p>Paracetamol/Panadol/Acetaminophen.....P</p> <p>Aspirin.....Q</p> <p>Ibuprofen.....R</p> <p>Other (<i>specify</i>.....).....X</p> <p>Don't know.....Z</p>
CA12	<p><b>Check UF11: Child age 0-35 months?</b></p> <p><input type="checkbox"/> Yes ⇒ Continue to CA13</p> <p><input type="checkbox"/> No ⇒ CA14</p>	
CA13	<p>THE LAST TIME (<i>name</i>) PASSED STOOLS, WHAT WAS DONE TO DISPOSE OF THE STOOLS?</p>	<p>Child used toilet/latrine.....01</p> <p>Put/rinsed into toilet or latrine.....02</p> <p>Put/rinsed into drain or ditch.....03</p> <p>Thrown into garbage (solid waste).....04</p> <p>Buried.....05</p> <p>Left in the open.....06</p> <p>Other (<i>specify</i>.....).....96</p> <p>Don't know.....98</p>
CA14	<p>[Ask <b>ONLY ONCE</b> for each mother/ caretaker]</p> <p>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?</p> <p>[Keep asking for more signs or symptoms until the mother/caretaker cannot recall any additional symptoms. Circle all symptoms mentioned]</p> <p>[Do not prompt with any suggestions]</p>	<p>Child not able to drink or breastfeed.....A</p> <p>Child becomes sicker.....B</p> <p>Child develops a fever.....C</p> <p>Child has fast breathing.....D</p> <p>Child has difficult breathing.....E</p> <p>Child has blood in stool.....F</p> <p>Child is drinking poorly.....G</p> <p>Other1 (<i>specify</i>.....).....X</p> <p>Other2 (<i>specify</i>.....).....Y</p> <p>Other3 (<i>specify</i>.....).....Z</p>

C.6: Malaria			ML
#	Question	Options	Skip
ML1	IN THE LAST TWO WEEKS, THAT IS, SINCE ( <i>day of the week</i> ) OF THE WEEK BEFORE LAST, HAS ( <i>name</i> ) BEEN ILL WITH A FEVER?	Yes ..... 1 No ..... 2 Don't know ..... 8	2⇒ML10 8⇒ML10
ML2	WAS ( <i>name</i> ) SEEN AT A HEALTH FACILITY DURING THIS ILLNESS?	Yes ..... 1 No ..... 2 Don't know ..... 8	2⇒ML6 8⇒ML6
ML3	DID ( <i>name</i> ) TAKE A MEDICINE FOR FEVER OR MALARIA THAT WAS PROVIDED OR PRESCRIBED AT THE HEALTH FACILITY?	Yes ..... 1 No ..... 2 Don't know ..... 8	2⇒ML5 8⇒ML5
ML4	WHAT MEDICINE DID ( <i>name</i> ) TAKE THAT WAS PROVIDED OR PRESCRIBED AT THE HEALTH FACILITY?  <i>[Circle all medicines mentioned]</i>	<u>Anti-malarials:</u> SP/Fansidar ..... A Chloroquine ..... B Amodiaquine ..... C Quinine ..... D Artemisinin-based combinations ..... E Other anti-malarial (specify ..... ) . H  <u>Other medications:</u> Paracetamol/Panadol/Acetaminophen ..... P Aspirin ..... Q Ibuprofen ..... R  Other (specify ..... ) . X Don't know ..... Z	
ML5	WAS ( <i>name</i> ) GIVEN MEDICINE FOR THE FEVER OR MALARIA BEFORE BEING TAKEN TO THE HEALTH FACILITY?	Yes ..... 1 No ..... 2 Don't know ..... 8	1⇒ML7 2⇒ML8 8⇒ML8
ML6	WAS ( <i>name</i> ) GIVEN MEDICINE FOR FEVER OR MALARIA DURING THIS ILLNESS?	Yes ..... 1 No ..... 2 Don't know ..... 8	2⇒ML8 8⇒ML8
ML7	WHAT MEDICINE WAS ( <i>name</i> ) GIVEN?  <i>[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.]</i>	<u>Anti-malarials:</u> SP/Fansidar ..... A Chloroquine ..... B Amodiaquine ..... C Quinine ..... D Artemisinin-based combinations ..... E Other anti-malarial (specify ..... ) . H  <u>Other medications:</u> Paracetamol/Panadol/Acetaminophen ..... P Aspirin ..... Q Ibuprofen ..... R  Other (specify ..... ) . X Don't know ..... Z	

C.6: Malaria			ML
#	Question	Options	Skip
ML8	<b>Check ML4 and/or ML7: Anti-malarial mentioned (Codes A-H)?</b> <input type="checkbox"/> Yes ⇒ Continue to ML9 <input type="checkbox"/> No ⇒ ML10		
ML9	HOW LONG AFTER THE FEVER STARTED DID <i>(name)</i> FIRST TAKE <i>(name of anti-malarial from ML4 or ML7)?</i>  [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]	Same day ..... 0 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	
ML10	DID <i>(name)</i> SLEEP UNDER A MOSQUITO NET LAST NIGHT?	Yes ..... 1 No ..... 2 Don't know ..... 8	



C.7: Child Immunization										IM
#	Question		Options							Skip
<p>If an immunization card is available, copy the dates in IM2-IM8b for each type of immunization or vitamin A dose recorded on the card. IM9 is for recording vaccinations that are not recorded on the card. IM10-IM17 will only be asked when a card is not available.</p>										
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.		Date of Immunization							
	(b) Write '44' in day column if card shows that vaccination was given but no date recorded.		Day		Month		Year			
IM2	BCG	BCG								
IM3a	Polio 0	OPV 0								
IM3b	Polio 1	OPV 1								
IM3c	Polio 2	OPV 2								
IM3d	Polio 3	OPV 3								
IM4a	DPT - HepB + Hib: 1 (Pentavalent 1)	DPT 1								
IM4b	DPT - HepB + Hib: 2 (Pentavalent 2)	DPT 2								
IM4c	DPT - HepB + Hib: 3 (Pentavalent 3)	DPT 3								
IM6	Measles (or MMR)	Measles								
IM7	Yellow fever	Y Fever								
IM8a	Vitamin A (1)	Vit. A1								
IM8b	Vitamin A (2)	Vit A2								
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, Measles or Vitamin A supplements.]		Yes ..... 1 (Probe for vaccinations and write '66' in the corresponding day column on IM2 to IM8B and go to IM19.)  No ..... 2 Don't know ..... 8							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 Don't know ..... 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 Don't know ..... 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							2⇒IM15

C.7: Child Immunization					IM
		Don't know ..... 8	8⇒IM15		
IM13	HOW OLD WAS ( <i>name</i> ) 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 ( <i>name</i> ) BEEN GIVEN THESE DROPS?	No. of times ..... <input type="text"/> <input type="text"/>			
IM15	HAS ( <i>name</i> ) EVER BEEN GIVEN "DPT/ HepB/ Hib1 VACCINATION INJECTIONS" – THAT IS, AN INJECTION IN THE THIGH AND BUTTOCKS – TO PREVENT HIM/HER FROM GETTING TETANUS, WHOOPING COUGH, DIPHTHERIA, HEPATITIS B, <i>HAEMOPHILUS INFLUENZAE TYPE B</i> ? SOMETIMES GIVEN AT THE SAME TIME AS POLIO.	Yes ..... 1 No..... 2 Don't know ..... 8	2⇒IM17 8⇒IM17		
IM16	HOW MANY TIMES?	No. of times ..... <input type="text"/>			
IM17	HAS ( <i>name</i> ) EVER BEEN GIVEN "MEASLES VACCINATION INJECTIONS" OR MMR – 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 Don't know ..... 8			
IM18	HAS ( <i>name</i> ) 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 Don't know ..... 8			
IM19	PLEASE TELL ME. IF ( <i>name</i> ) HAS PARTICIPATED IN ANY OF THE FOLLOWING CAMPAIGNS, NATIONAL IMMUNIZATION DAYS AND/OR VITAMIN A OR CHILD HEALTH DAYS:		Yes	No	DK
IM19a	CHILD HEALTH DAYS, VIT-A CAMPAIGN		1	2	8
IM19b	MEASLES & VITAMIN A CAMPAIGN		1	2	8
IM19c	CHILD HEALTH DAYS - VIT. A & DEWORMING CAMPAIGN		1	2	8
IM20	<p><b>Does another eligible child reside in the HH for whom this respondent is mother/caretaker? Check HH listing, column HL8.</b></p> <p><input type="checkbox"/> Yes ⇒ End the current Form and go for another 'Child &lt; 5 Form' to administer the Form for the next eligible child.</p> <p><input type="checkbox"/> No ⇒ End the interview with this respondent by thanking him/her cooperation.</p> <p>If this the last eligible child in the HH, go on to Anthropometry Section (C.8).</p>				

C.8: Anthropometry			AN
#	Question	Options	Skip
<p>After completing Forms for all children age 6-59 months, the weight and height measurements of each child are to be taken. Record weight and length/height below, taking care to record the measurements on the correct Form for each child. Check the child's name and line number on the HH Listing Section before recording measurements.</p>			
AN-A	<p><b>Check UF11: Child age 6-59 months?</b></p> <p><input type="checkbox"/> Yes ⇒ <b>Continue to AN-B</b></p> <p><input type="checkbox"/> No ⇒ <b>END</b></p>		
AN-B	Name and Line Number of the Child	Line Number..... <input type="text"/> <input type="text"/>	
AN1	Child's weight	Kilograms (Kg) ..... <input type="text"/> <input type="text"/> . <input type="text"/>	
AN2	<p><b>Child's length or height. Check age of child in UF11:</b></p> <p><input type="checkbox"/> Child age below 24 months ⇒ Measure length (lying down).</p> <p><u>Length (cm)</u></p> <p>Lying down ..... <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/></p> <p><input type="checkbox"/> Child age 24+ months ⇒ Measure height (standing up).</p> <p><u>Height (cm)</u></p> <p>Standing ..... <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/></p>		
AN3	Measurer/investigator identification code	Measurer Code ..... <input type="text"/> <input type="text"/>	
AN4	Result of measurement	Measured ..... 1 Not present ..... 2 Refused ..... 3 Others (Specify) ..... 6	
AN5	<p><b>Is there another child in the HH who is eligible for measurement?</b></p> <p><input type="checkbox"/> Yes ⇒ <b>Record measurements for next child.</b></p> <p><input type="checkbox"/> No ⇒ <b>End the interview with this household by thanking all participants for their cooperation.</b></p> <p><b>Gather together all Forms for this HH and check that all identification numbers are inserted on each page. Tally on the Household Information Panel the number of interviews completed.</b></p>		



**Remarks/Observations by the Supervisor/Editor/Coordinators:**

