Kenya
Eastern Province
Makueni 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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Kenya National Bureau of Statistics (KNBS) carried out the Makueni District Multiple Indicator Cluster Survey (MICS) with financial and technical support from the United Nations Children's Fund (UNICEF).The survey was conducted as part of the Third Round of MICS surveys (MICS3). Similar surveys were carried out around the world in more than 50 countries, in 2005-2006. The first two rounds of MICS survey were conducted in 1995 and the year 2000 respectively. Survey tools were 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 http://www.childinfo.org.

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List of Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ASFRs	Age Specific Fertility Rates
BCG	Bacillus Calmette Guerin (Tuberculosis)
CDC	Center for Disease Control
CSPro	Census and Survey Processing System
DHS	Demographic and Health Survey
DPT	Diphtheria Pertussis Tetanus
DSO	District Statistical Officer
EA	Enumeration Areas
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
IPT	Intermittent Preventive Treatment
ITN	Insecticide Treated Net
IUD	Intrauterine Device
KDHS	Kenya Demographic and Health Survey
KEPI	Kenya Expanded Programme on Immunizations
KESSP	Kenya Education Sector Support Programme
KNBS	Kenya National Bureau of Statistics
LAM	Lactational Amenorrhea Method
LPG	Liquefied Petroleum Gas
MDG	Millennium Development Goals
MICS	Multiple Indicator Cluster Survey
MoH	Ministry of Health
NAR	Net Attendance Rate
NCHS	National Centre for Health Statistics
NPA	National Programme of Action
ORS	Oral Re-hydration Salts
ORT	Oral Rehydration Treatment
ppm	Parts Per Million
PRS	Poverty Reduction Strategy
RHF	Recommended Home Fluid
SPSS	Statistical Package for Social Sciences
STIs	Sexually Transmitted Infections
TFR	Total Fertility Rate
TT	Tetanus Toxoid
U5MR	Under-5 Mortality Rate
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
WASH	Water, Sanitation and Hygiene
WFFC	World Fit For Children
WHO	World Health Organization
WSC	World Summit for Children

Foreword

The Makueni Multiple Indicator Cluster Survey (MICS) 2008 is one of the largest district representative sample survey conducted in the district. The survey covered 1,141 households selected using appropriate statistical procedures.

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

The results show that consumption of iodized salt by households in Makueni is among the highest in the province. The district also has the lowest prevalence of FGM/C. While exclusive breastfeeding is recommended for children aged 0-5 months, the district has among the lowest percentage coverage, way below the average for Eastern province.

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

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

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Executive Summary

The Makueni District Multiple Indicator Survey (MICS) is a representative sample survey drawn using the 1999 Census of Kenya Enumeration Areas (EAs) as the sampling frame. The 50 enumeration areas were sampled using the Probability Proportional to Size (PPS) sampling methodology, and information from a total of 1,141 households was collected using structured questionnaires. MICS is the largest household sample survey ever conducted in the district.

The survey used a Two Stage Design. At the EA level, households were stratified into two, one comprising of households with a child below 3 years and the other with no child below 3 years at the time of household listing[1]. The stratification at EA level was done to increase the number of children and women who had given birth in the recent years to reduce the standard errors of children and women based estimates. Data was collected by two teams comprising of 5 members each, one supervisor, one editor/measurer and three investigators.

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

Child Mortality

The Under-five Mortality Rate and the Infant Mortality Rate were calculated using the birth history data during the 10 year period preceding the survey. The Under-five Mortality rate is 56 per 1,000 live births and Infant Mortality Rate in the district is 45 per 1,000 live births. This means that 1 in 18 children do not live to see their fifth birthday, while 1 in 22 children do not live to their first birthday.

Nutritional Status and Breastfeeding

Makueni district faces nutritional challenges with about 20 per cent of children aged 6-59 months moderately underweight. More than one third of children under five in the district are stunted. The proportion of moderately stunted children is high at 34 per cent.

Timely initiation of breastfeeding where children are given breast milk within an hour of birth was reported by 48 per cent of the mothers. Exclusive breastfeeding for children aged 0-5 months is low at 13 per cent.

Majority of households (97 per cent) are consuming iodized salt.

The proportion of children weighed at the time of birth was only 33 per cent, which is one of the lowest in Eastern Province.

Immunization

Seventy-nine (79) per cent of children aged 12-23 months received full vaccination before reaching the age of 12 months. Specific immunisation coverage in the district indicates that BCG was given to 96 per cent of children aged 12-23 months; Polio administered to 90 per cent of the children, while Measles was received by only 87 per cent of the children before they reached 12 months. This shows a very low coverage rate for measles compared to BCG and Polio immunisations.

About 72 per cent of the mothers who gave birth during the two years preceding the survey received Tetanus Toxoid (TT) injection.

[1] Three teams, each team comprised of a lister and mapper, carried out the household listing.

Care of Illness

Thirty eight per cent of children with diarrhoea during the 2 weeks preceding the survey received Oral Re-hydration Therapy. About 19 per cent reported home management of diarrhoea.

Half of children with suspected pneumonia were taken to an appropriate health provider, while 33 per cent of children with infection received antibiotic treatment.

Malaria Prevention

The district has about 54 per cent of households who own insecticide-treated nets (ITNs), with 43 per cent of the under-fives sleeping under insecticide-treated nets the night before the survey. This shows a fair proportion of children are sleeping under the treated nets which reduces malaria infection.

For children under five who had fever, 27 per cent received appropriate anti-malarial treatment, indicating that a larger majority of children are still not receiving treatment.

In Makueni, 20 per cent of women who gave birth in the last two years received an appropriate intermittent preventive treatment for malaria during pregnancy.

Water and Sanitation

Two fifths of households in Makueni have access to improved sources of drinking water and 39 per cent use treated water for drinking. The district has one of the lowest access to improved water sources in the Province, with majority of households still using untreated water for drinking.

About half of the households in Makueni are using improved sanitation facilities; and majority of households (80 per cent) safely dispose off stool for children under 2 years.

Reproductive Health

The total fertility rate in Makueni for the 3-years preceding the survey is 5.1 children per woman which is one of the highest fertility rates in the Province. Contraceptive use among married women is fairly low at 40 per cent, which is among the lowest in the Province.

About 93 per cent of mothers who gave birth in the past 2 years sought antenatal care but only 36 per cent were attended to by a skilled attendant at delivery. This was one of the lowest levels reported in the Province.

A third of women (33 per cent) gave birth in a health institution during their last pregnancy. In contrast, two thirds of women in Makueni district still deliver children outside health facilities, which could be harmful to the health of mothers or the new born babies, in case of birth-related emergencies.

Education

Pre-school attendance in Makueni is one of the lowest in the Province at 28 per cent. About half of the children age 6 years are currently attending first grade. The net primary school attendance rate is 91 per cent and that of secondary is 31 per cent, indicating high discontinuation rates from primary to secondary schools in the district.

Female adult literacy rate is high with 95 per cent of women aged 15-24 years able to read. This was the highest literacy rate in the province.

Child Protection

Birth registration is the first right of the child but less than half (47 per cent) of children under-five in the district have their births registered.

While child labour is not high in the district, some of the children aged 5-24 years (15 per cent) in Makueni are engaged in child labour.

A very high proportion of children (82 per cent) aged 2-14 years received psychological or physical punishment during the one month prior to the survey.

Early marriage may have been practised in earlier periods in the district with 19 per cent of women aged 20-49 years indicating they had been married by exact age 18. However, there was no evidence that the practise is common presently.

HIV and AIDS

Only 35 per cent of young women aged 15-24 years in the district have comprehensive knowledge about HIV prevention. About 40 per cent of the women have knowledge of mother-to child transmission of HIV.

Majority of women (88 Per cent) know where they can be tested for HIV but only 41 per cent of women age 15-49 years reported that they had been tested for HIV.

About 64 per cent of women who delivered a child in the last 2 years received counselling on prevention of mother-to-child transmission of HIV and 68 per cent had an HIV test done.

Orphans and Vulnerable Children

Makueni district has one of the highest prevalence of orphans and vulnerable children in the Province. Prevalence of orphans is 12 per cent while that of vulnerable children is 15 per cent.

External support to households with orphaned children in Makueni is fairly high with 35 per cent receiving free basic support in caring for the children orphaned by HIV/AIDS.

Female Genital Mutilation/ Cutting (FGM/C) and Domestic Violence

Female genital mutilation is not prevalent in the area. Domestic violence is however on the rise in the district and women's opinions were sought on the causes of this in the district. More than half (55 per cent) of the women interviewed in Makueni believe that domestic violence to women is justified in some cases. These women believe that a husband is justified in beating his wife if she goes out without telling him, or neglects the children, or argues with him, or if she refuses sex with him or burns the food. A lot of civic education is required in the area to enlighten the community on rights of women and to reduce domestic violence.

Summary Table of Findings

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

Topic	MICS Indicator Number	MDG Indicator Number	Indicator	Value & Unit	
CHILD MORTALITY					
Child mortality	1	13	Under-five mortality rate	56	per thousand
	2	14	Infant mortality rate	45	per thousand
NUTRITION					
Nutritional status			Underweight prevalence (below -2 SD)	19.6	per cent
			Stunting prevalence (below -2 SD)	34.1	per cent
			Wasting prevalence (below -2 SD)	2.4	per cent
Breastfeeding	45		Timely initiation of breastfeeding	48.2	per cent
	15		Exclusive breastfeeding rate	12.8	per cent
	16		Continued breastfeeding rate		
			at 12-15 months	91.0	per cent
			at 20-23 months	46.4	per cent
	17		Timely complementary feeding rate	71.8	per cent
	18		Frequency of complementary feeding	65.7	per cent
	19		Adequately fed infants	39.5	per cent
Salt iodization	41		Iodized salt consumption	97.4	per cent
Vitamin A	42		Vitamin A supplementation (under-fives)	41.5	per cent
	43		Vitamin A supplementation (post-partum mothers)	40.0	per cent
Low birth weight	9		Low birth weight infants	8.6	per cent
	10		Infants weighed at birth	32.6	per cent
CHILD HEALTH					
Immunization	25		Tuberculosis immunization coverage (by 12 months)	95.7	per cent
	26		Polio immunization coverage (by 12 months)	89.9	per cent
	27		DPT immunization coverage (by 12 months)	94.1	per cent
	28	15	Measles immunization coverage (by 12 months)	86.9	per cent
	31		Fully immunized children (by 12 months)	78.9	per cent
Tetanus toxoid	32		Neonatal tetanus protection	71.5	per cent
Care of illness	33		Use of oral rehydration therapy (ORT)	38.2	per cent
	34		Home management of diarrhoea	18.8	per cent
	35		Received ORT or increased fluids, and continued feeding	26.9	per cent
	23		Care seeking for suspected pneumonia	49.7	per cent
	22		Antibiotic treatment of suspected pneumonia	33.1	per cent
Solid fuel use	24	29	Solid fuels	97.9	per cent
Malaria	36		Households having insecticide-treated nets (ITNs)	67.2	per cent
	37	22	Under-fives sleeping under insecticide-treated nets	53.4	per cent
	38		Under-fives sleeping under mosquito nets	53.6	per cent
	39	22	Antimalarial treatment (under-fives)	27.4	per cent
	40		Intermittent preventive malaria treatment (pregnant women)	20.1	per cent
ENVIRONMENT					
Water and Sanitation	11	30	Use of improved drinking water sources	39.7	per cent
	13		Water treatment	39.3	per cent
	12	31	Use of improved sanitation facilities	50.7	per cent
	14		Disposal of child's faeces	79.8	per cent

Topic	MICS Indicator Number	MDG Indicator Number	Indicator	Value & Unit	
REPRODUCTIVE HEALTH					
Contraception and unmet need	21	19c	Contraceptive prevalence	40.3	per cent
	98		Unmet need for family planning	4.0	per cent
Maternal and newborn health	20		Antenatal care	91.0	per cent
				93.1	
	44		Content of antenatal care		
			Blood test taken	73.9	per cent
			Blood pressure measured	83.7	per cent
			Urine specimen taken	59.0	per cent
			Weight measured	90.9	per cent
	4	17	Skilled attendant at delivery	36.1	per cent
	5		Institutional deliveries	32.9	per cent
			Total fertility rate	5.1	Rate
EDUCATION					
Education	52		Pre-school attendance	27.6	per cent
	53		School readiness	91.3	per cent
	54		Net intake rate in primary education	53.4	per cent
	55	6	Net primary school attendance rate	90.7	per cent
	56		Net secondary school attendance rate	30.9	per cent
			Adult literacy rate (female)	95.3	per cent
CHILD PROTECTION					
Birth registration	62		Birth registration	46.9	per cent
Child labour	71		Child labour	15.3	per cent
	72		Labourer students	98.0	per cent
	73		Student labourers	15.6	per cent
Child discipline	74		Any psychological/physical punishment	81.5	per cent
Early marriage and polygyny	67		Marriage before age 15	3.8	per cent
			Marriage before age 18	18.7	per cent
	68		Young women aged 15-19 currently married/in union	8.0	per cent
Female genital mutilation/ Cutting	66		Approval for FGM/C	4.4	per cent
	63		Prevalence of female genital mutilation/cutting (FGM/C)	5.3	per cent
	64		Prevalence of extreme form of FGM/C	1.6	per cent
	65		FGM/C prevalence among daughters	0.7	per cent
Domestic violence	100		Attitudes towards domestic violence	54.8	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	34.5	per cent
	89		Knowledge of mother- to-child transmission of HIV	40.1	per cent
	86		Attitude towards people with HIV/AIDS	11.0	per cent
	87		Women who know where to be tested for HIV	87.8	per cent
	88		Women who have been tested for HIV	41.4	per cent
	90		Counselling coverage for the prevention of mother-to-child transmission of HIV	64.2	per cent
	91		Testing coverage for the prevention of mother-to-child transmission of HIV	67.8	per cent
Support to orphaned and vulnerable children	75		Prevalence of orphans	12.2	per cent
	78		Children's living arrangements	11.5	per cent
	76		Prevalence of vulnerable children	15.0	per cent
	77	20	School attendance of orphans versus non-orphans	1.02	Ratio
	81		External support to children orphaned and made vulnerable by HIV/AIDS	34.9	per cent

Introduction 1

1.1 Background

This report is based on the Makueni District Multiple Indicator Cluster Survey, conducted in 2008 by the Kenya National Bureau of Statistics. The survey provides valuable information on the situation of children and women in Makueni, and was based, in large part, on the needs to monitor progress towards goals and targets emanating from recent international agreements*: The Millennium Declaration*, adopted by all 191 United Nations Member States in September 2000, and *The Plan of Action of A World Fit For Children*, adopted by 189 Member States at the United Nations Special Session on Children in May 2002. All these commitments build upon promises made by the international community at the 1990 World Summit for Children. In signing these international agreements, governments committed themselves to improving conditions for their children and to monitoring progress towards that end. UNICEF was assigned a supporting role in this task (see box 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 tend to be more vulnerable to social-economic hardships. With regard to children, the Government of Kenya (GOK) formulated the National Programme of Action (NPA) for children in

1992 soon after the World Summit for Children (WSC) which was held in 1990. The main objective of this programme was to identify issues affecting children and the strategies to address them. Measuring indicators of progress towards declared goals through proper monitoring and evaluation of projects/programmes and other interventions e.g. emergency response and humanitarian assistance, are vital components of the NPA. The call for consolidated efforts in development was further stressed in the Vision 2030 document, which is the government of Kenya blue print for economic and social development.

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

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

The results from MICS 2008 in Makueni District of Eastern Province are presented in this report.

1.2 Survey Objectives

The 2008 Makueni District Multiple Indicator Cluster Survey had its primary objectives as:

- To provide up-to-date information for assessing the situation of children and women in Makueni District of Eastern Province;
- To furnish data needed for monitoring progress towards goals established in the Millennium Declaration, the goals of *A World Fit For Children (WFFC),* other internationally agreed upon goals, and Vision 2030 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 Makueni District Multiple Indicator Cluster Survey (MICS) was designed to provide estimates on a large number of indicators on the situation of children and women at the district level. The sample was selected in two stages. Within each district, 50 clusters (census enumeration areas) were selected with probability proportional to population size. Later, a household listing was carried out within the selected enumeration areas with all households stratified into two groups; the first group having children below 3 years and second not having children below 3 years. From each selected cluster (EA), a circular systematic sample of 16 households from stratum one and 8 households from stratum two was drawn using a random start. The sample was stratified and is not self-weighting. For reporting the results, sample weights are used.

2.2 Questionnaires

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

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 was administered to all women aged 15-49 years living in the households, and included the following modules:

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

The Questionnaire for Children under Five was administered to mothers or caretakers of children under 5 years of age[2] living in the households. Normally, the questionnaire was administered to mothers of under-5 children; in cases where the mother was not listed in the household roster, a primary caretaker for the child was identified and interviewed. The questionnaire included the following modules:

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

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

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

2.3 Training and Fieldwork

Training for the fieldwork was conducted in two parts; 3 days training for the mapping and listing teams and 12 days training for the main survey teams in June 2008. Training 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 practicing on how to interview in different locations of Makueni district before conducting interviews in the sampled households.

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

The data were collected by 2 teams; each comprised of 3 interviewers, one driver, one editor/measurer and a supervisor. Fieldwork began towards end of June 2008 and was concluded by end of August 2008.

[2] The terms “children under 5”, “children age 0-4 years”, and “children aged 0-59 months” are used interchangeably in this report.
[3] The model MICS3 questionnaire can be found at http//www.childinfo.org, or in UNICEF, 2006.

2.4 Data Processing

Data were 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, and the whole process was monitored by two supervisors. Procedures and standard programs developed under the global MICS3 project and adapted to the modified questionnaire were used throughout. Data entry process 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) program, and the model syntax and tabulation plans developed by UNICEF were customized for this purpose.

Sample Coverage and Household Characteristics 3

3.1 Sample Coverage

Of the 1,200 households selected for the sample in Makueni, 1,196 were found to be occupied. Among these, 1,141 were successfully interviewed with a household response rate of 95 per cent. In the interviewed households, 1,432 eligible women (age 15-49) were identified of these, 1,307 were successfully interviewed yielding a response rate of 91 per cent. In addition, 1,218 children under age five were listed in the household questionnaire. Questionnaires were completed for 1,204 of these children yielding a response rate of 99 per cent. Overall response rates of 87 and 94 per cent are calculated for the women and under-5 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's and under-five's response rates, Makueni District, Eastern Province, Kenya MICS 2008

Number of households	
Sampled (H_s)	1200
Occupied (H_o)	1196
Interviewed (H_i)	1141
Response rate (H_r)	95.4
Number of women	
Eligible (W_e)	1432
Interviewed (W_i)	1307
Response rate (W_r)	91.3
Overall response rate (W_{or})	87.1
Number of children under 5	
Eligible (C_e)	1218
Information collected (C_i)	1204
Response rate (C_r)	98.9
Overall response rate (C_{or})	94.3

$H_r = H_i / H_o$ (where H_o is HH8 = 1, 2, 3 or 6)
$W_r = W_i / W_e$; $W_{or} = W_r \times H_r$;
$C_r = C_i / C_e$; $C_{or} = C_r \times H_r$

Note: This table is un-weighted, however all other tables presented in this report are weighted unless mentioned otherwise.

3.2 Characteristics of Households

Household distribution of the survey population, by age and sex is provided in Table 3.2 (HH.2). The distribution is also used to produce the population pyramid in Figure 3.1. In the 1,141 households successfully interviewed in the survey, 6,082 household members were listed; 2,933 were male, and 3,149 were females. These figures indicate a sex ratio of 0.93 in Makueni.

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, Makueni District, Eastern Province, Kenya MICS 2008

	Males		Females		Total	
Characteristics	Number	Per cent	Number	Per cent	Number	Per cent
Age						
0-4	464	15.8	468	14.8	932	15.3
5-9	464	15.8	432	13.7	897	14.7
10-14	460	15.7	415	13.2	874	14.4
15-19	366	12.5	370	11.8	737	12.1
20-24	239	8.1	221	7.0	460	7.6
25-29	169	5.8	221	7.0	390	6.4
30-34	135	4.6	152	4.8	287	4.7
35-39	120	4.1	168	5.3	288	4.7
40-44	91	3.1	91	2.9	182	3.0
45-49	63	2.2	113	3.6	176	2.9
50-54	64	2.2	108	3.4	173	2.8
55-59	76	2.6	89	2.8	165	2.7
60-64	48	1.7	70	2.2	118	1.9
65-69	42	1.4	57	1.8	99	1.6
70+	90	3.1	135	4.3	224	3.7
Missing/DK	43	1.4	38	1.2	81	1.3
Dependency age groups						
< 15	1388	47.3	1315	41.7	2703	44.4
15-64	1372	46.8	1604	50.9	2976	48.9
65 +	131	4.5	192	6.1	323	5.3
Missing/DK	43	1.4	38	1.2	81	1.3
Children aged 0-17	1613	55.0	1548	49.2	3161	52.0
Adults 18+/Missing/ DK	1320	45.0	1601	50.8	2922	48.0
Total	**2933**	**100**	**3149**	**100**	**6082**	**100**

The age distribution from Table 3.2 shows that 44 per cent of the population is below 15 years of age and 49 per cent are between ages 15-64 years. The population aged 65 years and above is only five per cent. The population below 15 years accounts for 44 per cent of the total population of Makueni, an indicator of high dependency ratio and calls for interventions focussing on needs of this group to build their future.

Figure 3.1: Age and Sex Distribution of Household Population

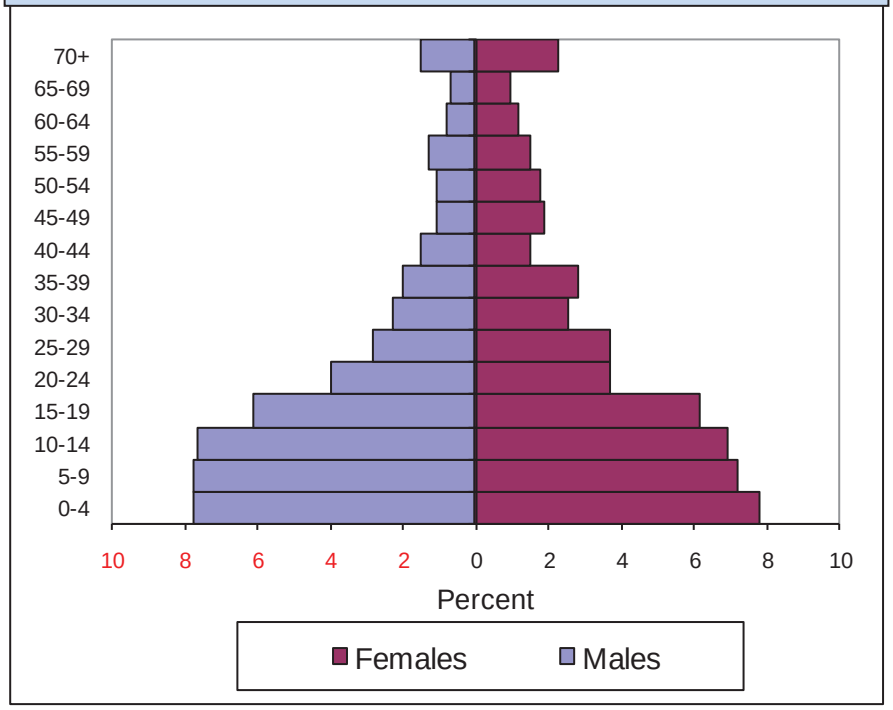


Table 3.3 (HH.3) provides basic background information on the households with the sex of the household head and number of household members shown. The table indicates values for weighted and un-weighted numbers of total households which is equal, since sample weights were normalized. The table also shows the proportion of households with at least one child under 18; at least one child under 5; and at least one eligible woman aged 15-49 years.

The results show that 45 per cent of the households in Makueni district are headed by females and 52 per cent have at least one child below 5 years of age. Majority of the households have at least one child below 18 years of age. Four out of five households (80 per cent) have at least one woman in the reproductive age group 15-49 years. The mean household size in Makueni District is 5 persons.

Table 3.3 (HH.3): Household Composition

Percentage distribution of households by selected characteristics, Makueni District, Eastern Province, Kenya MICS 2008

Characteristics	Weighted per cent	Number of households	
		Weighted	Un-weighted
Sex of household head			
Male	55.5	633	647
Female	44.5	508	494
Number of household members			
1	(6.5)	75	46
2-3	17.6	201	177
4-5	31.9	364	363
6-7	25.1	287	306
8-9	12.7	145	168
10+	6.1	70	81
Mean household size	**5.1**	**NA**	**NA**
Total	**100.0**	**1141**	**1141**
At least one child aged < 18 years	84.5	1141	1141
At least one child aged < 5 years	51.9	1141	1141
At least one woman aged 15-49 years	80.4	1141	1141

3.3 Characteristics of Female Respondents

Tables 3.4 (HH.4) provides information on the background characteristics of female respondents aged 15-49 years in Makueni district, MICS 2008. In the table, the total number of weighted and un-weighted observations is 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 in each background category.

Table 3.4 provides 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], wealth index[5].

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

[5] Principal Components Analysis was performed by using information on the ownership of household goods and amenities (assets) to assign weights to each household asset, and obtain wealth scores for each household in the sample (The assets used in these calculations were as follows: number of sleeping rooms, type of floor, type of roof, type of walls, type of fuel used for cooking, electricity, radio, television, telephone (mobile or land line), refrigerator, computer, internet connection, watch, bicycle, motorcycle or scooter, animal drawn cart, car or truck, boat with motor, source of drinking water and type of sanitation). Each household was then weighted by the number of household members, and the household population was divided into three groups, based on the wealth scores of households they were living in. The wealth index was assumed to capture the underlying long-term wealth through information on the household assets, and was intended to produce a ranking of households by wealth, from poorest to richest. The wealth index did not provide information on absolute poverty, current income or expenditure levels, and the wealth scores calculated were applicable for only the particular data set and were based on. Further information on the construction of the wealth index can be found in; *Rutstein and Johnson. 2004, and Filmier and Pritchet. 2001.*

Table 3.4 (HH.4): Women's Background Characteristics

Percentage distribution of women aged 15-49 years by background characteristics, Makueni District, Eastern Province, Kenya MICS 2008

Characteristics	Weighted per cent	Number of women	
		Weighted	Un-weighted
Age			
15-19	24.0	314	291
20-24	15.7	205	240
25-29	17.8	233	258
30-34	12.0	156	170
35-39	13.9	181	170
40-44	7.3	95	84
45-49	9.4	123	94
Marital/Union status			
Currently married/in union	60.8	795	837
Formerly married	8.3	109	98
Never married	30.8	403	372
Motherhood status			
Ever gave birth	73.4	959	1001
Never gave birth	26.6	348	306
Education			
None	6.1	80	69
Primary	59.7	780	787
Secondary +	34.2	447	451
Wealth index			
Low	18.6	243	246
Medium	38.9	509	516
High	42.5	555	545
Total	**100.0**	**1307**	**1307**

Overall, 61 per cent of the women aged 15-49 years in Makueni are married/in union, while 31 per cent were never married or in union. Seventy-three per cent of women interviewed had ever given birth while 27 per cent have never had a birth. Surprisingly, the proportion of women who have never been married/in union is higher than the proportion that have never had a birth, indicating a high incidence of births out of marriage/in union in the district. In Makueni district, a larger proportion of women aged 15-49 years have primary level education with 34 per cent achieving secondary education or higher. Majority of the women interviewed are from the higher wealth index households, with only 18.2 per cent in the lower wealth index households.

3.4 Characteristics of Children Under Five

Some background characteristics of children under 5 years were presented in Table 3.5 (HH.5). These include distribution of children by several attributes: sex, region and area of residence, age in months, mother's or caretaker's education and wealth index. The total number of weighted and un-weighted observations was equal, since sample weights had been normalized (standardized).

Table 3.5 (HH.5): Children's Background Characteristics

Percentage distribution of children under five years of age by background characteristics, Makueni District, Eastern Province, Kenya MICS 2008

Characteristics	Weighted Percentage	Number of under-5 children	
		Weighted	Un-weighted
Sex			
Male	50.1	603	596
Female	49.9	601	608
Age			
< 6 months	10.9	131	146
6-11 months	8.5	102	107
12-23 months	20.5	247	259
24-35 months	18.3	221	231
36-47 months	20.7	249	233
48-59 months	21.2	255	228
Mother's education			
None	7.9	95	80
Primary	60.2	724	728
Secondary +	31.9	384	396
Wealth index			
Low	23.9	288	287
Medium	40.9	492	484
High	35.2	424	433
Total	**100.0**	**1204**	**1204**

The table shows that there was no significant difference in the proportion of male and female children under five years in Makueni district. A look at the distribution of the children under five by age reveals that majority of the children are 12-23 months and 36-47 months old. Survival rates for children under five in the older age groups is higher with increasing survival from 24-35 months of age. The table shows that fewer children are in the 6-11 months age group compared with those under-6 months, indicating a possibility of high late infant mortality in Makueni district.

As mentioned earlier, majority of women sampled had primary education. About 60 per cent of the children belong to mothers who have primary education and majority of the children (76 per cent) belong to medium and high wealth index households.

Child Mortality 4

One of the overarching goals of the Millennium Development Goals (MDGs) and the World Fit for Children (WFFC) is to reduce infant and under-five mortality. Specifically, the MDG4 target 5 calls for the reduction of under-five mortality by two-thirds between 1990 and 2015. Monitoring progress towards this goal is an important but difficult 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 Kenya district level MICS, direct measures of child mortality from birth histories has been used and is one of the best ways of obtaining this information. The birth history obtained from women aged 15-49 years include number of children ever born and living by sex, and date of birth of each child. If the child is not alive at the time of survey, information on age of the child at the time of death is also obtained. Demographic and Health Surveys (DHS) worldwide including that of Kenya Demographic Health Survey (KDHS) are using this method, which allows us to compare the mortality rates with KDHS.

The under-five mortality rate is the probability of dying before reaching the fifth birthday while child mortality rate refers to probability of dying between one and five years of life. Neonatal mortality rate is the probability of dying before one month of life, while Post neonatal mortality rate is the probability of dying between one month and one year of life. Infant mortality rate is the probability of dying before reaching the first birthday. All mortality rates mentioned above are expressed as deaths 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 one of the best, 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 underestimates the mortality levels.

4.1 Levels of Childhood Mortality

Table 4.1 provides estimates of childhood mortality for the ten-year periods preceding the survey. This allows us to see the changes in childhood mortality rates. The estimates have been calculated based on births during the ten year period preceding the survey. The infant mortality rate for Makueni is estimated as 45 per thousand live births, while the probability of dying before the fifth birthday (U5MR) is 56 per thousand live births. This implies that 1 in 22 children die before their first birthday, while 1 in 18 children die before their fifth birthday. The infant mortality rate for Makueni is higher than the Provincial average indicating poor child survival in this district. This has been already shown in a previous table indicating poor survival of children from six months to 1 year of age (Table 3.4).

Table 4.1 (CM.03): Child mortality

Infant, neonatal, post-neonatal, child and under-five mortality rates for 10-year period preceding the survey, Makueni District, Eastern Province, Kenya MICS 2008

Periods of analysis of 10 years	Neonatal mortality	Post neonatal mortality	Infant mortality*	Child mortality	Under five mortality**
	Mean	Mean	Mean	Mean	Mean
0-9	29	16	45	12	56
10-19	22	20	42	21	62

*** MICS indicator 2; MDG indicator 14**
****MICS indicator 1; MDG indicator 13**

Comparison of child mortality rates for the ten year period prior to the survey, with those twenty years earlier from Table 4.1, indicates a decline in the mortality rates, implying improved child survival in Makueni district over the 20-year period.

Nutrition 5

Children's nutritional status is a reflection of their overall health. When children have access to an adequate food supply and are not exposed to repeated illnesses, they reach their growth potential and are considered well nourished. Malnutrition is associated with more than half of all child deaths worldwide. Undernourished children are more likely to die from common childhood ailments, and those who survive, have recurring sicknesses and faltering growth. Three-quarters of the children who die from causes related to malnutrition are only mildly or moderately malnourished – showing no outward sign of their vulnerability. The Millennium Development Goal 1 target 2 is to reduce by half the proportion of people who suffer from hunger between 1990 and 2015. A World Fit for Children goal is to reduce the prevalence of malnutrition among children under five years of age by at least one-third (between 2000 and 2010), with special attention to children under 2 years of age. A reduction in the prevalence of malnutrition will assist in the goal to reduce child mortality.

5.1 Nutritional Status

The government with other development partners including WHO, UNICEF and others aims to scale up proven, high-impact, cost-effective health and nutrition interventions to reduce the number of neonatal and young 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. Under-nourishment in a population can be gauged by comparing children to a reference population. The reference population used in this report is the WHO/CDC/NCHS reference, which was recommended for use by UNICEF and the World Health Organization at the time the survey was implemented. Three indicators are used to measure children's nutritional status. These are weight-for-age; height-for-age; and weight-for-height. Each of the three nutritional status indicators can be expressed in standard deviation units (z-scores) from the median of the reference population.

Weight-for-age (or underweight), is a measure of both acute and chronic malnutrition. Children whose weight-for-age is more than two standard deviations below the median of the reference population are considered *moderately underweight* while those whose weight-for-age is more than three standard deviations below the median are classified as *severely underweight.* Height-for-age (or stunting) is a measure of linear growth. Children whose height-for-age is more than two standard deviations below the median of the reference population are considered short for their age and are classified as *moderately stunted.* Those whose height-for-age is more than three standard deviations below the median are classified as *severely stunted.* Stunting is a reflection of chronic malnutrition as a result of failure to receive adequate nutrition over a long period and recurrent or chronic illness. Finally, children whose weight-for-height (or wasting) is more than two standard deviations below the median of the reference population are classified as *moderately wasted,* while those who fall more than three standard deviations below the median are *severely wasted*. Wasting is usually the result of a recent nutritional deficiency. The indicator may exhibit significant seasonal shifts associated with changes in the availability of food or disease prevalence. In district level MICS 2008, weights and heights of all children aged 6-59 months were measured using anthropometric equipments recommended by UNICEF (UNICEF, 2006). Findings in this section are based on the results of these measurements.

Table 5.1 (NU.1) presents the nutrition status of children in Makueni district classified as underweight, stunted or wasted based on the anthropometric measurements that were taken during fieldwork. 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.

Table 5.1 (NU.1): Child malnourishment

Percentage of children aged 6-59 months who are severely or moderately malnourished, Makueni District, Eastern Province, Kenya MICS 2008

	Weight-for-age		Height-for-age		Weight-for-height			Number of children aged 6-59 months
Characteristics	% below - 2 SD*	% below - 3 SD*	% below - 2 SD**	% below - 3 SD**	% below - 2 SD***	% below - 3 SD***	% above + 2 SD***	
Sex								
Male	21.0	2.4	37.8	10.6	2.6	0.2	1.0	514
Female	18.2	1.5	30.3	6.0	2.2	0.2	2.1	501
Age								
6-11 months	11.7	0.8	23.6	3.1	2.6	0.0	4.9	99
12-23 months	21.1	2.4	40.7	10.1	3.5	0.4	2.9	237
24-35 months	22.1	2.4	32.6	8.0	1.5	0.0	0.9	211
36-47 months	18.3	1.9	31.1	7.5	2.6	0.0	0.4	225
48-59 months	21.3	1.7	37.3	10.2	2.0	0.4	0.0	234
Mother's education								
None	25.7	4.6	37.6	13.7	4.5	0.0	0.0	76
Primary	21.8	1.7	35.5	8.8	3.0	0.3	1.2	614
Secondary +	14.1	1.9	30.6	6.2	0.8	0.0	2.5	325
Wealth index								
Low	29.9	4.1	45.0	14.3	2.4	0.0	1.8	240
Medium	18.6	1.6	36.1	6.1	2.2	0.4	1.6	419
High	13.9	0.9	24.4	7.0	2.7	0.0	1.4	356
Total	**19.6**	**1.9**	**34.1**	**8.3**	**2.4**	**0.2**	**1.6**	**1015**

*** 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 is missing are excluded from the calculations. If height and weight data are missing for more than 10 per cent of under-five children, caution should be exercised in the interpretation of the results. In addition, children for whom the indices are out of range are omitted.

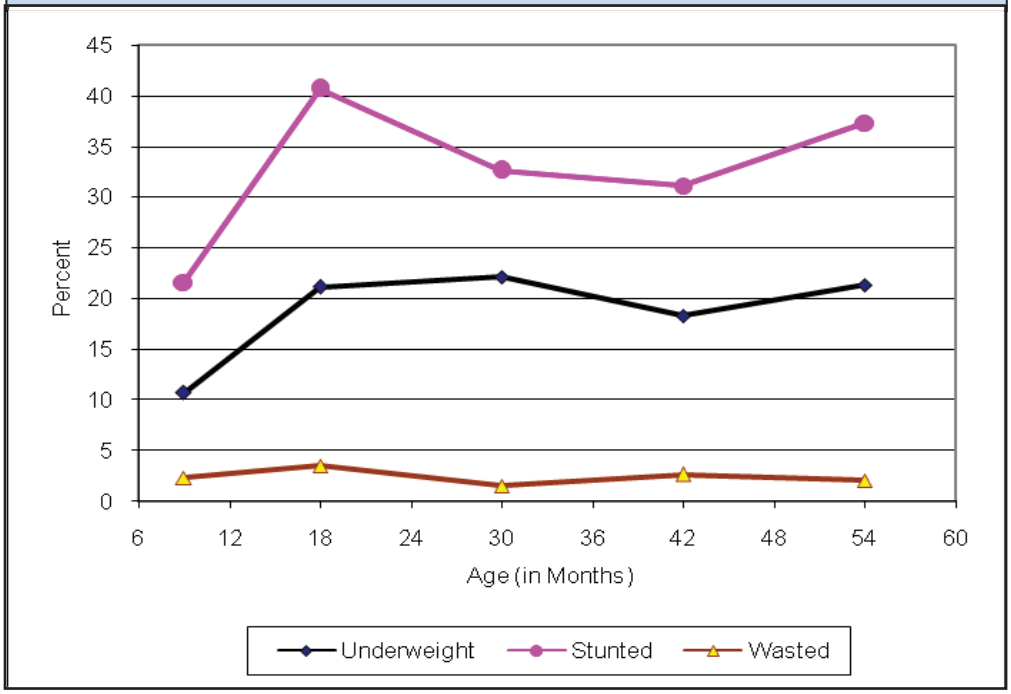
From Table 5.1, one in every five children aged 6-59 months (20 per cent) in Makueni district is moderately underweight. Underweight is more common among children aged 12-35 months; those whose mothers have no education; and those who live in low income households. Wasting is not a significant problem in Makueni district.

Thirty-four per cent of children under five in Makueni district are moderately stunted, while eight per cent of children under five are severely stunted. Stunting is more common in children aged 12-23 months, with 40 per cent moderately stunted. This pattern is related to the age at which many children are weaned. Stunting levels in Makueni are higher than the Provincial average indicating chronic malnutrition in this district.

Children whose mothers have secondary or higher levels of education are less likely to be underweight and stunted compared to children of mothers with no education. The same pattern is observed in regard to wealth index where children in households with a high wealth index are less likely to be underweight compared to those in low wealth index households. Boys are more likely to be underweight, stunted, and wasted compared to girls.

Figure 5.1 shows the percentage of children under five years of age in Makueni district by their nutritional status. The figure shows that stunting is more prevalent in Makueni district than wasting or underweight. Therefore efforts should be made to reduce the food stress associated with stunting in this district.

Figure 5.1: Percentage of children age 6-59 months who are undernourished, Makueni district, 2008



5.2 Breastfeeding

A World Fit for Children targets to protect, promote and support exclusive breastfeeding for six months and continued breastfeeding with safe, appropriate and adequate complementary feeding up to two years of age or beyond. Breastfeeding for the first few years of life protects children from infection, provides an ideal source of nutrients, and is economical and safe. However, many mothers stop breastfeeding too soon and there are often pressures to switch to infant formula, which can contribute to growth faltering and micronutrient malnutrition and is unsafe if clean water is not readily available.

UNICEF in its programmes advocates for and promotes programmes to increase rates of exclusive breastfeeding which is the strongest foundation of baby health. Studies have shown that breastfeeding protects babies from diarrhoea and acute respiratory infections, stimulates their immune systems and improves response to vaccinations, and contains many hundreds of health-enhancing molecules, enzymes, proteins and hormones.

WHO/UNICEF have the following feeding recommendations:

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

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

The indicators of recommended child feeding practices are as follows:

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

Table 5.2 (NU.2) below provides the proportion of women who started breastfeeding their infants within one hour of birth, and women who started breastfeeding within one day of birth (which includes those who started within one hour). The table shows that women with higher education are less likely to breastfeed their babies within one day of birth compared to those with primary education.

In addition, women in the higher wealth index category are less likely to breastfeed their babies within one hour or one day of birth compared to women in other wealth index categories.

Table 5.2 (NU.2): Initial breastfeeding

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

Characteristics	Percentage who started breastfeeding within one hour of birth*	Percentage who started breastfeeding within one day of birth	Number of women with a live birth in the two years preceding the survey
Months since birth			
< 6 months	47.0	94.0	99
6-11 months	51.7	92.2	102
12-23 months	47.2	87.7	192
Mother's education			
None	(40.8)	(100)	20
Primary	48.2	91.7	243
Secondary +	49.4	85.4	135
Wealth index			
Low	53.5	93.0	91
Medium	54.0	92.5	148
High	39.8	86.0	159
Total	**48.2**	**90.0**	**398**

***MICS indicator 45**

Note: Figures in parentheses are based on 25-49 unweighted cases.

Table 5.3a and 5.3b (NU.3) present breastfeeding status of children based on the mothers/ caretakers reports of children's consumption of food and fluids during the 24 hours prior to the interview. *Exclusively breastfed* refers to infants who received only breast milk. Table 5.3a shows status for exclusive breastfeeding of infants during the first six months of life (separately for 0-3 months and 0-5 months). However, the figures are few for several categories to have any meaningful interpretations of the results.

Table 5.3a (NU.3): Breastfeeding

Percentage of living children according to breastfeeding status at each age group, Makueni 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	(16.4)	42	12.6	55
Female	(20.1)	37	12.9	60
Mother's education				
None	(*)	0	(*)	0
Primary	(21.8)	42	13.8	69
Secondary +	(14.0)	37	11.3	46
Wealth index				
Low	(*)	17	(16.5)	26
Medium	(13.9)	26	(8.3)	44
High	(18.1)	36	14.9	46
Total	**18.1**	**79**	**12.8**	**115**

***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.

NOTE:

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

Figure 5.2 shows the detailed pattern of breastfeeding for children under 3 years of age for Makueni district.

Figure 5.2: Infant feeding patterns by age

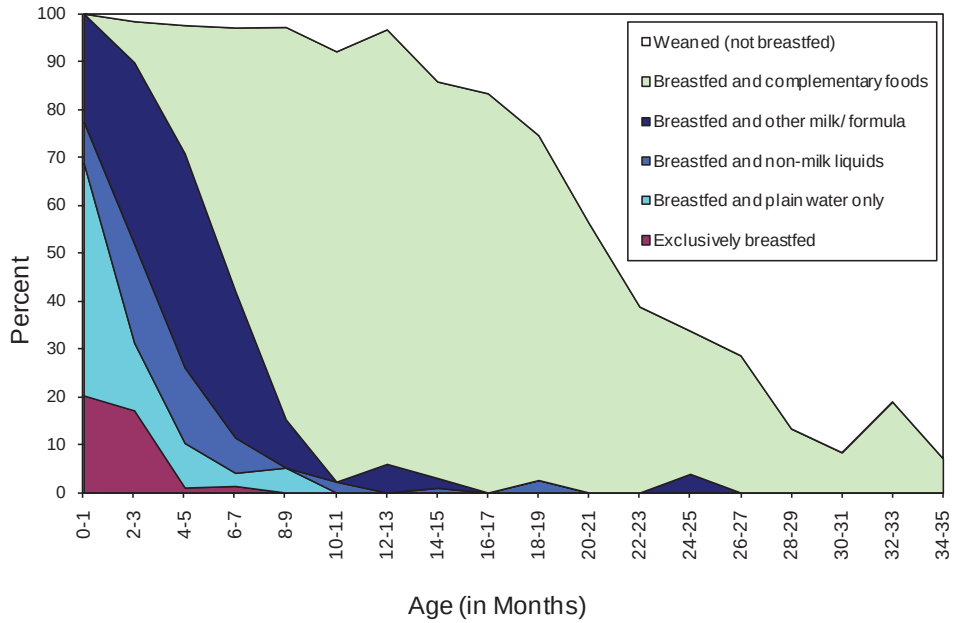


Table 5.3b (NU.3): Complementary feeding

Percentage of living children according to breastfeeding status at each age group, Makueni District, Eastern Province, Kenya 2008

Characteristics	Children age 6-9 months: Percentage receiving breast milk and solid/ mushy 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	(75)	36	(95.5)	39	(31.7)	44
Female	(69.1)	43	(86.5)	40	(62.6)	40
Mother's education						
None	(*)	2	(*)	2	(*)	7
Primary	70.7	57	93.2	48	42.9	49
Secondary +	(*)	20	(*)	30	(55.1)	28
Wealth index						
Low	(71.8)	24	(*)	22	(*)	15
Medium	(60.6)	31	(89.6)	28	(42.1)	38
High	(86)	24	(88.2)	30	(49.4)	31
Total	**71.8**	**79**	**91**	**80**	**46.4**	**84**

**** MICS indicator 17**
***** MICS indicator 16**

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

Table 5.4 (NU.4) presents results of complementary feeding of children aged 6-9 months and continued breastfeeding of children at 12-15 and 20-23 months of age. Different criteria for adequate feeding are used depending on the age of the child. For infants aged 0-5 months, exclusive breastfeeding is considered as adequate feeding. For those aged 6-8 months adequate feeding is considered if they are receiving breast milk and complementary food at least two times per day, while infants aged 9-11 months are considered to be adequately fed if they are receiving breast milk and eating complementary food at least three times a day. For children aged 0-5 months in Makueni district, only 13 per cent are currently exclusively breastfed, implying that majority of children under 6 months are inadequately fed. For children aged 6-8 months, 63 per cent are receiving breast milk and complementary food as required. Overall, for children under one year of age in Makueni district, about 40 per cent are appropriately fed. Children from high income households are more likely to be adequately fed than those from lower income households. This implies that poverty is an important factor in poor nutrition of children under five years of age in Makueni district.

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, Makueni 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	12.6	67.4	67.8	67.6	39.6	108
Female	12.9	59.4	67	64.1	39.3	124
Mother's education						
None	(*)	(*)	(*)	(*)	(*)	3
Primary	13.8	62.9	63.5	63.3	41.2	155
Secondary +	11.3	67.3	80.4	75.8	36	75
Wealth index						
Low	16.5	63.1	60	61.2	41.9	59
Medium	8.3	57.3	69.5	63	36	88
High	14.9	75.8	71.3	72.7	41.3	85
Total	**12.8**	**63.4**	**67.4**	**65.7**	**39.5**	**233**

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

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

5.3 Salt Iodization

Iodine Deficiency Disorders (IDD) is the world's leading cause of preventable mental retardation and impaired psychomotor development in young children. In its extreme form, iodine deficiency causes cretinism, a condition of severely stunted physical and mental growth due to untreated congenital deficiency of thyroid hormones, due to maternal nutritional deficiency of iodine. Iodine deficiency also increases the risk of stillbirths and miscarriages 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. The indicator is the percentage of households consuming adequately iodized salt (≥15 parts per million).

For the MICS 2008 survey, field work teams tested the salt used for cooking in the households for iodine content by using salt test kits and testing for the presence of potassium iodide. Table 5.5 (NU.5) shows the percentage distribution of households with adequately iodized salt; salt containing 15 parts per million (ppm) or more of iodine.

Table 5.5 (NU.5): Iodized salt consumption

Percentage of households consuming adequately iodized salt, Makueni 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	93.9	248	5.4	0	94.6	100	247
Medium	96.5	424	2.6	0.6	96.7	100	420
High	98.2	469	0.2	0.3	99.5	100	461
Total	**96.6**	**1141**	**2.2**	**0.3**	**97.4**	**100**	**1128**

***MICS indicator 41**

The results indicate that 97 per cent of households in Makueni district have adequate iodine content in the cooking salt they use. This was consistent across the various wealth index levels.

5.4 Vitamin A Supplements

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

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

For countries with vitamin A deficiency problems, current international recommendations call for 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 percentage of children 6-59 months of age, receiving at least one high dose vitamin A supplement in the six months preceding the survey.

Table 5.6 presents the distribution of children under 5 years based on those who received high dose Vitamin A supplements in the last six months prior to the MICS 2008.

Based on UNICEF/WHO guidelines, the Government of Kenya recommends that children aged 6-11 months be given one high dose Vitamin A capsules and children 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.

Table 5.6 shows that Vitamin A supplement for children under five years in the last six months is highest among children aged 6-11 months (64 per cent) compared to all other ages and decreases consistently to the lowest level of 28 per cent at ages 48-59 months. This implies that mothers are more likely to miss out on Vitamin A supplement as their children grow.

As is expected, the mother’s level of education is related to the likelihood of receiving Vitamin A supplementation. The percentage receiving a supplement in the last six months increases from 35 per cent among children whose mothers have no education to 47 per cent for those whose mothers have secondary or higher education levels. Household wealth index however, does not show large disparities.

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

Percentage distribution of children aged 6-59 months by whether they have received a high dose vitamin A supplement in the last 6 months, Makueni District, Eastern Province, Kenya MICS 2008

Characteristics	Percentage of children who received vitamin A: Within last 6 months*	Prior to last 6 months	Not sure when	Not sure if received vitamin A	Never received vitamin A	Total	Number of children aged 6-59 months
Sex							
Male	40.1	42.1	5.7	0.5	11.6	100	548
Female	42.9	35.9	5.9	1.3	14.0	100	541
Age							
< 6 months	(*)	(*)	(*)	(*)	(*)		15
6-11 months	64.0	2.9	2.5	0	30.6	100	117
12-23 months	59.4	27.6	2	0.4	10.7	100	247
24-35 months	38.2	45.5	5	0.6	10.7	100	220
36-47 months	33.9	48.5	8.6	0.4	8.6	100	249
48-59 months	27.7	52.8	9.2	1	9.3	100	251
Mother's education							
None	34.8	26.9	10.9	8.4	19.0	100	95
Primary	39.8	39.9	6.8	0.3	13.4	100	655
Secondary +	46.8	40.8	2.4	0	10.0	100	338
Wealth index							
Low	41.3	34.9	8.1	0.9	14.8	100	262
Medium	38.4	43	5.7	1.3	11.6	100	449
High	45.4	37.1	4.2	0.4	12.9	100	378
Total	**41.5**	**39**	**5.8**	**0.9**	**12.8**	**100**	**1089**

***MICS indicator 42**

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

Table 5.7 provides a summary of findings on the post-partum Vitamin A supplements for mothers who had a live birth in the two years prior to MICS 2008. It is recommended that mothers take a Vitamin A supplement within eight weeks of giving birth due to increased Vitamin A requirements during pregnancy and lactation.

Table 5.7 (NU.7): Post-partum mothers' vitamin A supplementation
Percentage of women aged 15-49 years with a live birth in the 2 years preceding the survey by whether they received a high dose vitamin A supplement before the infant was 8 weeks old, Makueni, District, Eastern Province, Kenya 2008

Characteristics	Received vitamin A supplement*	Not sure if received vitamin A	Number of women aged 15-49 years
Education			
None	(*)	(*)	20
Primary	34.7	0	243
Secondary +	50.5	0	135
Wealth index			
Low	38.7	0	91
Medium	37.6	0	148
High	42.9	0	159
Total	**40.0**	**0**	**398**

***MICS indicator 43**

The numerator includes all women who say they received a vitamin A dose in the first two months after their last birth (even if their last birth was less than two months prior to the interview). The denominator includes women who had a live birth in the two years preceding the date of interview.

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

Two out of five mothers (40 per cent) with a birth in the previous two years before the survey received a Vitamin A supplement within eight weeks of the birth. Vitamin A coverage increases with the education of the mother i.e., at 35 per cent for mothers with primary education compared to 51 percent for mothers with secondary or higher level of education, respectively.

5.5 Low Birth Weight

Weight at birth is a good indicator not only of a mother's health and nutritional status but also of 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. Those who survive have impaired immune function and increased risk of disease; they are likely to remain undernourished, with reduced muscle strength, throughout their lives, and suffer a higher incidence of diabetes and heart disease in later life. Children born underweight also tend to have a lower IQ and cognitive disabilities, which affect their performance in school and their 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: 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. Inadequate weight gain during pregnancy is particularly important since it accounts for a large proportion of foetal growth retardation. Moreover, diseases such as diarrhoea and malaria, which are common in many developing countries, can significantly impair foetal growth if the mother becomes infected while pregnant. In the industrialized world, cigarette smoking during pregnancy is the leading cause of low birth weight.

One of the major challenges of 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 selected 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 2,500 grams is estimated from two items in the questionnaire: the mother's assessment of the child's size at birth (i.e., very small, smaller than average, average, larger than average, very large) and the mother's recall of the child's weight or the weight as recorded on a health card if the child was weighed at birth[6].

Table 5.8 (NU.) presents the proportion of live births that were weighed at birth in the 2 years preceding the survey in Makueni district.

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

Percentage of live births in the 2 years preceding the survey that weighed below 2500 grams at birth, Makueni District, Eastern Province, Kenya MICS 2008

Characteristics	Percentage of live births: Below 2500 grams	Percentage of live births: Weighed at birth	Number of live births
Mother's education			
None	(*)	(*)	20
Primary	8.9	19.9	243
Secondary +	8.1	53.0	135
Wealth index			
Low	9.3	16.1	91
Medium	7.5	27.2	148
High	9.2	46.9	159
Total	**8.6**	**32.6**	**398**

*** MICS indicator 9**

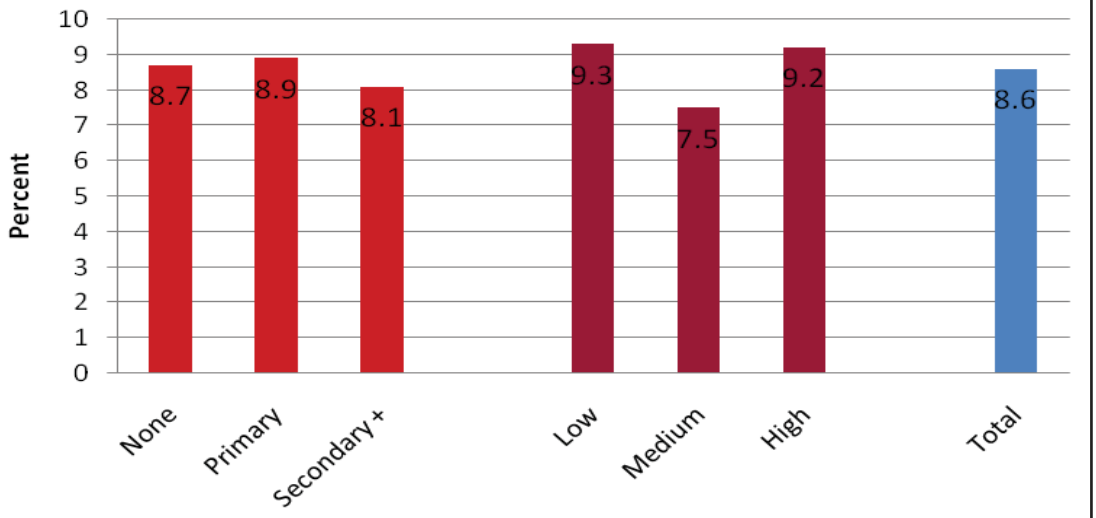
****MICS indicator 10**

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

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

Overall, only 33 per cent of births were weighed at birth which implies that more than two thirds of all the births in Makueni were not weighed at birth. In addition, the results show that approximately less than 10 per cent of infants in the district have low birth weight, although this is one of the highest values of underweight babies in Eastern Province. Figure 5.3 presents the distribution of low birth weights for Makueni district according to mother's education and wealth index. There were no major differentials with respect to mother's education and the wealth index of household.

Figure 5.3: Percentage of infants weighing less than 2500 Grams at Birth, Makueni, 2008



Child Health 6

6.1 Immunization

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

A World Fit for Children goal is to ensure full immunization of children under one year of age at 90 per cent nationally, with at least 80 per cent coverage in every district or equivalent administrative unit. The Kenya Expanded Programme on Immunizations (KEPI) and the Malezi Bora campaigns are playing key roles in this regard. In Kenya, and in accordance with the ministry of health guidelines, a child should receive a BCG vaccination to protect him/her against tuberculosis, three doses of DPT to protect against diphtheria, pertussis and tetanus and three doses of Polio vaccine by the age of 12 months. The measles vaccine should be administered by the age of 9 months. This is in accordance with the UNICEF and WHO guidelines.

In MICS 2008, mothers or caregivers of children below five years of age were asked to provide vaccination cards to the interviewers, who copied vaccination information from the cards onto the questionnaire. However, information about children with no immunization card was obtained using a set of structured direct questions on immunization administered to the care givers. The immunization coverage shown in MICS 2008 report includes information from the vaccination card as well as re-calls by care givers, unless mentioned otherwise. If the child did not have a card, the mother was asked to recall whether or not the child had received each of the vaccinations, and for DPT and Polio, to state how many times.

The percentage of children aged 12 to 23 months who received each of the vaccinations is shown in Table 6.1 (CH.1). The denominator for the table is comprised of children aged 12-23 months so that only children who are old enough to be fully vaccinated are counted. In the top panel, the numerator includes all children who were vaccinated at any time before the survey according to the vaccination card or the mother's report. In the bottom panel, only those who were vaccinated before their first birthday, as recommended are included. For children without vaccination cards, the proportion of vaccinations given before the first birthday is assumed to be the same as for children with vaccination cards.

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, Makueni District, Eastern Province, Kenya MICS 2008

Vaccinated at any time before the survey	Percentage of children who received:											Number of children aged 12-23 months
	BCG*	DPT1	DPT2	DPT3**	Polio0	Polio1	Polio2	Polio3***	Measles****	All*****	None	
According to:												
Vaccination card	85	86.2	85.4	85	70.7	86.1	85.8	82.3	79	77.7	0	247
Mother's report	10.7	10.4	10.4	9.5	7.2	10	10	8	11	6	2.9	247
Either	95.7	96.6	95.7	94.5	78	96.1	95.7	90.3	90	83.8	2.9	247
Vaccinated by 12 months of age	95.7	95.8	95.3	94.1	78	95.5	95.7	89.9	86.9	78.9	2.9	247

***MICS indicator 25**
**** MICS indicator 27**
***** MICS indicator26**
****** MICS indicator 28 MDG indicator 15**
******* MICS indicator 31**

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.

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

Almost all of the children aged 12-23 months (96 per cent) in Makueni district had received a BCG vaccination by the age of 12 months, with the first dose of DPT given to 96 per cent. Polio immunisation has a slow start with fewer children receiving Polio 0; and the proportion of children receiving subsequent doses declines, with Polio 3 doses administered to fewer children (90 per cent). The measles vaccine coverage is the lowest compared to other mandatory immunisations for Makueni district at 87 per cent.

The percentage of children who had received all the recommended vaccinations by their first birthday for Makueni District stood at 79 per cent. This information is also shown in figure 6.1 below.

Figure 6.1: Percentage of children aged 12-23 months who received the recommended vaccinations by 12 months, Makueni, 2008

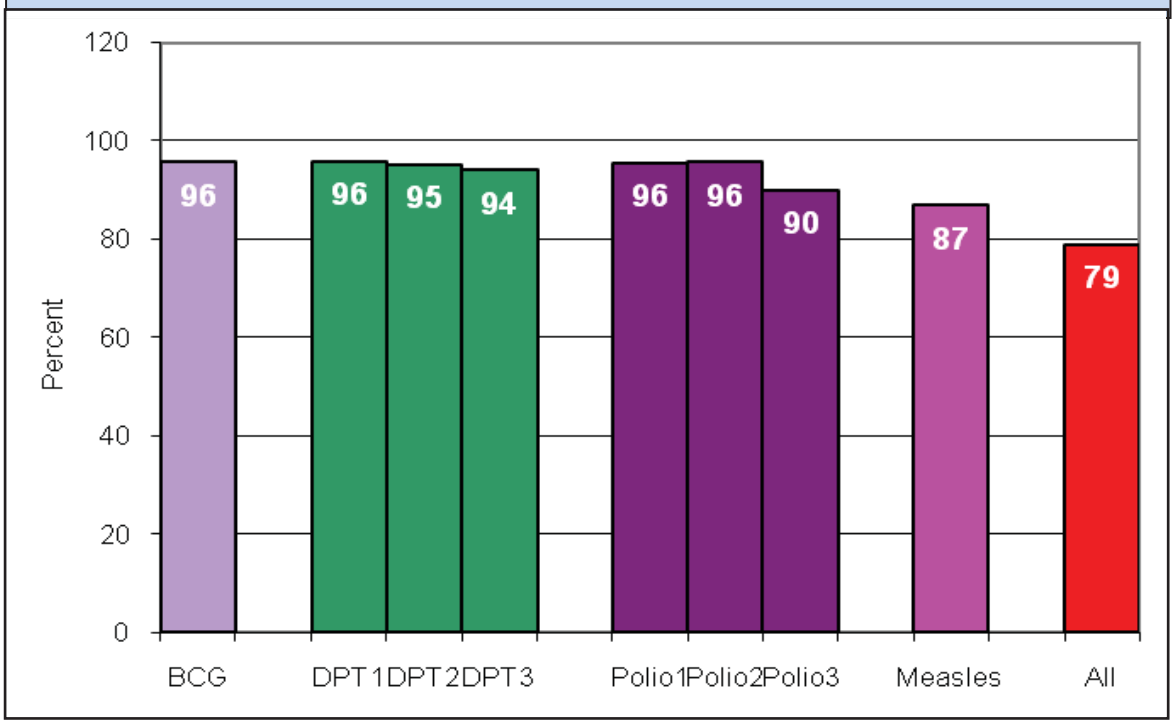


Table 6.2 (CH.2) shows vaccination coverage rates among children 12-23 months by various background characteristics. The information is on children receiving the vaccinations at any time up to the date of the survey, and is based on information from both the vaccination cards and mothers'/caretakers' reports. DPT1 and Polio1 recorded highest coverage with over 96 per cent while Polio0 reported the lowest coverage at 78 per cent.

Overall, 84 per cent of children age 12-23 months are fully vaccinated, i.e., received BCG, 3 doses of DPT, 3 doses of Polio and measles vaccines. There is a minimal disparity in the immunization coverage among boys and girls as well as by educational levels of the mother.

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

Percentage of children aged 12-23 months currently vaccinated against childhood diseases, Makueni District, Eastern Province, Kenya MICS 2008

	Percentage of children who received:												
Characteristics	BCG	DPT1	DPT2	DPT3	Polio0	Polio1	Polio2	Polio3	Measles	All	None	Percentage with health card	Number of children aged 12-23 months
Sex													
Male	93.6	96.6	95.9	94.2	75.4	94.4	95.3	90	90.1	81.2	3.4	83.7	121
Female	97.6	96.5	95.5	94.8	80.5	97.6	96.2	90.5	89.9	86.3	2.4	89.8	125
Mother's education													
None	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	14
Primary	96.7	96.7	95.2	93.8	77.7	96	94.8	90.5	89.5	86.3	3.3	87.5	139
Secondary +	96.2	100	100	98.7	78.6	98.2	99.1	94.8	94.4	84.9	0.0	87.5	94
Wealth index													
Low	99.2	96.7	96.7	96.7	82.9	97.5	99.2	96.7	88.6	86.8	0.8	91	54
Medium	93.9	93.8	92.6	90.8	73.3	93.1	91.3	85.8	86.5	82.2	6.1	83.4	102
High	95.6	99.6	98.7	97.4	80.4	98.6	98.7	91.5	94.9	83.7	0.4	88.2	91
Total	**95.7**	**96.6**	**95.7**	**94.5**	**78.0**	**96.1**	**95.7**	**90.3**	**90.0**	**83.8**	**2.9**	**86.8**	**247**

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

The table shows that 87 per cent of children aged 12-23 months in Makueni district had health cards (Table 6.2 (CH.2)). This shows that most of the mothers have been taking their children for check up in health facilities. In addition, 84 per cent of children aged 12-23 months have received all required vaccinations in the district.

6.2 Tetanus Toxoid

One of the MDGs goals (5) is to reduce by three quarters the maternal mortality ratio, with one strategy to eliminate maternal tetanus. A World Fit for Children (WFFC) goal was to eliminate maternal and neonatal tetanus by 2005. Prevention of maternal and neonatal tetanus in pregnant women is achieved by giving at least two doses of tetanus toxoid vaccine to all pregnant women. However, if women have not received two doses of the vaccine during the pregnancy, they (and their newborn) are also considered to be protected if the following conditions are met:

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

Table 6.3 shows the tetanus protection status of women who had a live birth within the last 12 months. Sixty-four per cent of mothers who had a birth in the last 12 months before the survey had received at least 2 doses of tetanus during the last pregnancy. Overall, about 72 per cent of women in Makueni district who had a child born during 2 years preceding the survey had adequate protection against tetanus.

Table 6.3 (CH.3): Neonatal tetanus protection

Percentage of mothers with a birth in the last 12 months protected against neonatal tetanus, Makueni District, Eastern Province, Kenya MICS 2008

	Percentage of mothers with a birth in the last 12 months who:						
Characteristics	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*	Number of mothers
Age							
15-19	(69.6)	(2.1)	(0.0)	(0.0)	(0.0)	(71.6)	34
20.-24	66.5	6.3	0.0	0.0	0.0	72.8	117
25-29	67.0	5.7	0.0	0.0	0.0	72.7	115
30-34	64.1	11.3	0.0	0.0	0.0	75.4	66
35-49	52.2	11.1	0.0	0.0	0.0	63.3	66
Education							
None	(68.0)	(0.0)	(0.0)	(0.0)	(0.0)	(68)	20
Primary	63.2	7.6	0.0	0.0	0.0	70.8	243
Secondary +	65.3	8.1	0.0	0.0	0.0	73.4	135
Wealth index							
Low	61.3	6.0	0.0	0.0	0.0	67.3	91
Medium	65.5	9.6	0.0	0.0	0.0	75.1	148
High	64.5	6.1	0.0	0.0	0.0	70.6	159
Total	**64.1**	**7.4**	**0.0**	**0.0**	**0.0**	**71.5**	**398**

***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. Figures in parentheses are based on 25-49 unweighted cases.

6.3 Oral Re-hydration Treatment

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

In this case, the goals are to: 1) reduce by one half the deaths due to diarrhoea among children under five by 2010 compared to 2000 (A World Fit for Children); 2) reduce by two thirds the mortality rate among children under five by 2015 compared to 1990 (Millennium Development Goals). In addition, the World Fit for Children calls for a reduction in the incidence of diarrhoea by 25 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 2008 questionnaire, mothers (or caregivers) were asked to report whether their child had diarrhoea 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, 11 per cent of under five children had diarrhoea in the two weeks preceding the survey (Table 6.4). Only 18 per cent of children with diarrhoea received fluid from ORS packet, with over 62 per cent receiving no treatment at all.

Table 6.4 (CH.4): Oral rehydration treatment

Percentage of children aged 0-59 months with diarrhoea in the last two weeks and treatment with oral rehydration solution (ORS) or other oral rehydration treatment (ORT), Makueni District, Eastern Province, Kenya MICS 2008

Characteristics	Had diarrhoea in last two weeks	Number of children aged 0-59 months	Children with diarrhoea who received: Fluid from ORS packet	Recom-mended home-made fluid	Pre-packaged ORS fluid	No treatment	ORT Use Rate*	Number of children aged 0-59 months with diarrhoea
Sex								
Male	10.9	603	13.3	13.7	16.2	65.8	34.2	66
Female	10.8	601	22.4	11.3	12.5	57.7	42.3	65
Age								
<6 months	22.1	131	(*)	(*)	(*)	(*)	(*)	29
6-11 months	24.6	102	(24.5)	(18.3)	(8.3)	(61.9)	(38.1)	25
12-23 months	14.6	247	(7.5)	(16.5)	(14.6)	(63.8)	(36.2)	36
24-35 months	11.3	220	(*)	(*)	(*)	(*)	(*)	25
36-47 months	4.1	249	(*)	(*)	(*)	(*)	(*)	10
48-59 months	2.3	251	(*)	(*)	(*)	(*)	(*)	6
Mother's education								
None	5.4	95	(*)	(*)	0	(*)	(*)	5
Primary	12.2	724	15.3	12	15.7	62.1	37.9	88
Secondary +	9.7	384	(26.3)	(10.8)	(13.3)	(60.3)	(39.7)	37
Wealth index								
Low	12.7	288	(24.1)	(18.7)	(7)	(54.9)	(45.1)	37
Medium	10.4	492	12.3	11.3	22.2	65.2	34.8	51
High	10.2	424	(19)	(8.7)	(11.4)	(63.6)	(36.4)	43
Total	**10.9**	**1204**	**17.8**	**12.5**	**14.4**	**61.8**	**38.2**	**131**

***MICS indicator 33**

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.

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

Table 6.5 provides information on home management of diarrhoea. On average about 47 per cent of children with diarrhoea drank more during the diarrhoea episode. About 27 per cent received ORT or increased fluids and continued feeding during the illness episode.

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, Makueni District, Eastern Province, Kenya MICS 2008

Characteristics	Had diarrhoea in last two weeks	Number of children aged 0-59 months	Children with diarrhoea who: Drank more	Drank the same or less	Ate some-what less, same or more	Ate much less or none	Home management of diarrhoea *	Received ORT or increased fluids and continued feeding **	Number of children aged 0-59 months with diarrhea
Sex									
Male	10.9	603	47.1	52.9	46.6	53.4	20.9	27.4	66
Female	10.8	601	46.1	53.9	40.5	58.2	16.7	26.5	65
Age (months)									
0-11	21.8	209	(34.5)	(65.5)	(28.7)	(69.5)	(6.6)	(11.6)	46
12-23	16.2	242	(49.8)	(50.2)	(45.7)	(54.3)	(15.3)	(21.7)	39
24-35	11.7	235	(*)	(*)	(*)	(*)	(*)	(*)	27
36-47	4.8	248	(*)	(*)	(*)	(*)	(*)	(*)	12
48-59	2.4	270	(*)	(*)	(*)	(*)	(*)	(*)	7
Mother's education									
None	5.4	95	(*)	(*)	(*)	(*)	(*)	(*)	5
Primary	12.2	724	44.1	55.9	37.6	62.4	15.6	20.5	88
Secondary+	9.7	384	(49.8)	(50.2)	(52.4)	(45.4)	(22.3)	(36.8)	37
Wealth index									
Low	12.7	288	(49.1)	(50.9)	(35.9)	(64.1)	(20.1)	(27.2)	37
Middle	10.4	492	45.0	55.0	50.4	49.6	20.6	29.2	51
High	10.2	424	(46.4)	(53.6)	(42.0)	(56.1)	(15.6)	(24.1)	43
Total	**10.9**	**1204**	**46.6**	**53.4**	**43.6**	**55.8**	**18.8**	**26.9**	**131**

***MICS indicator 34**
****MICS indicator 35**

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

6.4 Care Seeking and Antibiotic Treatment of Pneumonia

Pneumonia is among the leading cause of death in children and the use of antibiotics in under-five is recommended for addressing this problem. A World Fit for Children goal is to reduce by one-third the deaths due to acute respiratory infections.

Children with suspected pneumonia are those who had an illness with a cough accompanied by rapid or difficult breathing and whose symptoms were not due to a problem in the chest and a blocked nose. The indicators 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, if care was sought from a health provider. About ten per cent of children aged 0-59 months were reported to have had symptoms of pneumonia during the two weeks preceding the survey. Out of those with pneumonia symptoms, 43 per cent were treated either in a government hospital or a government health centre. Those who sought services from private facilities were about 10 per cent. Overall, 53 per cent of male children were taken to an appropriate provider compared to 47 per cent for female children.

Table 6.6 (CH.5): Children taken to health provider in the last two weeks

Percentage of children aged 0-59 months in the last two weeks taken to a health provider, Kenya, Eastern Province, MICS 2008

Characteristic	Had acute respiratory infect-ion	Number of children aged 0-59 months	Govt. hospital	Govt. health centre	Govt. health post	Village health worker	Mobile/ outreach clinic	Other public	Private hospital clinic	Private physician	Pharmacy	Mobile clinic	Other private medical	Relative or friend	Shop	Traditional practitioner	Other	Any appropriate provider *	Number of children aged 0-59 months with suspected pneumonia
Sex																			
Male	9.5	603	24.6	19.9	0	3.5	0	0	6	0	1.4	0	0	0	1.6	0	0	52.5	57
Female	10.2	601	8.2	32.5	1.5	0	0	0	3.3	0	7.2	1.5	0	0	5.2	0	0	47	61
Age (months)																			
0-11	10	209	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*).	(*)	(*)	(*)	(*)	75.5	21
12-23	7.2	242	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	62	17
24-35	11.5	235	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	41.1	27
36-47	10.2	248	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	40.3	25
48-59	10.2	270	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	39.4	28
Mother's education																			
None	17	95	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*).	(*)	(*)	(*)	(*)	(*)	(*)	53.6	16
Primary	9.8	724	13.6	29.9	1.3	0	0	0	4.1	0	3.7	1.3	0	0	4.4	0	0	50.2	71
Secondary+	8.1	384	18.4	19.7	0	0	0	0	8.3	0	8.3	0	0	0	.(0)	0	0	46.4	31
Wealth index																			
Lowest	13.1	-288	12.8	21.5	2.5	0	0	.(0)	0	0	2.2	0	0	0	4.8	0	0	34.5	38
Middle	8	492	22.4	31.9	0	0	0	.(0)	2.1	0	0	2.4	0	0	3.4	0	0	58.8	39
Upper	9.8	424	13.1	25.6	0	4.9	0	0	11.2	0	10.6	0	0	0	2.2	0	0	54.8	42
Total	**9.8**	**1204**	**16.1**	**26.4**	**0.8**	**1.7**	**0**	**0**	**4.6**	**0**	**4.4**	**0.8**	**0**	**0**	**3.4**	**0**	**0**	**49.7**	**118**

Table 6.7 presents the use of antibiotics for the treatment of suspected pneumonia in under-5s by sex, age, and socioeconomic factors. About 33 per cent of children aged 0-59 months with suspected pneumonia receive antibiotics in the two weeks preceding the survey. The proportion receiving antibiotics was higher among females than males (40 versus 20 per cent).

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

Percentage of children aged 0-59 months with suspected pneumonia who received antibiotic treatment, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	Percentage of children aged 0-59 months with suspected pneumonia who received antibiotics in the last two weeks *	Number of children aged 0-59 months with suspected pneumonia in the two weeks prior to the survey
Sex		
Male	25.9	57
Female	39.9	61
Age		
0-11 months	(*)	21
12-23 months	(*)	17
24-35 months	(*)	27
36-47 months	(*)	25
48-59 months	(*)	28
Mother's education		
None	(*)	16
Primary	30.7	71
Secondary+	(40.9)	31
Wealth index		
Low	(34.7)	38
Middle	(39.9)	39
High	(25.4)	42
Total	**33.1**	**118**

***MICS indicator 22**

(*) Values are too low for any significant interpretation

Issues related to knowledge of danger signs of pneumonia are presented in Table 6.8 (CH.7A). Mothers' knowledge of the danger signs is an important determinant of care-seeking behaviour. The table shows the knowledge of pneumonia symptoms by mothers education in Makueni district.

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

Percentage of mothers/caretakers of children aged 0-59 months by knowledge of types of symptoms for taking a child immediately to a health facility, and percentage of mothers/caretakers who recognize fast and difficult breathing as signs for seeking care immediately, Makueni District, Eastern Province, Kenya MICS 2008

	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
Characteristic	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	15.7	25.6	89.4	17.4	25.3	32.2	9.7	69.2	16.5	95
Primary	21.7	39.4	91.8	23.4	27.9	23.7	13.3	55.0	20.8	724
Secondary +	22.4	40.2	92.8	28.1	33.4	27.6	16.0	57.5	26.6	384
Wealth index										
Low	24.7	41.4	90.4	23.3	28.5	24.2	14.1	52.1	19.9	288
Medium	19.4	37.4	91.0	21.4	28.3	25.4	13.0	58.5	20.6	492
High	21.5	38.1	91.0	28.7	31.3	26.8	14.7	58.4	25.9	424
Total	**21.4**	**38.6**	**91.9**	**24.4**	**29.4**	**25.6**	**13.9**	**56.9**	**22.3**	**1204**

* 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.

Overall, about 22 per cent of women know the two danger signs of pneumonia – fast and difficult breathing. Majority of mothers in Makueni district take children to a health facility if they develop a fever. Few mothers take their children to a health facility if they are drinking poorly. Children expressing other symptoms are more likely to be taken to a health facility (57 per cent). More educated mothers and those from more wealthier households are more likely to recognise the two danger signs of pneumonia.

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 the by-products of incomplete combustion, including carbon monoxide (CO), polyaromatic hydrocarbons, sulphur dioxide (SO_2), and other toxic elements. Use of solid fuels increases the risks of acute respiratory illness, pneumonia, chronic obstructive lung disease, cancer, and possibly tuberculosis, low birth weight, cataracts, and asthma.

The primary indicator is the proportion of the population using solid fuels as the primary source of domestic energy for cooking. Table 6.9 (CH.8) shows the distribution of households in Makueni district by type of cooking fuel; and percentage of households using solid fuel for cooking.

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, Makueni District, Eastern Province, Kenya MICS 2008

	Percentage of households using:										
Characteristic	Liquefied Petroleum Gas (LPG)	Natural Gas	Kero-sene	Coal/ lignite	Char-coal	Wood	Straw/ shrubs/ grass	Missing	Total	Solid fuels for cooking *	Number of house-holds
Education of household head											
None	1.1	0	1.9	0	8.8	81.5	6.7	0	100	97	230
Primary	0	0.1	1.4	0.1	6.8	83.6	7.9	0	100	98.4	639
Secondary +	0	0	1.9	0	12.7	78.6	6.1	0.7	100	97.4	268
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	3
Missing/DK	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	1
Wealth index											
Low	0	0	0	0	0	99.4	0.6	0	100	100	112
Medium	0	0	0	0	2.4	89.1	8.5	0	100	100	256
High	1.1	0.1	7.8	0	30	54.1	6.8	0	100	91	229
Total	**0.2**	**0.1**	**1.6**	**0.1**	**8.6**	**82.1**	**7.2**	**0.2**	**100**	**97.9**	**1141**

*** MICS indicator 24; MDG indicator 29**

(*) indicates that the figure is based on fewer than 25 unweighted cases and has been suppressed

Majority of households in Makueni district are using solid fuel for cooking, with wood being the most common type of fuel used by 82 per cent of the households. The use of wood for cooking is much lower among high wealth index households (54 per cent) versus other wealth index categories.

6.6 Malaria

Malaria is one of the leading causes of death of children under age five in Kenya. It also contributes to anaemia in children and is a common cause of school absenteeism. Preventive measures, especially the use of mosquito nets treated with insecticide (ITNs), can dramatically reduce malaria mortality rates among children. In areas where malaria is common, international recommendations suggest treating any fever in children as if it were malaria and immediately giving the child a full course of recommended anti-malarial tablets. Children with severe malaria symptoms, such as fever or convulsions, should be taken to a health facility. In addition, children recovering from malaria should be given extra liquids and food, while, younger children, should continue breastfeeding. The MICS 2008 questionnaire incorporated questions on the availability and use of bed nets, both at household level and among children under five years of age, as well as anti-malarial treatment, and intermittent preventive therapy for malaria. Makueni district survey results indicate that most households (67 per cent) are likely to have at least one insecticide treated net (Table 6.10 (CH.10)). Forty-two per cent of the households reported to have two or more mosquito nets yielding a mean number of 2.1 nets per household in the district.

The differentials by household characteristics indicate a positive correlation between having at least one mosquito net and the educational level of the head of the household as well as the wealth index of the household. Households from the high wealth index are more likely to own more ITNs than those from the low wealth index.

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

Percentage of households with at least one insecticide treated net (ITN), Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	Percentage of households with at least one mosquito net	Two or more mosquito nets	at least one insecticide treated net (ITN)*	Mean number of mosquito nets per household	Number of households
Education of household head					
None	69.6	44.8	69.6	2.1	231
Primary	64.4	37.8	64.1	2.0	626
Secondary +	71.9	50.0	71.9	2.3	280
Wealth index					
Low	51.6	23.6	51.6	1.7	229
Medium	66.3	42.4	66.2	2.0	410
High	75.4	50.8	75.1	2.3	503
Total	**67.4**	**42.3**	**67.2**	**2.1**	**1141**

*** MICS Indicator 36**

In Table 6.11(Ch.11), the percentage of children under five years who slept under an insecticide treated net during the previous night of the survey are presented. The results indicate that more than half of children under the age of five slept under mosquito nets the night prior to the survey. There were no significant gender disparities in ITN use among children under five in Makueni district, but there are disparities in bed net use by household wealth index in favour of children from wealthier households.

Table 6.11 (CH.11): Children sleeping under bed nets

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

Characteristic	Percentage of children who: Slept under a bed net	Slept under an insecticide treated net	Don't know if slept under a net	Did not sleep under a bed net	Number of children aged 0-59 months
Sex					
Male	52.6	52.3	0.2	47.1	603
Female	54.6	54.5	0.0	45.4	601
Age					
0-11 months	62.0	61.6	0.0	38.0	233
12-23 months	57.5	57.4	0.0	42.5	247
24-35 months	50.9	50.9	0.0	49.1	220
36-47 months	48.5	48.2	0.6	50.9	249
48-59 months	49.7	49.7	0.0	50.3	251
Wealth index					
Low	50.9	50.9	0.0	49.1	288
Medium	51.0	50.7	0.0	49.0	492
High	58.4	58.3	0.4	41.3	424
Total	**53.6**	**53.4**	**0.1**	**46.3**	**1204**

Questions on the prevalence and treatment of fever were asked of all children under age five, the results are presented in Table 6.12 (CH.12). More male children received appropriate antimalarial drugs within the first 24 hours of the onset of the malaria symptoms. Children aged 36-47 months were most likely to receive appropriate antimalarial treatment. As expected, more children from wealthier households received any appropriate anti-malarial treatment within 24 hours of onset of symptoms.

In the last two weeks prior to the MICS 2008, 24 per cent of under five children reported having had fever, majority of whom were treated with artemisinin and other antimalarial drugs. Other medications given to children who had fever included panadol, aspirin and ibuprofen, with most mothers purchasing paracetamol for their children who had fever.

Table 6.12 (CH.12): children who received 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, Makueni District, Eastern Province, Kenya 2008

Characteristic	Had a fever in last two weeks	Number of children aged 0-59 months	Children with a fever in the last two weeks who were treated with: Anti-malarial: SP/ Fansidar	Chloro-quine	Amodia-quine	Quinine	Artemisinin based combin-ations	Other anti-malarial	Any appropriate anti-malarial drug	Other medications: Paracet-amol/ Panadol/ Acetamin-ophen	Aspirin	Ibu-profen	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	23.6	603	9.0	3.8	6.3	2.3	8.5	11.5	39.4	67.3	3.5	2.1	22.3	1.8	34.6	142
Female	25.3	601	2.1	2.8	6.0	2.9	8.8	9.4	30.6	64.6	6.2	0.8	19.4	1.1	20.7	152
Age (months)																
0-11	23.4	209	4.7	3.6	4.6	4.4	1.9	13.7	28.3	53.8	3.6	2.6	32.4	3.5	16.9	49
12-23	33.2	242	6.3	4.0	9.4	3.7	12.3	8.5	40.5	67.5	6.2	3.2	21.8	1.1	32	80
24-35	22.4	235	5.2	4.0	2.6	3.3	3.1	12.8	31.1	63.3	6.8	0.7	23.6	1.6	24.7	53
36-47	20.5	248	11.8	3.3	1.7	1.7	11.7	9.4	39.6	67.7	2.4	0	11.8	1.7	35.6	51
48-59	22.7	270	0.0	1.5	10.0	0.0	11.5	9.1	32.0	74.2	4.8	0	15.1	0	25.5	58
Mother's education																
None	23	95	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	22
Primary	23.2	724	4.1	4.4	4.8	3.3	6.3	9.2	30.2	68.2	5.2	1.5	16.8	2	20.2	168
Secondary +	27.2	384	6.4	2.3	8	1.3	13.1	10.2	39.4	64.4	4.3	1.7	25.5	0	37	104
Wealth index																
Low	21.6	288	5.1	1.4	2.6	4.9	4.9	2.7	19.5	56.6	7.2	0	22.3	2.7	15.3	62
Medium	23	492	4.6	4.3	7.6	1.6	10.3	13.8	39.7	68.9	5.2	1.1	16.8	0.8	28	113
High	28	424	6.4	3.4	6.6	2.4	9.1	11.2	38.4	67.9	3.5	2.5	23.8	1.5	33.2	119
Total	**24.4**	**1204**	**5.5**	**3.3**	**6.2**	**2.6**	**8.7**	**10.4**	**34.9**	**65.9**	**4.9**	**1.4**	**20.8**	**1.5**	**27.4**	**294**

- The percentages given various drugs will not add to 100 since some children may have been given more than one type of drug.
- (*) Values in asterisk are based on fewer than 25 weighted cases

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

In Makueni district MICS 2008, women were asked if they received intermittent preventive treatment (IPT) for malaria during pregnancy in the 2 years preceding the survey. Women are considered to have received intermittent preventive therapy if they received at least 2 doses of SP/Fansidar during pregnancy. Intermittent preventive treatment for malaria among pregnant women who gave birth in the two- years preceding the survey is presented in Table 6.13 (CH.13).

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, Makueni District, Eastern Province, Kenya 2008

Characteristic	Percentage of pregnant women who took:						Number of women who gave birth in prior two years
	Medicine to prevent malaria during pregnancy	SP/Fansidar only one time	SP/Fansidar two or more times*	Chloroquine	Other medicines	Don't know	
Education							
None	(69.8)	(47.8)	(15.5)	(0.0)	(6.5)	(0.0)	20
Primary	69.5	42.2	21.3	0.0	2.5	3.5	243
Secondary +	67.9	42.0	18.5	0.6	4.3	3.0	135
Wealth index							
Low	63.2	38.6	19.8	0.0	0.0	4.7	91
Medium	69.6	43.1	21.3	0.0	2.3	2.9	148
High	71.7	43.9	19.1	0.5	6.1	2.5	159
Total	**69.0**	**42.4**	**20.1**	**0.2**	**3.3**	**3.2**	**398**

The results indicate that 69 per cent of mothers who delivered a child during the two-year period preceding the survey received medicine to prevent malaria during pregnancy. Over forty-two per cent received SP/Fansidar only once, while about twenty per cent (20) reported using SP/fansidar two or more times. There were no major differentials by educational level and household wealth index in the use of intermittent preventive treatment for malaria during pregnancy.

7.1 Water

Poor sanitation, water and hygiene have many serious repercussions especially in the developing economies where children – and particularly girls – are denied their right to education because their schools lack private and decent sanitation facilities. Women are forced to spend large parts of their day fetching water. Poor farmers and wage earners are less productive due to illness, health systems are overwhelmed and national economies suffer. Without WASH (water, sanitation and hygiene), sustainable development is impossible.

Safe drinking water is a basic necessity 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, especially in rural areas, who bear the primary responsibility for carrying water, often for long distances.

One of the MDG goals (target 30 and 31) is to reduce by half, between 1990 and 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation. The 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 list of indicators used in MICS is as follows:

Water

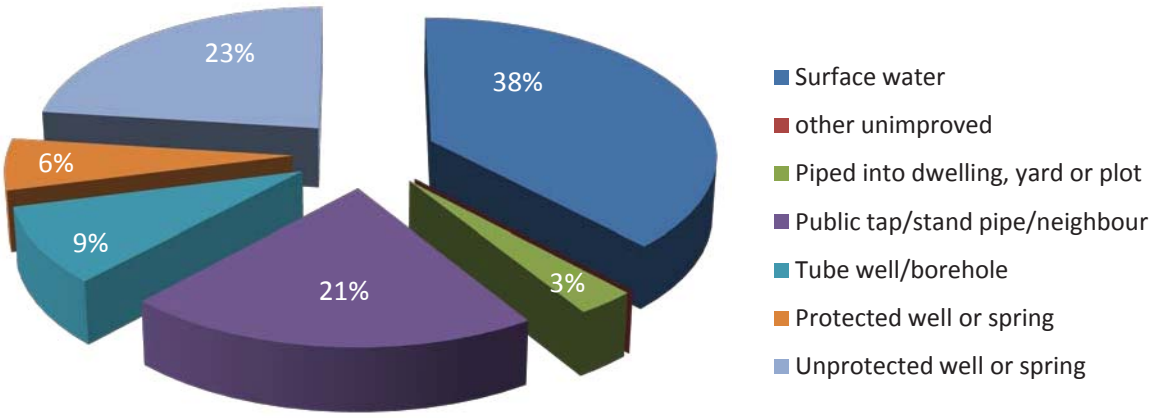
- Use of improved drinking water sources
- Use of adequate water treatment method
- Time to source of drinking water
- Person collecting drinking water

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 (EN.1). The population using *improved sources* of drinking water are those using any of the following types of supply: piped water (into dwelling, yard or plot), public tap/standpipe, tube well/borehole, protected well, protected spring, and 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.

Figure 7.1: Percentage distribution of household members by source of drinking water



Overall, 40 per cent of the population is using an improved source of drinking water in Makueni district with a higher percentage of the population with no education (41 per cent) more likely to use improved sources compared to their counterparts with primary and secondary education (38 per cent each). However, as would be expected, use of improved sources of water increases with the level of wealth index (28 per cent among the low wealth index versus 48 per cent among those from the high wealth index households).

Table 7.1 (EN1): Use of improved water sources

Percentage distribution of household population according to main source of drinking water and percent of household population using improved drinking water sources, Makueni District, Kenya MICS 2008

	Main source of drinking water																	
	Improved sources									Unimproved sources								
Characteristic	Piped into dwelling	Piped into yard or plot	Public tap/ stand pipe	Piped water from neighbour	Tube well/ borehole with pump	Tube well/ borehole with powered pump	Protected well	Protected Spring	Rain water collec-tion	Unprote cted well	Unprote cted Spring	Tanker-truck	Cart with small tank	Surface water	Other	Total	Improved source of drinking water	Number of household members
Education of household head																		
None	2.3	3.9	15.6	3.1	9.1	2.6	5.6	1.9	3.0	3.5	11.9	0.2	0.7	36.3	0.4	100	47.1	1142
Primary	1.2	0.6	17.8	2.6	8.2	0.6	2.5	2.7	1.6	7.4	15.6	0	1.2	37.3	0.5	100	38.0	3433
Secondary +	1.3	2.1	17.7	2.5	4.5	0.7	5.1	1.1	3.0	6.7	17.6	0.2	1.3	36.1	0.1	100	38.1	1479
Non-standard curriculum	29.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	70.5	0.0	100	29.5	25
Missing/DK	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	3
Wealth index																		
Low	0.0	0.0	14.0	1.0	7.8	0.6	2.3	2.1	0.0	10.1	14.7	0.0	2.1	45.2	0	100	27.9	1285
Middle	1.0	0.0	16.0	3.9	10.6	0.6	3.7	1.9	0.0	5.2	17.5	0.0	0.7	38.4	0.6	100	37.6	2367
High	3.0	4.0	20.4	2.4	4.2	1.7	4.5	2.4	5.5	5.8	13.5	0.2	1.0	31.2	0.4	100	48.0	2431
Total	**1.6**	**1.6**	**17.4**	**2.7**	**7.4**	**1.0**	**3.7**	**2.2**	**2.2**	**6.5**	**15.3**	**0.1**	**1.1**	**36.9**	**0.4**	**100**	**39.7**	**6083**

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

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

Use of in-house water treatment is presented in Table 7.2 (EN.2). Households were asked of ways they may be treating water at home to make it safer to drink – boiling, adding bleach or chlorine, using a water filter, and using solar disinfection were considered as proper treatment of drinking water. The table shows the percentage of household members using appropriate water treatment methods, separately for all households, and for households using improved and unimproved drinking water sources.

Thirty nine per cent of households in Makueni are using an appropriate method to treat all drinking water both from improved and unimproved water sources, while majority of households (59.1 per cent) are not treating their drinking water in Makueni district. When asked about the methods used to treat drinking water, 27 per cent were adding chlorine or bleaching, while 16 per cent reported boiling the water. Overall, 40 per cent of households are using an appropriate method of treating drinking water from all sources.

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, Makueni District, Eastern Province, Kenya MICS 2008

	Water treatment method used in the household							All drinking water sources		Improved drinking water sources		Unimproved drinking water sources	
Characteristic	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	52.7	21.5	31.2	0.0	0.3	1.7	2.3	44.1	1142	38.5	503	48.4	639
Primary	66.1	12.3	21.5	0.1	1.0	0.1	1.6	32.5	3433	33.9	1213	31.7	2220
Secondary +	48.8	18.5	35.3	0.5	0.7	0.0	2.9	50.3	1479	49.0	526	51.0	954
Wealth index													
Low	80.4	8.5	11.0	0.5	0.3	0.6	2.7	18.2	1285	10.8	345	20.9	940
Medium	63.7	14.1	20.8	0.0	1.4	0.1	2.8	34.1	2367	30.6	799	36.0	1568
High	43.3	21.2	40.7	0.2	0.5	0.5	1.5	55.4	2431	53.1	1108	57.3	1322
Total	**59.1**	**15.7**	**26.7**	**0.2**	**0.8**	**0.3**	**2.2**	**39.3**	**6083**	**38.6**	**2252**	**39.6**	**3831**

***MICS indicator 13**

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

Note that these results refer to one roundtrip from home to drinking water source. Information on the number of trips made in one day was not collected.

The amount of time it takes to obtain water is presented in Table 7.3 (EN.3) and the person who usually collected the water in Table 7.4 (EN.4).

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, Makueni District, Eastern Province, Kenya 2008

	Time to source of drinking water							
Characteristic	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	Total	Mean time to source of drinking water	Number of households
Education of household head								
None	14.3	11.2	13.3	24.3	36.9	100	61.4	230
Primary	5.9	12.1	15.1	28.7	38.2	100	56.4	639
Secondary +	9.8	15	13.9	27.5	33.7	100	53.2	268
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)		(*)
Missing/DK	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Wealth index								
Low	1	10.3	13.6	32.2	42.9	100	58.5	248
Medium	1.6	13.5	16.1	27.8	41	100	63.1	424
High	18.9	12.9	13.3	24.9	30	100	48.5	469
Total	**8.6**	**12.6**	**14.4**	**27.6**	**36.9**	**100**	**56.7**	**1141**

*The mean time to source of drinking water is calculated based on those households that do not have water on the premises.

(*) means that the values are too low for statistical significance

Table 7.3 shows that less than 10 per cent of households have the drinking water source on their premises in Makueni. This implies that majority of households have to take time to reach their source of drinking water. For 13 per cent of all households, it takes less than 15 minutes to get to the water source and bring water; 28 per cent spend 30-60 minutes, while for the majority (37 per cent) they spend more than 1 hour. Excluding those households with water on the premises, the average time to the source to bring drinking water is almost one hour (57 minutes).

Table 7.4 shows that for the majority of households, an adult female is usually the person collecting the water, when the source of drinking water is not on the premises. Adult men collect water in 32 per cent of households, while women collected in 78 per cent of the cases. This implies that women in Makueni are more than three times likely to fetch water for the household than their male counterparts. The same trend is seen for teenagers under 15 years, with females more likely to fetch water than males (11.5 per cent and 14.3 per cent respectively). This result has implications for school attendance for the female students, since they are more involved in domestic chores like fetching water.

Table 7.4 (EN.4): Person collecting water

Percentage distribution of households according to the person collecting drinking water used in the household, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	Person collecting drinking water*								Number of households
	Adult woman	Adult man	Female child under age 15	Male child under age 15	Adult woman and child	Adult man and child	Adult man and woman	Don't know	
Education of household head									
None	74.5	26.9	7.7	9.2	12.9	4.8	15.7	.0	230
Primary	81.2	33.0	10.9	12.2	15.3	7.9	20.7	.0	639
Secondary +	73.8	32.4	11.4	11.8	13.1	5.6	18.6	.0	268
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	3
Missing/DK	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	1
Wealth index									
Low	86.6	30.4	11.9	14.6	17.9	5.4	18.8	.0	248
Medium	86.2	33.0	12.9	14.7	18.7	9.6	21.9	.0	424
High	66.3	31.0	7.3	7.0	8.4	4.8	17.2	.0	469
Total	**78.1**	**31.6**	**10.4**	**11.5**	**14.3**	**6.7**	**19.3**	**.0**	**1141**

*Total per cent may add to more than 100.0 due to multiple responses.
(*) Implies that the values are too low for analysis, being less than 25 per cent of weighted cases

7.2 Sanitation

Poor sanitation owing to poor disposal for solid waste and human waste is a common cause of communicable diseases including diarrhoeal diseases 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.

About fifty-one per cent of the population of Makueni district is living in households using sanitary means of disposing excreta (Table 7.5 (EN.5)). Use of improved sanitation facilities is strongly correlated with household wealth index. The main improved sanitation facility in use by most households is the pit latrine with slab (35 per cent). Majority of the households in Makueni, (44 per cent), use pit latrines without slab or an open pit.

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

Percentage distribution of household population according to type of toilet facility used by the household, and the percentage of household population using sanitary means of excreta disposal, Makueni District, Eastern Province, Kenya MICS 2008

	Type of toilet facility used by household													
	Improved sanitation facility						Unimproved sanitation facility							
	Flush/pour flush to:													
Characteristic	Septic tank	Pit latrine	Ventilated improved pit latrine	Pit latrine with slab	Pit latrine with slab and cover	Compos-ting toilet	Flush to unknown place/not sure/DK where	Pit latrine without slab/ open pit	No facilities or bush or field	Other	Missing	Total	Percentage of population using sanitary means of excreta disposal*	Number of household members
Education of household head														
None	0.3	0.0	10.4	32.3	8.5	0.0	0.2	39.5	8.8	0.0	0.0	100.0	51.5	1142
Primary	0.1	0.1	4.5	33.0	8.2	0.2	0.2	48.8	4.3	0.5	0.0	100.0	46.2	3433
Secondary +	0.0	0.0	8.8	41.1	11.3	0.0	0.1	37.2	1.5	0.0	0.1	100.0	61.1	1479
Non-standard curriculum	(0.0)	(0.0)	(0.0)	(2.9)	(0)	(0)	(0)	(70.5)	(0)	(0)		(100.0)	(29.5)	25
Missing/DK	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)		(*)	(*)	3
Wealth index														
Low	0.0	0.0	0.3	24.9	2.1	0.3	0.0	58.1	14.2	0.0	0.0	100.0	27.7	1285
Medium	0.0	0.0	1.7	33	8.4	0.2	0.0	54.1	2.5	0.1	0.0	100.0	43.3	2367
High	0.2	0.1	14.8	41.9	13.2	0.0	0.5	27.4	1.2	0.6	0.0	100.0	70.2	2431
Total	**0.1**	**0.0**	**6.6**	**34.8**	**9.0**	**0.1**	**0.2**	**44.3**	**4.5**	**0.3**	**0.0**	**100.0**	**50.7**	**6083**

Safe disposal of a child's faeces is disposing off the stool using a toilet or by rinsing the stool into a toilet or latrine. Disposal of faeces of children 0-2 years of age is presented in Table 7.6 (EN.6).

In 80 per cent of households in Makueni district, stool for children aged 0-2 years is disposed off safely, with 75 per cent of them reportedly putting or rinsing the stool in the toilet/latrine as the main mode of disposal. However, about 11 per cent of the child's stools are disposed off by being thrown into the garbage, which is a sign of poor hygiene and sanitation.

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, Makueni District, Eastern Province, Kenya MICS 2008

	Place of disposal of child's faeces									Proportion of children whose stools are disposed of safely	Number of children aged 0-2 years
Characteristic	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	(1.7)	(66.1)	(0.0)	(22.2)	(0.0)	(5.2)	(1.9)	(2.8)	(100)	(67.8)	48
Primary	4.9	74.0	4.4	10.2	0.9	3.0	1.8	0.3	100	79.0	424
Secondary +	6.4	77.1	3.7	9.2	0.7	0.6	2.0	0.3	100	83.5	245
Wealth index											
Low	5.3	63.1	5.6	16.7	2.8	3.1	3.3	0.0	100	68.4	173
Medium	6.5	75.3	4.4	8.1	0.0	2.4	1.9	0.9	100	81.8	282
High	3.8	81.3	2.1	9.5	0.3	1.8	0.9	0.3	100	85.1	261
Total	**5.2**	**74.5**	**3.9**	**10.7**	**0.8**	**2.3**	**1.9**	**0.5**	**100**	**79.8**	**717**

The use of improved water sources and improved sanitation by households in Makueni district is reported in Table 7.7 (EN.7). The percentage of household population using improved sources of drinking water and using sanitary means of disposal is 35 per cent. This proportion increases with an increase in the wealth of the household, with 22 per cent of household population belonging to low wealth index using improved sources of drinking water and sanitary means of excreta disposal as opposed to 42 per cent in case of high wealth index category.

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, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	Percentage of household population: Using improved sources of drinking water	Using sanitary means of excreta disposal	Using improved sources of drinking water and using sanitary means of excreta disposal	Number of household members
Education of household head				
None	47.1	83.1	38.2	1142
Primary	38.0	87.9	33.8	3433
Secondary +	38.1	88.1	33.9	1479
Non-standard curriculum		(*)	(*)	(*)
Missing/DK		(*)	(*)	(*)
Wealth index				
Low	27.9	83.9	21.7	1285
Medium	37.6	90.0	34.5	2367
High	48.0	85.9	41.7	2431
Total	**39.7**	**87.1**	**34.6**	**6083**

Reproductive Health 8

This chapter presents information about fertility, marriage, contraception, unmet need for contraceptives and antenatal care collected from women aged 15-49 years in the Makueni district MICS 2008.

8.1 Fertility

Achieving national goals is directly linked to the size of a country's population and the resources available to support it. Studies have shown that, in most developing countries, resources are meagre and hence it is very important to balance population growth with availability of resources. To achieve this, 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 2008, 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(RH (A) presents the measures of current fertility levels in Makueni district for the three-year period preceding the survey; from mid-2005 to mid-2008. Current fertility measures such as age-specific fertility rates (ASFRs) and total fertility rate (TFR) are shown. Age specific fertility rates are calculated by dividing the number of births by women in a specific age group, by the number of women years lived during a given period. Total fertility rate is defined as the average number of children a woman would have if she went through her entire reproductive period (15-49 years) while reproducing at the prevailing age specific fertility rates.

Table 8.1: Current fertility

Age specific fertility rates (ASFR) and total fertility rate (TFR) for the 3-year preceding the survey, Makueni District, Eastern Province, Kenya MICS 2008

Age group	Total
15-19	88
20-24	287
25-29	249
30-34	189
35-39	141
40-44	45
45-49	12
TFR	**5.1**

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

The total fertility rate in Makueni district is 5.1 children per woman, for the three year period preceding the survey. As seen from Table 8.1, fertility peaks at ages 20-24 years and then declines gradually. 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. This group contributes to more than half of the total children ever born in the district. Teenage fertility contributes less than 10 per cent of the total births.

Table 8.2 presents the percentage distribution of all women, and currently married women, based on the number of children ever born and living. The mean number of children ever born to married women aged 15-49 years is 4.2, while those that were reported as surviving are 4.0. Overall,

about 41 per cent of currently married women aged 45-49 years, reported having given birth to 8 or more children implying a high fertility regime for the older 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, Makueni District, Eastern Province, Kenya MICS 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	88.8	10.4	.7	0.0	0.0	0.0	0.0	0.0	0.0	100.0	314	1.1	1.0
20-24	23.5	38.9	22.3	13.2	1.8	.3	0.0	0.0	0.0	100.0	205	1.8	1.7
25-29	5.7	15.3	22.1	33.6	13.4	6.9	2.1	1.0	0.0	100.0	233	2.9	2.8
30-34	.5	10.8	11.8	25.6	25.0	11.8	9.6	3.5	1.4	100.0	156	3.8	3.6
35-39	1.9	2.8	6.0	10.5	23.0	19.7	13.1	13.5	9.6	100.0	181	5.3	4.9
40-44	.7	1.5	6.9	4.4	10.8	26.1	3.6	11.6	34.5	100.0	95	7.0	6.5
45-49	2.6	4.5	4.4	6.6	9.1	11.1	15.5	8.5	37.7	100.0	123	7.8	7.2
Total	**26.6**	**13.5**	**10.8**	**13.5**	**10.5**	**8.4**	**5.1**	**4.1**	**7.5**	**100.0**	**1307**	**4.2**	**4.0**
Currently Married Women													
15-19	32.9	58.0	9.2							100.0	25	0.8	0.7
20-24	4.6	41.6	31.4	18.9	2.8	.6				100.0	128	1.8	1.7
25-29	2.9	13.4	22.6	35.4	15.1	7.1	2.4	1.1		100.0	202	2.9	2.7
30-34		5.9	10.5	26.3	30.2	11.4	9.1	4.6	1.8	100.0	119	4.0	3.8
35-39		2.7	3.5	11.3	23.6	22.0	14.8	11.8	10.4	100.0	154	5.3	4.9
40-44	.9	1.8	5.0	2.6	10.5	29.0	2.1	13.3	34.7	100.0	78	7.1	6.6
45-49		4.9	5.0	6.7	11.4	10.7	12.7	8.2	40.5	100.0	90	7.8	7.3
Total	**2.6**	**14.0**	**14.4**	**19.2**	**15.7**	**11.9**	**6.5**	**5.5**	**10.2**	**100.0**	**795**	**4.2**	**4.0**

8.2 Teenage Pregnancy and Motherhood

Reducing pregnancy rates among adolescents is one of the flagship programs of the Government of Kenya. The proportion of women aged 15-19 years currently pregnant with their first child and those who have began child bearing, by selected characteristics in Makueni district are shown in Table 8.3.

The results indicate that about 15 per cent of teenagers in Makueni district have already begun childbearing, 11 per cent of women of this age have had a live birth.

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, Makueni District, Eastern Province, Kenya MICS 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	1.0	6.2	7.3	70
16	4.6	0.0	4.6	72
17	5.6	0.0	5.6	67
18	21.1	6.3	27.3	57
19	(31.8)	(6.2)	(37.9)	49
Education				
None	(*)	(*)	(*)	3
Primary	11.7	3.0	14.7	195
Secondary +	9.9	2.6	12.5	116
Wealth index				
Low	6.3	4.5	10.8	63
Medium	13.2	5.5	18.7	134
High	11.5	0.6	12.1	117
Total	**11.2**	**3.5**	**14.6**	**314**

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

8.3 Contraception

Access to appropriate family planning is important to the health of women and children by: 1) preventing pregnancies that are too early or too late; 2) extending the period between births; and 3) limiting the number of children. A World Fit for Children goal is to increase access by all couples to information and services to prevent pregnancies that are too early, too closely spaced, too late or too many.

Table 8.4 (RH.1) shows the current use of contraception by women aged 15-49 years who are currently married or in union. Overall, contraceptive prevalence in Makueni district is 40 per cent. Slightly over one third of married women are using modern methods of contraception. The most popular modern methods in use are injections (19 per cent) and the pill (nine per cent).

The table also shows that use of any method as well as use of any modern method, increases with increasing levels of education level and the household wealth index. The percentage using any method increases with age but it starts declining at age 40. However, contraceptive use peaks at ages 35-39 (55 per cent).

8.4 Unmet Need

Unmet need[7] 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 those who are currently married (or in union), fecund (are currently pregnant or think that they are physically able to become pregnant), currently not using contraception, and want to space their births. Pregnant women are considered to want to space their births, if 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 a (another) child, but want to have the child at least two years later, or after marriage.

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

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

Table 8.4 (RH.1) indicates that majority of married women in Makueni district are not using any method of contraception. However, thirty five per cent of the women are using modern methods of contraception, and more than two fifths are using a method of contraception.

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

Table 8.4 (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, Makueni District, Eastern Province, Kenya MICS 2008

		Percentage of women (currently married or in union) who are using:													
Characteristic	Not using any method	Female sterili-zation	Pill	IUD	Inject-ions	Imp-lants	Con-dom	Diaphragm /foam/ jelly	LAM	Other	Total	Any modern method	Any traditional method	Any method*	Number of women
Age															
15-19	(76.2)	(0.0)	(0.0)	(0.0)	(19.7)	(0.0)	(1.3)	(0.0)	(2.8)	(0.0)	(100)	(20.9)	(2.8)	(23.8)	25
20-24	71.8	0.0	8.1	0.0	17.0	0.5	0.0	0.0	2.6	0.0	100	25.6	2.6	28.2	128
25-29	61.7	1.2	9.2	0.9	20.9	0.3	0.0	0.4	5.1	0.4	100	32.8	5.4	38.3	202
30-34	48.2	3.2	12.6	0.0	23.5	2.3	1.9	0.0	8.2	0.0	100	43.6	8.2	51.8	119
35-39	44.6	6.6	12.7	0.5	22.3	2.7	0.7	0.0	8.9	1.1	100	45.4	10.0	55.4	154
40-44	58.2	12.6	9.9	0.0	13.9	0.0	1.8	0.0	1.0	2.7	100	38.2	3.7	41.8	78
45-49		75.5	5.9	2.3	3.0	10.4	0.0	0.0	0.0	0.4	100.0	21.5		2.9	24.5
Number of living children**															
0	90.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	100	10.0	0.0	10.0	26
1	77.3	0.0	4.9	0.0	14.5	0.6	0.0	0.0	2.7	0.0	100	20.0	2.7	22.7	114
2	61.4	0.0	10.4	0.6	22.7	0.6	0.0	0.0	3.7	0.7	100	34.2	4.3	38.6	119
3	53.7	1.7	11.3	2.3	21.5	2.1	0.0	0.0	7.4	0.0	100	38.9	7.4	46.3	163
4+	54.2	7.7	9.8	0.2	19.5	0.9	0.7	0.2	5.7	1.1	100	39.0	6.7	45.8	373
Education															
None	64.7	4.8	9.5	0.0	18.0	0.0	0.0	0.0	3.0	0.0	100	32.4	3.0	35.3	57
Primary	61.6	3.6	8.9	0.4	19.3	0.5	0.4	0.1	4.8	0.4	100	33.2	5.1	38.4	485
Secondary +	54.8	4.3	9.7	1.3	18.7	2.3	1.3	0.0	6.3	1.2	100	37.7	7.5	45.2	252
Wealth index															
Low	66.9	2.4	7.9	0.0	14.7	0.5	0.9	0.5	3.6	2.5	100	26.9	6.1	33.1	147
Medium	64.7	2.5	8.9	0.4	15.1	1.0	1.1	0.0	5.9	0.3	100	29.0	6.3	35.3	318
High	51.6	6.0	10.0	1.2	24.7	1.4	0.1	0.0	5.0	0.0	100	43.3	5.0	48.4	330
Total	**59.7**	**3.9**	**9.2**	**0.7**	**19.0**	**1.0**	**0.6**	**0.1**	**5.1**	**0.6**	**100**	**34.6**	**5.7**	**40.3**	795

Note: Male sterilization, female condoms and periodic abstinence methods are used by less than 0.05 per cent and are not shown.

(*) Values are less than 25 per cent of weighted cases

Using information on contraception and unmet need, the percentage of demand for contraception satisfied is also estimated from the MICS data. This percentage 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 (RH.2) shows the results of the survey on unmet need for contraception, and the demand for contraception satisfied. Overall in Makueni district, the demand for contraception satisfied stood at 91 per cent, whereas 40 per cent of currently married women in the district are using contraception.

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, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	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	(23.8)	(5.6)	(0.0)	(5.6)	25	(*)	7
20-24	28.2	5.7	0.0	5.7	128	83.1	43
25-29	38.3	3.5	0.3	3.9	202	90.8	85
30-34	51.8	2.4	3.7	6.1	119	89.5	69
35-39	55.4	3.4	0.7	4.1	154	93.1	91
40-44	41.8	0.0	1.8	1.8	78	(*)	34
45-49	24.5	0.0	0.0	0.0	90	(*)	22
Education							
None	35.3	3.6	1.2	4.8	57	(*)	23
Primary	38.4	3.1	1.2	4.4	485	89.8	207
Secondary +	45.2	2.6	0.4	3.0	252	93.8	122
Wealth index							
Low	33.1	1.9	1.4	3.3	147	90.9	54
Medium	35.3	3.6	0.9	4.5	318	88.7	126
High	48.4	2.9	0.8	3.7	330	92.8	172
Total	**40.3**	**3.1**	**1.1**	**4.1**	**795**	**91.1**	**352**

*** MICS indicator 21; MDG indicator 19C**
****** MICS indicator 98**
******* MICS indicator 99**
** 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.
(*) Values are less than 25 per cent of weighted cases

8.5 Antenatal Care

The antenatal period presents important opportunities for reaching pregnant women with a number of interventions that may be vital to their health and well-being, and that of their infants. Better understanding of foetal growth and development and its relationship to the mother's health has resulted in increased attention to the potential of antenatal care as an intervention to improve both maternal and newborn health. For example, if the antenatal period is used to inform women and families about the danger signs or symptoms and the risks during 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.

Antenatal care provides women with opportunity to get information on birth spacing; get tetanus immunisation; prevention and treatment of malaria; treatment of anaemia; blood testing and blood pressure measurement; all which help to improve the health of the mother and that of the unborn child. 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 of 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)

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

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, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	Person providing antenatal care**				No antenatal care	Total	Antenatal care by any skilled personnel*	Number of women who gave birth in the preceding two years
	Medical doctor	Nurse/ midwife	Traditional birth attendant	Other				
Age								
15-19	(68.6)	(17.2)	(0.0)	(0.0)	(14.2)	(100)	(85.8)	34
20-24	54.3	36.2	0.9	0.6	7.3	100	90.6	117
25-29	59.3	32.1	2.1	1.2	5.3	100	91.4	115
30-34	72.5	23.6	0.0	0.0	3.5	100	96.1	66
35-49	60.2	28.6	1.7	0.0	8.5	100	88.8	66
Education								
None	(59.3)	(37.3)	(0.0)	(0.0)	(3.4)	(100)	(96.6)	20
Primary	62.4	28.0	1.2	0.0	7.1	100	90.4	243
Secondary +	58.5	32.7	1.3	0.5	7.0	100	91.2	135
Wealth index								
Low	58.9	29.5	3.1	0.0	6.2	100	88.4	91
Medium	60.4	31.3	0.0	0.5	7.6	100	91.7	148
High	62.7	29.1	1.1	0.0	6.6	100	91.8	159
Total	**61.0**	**30.0**	**1.1**	**0.2**	**6.9**	**100**	**91.0**	**398**

*** MICS indicator 20**

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

** If the respondent mentioned more than one provider, only the most qualified provider is considered

Other includes community health worker

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

The types of services pregnant women received while attending antenatal clinics, for those who gave birth in the two years preceding the survey are shown in Table 8.7 (RH.4).

Among women who gave birth to a child during the two years preceding the survey, 93 per cent reported that their blood sample was taken during antenatal care visits, 74 per cent reported that their blood pressure was checked, 84 per cent reported that their urine specimen was taken, while 59 per cent reported their weight being measured. The differentials by the education level of mothers clearly show a general increasing trend in the different types of services received with an increase in the level of education.

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, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	Percentage of pregnant women who had:					Number of women who gave birth in two years preceding survey
	Blood sample taken	Blood test taken*	Blood pressure measured*	Urine specimen taken*	Weight measured*	
Age						
15-19	(85.8)	(76.9)	(69.8)	(59.5)	(83.8)	34
20-24	92.7	74.2	81.1	59.3	90.9	117
25-29	94.7	72.2	88.0	53.6	91.4	115
30-34	96.5	83.1	91.1	69.9	96.5	66
35-49	91.5	65.9	80.4	56.7	88.3	66
Education						
None	(96.6)	(85.5)	(96.6)	(69.2)	(96.6)	20
Primary	92.9	68.0	81.6	51.4	90.2	243
Secondary +	93.0	82.9	85.5	71.1	91.4	135
Wealth index						
Low	93.8	65.5	78.1	44.9	89.1	91
Medium	92.4	74.1	84.5	60.1	91.5	148
High	93.4	78.6	86.1	65.9	91.4	159
Total	**93.1**	**73.9**	**83.7**	**59.0**	**90.9**	**398**

- Proportions are calculated separately: Total number of women weighed, blood pressure measured, gave urine sample, and gave blood sample.
- (*) Based on values that are less than 25 per cent of unweighted cases

8.6 Assistance at Delivery

Three quarters of all maternal deaths occur during delivery and the immediate post-partum period. The single most critical intervention for safe motherhood is to ensure a competent health worker with midwifery skills is present at every birth, and that transport is also available to a referral facility for obstetric care in case of emergency. A World Fit for Children goal is to ensure that women have ready and affordable access to skilled attendance at delivery. The indicators are the proportion of births with a skilled attendant and proportion of institutional deliveries. The skilled attendant at delivery indicator is also used to track progress toward the Millennium Development target of reducing the maternal mortality ratio by three quarters between 1990 and 2015. The MICS 2008 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.

From the table, 36 per cent of births occurring during the two years preceding the MICS 2008 were delivered by skilled personnel (Table 8.8 (RH.5)). Skilled delivery in Makueni district is one of the lowest in the Province. For women who received antenatal care from skilled personnel, a third of them delivered in a health facility. Twenty-three per cent of the women were assisted by doctors, while majority were assisted by traditional birth attendants (40 per cent). This is a high number of

women exposed to unskilled delivery care, since traditional birth attendants are not recognised by the government to be skilled health professionals.

The data also show that the more educated a woman is, the more likely she is to have delivered with the assistance of skilled personnel. A similar trend is observed with the level of wealth index, for example only 18 per cent of the women who belong to low wealth index household were attended too by skilled personnel compared to 52 per cent belonging to the high 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, Makueni District, Eastern Province, Kenya MICS 2008

	Person assisting at delivery										
Characteristic	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	(39.1)	(13.3)	(32.6)	(2.8)	(8.2)	(2.1)	(2.0)	(100)	(52.4)	(50.3)	34
20-24	21.7	12.1	41.4	3.1	19.3	1.2	1.2	100	33.9	29.9	117
25-29	21.2	15.8	38.1	4.4	13.2	2.9	4.4	100	37	33	115
30-34	24.8	16	41.3	1.9	7.2	3.6	5.2	100	40.8	36.4	66
35-49	17.5	7.9	41.6	1.1	19.2	2.1	10.6	100	25.4	25.4	50
Education											
None	(27.0)	(25.0)	(37.8)	(3.4)	(3.4)	(3.4)	(0.0)	(100)	(51.9)	(44.7)	20
Primary	14.6	7.9	45.9	3.8	18.4	3.1	6.2	100	22.5	20.4	243
Secondary +	37.2	21	28.8	1.2	9.3	0.7	1.8	100	58.2	53.6	135
Wealth index											
Low	12.7	5	52.8	1.5	19.1	2	6.9	100	17.7	15.3	91
Medium	17.3	13.1	41.1	4.2	17	2.1	5.1	100	30.5	28.3	148
High	33.9	17.9	31	2.4	9.7	2.7	2.3	100	51.8	47.1	159
Total	**22.9**	**13.2**	**39.7**	**2.9**	**14.6**	**2.3**	**4.4**	**100**	**36.1**	**32.9**	**398**

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

Child Development 9

9.1 Child Learning

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

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

For 46 per cent of children aged under-five in Makueni district, an adult engaged in about four activities that promote learning and school readiness during the 3 days preceding the survey (Table 9.1 (CD.1)). Household members are more likely to engage in about three activities with children under five years of age in their household. Fathers were less likely to be involved in such activities, with only 20 per cent reporting such engagements. This means that it is still female members of the households who engage in early childhood development activities. The table also indicates that the father's involvement in such activities was somewhat limited.

The results also indicate that a very high proportion (49 per cent) of children were living in a household without their natural fathers. This may be an indication of out-migration of the men in the community in search of economic opportunities in other towns.

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, Makueni District, Eastern Province, Kenya 2008

Characteristic	Percentage of children aged 0-59 months: For whom household members engaged in four or more activities that promote learning and school readiness*	Mean number of activities household members engage in with the child	For whom the father engaged in one or more activities that promote learning and school readiness**	Mean number of activities the father engaged in with the child	Living in a household without their natural father	Number of children aged 0-59 months
Sex						
Male	46.6	3.3	20.5	0.5	51.7	603
Female	44.4	3.3	20.3	0.4	45.9	601
Age						
0-23 months	21.8	2.3	14.8	0.3	50.1	479
24-59 months	61.2	3.9	24.1	0.6	48.0	725
Mother's education						
None	45.2	3.3	7.2	0.2	74.1	95
Primary	44.9	3.2	19.7	0.4	42.8	724
Secondary +	46.7	3.4	25	0.6	53.8	384
Father's education						
None	(35.6)	3.0	(61.4)	1.3	0.0	35
Primary	46.1	3.2	31.5	0.7	0.0	385
Secondary +	50.5	3.5	46.8	1.1	0.0	194
Father not in HH	44.2	3.3	2.0	0.0	100	588
Wealth index						
Low	38.0	2.8	14.7	0.3	45.9	288
Medium	47.3	3.4	19.9	0.5	48.5	492
High	48.5	3.5	24.9	0.6	51.1	424
Total	**45.5**	**3.3**	**20.4**	**0.5**	**48.8**	**1204**

***MICS indicator 46**
* Any adult has engaged in 4 or more activities to promote learning and school readiness in the past 3 days.
***MICS indicator 47**
** Father has provided one or more activities to promote learning and school readiness.

Note: Figures in parentheses are based on 25-49 unweighted cases.

10.1 Pre-School Attendance and School Readiness

Pre-school attendance in an organized learning or child education program, is important for the readiness of children to school. One of the World Fit for Children goals is the promotion of early childhood education.

Twenty eight per cent of children aged 36-59 months are attending pre-school (Table 10.1 (ED.1)). Surprisingly, more female children (32 per cent) are reportedly attending early childhood education compared with male children (23 per cent). Majority of children currently in first grade had attended pre-school the year before, indicating a high transition rate from pre-school to primary level education in Makueni district. The attendance of early childhood education increases with increasing levels of education of mothers.

Female participation in standard one is slightly higher (94 per cent) than that of males (88 per cent) in Makueni.

Table 10.1 (ED.1): Early childhood education

Percentage of children aged 36-59 months who are attending some form of organized early childhood education programme and percentage of first graders who attended pre-school, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	Percentage of children aged 36-59 months currently attending early childhood education*	Number of children aged 36-59 months	Percentage of children attending first grade who attended preschool program in previous year**	Number of children attending first grade
Sex				
Male	23.3	255	(88.4)	41
Female	32.1	249	94.1	43
Age of child				
36-47 months	9.9	249	NS	0
48-59 months	45.1	255	NS	0
6 years*	NS	0.0	91.3	84
Mother's education				
None	16.2	(34)	100	(*)
Primary	25.2	330	90.7	51
Secondary +	35.2	141	(89.6)	25
Wealth index				
Low	24.4	122	(*)	21
Medium	23.1	215	(89.1)	34
High	35.2	167	(94.1)	28
Total	**27.6**	**500**	**91.3**	**84**

***MICS indicator 52**
****MICS indicator53**

NOTE: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
Figures in parentheses are based on 25-49 unweighted cases.
*** 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.
(*): Not applicable; NS: Not shown, based on less than 25 un-weighted cases.

10.2 Primary and Secondary School Participation

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

The 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 of school progression include:

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

Table 10.2 (ED.2): Primary school entry

Percentage of children of primary school entry age (6 years old) attending grade 1, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	Percentage of children of primary school entry age currently attending grade 1*	Number of children of primary school entry age
Sex		
Male	49.1	90
Female	57.4	98
Mother's education		
None	(*)	18
Primary	45.8	120
Secondary +	68.6	48
Non-standard curriculum	(*)	1
Wealth index		
Low	45.4	48
Medium	47.9	79
High	67	60
Total	**53.4**	**188**

***MICS indicator 54**

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

For children who are of primary school entry age (age 6) in the Makueni district, slightly more than half (53 per cent) are attending the first grade of primary school. This is one of the higher net intake rates in primary education for Eastern Province. More female children are attending the first grade (57 per cent) compared with their male counterparts (49 per cent). There is a positive relationship between school attendance and the socio-economic status of the household.

Table 10.3 (ED.3) provides the percentage of children of primary school age attending primary or secondary school. The majority of children of primary school age are in school (91 per cent) indicating that the remaining nine per cent are out of school. It is also observed that female attendance is higher than for male (93 per cent and 89 per cent respectively). There was no much variation observed with respect to attendance and the educational level of the mother and the wealth index level of the household.

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), Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	Net attendance ratio*			Number of children		
	Male	Female	Total	Male	Female	Total
Age						
6	51.7	63.4	57.8	90	98	188
7	84.2	94.0	88.2	102	70	172
8	87.0	96.0	91.2	97	87	185
9	97.6	97.4	97.5	83	85	168
10	96.1	98.1	97.1	94	92	187
11	99.4	99.2	99.3	106	81	187
12	99.7	99.2	99.5	101	78	179
13	96.8	98.6	97.7	78	75	152
Mother's education						
None	90.8	94.8	92.8	90	91	181
Primary	87.2	91.4	89.1	485	410	894
Secondary +	93.7	94.0	93.8	176	165	341
Non-standard curriculum	100.0	100.0	100.0	1	1	2
Wealth index						
Low	86.4	88.4	87.4	153	156	308
Medium	86.8	89.4	88	312	249	561
High	93.2	97.9	95.5	286	262	549
Total	**89.2**	**92.5**	**90.7**	**751**	**667**	**1418**

*MICS indicator 55; MDG indicator 6
(*) Based on values too low for analysis
* 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.

As shown in Table 10.4 (ED.4), the total net attendance ratio for Makueni district is 22 per cent. Female children of secondary school age attending secondary school or higher were more than male children (34 per cent and 27 per cent respectively). The higher the wealth index of a household, the more likely the children were to attend school (16 per cent for low, 19 per cent for medium, and 44 percent for high).

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), Makueni District, Eastern Province, Kenya MICS 2008

	Net attendance ratio*			Number of children		
Characteristic	Male	Female	Total	Male	Female	Total
Age						
14	7.3	11.0	9.2	81	88	169
15	23.9	40.8	32.6	70	74	144
16	36.0	45.0	40.7	77	83	161
17	42.5	43.2	42.9	77	76	153
Mother's education						
None	27.0	25.7	26.4	31	26	58
Primary	17.8	29.0	23.8	164	185	349
Secondary +	42.6	47.6	45.1	57	57	114
Mother not in HH	40.2	42.7	41.4	54	53	107
Wealth index						
Low	16.1	20.9	18.5	67	70	136
Medium	18.6	26.1	22.2	127	120	247
High	43.9	48.8	46.6	112	132	244
Total	**27.3**	**34.3**	**22.2**	**306**	**321**	**627**

***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). About 24 per cent of children of secondary school age are still attending primary school with a higher proportion of males at 28 per cent versus female (20 per cent) doing so.

Table 10.5 (ED.4W): Secondary school age children attending primary school

Percentage of children of secondary school age (14 – 17 years) attending primary school, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	Percentage attending primary school			Number of children		
	Male	Female	Total	Male	Female	Total
Age						
14	53.6	41.1	47.1	81	88	169
15	28.0	17.6	22.6	70	74	144
16	17.5	9.9	13.6	77	83	161
17	13.3	8.9	11.1	77	76	153
Mother's education						
None	2.0	32.9	16.2	31	26	58
Primary	41.9	24.5	32.7	164	185	349
Secondary +	20.2	11.5	15.8	57	57	114
Mother not in HH	11.3	7.0	9.1	54	53	107
Wealth index						
Low	35.0	30.1	32.5	67	70	136
Medium	34.7	24.4	29.7	127	120	247
High	17.3	10.6	13.7	112	132	244
Total	**28.4**	**20.0**	**24.1**	**306**	**321**	**627**

*Children of secondary school age currently attending primary school are included in the numerator. All children of secondary school age are included in the denominator.

NS: Not shown, based on less than 25 un-weighted cases.

The ratio of girls to boys attending primary and secondary education is provided in Table 10.6 (ED.7). These ratios are better known as the Gender Parity Index (GPI). Notice that the ratios included here are obtained from net attendance ratios rather than gross attendance ratios. The latter provide an erroneous description of the GPI mainly because in most of the cases, the majority of over-aged children attending primary education tend to be boys as seen in Table 10.5 (ED.4W) above.

Table 10.6 (ED.7) shows that gender parity for primary school is 1.04, indicating not much difference in the attendance of girls and boys to primary school. However, the indicator increases marginally to 1.26 for secondary education indicating more girls attending secondary schools as compared to boys. As expected, the attendance ratio increases with the level of wealth index of the household, while there is no clear pattern with regard to the educational attainment of the mother.

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, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	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	
Sex						
Male	.	89.2	.	.	27.3	.
Female	92.5	.	.	34.3	.	.
Mother's education						
None	94.8	90.8	1.04	25.7	27.0	0.95
Primary	91.4	87.2	1.05	29.0	17.8	1.63
Secondary +	94.0	93.7	1.00	47.6	42.6	1.12
Non-standard curriculum	100	100	1.00			
Mother not in household				42.7	40.2	1.06
Wealth index						
Low	88.4	86.4	1.02	20.9	16.1	1.30
Medium	89.4	86.8	1.03	26.1	18.6	1.40
High	97.9	93.2	1.05	48.8	43.9	1.11
Total	**92.5**	**89.2**	**1.04**	**34.3**	**27.3**	**1.26**

***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 World Fit for Children goals is to achieve adult literacy. Adult literacy is also an MDG indicator, relating to both men and women. In MICS 2008, data was collected from women, and the results of female adult literacy are presented for women aged 15-24 years. Literacy was assessed on the ability of women to read a short simple statement or on school attendance. The percentage of those literate is presented in Table 10.7 (ED.8). Overall, 95 per cent of women aged 15-24 years are literate in Makueni district. The literate proportion is relatively higher among the younger age group 15-19 years (98 per cent) compared with the older age group 20-24 years (91 per cent). Literacy levels increase with increasing levels of in the household wealth index.

Table 10.7 (ED.8): Adult literacy

Percentage of women aged 15-24 years that are literate*, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	Percentage literate*	Percentage not known**	Number of women aged 15-24 years
Education			
None	(*)	0.0	16
Primary	94.2	0.0	305
Secondary +	100	0.0	198
Age			
15-19	97.8	0.0	314
20-24	91.3	0.0	205
Wealth index			
Low	94.0	0.0	97
Medium	95.8	0.0	201
High	95.3	0.0	221
Total	**95.3**	**0.0**	**519**

***MICS indicator 60; MDG indicator 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 state that every child has the right to a name and a nationality, and the right of protection from being deprived of his or her identity. Birth registration is a fundamental means of securing these rights for children. The World Fit for Children's goal is to develop systems to ensure the registration of every child, at or shortly after birth, and fulfil his or her right to acquire a name and a nationality, in accordance with national laws and relevant international instruments. The indicator is the percentage of children under 5 years of age whose birth is registered.

Table 11.1 (CP.1) presents the percentage distribution of children aged 0-59 months in Makueni district, by whether birth was registered and reasons for non registration. About 47 per cent of children under five years in Makueni have been registered. There are no significant variations in birth registration across sex, age, or education categories. Lack of knowledge that the child should be registered, inadequate knowledge of where to register their children and other reasons were cited as the main reasons for not registering births in Makueni district.

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, Makueni District, Eastern Province, Kenya MICS 2008

			Birth is not registered because:								
Characteristic	Birth is Regis-tered*	Number of children aged 0-59 months	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	48.3	603	4.9	4.5	26.6	0.0	20.9	41.1	1.4	100	274
Female	45.4	601	2.4	3.1	29.5	0.2	18.8	44.3	1.7	100	271
Age (months)											
0-11	46.5	233	1.0	4.7	28.8	0.3	19.2	43.3	1.0	100	118
12-23	52.6	247	5.7	4.6	30.5	0.0	20.2	36.8	2.1	100	94
24-35	47.7	220	7.0	4.0	28.1	0.0	13.7	45	2.2	100	100
36-47	40.4	249	3.0	4.1	27.0	0.0	26.7	37.8	1.4	100	122
48-59	48.2	251	2.5	1.6	25.8	0.0	18.2	50.9	1.1	100	108
Mother's education											
None	(41.5)	(95)	0.0	0.0	(50.2)	0.0	(21.8)	(20.9)	(7.1)	(100)	32
Primary	45.2	724	4.2	3.7	26.5	0.1	21.8	41.8	1.6	100	348
Secondary +	51.4	384	3.4	4.6	27.1	0.0	15.2	48.8	0.2	100	164
Wealth index											
Low	40.3	288	5.8	3.6	30.8	0.0	24.8	34.5	0.5	100	358
Medium	47.7	492	3.2	3.1	24.6	0.2	17.3	48.1	2.9	100	249
High	50.4	424	2.3	4.7	29.9	0.0	18.4	43.5	0.7	100	121
Total	**46.9**	**1204**	**3.7**	**3.8**	**28.1**	**0.1**	**19.8**	**42.7**	**1.5**	**100**	**544**

****MICS indicator 62**
Note: Figures in parentheses are based on 25-49 unweighted cases.

11.2 Child Labour

Article 32 of the Convention on the Rights of the Child states: "Party States recognize the right of the child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development...". The World Fit for Children mentions nine strategies to combat child labour and the MDGs call for the protection of children against exploitation. In the MICS 2008 questionnaire, a number of questions addressed the issue of child labour, namely the proportion of children aged 5-14 years of age involved in labour activities. A child is considered to be involved in child labour activities at the moment of the survey, if during the week preceding the survey he or she engaged in:

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

This definition allows differentiation between child labour and child work, so as 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 the type of work for Makueni district. Percentages do not add up to the total child labour as children may be involved in more than one type of work. The results show that 15 per cent of children aged 5-14 years in Makueni district are engaged in child labour.

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, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	Working outside household		Household chores for 28+ hours/ week	Working for family business	Total child labour*	Number of children aged 5-14 years
	Paid work	Unpaid work				
Sex						
Male	0.5	0.4	1.8	13.1	15.3	924
Female	0.7	0.2	1.0	14.1	15.3	847
Age						
5-11 years	0.8	0.4	1.5	18.2	20.2	1270
12-14 years	0.1	0.0	1.0	1.9	2.8	501
School participation						
Yes	0.6	0.3	1.3	13.9	15.6	1701
No	0.0	0.0	3.0	5.0	8.0	69
Mother's education						
None	0.0	1.0	1.5	12.7	13.5	229
Primary	0.8	0.1	1.6	12.6	14.7	1120
Secondary +	0.4	0.4	0.6	16.7	18.0	419
Non-standard curriculum	0.0	0.0	0.0	0.0	0.0	3
Wealth index						
Low	1.9	0.0	1.0	12.3	14.8	387
Medium	0.5	0.3	1.4	11.8	13.5	709
High	0.0	0.5	1.6	16.1	17.4	675
Total	**0.6**	**0.3**	**1.4**	**13.6**	**15.3**	**1771**

***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 findings of the percentage of children aged 5-14 years, who are labour students and student labourers in Makueni district. Student labourers are defined as school-going children who were involved in child labour activities at the time of the survey. The survey revealed that out of the 96 per cent of the children 5-14 years of age attending school, 16 per cent are also involved in child labour activities. On the other hand, out of the 15 per cent of the children classified as child labourers, majority of them are also attending school (98 per cent). There were no substantial gender differentials.

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

Percentage of children aged 5-14 years who are labourer students and student labourers, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	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	15.3	96	924	96.9	141	15.4	887
Female	15.3	96.2	847	99.1	130	15.8	815
Age							
5-9 years	20.2	95.2	1270	98.6	257	21	1209
10-14 years	2.8	98.3	501	85.1	14	2.4	492
Mother's education							
None	13.5	96.3	229	97.8	31	13.7	221
Primary	14.7	95.1	1120	97	165	15	1066
Secondary +	18.0	98.5	419	100	75	18.2	412
Non-standard curriculum	0.0	(*)	3		(*)	(*)	3
Wealth index							
Low	14.8	93.7	387	100	57	15.8	363
Medium	13.5	95.1	709	94.2	96	13.4	674
High	17.4	98.5	675	100	118	17.7	665
Total	**15.3**	**96.1**	**1771**	**98**	**271**	**15.6**	**1701**

* 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 involved in child labour activities divided by the total number of children 5-14 attending school.

11.3 Child Discipline

As stated in A World Fit for Children, "Children must be protected against any acts of violence …" and the Millennium Declaration calls for the protection of children against abuse, exploitation and violence. In the Makueni, mothers/caretakers of children aged 2-14 years were asked a series of questions pertaining to the methods they use to discipline their children. Note that for the child discipline module, one child aged 2-14 per household was selected randomly during fieldwork. 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 2-14 years of age, that believe that in order to raise their children properly, they need to physically punish them. About 82 per cent of children aged 2-14 years were subjected to some form of psychological or physical punishment by their mothers/caretakers or other household members (Table 11.4, CP.4). In Makueni, only 17 per cent of parents and care givers indicated that they preferred only non-violent discipline for children aged 2-14 years. More importantly, 16 per cent of children were subjected to severe physical punishment. Over 84 per cent of mothers/caretakers believed that children should be physically punished.

Table 11.4 (CP.4): Child discipline
Percentage of children aged 2-14 years according to method of disciplining the child, Makueni District, Eastern Province, Kenya MICS 2008

	Percentage of children 2-14 years of age who experience:								
		Type of punishment						Mother/ caretaker believes that the child needs to be physically punished	Number of children aged 2-14 years**
Characteristic	Only non-violent discipline	Psycho-logical	Minor physical	Severe physical	Any psychological or physical*	No discipline or punishment	Miss-ing		
Sex									
Male	14.9	46.7	75.5	17.2	83.6	1.4	0.0	84	1130
Female	18.1	42.5	72.9	15.0	79.4	2.5	0.0	84.3	1120
Age									
2-4 years	16.4	33.6	75.1	9.3	78.9	4.7	0.0	86.2	504
5-9 years	12.7	46.8	82.5	18.6	86.7	0.6	0.0	85.5	840
10-14 years	20.0	48.8	66.1	17.5	78.3	1.7	0.0	81.7	905
Mother's education									
None	23.7	39.9	62.3	10.1	71.7	4.6	0.0	75.9	271
Primary	14.3	46.9	76.4	19.0	83.8	1.9	0.0	87.3	1408
Secondary +	18.7	40.8	75.2	11.7	80.4	0.8	0.0	80	565
Non-standard curriculum	0.0	(*)	0.0	0.0	(*)	0.0	0.0	(*)	4
Wealth index									
Low	12.7	50	77.3	20.3	86	1.3	0.0	87.9	507
Medium	15.2	42.8	76.3	14.4	81.7	3.1	0.0	85	905
High	20.2	43.4	70.2	15.4	78.7	1.1	0.0	81	838
Total	**16.5**	**44.6**	**74.2**	**16.1**	**81.5**	**2**	**0.0**	**84.2**	**2249**

***MICS indicator 74**
(*) Values are too low for analysis
** 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.

Boys are more likely to receive psychological or physical punishment than girls (84 percent and 79 percent respectively). Children aged 5-9 years are more likely to receive psychological or physical punishment, compared to their younger and older counterparts. It is also of interest to note that the difference between the proportion of children receiving minor and severe punishment is quite high; 74 per cent reported minor physical punishment compared with 16 per cent reporting severe punishment. Also, a very high proportion of parents/caretakers still believe that in order to raise their children properly, they need to physically punish them (82 per cent).

11.4 Early Marriage

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

In many parts of the world parents encourage the marriage of their daughters while they are still children, in hopes that the marriage will benefit them both financially and socially. This is a violation of human rights, compromising the development of girls and often resulting in early pregnancy and social isolation, with little education and poor vocational training reinforcing the gendered nature of poverty.

The right to 'free and full' consent to a marriage is recognized in the Universal Declaration of Human Rights - with the recognition that consent cannot be 'free and full' when one of the parties involved is not sufficiently mature to make an informed decision about a life partner. The Convention on the Elimination of all Forms of Discrimination against Women, mentions the right to protection from child marriage in article 16, which states: "The betrothal and the marriage of a child shall have no legal effect, and all necessary action, including legislation, shall be taken to specify a minimum age for marriage...".

While marriage is not considered directly in the Convention on the Rights of the Child, child marriage is linked to other rights - such as the right to express their views freely, the right to protection from all forms of abuse, and the right to be protected from harmful traditional practices - and is frequently addressed by the Committee on the Rights of the Child. Other international agreements related to child marriage are the Convention on Consent to Marriage, Minimum Age for Marriage and Registration of Marriages, the African Charter on the Rights and Welfare of the Child, 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.

Young married girls are a unique, though often invisible, group. They are required to perform heavy amounts of domestic work and are under pressure to demonstrate fertility, which may lead them into the responsibility of raising children while still children themselves. Married girls and child mothers face constrained decision-making and reduced life choices. Boys are also affected by child marriage but the issue impacts girls in far larger numbers and with more intensity. Cohabitation - when a couple lives together as if married - raises the same human rights concerns as marriage. Where 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 increase a child's 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 more likely to experience domestic violence themselves. The age gap between partners is also thought to contribute to these abusive power dynamics and to increase the risk of untimely widowhood.

Women who get married before the age of 18 tend to have more children than those who get married 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/AIDS infection. Parents seek to marry off their girls to protect their honour, and men often seek younger women as wives as a means to avoid choosing a wife who might already be infected. The percentage of women aged 15-49 years married before 15 years of age, the percentage of women aged 20-49 years married before 18 years of age and the percentage of women aged 15-19 years married or in union are presented in Table 11.5 (CP.5). For women aged 20-49 years, one in five had been married before age 18. Among those adolescent girls aged 15-19 years, eight per cent are currently married or in union in Makueni district.

Table 11.5 (CP.5): Early marriage

Percentage of women aged 15-49 years in marriage or union before their 15th birthday, percentage of women aged 20-49 years in marriage or union before their 18th birthday, and percentage of women aged 15-19 years currently married or in union, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	Percent married before age 15*	Number of women aged 15-49 years	Percent married before age 18*	Number of women aged 20-49 years	Percent of women 15-19 married/in union**	Number of women aged 15-19 years
Age						
15-19	1.3	314	NS	0	8	314
20-24	2.0	205	18.7	205	NS	0
25-29	3.4	233	18.5	233	NS	0
30-34	3.2	156	13.8	156	NS	0
35-39	5.5	181	19.1	181	NS	0
40-45	10.4	95	25.4	95	NS	0
45-49	6.9	123	19.8	123	NS	0
Education						
None	4.9	80	9.7	77	100	3
Primary	5.7	780	26.3	585	8.6	195
Secondary +	0.1	447	7.5	331	4.8	116
Wealth index						
Low	7.1	243	27.9	180	3	63
Medium	4.2	509	18.5	375	12.8	134
High	1.9	555	15.2	438	5.1	117
Total	**3.8**	**1307**	**18.7**	**993**	**8**	**314**

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

Another component measured is the spousal age difference, whose indicator is the percentage of married/in union women with an age difference of 10 or more years younger than their current spouse. Table 11.6 (CP.6), shows that majority of women aged between 15-19 years of age have spouses aged 5-9 years older than them (44 per cent). About 1 in five married (or in union) women aged 15-19 years in Makueni have a partner who is 10 or more years older than them.

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, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	Percentage of currently married/in union women whose husband or partner is: 0-4 years older	5-9 years older	10+ years older*	Husband' s age unknown	Total	Number of women currently married/ in union
Age						
15-19	(8.1)	(59.3)	(20.2)	(12.4)	(100)	25
20-24	40.3	40.9	18.3	0.6	100	128
Total	**35.0**	**43.9**	**18.6**	**2.5**	**100**	**153**

***MICS indicator 69**
NOTE: Figures in parentheses are based on 25-49 unweighted cases.

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 get married and, sometimes, to women who are pregnant with their first child or who have just given birth. It is often performed by traditional practitioners, including midwives without anaesthesia, while 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.

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) present the prevalence of FGM/C and the type and extent of the procedure, as well as women's attitudes towards FGM/C. In Makueni, 91 per cent of women aged 15-49 years have heard about FGM/C while those who reported having undergone some form of FGM/C was a paltry five per cent. The results indicate that female genital mutilation is not so prevalent in Makueni district.

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 (infibulations), Makueni District, Eastern Province, Kenya 2008

				Percentage of women with FGM/C who:						
Characteristic	Heard about FGM/C	Had any form of FGM/C*	Number of women aged 15-49 years	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	83.6	0.0	314	0.0	0.0	0.0	0.0	0	.	0
20-24	86.6	0.0	205	0.0	0.0	0.0	0.0	0	.	0
25-29	93.6	2.4	233	(*)	0.0	0.0	(*)	(*)	0.0	6
30-34	94.9	4.7	156	(*)	0.0	0.0	0.0	(*)	0.0	7
35-39	92.6	3.2	181	(*)	(*)	0.0	0.0	(*)	0.0	6
40-44	95.0	12.5	95	(*)	(*)	0.0	0.0	(*)	0.0	12
45-49	96.4	31.9	123	(88.6)	(0.0)	(6.3)	(5.1)	(100)	(2.8)	39
Education										
None	89.6	8.0	80	82.9	0.0	17.1	0.0	100	0.0	52
Primary	90.6	6.7	780	89.7	5.3	0.0	5.1	100	0.0	11
Secondary +	90.5	2.5	447	87.4	0.0	12.6	.0	100	0.0	52
Wealth index										
Low	89.4	4.7	243	(*)	0.0	(*)	(*)	(*)	(*)	11
Medium	90.8	7.9	509	(89.7)	(6.8)	(3.4)	0.0	(100)	0.0	40
High	90.7	3.3	555	(*)	0.0	0.0	(*)	(*)	0.0	18
Total	**90.5**	**5.3**	**1307**	**88.7**	**3.9**	**3.5**	**3.8**	**100**	**1.6**	**70**

***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.

****MICS indicator 64**

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

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

For the women who have heard about FGM/C, the survey inquired about their attitude towards the continuation of the practice. The results are presented in Table 11.8 (CP.7). The results indicate that a majority of the respondents (92 percent) reported that the practice should be discontinued. This agreement was high among all women irrespective of the household wealth index level. However, women who had experienced FGM/C were less likely to approve discontinuation (62 per cent) than those who had not experienced FGM (94 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, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	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	95.7	1.8	1.8	100	262
20-24	2.3	96.8	0.2	0.7	100	177
25-29	2.7	92.8	2.4	2.1	100	218
30-34	2.2	93.9	0.7	3.2	100	148
35-39	2.1	94.4	2.6	0.9	100	168
40-44	7.3	87.2	0.8	4.7	100	90
45-49	22.3	76.8	0.9	0.0	100	118
Education						
None	3.7	95.4	0.9	0.0	100	72
Primary	5.8	90.2	1.6	2.4	100	707
Secondary +	2.0	95.6	1.3	1.0	100	404
FGM/C experience						
No	2.4	94.3	1.5	1.9	100	1113
Yes	35.8	62.2	1.6	0.4	100	70
Wealth index						
Low	4.8	90.8	1.9	2.5	100	217
Medium	6.8	89.8	1.5	1.9	100	462
High	2.0	95.4	1.2	1.4	100	503
Total	**4.4**	**92.4**	**1.5**	**1.8**	**100**	**1183**

***MICS indicator 66**

Table 11.9 (CP.8) presents the prevalence and extent of FGM/C performed on the respondent's daughters. This information was obtained from women aged 15-49 with at least one daughter. The prevalence of daughters undergoing FGM was so low (less than one per cent). There was no significant difference in the prevalence of female genital mutilation of the respondent's daughters in Makueni district.

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/cutting (FGM/C), and the percentage by type of FGM/C of the daughters, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	Daughter had any form of FGM/C*	Number of women aged 15-49 years with at least one daughter	Percentage of women whose daughters: Had flesh removed	Were nicked	Were sewn closed	Form of FGM/C not determined	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 woman									
15-24	0.0	116	(*)	(*)	(*)	(*)	(*)	(*)	0
25-34	0.0	288	(*)	(*)	(*)	(*)	(*)	(*)	0
35-49	1.5	350	(*)	(*)	(*)	(*)	(*)	(*)	5.0
Education									
None	(3.3)	46	(*)	(*)	(*)	(*)	(*)	(*)	2
Primary	0.7	479	(*)	(*)	(*)	(*)	(*)	(*)	4
Secondary +	0.0	229	(*)	(*)	(*)	(*)	(*)	(*)	0
Mother's FGM/C experience									
Had any FGM/C	8.2	62	(*)	(*)	(*)	(*)	(*)	(*)	5
No FGM/C	0.0	692	(*)	(*)	(*)	(*)	(*)	(*)	0
Wealth index									
Low	1.0	150	(*)	(*)	(*)	(*)	(*)	(*)	2
Medium	1.2	293	(*)	(*)	(*)	(*)	(*)	(*)	4
High	0.0	312	(*)	(*)	(*)	(*)	(*)	(*)	0
Total	**0.7**	**754**	**(*)**	**(*)**	**(*)**	**(*)**	**(*)**	**(*)**	**5**

***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 aimed at assessing the association of cultural beliefs with the prevalence of violence against women. The main assumption here is that women who agree with these statements tend to be abused by their own husbands/partners in reality. The responses to these questions are presented in Table 11.10 (CP.9).

About 55 per cent of women aged 15-49 believe that a husband is justified in beating his wife/partner when she goes out without telling him, neglects children, argues with him, and refuses sex with him or she burns food. Substantial differentials were noted with regard to approval of violence by age group, but overall, it's observed that the older women aged 45-49, agree with most statements justifying wife beating.

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, Makueni District, Eastern Province, Kenya MICS 2008

	Percentage of women aged 15-49 years who believe a husband is justified in beating his wife/partner:						
Characteristic	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	17.2	43.5	20.8	17.0	6.5	48.7	314
20-24	24.3	45.8	28.8	22.3	8.4	54.4	205
25-29	19.5	41.4	19.9	14.9	4.8	50.7	233
30-34	22.3	44.0	24.2	24.6	7.4	53.4	156
35-39	25.1	51.3	24.7	18.6	3.2	60.3	181
40-44	22.7	48.8	23.5	25.7	5.7	59.2	95
45-49	34.2	53.0	34.3	37.2	7.7	69.3	123
Marital/Union status							
Currently married/in union	25.2	49.2	26.6	22.0	6.1	58.8	795
Formerly married/in union	21.0	40.3	27.8	30.9	5.7	58.4	109
Never married/in union	17.3	40.9	18.9	16.8	6.5	46.0	403
Education							
None	27.1	39.6	29.3	24.8	14.6	45.0	80
Primary	23.4	50.7	24.3	22.4	5.8	61.0	780
Secondary +	19.9	38.5	23.5	18.2	5.4	45.7	447
Wealth index							
Low	27.8	46.6	29.2	25.4	6.9	57.5	243
Medium	23.6	47.2	27.4	23.8	7.2	59.2	509
High	19.0	44.3	19.3	16.8	5.0	49.6	555
Total	**22.4**	**45.9**	**24.3**	**21.1**	**6.2**	**54.8**	**1307**

***MICS indicator 100**

HIV/AIDS, Orphans and Vulnerable Children 12

12.1 Knowledge of HIV/AIDS Transmission and Condom Use

One of the most important prerequisites for reducing HIV/AIDS infection is provision of accurate knowledge of how HIV/AIDS is transmitted and strategies for preventing the disease transmission. Correct information is the first step towards raising awareness and giving young people the tools 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 varying misconceptions although some appear to be universal (for example; that sharing food or mosquito bites can transmit HIV/AIDS. The United Nations General Assembly Special Session on HIV/AIDS (UNGASS), called on governments to improve the knowledge and skills of young people to protect themselves from HIV/AIDS. The MDG goal is to reduce HIV/AIDS infections by half, and this includes improving the level of knowledge of HIV/AIDS and its prevention, and changing behaviours to prevent further spread of the disease. The HIV/AIDS module was administered to women aged 15-49 years.

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

In Makueni district, almost all of the interviewed women (99 per cent) have heard of HIV/AIDS. Slightly more than half of the respondents (54 percent) know of all the three main ways of preventing HIV/AIDS transmission. Knowledge of at least one way to prevent transmission is almost universal (97 per cent). Knowledge levels are high for all women irrespective of their education attainment or household wealth index background.

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

Percentage of women aged 15-49 years who know the main ways of preventing HIV/AIDS transmission, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	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	97.6	93.3	51.9	90.2	47.6	96.0	4.0	314
20-24	99.7	87.5	68.8	85.2	54.8	96.7	3.3	205
25-29	99.4	92.0	64.5	90.1	57.6	98.5	1.5	233
30-34	100	92.7	72.1	93.7	66.5	98.5	1.5	156
35-39	100	95.1	65.0	92.4	61.5	97.6	2.4	181
40-44	100	94.5	43.3	89.0	38.0	98.4	1.6	95
45-49	100	90.9	55.7	92.0	49.6	96.5	3.5	123
Education								
None	96.5	85.4	66.2	83.1	52.3	96.5	3.5	80
Primary	99.1	92.4	60.9	90.7	55.2	96.9	3.1	780
Secondary +	100	93.1	59.6	90.6	52.8	98.1	1.9	447
Wealth index								
Low	98.2	94.7	59.6	87.9	54.2	97.6	2.4	243
Medium	99.1	91.7	59.3	90.9	53.7	96.7	3.3	509
High	99.9	91.6	62.5	90.5	54.7	97.7	2.3	555
Total	**99.3**	**92.2**	**60.7**	**90.2**	**54.2**	**97.3**	**2.7**	**1307**

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 of HIV/AIDS. The indicator is based on the two most common and relevant misconceptions namely, 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 can be transmitted through sharing needles.

More than half of the women interviewed were aware of the common misconceptions and know that a healthy-looking person can be infected. About 88 per cent of women know that HIV/AIDS cannot be transmitted by supernatural means, and 84 per cent of women know that HIV/AIDS cannot be transmitted by sharing food, while 87 per cent of women knew that a healthy-looking person may be infected. From the table, it is evident that if a woman has attained a higher level of education, she is more likely to have correct knowledge about HIV/AIDS.

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

Percentage of women aged 15-49 years who correctly identify misconceptions about HIV/ AIDS, Makueni District, Eastern Province, Kenya MICS 2008

	Percentage who knew that:				Percentage who knew that:		
	HIV/AIDS cannot be transmitted by:						
Characteristic	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	Option 3: HIV/AIDS cannot be transmitted by sharing food	Option 4: HIV/AIDS can be transmitted by sharing needles	Number of women
Age							
15-19	84.8	78.2	78.1	57.9	86.1	97.0	314
20-24	90.7	69.5	88.2	57.9	80.9	99.3	205
25-29	88.8	74.6	89.5	64.8	84.9	98.4	233
30-34	91.0	78.1	87.1	64.3	86.1	98.4	156
35-39	87.3	65.6	91.3	51.9	86.5	98.5	181
40-44	86.5	69.0	93.5	58.9	72.9	96.1	95
45-49	85.4	60.8	90.3	44.6	80.9	100	123
Education							
None	83.2	75.7	77.9	54.4	85.0	96.5	80
Primary	87.9	69.6	86.5	56.0	82.4	97.9	780
Secondary +	88.1	75.9	89.1	61.8	85.7	99.0	447
Wealth index							
Low	83.6	66.5	84.3	51.1	78.7	96.9	243
Medium	87.7	72.1	86.3	57.4	83.7	98.3	509
High	89.5	74.6	88.5	61.3	85.9	98.6	555
Total	**87.7**	**72.1**	**86.9**	**57.9**	**83.7**	**98.2**	**1307**

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

Figure 12.1: Percent of women who have comprehensive knowledge of HIV/AIDS transmission, Makueni, 2008

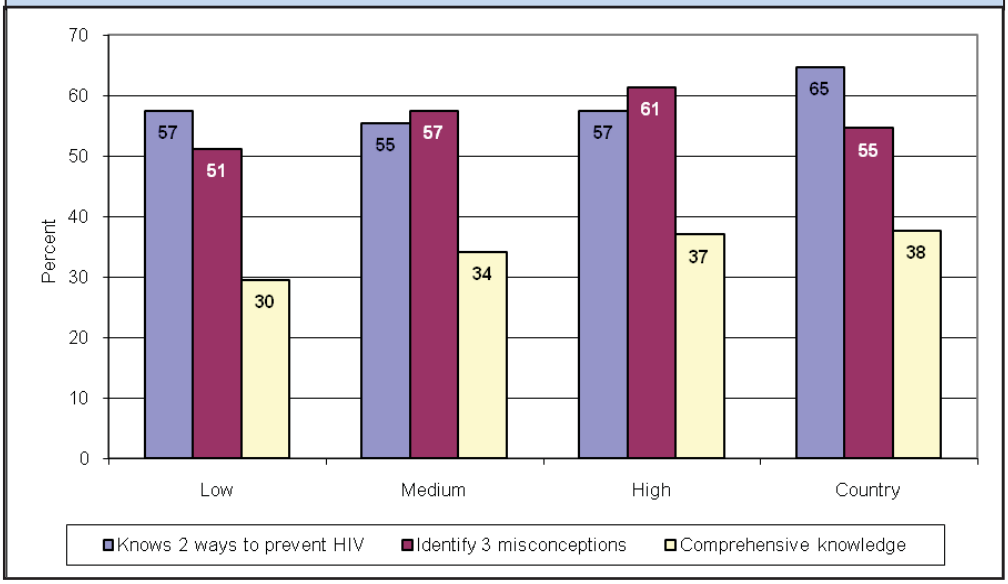


Table 12.3 (HA.3) presents the percentage of women who knew the 2 ways of preventing HIV/AIDS transmission and reject the three common misconceptions. These are the women who have comprehensive knowledge of HIV/AIDS prevention methods and transmission. The results show that women in Makueni district have a fairly low (35 per cent) comprehensive knowledge of HIV/AIDS prevention. Comprehensive knowledge increases with increasing levels of household wealth index. This pattern is also true for women who can identify 3 misconceptions about HIV/AIDS transmission.

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

Percentage of women aged 15-49 years who have comprehensive knowledge of HIV/AIDS transmission, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	Know 2 ways to prevent HIV/AIDS transmission	Correctly identify 3 misconceptions about HIV/AIDS transmission	Have comprehensive knowledge (identify 2 prevention methods and 3 misconceptions)*	Number of women
Age				
15-19	50.1	57.9	32.7	314
20-24	59.6	57.9	34.0	205
15-24	53.8	57.9	33.2	519
25-29	59.7	64.8	38.9	233
30-34	67.5	64.3	43.5	156
35-39	63.0	51.9	37.4	181
40-44	40.2	58.9	23.8	95
45-49	52.2	44.6	24.3	123
Education				
None	56.4	54.4	37.8	80
Primary	57.5	56.0	34.5	780
Secondary +	55.3	61.8	33.9	447
Wealth index				
Low	57.4	51.1	29.5	243
Medium	55.4	57.4	34.1	509
High	57.4	61.3	37.0	555
Total	**56.6**	**57.9**	**34.5**	**1307**

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

Knowledge of mother-to-child transmission is also an important step towards seeking HIV/AIDS testing among pregnant women. Women should know that HIV/AIDS can be transmitted during pregnancy, delivery and through breastfeeding.

The level of knowledge among women aged 15-49 years concerning mother-to-child transmission is presented in Table 12.4 (HA.4). Overall, about 99 per cent of women knew that HIV/AIDS can be transmitted from mother to child; with 40 per cent of the women understanding all the three ways of mother-to-child transmission of HIV/AIDS

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

Percentage of women aged 15-49 years who correctly identify means of HIV/AIDS transmission from mother to child, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	Knew AIDS can be transmitted from mother to child	Percentage who knew AIDS can be transmitted: During pregnancy	At delivery	Through breast milk	All three ways*	Did not know any specific way	Number of women
Age							
15-19	97.1	51.4	76.2	95.6	42.9	0.5	314
20-24	99.0	37.3	70.6	96.6	32.6	0.7	205
25-29	99.2	39.8	68.9	97.9	32.0	0.1	233
30-34	100.0	52.0	82.3	97.5	45.7	0.0	156
35-39	99.6	47.5	76.9	97.8	41.9	0.4	181
40-44	100.0	41.1	77.5	97.1	36.2	0.0	95
45-49	99.7	57.5	77.7	98.6	53.7	0.3	123
Education							
None	96.5	50.4	77.7	96.5	47.5	0.0	80
Primary	98.6	46.2	74.2	97.5	39.7	0.5	780
Secondary +	99.8	46.4	76.2	96.4	39.3	0.2	447
Wealth index							
Low	98.0	53.5	73.8	96.8	44.6	0.3	243
Medium	98.5	46.5	75.4	97.7	40.8	0.5	509
High	99.7	43.4	75.4	96.7	37.4	0.2	555
Total	**98.9**	**46.5**	**75.1**	**97.1**	**40.1**	**0.3**	**1307**

***MICS indicator 89**

The indicators on attitude towards people living with HIV/AIDS measure stigma and discrimination in the community. Stigma and discrimination are low if respondents report an accepting attitude on the following four statements:

1) Would care for family member sick with AIDS;
2) Would buy fresh vegetables from a vendor who was HIV positive;
3) Thinks that a female teacher who is HIV positive should be allowed to teach in school; and
4) Would ***not*** want to keep the HIV status of a family member a secret.

Table 12.5 (HA.5) presents the attitude of women towards people living with HIV/AIDS. Among the respondents who had heard about HIV/AIDS, 89 per cent are likely to discriminate persons living with HIV/AIDS. The proportion of women who agree with at least one discriminatory statement is comparable across household wealth index, but lower among women with no education versus those with primary or secondary level education. Overall in Makueni district, 11 per cent of respondents are likely to accept and have positive attitudes with persons living with HIV/AIDS.

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

Percentage of women aged 15-49 years who had heard of AIDS who expressed a discriminatory attitude towards people living with HIV/AIDS/AIDS, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	Percentage of women who: Would not care for a family member who was sick with AIDS	If a family member had HIV/AIDS would want to keep it a secret	Believe that a teacher with HIV/AIDS should not be allowed to work	Would not buy food from a person with HIV/AIDS	Agreed with at least one discriminatory statement	Agreed with none of the discriminatory statements*	Number of women who had heard of AIDS
Age							
15-19	2.7	78.9	27.5	42.9	88.9	11.1	306
20-24	3.4	80.3	35.4	53.9	92.3	7.7	204
25-29	1.1	75.8	33.1	46.7	88.6	11.4	231
30-34	1.1	77.2	22.8	47.0	89.1	10.9	156
35-39	1.1	75.7	28.8	51.7	87.0	13.0	181
40-44	0.8	74.3	26.0	48.8	84.5	15.5	95
45-49	1.1	76.5	49.0	48.9	91.1	8.9	123
Education							
None	0.9	73.1	18.5	29.6	80	20.0	77
Primary	2.0	76.5	36.1	54.1	90	10.0	773
Secondary +	1.7	79.5	25.2	40.7	88.9	11.1	447
Wealth index							
Middle	3.7	75.4	38.9	60.7	90.2	9.8	239
Fourth	1.3	76.3	35.9	49.0	88.0	12.0	504
Richest	1.4	79.1	23.8	41.7	89.4	10.6	554
Total	**1.8**	**77.3**	**31.3**	**48.0**	**89.0**	**11.0**	**1297**

Note: This table is based on women who had heard of AIDS.
***MICS indicator 86**

Table 12.6 (HA.6) presents information on knowledge about HIV testing facilities and the prevalence of testing. Most of the women in Makueni know a place where they could be tested for HIV (88 per cent), while less than half (41 per cent) had actually been tested. Among women who had been tested, a large proportion had been told the result (97 per cent).

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

Percentage of women aged 15-49 years who knew where to get an HIV/AIDS test, percentage of women who had been tested and, of those tested the percentage who had been told the result, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	Knew a place to get tested*	Had been tested**	Number of women	If tested, had been told result	Number of women who had been tested for HIV/AIDS
Age					
15-19	74.8	18.7	314	92.6	59
20-24	93.0	62.9	205	98.7	129
25-29	94.1	57.6	233	98.8	134
30-34	98.7	57.9	156	93.7	91
35-39	91.3	46.7	181	98.0	85
40-44	86.7	24.7	95	(*)	23
45-49	82.1	17.5	123	(*)	22
Education					
None	88.8	60.0	80	(95.7)	48
Primary	84.2	37.8	780	96.6	295
Secondary +	93.9	44.5	447	97.8	199
Wealth index					
Low	79.4	42.1	243	95.7	102
Medium	86.5	38.0	509	97.9	193
High	92.7	44.3	555	96.7	246
Total	**87.8**	**41.4**	**1307**	**97**	**542**

***MICS indicator 87**

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

****MICS indicator 88**

** Women who have been tested for HIV/AIDS 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.

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

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

In addition to the testing for HIV/AIDS among women who had given birth, information was collected on women who were offered counselling and testing services during antenatal care visits. For Makueni district, the information on the percentage who received counselling and testing during antenatal care is presented in Table 12.7 (HA.7).

Ninety-one per cent of mothers in Makueni received antenatal care from a health professional during their last pregnancy and 64 per cent were provided with information about HIV/AIDS prevention. Most women were tested for HIV and received their results during antenatal care visits.

Table 12.7 (HA.7): HIV/AIDS testing and counselling coverage during antenatal care

Percentage of women aged 15-49 years who gave birth in the two years preceding the survey who were offered HIV/AIDS testing and counselling with their antenatal care, Makueni District, Eastern Province, Kenya MICS 2008

	Percentage of women who:				
	Received antenatal care from a health care professional for last pregnancy	Were provided information about HIV/AIDS prevention during ANC visit*	Were tested for HIV/AIDS at ANC visit	Received results of HIV/AIDS test at ANC visit**	Number of women who gave birth in the 2 years preceding the survey
Age					
15-19	(85.8)	(50.8)	(73.9)	(71.8)	34
20-24	90.6	65.7	70.2	69	117
25-29	91.4	63.4	65.1	63.6	115
30-34	96.1	75.5	74.0	69.8	66
35-49	88.8	58.6	59.0	57.6	66
Education					
None	(96.6)	(81.6)	(84.7)	(74.6)	20
Primary	90.4	62.0	62.3	61.1	243
Secondary +	91.2	65.6	75.0	73.3	135
Wealth index					
Low	88.4	65.2	60.8	55.9	91
Medium	91.7	62.0	66.9	65.9	148
High	91.8	65.6	72.6	71.6	159
Total	**91.0**	**64.2**	**67.8**	**65.9**	**398**

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

NOTE: Figures in parentheses are based on 25-49 unweighted cases.

12.2 Orphans and Vulnerable Children (OVC)

As the HIV/AIDS epidemic progresses, more and more children are becoming orphaned and vulnerable. Children who are orphaned or in vulnerable households may be at an increased risk of neglect/exploitation. Monitoring the variations in different outcomes for orphans and vulnerable children, and comparing them to their peers, gives a measure of how well communities and governments are responding to their needs. To monitor these variations, a measurable definition of orphaned and vulnerable children needed to be created. The UNAIDS Monitoring and Evaluation Reference Group developed a proxy definition of children who have been affected by adult morbidity and mortality. This should capture many of the children affected by AIDS in countries where a significant proportion of the adults are HIV/AIDS infected. This definition classifies children as *orphaned* and *vulnerable* if they had experienced the death of either parent; if either parent was 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 proportion of children living with neither parent, mother only, and father only is presented in Table 12.8 (HA.10). Only 47 per cent of children aged 0-17 years in Makueni were living with both parents while about twelve per cent did not live with a biological parent, because they lived elsewhere or they had died. Twelve per cent of the children had lost either parent, while in five per cent of the cases, the status was difficult to determine due to missing information. As expected, the proportion of children not living with parents increases with an increase in the age of the child.

Table 12.9 (HA.11) shows the extent of orphan hood and vulnerability among children aged 0-17 years in Makueni district due to AIDS. Twelve per cent of the children lived in a household with an adult member who is chronically ill for 3 or more months during the year preceding the survey. Overall, vulnerable children were found in 15 per cent of households in Makueni district.

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, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	Living with both parents	Living with neither parent				Living with mother only		Living with father only		Impossible to determine	Total	Not living with a biological parent*	One or both parents dead**	Number of children
		Only father alive	Only mother alive	Both are alive	Both are dead	Father alive	Father dead	Mother alive	Mother dead					
Sex														
Male	45.3	1.6	0.8	7.3	1.3	30.9	6.3	0.1	1.0	5.4	100	11.0	12.0	1613
Female	48.0	1.2	1.6	7.5	1.6	28.1	6.2	0.1	0.7	4.9	100	12.0	12.4	1548
Age														
0-4 years	50.5	0.0	0.3	4.3	0.1	36.8	3.1	0.1	0.1	4.8	100	4.6	3.8	932
5-9 years	47.8	0.6	1.5	7.9	1.2	29.6	4.9	0.2	1.2	5.1	100	11.1	10.3	897
10-14 years	43.2	3.2	1.7	9.0	2.3	26.2	8.3	0.2	1.2	4.7	100	16.2	17.6	874
15-17 years	43.0	2.5	1.8	9.8	3.1	21.0	11.1	0.0	0.9	6.8	100	17.2	22.5	458
Wealth index														
Low	48.9	1.7	1.6	4.6	1.9	25.0	10.8	0.0	0.3	5.4	100	9.7	17.3	710
Medium	49.1	1.1	0.9	6.7	1.7	28.0	6.0	0.3	1.0	5.3	100	10.3	11.6	1267
High	42.7	1.6	1.4	9.9	1.0	33.9	3.7	0.0	1.0	4.8	100	13.9	9.8	1184
Total	**46.6**	**1.4**	**1.2**	**7.4**	**1.4**	**29.5**	**6.2**	**0.1**	**0.8**	**5.2**	**100**	**11.5**	**12.2**	**3161**

***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): Prevalence of orphan hood and vulnerability among children

Percentage of children aged 0-17 years who are orphaned or vulnerable due to AIDS, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	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	3.6	2.6	12.4	16.5	12.0	25.9	1613
Female	1.5	2.2	11.1	13.5	12.4	24.5	1548
Age							
0-4 years	2.2	2.5	12.1	14.8	3.8	18.3	932
5-9 years	3.1	2.9	10.8	15.3	10.3	23.2	897
10-14 years	2.3	1.9	11.3	13.9	17.6	29.1	874
15-17 years	3.0	2.4	13.9	17.0	22.5	35.8	458
Wealth index							
Low	1.7	2.8	12.8	16.3	17.3	30.3	710
Medium	2.0	3.1	11.9	15.6	11.6	24.9	1267
High	3.7	1.5	11.1	13.7	9.8	22.6	1184
Total	**2.6**	**2.4**	**11.8**	**15.0**	**12.2**	**25.2**	**3161**

***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 indicators developed for assessing the status of orphaned and vulnerable children relative to their peers, is the school attendance of children aged 10-14 years who have lost both parents (double orphans) versus children whose parents are alive (and who live with at least one of these parents) (MDG Indicator 20). 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.

Nearly all children whose parents are dead in Makueni district are currently attending school (Table 12.10 (HA.12)). The school attendance rate of children aged 10-14, who have not lost a parent and who live with at least one of them, is almost universal. On the other hand, the school attendance ratio of children who have lost both parents (double orphans) to children who have both parents (non orphans) is 1.02. This indicates that orphans in Makueni district are not so disadvantaged in terms of school attendance. The district reported a high of 99 per cent of school attendance of children who are orphaned or vulnerable due to AIDS.

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

School attendance of children aged 10-14 years by orphan hood and vulnerability due to AIDS, Makueni, Eastern Province, Kenya MICS 2008

	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	1.6	100	70.4	97.7	1.02	30.2	98.4	69.8	98.0	1:00	460
Female	3.1	100	68.6	99.4	1.01	27.9	99.1	72.1	98.8	1:00	415
Wealth index											
Low	3.6	100	65.3	98.0	1.02	35.8	98.0	64.2	98.3	1:00	188
Medium	2.9	100	73.0	98.1	1.02	30.2	98.1	69.8	97.7	1:00	343
High	1.1	100	68.4	99.1	1.01	24.5	100.0	75.5	99.0	1.01	344
Total	**2.3**	**100**	**69.5**	**98.5**	**1.02**	**29.1**	**98.7**	**70.9**	**98.4**	**1:00**	**874**

*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 households caring for orphaned and vulnerable children is presented in Table 12.11 (HA.13).

Table 12.11 (HA.13): Support for children orphaned and vulnerable due to AIDS

Percentage of children aged 0-17 years orphaned or made vulnerable due to AIDS whose households receive free basic external support in caring for the child, Makueni District, Eastern Province, Kenya MICS 2008

Characteristic	Percentage of orphans and vulnerable children whose households received:							Number of children orphaned or vulnerable aged 0-17 years
	Medical support (in last 12 months)	Emotional and psychosocial support (in last 3 months)	Social/ material support (in last 3 months)	Educational support (in last 12 months)	Any support*	All types of support	No support at all	
Sex								
Male	5.5	3.8	6.3	23.5	35.1	0.0	64.9	418
Female	3.7	3.0	1.8	28.2	34.7	0.0	65.3	380
Age								
0-4 years	4.4	3.7	1.0	0.0	9.0	0.0	91.0	171
5-9 years	3.0	3.7	3.3	31.1	38.1	0.0	61.9	208
10-14 years	4.3	4.4	6.0	32.6	44.8	0.0	55.2	255
15-17 years	7.7	1.3	5.4	35.0	42.6	0.0	57.4	164
Wealth index								
Low	3.7	0.8	1.1	29.9	33.3	0.0	66.7	215
Medium	5.9	4.6	3.3	26.7	37.9	0.0	62.1	315
High	4.1	4.1	7.5	21.3	32.7	0.0	67.3	268
Total	**4.7**	**3.4**	**4.1**	**25.7**	**34.9**	**0.0**	**65.1**	**798**

***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.

Sixty-five per cent of households with orphaned or vulnerable children aged 0-17 years in Makueni district do not receive any support, although five per cent received medical support during the year preceding the survey. Thirty five per cent of the children received support, with 26 per cent receiving educational support in the year preceding the survey. The proportion of children receiving support does not vary much by levels of household wealth index or by gender of the child.

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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 Makueni Multiple Indicator Cluster Survey (MICS 2008) was to produce statistically reliable estimates of most indicators, at the district level. A two-stage, cluster sampling approach was used for the selection of the survey sample. Further, the households were stratified into two groups one with a child below 3 years (stratum-1) and the other without a child below 3 years (stratum-2) at the time of household listing, and more households from stratum-1 were selected to get more children in the sample from less number of households. The cluster level stratification was done to net more children and mothers who have given birth during the last few years into the sample.

Sample Size and Sample Allocation

The target sample size for the Makueni MICS 2008 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 3 years.

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

Selection of Households

Lists of households were prepared by the listing teams in the field for each enumeration area. The households were grouped into two stratums 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., with out 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 using a random start.

Calculation of Sample Weights

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

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

Where,
Zd = total population of the district ‘d’,
Nd = total number of clusters in district ‘d’,
Zdi = number of households in the ith cluster of district ‘d’,
Sdi = number of segments in the ith cluster of 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.

Hdji = total number of households listed in the jth stratum of ith cluster in the district ‘d’, and
Hdji = number of households surveyed in the jth stratum of ith cluster in the district ‘d’.

As mentioned earlier, 50 clusters were selected from the Makueni district 2009 Census EA list using the PPS sampling methodology. However, we have computed final multipliers after combining 4-5 clusters because of small sample size in some of the cluster level 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 additional weights were computed using the non-response for anthropometry section.

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

Appendix B: List of Personnel Involved in the Survey

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

Technical Co-ordinators
Mr. James Gatungu, KNBS
Mr. Christopher Omolo, KNBS

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Data Collection Co-ordinator
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Research Assistants
Joseph Ngau Kinyata
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Purity Nyamai
Lydia T. Kalee
Damaris Mumo Ngewa
Augustine Musyoka Mwathani
Hellen Vilita Kimanthi
Christine A. Mutete Wambua

Appendix C: Estimates of Sampling Errors

The sample of respondents selected in the Makueni Multiple Indicator Cluster Survey 2008 is only one of the samples that could have been selected from the same population, using the same design and size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability between all possible samples. The extent of variability is not known exactly, but can be estimated statistically from the survey results.

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

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

For the calculation of sampling errors from MICS data, SPSS Version 14 Complex Samples module has been used, except for the under-five mortality and infant mortality, where CSPro program is used. The results are shown in the tables that follow. In addition to the sampling error measures described above, the tables also include weighted and unweighted counts of denominators for each indicator.

Sampling errors are calculated for indicators of primary interest at the district level. All indicators presented here are in the form of proportions. Table SE.1 shows the list of indicators for which sampling errors are calculated, including the base population (denominator) for each indicator. Tables SE.2 to SE.9 show the calculations.

STANDARD ERROR TABLE FOR MAKUENI

	Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Unweighted Count	Confidence limits	
Iodized salt consumption	0.9741	0.00525	0.005	1.237	1.112	2,297	1,132	0.964	0.985
Child discipline	0.8112	0.01761	0.022	1.869	1.367	1,780	924	0.776	0.846

	Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Unweighted Count	Confidence limits	
Use of improved drinking water sources	0.3601	0.03775	0.105	39.970	6.322	12,390	6,465	0.285	0.436
Use of improved sanitation facilities	0.4173	0.03415	0.082	31.000	5.568	12,390	6,465	0.349	0.486
Net primary school attendance rate	0.9034	0.01098	0.012	2.041	1.429	2,888	1,478	0.881	0.925
Net secondary school attendance rate	0.3089	0.02888	0.093	2.344	1.531	1,278	601	0.251	0.367
Primary completion rate	0.0368	0.01829	0.497	1.415	1.190	311	151	0.000	0.073
Child labour	0.1530	0.01987	0.130	5.666	2.380	3,607	1,860	0.113	0.193
Prevalence of orphans	0.1220	0.01110	0.091	4.040	2.010	6,438	3,515	0.100	0.144
Prevalence of vulnerable children	0.1503	0.01525	0.101	6.403	2.530	6,438	3,515	0.120	0.181

	Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Unweighted Count	Confidence limits	
Skilled attendant at delivery	0.3610	0.02429	0.067	1.320	1.149	819	517	0.312	0.410
Antenatal care	0.9100	0.01951	0.021	2.399	1.549	819	517	0.871	0.949
Contraceptive prevalence	0.4032	0.02242	0.056	1.747	1.322	1,634	837	0.358	0.448
Adult literacy	0.9526	0.00968	0.010	1.099	1.048	1,066	531	0.933	0.972
Prevalence of FGM/C	0.0534	0.00769	0.144	1.525	1.235	2,686	1,307	0.038	0.069
Marriage before age 18	0.1874	0.02330	0.124	0.852	0.923	421	240	0.141	0.234
Comprehensive knowledge about HIV prevention among young people	0.3450	0.01213	0.035	0.851	0.922	2,686	1,307	0.321	0.369
Attitudes towards people with HIV/AIDS	0.1098	0.01765	0.161	4.129	2.032	2,666	1,297	0.074	0.145
Women who have been tested for HIV	0.4145	0.01913	0.046	1.969	1.403	2,686	1,307	0.376	0.453
Knowledge of mother-to-child transmission of HIV	0.4005	0.01964	0.049	2.098	1.448	2,686	1,307	0.361	0.440

	Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Unweighted Count	Confidence limits	
Underweight prevalence	0.2841	0.01990	0.070	2.256	1.502	2,586	1,160	0.244	0.324
Tuberculosis immunization coverage	0.9568	0.01819	0.019	2.064	1.437	553	259	0.920	0.993
Polio immunization coverage	0.9028	0.02120	0.023	1.321	1.150	553	259	0.860	0.945
Immunization coverage for DPT	0.9415	0.01660	0.018	1.291	1.136	553	259	0.908	0.975
Measles immunization coverage	0.8971	0.02538	0.028	1.800	1.342	553	259	0.846	0.948
Fully immunized children	0.8348	0.02959	0.035	1.637	1.280	553	259	0.776	0.894
Acute respiratory infection in last two weeks	0.0983	0.01118	0.114	1.698	1.303	2,700	1,204	0.076	0.121
Antibiotic treatment of suspected pneumonia	0.3314	0.04470	0.135	1.001	1.000	265	112	0.242	0.421
Diarrhoea in last two weeks	0.1085	0.01099	0.101	1.502	1.226	2,700	1,204	0.087	0.131
Received ORT or increased fluids and continued feeding	0.2693	0.04349	0.161	1.307	1.143	293	137	0.182	0.356
Fever in last two weeks	0.2442	0.01739	0.071	1.972	1.404	2,700	1,204	0.209	0.279
Antimalarial treatment	0.2742	0.03099	0.113	1.424	1.193	660	296	0.212	0.336
Support for learning	0.4551	0.01226	0.027	0.729	0.854	2,700	1,204	0.431	0.480
Birth registration	0.4689	0.02942	0.063	4.182	2.045	2,700	1,204	0.410	0.528

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

Characteristic		Household population of women age 10-54	Interviewed women age 15-49		
		Number	Number	Percent	Percentage of eligible women interviewed
Age	10-14	415	.	.	.
	15-19	370	288	24.0	77.9
	20-24	221	192	16.0	86.8
	25-29	221	215	17.9	97.0
	30-34	152	145	12.1	95.6
	35-39	168	166	13.8	98.8
	40-44	91	86	7.2	94.7
	45-49	113	110	9.2	97.7
	50-54	108	.	.	.
Total	15-49	1337	1203	100.0	90.0

Appendix E: MICS Indicators - Numerators and Denominators

INDICATOR		NUMERATOR	DENOMINATOR
1	Under-five mortality rate	Probability of dying by exact age 5 years	
2	Infant mortality rate	Probability of dying by exact age 1 year	
3	Maternal mortality ratio	Number of deaths of women from pregnancy-related causes in a given year	Number of live births in the year (expressed per 100,000 births)
4	Skilled attendant at delivery	Number of women aged 15-49 years with a birth in the 2 years preceding the survey that were attended during childbirth by skilled health personnel	Total number of women surveyed aged 15-49 years with a birth in the 2 years preceding the survey
5	Institutional deliveries	Number of women aged 15-49 years with a birth in the 2 years preceding the survey that delivered in a health facility	Total number of women surveyed aged 15-49 years with a birth in 2 years preceding the survey
6	Underweight prevalence	Number of children under age five that fall below minus two standard deviations from the median weight for age of the NCHS/WHO standard (moderate and severe); number that fall below minus three standard deviations (severe)	Total number of children under age five that were weighed
7	Stunting prevalence	Number of children under age five that fall below minus two standard deviations from the median height for age of the NCHS/WHO standard (moderate and severe); number that fall below minus three standard deviations (severe)	Total number of children under age five measured
8	Wasting prevalence	Number of children under age five that fall below minus two standard deviations from the median weight for height of the NCHS/WHO standard (moderate and severe); number that fall below minus three standard deviations (severe)	Total number of children under age five weighed and measured
9	Low-birth weight infants	Number of last live births in the 2 years preceding the survey weighing below 2,500 grams	Total number of last live births in the 2 years preceding the survey
10	Infants weighed at birth	Number of last live births in the 2 years preceding the survey that were weighed at birth	Total number of last live births in the 2 years preceding the survey
11	Use of improved drinking water sources	Number of household members living in households using improved sources of drinking water	Total number of household members in households surveyed
12	Use of improved sanitation facilities	Number of household members using improved sanitation facilities	Total number of household members in households surveyed
13	Water treatment	Number of household members using water that has been treated	Total number of household members in households surveyed
14	Disposal of child's faeces	Number of children under age three whose (last) stools were disposed of safely	Total number of children under age three surveyed

INDICATOR		NUMERATOR	DENOMINATOR
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
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	Number of children aged 12-23 months receiving measles vaccine before their first birthday	Total number of children aged 12-23 months

INDICATOR		NUMERATOR	DENOMINATOR
	coverage		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
33	Use of oral Rehydration therapy (ORT)	Number of children aged 0-59 months with diarrhoea in the previous 2 weeks that received oral Rehydration salts and/or an appropriate household solution	Total number of children aged 0-59 months with diarrhoea in the previous 2 weeks
34	Home management of diarrhoea	Number of children aged 0-59 months with diarrhoea in the previous 2 weeks that received more fluids AND continued eating somewhat less, the same or more food	Total number of children aged 0-59 months with diarrhoea in the previous 2 weeks
35	Received ORT or increased fluids and continued feeding	Number of children aged 0-59 months with diarrhoea that received ORT (oral Rehydration salts or an appropriate household solution) or received more fluids AND continued eating somewhat less, the same or more food	Total number of children aged 0-59 months with diarrhoea in the previous 2 weeks
36	Household availability of insecticide-treated nets (ITNs)	Number of households with at least one mosquito net, either permanently treated or treated within the previous year	Total number of households surveyed
37	Under-fives sleeping under insecticide- treated nets	Number of children aged 0-59 months that slept under an insecticide-treated mosquito net the previous night	Total number of children aged 0-59 months surveyed
38	Under-fives sleeping under mosquito nets	Number of children aged 0-59 months that slept under a mosquito net the previous night	Total number of children aged 0-59 months surveyed
39	Anti-malarial treatment (under- fives)	Number of children aged 0-59 months reported to have had fever in the previous 2 weeks that were treated with an appropriate anti-malarial within 24 hours of onset	Total number of children aged 0-59 months reported to have had fever in the previous 2 weeks
40	Intermittent preventive malaria treatment (pregnant women)	Number of women receiving appropriate intermittent medication to prevent malaria (defined as at least 2 doses of SP/Fansidar) during the last pregnancy, leading to a live birth within the 2 years preceding the survey	Total number of women that have had a live birth within the 2 years preceding the survey
41	Iodized salt consumption	Number of households with salt testing 15 parts per million or more of iodine/iodate	Total number of households surveyed
42	Vitamin A supplementation (under-fives)	Number of children aged 6-59 months receiving at least one high-dose vitamin A supplement in the previous 6 months	Total number of children aged 6-59 months surveyed

INDICATOR		NUMERATOR	DENOMINATOR
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
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

INDICATOR		NUMERATOR	DENOMINATOR
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
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

INDICATOR		NUMERATOR	DENOMINATOR
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
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

INDICATOR		NUMERATOR	DENOMINATOR
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 24months surveyed
91	Testing coverage for the prevention of mother-to-child transmission of HIV	Number of women that gave birth in the previous 24months 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 anti-malarials	Total number of children (or households) for whom supplies were obtained
97	Cost of supplies	Median cost of supplies obtained, presented separately for each type of supply and whether sourced from public or private providers: insecticide-treated mosquito nets, oral Rehydration salts, antibiotics and anti-malarials.	Total number of children (or households) for whom supplies were obtained
98	Unmet need for family planning	Number of women that are currently married or in union that are fecund and want to space their births or limit the number of children they have and that are not currently using contraception	Total number of women interviewed that are currently married or in union
99	Demand satisfied for family planning	Number of women currently married or in union that are currently using contraception	Number of women currently married or in union that have an unmet need for contraception or that are currently using contraception
100	Attitudes towards	Number of women that consider that a husband/partner is justified in hitting or beating his wife in at least one of the	Total number of women surveyed

INDICATOR		NUMERATOR	DENOMINATOR
	domestic violence	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	
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 ANNIMAL 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 ..... ☐	

		Most Recent [Net #1]	Last But One [Net #2]
	Ask the respondent to show you the nets in the household, if more than 2, tell them to show the two recently obtained ones.		
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
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)	1ST CHILD	2ND CHILD	3RD CHILD	4TH CHILD .....
	Line number (from HL1)	___ ___	___ ___	___ ___	___ ___
	Age (from HL5)	___ ___	___ ___	___ ___	___ ___
OV9	I WOULD LIKE TO ASK YOU ABOUT ANY FORMAL, ORGANIZED HELP OR SUPPORT THAT YOUR HH MAY HAVE RECEIVED FOR (name) AND FOR WHICH YOU DID NOT HAVE TO PAY. BY FORMAL ORGANIZED SUPPORT I MEAN HELP PROVIDED BY SOMEONE WORKING FOR A PROGRAM. THIS PROGRAM COULD BE GOVERNMENT, PRIVATE, RELIGIOUS, CHARITY, OR COMMUNITY-BASED. REMEMBER THIS SHOULD BE SUPPORT FOR WHICH YOU DID NOT PAY.				
OV10	NOW I WOULD LIKE TO ASK YOU ABOUT THE SUPPORT YOUR HH RECEIVED FOR *(name)*. IN THE LAST 12 MONTHS, HAS YOUR HH RECEIVED ANY MEDICAL SUPPORT FOR *(name)*, SUCH AS MEDICAL CARE, SUPPLIES OR MEDICINE?	Yes.....1 No .....2 DK.....8	Yes .....1 No.....2 DK 8	Yes.....1 No .....2 DK.....8	Yes .....1 No.....2 DK 8
OV11	IN THE LAST 12 MONTHS, HAS YOUR HH RECEIVED ANY EMOTIONAL OR PSYCHOLOGICAL SUPPORT FOR *(name)*, SUCH AS COMPANIONSHIP, COUNSELING FROM A TRAINED COUNSELOR, OR SPIRITUAL SUPPORT, WHICH YOU RECEIVED AT HOME?	Yes.....1 **No .....2** **DK.....8** **2 or 8 ⇨OV13**	Yes .....1 **No.....2** **DK .....8** **2 or 8 ⇨OV13**	Yes.....1 **No .....2** **DK.....8** **2 or 8 ⇨OV13**	Yes .....1 **No.....2** **DK .....8** **2 or 8 ⇨OV13**
OV12	DID YOUR HH RECEIVE ANY OF THIS SUPPORT FOR *(name)*, IN THE PAST 3 MONTHS?	Yes.....1 No .....2 DK.....8	Yes .....1 No.....2 DK 8	Yes.....1 No .....2 DK.....8	Yes .....1 No.....2 DK 8
OV13	IN THE LAST 12 MONTHS, HAS YOUR HH RECEIVED ANY MATERIAL SUPPORT FOR *(name)*, SUCH AS CLOTHING, FOOD OR FINANCIAL SUPPORT?	Yes.....1 **No .....2** **DK.....8** **2 or 8 ⇨OV15**	Yes .....1 **No.....2** **DK .....8** **2 or 8 ⇨OV15**	Yes.....1 **No .....2** **DK.....8** **2 or 8 ⇨OV15**	Yes .....1 **No.....2** **DK .....8** **2 or 8 ⇨OV15**
OV14	DID YOUR HH RECEIVE ANY OF THIS SUPPORT FOR *(name)*, IN THE PAST 3 MONTHS?	Yes.....1 No .....2 DK.....8	Yes .....1 No.....2 DK 8	Yes.....1 No .....2 DK.....8	Yes .....1 No.....2 DK 8
OV15	IN THE LAST 12 MONTHS, HAS YOUR HH RECEIVED ANY SOCIAL SUPPORT FOR *(name)*, SUCH AS HELP IN HH WORK, TRAINING FOR A CAREGIVER, OR LEGAL SERVICES?	Yes.....1 **No .....2** **DK.....8** **2 or 8 ⇨OV17**	Yes .....1 **No.....2** **DK .....8** **2 or 8 ⇨OV17**	Yes.....1 **No .....2** **DK.....8** **2 or 8 ⇨OV17**	Yes .....1 **No.....2** **DK .....8** **2 or 8 ⇨OV17**
OV16	DID YOUR HH RECEIVE ANY OF THIS SUPPORT FOR *(name)*, IN THE PAST 3 MONTHS?	Yes.....1 No .....2 DK.....8	Yes .....1 No.....2 DK 8	Yes.....1 No .....2 DK.....8	Yes .....1 No.....2 DK 8
OV17	**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?
		Yes				Yes								
Line No.	Name	Paid	Unpaid	No	No. of hours	Paid	Unpaid	No	Yes	No	No. of hours	Yes	No	No. of hours
		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

unicef

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	

#	Question	Options	Skip
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 Ibupropfen ..... 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, Makueni District

Multiple Indicator Cluster Survey

2008