Kenya
Eastern Province
Meru Central District



Monitoring the situation of children and women

Multiple Indicator Cluster Survey 2008

Kenya National
Bureau of Statistics

United Nations
Children's Fund

MICS

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Eastern Province
Meru Central District



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The Meru Central District Multiple Indicator Cluster Survey (MICS), Eastern Province of Kenya was carried out by the Kenya National Bureau of Statistics (KNBS) between July and September 2008. 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 (MICS3), carried out in more than 50 countries, as a follow-up to the earlier two rounds of MICS conducted in 1995 and 2000. The 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.

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List of Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ASFR	Age Specific Fertility Rate
BCG	Bacillus Calmette Guérin (Tuberculosis)
CSPro	Census and Survey Processing System
CDC	Center for Disease Control
DHS	Demographic and Health Survey
DPT	Diphtheria Pertussis Tetanus
DSO	District Statistical Officer
EA	Enumeration Area
EPI	Expanded Programme on Immunization
ERS	Economic Recovery Strategy
FGM/C	Female Genital Mutilation/Cutting
GOK	Government of Kenya
GPI	Gender Parity Index
HIV	Human Immunodeficiency Virus
IDD	Iodine Deficiency Disorders
ITN	Insecticide Treated Net
IUD	Intrauterine Device
KEPI	Kenya Extended Programme on Immunization
KESSP	Kenya Education Sector Support Program
KDHS	Kenya Demographic and Health Survey
KNBS	Kenya National Bureau of Statistics
LAM	Lactational Amenorrhea Method
MDGs	Millennium Development Goals
MICS	Multiple Indicator Cluster Survey
MoH	Ministry of Health
MTCT	Mother to Child Transmission
NAR	Net Attendance Rate
NCHS	United States National Center for Health Statistics
NPA	National program of Action
ORS	Oral Rehydration Salts
ORT	Oral Rehydration Treatment
PPM	Parts Per Million
PPS	Probability Proportional Sample
PRS	Poverty Reduction Strategy
SPSS	Statistical Package for Social Sciences
TFR	Total Fertility Rate
TT	Tetanus Toxoid
UNAIDS	United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNGASS	United Nations General Assembly Special Session on HIV/AIDS
UNICEF	United Nations Children's Fund
WFFC	World Fit For Children
WHO	World Health Organization
WSC	World Summit for Children

Foreword

The Meru Central district Multiple Indicator Cluster Survey (MICS) of 2008 is one of the largest district representative sample surveys conducted in the district. The survey covered 1,158 households selected using appropriate statistical procedures.

The results from the survey indicate that under-five mortality rate and the infant mortality were estimated as 54 and 39 per 1,000 live births, a signal that a lot more needs to be done to bring down these averages to the lowest estimates observed for other districts within the province. Nearly, three in five households have at least one insecticide treated mosquito net, although only 40 per cent of women report intermittent preventive treatment for malaria during pregnancy within the two years prior to the survey. Nearly three out of four women in the district use contraception.

I wish to acknowledge the efforts of various organizations and individuals who contributed 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) whose Kenya country office staff provided valuable professional support and guidance. I also wish to acknowledge the commitment and efforts from the staff of the Kenya National Bureau of Statistics (KNBS) in the production of this report. I am also grateful to the good work done by interviewers and supervisors who braved difficult field conditions to collect data. I also wish to appreciate the data processing teams for the meticulous care and attention to detail in handling and processing the data for this report.

Finally, I am very grateful to the respondents who graciously made time for our interviewers, providing information and allowing the survey teams to interact with them and their children below 5 years of age. The information they provided and data generated by the survey form the basis of this report.



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Executive Summary

The Meru Central 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 EAs were sampled using the Probability Proportional to Size (PPS) sampling methodology, and information from a total of 1,158 households was collected using structured questionnaires.

The survey used a two-stage design. At the EA level, households were stratified into two, one comprising of households with at least one child below three years of age and the other consisting of households with no children below three years of age at the time of household listing.[1] The stratification at the household level was done to reduce the standard errors of children and women based estimates. The data was collected by two teams each comprising of five members: one supervisor, one editor/measurer and three interviewers.

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

Child Mortality

The under-five mortality rate and the infant mortality rate were calculated using the birth history data for the 10 year period preceding the survey. The under-five mortality rate is 54 per 1,000 live births while the infant mortality rate is 39 per 1,000 live births.

Nutritional Status and Breastfeeding

About eight per cent of children aged 6-59 months in Meru Central are severely or moderately underweight, while 14 per cent are severely stunted.
Slightly over one in two children (53 per cent) had a-timely onset of breastfeeding (given breast milk within an hour of birth). Surprisingly, the proportion of children aged 0-5 months (17 per cent) who are exclusively breastfed is low. The proportion of children weighed at the time of birth is 92 per cent.

About 93 per cent of the households use iodized salt, while five per cent had no salt.

Immunization

About three in four (77 per cent) 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 100 per cent of children aged 12-23 months, whereas measles is received by 90 per cent; showings a 10 per cent drop out rate.

Eighty five per cent of the mothers who had given birth in the two years preceding the survey had received tetanus toxoid (TT) injection.

Care of illness

The survey found that eight per cent of children aged below five years experienced diarrhoea in the two weeks preceding the survey. Among children with diarrhea, about three in five (59 per cent) received the recommended ORT dose while one in every five (20 per cent) reported home management of diarrhea.

Ten per cent of children aged 0-59 months had symptoms of suspected pneumonia. Among these, 66 per cent were taken to an appropriate health service provider. Antibiotic treatment was given to three in five (59 per cent) children with suspected pneumonia.

[1] The household listing was carried out by three teams, each team comprised of a lister and a mapper.

Malaria prevention

In Meru Central, 59 per cent of the households have at least one insecticide treated mosquito net, and 62 per cent of children below five years sleep under a treated net.

Only 57 per cent of children under five with fever during the two weeks preceding the survey were given anti-malarial treatment within twenty four hours of onset of symptoms.

Among women who gave birth during the two years preceding the survey, 40 per cent reported intermittent preventive treatment for malaria.

Water and sanitation

About 83 per cent of the Meru Central district population obtain their drinking water from an improved source. Thirty seven per cent of this group also reported treating their drinking water.

Around two in five (40 per cent) households use sanitary means of excreta disposal, while for 96 per cent of the households, child stool is disposed safely.

Reproductive health

The total fertility rate in Meru Central for the three-year period preceding the survey is three children per woman.

Teenage pregnancy is at 20 per cent for women aged 15-19 years. This age group contributes 10 per cent of the total fertility in the district. Fertility peaks in the age group 20-24 years.

Ninety six per cent of mothers who gave birth in the two years preceding the survey had an antenatal check-up. However, only 82 per cent had skilled assistance at delivery, and 81 per cent gave birth in a health facility.

Nineteen per cent of women aged 20-49 years got married before reaching age 18, while six per cent of those aged 15-19 years reported being currently married or in a union.

Contraceptive prevalence for women aged 15-49 years who are married or in a union is 73 per cent.

Education

In Meru Central district, only one in two (50 per cent) children of school-going age are attending primary school. The net primary school attendance rate is 88 per cent, while that of secondary school stands at 31 per cent. The female adult literacy rate in Meru Central is 82 per cent.

Child protection

The survey reveals that in the district, 72 per cent of children under-five have their births registered.

About one in five (19 per cent) children aged 5-14 years are engaged in child labour. However, 93 per cent of children involved in child labour also attend school.

A very high proportion (97 per cent) of children aged 2-14 years received some sort of psychological or physical punishment during the one month period prior to the survey.

HIV and AIDS

Forty nine per cent of women aged 15-49 years have comprehensive knowledge about HIV/AIDS prevention. Ninety nine per cent know that HIV/AIDS can be transmitted from mother to child, but only 44 per cent have knowledge of all the three ways of mother-to-child transmission of HIV/AIDS. Fifty five per cent of women aged 15-49 years reported that they were tested for HIV/AIDS.

Ninety two per cent of women who delivered in the last two years received counselling on prevention of mother-to-child transmission of HIV and 95 per cent had the HIV test.

Orphans and vulnerable children

About 17 per cent of the children under 18 years in the district are orphans and vulnerable children. One in nine children aged below 18 years (11 per cent) in the district is an orphan. About 15 per cent of children in the same age group do not live with any biological parent.

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

Twenty-two per cent of women aged 15-49 years in Meru Central have had a form of FGM/C. Among those who had FGM/C, 12 per cent had an extreme form.

Slightly over two in five women (42 per cent) in the district approve of a husband beating his wife if she: goes out without telling him; neglects the children; argues with him; refuses sex with him; or burns the food.

Summary Table of Findings

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

Topic	MICS Indicator Number	MDG Indicator Number	Indicator	Value & Unit	
CHILD MORTALITY					
Child mortality	1	13	Under-five mortality rate	54	per thousand
	2	14	Infant mortality rate	39	per thousand
NUTRITION					
Nutritional status			Underweight prevalence (below -2 SD)	7.9	per cent
			Stunting prevalence (below -2 SD)	14.0	per cent
			Wasting prevalence (below -2 SD)	1.2	per cent
Breastfeeding	45		Timely initiation of breastfeeding	53.3	per cent
	15		Exclusive breastfeeding rate	16.9	per cent
	16		Continued breastfeeding rate		
			at 12-15 months	92.2	per cent
			at 20-23 months	51.9	per cent
	17		Timely complementary feeding rate	94.4	per cent
	18		Frequency of complementary feeding	88.0	per cent
	19		Adequately fed infants	47.4	per cent
Salt iodization	41		Iodized salt consumption	92.7	per cent
Vitamin A	42		Vitamin A supplementation (under-fives)	41.6	per cent
	43		Vitamin A supplementation (post-partum mothers)	61.2	per cent
Low birth weight	9		Low birth weight infants	7.0	per cent
	10		Infants weighed at birth	91.5	per cent
CHILD HEALTH					
Immunization	25		Tuberculosis immunization coverage (BCG) (by 12 months)	99.6	per cent
	26		Polio immunization coverage (by 12 months)	87.0	per cent
	27		DPT immunization coverage (by 12 months)	91.1	per cent
	28	15	Measles immunization coverage (by 12 months)	89.8	per cent
	31		Fully immunized children (by 12 months)	76.7	per cent
Tetanus toxoid	32		Neonatal tetanus protection	85.1	per cent
Care of illness	33		Use of oral rehydration therapy (ORT)	59.0	per cent
	34		Home management of diarrhoea	20.3	per cent
	35		Received ORT or increased fluids, and continued feeding	29.8	per cent
	23		Care seeking for suspected pneumonia	66.4	per cent
	22		Antibiotic treatment of suspected pneumonia	59.2	per cent
Solid fuel use	24	29	Solid fuels	94.1	per cent
Malaria	36		Households having insecticide-treated nets (ITNs)	58.7	per cent
	37	22	Under-fives sleeping under insecticide-treated nets	62.1	per cent
	38		Under-fives sleeping under mosquito nets	62.7	per cent
	39	22	Anti-malarial treatment (under-fives)	56.5	per cent
	40		Intermittent preventive malaria treatment (pregnant women)	40.0	Per cent
ENVIRONMENT					
Water and Sanitation	11	30	Use of improved drinking water sources	82.9	per cent
	13		Water treatment	37.3	per cent
	12	31	Use of improved sanitation facilities	40.0	per cent
	14		Disposal of child's faeces	96.3	per cent

Topic	MICS Indicator Number	MDG Indicator Number	Indicator	Value & Unit	
REPRODUCTIVE HEALTH					
Contraception and unmet need	21	19c	Contraceptive prevalence	73.4	per cent
	98		Unmet need for family planning	1.9	per cent
Maternal and newborn health	20		Antenatal care	95.8	per cent
	44		Content of antenatal care		
			Blood test taken	95.0	per cent
			Blood pressure measured	94.6	per cent
			Urine specimen taken	87.0	per cent
			Weight measured	95.3	per cent
	4	17	Skilled attendant at delivery	82.3	per cent
	5		Institutional deliveries	80.8	per cent
			Total fertility rate	3	Rate*
EDUCATION					
Education	52		Pre-school attendance	40.5	per cent
	53		School readiness	81.7	per cent
	54		Net intake rate in primary education	50.0	per cent
	55	6	Net primary school attendance rate	88.3	per cent
	56		Net secondary school attendance rate	30.7	per cent
			Adult literacy rate (female)	82.4	per cent
CHILD PROTECTION					
Birth registration	62		Birth registration	72.1	per cent
Child labour	71		Child labour	19.3	per cent
	72		Labourer students	93.4	per cent
	73		Student labourers	18.8	per cent
Child discipline	74		Any psychological/physical punishment	96.6	per cent
Early marriage and polygyny	67		Marriage before age 15	4.2	per cent
			Marriage before age 18	18.6	per cent
	68		Young women aged 15-19 currently married/in union	5.8	per cent
Female genital mutilation/ Cutting	66		Approval for FGM/C	0.9	per cent
	63		Prevalence of female genital mutilation/cutting (FGM/C)	22.2	per cent
	64		Prevalence of extreme form of FGM/C	11.7	per cent
	65		FGM/C prevalence among daughters	2.7	per cent
Domestic violence	100		Attitudes towards domestic violence	41.7	per cent
HIV/AIDS, SEXUAL BEHAVIOUR, AND ORPHANED AND VULNERABLE CHILDREN					
HIV/AIDS knowledge and attitudes	82	19b	Comprehensive knowledge about HIV prevention among young people	48.5	per cent
	89		Knowledge of mother- to-child transmission of HIV	43.6	per cent
	86		Attitude towards people with HIV/AIDS	30.2	per cent
	87		Women who know where to be tested for HIV	95.0	per cent
	88		Women who have been tested for HIV	54.8	per cent
	90		Counselling coverage for the prevention of mother-to-child transmission of HIV	92.1	per cent
	91		Testing coverage for the prevention of mother-to-child transmission of HIV	94.6	per cent
Support to orphaned and vulnerable children	75		Prevalence of orphans	11.0	per cent
	78		Children's living arrangements	15.0	Per cent
	76		Prevalence of vulnerable children	7.6	per cent
	77	20	School attendance of orphans versus non-orphans	1.01	ratio
	81		External support to children orphaned and made vulnerable by HIV/AIDS	18.7	per cent

Introduction 1

1.1 Background

This report is based on the Meru Central district Multiple Indicator Cluster Survey (MICS), conducted from June to August 2008 by the Kenya National Bureau of Statistics. The survey provides valuable information on the situation of children and women in Meru Central district and was based, in large part, on the need to monitor progress towards goals and targets contained in recent international agreements and commitments: 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 on 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 table below).

A Commitment to Action:
National and International Reporting Responsibilities

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

"We will monitor regularly at the national level and, where appropriate, at the regional level and assess progress towards the goals and targets of the present Plan of Action at the national, regional and global levels. Accordingly, we will strengthen our national statistical capacity to collect, analyse and disaggregate data, including by sex, age and other relevant factors that may lead to disparities, and support a wide range of child-focused research. We will enhance international cooperation to support statistical capacity-building efforts and build community capacity for monitoring, assessment and planning." (A World Fit for Children, paragraph 60)
"…We will conduct periodic reviews at the national and 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 are more vulnerable to social-economic hardships. With regard to children, the Government of Kenya (GOK) formulated the National Plan 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 program 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/programs and other interventions, e.g. emergency response and humanitarian assistance are vital components of NPA.

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

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

1.2 Survey Objectives

The primary objectives of MICS 2008 were:

- To provide up-to-date information for assessing the situation of children and women in Meru Central district, Eastern Province;
- To 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;
- To 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.

Sample and Survey Methodology 2

2.1 Sample Design

The sample for the Meru Central district 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 was selected in two stages. Within the district, 50 clusters (census enumeration areas) were selected based on Probability Proportional to Size. After a household listing was carried out within the selected enumeration areas, households were stratified into two groups: those which had at least one child below three years; and those that did not have any child below three years of age. A systematic sample of 16 households from stratum one and 8 households from stratum two was drawn using a random start. The sample was not self-weighting, meaning we had to develop weights which are used in reporting the results. 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-five questionnaire administered to mothers or caretakers of all children aged less than five years living in the household. The focus of the three questionnaires varied as shown below.

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 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/AIDS Knowledge

The Questionnaire for Children under Five was administered to mothers of the respective children under five.[2] In cases where the mother was not listed in the household roster, a primary caretaker of the child was identified and interviewed. The questionnaire included the following modules:

- Birth Registration and Early Learning
- Child Development
- Vitamin A
- Breastfeeding

[2] The terms "children under 5", "children age 0-4 years", and "children aged 0-59 months" are used interchangeably in this report.

- Care of Illness
- Malaria
- Immunization
- Anthropometry

The questionnaires were based on the MICS3 model questionnaire.[3] From the MICS3 model English version, the questionnaires were translated into Kiswahili, Borana, Kamba, Meru, and Embu languages.

In addition to the administration of questionnaires, fieldwork teams measured the weights and heights of children age 0-59 months, and tested the household cooking salt for iodine content. 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 June 2008 and was structured into two parts: three days training for the mapping and listing teams; and 12 days training for the main survey teams. Training 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 Central district.

The household listing was carried out by three teams, each comprising a lister and a mapper. These three teams were supervised by the District Statistical Officer (DSO), with the whole listing operation being monitored by the district co-ordinator located at KNBS headquarters.

The data was collected by two teams, each comprising three interviewers, one driver, one editor/measurer and a supervisor. Fieldwork began towards the end of June 2008 and concluded in August 2008.

2.4 Data Processing

Data was entered using the Census and Survey Processing System (CSPro) software. In order to ensure quality control, all questionnaires were double-entered and internal consistency checks were performed. In addition, the whole process was monitored by two supervisors. Procedures and standards developed under the global MICS3 project and adapted to the modified questionnaire were used throughout. Data processing began simultaneously with data collection in July 2008, and was completed in September 2008. Data was 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.

[3] The model MICS3 questionnaire can be found at www.childinfo.org, or in UNICEF, 2006.

Sample Coverage and Household Characteristics 3

3.1 Sample Coverage

Among the 1,200 households selected for the sample, 1,199 were found to be occupied. Among these, 1,158 were successfully interviewed leading to a household response rate of 97 per cent. In the interviewed households, 1,199 women (age 15-49) were identified as prospective respondents. Among these, 1,125 were successfully interviewed, yielding a response rate of 94 per cent. In addition, 929 children below five years were listed in the household questionnaire. Questionnaires were completed for 919 of these children, which corresponds to a response rate of 99 per cent. Overall response rates of 91 and 96 per cent were realised for women and under five interviews, respectively (Table 3.1 (HH.1)).

Table 3.1 (HH.1): Results of household and individual interviews

Number of households, women, and children under 5 by results of the interviews, and household, women and under-five response rates, Meru Central District, Eastern Province, Kenya 2008

Number of households	
Sampled (H_s)	1,200
Occupied (H_o)	1,199
Interviewed (H_i)	1,158
Response rate (H_r)	96.6
Number of women	
Eligible (W_e)	1,199
Interviewed (W_i)	1,125
Response rate (W_r)	93.8
Overall response rate (W_{or})	90.6
Number of children under 5	
Eligible (C_e)	929
Information collected (C_i)	919
Response rate (C_r)	98.9
Overall response rate (C_{or})	95.5

$H_r = H_i / H_o$ (where H_o is HH8 = 1, 2, 3 or 6)

$W_r = W_i / W_e$; $W_{or} = W_r \times H_r$;

Note: 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 the survey population is provided in Table 3.2 (HH.2). The distribution is also used to produce the population pyramid in Figure 3.1 (HH.1). In the 1,158 households successfully interviewed for the survey, 4,081 household members were listed. Among these, 2,073 were males and 2,008 were females. The estimated average household size was 3.5 members, which is more or less similar to the national projected household size of 4.1 for the year 2008.

The age distribution from Table 3.2 shows that 34 per cent of the population is below 15 years of age and 61 per cent is aged between 15-64 years. Only five per cent of the population is aged 60 years and above, while 40 per cent is aged 0-17 years. The age structure of the population is pyramidal as one would except, but with a kink created by the 25-29 age group which is known to be very mobile and susceptible to migrations.

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, Meru Central district, Eastern Province, Kenya 2008

	Male		Female		Total	
Characteristics	Number	Per cent	Number	Per cent	Number	Per cent
Age						
0-4	221	10.7	237	11.8	458	11.2
5-9	220	10.6	255	12.7	475	11.6
10-14	222	10.7	233	11.6	455	11.2
15-19	202	9.7	181	9.0	383	9.4
20-24	195	9.4	179	8.9	375	9.2
25-29	238	11.5	200	10.0	438	10.7
30-34	135	6.5	126	6.3	261	6.4
35-39	170	8.2	131	6.5	301	7.4
40-44	106	5.1	97	4.8	203	5.0
45-49	87	4.2	88	4.4	175	4.3
50-54	87	4.2	57	2.8	144	3.5
55-59	49	2.4	62	3.1	111	2.7
60-64	40	1.9	46	2.3	86	2.1
65-69	39	1.9	53	2.6	93	2.3
70+	62	3.0	62	3.1	124	3.0
Dependency age groups						
<15	663	32.0	725	36.1	1,388	34.0
15-64	1,309	63.1	1,167	58.1	2,476	60.7
65+	101	4.9	115	5.7	216	5.3
Age						
Children aged 0-17	790	38.1	827	41.2	1,617	39.6
Adults 18+/Missing/DK	1,284	61.9	1,180	58.8	2,464	60.4
Total	**2,073**	**100.0**	**2,008**	**100.0**	**4,081**	**100.0**

Figure 3.1: Age and Sex Distribution of Household Population

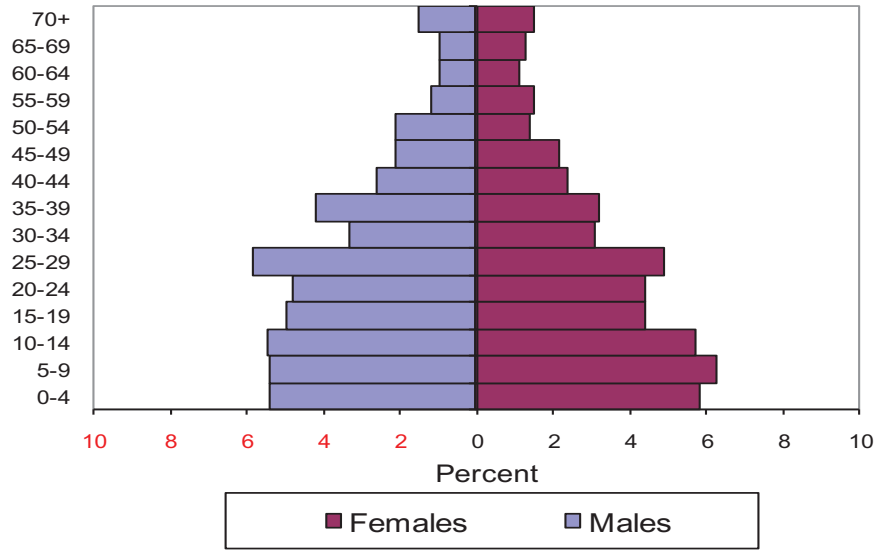


Table 3.3 (HH.3) provides some basic background household information, such as the sex of the household head and numbers of household members. The weighted and un-weighted numbers of total households are equal since sample weights were normalized (See Appendix A). In the district, 26 per cent of the households are headed by a female; 33 per cent have at least one child below five years of age; and 70 per cent have at least one child below 18 years of age. Another 67 per cent of the households have at least one woman in the reproductive age groups, i.e., 15-49 years. In terms of household size, 65 per cent had between two and five members, resulting in a mean household size of 3.5 persons.

Table 3.3 (HH.3): Household composition

Percentage distribution of households by selected characteristics, Meru Central District, Eastern Province, Kenya 2008

Characteristics	Weighted percentage	Number of households	
		Weighted	Un-weighted
Sex of household head			
Male	74.0	857	894
Female	26.0	301	264
Number of household members			
1	19.2	223	121
2-3	31.7	368	349
4-5	32.8	380	461
6-7	14	162	185
8-9	1.6	18	30
10+	0.6	7	12
Mean household size	3.5	NA	NA
At least one child aged < 18 years	69.8	1,158	1,158
At least one child aged < 5 years	32.8	1,158	1,158
At least one woman aged 15-49 years	66.8	1,158	1,158

NA – Not Applicable

3.3 Characteristics of Female Respondents and Children

Tables 3.4 and 3.5 provide information on the background characteristics of female respondents aged 15-49 years and children aged under five years. In both tables, the total number of weighted and un-weighted observations are equal since sample weights have been normalized (standardized). In addition to providing useful information on the background characteristics of women and children, the tables also show the number of observations by selected background categories. These categories are used in the subsequent tabulations of this report.

Table 3.4 (HH.4) provides the background characteristics of female respondents aged 15-49 years. The table includes information on the distribution of women according to age, marital status, motherhood status, education[4] and wealth index[5]. Majority of females were in the 25-29 age group (21 per cent) followed by the 20-24 and the 15-19 age groups.

Overall, 63 per cent of the women aged 15-49 years in Meru Central are currently married and another 26 per cent reported never being married or in a union. Seventy eight per cent of the women reported having given birth, while 22 per cent have never given birth. The data suggests that most women in this district give birth within marriage or in a union. The majority of Meru Central women have primary education (58 per cent) with only a modest eight per cent having no

[4] Unless otherwise stated, "education" refers to the educational level attained by the respondent throughout this report when it is used as a background variable.

[5] Principal components analysis was performed using information on the ownership of household goods and amenities (assets) to assign weights to each household asset, and to 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.

education at all. Interestingly, 64 per cent of the women are from high wealth index households, with less than four per cent coming from low wealth index households.

Table 3.4 (HH.4): Women's background characteristics

Percentage distribution of women aged 15-49 years by background characteristics, Meru Central district, Eastern Province, Kenya 2008

Characteristics	Weighted percentage	Number of women	
		Weighted	Un-weighted
Age			
15-19	15.6	176	154
20-24	16.2	182	256
25-29	20.9	235	263
30-34	13.1	148	175
35-39	13.7	154	123
40-44	10.9	122	80
45-49	9.6	108	74
Marital/Union status			
Currently married/in union	62.5	703	748
Formerly married/in union	11.6	131	122
Never married/in union	25.9	291	255
Motherhood status			
Ever gave birth	77.8	875	958
Never gave birth	22.2	250	167
Education			
None	8.1	91	86
Primary	57.8	651	696
Secondary +	33.4	376	341
Non-standard curriculum	0.7	8	2
Wealth index			
Low	3.4	39	40
Medium	32.7	368	395
High	63.9	719	690
Total	**100.0**	**1,125**	**1,125**

3.4 Characteristics of Children under Five

Some background characteristics of children below five years are presented in Table 3.5 (HH.5). These include distribution of children by several attributes: sex, age in months, mothers' or caretakers' education, and wealth index. As expected, the proportion of male to female children aged 0-4 years was almost equal. About 12 per cent of children aged below five years belong to the 0-5 month age group, while eight per cent are in the 6-11 month category. Majority of the children were in the middle age categories of 12 to 47 months which accounts for 64 per cent of the sample. Sixty per cent of children have mothers having primary level education, while seven per cent have mothers with no education. The distribution of children below five years by wealth index shows that five per cent come from households categorised as low wealth index households, 58 per cent from high wealth index households, and the remaining 37 per cent from medium wealth index households.

Table 3.5 (HH.5): Children's background characteristics

Percentage distribution of children under five years of age by background characteristics, Meru Central district, Eastern Province, Kenya 2008

		Number of under-5 children	
Characteristics	Weighted percentage	Weighted	Un-weighted
Sex			
Male	49.0	450	441
Female	51.0	469	478
Age			
< 6 months	12.7	117	124
6-11 months	7.9	73	94
12-23 months	19.9	181	229
24-35 months	22.4	204	238
36-47 months	21.7	199	136
48-59 months	15.8	145	98
Mother's education			
None	7.4	68	62
Primary	60.3	554	583
Secondary+	31.6	291	273
Non-standard curriculum	0.7	6	1
Wealth index			
Low	4.9	45	39
Medium	36.9	339	357
High	58.2	535	523
Total	**100.0**	**919**	**919**

Child Mortality 4

The Millennium Development Goals (MDGs) and the World Fit for Children (WFFC) have the common goal of reducing infant and under-five mortality. Specifically, the MDGs call for the reduction in under-five mortality by two-thirds between 1990 and 2015 (Goal 4: Target 5). Monitoring the progress towards this goal is an important objective. Measuring childhood mortality may seem easy, but attempts using direct questions such as "Has anyone in this household died in the last year?" give inaccurate results. However, in Meru Central district MICS, direct measures of child mortality from birth histories were used. This method uses birth history information and is one of the best ways of estimating mortality information. The birth history obtained from women aged 15-49 years include the number of children ever born and living by sex, and the date of birth of each child. If the child is not alive at the time of the survey, information on the age of the child at the time of death is also obtained. This method is also used by Demographic and Health Surveys (DHS) framework worldwide, including the Kenya Demographic and Health Survey (KDHS). It is therefore possible to compare the mortality rates obtained by MICS to those from KDHS.

The infant mortality rate is the probability of a child dying before their first birthday. The under-five mortality rate is the probability of a child dying before their fifth birthday. The neonatal mortality rate is the probability of dying before one month of life. Post neonatal mortality rate is the probability of dying between one month and one year of life. Child mortality rate refers to the probability of dying between one and five years of life. All mortality rates mentioned above are expressed per 1,000 live births except for child mortality rate, which is expressed per 1,000 children surviving up to 12 months of age.

Though direct estimates of mortality obtained from birth histories are preferred, their quality depends on the completeness of information obtained in the birth histories. In many cases, women tend to avoid reporting their dead children and this leads to an underestimation of mortality levels.

4.1 Levels of Childhood Mortality

Table 4.1 provides estimates of childhood mortality for the ten year period preceding the survey. The infant mortality rate is estimated at 39 per 1,000 live births, while the probability of dying before the fifth birthday – under-5 mortality rate - is 54 per 1,000 live births. Neonatal mortality is 28 per 1,000 live births while child mortality is 16 per 1,000 live births.

Table 4.1: Child mortality

Infant, neonatal, post-neonatal, child and under-five mortality rates for 10-year period preceding the survey, Meru Central district, Eastern Province, 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	39	28	10	16	54
10-19	28	24	5	4	32

Nutrition 5

Children's nutritional status is the result of interactions between food consumption and the overall status of health and care practices. At the individual level, inadequate or poor feeding patterns lead to malnutrition. Numerous socio-economic and cultural factors influence decisions on care and feeding patterns, and hence children's nutritional status. When children do not have access to an adequate food supply and/or are exposed to repeated illness, it may lead to malnutrition.

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. The Millennium Development Goal 1 (target 2) is to reduce by half, the proportion of the population below the minimum level of dietary energy consumption, 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 two years of age. A reduction in the prevalence of malnutrition will assist in the goal to reduce child mortality.

5.1 Nutritional Status

The government and other development partners including WHO and UNICEF aim to scale up proven, high-impact, cost-effective health and nutrition interventions, in order to reduce the number of neonatal and child deaths from preventable and easily treatable causes. In a well-nourished population, there is a reference distribution of height and weight for children under age five. 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 the WHO/CDC/NCHS reference. Three standard indices of physical growth that describe nutritional status of children under five 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 deviations (often referred to as z-scores) from the median of the reference population.

Weight-for-age is a measure of both acute and chronic malnutrition. Children whose weight-for-age is 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 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 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, which might result from significant seasonal shifts associated with changes in the availability of food or disease prevalence.

For the Meru Central district MICS, weights and heights of all children aged 6-59 months were measured using anthropometric equipment recommended by UNICEF.[6] In Table 5.1, approximately three per cent of children were excluded from the analysis if; they were not weighed

[6] See UNICEF (2006),

or measured or because their measurements were outside a plausible range or if the age information was missing.

Table 5.1 (NU.1) shows proportion of children classified into each of the above anthropometric measures. Additionally, the table includes the percentage of children who are overweight-- meaning their weight for height was above 2 standard deviations from the median of the reference population.

For all three conditions, Meru Central's children are mostly affected by moderate and severe stunting (14 and 3.4 per cent, respectively). Underweight children are also a common nutritional problem at 7.9 per cent. However, the proportion of children who are wasted is relatively small. The problem of overweight children is slowly becoming an issue as witnessed by the three per cent of children who are classified as over-weight (obese).

Across the age groups, underweight and stunting affects mostly the middle age categories (12-23, 24-35, and 36-47) more than the rest of the age groups. However, wasting was greatest in the lower age categories and reduced with increasing age.
The proportion of children who are underweight and stunted was highest among those with mothers who are educated up to primary level (9 and 16 per cent, respectively). Although the proportions are smaller, the percentage of over-weight (obese) children was highest for those with mothers who have attained secondary education level and above. As expected, the proportion of over-weight children was higher among those from the high wealth index households (four per cent). Nearly one-quarter of the children from low wealth index households (25 per cent) were underweight compared to about five per cent for those from high wealth index households. The situation was even worse for stunting: with 40 per cent of the children from low wealth index households affected versus only 10 per cent for those from high wealth index households.

Table 5.1 (NU.1): Child malnourishment

Percentage of children aged 6-59 months who are severely or moderately malnourished, Meru Central district, Eastern Province, 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	
Sex								
Male	8.6	1.2	15.5	4.2	1.1	0.2	1.3	371
Female	7.3	1.0	12.7	2.6	1.3	0.2	3.6	402
Age								
6-11 months	4.4	1.0	7.8	1.1	3.2	0.0	3.8	71
12-23 months	9.8	2.6	21.8	5.3	1.8	0.9	5.4	174
24-35 months	11.9	1.2	14.6	1.8	1.0	0.0	0.7	198
36-47 months	6.4	0.4	10.3	6.1	0.9	0.0	0.4	183
48-59 months	3.5	0.0	12	1.1	0.0	0.0	0.0	140
Mother's education								
None	5.0	1.7	10.7	5	0.0	0.0	1.7	47
Primary	8.8	1.5	16.1	4.8	1.6	0.2	1.8	465
Secondary +	4.6	0.3	8.6	0.5	0.9	0.3	3.9	255
Wealth index								
Low	24.8	4.6	40.0	11.3	0.0	0.0	2.0	37
Medium	11.1	1.6	18.7	6.0	2.3	0.6	0.0	284
High	4.5	0.5	8.9	1.1	0.7	0.0	4.1	452
Total	**7.9**	**1.1**	**14**	**3.4**	**1.2**	**0.2**	**2.5**	**773**

*** MICS indicator 6; MDG indicator 4**
**** MICS indicator 7**
***** MICS indicator 8**

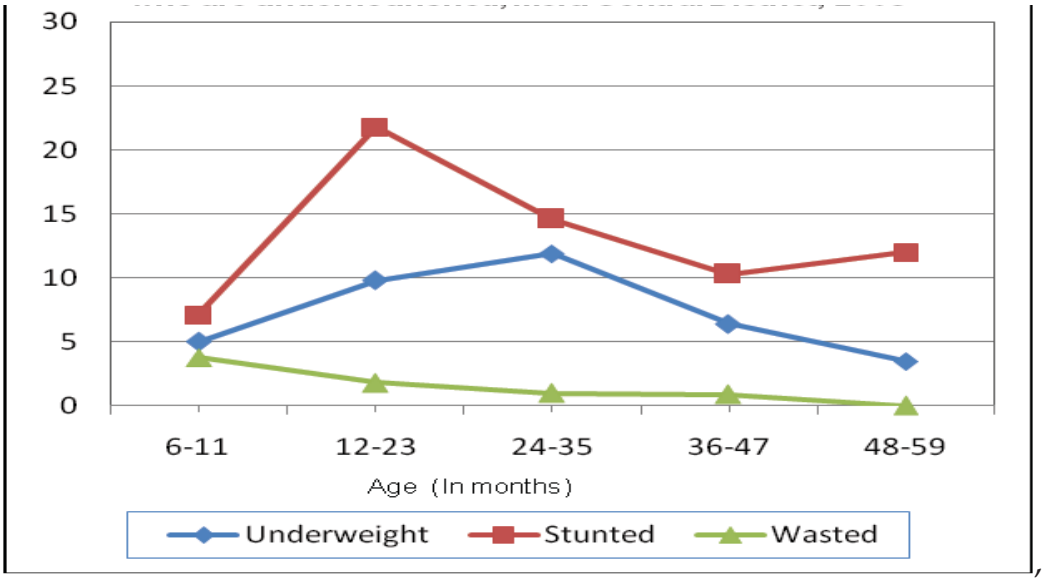
Columns 1 and 2 refer to children whose weight for age z-scores (i.e., the exact number of standard deviations from the median) fall below -2 standard deviations (moderately underweight) and -3 standard deviations (severely underweight) from the median weight for age of the NCHS reference population. 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 are 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.

Figure 5.1 summarises the malnutrition data using the 3 anthropometric measures (results are for -2 SD). Underweight is high around 12-23 months of age while stunting is highest during the 24-35 months of age.

Figure 5.1: Percentage of Children age 6-59 months who are undernourished



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 goal for A World Fit for Children is to ensure that children are exclusively breastfed for six months, and that they should continue to be breastfed with safe, appropriate and adequate complementary feeding for up to two years of age and beyond.

WHO/UNICEF have the following feeding recommendations:

- Exclusive breastfeeding for the first six months
- Continued breastfeeding for two years or more
- Safe, appropriate and adequate complementary foods beginning at six months
- Frequency of complementary feeding: two times per day for 6 to 8 months old infants; three times per day for 9 to 11 months old infants

It is also recommended that breastfeeding be initiated within one hour after birth. The indicators of recommended child feeding practices are as follows:

- Exclusive breastfeeding rate (< six months and < four months)
- Timely complementary feeding rate (6 to 9 months)
- Continued breastfeeding rate (12-15 and 20-23 months)
- Timely initiation of breastfeeding (within one hour of birth)
- Frequency of complementary feeding (6 x to 11 months)
- Adequately fed infants (0 to 11 months)

Table 5.2 (NU.2) provides the proportion of women who started breastfeeding their infants within one hour after birth and within one day after birth (including those who started breastfeeding within one hour). The proportion of mothers initiating breastfeeding within an hour of birth was quite similar across children's age-groups (averaging 53 per cent), a possible indication of standard practice over the years.

The table shows that initiation of breastfeeding within an hour of birth is not appreciably different between women with primary education and those with secondary or higher education (54 per cent against 56 per cent), but appears to be lower for those with no education. A similar pattern is observed by the proportion of women initiating breastfeeding within a day by levels of education. The proportional differences in initiation of breastfeeding patterns seem comparable across levels of household wealth index for both initiations within an hour and within one day of birth.

Table 5.2 (NU.2) Initial Breastfeeding

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

Characteristics	Percentage of those who started breastfeeding within one hour of birth**	Percentage of those who started breastfeeding within one day of birth**	Number of women with a live birth in the two years preceding the survey
Months since last birth			
< 6 months	50.0	86.2	57
6-11 months	54.8	83.7	51
12-23 months	55.3	91.2	111
Education			
None	(31.5)	(63.5)	13
Primary	54.2	90.6	150
Secondary +	55.6	87.0	62
Wealth index			
Low	(*)	(*)	9
Medium	52.8	91.9	87
High	54.6	87.3	129
Total	**53.3**	**88.1**	**225**

*** *MICS indicator 45**

Tables 5.3a and 5.3b (NU.3) present information on breastfeeding practices and children's consumption of food and fluids in the 24 hours prior to the interview, as reported by their mothers/caretakers. *Exclusively breastfed* refers to infants who received only breast milk (and vitamins, mineral supplements, or medicine). The tables show exclusive breastfeeding of infants during the first six months of life (separately for 0-3 months and 0-5 months (Table 5.3a)), as well as complementary feeding of children aged 6-9 months; and continued breastfeeding of children aged 12-15 and 20-23 months (Table 5.3b).

Approximately 17 per cent of children aged up to three months, and 13 per cent of children aged less than six months are exclusively breastfed. These rates reflect very poorly against recommendations that aim to have all children in these age ranges exclusively breastfed. Exclusive breastfeeding between 0-5 months appears to be higher among females than males. There seems to be some variations in levels of exclusive breastfeeding and mother's education or household wealth index, but the patterns are unclear due to fewer observations.

Table 5.3a (NU.3): Breastfeeding

Percentage of living children according to breastfeeding status at each age group, Meru Central district, Eastern Province, Kenya 2008

Characteristics	Children age 0-3 months		Children age 0-5 months	
	Percentage exclusively breastfed	Number of children	Percentage exclusively breastfed**	Number of children
Sex				
Male	6.6	38	6.4	52
Female	(31.6)	27	19.2	50
Mother's education				
None	(*)	6	(*)	7
Primary	11.5	39	7.9	68
Secondary +	*	19	(27.8)	28
Wealth index				
Low	0.0	7	0.0	7
Middle	(*)	24	(13.3)	40
Upper	(18.9)	34	13.8	56
Total	**16.9**	**65**	**12.7**	**103**

**** MICS indicator 15**

Note: 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.

Children's diets are expected to change as they grow older by introducing supplementary food to breastfeeding. For ages 6 to 9 months, breast-feeding was supplemented with mashed foods for nearly 94 per cent of the children in this age range. Breastfeeding remains high in the age range 12-15 months at nearly 92 per cent. However, for the 20-23 month age category, the proportion of children who are breastfeeding reduces to 52 per cent. In this age range (20-23 months), no gender differences are observed in the patterns of children who are breastfed. It is difficult to draw conclusions of the patterns of breastfeeding by education levels of mothers and household wealth index due to fewer observations.

Table 5.3b (NU.3): Breastfeeding

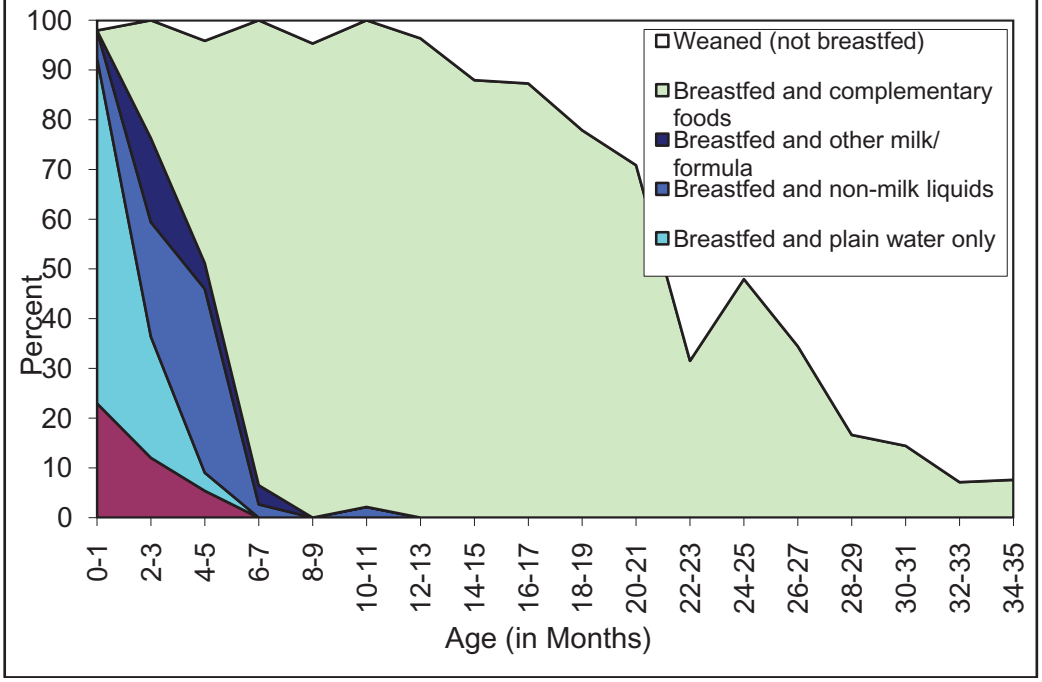
Percentage of living children according to breastfeeding status at each age group, Meru central district, Eastern Province, Kenya 2008

Characteristics	Children age 6-9 months: Percentage receiving breast milk and solid/mush food**	Children age 6-9 months: Number of children	Children age 12-15 months: Percentage breastfed ***	Children age 12-15 months: Number of children	Children age 20-23 months: Percentage breastfed ***	Children age 20-23 months: Number of children
Sex						
Male	91.7	31	89.5	27	50.3	31
Female	97.2	29	94.3	34	53.4	35
Mother's education						
None	(*)	8	(*)	2	(*)	3
Primary	(97.0)	38	(96.3)	35	61.4	45
Secondary +	(*)	15	(88.7)	24	(37.2)	18
Wealth index						
Low	(*)	3	(*)	2	(*)	2
Medium	(96.1)	29	(*)	17	(63.5)	30
High	(92.0)	28	(90.4)	42	(41.7)	34
Total	**94.4**	**60**	**92.2**	**61**	**51.9**	**65**

**** MICS indicator 17**
***** MICS indicator 16**
Note: 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.

Figure 5.2 provides a summary of the results observed in Tables 5.3a and 5.3b. The most striking element of the figure is the revelation that about 40 per cent of the children aged up to 35 months are never breastfed, despite the recommendation that all children should breastfeed for as long as practical. The second and related aspect of the chart is the fact that mothers adopt other feeding habits, such as mixing breastfeeding with water and solids way earlier. Children who are breastfed exclusively are a small fraction of those for whom milk is supplemented with plain water. Indeed, the pattern is quite striking for cases where mothers use other milk and formula foods to supplement their children's diets.

Figure 5.2: Percentage distribution of children aged under 3 years by feeding pattern, Meru Central district, 2008



Information on the adequacy of infant feeding among children aged less than 12 months is provided in Table 5.4 (NU.4). Various criteria that are based on the age of the child are used to review the adequacy of feeding. For infants of up to five months of age, exclusive breastfeeding is considered adequate feeding. Infants aged six to eight 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 adequately fed if they are receiving breast milk and eating complementary food at least three times a day.

Among children aged 0-5 months, 13 per cent are exclusively breastfed, with this proportion remaining comparable across children from medium and high wealth index households. Among children aged 6 to 8 months, 96 per cent received breast milk and complementary food at least two times in the twenty four hours prior to the survey. While, 88 per cent of children aged 6 to 11-months old received complementary milk with food as recommended.

About 47 per cent of children aged 0- 11 months were “appropriately fed” with a slight gender difference in favour of female children (52 per cent) versus male children (44 per cent). The proportion of children who were appropriately fed was higher among those with mother’s who are educated up to secondary or higher levels (58 per cent) versus those with primary level education (43 per cent). Surprisingly, the proportion of children aged 0-11 months who were appropriately fed was higher among those from the medium wealth index households at 52 per cent versus 44 per cent for those from high wealth index households.

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, Meru central district, Eastern Province, Kenya 2008

	Percentage of infants					
Characteristics	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**	Number of infants aged 0-11 months
Sex						
Male	6.4	90.4	78.9	83.8	43.7	101
Female	19.2	100.0	81.1	93.3	51.5	89
Mother's education						
None	(*)	(*)	(*)	(*)	(*)	16
Primary	7.9	97.8	75.2	87	42.6	120
Secondary +	27.8	89.3	89.4	89.3	57.9	54
Wealth index						
Low	(*)	(*)	(*)	(*)	(*)	13
Medium	13.3	97.5	82.5	91.5	51.9	79
High	13.8	93.2	72.9	83	43.5	98
Total	**12.7**	**95.6**	**79.6**	**88.0**	**47.4**	**190**

*** MICS indicator 18**
**** MICS indicator 19**

5.3 Salt Iodization

Iodine Deficiency Disorder (IDD) is the world's leading cause of preventable mental retardation and impaired psychomotor development in young children. In its most extreme form, iodine deficiency causes cretinism. It also increases the risks of stillbirth and miscarriage in pregnant women. Iodine deficiency is most commonly and visibly associated with goitre. IDD takes its greatest toll by impairing 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, with performance being gauged by the proportion of households consuming adequately iodized salt (≥15 parts per million).

In about 93 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 about five per cent of households had no salt available for testing. In 93 per cent of households, salt was found to contain 15 parts per million (ppm) or more of iodine, i.e., adequately iodized salt. As expected, the proportion of households with adequately iodized salt was higher among high wealth index households.

Table 5.5 (NU.5): Iodized salt consumption

Percentage of households consuming adequately iodized salt, Meru central district, Eastern Province, Kenya 2008

Wealth index	Percentage of households in which salt was tested	Number of households interviewed	Percentage of households with Salt test result: No salt	< 15 PPM	15+ PPM*	Total	Number of households in which salt was tested or with no salt
Low	(77.8)	49	(17)	(4.9)	(78.1)	100.0	46
Medium	90.6	361	7.1	1.3	91.6	100.0	352
High	94.9	748	3.9	1.9	94.2	100.0	738
Total	**92.8**	**1158**	**5.4**	**1.9**	**92.7**	**100.0**	**1136**

*** MICS indicator 41**

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 fruits, red palm oil and green leafy vegetables. However the amount of vitamin A readily available to the body from these sources varies widely. In developing countries, where vitamin A is largely consumed in the form of fruits and vegetables, daily per capita intake is often insufficient to meet dietary requirements. Adequate 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 world, particularly in countries with high child mortality burdens.

The 1990 World Summit for Children set a 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 control of vitamin A deficiency a primary component of child survival efforts, and is therefore critical to the achievement of the fourth Millennium Development Goal; a two-thirds reduction in under-five mortality by the year 2015 (Goal 4: Target 5).

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 at all children between the ages of 6 to 59 months living in affected areas. Providing young children with two high-dose vitamin A capsules a year is a safe, cost-effective, efficient strategy for eliminating vitamin A deficiency and improving child survival. Giving vitamin A to new mothers who are breastfeeding helps protect their children during the first months of life and helps to replenish the mother's stores of vitamin A, which are depleted during pregnancy and lactation. For countries with vitamin A supplementation programs, the definition of the indicator is the proportion 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 Government of Kenya recommends that children aged 6 to 11 months be given one high-dose of vitamin A capsule while those aged 12-59 months

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.

In Meru Central district, 42 per cent of children aged 6 to 59 months received a high-dose vitamin A supplement during the six months prior to the survey (Table 5.6 (NU.6)). About 27 per cent of the children received the supplement at some point beyond six months prior to the survey, while 24 per cent of mothers / caretakers were unable to specify when their children received the vitamin A supplement. Thus, about 93 per cent of the children aged 6-59 months received vitamin A supplementation.

Table 5.6 (NU.6): Children's vitamin A supplementation

Percentage distribution of children aged 6-59 months by whether they have received high-dose Vitamin A supplement in the last 6 months, Meru Central district, Eastern Province, Kenya 2008

Characteristics	Percentage of children who received vitamin A:			Not sure if received vitamin A	Never received vitamin A	Missing	Total	Number of children aged 6-59 months
	Within last 6 months*	Prior to last 6 months	Not sure when					
Sex								
Male	41.4	27.2	24.4	2.0	4.5	0.5	100.0	398
Female	41.8	26.1	23.3	0.0	8.3	0.6	100.0	418
Age								
6-11 months	67.8	5.2	3.8	0.0	18.9	4.3	100.0	88
12-23 months	47.5	29.5	14.9	0.9	7.2	0.0	100.0	181
24-35 months	41.7	35.4	18.4	0.4	4.1	0.0	100.0	204
36-47 months	32.0	24.3	36.0	0.9	6.8	0.0	100.0	199
48-59 months	31.3	26.9	37.9	2.6	1.3	0.4	100.0	145
Mother's education								
None	30.4	29.8	20.6	9.6	9.6	0.0	100.0	61
Primary	39.8	26	25.8	0.4	7.4	0.6	100.0	486
Secondary +	48.5	25.3	21.5	0.0	4.1	0.6	100.0	263
Wealth index								
Low	(31.9)	(10.6)	(35.2)	(0)	(22.3)	(0)	100.0	38
Medium	41.8	27	22.9	1.3	6.6	0.4	100.0	299
High	42.2	27.6	23.5	0.9	5.2	0.6	100.0	479
Total	**41.6**	**26.6**	**23.8**	**1.0**	**1.0**	**7.0**	**100.0**	**816**

*** MICS indicator 42**

There is a marginal variation in the proportion of children who received vitamin A supplementation by gender. The proportion of female children (8.3 per cent) who never received vitamin A is nearly double that of male children who didn't receive it (4.5 per cent). The age group 6 to 11 months accounted for the largest proportion of those receiving the vitamin A supplementation within the last six months before the survey (68 per cent).

The mother's level of education is related to the likelihood of the child receiving vitamin A supplementation. For example, the proportion of children receiving the supplement in the last six

months was 30 per cent among children whose mothers have no education versus nearly 49 per cent among children whose mothers have secondary or higher education levels.

However, the proportion of children receiving vitamin A supplementation in the six months prior to the survey seems to be comparable for both children from the medium and high wealth index households.

As noted above, mothers lose their vitamin A stock during pregnancy and lactation, thereby also needing supplementation. Two out of three mothers (61 per cent) who had a birth in the previous two years before the survey received vitamin A supplementation within eight weeks of giving birth, while about five per cent were unsure whether they did receive it or not (Table 5.7 (NU.7)). Vitamin A coverage is higher (69 per cent) for mothers with secondary or higher education levels compared to mothers with primary education (58 per cent). The proportion of mothers receiving vitamin A supplements was higher among those from high wealth index households at 70 per cent compared to 51 per cent for those from medium wealth index households.

Table 5.7 (NU.7): Post-partum mother's vitamin A supplementation

Percentage of women aged 15-49 years with a birth in the 2 last years preceding the survey whether they received high-dose vitamin A supplement before the infant was 8 weeks old, Meru Central, Kenya, Eastern Province, 2008

Characteristics	Received vitamin A supplement*	Not sure if received vitamin A	Number of women aged 15-49 years
Education			
None	(60.8)	(0.0)	13
Primary	57.9	6.3	150
Secondary +	69.0	1.5	62
Wealth index			
Low	(*)	(*)	9
Medium	50.9	8.2	87
High	70.0	2.1	129
Total	**61.2**	**4.6**	**225**

*** MICS indicator 43**

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 were undernourished in the womb face a greatly increased risk of dying during their early months and years of life. Those who survive tend to have an impaired immune system and face an increased risk of disease. They are also likely to remain undernourished, experience reduced muscle strength throughout their lives, and face an increased risk of having diabetes and heart disease in later life. Children born underweight also tend to have a lower IQ and cognitive disabilities. This affects their performance in school and their prospects of job opportunities as adults.

In the developing world, low birth weight stems primarily from the mother's poor health and nutrition. Three factors have most impact on the child's birth weight: the mother's poor nutritional status before conception, short stature (due mostly to under nutrition and infections during her childhood) and poor nutrition during pregnancy. Adequate weight gain during pregnancy is particularly important since the lack of 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 fully matured for reproduction 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, represent only a small sample of all births.

Because many infants are not weighed at birth and those who are weighed may be a biased sample of all births, the reported birth weights usually cannot be used to estimate the prevalence of low birth weight among all children. Therefore, the percentage of births weighing below 2500 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.[7]

In Meru Central, 92 per cent of births were weighed at birth and approximately seven per cent of infants are estimated to weigh less than 2500 grams at birth (Table 5.8). The proportion of those weighed at birth increases with increasing levels of mother's education, as well as by household wealth index. The findings from the Meru Central survey suggest a very healthy population of mothers during pregnancy as a mere seven per cent of the new-borns weighed less than the 2,500 grams cut-off. The proportion of children weighing below 2500 grams was very comparable across levels of mother's education and household wealth index. These findings are also summarized in Figure 5.3.

Table 5.8 (NU.8): Low birth weight infants

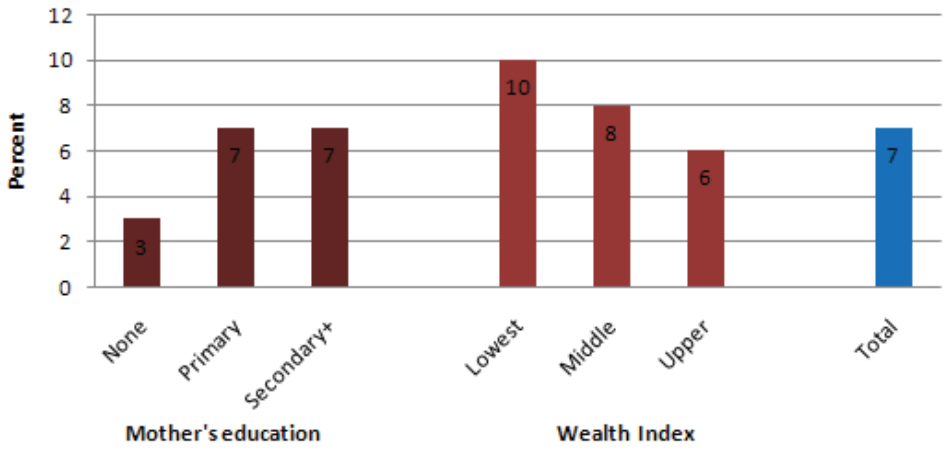
Percentage of live births in the two years preceding the survey that weighed below 2500 grams at birth, Meru Central district, Eastern Province, Kenya 2008

Characteristics	Percentage of live births: Below 2500 grams*	Weighed at birth**	Number of live births
Mother's education			
None	(2.6)	(74.9)	13
Primary	7.2	90.0	150
Secondary +	7.3	98.6	62
Wealth index			
Lowest	(*)	(*)	9
Middle	7.7	88.6	87
Upper	6.2	96.5	129
Total	**7.0**	**91.5**	**224**

*** MICS indicator 9**
**** MICS indicator 10**

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

Figure 5.3: Percentage of infants weighing less than 2,500 grams at birth



6.1 Immunization

Target 5 of MDG 4 aims to reduce child mortality by two-thirds between 1990 and 2015. Immunization of infants plays a key role in the efforts to achieve this goal. Immunization has saved the lives of millions of Kenyan 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 still cause more than 2 million child deaths every year.

A goal of the World Fit for Children campaign is to ensure full immunization of at least 90 per cent of each nation's children under one year of age, with at least 80 per cent coverage in every district or equivalent administrative unit. In this regard, the Kenya Expanded Programme on Immunization (KEPI) and the *Malezi Bora—a* comprehensive initiative to protect Kenyan children's health are playing key roles.

In accordance with UNICEF and WHO guidelines adopted by the Kenyan Ministry of Health, each 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 the polio vaccine by the age of 12 months. The measles vaccine should be administered by the age of 9 months.

During MICS3, mothers or caretakers of children below five years of age were asked to provide vaccination cards whose information was copied onto the survey questionnaires. However, information about children with no immunization cards was obtained using a set of structured direct questions on immunization. Consequently, the immunization coverage reflected in this report includes information from vaccination cards as well as re-call information from the mothers or caretakers, unless mentioned otherwise.

Overall, there were vaccination cards for 77 per cent of children in the sample (Table 6.1). The table shows the percentage of children aged 12 to 23 months who received the various vaccinations. The denominator of the calculation from which the percentages are derived comprises only children aged 12-23 months, meaning they are old enough to be fully vaccinated. In the top panel, the numerator includes all children who were vaccinated before the survey based on the information from the vaccination cards or as reported by their mothers or caretakers. In the bottom panel, only children who received the recommended vaccination before their first birthday 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.

Results from the table show that almost 100 per cent of children aged 12-23 months received a BCG, DPT 1 and DPT 2 vaccinations, as well as Polio 0, Polio 1 and Polio 2 by the age of 12 months. However, the coverage rates for DPT 3, Polio 3 and Measles were not so impressive, leading to a drop in the overall coverage for all recommended vaccines to be 77 per cent.

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, Meru Central district, Eastern Province, Kenya 2008

Vaccinated at any time before the survey	Percentage of children who received:											Number of children aged 12-23 months
	BCG*	DPT 1	DPT 2	DPT 3**	Polio 0	Polio 1	Polio 2	Polio 3***	Measles****	All*****	None	
According to:												
Vaccination card	77.3	77.0	76.8	74.8	76.9	77.0	76.8	74.3	69.7	68.0	0.0	181
Mother's report	22.3	22.3	21.8	17.8	20.0	21.8	21.4	13.2	20.8	11.0	0.4	181
Either	99.6	99.3	98.7	92.6	97.0	98.8	98.3	87.5	90.6	79.0	0.4	181
Vaccinated by 12 months of age	99.6	98.7	98.3	91.1	97.0	98.8	97.9	87.0	89.8	77.0	0.4	181

*** MICS indicator 25**
**** MICS indicator 27**
***** MICS indicator 26**
****** MICS indicator 28 and MDG indicator 15**
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 1st 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 1st birthday.

******* MICS indicator 31**
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

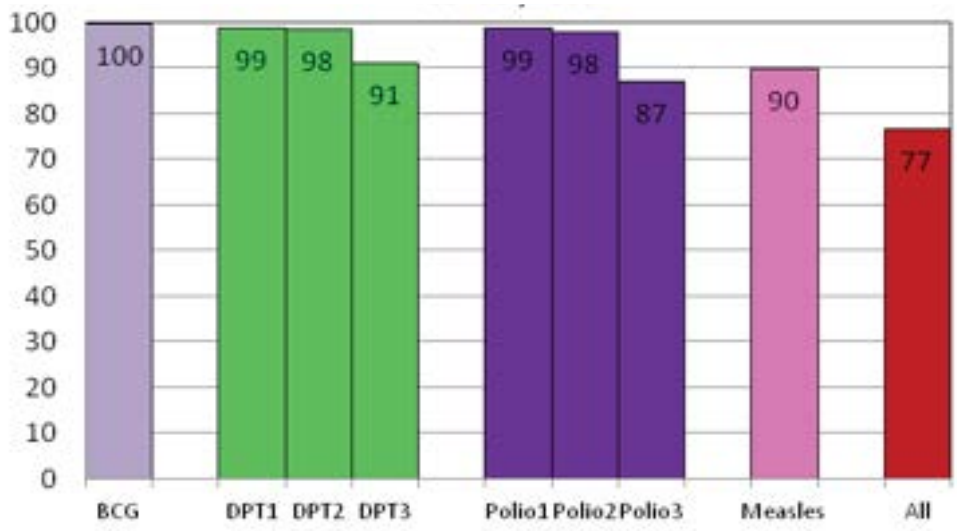


Table 6.2 (CH.2) shows vaccination coverage rates among children aged 12-23 months by background characteristics. It is quite surprising that the vaccination card was available for 83 per cent of the male children versus 73 per cent for females. The coverage of BCG, DPT 1, DPT 2 and Polio1 is near universal in Meru Central. However, the proportion of children receiving DPT 3 and Polio 3 drops by nearly seven per cent and 12 per cent, respectively. The measles vaccination was reportedly received by 91 per cent of children aged 12-23 months. Overall, 79 per cent of children aged 12-23 months are fully vaccinated, i.e., received BCG, three doses of DPT, three doses of Polio and the single measles vaccines. Overall, there is less variation in the full immunization coverage among boys and girls, but there are some variations by individual antigens, such as males receiving DPT3 and Polio3 more than females, and females receiving more measles vaccination than males.

Contrary to expectations, about 82 per cent of children with mothers' who attained primary level education received all vaccinations versus 73 per cent among those with mothers who have secondary or higher level of education. The proportions of fully vaccinated children by household wealth index show a very comparable coverage for both high and medium wealth index households (about 80 per cent in both). However, the proportion of children having health cards was higher among medium wealth index households at 88 per cent versus 70 per cent among children from high wealth index households.

Table 6.2 (CH.2): Vaccinations by background characteristics

Percentage of children aged 12-23 months currently vaccinated against childhood diseases, Meru Central district, Eastern Province, Kenya 2008

Characteristics	Percentage of children who received:											Percentage with health card	Number of children aged 12-23 months
	BCG	DPT1	DPT2	DPT3	Polio0	Polio1	Polio2	Polio3	Measles	All	None		
Sex													
Male	100.0	100.0	99.0	95.5	96.5	100.0	100.0	90.3	88.7	79.1	0.0	82.6	82
Female	99.2	98.7	98.4	90.2	97.4	97.9	96.8	85.2	92.1	79.7	0.8	72.9	99
Mother's education													
None	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	8
Primary	99.3	98.8	97.9	95.6	96.5	98.8	97.9	92.2	88.5	81.7	0.7	79.6	112
Secondary +	100.0	100.0	100.0	86.0	97.5	98.7	98.7	78.2	93.1	73.4	0.0	72.3	61
Wealth index													
Low	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	5
Medium	100.0	100.0	98.8	96.3	98.7	100.0	97.6	93.4	83.9	79.8	0.0	88.1	65
High	99.3	99.3	98.6	90.5	95.8	98.6	98.6	84	94.8	79.5	0.7	70.7	111
Total	**99.6**	**99.3**	**98.7**	**92.6**	**97**	**98.8**	**98.3**	**87.5**	**90.6**	**79.4**	**0.4**	**77.3**	**181**

Note: 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.

6.2 Tetanus Toxoid

MDG 5 (Target 6) aims to reduce by three quarters the maternal mortality ratio (MMR), with one strategy being to eliminate maternal tetanus. In addition, A World Fit for Children goal was to eliminate maternal and neonatal tetanus by 2005.

To prevent maternal and neonatal tetanus, 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 immediate past three years;
- Received at least three doses, the last within the immediate past five years;
- Received at least four doses, the last within past 10 years; or
- Received at least five doses during their lifetimes.

Table 6.3(CH.3) shows the tetanus protection status of women who had a live birth within the 12 months prior to the survey. Overall, 85 per cent of women who had a child birth during the 12 months preceding the survey had adequate protection against tetanus. Protection against tetanus increases with increasing levels of education for those receiving two doses during pregnancy. This pattern is also true for overall protection. The proportion of women protected against tetanus also increases with increasing levels of the household wealth index.

Table 6.3 (CH.3): Neonatal tetanus protection

Percentage of mothers with a birth in the last 12 months protected against neonatal tetanus, Meru Central district, Eastern Province, Kenya 2008

Characteristics	Percentage of mothers with a birth in the last 12 months who:						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	Protected against tetanus*	
Age							
15-19	(57.1)	(8.6)	(0.0)	(0.0)	(0.0)	(65.7)	21
20-24	76.2	8.6	0.8	0.0	0.0	85.5	61
25-29	72.3	16.3	0.6	0.0	0.0	89.2	77
30-34	82.2	8.4	0.0	0.0	0.0	90.6	42
35-49	(66.1)	(11.2)	(0.0)	(0.0)	(0.0)	(77.2)	22
Education							
None	(58.1)	(13.1)	(0.0)	(0.0)	(0.0)	(71.2)	13
Primary	70.1	13.4	0.6	0	0	84.1	150
Secondary	83.7	6.6	0.0	0.0	0.0	90.2	62
Wealth index							
Low	(*)	(*)	(*)	(*)	(*)	(*)	9
Medium	69.9	10.8	1.1	0.0	0.0	81.7	87
High	77.2	12.4	0.0	0.0	0.0	89.6	129
Total	**73.2**	**11.5**	**0.4**	**0.0**	**0.0**	**85.1**	**224**

*MICS indicator 32

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.

6.3 Oral Rehydration Treatment

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

The global goals pertaining to diarrhoea are to: 1) reduce by one half deaths due to diarrhoea among children under five by 2010 compared to 2000 (A World Fit for Children); and 2) reduce by two thirds the mortality rate among children under five years by 2015 compared to 1990 (Millennium Development Goal 4 target 5). In addition, A World Fit for Children calls for a reduction in the incidence of diarrhoea by 25 per cent.

The indicators are:

- Prevalence of diarrhoea
- Oral rehydration therapy (ORT)
- Home management of diarrhoea
- ORT or increased fluids and continued feeding

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

Overall, eight per cent of children under five had diarrhea in the two weeks preceding the survey (Table 6.4). The prevalence of diarrhea was nearly double among male children versus female children. The peak of diarrhea prevalence occurs in the weaning period, i.e. around the ages of 6-23 months and again rises in the 48-59 age categories. Interestingly, the prevalence of diarrhea was lowest among children with mothers who had no education (four per cent) and highest among children with mothers who had primary level education. However, the prevalence of diarrhoea decreased with increasing levels of household wealth index.

Table 6.4 also shows the percentage of children receiving various types of recommended liquids during the diarrhea episodes. About 34 per cent of children with diarrhea received fluids from ORS packets; 33 per cent received pre-packaged ORS fluids, and about 19 per cent received recommended homemade fluids. Overall, about three out of five (59 per cent) children with diarrhea received one or more of the recommended home treatments, but a larger proportion (41 per cent) still received no treatment.

Table 6.4 (CH.4): Oral rehydration treatment

Percentage of children aged 0-59 months with diarrhea in the last two weeks and treatment with oral rehydration solution (ORS) or other oral rehydration treatment (ORT), Meru Central district, Eastern Province, Kenya 2008

Characteristics	Had diarrhea in last two weeks	Number of children aged 0-59 months	Children with diarrhoea who received: Fluid from ORS packet	Recom-mended homemade fluid	Pre-packaged ORS fluid	No treatment	ORT Use Rate	Number of children aged 0-59 months with diarrhea
Sex								
Male	10.5	450	(32.0)	(24.0)	(31.4)	(39.9)	(60.1)	47
Female	5.6	469	(36.6)	(8.9)	(35.2)	(43.1)	(56.9)	26
Age								
<6 months	3.1	117	(*)	(*)	(*)	(*)	(*)	4
6-11 months	13.9	73	(*)	(*)	(*)	(*)	(*)	10
12-23 months	10.5	181	(22.7)	(20.0)	(31.7)	(50.9)	(49.1)	19
24-35 months	7.6	204	(*)	(*)	(*)	(*)	(*)	16
36-47 months	6.2	199	(*)	(*)	(*)	(*)	(*)	12
48-59 months	9.1	145	(*)	(*)	(*)	(*)	(*)	13
Mother's education								
None	3.5	68	(*)	(*)	(*)	(*)	(*)	2
Primary	10.1	554	33.5	20.9	34.6	35.3	64.7	56
Secondary +	5.3	291	(*)	(*)	(*)	(*)	(*)	15
Wealth index								
Low	(14.4)	45	(*)	(*)	(*)	(*)	(*)	6
Medium	9.2	339	(47.8)	(17.4)	(33.8)	(29.6)	(70.4)	31
High	6.7	535	(22.9)	(18.5)	(31.9)	(48.5)	(51.5)	36
Total	**8.0**	**919**	**33.6**	**18.6**	**32.8**	**41.0**	**59.0**	**74**

Note: 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.
Since mothers were able to name more than one type of liquid, the percentages do not necessarily add to 100

The larger proportion of children receiving no treatment for diarrhoea is surprising since the condition is amenable to home management, as illustrated in Table 6.5. Consumption of more fluids and continued eating is recommended in the management of diarrhea. Among children below five years with diarrhea during the two weeks preceding the survey, 51 per cent drank more fluids than usual, while 59 per cent had much less food or none at all. The table also shows that 30 per cent of the children received increased fluids and at the same time continued feeding. Diarrhea prevalence decreased with increasing household wealth index. Similarly, more children from high wealth index households drank more fluids during diarrhea episodes, and a few ate less, the same or more. Interestingly, a good proportion of children from the high wealth index households also received home management of diarrhea than those from the lower wealth index households. The proportion of children who experienced drinking of more fluids increased with increasing levels of mothers' education.

Table 6.5 (CH.5): Home management of diarrhea

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, Meru central district, Eastern Province, Kenya 2008

Characteristics	Had diarrhea in last two weeks	Number of children aged 0-59 months	Children with diarrhea who:				Home manage-ment of diarrhea	Received ORT or increased fluids AND continued feeding	Number of children aged 0-59 months with diarrhea
			Drank more	Drank the same or less	Ate somewhat less, same or more	Ate much less or none			
Sex									
Male	10.5	450	(59.2)	(40.8)	(41.1)	(58.9)	(18.6)	(30.0)	(47)
Female	5.6	469	(37.4)	(62.6)	(41.7)	(58.3)	(23.4)	(29.4)	(26)
Age									
0-11 months	7.1	170	(*)	(*)	(*)	(*)	(*)	(*)	12
12-23 months	10.6	188	(39.7)	(60.3)	(39.5)	(60.5)	(18.1)	(26.0)	20
24-35 months	7.7	204	(*)	(*)	(*)	(*)	(*)	(*)	16
36-47 months	5.0	186	(*)	(*)	(*)	(*)	(*)	(*)	9
48-59 months	9.7	170	(*)	(*)	(*)	(*)	(*)	(*)	17
Mother's education									
None	3.5	68	(*)	(*)	(*)	(*)	(*)	(*)	2
Primary	10.1	554	46.6	53.4	50.8	49.2	26.8	35.7	56
Secondary +	5.3	291	(*)	(*)	(*)	(*)	(*)	(*)	15
Wealth index									
Low	(14.4)	45	(*)	(*)	(*)	(*)	(*)	(*)	6
Medium	9.2	339	(47.9)	(52.1)	(37.0)	(63.0)	(12.7)	(26.0)	31
High	6.7	535	60.0	40.0	40.1	59.9	29.2	34.7	36
Total	**8.0**	**919**	**51.4**	**48.6**	**41.3**	**58.7**	**20.3**	**29.8**	**74**

6.4 Care Seeking and Antibiotic Treatment of Pneumonia

Pneumonia is one of the leading causes of death in children for which the use of antibiotics in children under five is a key intervention. While the MDG targets do not address the condition specifically, A World Fit for Children goal is to reduce by one-third the deaths due to acute respiratory infections.

In MICS3, children were suspected to have pneumonia if in the two weeks prior to the survey they had a cough accompanied by rapid or difficult breathing, and whose symptoms were NOT due to a problem in the chest or a blocked nose. The indicators for suspected pneumonia and treatment for MICS3 are:

- 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 the prevalence of suspected pneumonia and the place of care, and whether care was sought outside the home. Only 10 per cent of children aged 0-59 months were reported to have had an acute respiratory infection. Among these, 66 per cent were taken to an appropriate health service provider, including 56 per cent who visited a public health facility. The incidence of suspected pneumonia was marginally higher among male children (11 versus 9 per cent, respectively), but appropriate care was sought in 71 per cent of female cases compared to only 62 per cent for males.

Suspected child pneumonia infections were more prevalent among the 0-11 month age category (13.3 per cent) and dropped systematically with increasing age thereafter.

Suspected child pneumonia infections were highest among children with mothers who had no education (14 per cent) followed by those with mothers having secondary or higher education levels and lowest among those with mothers educated up to primary level (9 per cent).

The prevalence of suspected pneumonia among high wealth index households was 10 per cent, which was very comparable to that observed among children from medium wealth index households (9.7 per cent). However, the proportion of children receiving appropriate care was different among children from medium and high wealth index 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, Meru Central district, Eastern Province, Kenya 2008

Characteristics	Had acute respiratory infection[1]	Number of children aged 0-59 months	Children with suspected pneumonia who were taken to:												Number of children aged 0-59 months with suspected pneumonia
			Public sources				Private sources				Other source				
			Govt. Hospital	Govt. health centre	Govt. health post	Other public*	Private hospital / clinic	Private physician	Phar-macy	Other private	Relative or friend	Shop	Trad. Practitioner	Any appropriate provider	
Sex															
Male	10.7	450	(32.1)	(17.2)	(1.6)	(0.0)	(11.3)	(0.0)	(4.8)	(0.0)	(0.0)	(5.0)	(0.0)	(62.2)	48
Female	8.9	469	(33.6)	(23.9)	(1.9)	(1.9)	(8.0)	(1.9)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(71.2)	42
Age															
0-11 months	13.3	170	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	23
12-23 months	9.5	188	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	18
24-35 months	9.6	204	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	20
36-47 months	8.1	186	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	15
48-59 months	8.6	170	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	15
Mother's education															
None	14.0	68	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	9
Primary	8.5	554	(11.5)	(26.4)	(3.3)	(0.0)	(13.1)	(1.7)	(3.2)	(0.0)	(0.0)	(0.0)	(0.0)	(56.0)	47
Secondary +	11.6	291	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	34
Wealth index															
Low	(3.0)	45	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	1
Medium	9.7	339	(13.0)	(23.3)	(2.4)	(0.0)	(15.1)	(2.4)	(4.6)	(0.0)	(0.0)	(0.0)	(0.0)	(56.3)	33
High	10.4	535	(43.8)	(18.2)	(1.4)	(1.4)	(6.8)	(0.0)	(1.4)	(0.0)	(0.0)	(4.3)	(0.0)	(71.6)	56
Total	**9.8**	**919**	**32.8**	**20.4**	**1.7**	**0.9**	**9.7**	**0.9**	**2.6**	**0.0**	**0.0**	**2.7**	**0.0**	**66.4**	**90**

* Includes village health worker or mobile/outreach clinic.
Note: 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.

Table 6.7 (CH.7) presents the use of antibiotics for the treatment of suspected pneumonia in children under five years of age by sex, age and socioeconomic factors. About 60 per cent of children with suspected pneumonia in the two weeks prior to the survey received an antibiotic treatment. About 62 per cent of male children received antibiotic treatment versus 56 per cent among female children.

Table 6.7 (CH.7): Antibiotic treatment of pneumonia

Percentage of children aged 0-59 months with suspected pneumonia who received antibiotic treatment, Meru Central district, Eastern Province, Kenya 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
Sex		
Male	(62.3)	48
Female	(55.6)	42
Age		
0-11 months	(*)	23
12-23 months	(*)	18
24-35 months	(*)	20
36-47 months	(*)	15
48-59 months	(*)	15
Mother's education		
None	(*)	9
Primary	(43.3)	47
Secondary +	(*)	34
Wealth index		
Low	(*)	1
Medium	(53.7)	33
High	(61.4)	56
Total	**59.2**	**90**

*** MICS indicator 22**

The survey also investigated mothers' and caretakers' knowledge of the danger signs of pneumonia. Table 6.8 (CH.7A) presents the percentage of mothers/caretakers of children aged up to 59 months by knowledge of symptoms for taking a child immediately to a health facility. Overall, nine per cent of mothers/caretakers recognize the two danger signs of pneumonia as signs for taking a child to a health facility immediately. The most common danger sign that mothers or caretakers recognise is fever (81 per cent). The seeking of treatment as a result of fever does not seem to vary by household wealth index. The proportion seeking care for fever as a sign of pneumonia among children also appears comparable for children with mothers having primary and secondary or higher education levels, but relatively lower for those with mothers having no education (62 per cent).

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, Meru Central district, Eastern Province, Kenya 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		
Mother's education										
None	26.2	27.2	61.9	11.6	25.6	4.7	22.9	63.7	8.2	68
Primary	25.2	28.7	82.4	15.2	36.3	8.3	21.4	62.3	10.6	554
Secondary +	25.7	25.3	85.9	9.0	36.7	7.8	20.3	74.8	6.0	291
Wealth index										
Low	(26.4)	(27.6)	(81.5)	(6.6)	(30.0)	(3.6)	(18.9)	(52.9)	(3.0)	45
Medium	25.8	24.2	80.8	13.2	35.1	7.0	20.4	69.9	7.7	339
High	24.8	29.3	81.8	13.2	37.3	8.6	21.6	65.7	10.2	535
Total	**25.2**	**27.3**	**81.4**	**12.9**	**36.1**	**7.8**	**21.0**	**66.6**	**8.9**	**919**

* Percentage of mothers/caretakers who state fast AND difficult breathing as signs for taking a child to a health facility immediately
Note: 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), polyaromatic hydrocarbons, sulphur dioxide (SO_2), and other toxic elements. Use of solid fuels increases the risk 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 Central district, with 94 per cent of the households reporting use (Table 6.9 (CH.8)). Kerosene use is low at four per cent, and remarkably for an urban district, liquid profane gas (LPG) use is less than one per cent. Indeed, it is surprising that even across the household wealth index divide, over 91 per cent of households from the high wealth index group use solid fuels for cooking. Similarly, 25 per cent of the households from the high wealth index group use charcoal.

Differentials by educational background show that, the use of solid fuels was greatest among households headed by individuals with primary level education (96 per cent) and this was very comparable to those headed by individuals who attained secondary education or higher (95 per cent).

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, Meru Central district, Kenya, Eastern Province, 2008

	Type of fuel using for cooking								
Characteristics	Liquid propane gas (LPG)	Natural gas	Biogas	Kerosene	Coal/ lignite	Charcoal	Wood	Solid fuels for cooking *	Number of households
Education of household head									
None	1.6	1.8	1.4	6.3	0.0	15.3	72.1	87.4	226
Primary	0.3	0.1	0.0	3.5	0.5	14.4	81.2	96.1	650
Secondary +	0	0.2	0.0	2.2	0.0	24.6	70.3	94.9	273
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	8
Wealth index quintiles									
Low	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(100.0)	(100.0)	49
Medium	0.0	0.0	0.0	0.0	0.0	2.7	97.3	100.0	361
High	0.7	0.7	0.4	5.8	0.4	25.1	65.3	90.9	748
Total	**0.5**	**0.5**	**0.3**	**3.7**	**0.3**	**17.0**	**76.8**	**94.1**	**1158**

6.6 Malaria

Malaria is one of the leading causes of under five mortality in Kenya. 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 and for younger children, they should continue breastfeeding.

The MICS questionnaire probed for the availability and use of bed nets, both at household level and among children under five years of age, as well as the use of anti-malarial treatment and intermittent preventive therapy for malaria. The survey results indicate that 59 per cent of households have at least one ITN while a similar proportion (59 per cent) have at least one mosquito net, which suggests possibly that most of the nets owned are ITNs (Table 6.10 (CH.10)). Thirty four per cent of households reported having two or more mosquito nets. Households headed by members with high levels of education were more likely to have an insecticide treated mosquito net versus those headed by members with no education.

A similar pattern is noted with respect to net possession and the household wealth index. Households from high wealth index are more likely to have any net compared to low wealth index households (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 Central district, Eastern Province, Kenya 2008

Characteristics	Percentage of households with: At least one mosquito net	Two or more mosquito nets	at least one insecticide treated net (ITN)*	Number of households
Education of household head				
None	56.0	25.8	54.1	226
Primary	55.7	29.6	55.2	650
Secondary +	69.0	49.6	69.6	273
Wealth index				
Low	35.3	8.2	35.3	48
Medium	49.0	24.6	48.9	370
High	65.9	39.8	65.2	740
Total	**59.3**	**33.6**	**58.7**	**1158**

*** MICS indicator 36**

Figure 6.2: Percentage of households with at least one treated mosquito net

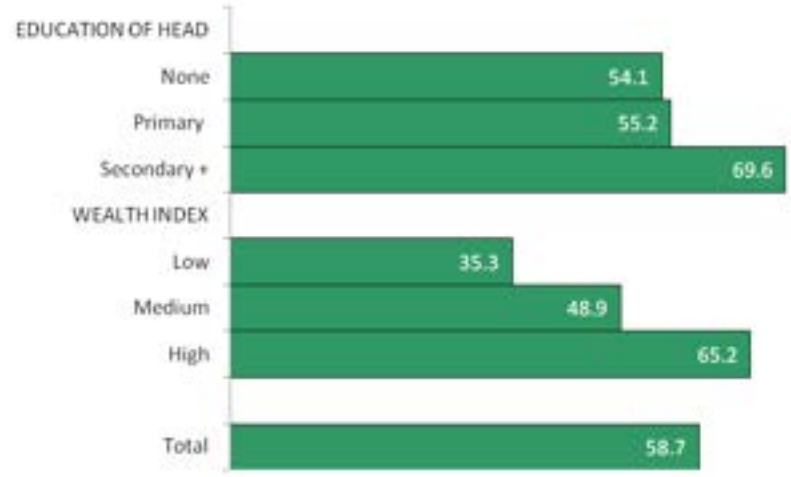


Table 6.11 provides results on bednet usage and sleeping patterns among children less than 5 years. The findings show that 37 per cent of children under the age of five did not sleep under any mosquito net during the night before the survey (Table 6.11 (CH.11)). While 63 per cent slept under a net, with an almost equal proportion sleeping under an ITN (62 per cent). There is no significant gender disparity in bed net and ITN use among children below five years. The results show that the proportion sleeping under bed nets and ITNs decreased with increasing child age. Although marginal, the proportion of children sleeping under a bed net or ITN increased with increasing levels of household wealth index.

Table 6.11 (CH.11): Children sleeping under bednets

Percentage of children aged 0-59 months who slept under an insecticide treated net during the previous night, Meru Central district, Eastern Province, Kenya 2008

	Percentage of children who:						
Characteristics	Slept under a bednet*	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 bednet	Number of children aged 0-59 months
Sex							
Male	62.2	61.9	0.4	0.0	0.0	37.8	450
Female	63.2	62.4	0.8	0.0	0.1	36.7	469
Age							
0-11 months	72.1	72.1	0.0	0.0	0.0	27.9	170
12-23 months	72.7	71.9	0.9	0.0	0.0	27.3	188
24-35 months	62.0	61.6	0.4	0.0	0.3	37.7	204
36-47 months	52.9	52.9	0.0	0.0	0.0	47.1	186
48-59 months	53.8	52.0	1.8	0.0	0.0	46.2	170
Wealth index							
Low	(54.8)	(54.8)	(0.0)	(0.0)	(0.0)	(45.2)	45
Medium	60.3	60.1	0.2	0.0	0.2	39.5	339
High	64.9	64.0	0.9	0.0	0.0	35.1	535
Total	**62.7**	**62.1**	**0.6**	**0.0**	**0.1**	**37.2**	**919**

* **MICS indicator 38**
** **MICS indicator 37; MDG indicator 22**

Questions were asked for all children under age five who had fever in the two weeks prior to the survey on whether they received anti-malarial drugs. Table 6.12 (CH.12) presents the results which show that about 22 per cent of under five children were ill with a fever in the two weeks prior to the survey, and that fever prevalence increased with age and peaked at 24-35 months of age (26 per cent). Prevalence of fever was higher among males (26 per cent) than female (20 per cent) but comparable among children from both medium (21 per cent) and high (23 per cent) wealth index households.

Information was also sought from mothers about all 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. Nearly 62 per cent of children with fever in the last two weeks were treated with an "appropriate" anti-malarial drug and 57 per cent received anti-malarial drugs within 24 hours of onset of symptoms. The proportion of children receiving an appropriate anti-malarial drug and particularly within 24 hours of onset of symptoms was higher for those having mothers who are more educated and for children from high wealth index households.

The most commonly used anti-malarial drug was amodiaquine (24 per cent) with the government recommended drug only accounting for 10 per cent of the usage share. The most commonly used other drugs for treating fever were pain-killers particularly Paracetamol/Panadol/Acetaminophen (52 per cent).

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 Central district, Eastern Province, Kenya 2008

			Children with a fever in the last two weeks who were treated with:													
			Anti-malarials:							Other medications:						
Characteristics	Had a fever in last two weeks	Number of children aged 0-59 months	SP/ Fans-idar	Chloro -quine	Amodia-quine	Quinine	Artemisinin based combin-ations	Other anti malarial	Any appropriate anti-malarial drug	Paracetamol / Panadol/ Acetamin-ophen	Aspirin	Ibuprofen	Other	Don't know	Any appropriate anti-malarial drug within 24 hours of onset of symptoms*	Number of children with fever in last two weeks
Sex																
Male	25.7	450	11.8	1.3	20	11.5	9.8	10.9	54.7	50.3	8.1	2	29.6	1.4	51.1	116
Female	19.9	469	17	8.8	29.8	11.0	9.4	6.5	70.8	53.3	16.4	5.6	34	0.4	63.2	93
Age																
0-11 months	16.6	170	(22.4)	(0.0)	(14.5)	(8.6)	(14.3)	(13.4)	(61.9)	(44.9)	(12.9)	(2.8)	(19.7)	(0.0)	(55.8)	28
12-23 months	24.7	188	22.8	0.0	22.4	9.8	6.1	4.6	59.6	54.0	8.3	6.2	23.6	0.0	47.5	47
24-35 months	25.6	204	(14.6)	(2.8)	(22.7)	(22.5)	(11.6)	(23.2)	(72.9)	(57.2)	(8.3)	(0.0)	(42.5)	(1.5)	(66.9)	52
36-47 months	20.8	186	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	39
48-59 months	25.3	170	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	43
Mother's education																
None	13.3	68	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	9
Primary	21.9	554	17.5	4.7	24.2	10.9	6.5	5.6	61.4	43.7	8.6	3.8	24.4	1	54.3	121
Secondary +	27.1	291	8.5	5.3	21.1	13.1	15.4	15.1	61.5	62.9	17	3.7	46.2	0	59.5	79
Wealth index																
Low	(33.7)	45	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	15
Medium	20.6	339	20.9	5.9	27.2	5.9	5.1	4.6	60.1	43.8	11.9	0	16.2	1.1	52.4	70
High	23.2	535	10.7	4	24.1	15	13.3	12.5	66.2	58.8	11.9	6.1	42.7	1	62.8	124
Total	**22.7**	**919**	**14.1**	**4.7**	**24.4**	**11.3**	**9.6**	**9**	**61.9**	**51.7**	**11.8**	**3.6**	**31.6**	**1**	**56.5**	**209**

* **MICS indicator 39; MDG indicator 22**

* The percentages given various drugs will not add to 100 since some children may have been given more than one type of drug.

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 of the disease. Once infected, pregnant women risk becoming anemic, or having a premature delivery and possibly stillbirths. Also, 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 offering malaria treatment during antenatal check-ups in a form of Intermittent Preventive Treatment for malaria (IPT). In the Meru Central district, women were asked about any medicines they received during their last pregnancy during the two years preceding the survey. Women are considered to have received IPT if they received at least two doses of SP/Fansidar during pregnancy.

The data on IPT for malaria in pregnant women who gave birth in the two years preceding the survey is presented in Table 6.13 (CH.13). Eighty four per cent of mothers who delivered a child in the two years prior to the survey received IPT for malaria during pregnancy, meaning 16 per cent were not protected. About one in three (33 per cent) received SP/Fansidar only once, while 40 per cent received the same two or more times. The rest received Chloroquine and 'other medicines'.

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 Central district, Eastern Province, Kenya 2008

	Percentage of pregnant women who took:						
Characteristics	Medicine to prevent malaria during pregnancy	SP/Fansidar only one time	SP/Fansidar two or more times*	Chloroquine	Other medicines	Don't know	Number of women who gave birth in prior two years
Education							
None	(66.5)	(21.7)	(37.4)	(3.6)	(3.8)	(0)	13
Primary	84.5	36.9	36.9	2.3	0.9	6.2	150
Secondary +	87.7	24.7	48.0	2.5	6.7	5.8	62
Wealth index							
Low	(*)	(*)	(*)	(*)	(*)	(*)	9
Medium	87.3	37.1	38.0	2.1	1.8	6.3	87
High	84.2	30.1	43.0	2.1	3.4	5.4	129
Total	**84.4**	**32.7**	**40.0**	**2.5**	**2.7**	**5.7**	**224**

* **MICS indicator 40**

7.1 Water

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

The MDG 7 goal is to halve by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation (goal 7: target 10). 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 to assess the water and sanitation situation;

Water

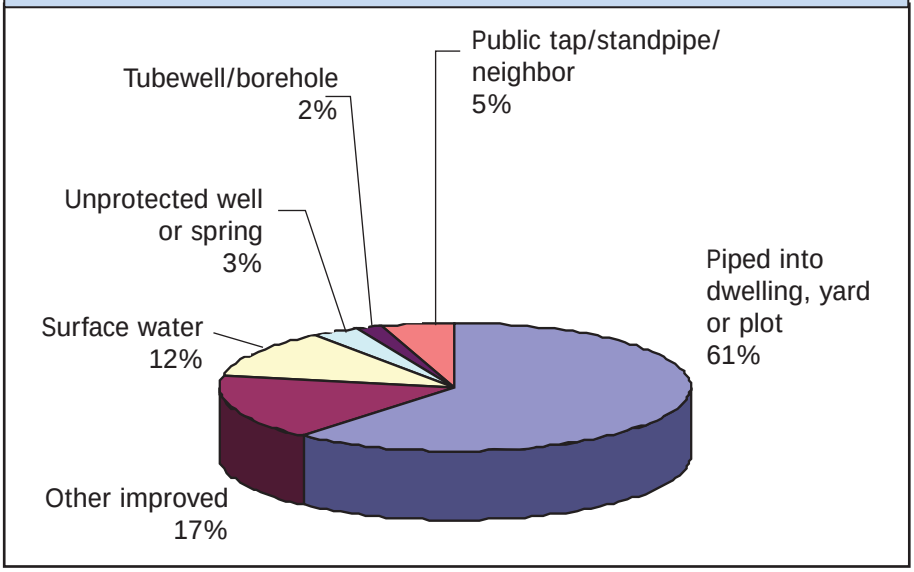
- Use of improved drinking water sources
- Use of adequate water treatment method
- Time to source of drinking water
- Person collecting drinking water

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, tubewell/ borehole, protected well, protected spring, rainwater collection. Bottled water is considered as an improved water source only if the household is using an improved water source for other purposes, such as hand washing and cooking. The proportion of households using improved sources is about 70 per cent, and those using unimproved sources are 17 per cent. Households headed by members with secondary or higher education levels are more likely to use water from improved sources (81 per cent). The use of improved water sources increases with increasing levels of household wealth index. For example, while only five per cent of low wealth index households used improved sources, the proportion was 83 per cent among high wealth index households.

Figure 7.1: Percentage distribution of household members by source of drinking water, Meru Central, 2008



Meru Central being an urban district, it is expected that piped water into dwellings (22 per cent) and yard/plot (39 per cent) should dominate improved water sources.

Table 7.1 (EN.1): Use of improved water sources

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

	Main source of drinking water													
	Improved sources								Unimproved sources					
Characteristics	Piped into dwelling	Piped into yard/ plot	Piped water from neighbour	Public tap/ stand-pipe	Tube-well/ bore-hole	Protected well	Protected spring	Rain water collection	Unpro-tected well	Unpro-tected spring	Cart with tank/ drum	Surface water	Total	Improved source of drinking water*	Number of household members
Education of household head															
None	30.6	31	10.5	9.5	1.3	0.5	0.5	0.0	0.0	2.2	1.3	12.7	100.0	73.4	737
Primary	15.4	39	15.4	4.8	3.3	0.6	0.6	0.4	1.6	3.1	1.9	14.1	100.0	64.0	2347
Secondary +	31.9	43.8	8.8	3.5	0.4	0.4	1.2	0.0	0.4	0.8	1.9	6.9	100.0	81.2	976
Wealth index															
Low	0.0	0.0	17.2	1.1	2.9	0.8	0.0	0.0	2.4	7.4	10.1	58.1	100.0	4.8	152
Medium	11.1	28.3	25.1	7.9	3.8	0.4	0.2	0.7	2.1	3.2	3.4	13.8	100.0	52.4	1358
High	29.2	46.7	6.2	4.2	1.3	0.6	1.1	0.0	0.3	1.6	0.4	8.4	100.0	83.0	2571
Total	**22.1**	**38.8**	**12.9**	**5.3**	**2.2**	**0.5**	**0.7**	**0.2**	**1.0**	**2.3**	**1.8**	**12.1**	**100.0**	**69.9**	**4081**

*** MICS indicator 11; MDG indicator 30**

Households were asked about the ways they use to treat water at home to make it safer to drink. The following approaches were considered as proper treatment of drinking water; boiling, adding bleach or chlorine, using a water filter and using solar disinfection. The use of in-house water treatment is summarised in Table 7.2 (EN.2). Nearly two out of five households (37 per cent) use an appropriate water treatment method. Sixty three per cent of the households reported that they did not treat their water irrespective of the source. While 36 per cent of the households reported that they boiled their water. Among those using drinking water from unimproved sources, close to 38 per cent use an appropriate water treatment. Similarly, among households using drinking water from improved sources, close to 36 per cent use an appropriate water treatment. There are minimal variations in the above proportions by levels of household wealth index or education levels of the household head.

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 Central district, Eastern Province, Kenya 2008

	Water treatment method used in the household							All drinking water sources		Improved drinking water sources		Unimproved drinking water sources	
Characteristics	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	Appropriate water treatment method:	Number of household members
Education of household head													
None	61.5	36.8	0.8	0.0	0.0	0.8	0.0	37.6	737	37.3	541	38.5	196
Primary	65.3	33.5	1.2	0.0	0.0	0.2	0.0	34.5	2347	34.6	1502	34.3	845
Secondary +	55.9	42.7	1.7	0.0	0.0	0.0	0.0	44.1	976	45.4	793	38.7	183
Wealth index													
Low	66.5	33.5	0.0	0.0	0.0	0	0.0	33.5	152	0.0	7	35.1	145
Medium	71.1	28.6	0.4	0.0	0.0	0.2	0.0	28.8	1358	23.8	712	34.2	646
High	57.7	40.4	1.8	0.0	0.0	0.3	0.0	42.0	2571	42.9	2135	37.8	436
Total	**62.5**	**36.2**	**1.3**	**0.0**	**0.0**	**0.2**	**0.0**	**37.3**	**4081**	**38.0**	**2854**	**35.6**	**1227**

* **MICS indicator 13**

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

The amount of time it takes for a round trip to collect drinking water from an appropriate source is presented in Table 7.3 (EN.3). For households headed by someone with no education, the average time for water collection was about 24 minutes in contrast to 17 minutes among households headed by someone who attained secondary or higher education. Average time for water collection was generally comparable by levels of household wealth index (range of 21 to 24 minutes).

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 Central district, Eastern Province, Kenya 2008

Characteristics	Time to source of drinking water							Mean time to source of drinking water (excluding those on premises)	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	DK	Total		
Education of household head									
None	59.8	14.0	10.7	10.6	4.8	0.0	100.0	24.2	226
Primary	56.3	19.6	6.8	11.8	5.4	0.1	100.0	22.6	650
Secondary +	73.9	12.6	8.6	3.0	1.9	0.0	100.0	17.0	273
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	8
Wealth index									
Low	0.0	34.5	29.4	31.9	4.2	0.0	100.0	20.8	49
Medium	40.8	27.2	10.7	15.4	5.7	0.1	100.0	20.7	361
High	75.1	10.8	5.2	5.0	3.8	0.0	100.0	23.7	748
Total	**61.2**	**16.9**	**7.9**	**9.4**	**4.5**	**0.0**	**100.0**	**22.0**	**1158**

Results on the person who usually collected water is presented in Table 7.4 (EN.4). The findings show that for majority of households, an adult woman is usually the person who collects water (29 per cent). Collection of water by women is higher among households from low wealth index group. An adult man is only responsible for collecting water in 11 per cent of the households.

Table 7.4 (EN.4): Person collecting water

Percentage distribution of households according to the person collecting water used in the household, Meru Central district, Eastern Province, Kenya 2008

Characteristics	Adult Woman	Adult Man	Female Child	Male Child	Adult women and Child	Adult male and Child	Adult Women and Male	DK	Number of households
Education of household head									
None	25.9	14.7	9.7	8.5	9.7	2.5	2.7	0.0	226
Primary	32.9	12.3	7.8	6.5	10.0	1.3	2.4	0.0	650
Secondary +	21.6	6.9	1.8	3.4	4.2	1.6	2.4	0.0	273
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	8
Wealth index									
Low	(92.6)	(17)	(23.6)	(17.1)	(30.1)	(9.6)	(10.4)	(0.0)	49
Medium	48.8	13.5	12.1	10.7	15.1	2.1	4.7	0.0	361
High	15.0	10.0	3.3	3.5	4.3	0.8	0.9	0.0	748
Total	**28.8**	**11.4**	**6.9**	**6.3**	**8.7**	**1.6**	**2.5**	**0.0**	**1158**

*Total per cent may add to more than 100.0 due to multiple responses.

7.2 Sanitation

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

Forty per cent of the households in Meru Central district use sanitary means of disposing excreta (Table 7.5 (EN.5). The proportion of households using sanitary means of disposing excreta increases with increasing levels of household wealth index. For example, 56 per cent of households from high wealth index use sanitary means of disposing excreta versus only five per cent among those from low wealth index households.

Table 7.5 (EN.5): Use of sanitary means of excreta disposal

Percentage distribution of household population according to type of toilet used by the household and the percentage of household members using sanitary means of excreta disposal, Meru Central district, Eastern Province, Kenya 2008

	Type of toilet facility used by household											
	Improved sanitation facility						Unimproved sanitation facility					
Characteristics	Flush to piped sewer system	Flush to septic tank	Flush to pit (latrine)	Ventilated Improved Pit latrine (VIP)	Pit latrine with slab	Pit latrine with slab and cover	Flush to unknown place/not sure/DK where	Pit latrine without slab/open pit	Other	Total	Percentage of population using sanitary means of excreta disposal *	Number of household members
Education of household head												
None	5.4	4.0	1.0	18.8	7.1	12.3	0.0	51.5	0.0	100.0	48.5	737
Primary	0.0	0.7	0.5	9.2	12.8	8.2	0.1	68.0	0.4	100.0	31.5	2347
Secondary +	0.4	1.9	1.1	19.4	14.2	17.4	1.3	44.4	0.0	100.0	54.3	976
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	20
Wealth index												
Low	0.0	0.0	0.0	0.0	0.0	5.3	0.0	88.5	6.2	100.0	5.3	152
Medium	0.0	0.0	0.0	1.2	7.8	5.0	0.0	86.1	0.0	100.0	13.9	1358
High	1.7	2.6	1.1	20.6	15.0	14.8	0.5	43.7	0.0	100.0	55.8	2571
Total	**1.1**	**1.6**	**0.7**	**13.3**	**12.0**	**11.2**	**0.3**	**59.5**	**0.2**	**100.0**	**40.0**	**4081**

* **MICS indicator12; MDG 31**

Safe disposal of a child's faeces is achieved by using a toilet or by rinsing the stool into a toilet or latrine. Disposal of faeces of children aged 0-2 years is presented in Table 7.6 (EN.6). In 96 per cent of the cases, stool from children is disposed safely. The proportion of children whose stools are safely disposed is high among all children with mothers educated up to primary and secondary or above levels (97 per cent). The observed proportion among mothers having no education was 88 per cent, although this estimate is derived from relatively smaller observations. Safe disposal of child stool increases with increasing levels of household wealth index. Child's faeces is mostly disposed into the toilet/latrine (79 per cent), followed by the child using a toilet (18 per cent).

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 Central district, Eastern Province, Kenya 2008

Characteristics	Place of disposal of child's faeces									Proportion of children whose stools are disposed off 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	(22.4)	(65.3)	(8.1)	(2.1)	(0)	(0)	(0)	(2.1)	(100.0)	(87.8)	38
Primary	19.2	77.3	1.5	0.4	0.1	0.2	0.6	0.5	100.0	96.5	351
Secondary +	14.2	83.2	0.8	1.6	0.0	0.0	0.3	0.0	100.0	97.4	192
Wealth index											
Low	(15.6)	(75.9)	(3.4)	(0)	(0)	(0)	(0)	(3.5)	(100.0)	(91.5)	24
Medium	21.3	74.6	1.9	0.7	0.0	0.3	0.5	0.7	100.0	95.8	233
High	15.1	81.8	1.4	1.1	0.0	0.0	0.4	0.2	100.0	96.9	330
Total	**17.6**	**78.7**	**1.7**	**0.9**	**0.1**	**0.1**	**0.4**	**0.4**	**100.0**	**96.3**	**587**

* **MICS indicator 14**

An overview of the households using improved sources of drinking water and sanitary means of excreta disposal is presented in Table 7.7 (EN.7). The household population using improved sources of drinking water was 70 per cent (see also Table 7.1), while the proportion using sanitary means of excreta disposal was 40 per cent. The rate of use of both improved water sources and sanitary means of excreta disposal is 23 per cent. This proportion is higher among households having a head who is highly educated (secondary and above). Surprisingly, this proportion is also high among households headed by a member with no education. Although none of the households from the poor wealth index group practices the use of improved sources of drinking water and sanitary means of excreta disposal, the proportion of those practicing both increases with increasing levels of household wealth index among medium and high wealth index groups.

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 Central district, Kenya, 2008

Characteristics	Percentage of household population using improved sources of drinking water *	Percentage of household population using sanitary means of excreta disposal **	Percentage of household population using improved sources of drinking water and using sanitary means of excreta disposal	Number of household members
Education of household head				
None	73.4	48.5	32.8	737
Primary	64.0	31.5	16.6	2347
Secondary +	81.2	54.3	31.7	976
Non-standard curriculum	(*)	(*)	(*)	20
Wealth index				
Low	4.8	5.3	0.0	152
Medium	52.4	13.9	4.9	1358
High	83.0	55.8	34.0	2571
Total	**69.9**	**40.0**	**23.1**	**4081**

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

Reproductive Health 8

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

8.1 Fertility

Achieving national goals is directly linked to the size of a country's population and the socio-economic resources available to support such a population. Studies have shown that in most of the developing countries, resources are scarce, making it important to balance population growth with availability of resources. To achieve this balanced growth for the country, it becomes necessary to develop population programmes that target a desired level of fertility. Such programmes invariably require information about prevailing fertility levels. In MICS, fertility data was collected by asking all women of reproductive age (15-49 years) to provide complete birth histories of all children they had given birth to such as child's name, sex, month and year of birth, survival status and if dead, the age at death.

Table 8.1 presents the measures of current fertility levels in Meru Central district for the three-year period preceding the survey. Current fertility measures such as age specific fertility rates (ASFR) and total fertility rate (TFR) are shown. Age specific fertility rates are calculated by dividing the number of births to women in a specific age group by the number of women years lived during a given period. TFR is defined as the average number of children a woman would have if she went through her entire reproductive period reproducing at the prevailing ASFR.

The total fertility rate in Meru Central district is 3.1 children per woman for the three year period preceding the survey. In the district, as is the case in most Kenyan communities, fertility peaks at age 20-24 years. An analysis of the age-specific fertility rates shows that 53 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 around five per cent. The contribution of the adolescent age group (15-19 years) to total fertility is about 12 per cent, which is an indicator of teenage pregnancies in the district.

Table 8.1: Current fertility

Age Specific Fertility Rates (ASFR) and Total Fertility Rate (TFR) for the 3-year preceding the survey, Meru Central district, Eastern Province, Kenya 2008

Age group	Total
15-19	77
20-24	166
25-29	162
30-34	127
35-39	60
40-44	21
45-49	11
TFR	**3.1**

TFR: Total fertility rate for women age 15-49 years expressed per woman.

Table 8.2 presents the percentage distribution of all women and currently married women based on the number of children ever born and living. Results are for 'all women' and 'currently married women'. The mean number of children ever born to both women groups aged 15-49 years

is 3.1 and that of surviving children is 3.0. As expected, the mean number of children ever born increases with increasing ages of women.

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 Central district, Eastern Province, Kenya 2008

Age group	Number of children ever born									Total	Number of women	Mean number of children	
	0	1	2	3	4	5	6	7	8+			Ever born	Living
All women													
15-19	84.7	15.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	100.0	176	1.0	1.0
20-24	31.9	45.4	18.5	3.6	0.6	0.0	0.0	0.0	0.0	100.0	182	1.4	1.4
25-29	13.4	32.7	38.1	13.2	2.3	0.0	0.2	0.2	0.0	100.0	235	1.9	1.9
30-34	4.9	11.2	44.1	29.4	6.1	3.3	0.6	0.0	0.2	100.0	148	2.6	2.4
35-39		10.6	22.5	23.5	24.0	13.4	0.5	1.8	3.7	100.0	154	3.7	3.6
40-44	2.3	5.0	9.3	25.8	26.1	11.5	10.4	8.5	1.1	100.0	122	4.8	4.6
45-49	1.7	1.7	2.8	27.8	19.0	20.5	8.4	9.9	8.4	100.0	108	5.7	5.4
Total	**22.2**	**20.2**	**21.1**	**15.9**	**9.3**	**5.5**	**2.1**	**2.2**	**1.5**	**100.0**	**1125**	**3.1**	**3.0**
Currently Married Women													
15-19	13.7	86.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	10	0.9	0.9
20-24	9.6	57.5	26.5	5.3	1.1	0.0	0.0	0.0	0.0	100.0	99	1.3	1.3
25-29	6,3	31.8	44.9	13.9	2.6	0.0	0.3	0.3	0.0	100.0	172	1.8	1.8
30-34	0.0	8.8	51.4	28.6	7.7	2.3	0.8	0.0	0.3	100.0	112	2.6	2.4
35-39	0.0	9.3	20.5	28.3	24.1	14.5	0.6	1.9	0.7	100.0	118	3.5	3.4
40-44	2.8	3.2	5.1	26.8	30.6	12.5	9.6	8.2	1.2	100.0	103	4.9	4.6
45-49	2.0	0.0	2.6	26.0	16.4	21.0	10.2	12.1	9.8	100.0	89	5.9	5.5
Total	**3.7**	**20.6**	**27.4**	**20.7**	**12.6**	**7.3**	**3.0**	**3.1**	**1.6**	**100.0**	**703**	**3.1**	**3.0**

8.2 Teenage Pregnancy and Motherhood

Reducing pregnancy among adolescents is one of the flagship programs of the government. Teenage pregnancies threaten the well being of young girls since their bodies might not be fully developed, and also risk the survival of the baby and subsequent development of the child. Also, early pregnancies tend to hinder girls' enrolment and continuation in school as well as completion of education. The proportion of women aged 15-19 years who gave birth, those who are currently pregnant and those who began child bearing by selected characteristics are shown in Table 8.3. More than 20 per cent of women aged 15-19 years have began child bearing, meaning they have either had a live birth or are pregnant with their first child. As expected, initiation of child bearing is relatively higher among the late teenage years i.e., 18-19 years. The percentage initiating child bearing decreases with increasing levels of educational attainment of the women as well as by household wealth index.

Table 8.3: Teenage pregnancy and motherhood

Percentage of women age 15-19 years who are mothers or pregnant with their first child and percentage who have begun child bearing, Meru Central district, Eastern Province, Kenya 2008

Characteristic	Percentage who		Percentage who have began child bearing	Number of women
	Have had a live birth	Are pregnant with first child		
Age				
15	1.8	0.0	1.8	34
16	11.9	0.0	11.9	34
17	9.7	1.5	11.2	30
18	18.9	14.2	33.1	39
19	30.8	6.7	37.5	39
Education				
None	100.0	0.0	(100.0)	7
Primary	17.9	7.3	25.2	91
Secondary +	4.3	2.5	6.9	77
Wealth index				
Low	30.9	0.0	30.9	12
Medium	15.7	5.1	20.8	62
High	13.3	5.3	18.6	102
Total	**15.3**	**4.9**	**20.2**	**176**

8.3 Contraception

Access to appropriate family planning is important to the health of women and children by: (1) preventing pregnancies that are unwanted; (2) spacing the period between desired births; (3) limiting the number of children. Elements of family planning – specifically condoms – are also beneficial in reducing the risk of sexually transmitted diseases which can undermine reproductive capability and threaten the health of a foetus. 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.

Current use of any method of contraception was reported by 73 per cent of women currently married or in union (Table 8.4 (RH.1)), with about 71 per cent using a modern method of contraception. The most popular method is the injection which is used by nearly two in five (41.7 per cent) women who are married or in union. The next most popular method is pill which is used by 21 per cent of married women. Female sterilisation accounts for 2.6 per cent of the choice of methods while male sterilisation has a negligible usage in the district.

The use of any contraception method was highest among the 30-34 age group (78 per cent) and lowest among the 20-24 (68 per cent). Contraceptive use (any method) by women's education was highest among those with primary level education and lowest among women with secondary or higher levels of education.

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 Central District, Eastern Province, Kenya 2008

	Percentage of women (currently married or in union) who are using:																	
	Not using any method	Female sterili-zation	Male sterili-zation	Pill	IUD	Inject-ions	Implants	Condom	Female condom	Diaph-ragm/ foam/ jelly	LAM	Periodic abstin-ence	Other	Total	Any modern method	Any tradi-tional method	Any method*	Number of women
Age																		
15-19	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	10
20-24	32	0.0	0.0	18.4	0.0	45.2	2.2	0.5	0.0	0.5	0.5	0.3	0.4	100.0	66.7	1.3	68	99
25-29	23.7	0.7	0.0	18.6	0.2	49.6	4.4	0.0	0.2	1.7	0.6	0.2	0.0	100.0	75.5	0.8	76.3	172
30-34	22.3	3.0	0.0	20.1	3.1	49.7	1.1	0.0	0.0	0.0	0.7	0.0	0.0	100.0	77.0	0.7	77.7	112
35-39	23.8	4.8	0.0	33.2	0.3	32.9	0.8	0.8	0.0	0.7	0.4	2.4	0.0	100.0	73.4	2.8	76.2	118
40-44	27.1	4.9	0.0	18.6	5.9	34.3	2.7	0.0	0.0	0.3	4.2	1.9	0.0	100.0	66.8	6.1	72.9	103
45-49	31.7	3.5	0.5	13.4	3.6	34.9	4.9	3.2	0.0	0.0	4.3	0.0	0.0	100.0	64.0	4.3	68.3	89
Number of living children**																		
0	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	30
1	34.5	0.0	0.0	18.8	0.3	41.5	3.4	0.3	0.0	0.3	0.4	0.4	0.2	100.0	64.5	1.0	65.5	157
2	13.1	0.4	0.0	25.3	1.7	54.0	2.9	0.0	0.2	0.4	0.3	1.4	0.2	100.0	85.0	1.9	86.9	200
3	15.7	6.5	0.0	26.5	2.4	37.9	5.1	2.0	0.0	2.0	0.6	1.4	0.0	100.0	82.4	1.9	84.3	140
4+	31.1	4.7	0.3	15.7	3.6	38.0	0.4	0.5	0.0	0.5	5.2	0.0	0.0	100.0	63.7	5.2	68.9	175
Education																		
None	28.4	3.9	0.0	22.6	0.5	34.5	8.5	0.0	0.0	0.0	0.0	1.0	0.6	100.0	70.0	1.7	71.6	66
Primary	23.9	2.3	0.1	21.6	2.8	44.2	1.3	0.8	0.1	1.1	1.2	0.7	0.1	100.0	74.2	1.9	76.1	427
Secondary +	32.2	2.9	0.0	18.4	0.7	37.6	3.9	0.4	0.0	0.2	2.9	0.9	0.0	100.0	64.0	3.8	67.8	206
Wealth index																		
Low	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	19
Medium	23.3	1.5	0.2	24.3	4.5	44.5	0.4	0.0	0.0	0.8	0.5	0.0	0.0	100.0	76.2	0.5	76.7	209
High	28.1	3.2	0.0	18.4	0.9	41.5	3.8	0.8	0.1	0.7	1.3	1.2	0.2	100.0	69.3	2.6	71.9	475
Total	**26.6**	**2.6**	**0.1**	**20.6**	**1.9**	**41.7**	**2.7**	**0.6**	**0.0**	**0.7**	**1.6**	**0.8**	**0.1**	**100.0**	**70.9**	**2.5**	**73.4**	**703**

Note: Male sterilization, female condoms and withdrawal method are used by less than 0.05 per cent and are not shown. **[delete columns with 0.0's and add footnote]**

8.4 Unmet Need

Unmet need[8] 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 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 include 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 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 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 and do not want to have another child.

Total unmet need for contraception is simply the sum of the unmet need for spacing and the unmet need for limiting.

Using information on contraception and unmet need, the percentage of demand for contraception satisfied is also estimated from the MICS data. The 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.

Table 8.5 shows the results of the Meru Central survey on contraception, unmet need and the demand for contraception satisfied. The unmet need for contraception in Meru Central is negligible with 98 per cent of demand for contraception satisfied. There are minimal variations in the levels of unmet need by household wealth index, education levels and age of women.

[8] The unmet need measurement in MICS is somewhat different from 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 therefore 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 central district, Eastern Province, Kenya 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	(*)	(*)	(*)	(*)	10	(*)	6
20-24	68	2.8	0.0	2.8	99	96	70
25-29	76.3	2.8	0.0	2.8	172	96.5	136
30-34	77.7	2.5	0.8	3.3	112	95.9	91
35-39	76.2	0.0	0.4	0.4	118	99.5	91
40-44	72.9	0.0	0.0	0.0	103	(100)	75
45-49	68.3	0.0	0.5	0.5	89	(99.2)	61
Education							
None	71.6	3.3	0.0	3.3	66	95.6	50
Primary	76.1	1.3	0.4	1.7	427	97.8	332
Secondary +	67.8	1.7	0.0	1.7	206	97.5	143
Wealth index							
Low	(*)	(*)	(*)	(*)	19	(*)	15
Medium	76.7	2.0	0.2	2.3	209	97.1	165
High	71.9	1.4	0.3	1.7	475	97.7	349
Total	**73.4**	**1.6**	**0.3**	**1.9**	**703**	**97.5**	**529**

** 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.

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 child health. For example, if the antenatal period is used to inform women and families about the danger signs and symptoms and 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 expected 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 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 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 on antenatal care visits which include:

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

In Meru Central district, coverage of antenatal care by any skilled personnel (a doctor, nurse or midwife) is relatively high with 96 per cent of women making at least one visit during pregnancy (Table 8.6). Most of the antenatal care was sought from a nurse or midwife, followed by medical doctor. The proportion of women who sought antenatal care from any skilled personnel was comparable across levels of education attainment (97 and 99 per cent among women with primary and secondary or higher level education, respectively). The same was also true by levels of household wealth index where 97 and 98 per cent of women from medium and high wealth index households sought ANC from skilled personnel.

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, Meru Central district, Eastern Province, Kenya 2008

	Person providing antenatal care**							
Characteristics	Medical doctor	Nurse/ midwife	Traditional birth attendant	Other	No antenatal care	Total	Antenatal care by any skilled personnel*	Number of women who gave birth in the preceding two years
Age								
15-19	(33.0)	(52.9)	(0.0)	(0.0)	(14.1)	(100.0)	(85.9)	21
20-24	37.9	60.1	0.7	0.0	1.3	100.0	98.0	61
25-29	28.7	66.8	0.0	0.0	4.4	100.0	95.6	77
30-34	27.9	71.0	0.0	1.1	0.0	100.0	98.9	42
35-49	(27.7)	(66.2)	(0.0)	(0.0)	(6.1)	(100.0)	(93.9)	22
Education								
None	(*)	(*)	(*)	(*)	(*)	(*)	(*)	13
Primary	32.3	64.4	0.3	0.0	3.0	100.0	96.7	150
Secondary +	29.7	69.0	0.0	0.0	1.4	100.0	98.6	62
Wealth index								
Low	(*)	(*)	(*)	(*)	(*)	(*)	(*)	9
Medium	36.2	60.4	0.0	0.0	3.4	100.0	96.6	87
High	29.8	68.0	0.4	0.4	1.4	100.0	97.8	129
Total	**31.4**	**64.4**	**0.2**	**0.2**	**3.8**	**100.0**	**95.8**	**224**

* Skilled health personnel include: doctors, nurses, midwifes, and auxiliary midwifes.
** If the respondent mentioned more than one provider, only the most qualified provider is considered

The types of services pregnant women receive at the antenatal clinics are shown in Table 8.7 (RH.4). A total of 96 per cent of the women received a range of services that constitute antenatal care visits at least once during their pregnancy. About 95 per cent of women who received antenatal care, had a blood sample taken as part of the routine visits. An almost equivalent

proportion of women (95 per cent) had their blood pressure measurements taken, about 87 per cent reported having their urine specimen taken, and about 95 per cent were weighed. The proportion of women receiving these services does not differ much by household wealth index or by educational levels of the women. The proportions of women receiving the above ANC services were comparable across women ages with the exception of the young (15-19 years) and older (35-49) age groups, which are also based on relatively smaller frequencies.

Table 8.7 (RH.4): Antenatal care

Percentage of pregnant women receiving antenatal care among women aged 15-49 years who gave birth in two years preceding the survey and percentage of pregnant women receiving specific care as part of the antenatal care received, Meru Central district, Eastern Province, Kenya 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*	
Age						
15-19	(85.9)	(77.5)	(84.0)	(68.0)	(85.9)	21
20-24	98.7	97.2	95.8	91.6	97.3	61
25-29	95.6	95.6	94.9	91.6	95.6	77
30-34	100.0	100.0	97.9	84.8	97.7	42
35-49	(93.9)	(93.9)	(93.9)	(81.3)	(92.8)	22
Education						
None	(74.9)	(74.9)	(74.9)	(71.4)	(74.9)	13
Primary	97.0	95.2	94.9	84.7	96.2	150
Secondary +	98.6	98.6	97.8	95.9	97.2	62
Wealth index						
Low	(*)	(*)	(*)	(*)	(*)	9
Medium	96.6	93.4	93.9	84.0	94.7	87
High	98.6	98.6	97.6	91.5	98.2	129
Total	**96.2**	**95.0**	**94.6**	**87.0**	**95.3**	**224**

* **MICS indicator 44**
* Proportions are calculated separately: Total number of women weighed, blood pressure measured, gave urine sample, gave blood sample.

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 the time of birth, and transport is available to a referral facility for obstetric care in case of an emergency. A World Fit for Children goal is to ensure that women have ready and affordable access to skilled attendance during delivery. The indicators for this goal 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 toward the Millennium Development Goal 5's target of reducing the maternal mortality ratio by three quarters between 1990 and 2015 (Goal 5: Target 6). The 2008 MICS study included a number of questions to assess the proportion of births attended by a skilled attendant. *A skilled attendant* includes a doctor, nurse, midwife or auxiliary midwife.

About four in five (82 per cent) women who gave birth in the two years preceding the survey delivered with the assistance of a skilled personnel (Table 8.8 (RH.5)). The proportion of women who delivered with the assistance of a skilled personnel increased with increasing levels of education attainment and also by household wealth index. For example, 91 per cent of women from the high wealth index households delivered with the assistance of the skilled personnel versus only 73 per cent for those from the medium wealth index category. Nurses or midwifes were the most common skilled personnel that offered delivery assistance (46 per cent), followed by the medical doctor (36 per cent). Traditional birth attendants still offer a dismal level of delivery assistance at five per cent in Meru Central district.

The Meru Central MICS also probed for the place of delivery since the government's strategy for reducing maternal mortality is not only to encourage attendance at antenatal clinics, but also promote facility deliveries. The findings show that 81 per cent of the women aged 15-49 delivered in a health facility. The proportion of facility deliveries increases with increasing levels of women's education and also by household wealth index.

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, Meru Central district, Eastern Province, Kenya 2008

	Person assisting at delivery										
Characteristics	Medical doctor	Nurse/ midwife	Traditional birth attendant	Comm-unity health worker	Relative /friend	Other	No attendant	Total	Any skilled personnel*	Delivered in health facility**	Number of women who gave birth in preceding two years
Age											
15-19	(37.9)	(39.9)	(17.9)	(0.0)	(4.4)	(0.0)	(0.0)	(100.0)	(77.7)	(77.7)	21
20-24	32.7	46.6	1.7	0.8	16.0	1.5	0.7	100.0	79.2	77.4	61
25-29	41.3	47.0	5.1	0.6	4.7	0.6	0.6	100.0	88.4	86.7	77
30-34	32.4	52.9	1.1	1.1	12.5	0.0	0.0	100.0	85.3	84.1	42
35-49	(30.8)	(37.5)	(3.1)	(0.0)	(22.8)	(0.0)	(5.7)	(100.0)	(68.3)	(66.2)	22
Education											
None	(31.1)	(42.1)	(23.2)	(0.0)	(3.6)	(0.0)	(0.0)	(100.0)	(73.2)	(73.2)	13
Primary	36.7	43.1	2.3	0.6	14.8	0.9	1.5	100.0	79.8	78.7	150
Secondary +	35.0	55.1	5.7	0.7	3.4	0.0	0.0	100.0	90.1	87.4	62
Wealth index											
Low	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	9
Medium	25.5	47.0	3.3	1.1	20.1	1.6	1.5	100.0	72.5	70.9	87
High	44.0	47.4	3.2	0.4	4.4	0.0	0.7	100.0	91.4	89.8	129
Total	**35.9**	**46.4**	**4.5**	**0.6**	**11.0**	**0.6**	**1.0**	**100.0**	**82.3**	**80.8**	**224**

*** MICS indicator 4; MDG indicator 17**
**** MICS indicator 5**
* Skilled health personnel include: doctors, nurses, midwifes, and auxiliary midwifes.

Child Development 9

9.1 Child Learning

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

Information on a number of activities that support early learning was collected in the survey. This 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 the Meru Central study, for about two out of five children aged under-five (43 per cent) a household member engaged in at least four activities that promote learning and school readiness (Table 9.1 (CD.1)). Engagement in at least four activities that promote learning and school readiness among children was generally comparable for both males (43 per cent) and females (42 per cent), but increased with increasing levels of household wealth index.
The average number of activities that adults engaged in with children was about three, and this average was comparable by child gender, education of the mother/father and by household wealth index. Besides household member's involvement, the MICS survey sought to examine the separate involvement of fathers in children's activities. On average, fathers involvement with children in activities that promote learning and school readiness was about 34 per cent. Father's level of involvement increased with increasing levels of mother's education, father's education, and household wealth index. On average, father's involvement was limited to only one activity (mean of 0.6), meaning that much of the interaction with children from household members was from other household members. This is also partially supported by the finding that on average 36 per cent of children lived in a household without their natural father.

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, Meru Central; Kenya, Eastern Province, 2008

	Percentage of children aged 0-59 months					
Characteristics	For whom household members engaged in four or more activities that promote learning and school readiness *	Mean number of activities household members engage in with the child	For whom the father engaged in one or more activities that promote learning and school readiness **	Mean number of activities the father engage in with the child	Living in a household without their natural father	Number of children aged 0-59 months
Sex						
Male	43.4	3.3	34.6	0.7	30.0	450
Female	41.9	3.2	33.9	0.6	43.0	469
Age						
0-23 months	15.3	2.3	26.8	0.4	35.0	371
24-59 months	61.2	3.9	39.3	0.8	38.0	548
Mother's education						
None	40.6	3.0	22.0	0.5	64.0	68
Primary	39.8	3.1	32.7	0.6	33.0	554
Secondary+	47.4	3.6	38.7	0.7	37.0	291
Father's education						
None	(40.2)	(3.0)	(73.2)	(1.4)	(0.0)	48
Primary	39.3	3.1	47.3	0.8	0.0	369
Secondary +	53.0	3.8	54.5	1.2	0.0	168
Father not in household	41.5	3.2	4.2	0.0	100.0	334
Wealth index						
Low	(24.4)	(2.5)	(1.8)	(0.0)	(57.0)	45
Medium	39.4	3.0	27.8	0.5	39.0	339
High	46.2	3.5	41.1	0.7	33.0	535
Total	**42.7**	**3.2**	**34.3**	**0.6**	**36.0**	**919**

***MICS indicator 46**
***MICS indicator 47**

10.1 Pre-School Attendance and School Readiness

Attendance of pre-school education in an organized learning or child education program is important for the readiness of children for school. One goal of A World Fit for Children (Goal 2) is the promotion of early childhood education.

The Meru Central district results show that 41 per cent of children aged 36-59 months are attending pre-school (Table 10.1 (ED.1)). The male attendance rate (45 per cent) was greater than that for the female children (36 per cent). The attendance rate nearly doubles for children from high wealth index households versus those from medium wealth index households i.e., 50 per cent versus 27 per cent, respectively. As expected, the proportion of children from the younger age group (36-47 months) attending school was lower (22 per cent) than that for the older age group (48-59 month) at 67 per cent. The findings additionally provide an idea of transition from pre-school to standard one in primary school. Nearly 82 per cent of the children who are currently attending standard one had gone through pre-school the previous year.

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 standard (std) one pupils who attended pre-school, Meru Central district, Eastern Province, Kenya 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 std one who attended preschool program in previous year**	Number of children attending first grade
Sex				
Male	45.2	170	(78.9)	26
Female	36.0	174	(84.9)	23
Age of child				
36-47 months	21.2	199	(*)	0
48-59 months	67.0	145	(*)	0
6 years*	(*)	0	81.7	49
Mother's education				
None	(*)	28	(*)	3
Primary	33.7	223	(87.6)	32
Secondary +	(55.4)	85	(*)	14
Wealth index				
Low	(*)	22	(*)	0
Medium	26.8	114	(92.4)	16
High	49.8	209	(76.7)	33
Total	**40.5**	**344**	**81.7**	**49**

***MICS indicator 52**
**** MICS indicator 53**
*Primary school entry age should be defined at the country level (usually based on UNESCO's ISCED1 classification). Here, it is assumed that primary education starts at age 6.

10.2 Primary and Secondary School Participation

Universal access to basic education and the achievement of full primary education by the world's children is one of the most important goals of the Millennium Development Goals (Goal 2, target 3) and A World Fit for Children. Education is a vital prerequisite for combating poverty, empowering women, protecting children from hazardous/exploitative labour, sexual exploitation, promoting human rights and democracy, protecting the environment and influencing population growth.

The indicators for primary and secondary school attendance include:

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

The indicators for school progression include:

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

Among children who are of primary school entry age (age 6) in Meru Central, one in two (50 per cent) are attending standard 1 of a primary school. More male children are attending standard one (55 per cent) than female children (46 per cent). Attending school seems to increase with increasing levels of mother's education as well as household wealth index. For example, about 49 per cent of children whose mothers have a primary school education level were attending standard one compared to 58 per cent for children whose mothers have secondary education. Similarly, 60 per cent of children from high wealth index households are attending standard 1, compared to 40 per cent among those from medium wealth index households.

Table 10.2 (ED.2): Primary school entry

Percentage of children of primary school entry age (6 years old) attending grade 1,Meru Central district, Eastern Province, Kenya 2008

Characteristics	Percentage of children of primary school entry age currently attending Std. 1*	Number of children of primary school entry age
Sex		
Male	55.1	48
Female	46.1	64
Mother's education		
None	(*)	13
Primary	48.6	75
Secondary +	(57.6)	24
Wealth index		
Low	(*)	3
Medium	39.7	47
High	60.2	62
Total	**50.0**	**112**

***MICS indicator 54**

For primary school education, Table 10.3 (ED.3) shows that the percentage of children of primary school age attending primary or secondary school averaged 88 per cent. Female children (88 per cent) have an almost equal advantage like male children (89 per cent) in attendance of school. The enrolment rate also improves with increasing levels of mother's education and household wealth index.

Table 10.3 (ED.3): Primary school net attendance ratio

Percentage of children of primary school age (6 – 13 years) attending primary or secondary school (NAR), Meru Central district, Eastern Province, Kenya 2008

	Net attendance ratio*			Number of children		
Characteristics	Male	Female	Total*	Male	Female	Total
Age						
6	55.1	51.6	53.1	48	64	112
7	77.6	79.3	78.3	48	36	85
8	92.0	95.1	93.7	45	51	96
9	(99.1)	94.4	96.6	44	48	91
10	(90.7)	(100)	94.6	53	38	91
11	(99.5)	(100)	99.7	48	51	99
12	(100)	99.2	99.6	44	51	95
13	(98.9)	(94.6)	96.2	35	58	93
Mother's education						
None	(81.1)	(88.6)	85.0	42	45	87
Primary	89.2	88.4	88.8	233	244	477
Secondary +	93.2	86.6	89.6	85	103	188
Wealth index						
Low	(*)	(*)	(79.7)	18	14	32
Medium	87.9	84.2	86.0	141	148	289
High	89.1	91.6	90.4	207	235	442
Total	**88.6**	**88.1**	**88.3**	**366**	**396**	**763**

***MICS indicator 55; MDG indicator 6**

* 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 (NAR) is presented in Table 10.4 (ED.4). About, 12 per cent of the primary school age children are not attending school (Table 10.3). For secondary school attendance, about 31 per cent of the children of secondary school age (14–17 years) are attending secondary school. Gender differentials in secondary school attendance are in favour of females (38 per cent) compared to only 25 per cent for males. The proportion attending secondary school increases with student's age as seen by the increase of NAR from10 per cent among 14 year olds to nearly 69 per cent among the 17 year olds. Similarly, NAR appears to improve with increasing levels of mother's education and by household wealth index.

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), Meru Central district, Eastern Province, Kenya 2008

	Net attendance ratio			Number of children		
Characteristics	Male	Female	Total*	Male	Female	Total
Age						
14	(12.8)	(5.8)	9.6	41	36	77
15	(14.7)	(30.8)	21.4	47	33	81
16	(25)	(32)	27.7	49	30	79
17	(55.6)	(79.6)	69.0	30	38	68
Mother's education						
None	(*)	(*)	(*)	4	6	9
Primary	29.3	31.8	30.4	79	62	141
Secondary +	(*)	(39.3)	35.3	33	33	66
Mother not in HH	(13.4)	(46.8)	27.2	52	37	89
Wealth index						
Low	(*)	(*)	(*)	5	3	8
Medium	(15.6)	35.2	25.8	47	51	98
High	28.6	38.2	32.6	116	84	199
Total	**24.6**	**38.2**	**30.7**	**167**	**137**	**305**

***MICS indicator 56**

* 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.

The primary school net attendance ratio of children of secondary school age is presented in Table 10.5 (ED.4W). Seventeen per cent of children of secondary school age are currently attending primary school when they should be attending secondary school. Slightly more males than females (19 versus 13 per cent) are attending primary school when they should be attending secondary school. The proportion of children of secondary school age who are attending primary school decreases with increasing levels of mother's education and also by household wealth index.

Table 10.5 (ED.4W): Primary school net attendance ratio of children of secondary school age

Percentage of children of secondary school age (14 – 17 years) attending primary school, Meru Central district, Eastern Province, Kenya 2008

Characteristics	Net attendance ratio			Number of children		
	Male	Female	Total	Male	Female	Total
Age						
14	(36.9)	(18.9)	28.5	41	36	77
15	(17.1)	(15.7)	16.5	47	33	81
16	(17.9)	(21.2)	19.1	49	30	79
17	(0.0)	(0.0)	0.0	30	38	68
Mother's education						
None	(*)	(*)	(*)	4	6	9
Primary	24.6	20.0	22.6	79	62	141
Secondary +	(*)	(5.9)	12.5	33	33	66
Mother not in HH	(10.4)	(10.0)	10.3	52	37	89
Wealth index						
Low	(*)	(*)	(*)	5	3	8
Medium	(24.1)	25.0	24.6	47	51	98
High	17.3	6.8	12.9	116	84	199
Total	**19.1**	**13.4**	**16.5**	**167**	**137**	**305**

* 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.

The ratio of girls to boys attending primary and secondary education is summarized in Table 10.6 (ED.7). These ratios are better known as the Gender Parity Index (GPI). The ratios included here are obtained from NAR rather than gross attendance ratios. The latter provides an erroneous description of the GPI mainly because in most cases, the majority of over-aged children attending primary education tend to be boys. The table shows that the GPI for primary schools in Meru Central is one, indicating there are no differences in the primary school attendance between girls and boys. The GPI for primary school appears to reduce with increasing levels of the mother's education attainment. In contrast, the GPI for primary school seems to increase with improving levels of the household wealth index.

However, the GPI for secondary school at 1.55 indicates that more girls are attending secondary schools compared with boys. This indicator decreases with improving levels of the mother's education. The GPI for secondary school also decreases with increasing levels of the household wealth index.

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, Meru Central district, Eastern Province, Kenya 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	
Mother's education						
None	88.6	81.1	1.09	44.8	22.3	2.01
Primary	88.4	89.2	0.99	31.8	29.3	1.09
Secondary +	88.9	93.2	0.95	39.3	31.3	1.25
Wealth index						
Low	70.3	87.0	0.81	87.0	16.5	5.27
Medium	84.2	87.9	0.96	35.2	15.6	2.25
High	92.6	89.1	1.04	38.2	28.6	1.33
Total	**88.7**	**88.6**	**1**	**38.2**	**24.6**	**1.55**

***MICS indicator 61 MDG indicator 9**

* 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 goals of A World Fit for Children seeks is to improve adult literacy. Adult literacy is also an MDG indicator (8) relating to both men and women. In MICS, since only a women's questionnaire was administered, the results are only available for females aged 15-24 years. Literacy was assessed on the ability of women to read a short simple statement or on school attendance. The percentage literate is presented in Table 10.7 (ED.8). Overall, 82 per cent of women aged 15-24 years are literate in Meru Central district. The percentage literate is marginally higher among the younger age group 15-19 years (84 per cent) compared with the older age group 20-24 years (81 per cent). The level of literacy improves with increasing levels of household wealth index.

Table 10.7 (ED.8): Adult literacy

Percentage of women aged 15-24 years that are literate*, Meru Central district, Eastern Province, Kenya 2008

Characteristics	Percentage literate*	Percentage not known**	Number of women aged 15-24 years
Education			
None	(*)	(*)	16
Primary	72.7	0.0	195
Secondary +	100.0	0.0	146
Age			
15-19	84.3	0.0	176
20-24	80.6	0.0	182
Wealth index			
Low	(*)	(*)	17
Medium	82.5	0.0	123
High	84.5	0.0	218
Total	**82.4**	**0.0**	**358**

***MICS indicator 60 MDG 8**

* 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.

**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.

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. A World Fit for Children has a goal to develop systems to ensure the registration of every child at, or shortly after birth and fulfil his or her right to acquire a name and a nationality in accordance with national laws and relevant international instruments. The indicator is the percentage of children under 5 years of age whose birth is registered.

The births of 72 per cent of children less than five years of age in Meru Central are registered (Table 11.1 (CP.1)). Registration of female children is very comparable to that of male children (73 against 71 per cent). As expected the proportion of birth registered increases with increasing levels of the mothers' education as well as increasing levels of the household wealth index. For example, 45 per cent of births of children from low wealth index were registered compared to 76 per cent among those from high wealth index households. The major reason why births are not registered is because many mothers or caretakers do not know that a child should be registered (66 per cent). Other unspecified reasons for non-registration account for 16 per cent of the unregistered births, while ignorance of where to register accounts for 12 per cent of non-registration.

Table 11.1 (CP.1): Birth registration

Percentage distribution of children aged 0-59 months by whether birth is registered and reasons for non-registration, Meru Central district, Eastern Province, Kenya 2008

Characteristics	Birth is Regis-tered*	Number of children aged 0-59 months	Birth is not registered because: Costs too much	Must travel too far	Didn't know child should be registered	Late, did not want to pay fine	Doesn't know where to register	Other	Don't know	Total	Number of children aged 0-59 months without birth registration
Sex											
Male	70.7	450	1.1	0.0	69.2	1.5	11.2	15.9	1.1	100.0	54
Female	73.4	469	2.6	1.5	63.5	4.0	11.8	15.2	1.4	100.0	54
Age											
0-11 months	77.9	170	(0.0)	(0.0)	(54.1)	(0.0)	(13.4)	(30.3)	(2.3)	(100.0)	26
12-23 months	75.9	188	(2.3)	(3.1)	(57.7)	(5.2)	(16.5)	(12.2)	(3.0)	(100.0)	26
24-35 months	73.4	204	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	21
36-47 months	62.8	186	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	14
48-59 months	70.4	170	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	20
Mother's education											
None	52.8	68	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	10
Primary	72.4	554	1.4	0.0	67.7	1.9	11.0	16.3	1.6	100.0	86
Secondary +	75.3	291	6.7	6.7	42.4	6.7	18.7	18.9	0.0	100.0	12
Wealth index											
Low	(44.6)	45	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	13
Medium	68.9	339	0.0	0.0	66.3	3.2	13.2	15.3	2.1	100.0	67
High	76.3	535	(7.1)	(2.9)	(58.4)	(2.9)	(8.2)	(20.6)	(0.0)	(100.0)	28
Total	**72.1**	**919**	**1.8**	**0.7**	**66.3**	**2.7**	**11.5**	**15.6**	**1.3**	**100**	**108**

*MICS indicator 62

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…". A World Fit for Children mentions nine strategies to combat child labour, while the MDGs call for the protection of children against exploitation. In the MICS questionnaire, a number of questions addressed the issue of child labour, that is, children 5-14 years of age involved in labour activities. A child was considered to be involved in child labour activities at the time of the survey, if during the week preceding the survey they were engaged in:

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

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. Percentages do not add up to the total number of child labourers as children may be involved in more than one type of

work. Among children aged 5-14 years, 19 per cent are engaged in child labour. The prevalence of child labour by gender is very comparable, with male children having a two percentage points edge over females (20 per cent versus 18 per cent). Child labour among the larger age group 5-11 year is 25 per cent versus 4.2 per cent among the 12-14 year age group. About 19 per cent of the child labourers reported being in school. However, the proportion of child labourers was very comparable across household wealth index.

Majority of the child labourers are involved in unpaid work with less than one per cent reporting any paid work. The proportion of children doing at least four hours of household chores per day was dismal (two per cent) while those working in a family business were about nine per cent. The proportion working in a family business did not vary much by levels of household wealth index.

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, Meru Central district, Eastern Province, Kenya 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				
Sex						
Male	1.2	12.0	1.5	9.1	20.4	442
Female	0.4	11.0	2.0	9.0	18.3	489
Age						
5-11 years	0.7	15.5	1.8	12.3	25.3	665
12-14 years	0.8	1.2	1.6	0.8	4.2	265
School participation						
Yes	0.6	11.3	1.4	9.0	18.8	891
No	(5)	(13.9)	(9.6)	(9.6)	(30.6)	39
Mother's education						
None	0.0	10.0	0.8	7.9	11.7	92
Primary	1.0	13.5	1.7	9.8	21.8	583
Secondary +	0.5	4.9	2.3	8.0	14.4	245
Wealth index						
Low	(2.0)	(7.0)	(2.0)	(10.0)	(20.0)	40.0
Medium	0.9	10.6	1.9	8.0	19.6	355
High	0.6	12.2	1.8	9.6	19.0	536
Total	**0.7**	**11.4**	**1.8**	**9.0**	**19.3**	**930**

*MICS indicator 71

* 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 percentage of children classified as either 'student labourers' or 'labourer students'. Student labourers are children attending school who are also involved in child labour activities at the time of the survey. On average, 96 per cent of the children aged 5-14 years are attending school, with about one in five (19 per cent) involved in child labour activities (see Table 11.2). Out of the 19 per cent of the children classified as child labourers, a large majority also attend school (93 per cent). The proportion of child labourers who are also attending school is

very comparable across gender. The proportion of child labourers is also comparable across levels of mother's education, while this proportion seems to decline with increasing levels of household wealth index. For labourer students, the district average was 19 per cent with very comparable proportions across gender.

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

Percentage of children aged 5-14 years who are labourer students and student labourers, Meru Central district, Eastern Province, Kenya 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
Sex							
Male	20.4	95.6	442	92.6	90	19.7	422
Female	18.3	96.1	489	94.1	89	17.9	469
Age							
5-9 years	25.3	95.5	665	96.2	168	25.5	635
10-14 years	4.2	96.6	265	(*)	11	2.2	256
Mother's education							
None	11.7	94.4	92	(*)	11	11.4	86
Primary	21.8	96.5	583	93.1	127	21.0	562
Secondary +	14.4	94.5	245	(93.3)	35	14.3	232
Wealth index							
Low	(20)	(93.4)	40	(*)	8	(18.2)	37
Medium	19.6	96.6	355	97.8	70	19.9	343
High	19.0	95.5	536	91	102	18.1	512
Total	**19.3**	**95.8**	**930**	**93.4**	**179**	**18.8**	**891**

* 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.
***MICS indicator 72**
** 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.
****MICS indicator 73**
**** Student labourers: Number of children 5-14 years of age attending school that are also invoved 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 their protection against abuse, exploitation and violence. In the MICS, mothers/caretakers of children aged 2-14 years were asked a series of questions on the methods parents use to discipline their children. Note that for 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 aged 2-14 years that experience psychological aggression as punishment ***or*** minor physical punishment ***or*** severe physical punishment; and 2) the number of parents/caretakers of children aged 2-14 years who believe that in order to raise their children properly, they need to physically punish them.

Information on child discipline by selected characteristics is presented in Table 11.4. In Meru Central district, 97 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 during the one month preceding the survey. The preferred modes of punishing children in the district include minor physical punishment (86 per cent), psychological punishment (86 per cent) and to a less extent severe punishment (16 per cent). The differentials by selected characteristics did not reflect any large differences in the proportions of various punishments received. Nine out of ten (91 per cent) mothers/caretaker believe that a child needs to be physically punished to bring them up properly. This proportion is equally distributed across gender and household wealth index, while being higher among mothers with primary level education (95 per cent) compared to those with no education (85 per cent) or those with secondary or higher levels of education (88 per cent).

Table 11.4 (CP.4): Child discipline

Percentage of children aged 2-14 years according to method of disciplining the child, Meru Central district, Eastern Province, Kenya 2008

	Percentage of children 2-14 years of age who experience:								
		Type of punishment							
Characteristics	Only non-violent discipline	Psycho-logical	Minor physical	Severe physical	Any psychological or physical Punishment*	No discipline or punishment	Missing	Mother/ caretaker believes that the child needs to be physically punished	Number of children aged 2-14 years**
Sex									
Male	1.6	88.3	87.3	17.5	98.2	0.2	0.0	91.6	564
Female	2.9	83.0	84.5	13.7	95.2	2.0	0.0	91.9	597
Age									
2-4 years	1.3	81.9	92.5	16.0	98.4	0.3	0.0	92.9	244
5-9 years	1.2	90.6	93.0	18.0	98.8	0.0	0.0	93.5	470
10-14 years	3.9	82.2	74.7	12.7	93.4	2.7	0.0	89.5	448
Mother's education									
None	1.5	84.4	78.7	6.9	92.2	6.3	0.0	85.1	120
Primary	1.6	88.0	87.5	18.7	98.3	0.2	0.0	95.3	711
Secondary +	4.2	80.7	84.0	12.7	94.4	1.3	0.0	87.7	313
Wealth index									
Low	(0.0)	(93.8)	(86.9)	(8.2)	(100.0)	(0.0)	(0.0)	(95.6)	45
Medium	1.7	85.9	89.3	16.7	98.2	0.2	0.0	92.3	437
High	2.8	84.8	83.6	15.3	95.4	1.8	0.0	91.2	679
Total	**2.3**	**85.6**	**85.9**	**15.6**	**96.6**	**1.1**	**0.0**	**91.8**	**1161**

***MICS indicator 74**

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

11.4 Early Marriage

Marriage before the age of 18 is a common occurrence for many young girls. According to UNICEF's worldwide estimates, over 60 million women aged 20-24 years were married/in union before the age of 18. Factors that influence child marriage 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 values that condone the practice.

In many parts of the world, parents encourage the marriage of their daughters while young with hope that the marriage will benefit the family both financially and socially. In actual fact, child marriage is a violation of human rights, compromising the development of girls and often resulting in early pregnancy and social isolation. Given that such girls have little education and poor vocational training, the practice of early marriage reinforces 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 addressing child marriage are the Convention on Consent to Marriage, Minimum Age for Marriage and Registration of Marriages, the African Charter on the Rights and Welfare of the Child, and the Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa. Child marriage was also identified by the Pan-African Forum against the Sexual Exploitation of Children as a type of commercial sexual exploitation of children.

Young married girls are a unique, but often invisible group that needs support. Often, young girls are required to perform heavy amounts of domestic work, are under pressure to demonstrate fertility, and are sometimes responsible for raising children while still children themselves. Married girls and child mothers face constrained decision-making and reduced life choices. Boys are also affected by child marriage but the issue impacts girls more than males. 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.

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 get married at younger ages are more likely to believe that it is sometimes acceptable for a husband to beat his wife and are also more likely to experience domestic violence themselves. The age gap between partners is thought to contribute to these abusive power dynamics and to increase the risk of untimely widowhood.

Closely related to the issue of child marriage is the age at which girls become sexually active. Women who are married before the age of 18 tend to have more children than those who marry later in life. Pregnancy related deaths are known to be a leading cause of mortality for both married and unmarried girls between the ages of 15 and 19 particularly among the youngest of this cohort. There is evidence to suggest that girls who marry at young ages are more likely to marry

older men which puts them at an increased risk of HIV infection. The demand for this young wife to demonstrate fertility and the power imbalance resulting from the age differences leads to very low condom use among such couples.

Table 11.5 (CP.5) provides information regarding early marriage in Meru Central district. Four per cent of women aged 15-49 years were married before reaching age 15, the practice being evidently more prominent in the older age categories. The prevalence of early marriages is very comparable for women with no education and those with primary level education, but much lower among those who have attained a secondary level education (two per cent). The proportions also declined with increasing levels of household wealth index.

Among women aged 20-49 years old, about one in five (19 per cent) were married before reaching age 18 years. There are minor proportional differences in the distribution of these marriages across the age groups. The proportion of women married before reaching age 18 in the 20-49 year category was highest among women who are educated up to primary level, with the proportion being lowest among those educated up to secondary level (97 per cent). As expected, the proportion of women married by age 18 years for the 20-49 year age group declines with increasing levels of the household wealth index.

Among adolescent girls aged 15-19 years, six per cent are currently married or in union. This means that about one in twenty women aged 15-19 years old in Meru Central are living with a partner. Differentials by selected socio-economic characteristics show that there is less early marriage/union experiences among the 15-19 year old women educated up to secondary level. Similarly, the proportion of women in this age group experiencing early marriage or union declines with increasing levels of household wealth index.

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, Meru Central district, Eastern Province, Kenya 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
Age						
15-19	2.9	176	(*)	0	5.8	176
20-24	2.4	182	23.2	182	(*)	0
25-29	0.7	235	12.9	235	(*)	0
30-34	7.0	148	18.8	148	(*)	0
35-39	6.6	154	21.0	154	(*)	0
40-45	6.5	122	18.5	122	(*)	0
45-49	7.3	108	19.7	108	(*)	0
Education						
None	5.1	91	10.1	83	(*)	7
Primary	5.6	651	26.1	560	7.3	91
Secondary +	1.7	376	7.4	298	0.6	77
Wealth index						
Low	(9.7)	39	(35.4)	27	(*)	12
Medium	5.1	368	25.5	306	5.9	62
High	3.5	719	14.5	617	2.9	102
Total	**4.2**	**1125**	**18.6**	**949**	**5.8**	**176**

***MICS indicator 67**
****MICS indicator 68**

Another quite important aspect of early marriage is the spousal age difference. The indicator used is the percentage of married/in union women with an age difference of 10 or more years with their current spouses. Table 11.6 (CP.6) shows that for about 41 per cent of married or in-union women, aged 15-24 years, the husband or partner is less than 5 years old, while for 42 per cent of the women the partner is 5-9 years older.

Table 11.6 (CP.6): Spousal age difference

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, Meru Central district, Eastern Province, Kenya 2008

Characteristics	Percentage of currently married/in union women whose husband or partner is:						Number of women currently married/ in union
	Younger	0-4 years older	5-9 years older	10+ years older*	Husband's age unknown	Total	
Age							
15-19	(*)	(*)	(*)	(*)	(*)	(*)	10
20-24	0.4	43.3	39.3	17.0	0.0	100.0	99
Total	**0.4**	**41.2**	**41.8**	**16.6**	**0.0**	**100.0**	**110**

***MICS indicator 69**

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 midwifes, 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 give informed consent to such a potentially damaging practice as FGM/C.

During MICS, 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 (CP.7) and 11.8 (CP.7) presents the prevalence of FGM/C among Meru Central district women and the type and extent of the procedure as well as the woman's attitudes towards FGM/C. About 22 per cent of respondents reported that they had undergone some form of FGM/C. As expected, the proportion of women who have undergone FGM/C was higher among older women (64 per cent) and lower among younger women aged 20-29 (averaging 12 per cent) and less than three per cent among the 15-19 year old women. A less clear pattern emerged in respect to educational attainment and prevalence of FGM/C. The proportion of women who had any form of FGM/C was highest among women with primary level education at 30 per cent, a figure which was more than double the proportions observed among women with no education (13 per cent) and those with secondary or higher education (11 per cent). The proportion of women who had any form of FGM/C declined with increasing levels of household wealth index. For example, 38 per cent of women aged 15-49

years from low wealth index level households had FGM/C compared to 28 and 18 per cent among those from medium and high wealth index households.

Among women who had the FGM/C, nearly 12 per cent had an extreme form of FGM/C, i.e., both the removal of flesh from the genital area after which it was sewn closed. The proportion of women who had an extreme form of FGM/C was comparable across levels of the household wealth index, although for the low household wealth category the observed frequencies were low. Among the various modes or forms of FGM/C, the removal of flesh (89 per cent) was most widespread followed by having the genitalia sewn closed (12 per cent).

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), Meru Central district, Eastern Province, Kenya 2008

Characteristics	Had any form of FGM/C*	Number of women aged 15-49 years	Percentage of women with FGM/C who: Had flesh removed	Were nicked	Were sewn closed	Form of FGM/C not determined	Total	Had an extreme form of FGM/C**	Number of women with FGM/C
Age									
15-19	2.5	176	(*)	(*)	(*)	(*)	(*)	(*)	4
20-24	11.6	182	(87.3)	(2.2)	(10.5)	(0.0)	(100.0)	(10.5)	21
25-29	10.2	235	(96.1)	(0.0)	(3.9)	(0.0)	(100.0)	(3.9)	24
30-34	18.1	148	(77.4)	(1.8)	(20.8)	(0.0)	(100.0)	(20.8)	27
35-39	32.4	154	(87.2)	(0.0)	(12.4)	(0.5)	(100.0)	(12.4)	50
40-44	45.2	122	(87.1)	(0.0)	(12.2)	(0.7)	(100.0)	(12.2)	55
45-49	63.6	108	(86.3)	(0.0)	(11.1)	(2.6)	(100.0)	(11.1)	69
Education									
None	13.2	91	(*)	(*)	(*)	(*)	(*)	(*)	12
Primary	30.1	651	85.4	0.2	13.1	1.3	100.0	12.9	196
Secondary +	11.2	376	(91.4)	(0.0)	(8.6)	(0.0)	(100.0)	(8.6)	42
Wealth index									
Low	(37.8)	39	(*)	(*)	(*)	(*)	(*)	(*)	15
Medium	28.9	368	86.5	0.4	11.3	1.7	100.0	11.3	106
High	18.0	719	89.1	0.4	10.3	0.3	100.0	10.0	129
Total	**22.2**	**1125**	**86.8**	**0.4**	**11.8**	**1.0**	**100.0**	**11.7**	**250**

***MICS indicator 63**

* 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 women who reported having heard about FGM/C were asked about their attitude towards the practice and whether the practice should be continued or not. The results are presented in Table 11.8 (CP.7). Nearly all women (98 per cent) aged 15-49 years believe that the practice of FGM/C should be discontinued. This level of agreement on discontinuation was consistent across all age groups, education levels and levels of household wealth index. It is also interesting to note that the proportion of women in support of discontinuation was consistently high for both women who have had FGM/C (95 per cent) and those who have not had the experience (99 per cent).

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, Meru Central district, Eastern Province, Kenya 2008

Characteristics	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
	Continue ***	Be discontinued	Depends on situation	Don't know	Total	
Age						
15-19	0.8	97.2	0.0	2.0	100.0	171
20-24	1.0	96.9	2.1	0.0	100.0	181
25-29	0.9	98.9	0.0	0.2	100.0	235
30-34	0.6	99.1	0.0	0.3	100.0	148
35-39	2.0	97.8	0.2	0.0	100.0	151
40-44	0.0	100	0.0	0.0	100.0	122
45-49	0.4	97.5	2.1	0.0	100.0	108
Education						
None	0.9	96.6	2.5	0.0	100.0	90
Primary	1.0	98.8	0.0	0.1	100.0	645
Secondary +	0.6	97.4	1.0	0.9	100.0	373
FGM/C experience						
No	0.4	99.1	0.0	0.5	100.0	865
Yes	2.4	95.1	2.5	0.0	100.0	250
Wealth index						
Low	(0.6)	(98.8)	(0.6)	(0.0)	(100.0)	39
Medium	1.5	97.9	0.6	0.0	100.0	362
High	0.5	98.3	0.5	0.6	100.0	714
Total	**0.9**	**98.2**	**0.6**	**0.4**	**100.0**	**1115**

***MICS indicator 66**

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 any form of FGM/C or not. Slightly less than three per cent reported that their daughter(s) have undergone the practice. As noted in case of FGM/C practice among women aged 15-49 years, age and education of mothers are the most important determinants of having FGM/C among daughters. Six per cent of women with no education reported that their daughters had undergone FGM/C compared with four per cent among those with primary education and none for those with secondary or higher levels of education. Furthermore, women who had undergone FGM/C were more likely to report that their daughters too had experienced the practice. However, the proportion of women reporting that their daughters too experienced FGM/C declined with increasing levels of household wealth index.

Table 11.9 (CP.8): Female genital mutilation/cutting (FGM/C) among daughters

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, Meru Central district, Eastern Province, Kenya 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
Age of women						
15-24	0.0	83	(*)	(*)	(*)	0
25-34	0.8	246	(*)	(*)	(*)	2
35-49'	4.7	346	(*)	(*)	(*)	16
Education						
None	5.6	48	(*)	(*)	(*)	3
Primary	3.7	422	(*)	(*)	(*)	16
Secondary +	0.0	205	(*)	(*0	(*)	0
Ever circumcised						
Yes	7.1	223	(*)	(*)	(*)	16
No	0.5	452	(*)	(*)	(*)	2
Wealth index						
Lowest	(*)	21	(*)	(*)	(*)	0
Middle	4.6	248	(*)	(*)	(*)	11
Upper	1.6	406	(*)	(*)	(*)	6
Total	**2.7**	**675**	**100.0**	**100.0**	**.0**	**18**

***MICS indicator 65**

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 in 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 underlying assumption was that, women who agree that husbands/partners are justified to beat their wives/partners under the situations described, may in reality tend to be abused by their own husbands/partners. The responses to these questions are summarized in Table 11.10 (CP.9).

In Meru Central, 42 per cent of the women aged 15-49 years believe that a husband is justified in beating his wife/partner when she: goes out without telling him; neglects children; argues with him; refuses sex with him; and burns food. Across the age categories, there are some proportional differences in the levels of acceptance of any justification for wife/partner beating but with no particular trends observed. The proportion of women who agreed with the scenarios for wife beating was slightly higher among those who were formerly married/in union (52 per cent) than those currently married/in union (42 per cent), or those who have never been married/in union (37 per cent). The levels of acceptance by educational status of women shows that women with primary level education believe more in wife beating (46 per cent) than those with no education (33 per cent) or those with secondary and higher levels of education (36 per cent). As expected the proportion of women showing acceptance of wife beating declined with increasing levels of household wealth index.

Among the five scenarios justifying a beating, neglect of children was the most common reason that was accepted as justification for wife beating (33 per cent) followed by refusal of having sex (19 per cent).

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, Meru central district, Eastern Province, Kenya 2008

Characteristics	Percentage of women aged 15-49 years who believe a husband is justified in beating his wife/partner: When she goes out without telling him	When she neglects the children	When she argues with him	When she refuses sex with him	When she burns the food	For any of these reasons*	Number of women aged 15-49 years
Age							
15-19	15.2	36.1	13.9	22.5	6.2	43.2	176
20-24	14.7	39.0	14.4	17.3	3.2	44.4	182
25-29	11.0	25.5	10.0	19.6	2.4	34.6	235
30-34	14.3	31.3	6.8	8.5	2.2	38.1	148
35-39	14.7	36.0	9.5	22.8	4.1	49.1	154
40-44	15.8	32.3	12.8	18.9	8.7	39.2	122
45-49	24.1	34.2	15.7	24.1	4.3	47.2	108
Marital/Union status							
Currently married/ in union	15.8	31.4	12.0	19.0	3.9	41.6	703
Formerly married/ in union	19.0	47.0	10.1	23.6	8.4	51.9	131
Never married/ in union	11.0	31.2	11.7	17.1	3.1	37.3	291
Education							
None	12.7	27.6	7.2	14.8	4.5	32.9	91
Primary	17.9	36.2	13.7	21.5	6.2	46.3	651
Secondary +	10.7	29.8	9.5	16.1	0.7	36.6	376
Wealth index							
Low	(27.2)	(35.2)	(27.2)	(39.3)	(9.5)	(60.4)	39
Medium	18.1	41.5	17.6	21.8	5.8	51.0	368
High	12.7	28.8	7.8	16.5	3.1	35.9	719
Total	**15.0**	**33.1**	**11.7**	**19.0**	**4.2**	**41.7**	**1125**

***MICS indicator 100**

HIV/AIDS, Sexual Behaviour, Orphaned and Vulnerable Children

12

12.1 Knowledge of HIV/AIDS Transmission and Condom Use

One of the most important prerequisites for reducing the rate of HIV/AIDS infection is accurate knowledge of how HIV/AIDS is transmitted and strategies for preventing transmission. Correct information is the first step towards raising awareness and giving young people the means to protect themselves from infection. Misconceptions about HIV/AIDS 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 such as the misconception of sharing food or whether mosquito bites can transmit HIV/AIDS. The UN General Assembly Special Session on HIV/AIDS (UNGASS) called on governments to improve the knowledge and skills of young people to protect them from HIV/AIDS. The indicators to measure this goal as well as the MDG on reducing HIV/AIDS infections by half include improving the level of knowledge of HIV/AIDS and its prevention, and changing behaviour to prevent further spread of the disease. The MICS HIV/AIDS module was administered to women aged 15-49 years.

One indicator, employed by both the MDG and UNGASS is the percentage of young women who have comprehensive and correct knowledge of HIV/AIDS prevention and transmission. Women were asked whether they know of the three main ways of preventing HIV/AIDS transmission i.e. having only one faithful uninfected partner; using a condom every time; and abstaining from sex. The Meru central results on this inquiry are presented in Table 12.1. Almost all of the interviewed women (100 per cent) have heard of AIDS. However, the percentage of women who know of all three main ways of preventing HIV/AIDS transmission is only 63 per cent compared to 99 per cent who know at least one of the three ways of prevention. Across the age groups, the 20-24 year age group was the most knowledgeable (71 per cent), although this group was at par with the others on knowledge of at least one mode of prevention. Surprisingly, the proportion of women with knowledge of the three preventive ways was higher among those with no education (78 per cent) compared to the other two education categories (59 per cent among those with primary level education and 66 per cent for those with secondary or higher levels). The proportion of women with knowledge of the three ways also appears to increases with increasing levels of the household wealth index.

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, Meru Central district, Eastern Province, Kenya 2008

Characteristics	Heard of AIDS	Percentage who know transmission can be prevented by: Having only one faithful uninfected sex partner	Using a condom every time	Abstaining from sex	Knows all three ways	Knows at least one way	Doesn't know any way	Number of women
Age								
15-19	98.0	89.9	62.9	89.0	55.9	96.1	3.9	176
20-24	99.8	95.7	79.4	93.9	71.0	99.8	0.2	182
25-29	99.8	97.8	67.3	96.6	65.0	99.6	0.4	235
30-34	100.0	97.2	69.5	90.6	65.1	100.0	0.0	148
35-39	100.0	95.4	68.3	87.4	59.6	98.4	1.6	154
40-44	100.0	99.6	64.2	95.3	63.8	100.0	0.0	122
45-49	99.5	95.1	64.3	86.9	55.8	99.5	0.5	108
Education								
None	96.4	94.7	83.2	88.1	78.0	96.4	3.6	91
Primary	99.9	94.6	64.1	92.8	59.0	99.3	0.7	651
Secondary +	99.9	97.9	72.5	91.0	65.9	99.3	0.7	376
Wealth index								
Low	(92.3)	(84.5)	(64.6)	(83.7)	(64.6)	(84.5)	(15.5)	39
Medium	99.7	94.0	64.2	90.1	57.0	98.9	1.1	368
High	99.9	97.3	70.7	93.2	65.7	99.9	0.1	719
Total	**99.6**	**95.8**	**68.4**	**91.9**	**62.8**	**99.0**	**1.0**	**1125**

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

Table 12.2 (HA.2) presents the percentage of women who can correctly identify misconceptions concerning HIV/AIDS. The indicator is based on the two most common and relevant misconceptions i.e., that HIV/AIDS can be transmitted by supernatural means and through mosquito bites. The table also provides information on whether women know that HIV/AIDS cannot be transmitted by sharing food, but that HIV/AIDS can be transmitted by sharing needles. Among interviewed women, 65 per cent reject the two most common misconceptions and know that a healthy-looking person can be infected. This finding was strongest in the 30-34 (76 per cent) and 25-29 (71 per cent) age groups and the uneducated women (82 per cent), and somewhat lower among the 45-49 year old women (47 per cent). This proportion was also lower among women educated up to primary level (57 per cent) as well as those from medium wealth index households (56 per cent).

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

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

Characteristics	Percentage who know that: HIV cannot be transmitted by: Option 1: Supernatural means	Option 2: Mosquito bites	A healthy looking person can be infected	Reject two most common misconceptions and know a healthy-looking person can be infected	Percentage who know that: Option 3: HIV cannot be transmitted by sharing food	Option 4: HIV can be transmitted by sharing needles	Number of women
Age							
15-19	84.9	78.8	81.5	68.1	87.0	97.7	176
20-24	84.3	79.4	89.0	67.5	93.9	96.2	182
25-29	88.1	80.8	92.7	71.1	90.9	97.8	235
30-34	85.6	82.2	98.8	75.9	87.4	96.1	148
35-39	86.4	70.5	97.6	62.4	95.1	98.0	154
40-44	73.1	63.6	93.7	50.2	89.4	96.8	122
45-49	70.5	56.7	90.6	46.8	80.2	92.6	108
Education							
None	86.4	84.4	95.0	81.5	90.5	96.4	91
Primary	79.6	70.7	89.2	57.3	87.1	95.5	651
Secondary +	88.1	79.2	95.2	73.2	93.8	98.8	376
Wealth index							
Low	(79.8)	(76.9)	(81.5)	(61.6)	(86.9)	(86.7)	39
Medium	76.6	66.2	90.4	55.7	87.3	95.4	368
High	86.6	79.2	92.9	69.8	91.1	97.9	719
Total	**83.1**	**74.9**	**91.7**	**64.9**	**89.7**	**96.7**	**1125**

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

Figure 12.1: Percentage of women who have comprehensive knowledge of HIV/AIDS transmission, Meru central, 2008

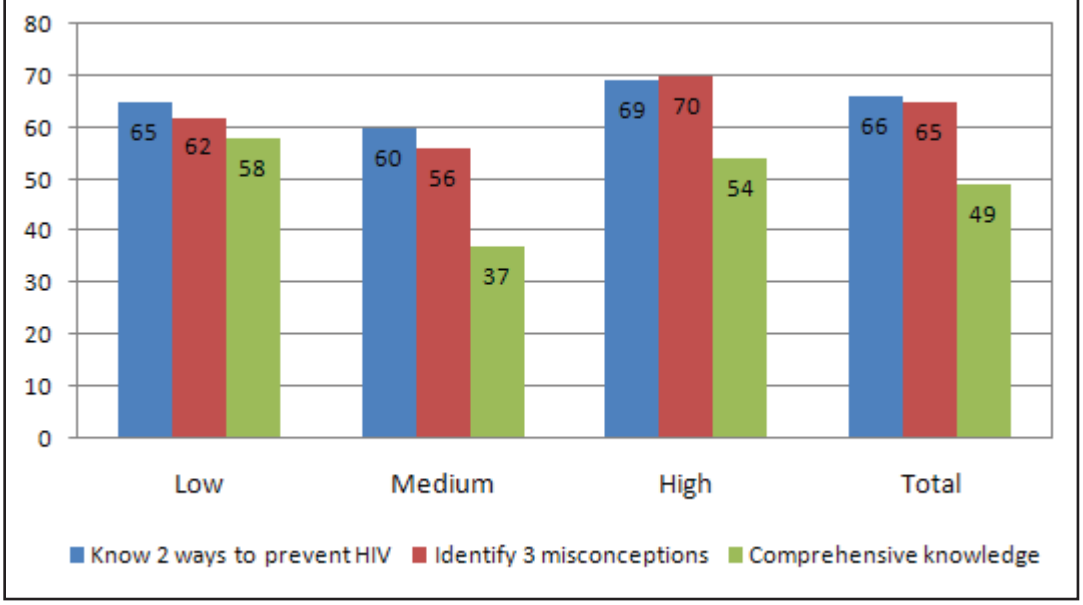


Table 12.3 (HA.3) summarizes information from Tables 12.1 (HA.1) and 12.2 (HA.2) and presents the percentage of women who know two ways of preventing HIV/AIDS transmission and who reject three common misconceptions. Comprehensive knowledge of HIV prevention methods and transmission is still fairly low. Overall, 49 per cent of women aged 15-49 years in Meru Central have comprehensive knowledge about HIV/AIDS i.e., know two prevention methods against HIV/AIDS and three misconceptions about HIV/AIDS. Age is an important factor in improving comprehensive knowledge as seen from the low proportions observed among women over 40 and the young age group (15-19 years). Surprisingly, the proportion of women with no education who have comprehensive knowledge was higher at 73 per cent compared to 41 and 56 per cent among women with primary and secondary education levels, respectively. The proportion of women with comprehensive knowledge was highest among women from low wealth index households followed by those from high wealth index households.

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, Meru Central district, Eastern Province, 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
Age				
15-19	58.3	68.1	44.3	176
20-24	76.0	67.5	56.2	182
25-29	67.3	67.7	50.4	358
30-34	65.9	71.1	50.8	235
35-39	69.0	75.9	56.3	148
40-44	67.7	62.4	51.4	154
45-49	63.8	50.2	38.9	122
	60.1	46.8	33.8	108
Education				
None	82.2	81.5	72.6	91
Primary	61.1	57.3	40.9	651
Secondary +	71.5	73.2	56.0	376
Wealth index				
Low	64.6	61.6	58.0	39
Medium	60.3	55.7	36.8	368
High	69.3	69.8	54.0	719
Total	**66.2**	**64.9**	**48.5**	**1125**

***MICS indicator 82; MDG indicator 19b**

Knowledge of mother-to-child transmission (MTCT) of HIV is important for encouraging women to test for HIV when they are pregnant in order to avoid infecting the expected baby. Women should know that HIV can be transmitted during pregnancy, delivery and through breastfeeding. The level of knowledge among Meru Central women aged 15-49 years concerning MTCT is presented in Table 12.4 (HA.4). Overall, 99 per cent of women know that HIV can be transmitted from mother to child, this knowledge being well-distributed across all age groups between 15-49 years. Women who are more educated appear to have more awareness and knowledge of MTCT. Equally, the proportion of women with good knowledge and awareness of MTCT increases with increasing levels of household wealth index. The most commonly known mode of MTCT was through breastfeeding, followed by delivery and during pregnancy. The proportion of women who know all the three ways in which the virus can be transmitted from mother to child was surprisingly higher among women with no education (52 per cent) but almost

evenly distributed among those with primary (43 per cent) and secondary or higher education levels (42 per cent).

Table 12.4 (HA.4): Knowledge of mother-to-child HIV transmission

Percentage of women aged 15-49 years who correctly identify means of HIV transmission from mother to child, Meru Central district, Eastern Province, Kenya 2008

Characteristics	Know AIDS can be transmitted from mother to child	Percentage who know AIDS can be transmitted: During pregnancy	At delivery	Through breastmilk	All three ways*	Did not know any specific way	Number of women
Age							
15-19	97.8	62.0	81.0	98.0	56.6	0.3	176
20-24	99.4	46.4	62.9	99.0	33.5	0.5	182
25-29	99.1	46.5	69.7	98.0	35.2	0.7	235
30-34	99.7	55.1	73.8	96.0	47.9	0.3	148
35-39	100	60.7	72.3	100.0	51.5	0.0	154
40-44	100	51.1	69.1	100.0	44.6	0.0	122
45-49	97.5	44.1	64.9	98.0	39.2	2.0	108
Education							
None	93.5	56.6	76.6	92.0	51.5	2.9	91
Primary	99.6	53.4	68.8	99.0	43.4	0.2	651
Secondary +	99.4	49.4	72.1	99.0	42	0.4	376
Wealth index							
Low	(92.3)	(51.6)	(70.2)	(92.0)	(42.2)	(0.0)	39
Medium	99.3	62.8	73.6	98.0	52.3	0.3	368
High	99.3	46.9	69.3	99.0	39.2	0.6	719
Total	**99.1**	**52.3**	**70.8**	**98.0**	**43.6**	**0.5**	**1125**

***MICS indicator** 4

The indicators on attitudes toward people living with HIV/AIDS (PLWHA) measure stigma and discrimination in the community. Stigma and discrimination are low if respondents report an accepting attitude on the following four circumstances:

- would care for a family member who is sick with AIDS;
- would buy fresh vegetables from a vendor who was HIV positive;
- thinks that a female teacher who is HIV-positive should be allowed to teach in school; and
- would *not* want to keep the HIV status of a family member a secret.

Table 12.5 (HA.5) presents the attitudes of women who have heard of HIV/AIDS towards people living with HIV/AIDS. Nearly 30 per cent of the respondents agreed with none of the discriminatory statements above. The proportion of women agreeing with none of the discriminatory statements was highest among those with secondary or higher education, followed by those with no education (33 per cent) and primary education (23 per cent). Among women who agreed with at least one discriminatory statement (70 per cent), the highest proportion was among the 45-49 age group at 82 per cent with other age categories falling between 64 and 72 per cent.

It is encouraging to note that less than five per cent of women reported that they would not care for a family member who is sick with HIV/AIDS, while 44 per cent supported keeping a secret about a family member having HIV/AIDS. Nearly one-third of the women believe that an HIV positive teacher should not be allowed to work while another one-third would not buy food from a person having HIV/AIDS.

Table 12.5 (HA.5): Attitudes toward people living with HIV/AIDS

Percentage of women aged 15-49 years who have heard of AIDS who express a discriminatory attitude towards people living with HIV/AIDS, Meru Central district, Eastern Province, Kenya 2008

	Percentage of women who:						
Characteristics	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*	Number of women who have heard of AIDS
Age							
15-19	11	48.4	26.9	41.0	71.6	28.4	172
20-24	6.4	43.7	33.5	35.0	71.5	28.5	182
25-29	2.3	44.4	32.5	31.0	68.9	31.1	234
30-34	1.0	42.3	25.0	25.0	64.8	35.2	148
35-39	0.8	34.4	32.9	33.0	67.0	33.0	154
40-44	0.0	41.2	26.1	32.0	64.5	35.5	122
45-49	5.8	51.7	39.6	40.0	82.4	17.6	107
Education							
None	1.2	52.4	15.7	16.0	66.7	33.3	87
Primary	5.7	42.4	40.1	43.0	76.8	23.2	650
Secondary +	1.8	44.5	18.9	22.0	59.7	40.3	375
Wealth index							
Low	(9.7)	(54.3)	(50.5)	(53.0)	(86.0)	(14.0)	36
Middle	6.6	43.4	39.7	40.0	74.7	25.3	366
High	2.4	43.2	25.3	30.0	66.4	33.6	718
Total	**4**	**43.6**	**30.9**	**34.0**	**69.8**	**30.2**	**1120**

***MICS indicator 86**

Note: This table is based on women who have heard of AIDS.

Another important indicator is the knowledge of where to be tested for HIV and the use of such services. Women were asked questions relating to knowledge of a HIV testing facility and whether they have ever been tested (Table 12.6). Most of the women in Meru Central know where to be tested (95 per cent), while 55 per cent have actually been tested. The proportion of women who know locations of testing facilities is high among all age groups with the exception of the 15-19 year olds (81 per cent). This knowledge is also moderately spread across levels of household wealth index and women's education levels. The proportion of women who have been tested was higher among the middle age groups (20-34 years) and lower among the teenagers and those aged 35-49 years. More women with no education (61 per cent) have been tested compared to those with primary (53 per cent) and secondary or higher education (55 per cent). However the proportion of women who have been tested increases with increasing levels of the household wealth index.

Table 12.6 (HA.6): Knowledge of a facility for HIV/AIDS testing

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, Meru Central district, Eastern Province, 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
Age					
15-19	80.9	29.5	176	94.5	52
20-24	96.0	78.6	182	99.5	143
25-29	99.5	79.5	235	94.4	187
30-34	97.9	65.5	148	99.5	97
35-39	99.8	43.4	154	99.3	67
40-44	(95.8)	(37.9)	(122)	(99.3)	46
45-49	(*)	(*)	(*)	(*)	24
Education					
None	94.8	61.2	91	100.0	55
Primary	92.8	53.1	651	97.5	345
Secondary +	98.7	55.2	376	96.5	208
Wealth index					
Low	(91.1)	(43)	(39)	(95.4)	17
Medium	93.0	48.7	368	99.0	179
High	96.2	58.5	719	96.9	420
Total	**95.0**	**54.8**	**1125**	**97.5**	**616**

***MICS indicator 87**

* Women who know of a place to get tested for HIV includes those women who have already been tested, including those tested during antenatal care.

***MICS indicator 88**

** 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 Meru Central women who gave birth within the two years preceding the survey, the findings of those who received counselling and HIV testing during antenatal care are presented in Table 12.7 (HA.7). Ninety six per cent of mothers received antenatal care from a health professional. This proportion was highest among women with primary or higher levels of education and equally high among women from both medium and high wealth index households. Among women who attended an antenatal clinic during pregnancy, 92 per cent were provided with information about HIV prevention during the visit, 95 per cent were tested for HIV during antenatal care visit, and 94 per cent received the results of their HIV test. Receipt of HIV information, testing, and receiving results increased with age and household wealth index levels.

Table 12.7 (HA.7): HIV/AIDS 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, Meru Central district, Eastern Province, 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**	
Age					
15-19	85.9	82.1	85.9	85.9	21
20-24	98.0	94.0	96.5	96.5	61
25-29	95.6	91.9	94.3	94.3	77
30-34	98.9	96.9	99.2	99.2	42
35-49	(93.9)	(88.2)	(90.5)	(88.4)	22
Education					
None	(71.2)	(71.4)	(74.9)	(74.9)	13
Primary	96.7	93.6	95.4	95.4	150
Secondary +	98.6	92.8	96.8	96.1	62
Wealth index					
Low	(*)	(*)	(*)	(*)	9
Medium	96.6	91.4	94	93.5	87
High	97.8	95.4	98	98	129
Total	**95.8**	**92.1**	**94.6**	**94.4**	**224**

***MICS indicator 90**
****MICS indicator 91**

12.2 Orphans and Vulnerable Children

As the HIV epidemic progresses, more children are becoming orphaned and vulnerable because of AIDS. Children who are orphaned or in vulnerable households may be at increased risk of neglect or exploitation. Monitoring the variations in different outcomes for orphans and vulnerable children (OVC) and comparing them to their peers, provides a measure of how well communities and governments are responding to such children's needs. To monitor the variations, a measurable definition of OVC needed to be created. The UNAIDS Monitoring and Evaluation Reference Group developed proxy definitions of children who have been affected by adult morbidity and mortality. The definition classifies children as `orphaned' and/or `vulnerable' if they have experienced the death of either parent, if either parent is chronically ill, or if an adult (aged 18-59) in the household either died (after being chronically ill) or was chronically ill in the year prior to the survey.

The findings of children living with neither parent, mother only, and father only are presented in Table 12.8 (HA.10). About 52 per cent of children aged 0-17 years live with both parents, 11 per cent of children have lost one or both parents, while 15 per cent do not live with a biological parent. The proportion of children living with both parents reduces with increasing age of the child (from 64 to 38 per cent), but increases with increasing levels of the household wealth index (from 34 to 55 per cent).

About one out of five children (21 per cent) are living with only the mother though the father is alive compared to one in twenty five where the father is dead. Such children tend to be females, from the younger age groups and also from low wealth index households. A mere four per cent of the children live with the father alone, although the mother is alive compared to two per cent where the mother is dead.

Table 12.8 (HA.10): Children's living arrangements and orphanhood

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, Meru Central district, Eastern Province, Kenya 2008

		Living with neither parent				Living with mother only		Living with father only						
Characteristics	Living with both parents	Only father alive	Only mother alive	Both are alive	Both are dead	Father alive	Father dead	Mother alive	Mother dead	Impossible to determine	Total	Not living with a biological parent*	One or both parents dead**	Number of children
Sex														
Male	54.0	2.2	0.9	10.29.8	1.4	19.120.7	3.1	5.1	2.3	1.9	100.0	14.6	9.9	790
Female	50.9	1.11	1.5	9.4	3.5	22.3	5.1	2.6	0.8	2.8	100.0	15.5	12.1	827
Age														
0-4 years	62.4	0.1	0.2	4.3	0.1	27.5	1.5	1.5	0.1	2.3	100.0	4.7	1.9	458
5-9 years	54.4	0.4	1.3	12.6	2.1	17.9	3.8	2.8	1.2	3.6	100.0	16.4	8.8	475
10-14 years	47.3	1.3	1.2	10.7	5.1	19.4	6.1	4.8	2.5	1.6	100.0	18.3	16.3	455
15-17 years	38.2	7.8	3.2	13	2.6	15.7	6.4	8.7	3.3	1.1	100.0	26.5	23.2	228
Wealth index														
Low	34.3	0.0	0.0	11.3	0.0	37.7	9.4	0.6	0.0	6.7	100.0	11.3	10.6	69
Medium	50.5	0.1	0.4	11.9	0.7	21.9	5.9	4.9	1.0	2.8	100.0	13.1	8.2	596
High	54.9	2.6	1.8	8.4	3.7	18.8	2.7	3.4	2.0	1.7	100.0	16.5	12.8	951
Total	**52.4**	**1.6**	**1.2**	**9.8**	**2.4**	**20.7**	**4.1**	**3.8**	**1.5**	**2.3**	**100.0**	**15**	**11.0**	**1617**

***MICS indicator 78**
*Children who are not living with at least one biological parent, either because the parents live elsewhere or because the parents are dead.
****MICS indicator 75**
**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) provides information on OVCs aged 0-17 years. About 17 per cent of all children in the age cohort 0-17 years are orphans or vulnerable children. The proportion of OVCs by gender is generally comparable. However, the proportion of OVCs increased with increasing age. For example, the figure was about seven per cent for the 0-4 age group and 30 per cent for the 15-17 year age group. The proportion of OVC among low and high wealth index households was comparable at about 20 per cent, compared to about 12 per cent that was observed among those from medium wealth index households. About 11 per cent of children had one or both parents dead. Five per cent of the children live in a household with an adult member who is chronically ill.

Table 12.9 (HA.11): Prevalence of orphanhood and vulnerability among children

Percentage of children aged 0-17 years who are orphaned or vulnerable due to AIDS, Meru Central district, Eastern Province, 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
Sex							
Male	0.7	2.4	6.2	8.4	9.9	16.8	790
Female	0.8	2.6	3.8	6.9	12.1	17.2	827
Age							
0-4 years	0.2	0.8	4.8	5.6	1.9	7.4	458
5-9 years	0.2	2.2	4.9	7.0	8.8	15.1	475
10-14 years	2.1	1.9	5.0	7.7	16.3	22.1	455
15-17 years	0.5	7.8	5.3	12.9	23.2	29.9	228
Wealth index							
Low	3.4	12.0	4.1	19	10.6	20.7	69
Medium	0.0	2.1	4.4	5.7	8.2	12.8	596
High	1.0	2.1	5.4	8.0	12.8	19.3	951
Total	**0.8**	**2.5**	**4.9**	**7.6**	**11.0**	**17.0**	**1617**

***MICS indicator 76**
****MICS indicator 75**
The columns of the table are produced as follows:
1) Either parent has been chronically ill for 3 of the 12 months preceding the survey
2) Adult death in the household after a chronic illness of 3 of the 12 months preceding the survey
3) Any adult in the household has been sick for 3 of the 12 months preceding the survey
4) A vulnerable child is defined as a child who lives in a household where any of the preceding 3 conditions is true.
5) A child is an orphan if one or both of his/her biological parents is dead
6) Orphaned or vulnerable children, are those defined in columns 4 or 5
7) Total number of children aged 0-17 years as enumerated in the household listing.
An orphan is a child aged 0-17 years who has lost one or both parents

One of the measures developed for the assessment of the status of OVCs relative to their peers looks at the school attendance rate between ages 10-14 years for children who have lost both parents (double orphans) versus children whose two parents are alive (and 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 being met. The results in Table 12.10 distinguishes between orphans (without parents) and OVCs which includes orphans and children living with one or more chronically ill parent(s) or non-parent adult(s), or have recently lost an adult in the household. Thus while orphans amount to five per cent among the 10 to 14 year olds, OVC constitute 22 per cent of that population. In Meru Central, five per cent of children aged 10-14 years have lost both parents, but almost all such children attend school (Table 12.10). Among children aged 10-14 years, 72 per cent have not lost a parent and live with at least one parent. Among OVCs, school attendance was 90 per cent compared to 99 per cent for children

who are neither orphaned nor vulnerable (non-OVCs). This suggests that orphans in Meru Central are not so much disadvantaged compared to the non-orphaned children in terms of school attendance.

Table 12.10 (HA.12): School attendance of orphaned and vulnerable children

School attendance of children aged 10-14 years by orphanhood and vulnerability due to AIDS, Meru Central district, Eastern Province, Kenya 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 of whom both parents are alive and child is living with at least one parent	School attendance rate of children of whom both parents are alive and child is living with at least one parent	Double orphans to non-orphans school attendance ratio*	Percentage of children who are orphaned or vulnerable	School attendance of children who are orphaned or vulnerable	Percentage of children who are not orphaned or vulnerable	School attendance of children who are not orphaned or vulnerable	OVC vs non-OVC school attendance ratio	Total number of children aged 10-14 years
Sex											
Male	3.5	100.0	77.8	98.0	1	21.1	91.0	79.0	98.0	0.9	222
Female	6.6	100.0	65.6	100.0	1	23.1	90.0	77.0	99.5	0.9	233
Wealth index											
Low	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	17
Medium	1.0	100.0	68.0	100.0	1	18.6	99.0	81.0	99.7	1.0	157
High	7.6	100.0	73.3	98.0	1	24.0	87.0	76.0	98.4	0.9	282
Total	**5.1**	**100.0**	**71.5**	**99.0**	**1**	**22.1**	**90.0**	**78.0**	**98.8**	**0.9**	**455**

***MICS indicator 77 MDG indicator 20**

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 Meru Central households caring for orphaned children and children vulnerable due to AIDS is presented in Table 12.11 (HA.13).

The table shows that more than four in five (81 per cent) households with orphaned or vulnerable children received no free basic external support at all. Less than one per cent of the children received all the categories of support listed in Table 12.11, but at least 19 per cent did receive some support. Among the listed categories of support, 13 per cent of the households of OVCs received educational support, 10 per cent received emotional and psychosocial support and less than five per cent received medical or social/material support.

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, Meru Central district, Eastern Province, Kenya 2008

	Percentage of orphans and vulnerable children whose households received:							Number of children orphaned or vulnerable aged 0-17 years
Characteristics	Medical support (in last 12 months)	Emotional and psychosocial support (in last 3 months	Social/ material support (in last 3 months)	Education al support (in last 12 months)	Any support*	All types of support	No support at all	
Sex								
Male	3.8	15.0	3.1	16.0	23.0	1.8	77.0	133
Female	5.6	5.6	3.2	9.8	15.0	0.0	85.0	142
Age								
0-4 years	0.0	9.2	0.0	0.0	9.2	0.0	91.0	34
5-9 years	10.0	10.0	6.6	17.0	23.0	3.3	78.0	72
10-14 years	1.0	12.0	1.8	16.0	22.0	0.0	78.0	101
15-17 years	6.7	8.7	3.3	9.9	14.0	0.0	86.0	68
Wealth index								
Low	(*)	(*)	(*)	(*)	(*)	(*)	(*)	14
Medium	1.0	2.5	0.0	4.0	7.0	0.0	93.0	76
High	6.6	14.0	4.8	16.0	24.0	1.3	76.0	184
Total	**4.7**	**10.0**	**3.2**	**13.0**	**19.0**	**0.9**	**81.0**	**275**

*__MICS indicator 81__

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.

List of References

Boerma, J. T., Weinstein, K. I., Rutstein, S.O., and Sommerfelt, A. E., 1996. Data on Birth Weight in Developing Countries: Can Surveys Help? *Bulletin of the World Health Organization*, 74(2), 209-16.

Blanc, A. and Wardlaw, T. 2005. "Monitoring Low Birth Weight: An Evaluation of International Estimates and an Updated Estimation Procedure". *WHO Bulletin*, 83 (3), 178-185.

Central Bureau of Statistics (CBS) [Kenya], Ministry of Health (MOH) [Kenya], and ORC Macro. 2004. *Kenya Demographic Health Survey 2003*. Calverton, Maryland: CBS, MOH, and ORC Macro.

Filmer, D. and Pritchett, L., 2001. Estimating wealth effects without expenditure data – or tears: An application to educational enrolments in states of India. *Demography* 38(1): 115-132.

Rutstein, S.O. and Johnson, K., 2004. *The DHS Wealth Index*. DHS Comparative Reports No. 6. Calverton, Maryland: ORC Macro.

UNICEF, 2006. *Monitoring the Situation of Children and Women. Multiple Indicator Cluster Survey Manual*, New York.

United Nations, 1990a. *QFIVE, United Nations Program for Child Mortality Estimation*. New York, UN Pop Division

United Nations, 1990b. *Step-by-step Guide to the Estimation of Child Mortality*. New York, UN www.Childinfo.org.

Appendix A: Sample Design

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

The primary objective of the sample design for the Meru Central 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. 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 Central 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:

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

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 three years.

The listing and mapping teams were oriented in a three-day training program in Meru Central, which included classroom 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 with a lister and a mapper. The teams were supervised by the District Statistical Officer (DSO) on a daily basis, who also attended the three-day training programme. One team was given two days to list an EA[***] with segmentation being 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 EA. 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 straum-2 were carried out using systematic selection procedures with a random start.

Calculation of Sample Weights

The Meru Central MICS sample is not self-weighted at cluster level due to cluster level stratification. Therefore, 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:

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

Where,
Zd = total population of the district ‘d’,
nd = total number of clusters in district ‘d’,
zdi = number of households in the ith cluster of district ‘d’,
sdi = number of segments in the ith cluster of district ‘d’,
$Hdji$ = total number of households listed in the jth stratum of ith cluster in the district ‘d’, and
$ħdji$ = number of households surveyed in the jth stratum of ith cluster in the district ‘d’.

[***] 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 Central 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 sizes in some of the cluster level stratums.

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 section, additional weights were computed using the section's non-response rates.

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

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. Robert Nderitu

Supervisor
Dickson Makuba

Enumerators
Morris Mwenda Mugambi
Maryanne Wanja Kariuki
Martin Nkaabu
Catherine Kithinji
Renson Mwenda Kirinya
Bessy Kajuju Mukiama

Data Collection Co-ordinator
Mr. Samuel Kipruto

Supervisors
Ellah Koome
Doreen Gakii Marangu

Field Editors
James Mutewa
Mwende Musyoka Bururia

Research Assistants
Jenrose Mugiira
Winnie Kanyua Gichunge
Grace Makena
Florence Kirimi
Rosemary Nculubi Lichoro
Vejerina Mwendwa King'aru

Appendix C: Estimates of Sampling Errors

The sample of respondents selected in the Meru Central MICS 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 per cent 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	Unweighted Count	Confidence limits	
Iodized salt consumption	0.9275	0.01064	0.011	1.915	1.384	1,543	1,139	0.906	0.949
Child discipline	0.9596	0.01083	0.011	2.409	1.552	933	798	0.938	0.981

	Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Unweighted Count	Confidence limits	
Use of improved drinking water sources	0.6993	0.04072	0.058	36.624	6.052	5,541	4,645	0.618	0.781
Use of improved sanitation facilities	0.2877	0.02439	0.085	13.480	3.672	5,541	4,645	0.239	0.337
Net primary school attendance rate	0.8827	0.01706	0.019	2.223	1.491	1,036	792	0.849	0.917
Net secondary school attendance rate	0.3073	0.03678	0.120	1.773	1.331	414	280	0.234	0.381
Primary completion rate	0.0038	0.00365	0.958	0.295	0.543	127	85	-0.003	0.011
Child labour	0.1927	0.02450	0.127	3.733	1.932	1,263	969	0.144	0.242
Prevalence of orphans	0.1099	0.01483	0.135	4.730	2.175	2,195	2,104	0.080	0.140
Prevalence of vulnerable children	0.0764	0.01454	0.190	6.298	2.510	2,195	2,104	0.047	0.105

	Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Unweighted Count	Confidence limits	
Skilled attendant at delivery	0.8228	0.02758	0.034	2.354	1.534	268	452	0.768	0.878
Antenatal care	0.9576	0.01506	0.016	2.520	1.588	268	452	0.927	0.988
Contraceptive prevalence	0.7339	0.02316	0.032	2.053	1.433	838	748	0.688	0.780
Adult literacy	0.8242	0.04349	0.053	5.339	2.311	427	410	0.737	0.911
Prevalence of FGM/C	0.2222	0.01857	0.084	2.244	1.498	1,341	1,125	0.185	0.259
Marriage before age 18	0.2323	0.04094	0.176	2.397	1.548	217	256	0.150	0.314
Comprehensive knowledge about HIV prevention among young people	0.4854	0.03080	0.063	4.268	2.066	1,341	1,125	0.424	0.547
Attitudes towards people with HIV/AIDS	0.3024	0.01857	0.061	1.830	1.353	1,336	1,120	0.265	0.340
Women who have been tested for HIV	0.5476	0.02119	0.039	2.037	1.427	1,341	1,125	0.505	0.590
Knowledge of mother-to-child transmission of HIV	0.4359	0.02239	0.051	2.292	1.514	1,341	1,125	0.391	0.481

	Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Unweighted Count	Confidence limits	
Underweight prevalence	0.1925	0.01709	0.089	1.684	1.298	861	897	0.158	0.227
Tuberculosis immunization coverage	0.9956	0.00441	0.004	1.004	1.002	174	229	0.987	1.004
Polio immunization coverage	0.8750	0.03121	0.036	2.032	1.425	174	229	0.813	0.937
Immunization coverage for DPT	0.9257	0.03595	0.039	4.281	2.069	174	229	0.854	0.998
Measles immunization coverage	0.9057	0.02515	0.028	1.689	1.300	174	229	0.855	0.956
Fully immunized children	0.7941	0.03894	0.049	2.114	1.454	174	229	0.716	0.872
Acute respiratory infection in last two weeks	0.0979	0.01502	0.153	2.346	1.532	885	919	0.068	0.128
Antibiotic treatment of suspected pneumonia	0.5917	0.07375	0.125	1.576	1.255	87	71	0.444	0.739
Diarrhoea in last two weeks	0.0802	0.01925	0.240	4.615	2.148	885	919	0.042	0.119
Received ORT or increased fluids and continued feeding	0.2977	0.03358	0.113	0.361	0.601	71	68	0.231	0.365
Fever in last two weeks	0.2274	0.02113	0.093	2.332	1.527	885	919	0.185	0.270
Antimalarial treatment	0.5652	0.05903	0.104	2.779	1.667	201	197	0.447	0.683
Support for learning	0.4267	0.02585	0.061	2.507	1.583	885	919	0.375	0.478
Birth registration	0.7205	0.02875	0.040	3.767	1.941	885	919	0.663	0.778

Appendix D: Data Quality Tables

Table DQ.2: Age distribution of eligible and interviewed women, Meru Central district

		Household population of women age 10-54	Interviewed women age 15-49		4
		Number	Number	Percent	Percentage of eligible women interviewed
Age	10-14	233	.	.	.
	15-19	181	145	15.6	80.2
	20-24	179	152	16.3	84.9
	25-29	200	196	21.0	97.8
	30-34	126	126	13.5	99.8
	35-39	131	129	13.8	98.3
	40-44	97	96	10.3	99.3
	45-49	88	88	9.4	99.5
	50-54	57	.	.	.
	15-49	1002	931	100.0	92.9

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-birthweight 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
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

INDICATOR		NUMERATOR	DENOMINATOR
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
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

INDICATOR		NUMERATOR	DENOMINATOR
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	Antimalarial treatment (under-fives)	Number of children aged 0-59 months reported to have had fever in the previous 2 weeks that were treated with an appropriate antimalarial within 24 hours of onset	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
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

INDICATOR		NUMERATOR	DENOMINATOR
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 any form of genital mutilation/cutting	Total number of women aged 15-49 years surveyed
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

INDICATOR		NUMERATOR	DENOMINATOR
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
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 infection and reject three common misconceptions about HIV transmission	Total number of women aged 15-24 years surveyed

INDICATOR		NUMERATOR	DENOMINATOR
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
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 antimalarials	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 antimalarials.	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

INDICATOR		NUMERATOR	DENOMINATOR
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







FORM-A: HOUSEHOLD

H1. Identification — *ENGLISH*

#	Question	Options
HH-A	Province Name & Code _____	☐
HH-B	District Name & Code _____	☐☐
HH1	Cluster Name & Number ☐☐	HH-C Stratum [Child < 3 = 1/Other = 2] ☐
HH2	HH No.	☐☐☐
HH3	Interviewer's Name & No. _____	☐☐☐
HH4	Supervisor Name & No. _____	☐☐☐
HH5	Day/Month/Year of Interview	☐☐/☐☐/☐☐☐☐
HH6	Urban/Rural (Urban=1, Rural=2)	☐
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 (*specify*_____) .. 6
HH9	Respondent to HH Form: Name: _____	Line No.: ☐☐
HH10	Total No. of HH members	☐☐
HH11	No. of women 15-49 eligible ☐☐	HH12 No. of women 15-49 forms completed ☐☐
HH13	No. of children < 5 eligible ☐☐	HH14 No. of children < 5 forms completed ☐☐
HH16	Editor: Name and Code _____ ☐☐☐	HH17 Data Entry: Name and Code _____ ☐☐

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 ☐

					Eligible for :			If age 18-59	For children age 0-17 year ask HL9 to HL12A					
					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 RELATION-SHIP 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]	HL8A HAS (name) BEEN VERY SICK FOR AT LEAST 3 MONTHS DURING THE PAST 12 MONTHS?	HL9 IS (name's) NATURAL MOTHER ALIVE? 1-YES 2 - NO ⇘ HL11 8 - DK ⇘ HL11	HL10 [If alive:] DOES (name's) NATURAL 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 ⇘ NEXT LINE 8 - DK ⇘ 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	Mother	Y N DK	Y N DK	Father	Y N DK
01		0 1	1 2	☐☐	01	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
02		☐☐	1 2	☐☐	02	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
03		☐☐	1 2	☐☐	03	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
04		☐☐	1 2	☐☐	04	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
05		☐☐	1 2	☐☐	05	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
06		☐☐	1 2	☐☐	06	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
07		☐☐	1 2	☐☐	07	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
08		☐☐	1 2	☐☐	08	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
09		☐☐	1 2	☐☐	09	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8

					Eligible for :			If age 18-59	For children age 0-17 year ask HL9 to 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 RELATION-SHIP 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]	HL8A HAS (name) BEEN VERY SICK FOR AT LEAST 3 MONTHS DURING THE PAST 12 MONTHS?	HL9 IS (name's) NATURAL MOTHER ALIVE? 1-YES 2 - NO ⇨ HL11 8 - DK ⇨ HL11	HL10 [If alive:] DOES (name's) NATURAL 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 ⇨ NEXT LINE 8 - DK ⇨ 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	Mother	Y N DK	Y N DK	Father	Y N DK
10		☐☐	1 2	☐☐	10	☐☐	☐☐	1 2 8	1 2 8	☐☐	1 2 8	1 2 8	☐☐	1 2 8
11		☐☐	1 2	☐☐	11	☐☐	☐☐	1 2 8	1 2 8	☐☐	1 2 8	1 2 8	☐☐	1 2 8
12		☐☐	1 2	☐☐	12	☐☐	☐☐	1 2 8	1 2 8	☐☐	1 2 8	1 2 8	☐☐	1 2 8
13		☐☐	1 2	☐☐	13	☐☐	☐☐	1 2 8	1 2 8	☐☐	1 2 8	1 2 8	☐☐	1 2 8
14		☐☐	1 2	☐☐	14	☐☐	☐☐	1 2 8	1 2 8	☐☐	1 2 8	1 2 8	☐☐	1 2 8
15		☐☐	1 2	☐☐	15	☐☐	☐☐	1 2 8	1 2 8	☐☐	1 2 8	1 2 8	☐☐	1 2 8
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:]														
*HL5: Ascertain age for all persons below 60 years; Code '00' for children below 1 year and '97' for 97+ years.					Women 15-49	Children 5-14	Children under 5	Very sick (1)	Mother dead (2)		Mother sick (1)	Father dead (2)		Father sick (1)
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
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
12 - Niece/Nephew by marriage
13 - Other relative
14 - Adopted/Foster/Step child
15 - Not related
98 - Don't know

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? 1 Yes 2 No ⇨ Next Line 8 DK ⇨Next Line			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	☐	☐☐

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?	**Piped water** **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** **Dug well** **Protected well** ..... **31** **Unprotected well** ..... **32** **Water from spring** **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 (*specify*_____) 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?	Piped water **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 Dug well Protected well ..... 31 Unprotected well ..... 32 Water from spring 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 (*specify*_____) 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 ..... ☐☐☐ **Water on premises** ..... **995** Don't know 998	995⇨WS4A
WS4	WHO USUALLY GOES TO THIS SOURCE TO FETCH THE WATER FOR YOUR HH? **Probe:** 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? *[Record all items mentioned]*	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? **If "flush" or "pour flush":** WHERE DOES IT FLUSH TO? **[Ask for permission & observe the facility]**	<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 **No facilities or bush or field ... 95** 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) ... ☐ 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 ..... ☐☐	
HC3	**Observe and record:** Main material of the dwelling **floor**:	Natural floor Earth/sand ..... 11 Dung ..... 12 Rudimentary floor Wood planks ..... 21 Palm/bamboo ..... 22 Finished floor Parquet or polished wood ..... 31 Vinyl or asphalt strips ..... 32 Ceramic tiles ..... 33 Cement ..... 34 Carpet ..... 35 Other *(specify*_____) .. 96	
HC4	**Observe and record:** Main material of the **roof**:	Natural roofing No Roof ..... 11 Thatch/palm leaf ..... 12 Sod ..... 13 Rudimentary Roofing Rustic mat ..... 21 Palm/bamboo ..... 22 Wood planks ..... 23 Finished roofing 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	**Observe and record:** Main material of the **walls**:	Natural walls No walls ..... 11 Cane/palm/trunks ..... 12 Mud/dirt ..... 13 Rudimentary walls Bamboo with mud ..... 21 Stone with mud ..... 22 Uncovered adobe ..... 23 Plywood ..... 24 Carton ..... 25 Reused wood ..... 26 Finished walls Cement ..... 31 Stone with lime/cement ..... 32 Bricks ..... 33 Cement blocks ..... 34 Covered adobe ..... 35 Wood planks/shingles ..... 36 Other (*specify* _____) 96	
HC6	WHAT TYPE OF FUEL DOES YOUR HH MAINLY USE FOR COOKING?	**Electricity** ..... **01** **Liquid Propane Gas (LPG)** ..... **02** **Natural gas** ..... **03** **Biogas** ..... **04** Kerosene ..... 05 Coal / Lignite ..... 06 Charcoal ..... 07 Wood ..... 08 Straw/shrubs/grass ..... 09 Animal dung ..... 10 Agricultural crop residue ..... 11 Other (*specify* _____) 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? **Probe for type**	Open fire ..... 1 Open stove ..... 2 **Closed stove** ..... **3** **Other (*specify* _____)** **6**	 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 (*specify* _____) 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 ..... ☐		
	Ask the respondent to show you the nets in the household, if more than 2, tell them to show the two recently obtained ones.	**Most Recent [Net #1]**	**Last But One [Net #2]**	
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 LAST/LAST BUT ONE 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 ..... ☐☐ More than 3 years ..... 95 Don't know/not sure 98	No of Months ..... ☐☐ More than 3 years ..... 95 Don't know/not sure 98	
TN5	***Observe the brand/type** of mosquito net.* *If not observed ask:* WHAT BRAND IS THE NET?	Long lasting nets **Permanet ..... 1 ⇨ TN8** **Olyset ..... 2 ⇨ TN8** Other nets Supanet ..... 3 Other(sp_____) ..... 8 Don't know 9	Long lasting nets **Permanet ..... 1 ⇨ TN8** **Olyset ..... 2 ⇨ TN8** Other nets 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 ..... ☐☐ More than 2 years ..... 95 Don't know/not sure 98	No of Months ..... ☐☐ 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']*	**Name** / **Line No** 1 ..... ☐☐ 2 ..... ☐☐ 3 ..... ☐☐ 4 ..... ☐☐	**Name** / **Line No** 1 ..... ☐☐ 2 ..... ☐☐ 3 ..... ☐☐ 4 ..... ☐☐	

H.7: Orphan-hood/Vulnerability			OV
#	Question	Options	Skip
OV1	**Check HL5 (in section H.2): Any children 0-17?** ☐ **Yes ⇨ Continue to OV2** ☐ **No ⇨ 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	**Check the following in the HH Listing** **1. Check totals for HL9 and HL11** ☐ **At least one mother or father dead ⇨ OV8** ☐ **No mother or father dead** **2. Check total for HL8A** ☐ **At least one adult aged 18-59 very sick 3 of last 12 months ⇨ OV8** ☐ **No adult aged 18-59 very sick 3 of last 12 months** **3. Check totals for HL10A and HL12A** ☐ **At least one mother or father ill 3 of last 12 months ⇨ OV8** ☐ **No mother or father ill 3 of last 12 months ⇨ Go to Section H.8**		

H.7: Orphan-hood — OV

		1ST CHILD	2ND CHILD	3RD CHILD	4TH CHILD
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)	.....	.....	.....	.....
	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	**Check OV8: Age of the child 5-17 Yr?**	☐ **Yes ⇨ OV18** ☐ **No ⇨ Next child**	☐ **Yes ⇨ OV18** ☐ **No ⇨ Next child**	☐ **Yes ⇨ OV18** ☐ **No ⇨ Next child**	☐ **Yes ⇨ OV18** ☐ **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.

CL1 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? **If Yes:** 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? *[If more than one job, include all hours at all jobs]* **Record & skip to ⇨ CL6**	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? **If Yes:** FOR PAY IN CASH OR KIND? 1=Yes, for pay (cash or kind) 2=Yes, unpaid 3=No			CL6 DURING THE PAST WEEK, DID *(name)* HELP WITH 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?
Line No.	Name	Yes		No	No. of hours	Yes		No	Yes	No	No. of hours	Yes	No	No. of hours
		Paid	Unpaid			Paid	Unpaid							
		1	2	**3**	☐☐	1	2	3	1	**2**	☐☐	1	**2**	☐☐
		1	2	**3**	☐☐	1	2	3	1	**2**	☐☐	1	**2**	☐☐
		1	2	**3**	☐☐	1	2	3	1	**2**	☐☐	1	**2**	☐☐
		1	2	**3**	☐☐	1	2	3	1	**2**	☐☐	1	**2**	☐☐
		1	2	**3**	☐☐	1	2	3	1	**2**	☐☐	1	**2**	☐☐
		1	2	**3**	☐☐	1	2	3	1	**2**	☐☐	1	**2**	☐☐
		1	2	**3**	☐☐	1	2	3	1	**2**	☐☐	1	**2**	☐☐
		1	2	**3**	☐☐	1	2	3	1	**2**	☐☐	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	CD4 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	__ __	__ __	
	Total children aged 2-14 years in the HH						__ __

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.....							__ __

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	__ __	__ __	
	Total children aged 2-14 years in the HH					__ __

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.....							__ __

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.: ☐☐	
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 ☐☐ No. of months ..... 2 ☐☐	
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	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? [Once you have examined the salt, circle number that corresponds to test outcome]	Not iodized ..... 1 **Less than 15 ppm ..... 2** **15 ppm and more ..... 3** **No salt at home ..... 6** **Salt not tested 7**	 2⇨ SL2 3⇨ SL2 3⇨ SL2 3⇨ SL2
SL1A	TYPE OF SALT	Crystal ..... 1 Powder ..... 2 Other (Specify_____) 9	
SL2	**Check HL6: 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.** ☐ **Yes ⇨ Go to WOMAN 15-49 FORM to administer the questions to the first eligible woman.** ☐ **No ⇨ Continue to SL3.**		
SL3	**Check HL8: 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.** ☐ **Yes ⇨ Go to CHILD < 5 FORM to administer the Form to mother or caretaker of the first eligible child.** ☐ **No ⇨ End the interview by thanking the respondent for his/her cooperation.** **Gather together all Forms for this household and tally the number of Forms completed on the cover page.**		

Interviewer's Remarks:

Supervisor's Remarks:



FORM-B: WOMAN AGE 15-49 YEARS

W.1: Identification Panel		ENGLISH
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.		
WM-A	Province Name and Code:	☐
WM-B	District Name and Code:	☐☐
WM1	Cluster Name and Number	☐☐
WM-C	Stratum code: HH with child < 3 = 1 Other HHs = 2	☐
WM2	HH No.	☐☐☐
WM3	Name of the woman (from FORM-A: **HL2**)	_____
WM4	Line no. of woman (from FORM-A: **HL1**)	☐☐
WM5	Interviewer's Name & Code	☐☐☐
WM6	Day/Month/Year of interview	☐☐/☐☐/☐☐☐☐
WM7	Result of interview for woman	Completed ..... 1 Not at home ..... 2 Refused ..... 3 Partly completed ..... 4 Incapacitated ..... 5 Other *(Specify*_____*)* 6
	Remarks if any:	

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 ☐☐ DK Month 98 Year ☐☐☐☐ DK Year 9998	
WM9	HOW OLD WERE YOU AT YOUR LAST BIRTHDAY?	Age in completed years ☐☐	
WM10	HAVE YOU EVER ATTENDED SCHOOL 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 ☐☐	
WM13	**Check WM11: Level of schooling** ☐ **Secondary/College/University (codes 3 or 4 or 5)** ⇨ **WM15** ☐ **Other** ⇨ **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
To be administered to all women age 15-49. All questions refer to LIVE births only.			
CM1	NOW I WOULD LIKE TO ASK ABOUT ALL THE BIRTHS YOU HAVE HAD DURING YOUR LIFE. HAVE YOU EVER GIVEN BIRTH? ***If "No" probe by asking:*** I MEAN, TO A CHILD WHO EVER BREATHED OR CRIED OR SHOWED OTHER SIGNS OF LIFE – EVEN IF HE OR SHE LIVED ONLY A FEW MINUTES OR HOURS?	Yes ..... 1 **No** **2**	2⇨ (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 ☐☐ B. Daughters at home ☐☐	
CM5	DO YOU HAVE ANY SONS OR DAUGHTERS TO WHOM YOU HAVE GIVEN BIRTH WHO ARE ALIVE BUT DO NOT LIVE WITH YOU?	Yes ..... 1 **No** **2**	2⇨ CM7
CM6	HOW MANY SONS ARE ALIVE BUT DO NOT LIVE WITH YOU? HOW MANY DAUGHTERS ARE ALIVE BUT DO NOT LIVE WITH YOU?	A. Sons elsewhere ☐☐ B. Daughters elsewhere ☐☐	
CM7	HAVE YOU EVER GIVEN BIRTH TO A BOY OR GIRL WHO WAS BORN ALIVE BUT LATER DIED? **If "No" probe by asking:** 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 ☐☐ B. Girls dead ☐☐	
CM9	**Sum answers to** CM4, CM6, & CM8.	Sum ☐☐	
CM10	**JUST TO MAKE SURE THAT I HAVE THIS RIGHT, YOU HAVE HAD IN TOTAL _____ BIRTHS DURING YOUR LIFE. IS THIS CORRECT?** ☐ **Yes** ⇨ **Continue to W.3a (next page).** ☐ **No** ⇨ **Check responses and make corrections before proceeding to W.3a**		

MICS

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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)*?
01		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ / Year ☐☐☐☐	Yes ... 1 **No ..... 2** **⇨ BH9**	☐☐	Y .... 1 N 2	☐☐ **⇨ next line**	Days ..... 1 Month ..... 2 Year 3	☐☐	
02		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ / Year ☐☐☐☐	Yes ... 1 **No ..... 2** **⇨ BH9**	☐☐	Y .... 1 N 2	☐☐ **⇨ BH10**	Days ..... 1 Month ..... 2 Year 3	☐☐	Yes ..... 1 [Add] No ..... 2 [Next]
03		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ / Year ☐☐☐☐	Yes ... 1 **No ..... 2** **⇨ BH9**	☐☐	Y .... 1 N 2	☐☐ **⇨ BH10**	Days ..... 1 Month ..... 2 Year 3	☐☐	Yes ..... 1 [Add] No ..... 2 [Next]
04		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ / Year ☐☐☐☐	Yes ... 1 **No ..... 2** **⇨ BH9**	☐☐	Y .... 1 N 2	☐☐ **⇨ BH10**	Days ..... 1 Month ..... 2 Year 3	☐☐	Yes ..... 1 [Add] No ..... 2 [Next]
05		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ / Year ☐☐☐☐	Yes ... 1 **No ..... 2** **⇨ BH9**	☐☐	Y .... 1 N 2	☐☐ **⇨ BH10**	Days ..... 1 Month ..... 2 Year 3	☐☐	Yes ..... 1 [Add] No ..... 2 [Next]
06		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ / Year ☐☐☐☐	Yes ... 1 **No ..... 2** **⇨ BH9**	☐☐	Y .... 1 N 2	☐☐ **⇨ BH10**	Days ..... 1 Month ..... 2 Year 3	☐☐	Yes ..... 1 [Add] No ..... 2 [Next]
07		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ / Year ☐☐☐☐	Yes ... 1 **No ..... 2** **⇨ BH9**	☐☐	Y .... 1 N 2	☐☐ **⇨ BH10**	Days ..... 1 Month ..... 2 Year 3	☐☐	Yes ..... 1 [Add] No ..... 2 [Next]
08		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ / Year ☐☐☐☐	Yes ... 1 **No ..... 2** **⇨ BH9**	☐☐	Y .... 1 N 2	☐☐ **⇨ BH10**	Days ..... 1 Month ..... 2 Year 3	☐☐	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 ☐☐ Year ☐☐☐☐	Yes ... 1 **No..... 2** ⇨ BH9	☐☐	Y .... 1 N 2	☐☐ ⇨ BH10	Days ..... 1 Month ..... 2 Year 3	☐☐	Yes ..... 1 [Add] No ..... 2 [Next]
10		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ Year ☐☐☐☐	Yes ... 1 **No..... 2** ⇨ BH9	☐☐	Y .... 1 N 2	☐☐ ⇨ BH10	Days ..... 1 Month ..... 2 Year 3	☐☐	Yes ..... 1 [Add] No ..... 2 [Next]
11		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ Year ☐☐☐☐	Yes ... 1 **No..... 2** ⇨ BH9	☐☐	Y .... 1 N 2	☐☐ ⇨ BH10	Days ..... 1 Month ..... 2 Year 3	☐☐	Yes ..... 1 [Add] No ..... 2 [Next]
12		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ Year ☐☐☐☐	Yes ... 1 **No..... 2** ⇨ BH9	☐☐	Y .... 1 N 2	☐☐ ⇨ 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:** ☐ **Numbers are different ⇨ Probe and reconcile** ☐ **Numbers are same** ⟹	**Check:** **For all birth:** Year of birth is recorded ..... ☐ **For each living child:** Current age is recorded ..... ☐ **For each dead child:** Age of death is recorded..... ☐ **For age at death 12 months or 1 year:** Probe to ..... ☐ 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 ..... ☐☐ 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 ..... ☐☐ DK 98	
CM12	**Check BH4 of last birth: 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.** ☐ **No live birth in last 2 years** ⇨ **MARRIAGE/UNION Section [W.6]** ☐ **Yes, live birth in last 2 years** ⇨ **Continue to CM13** **Name of child:**_____		
CM13	AT THE TIME YOU BECAME PREGNANT WITH (name), DID YOU WANT TO BECOME PREGNANT THEN, DID YOU WANT TO WAIT UNTIL LATER, OR DID YOU WANT NO (MORE) CHILDREN AT ALL?	Then ..... 1 Later ..... 2 No more 3	

W.4: Tetanus Toxoid — TT

#	Question	Options	Skip
This section is to be administered to all women with a live birth in the 2 years preceding the date of interview.			
TT1	DO YOU HAVE A CARD OR OTHER DOCUMENT WITH YOUR OWN IMMUNIZATIONS LISTED? [If a card is presented, use it to assist with answers to the following questions]	Yes (card seen) ..... 1 Yes (card not seen) ..... 2 No ..... 3 DK 8	
TT2	WHEN YOU WERE PREGNANT WITH YOUR LAST CHILD, DID YOU RECEIVE ANY INJECTION TO PREVENT HIM OR HER FROM GETTING TETANUS, 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 ..... ☐☐ **DK 98**	98⇨TT5
TT4	***Check:* How many TT doses during last pregnancy were reported in TT3?**	**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 ..... ☐☐	
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 ..... ☐☐ DK month ..... 98 **Year ..... ☐☐☐☐** 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 ..... ☐☐	

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, **show typical anti-malarial** 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 ..... ☐☐	
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	
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	**Check MN8 for place of birth:** ☐ **Birth at home (Code 11 or 12)** ⇨ **Continue to MN8E** ☐ **Otherwise** ⇨ **Skip to MN9**		
MN8E	IN THE TWO MONTHS AFTER *(name)* 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 *(name)* 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	
MN8G	WHO CHECKED ON *(name)*'S 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	
MN8H	WHERE DID THIS FIRST CHECK OF *(name)* 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] _____ (NAME OF THE 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	
MN9	WHEN YOUR LAST CHILD *(name)* WAS BORN, WAS HE/SHE VERY LARGE, LARGER THAN AVERAGE, AVERAGE, SMALLER THAN AVERAGE, OR VERY SMALL?	Very large ..... 1 Larger than average ..... 2 Average ..... 3 Smaller than average ..... 4 Very small ..... 5 DK 8	
MN10	WAS *(name)* WEIGHED AT BIRTH?	Yes ..... 1 **No** ..... **2** **DK** **8**	 2⇨MN12 8⇨MN12

W.5: Maternal and Newborn Health — MN

#	Question	Options	Skip
MN11	HOW MUCH DID *(name)* WEIGH? [Record weight from health card, if available]	Card ..... 1 Re-call ..... 2 (Record in Kgs) □.□□□ Don't know 99998	
MN12	DID YOU EVER BREASTFEED *(name)*?	Yes ..... 1 **No 2**	2⇨ (W.6)
MN13	HOW LONG AFTER BIRTH DID YOU FIRST PUT *(name)* TO THE BREAST? If less than 1 hour, record '00' hours. If less than 24 hours, record hours. Otherwise, record days.	Immediately ..... 000 Hours after ..... 1 □□ Days after ..... 2 Don't know/remember 998	
MN14	DID *(name)* RECEIVE ANYTHING ELSE BEFORE STARTING TO BREASTFEED?	Yes ..... 1 **No ..... 2** **Don't know 8**	2⇨ (W.6) 8⇨ (W.6)
MN15	DID (name) 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** ..... ☐☐ **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 **FIRST** MARRY OR START LIVING WITH A MAN AS IF MARRIED?	Month ..... ☐☐ DK month ..... 98 Year ..... ☐☐☐☐ DK year 9998	
MA7	**Check MA6: For month and year of marriage** ☐ **Both Month and year of marriage are known?** **⇨ Next Section (W.7)** ☐ **Either month or year of marriage/union not known?** **⇨ Continue to MA8**		
MA8	HOW OLD WERE YOU WHEN YOU STARTED LIVING WITH YOUR FIRST HUSBAND/PARTNER?	Age in years ..... ☐☐	

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 BECOME PREGNANT DID YOU WANT TO BECOME PREGNANT THEN, DID YOU WANT TO WAIT UNTIL LATER, OR DID YOU NOT WANT 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 ☐☐ Years ..... 2 Soon/now ..... 993 **Says she cannot get pregnant ..... 994** After marriage ..... 995 Other ..... 996 Don't know 998	 994⇨ (W.8)
CP6	**Check CP1: Pregnancy status** ☐ **Currently pregnant (code = 1) ⇨ Next Section (W.8)** ☐ **Not currently pregnant ⇨ Continue to CP7**		
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?	TRADITIONAL PERSONS Traditional 'circumciser' ..... 11 Traditional birth attendant ..... 12 Other traditional (***specify*** _____) .. 16 HEALTH PROFESSIONAL Doctor ..... 21 Nurse/midwife ..... 22 Other health professional (***specify*** _____) .. 26 Don't know 98	
FG8	**Check CM4 and CM6 (in Section W.3): Woman has living daughter?** ☐ **Yes, has living daughter** ⇨ **Continue with FG9** ☐ **No living daughter** ⇨ **Go to FG16**		
FG9	HAVE ANY OF YOUR DAUGHTERS BEEN CIRCUMCISED? **If yes**, HOW MANY?	No. of daughters circumcised ..... ☐☐ **No daughters circumcised** **00**	00⇨FG16
FG10	TO WHICH OF YOUR DAUGHTERS DID THIS HAPPEN MOST RECENTLY? [Record the daughter's name]	Name of daughter: _____	
FG11	NOW I WOULD LIKE TO ASK YOU WHAT WAS DONE TO *(name)* AT THAT TIME. WAS ANY FLESH REMOVED FROM THE GENITAL AREA?	**Yes** ..... **1** No ..... 2 DK 8	1⇨FG13

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 ..... ☐☐ Don't know 98	
FG15	WHO DID THE CIRCUMCISION FOR *(name)*?	TRADITIONAL PERSONS Traditional 'circumciser' ..... 11 Traditional birth attendant ..... 12 Other traditional (***specify*** _____) .. 16 HEALTH PROFESSIONAL Doctor ..... 21 Nurse/midwife ..... 22 Other health professional (***specify*** _____) .. 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	**Check MN5 (in Section W.5): Tested for HIV during antenatal care?** ☐ **Yes ⇨ HA19** ☐ **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?	**Asked for the test ..... 1** **Offered and accepted ..... 2** **Required 3**	**END**
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**	**END**
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

Remarks

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

C.2: Birth Registration and Early Learning — BR

#	Question	Options	Skip
BR1	DOES (*name*) HAVE A BIRTH CERTIFICATE? MAY I SEE IT?	**Yes, seen....1** **Yes, not seen....2** No....3 Don't know....8	1⇨BR5 2⇨BR5
BR2	HAS (*name's*) BIRTH BEEN REGISTERED WITH THE CIVIL AUTHORITIES?	**Yes....1** No....2 **Don't know....8**	1⇨BR5 8⇨BR4
BR3	WHY IS (*name's*) BIRTH NOT REGISTERED? PROBE: DID YOU KNOW THAT A BIRTH HAS TO BE REGISTERED? DID YOU TRY TO REGISTER THIS ONE? WHY DID YOU FAIL TO REGISTER THIS BIRTH?	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 (*specify*_____)..6 Don't know....8	
BR4	DO YOU KNOW HOW TO REGISTER YOUR CHILD'S BIRTH?	Yes....1 No....2	
BR4A	DO YOU KNOW WHERE TO REGISTER YOUR CHILD'S BIRTH?	Yes....1 No....2	
BR5	**Check UF11 (age of the child): Child is 36-59 months old?** ☐ **Yes ⇨ Continue to BR6** ☐ **No ⇨ Go to BR8**		
BR6	DOES (*name*) ATTEND ANY ORGANIZED LEARNING OR EARLY CHILDHOOD EDUCATION PROGRAMME, SUCH AS A PRIVATE OR GOVERNMENT FACILITY, INCLUDING KINDERGARTEN OR COMMUNITY CHILD CARE?	Yes....1 **No....2** **Don't know....8**	2⇨BR7A 8⇨BR8
BR7	WITHIN THE LAST SEVEN DAYS, ABOUT HOW MANY HOURS DID (*name*) ATTEND?	No. of Hours ☐☐	**Skip to BR8**

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*): ***If yes, ask:*** WHO ENGAGED IN THIS ACTIVITY WITH THE CHILD - THE MOTHER, THE CHILD'S FATHER OR ANOTHER ADULT MEMBER OF THE HOUSEHOLD (INCLUDING THE CARETAKER/RESPONDENT)? *Circle all that apply.*	Mother	Father	Other	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 ..... ☐☐ 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 ☐☐ Days ..... 2 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 ..... ☐☐ 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 ..... ☐☐ 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 — **Check BF3H. Child received solid or semi-solid (mushy) food?**

☐ **Yes** ⇨ **Continue to BF5**

☐ **No or DK** ⇨ **Next Section (C.5)**

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

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	FROM WHERE DID YOU SEEK CARE? ANYWHERE ELSE? [Circle all providers mentioned, but do NOT prompt with any suggestions] [If source is hospital, health center, or clinic, write the name of the place below. Probe to identify the type of source and circle the appropriate code.] _____ (NAME OF PLACE)	**Public sector** Govt. hospital ..... A Govt. health centre ..... B Govt. health post ..... C Village health worker ..... D Mobile/outreach clinic ..... E Other public (specify_____) ..... H **Private medical sector** Private hospital/clinic ..... I Private physician ..... J Private pharmacy ..... K Mobile clinic ..... L Other private (specify_____) ..... O **Other source** Relative or friend ..... P Shop ..... Q Traditional practitioner ..... R Other (specify_____) X	
CA10	WAS (*name*) GIVEN MEDICINE TO TREAT THIS ILLNESS?	Yes ..... 1 **No ..... 2** **Don't know 8**	2⇨CA12 8⇨CA12
CA11	WHAT MEDICINE WAS (*name*) GIVEN? (Circle all medicines given)	Antibiotic ..... A Paracetamol/Panadol/Acetaminophen ..... P Aspirin ..... Q Ibuprofen ..... R Other (*specify*_____) ..... X Don't know ..... Z	
CA12	**Check UF11: Child age 0-35 months?** ☐ **Yes ⇨ Continue to CA13** ☐ **No ⇨ CA14**		
CA13	THE LAST TIME (*name*) PASSED STOOLS, WHAT WAS DONE TO DISPOSE OF THE STOOLS?	Child used toilet/latrine ..... 01 Put/rinsed into toilet or latrine ..... 02 Put/rinsed into drain or ditch ..... 03 Thrown into garbage (solid waste) ..... 04 Buried ..... 05 Left in the open ..... 06 Other (*specify*) _____ 96 Don't know 98	
CA14	[Ask **ONLY ONCE** for each mother/ caretaker] SOMETIMES CHILDREN HAVE SEVERE ILLNESSES AND SHOULD BE TAKEN IMMEDIATELY TO A HEALTH FACILITY. WHAT TYPES OF SYMPTOMS WOULD CAUSE YOU TO TAKE YOUR CHILD TO A HEALTH FACILITY RIGHT AWAY? [Keep asking for more signs or symptoms until the mother/caretaker cannot recall any additional symptoms. Circle all symptoms mentioned] [Do not prompt with any suggestions]	Child not able to drink or breastfeed ..... A Child becomes sicker ..... B Child develops a fever ..... C Child has fast breathing ..... D Child has difficult breathing ..... E Child has blood in stool ..... F Child is drinking poorly ..... G Other1 (*specify*_____) . X Other 2(*specify*_____) . Y Other3 (*specify*_____) . Z	

C.6: Malaria			ML
#	Question	Options	Skip
ML1	IN THE LAST TWO WEEKS, THAT IS, SINCE (*day of the week*) OF THE WEEK BEFORE LAST, HAS (*name*) BEEN ILL WITH A FEVER?	Yes ..... 1 **No** ..... **2** **Don't' know** **8**	 2⇨ML10 8⇨ML10
ML2	WAS (*name*) SEEN AT A HEALTH FACILITY DURING THIS ILLNESS?	Yes ..... 1 **No** ..... **2** **Don't' know** **8**	 2⇨ML6 8⇨ML6
ML3	DID (*name*) TAKE A MEDICINE FOR FEVER OR MALARIA THAT WAS PROVIDED OR PRESCRIBED AT THE HEALTH FACILITY?	Yes ..... 1 **No** ..... **2** **Don't' know** **8**	 2⇨ML5 8⇨ML5
ML4	WHAT MEDICINE DID (*name*) TAKE THAT WAS PROVIDED OR PRESCRIBED AT THE HEALTH FACILITY? *[Circle all medicines mentioned]*	Anti-malarials: SP/Fansidar ..... A Chloroquine ..... B Amodiaquine ..... C Quinine ..... D Artemisinin-based combinations ..... E Other anti-malarial (specify_____). H Other medications: Paracetamol/Panadol/Acetaminophen ..... P Aspirin ..... Q Ibuprofen ..... R Other (*specify*_____) ..X Don't know ..... Z	
ML5	WAS (*name*) 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 (*name*) 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 (*name*) GIVEN? *[Circle all medicines given. Ask to see the medication if type is not known. If type of medication is still not determined, show typical anti-malarials to respondent.]*	Anti-malarials: SP/Fansidar ..... A Chloroquine ..... B Amodiaquine ..... C Quinine ..... D Artemisinin-based combinations ..... E Other anti-malarial (specify_____). H Other medications: Paracetamol/Panadol/Acetaminophen ..... P Aspirin ..... Q Ibuprofen ..... R Other (*specify*_____) ..X Don't know ..... Z	

C.6: Malaria			ML
#	Question	Options	Skip
ML8	**Check ML4 and/or ML7: Anti-malarial mentioned (Codes A-H)?** ☐ **Yes ⇨ Continue to ML9** ☐ **No ⇨ ML10**		
ML9	HOW LONG AFTER THE FEVER STARTED DID (*name*) FIRST TAKE (*name of anti-malarial from ML4 or ML7*)? [If multiple anti-malarials mentioned in ML4 or ML7, name all anti-malarial medicines mentioned] [Record the code for the day on which the first anti-malarial was given]	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 (*name*) SLEEP UNDER A MOSQUITO NET LAST NIGHT?	Yes ..... 1 No ..... 2 Don't' know 8	

C.7: Child Immunization — IM

#	Question		Options	Skip
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.				
IM1	IS THERE A VACCINATION CARD FOR (*name*)?		Yes, seen ..... 1 **Yes, not seen ..... 2** **No 3**	 2⇨IM10 3⇨IM10
	(a) Copy dates for each vaccination from the card. (b) Write '44' in day column if card shows that vaccination was given but no date recorded.		Date of Immunization Day / Month / Year	
IM2	BCG	BCG		
IM3a	Polio 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 (*name*) 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 (*name*) BEEN GIVEN THESE DROPS?	No. of times ..... ☐☐				
IM15	HAS (*name*) 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, *HAEMOPHILIS INFLUENZAE TYPE B*? 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 ..... ☐				
IM17	HAS (*name*) 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 (*name*) EVER BEEN GIVEN "YELLOW FEVER VACCINATION INJECTIONS" – THAT IS, A SHOT IN THE ARM AT THE AGE OF **9** MONTHS OR OLDER - TO PREVENT HIM/HER FROM GETTING YELLOW FEVER? SOMETIMES GIVEN AT THE SAME TIME AS MEASLES	Yes ..... 1 No ..... 2 Don't know 8				
IM19	PLEASE TELL ME. IF (*name*) 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	**Does another eligible child reside in the HH for whom this respondent is mother/caretaker? Check HH listing, column HL8.** ☐ **Yes ⇨ End the current Form and go for another 'Child < 5 Form' to administer the Form for the next eligible child.** ☐ **No ⇨ End the interview with this respondent by thanking him/her cooperation. If this the last eligible child in the HH, go on to Anthropometry Section (C.8).**					

C.8: Anthropometry — AN

#	Question	Options	Skip
	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.		
AN-A	**Check UF11: Child age 6-59 months?** ☐ **Yes ⇨ Continue to AN-B** ☐ **No ⇨ END**		
AN-B	Name and Line Number of the Child _____	Line Number ..... ☐☐	
AN1	Child's weight	Kilograms (Kg) ..... ☐☐.☐	
AN2	**Child's length or height. Check age of child in UF11:**		
	☐ **Child age below 24 months ⇨ Measure length (lying down).**	**Length (cm)** Lying down ..... ☐☐☐.☐	
	☐ **Child age 24+ months ⇨ Measure height (standing up).**	**Height (cm)** Standing ..... ☐☐☐.☐	
AN3	Measurer/investigator identification code	Measurer Code ..... ☐☐	
AN4	Result of measurement	Measured ..... 1 Not present ..... 2 Refused ..... 3 Others (Specify) _____ 6	
AN5	**Is there another child in the HH who is eligible for measurement?** ☐ **Yes ⇨ Record measurements for next child.** ☐ **No ⇨ End the interview with this household by thanking all participants for their cooperation.** **Gather together all 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.**		

Remarks/Observations by the Supervisor/Editor/Coordinators:

Kenya - Eastern Province, Meru Central District

Multiple Indicator Cluster Survey

2008