

Kenya

Eastern Province

Kitui District

Monitoring the situation of children and women



Multiple Indicator Cluster Survey 2008



Kenya National
Bureau of Statistics



United Nations
Children's Fund



Kenya

Eastern Province

Kitui District



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The Kitui district Multiple Indicator Cluster Survey (MICS), of the Eastern Province, Kenya was carried out by the Kenya National Bureau of Statistics (KNBS). Financial and technical support for the whole exercise was provided by the United Nations Children's Fund (UNICEF).

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

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List of Abbreviations

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

Foreword

The Kitui district Multiple Indicator Cluster Survey (MICS) 2008 is one of the largest district representative household sample survey conducted in the district. The survey covered 1,101 households in the district, sampled 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, so as to enable policymakers, planners, researchers and program managers to take actions based on credible evidence pointed out by the survey. In MICS 2008, information on specific areas such as, reproductive health, child mortality, child health, nutrition, child protection, water and sanitation, education, HIV/AIDS, orphan hood status among other related areas were collected.

The results indicate that the infant and child mortality in Kitui District is the highest in the Province, and that the district has a high prevalence of under-weight children.

It is also worth noting that the proportion of children aged 0-5 months who are exclusively breastfed is low (23 per cent).

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). The staff of UNICEF Kenya country office provided valuable professional support and guidance to the overall management of the survey. The effort and commitment of the staff of the Kenya National Bureau of Statistics (KNBS) in executing the tasks of this survey are commendable. Their relentless dedication to this course enabled us to successfully complete the survey and avail the results. I would like to acknowledge the good work of the interviewers and supervisors who braved difficult terrain and field conditions to collect data for this survey. I also appreciate the meticulous care and attention to detail with which data processing was carried out by staff tasked to accomplish these important assignment. I further wish to thank the UNICEF and KNBS Staff for their valuable effort in editing this final report.

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



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Executive Summary

The Kitui district Multiple Indicator Cluster Survey (MICS) is a representative sample survey drawn using the 1999 Census of Kenya Enumeration Areas (EAs) as the sampling frame. The 50 Enumeration Areas were sampled using the probability proportional to size (PPS) sampling methodology, with information from a total of 1,101 sampled households, collected using structured questionnaires. The Kitui district MICS is the largest household sample survey ever conducted in the district.

The survey used a two stage design, where at the EA level households were stratified into two; one households with at least a child below 3 years and the other being a household with no children below 3 years at the time of household listing¹. The stratification at EA level was done to reduce the standard errors of children and women based estimates. The data was collected by two teams comprising of 5 members each, 1 supervisor, 1 editor/measurer and 3 investigators.

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

Child Mortality

The under-five mortality rate and the infant mortality rate were calculated using the birth history data for the 10 year period preceding the survey. The under-five mortality rate of Kitui district is 86 per 1,000 live births while the infant mortality rate is 63 per 1,000 live births.

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

Nutritional Status and Breastfeeding

Kitui district has comparatively high underweight and stunting levels for children under five years of age; with 26 per cent of children being underweight while 38 per cent are stunted.

Fifty two per cent of the children in the interviewed households were timely breastfed at birth (given breast milk within an hour of birth), with 23 per cent of children aged between 0-5 months being exclusively breastfed. However, only one third of children under five years in Kitui district were weighed at birth.

Majority of the households in Kitui (74 per cent) use iodized salt for cooking.

Immunization

Immunisation coverage for Kitui district is fairly high with 64 per cent of children aged between 12-23 months receiving full vaccination (BCG, 3 doses of Polio, 3 doses of DPT+HepB+Hib and measles) before reaching their first birthday i.e. 12 months. BCG immunization coverage was almost universal (98 per cent) but measles immunisation was done for 76 per cent of children aged between 12-23 months. Polio and DPT immunization coverage in Kitui district is high at about 85 per cent and 91 per cent, respectively.

In addition, 71 per cent of the mothers who gave birth during the two years preceding the survey reportedly received tetanus toxoid (TT) injection.

Care of Illness

For children who had diarrhoea during the 2 weeks preceding the survey in Kitui district, 38 per cent received oral re-hydration therapy with another 17 per cent reporting home management of diarrhoea. Another 23 per cent of the caregivers either increased ORT or increased fluids and continued feeding.

About two out of three children who had suspected pneumonia infection reportedly sought treatment with almost 44 per cent given antibiotic treatment for suspected pneumonia infection cases.

In Kitui district, solid fuel is the dominant fuel type with 95 per cent of the households using it in their homes.

Malaria Prevention

In Kitui district, 55 per cent of the households own at least one insecticide treated mosquito net, 44 percent of the children below five years sleep under mosquito net, with nearly 46 per cent of children below 5 years of age actually sleeping under an insecticide treated net.

For children who reported having fever during the 2 weeks preceding the survey, 13 per cent of children were given an anti-malarial treatment. Only 22 per cent of women who had given birth during the two years preceding the survey received intermittent preventive treatment for malaria.

Water and Sanitation

About 31 per cent of the Kitui district population is using drinking water from an improved source while 40 per cent reported treating their drinking water.

In Kitui district, only 36 per cent of the population is using improved sanitation facilities, with 49 per cent of the households with children under five years disposing of child waste/stool safely.

Reproductive Health

The total fertility rate (TFR) of Kitui district for the 3-year period preceding the survey is 5.1 children per woman and is one of the highest in the Province. Majority of mothers (97 per cent) who gave birth in the two years before the survey had an antenatal check-up attended by skilled personnel. Some of the services provided to expectant mothers during

antenatal care visits include blood test, blood pressure examination, urine test and weight measurement.

Skilled professionals provided antenatal care to 29 per cent of the women who gave birth in the two years before the survey, while 28 per cent of the mothers gave birth in a health facility.

Education

In Kitui district, only about 30 per cent of children of pre-school age are in school. A larger proportion are out of school. For those children currently in primary school, 97 per cent attended pre-school. However, only 37 per cent of the children of primary school entry age are attending primary school. The net primary school attendance rate for children aged 6-13 years is 85 per cent, while that of secondary school attendance for children aged 14-17 years is only 15 per cent. The results show that while primary school attendance in Kitui district is high, there is low transition to secondary schools.

Female adult literacy rate in Kitui district is high, 83 per cent of young women aged 15-24 are able to read.

Child Protection

Few births in the district (36 per cent) have been registered. About 16 per cent of children aged between 5-14 years in Kitui district are engaged in child labour. Majority (94 percent) are labourer students, while 16.3 per cent are student labourers.

Furthermore, a very high proportion (94 per cent) of children age 2-14 years confirmed having received some sort of psychological or physical punishment the month preceding the survey. Early marriage is common in the district, with 28 per cent of women aged 20-49 years confirming they got married before reaching age 18. Currently, 11 per cent of women between 15-19 years age category are either currently married or in some union.

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

In Kitui district, 29 per cent of women aged 15-49 years have undergone female genital mutilation; while majority of women (93 percent) have heard about FGM/C. About 10 per cent of the women who have heard of FGM/C believe that the practice should be continued.

Further, about 48 per cent of women in Kitui district believe that a husband is justified to beat a wife for either going out without seeking permission from him, neglecting children, arguing with him, refusing to have sex with him or due to burning food while cooking.

HIV/AIDS

About 38 per cent of young women aged between 15-24 years in Kitui district have comprehensive knowledge about HIV/AIDS prevention. One in every two women (almost 50 per cent) have knowledge of at least three ways by which a mother can transmit HIV/AIDS to her child.

Although 90 per cent confirmed that they know where to get testing services, only 48 per cent of the women interviewed reported having undergone testing for HIV virus. It is worth noting that up to 12 per cent of the women still had some negative attitude towards those living with the virus.

The report further shows that up to 72 per cent of the women who delivered within the two years preceding the survey received counselling on prevention of mother-to-child transmission of HIV/AIDS with another 72 per cent confirming they were tested for HIV/AIDS virus to prevent mother to child transmission.

Orphanhood status and Vulnerable Children

HIV orphanhood affects about 9 per cent of children in Kitui district. There is no difference in school attendance for orphaned students compared to non orphaned students. Over 35 per cent of households with orphans and vulnerable children in Kitui district receive free basic external support.

Summary Table of Findings

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

Topic	MICS INDICATOR NUMBER	MDG INDICATOR NUMBER	Indicator	Value & Unit	
CHILD MORTALITY					
Child mortality	1	13	Under-five mortality rate	86	per thousand
	2	14	Infant mortality rate	63	per thousand
NUTRITION					
Nutritional status			Underweight prevalence (below -2 SD)	25.7	per cent
			Stunting prevalence (below -2 SD)	37.9	per cent
			Wasting prevalence (below -2 SD)	3.6	per cent
Breastfeeding	45		Timely initiation of breastfeeding	51.6	per cent
	15		Exclusive breastfeeding rate	22.6	per cent
	16		Continued breastfeeding rate at 12-15 months	88.2	per cent
			Continued breastfeeding rate at 20-23 months	47.1	per cent
	17		Timely complementary feeding rate	77.8	per cent
	18		Frequency of complementary feeding	64.8	per cent
	19		Adequately fed infants	44.2	per cent
Salt iodization	41		Iodized salt consumption	74.0	per cent
Vitamin A	42		Vitamin A supplementation (under-fives)	38.5	per cent
	43		Vitamin A supplementation (post-partum mothers)	39.6	per cent
Low birth weight	9		Low birth weight infants	9.0	per cent
	10		Infants weighed at birth	31.1	per cent
CHILD HEALTH					
Immunization	25		Tuberculosis immunization coverage (by 12 months)	98.4	per cent
	26		Polio immunization coverage (by 12 months)	84.8	per cent
	27		DPT immunization coverage (by 12 months)	90.8	per cent
	28	15	Measles immunization coverage (by 12 months)	76.3	per cent
	31		Fully immunized children (by 12 months)	63.6	per cent
Tetanus toxoid	32		Neonatal tetanus protection	71.2	per cent
Care of illness	33		Use of oral rehydration therapy (ORT)	38.1	per cent
	34		Home management of diarrhoea	17.3	per cent
	35		Received ORT or increased fluids, and continued feeding	22.9	per cent
	23		Care seeking for suspected pneumonia	63.7	per cent
	22		Antibiotic treatment of suspected pneumonia	43.8	per cent
Solid fuel use	24	29	Solid fuels for cooking	95.4	per cent
Malaria	36		Households having at least one insecticide-treated nets (ITNs)	55.4	per cent
	37	22	Under-fives sleeping under insecticide-treated nets	43.7	per cent
	38		Under-fives sleeping under mosquito nets	48.3	per cent
	39	22	Antimalarial treatment (under-fives)	12.7	per cent
	40		Intermittent preventive malaria treatment (pregnant women)	22.4	per cent
ENVIRONMENT					
Water and Sanitation	11	30	Use of improved drinking water sources	30.8	per cent
	13		Water treatment	40.1	per cent
	12	31	Use of improved sanitation facilities	36.0	per cent
	14		Disposal of child's faeces	49.2	per cent

Topic	MICS INDICATOR NUMBER	MDG INDICATOR NUMBER	Indicator	Value & Unit	
REPRODUCTIVE HEALTH					
Contraception and unmet need	21	19c	Contraceptive prevalence	57.5	per cent
	98		Unmet need for family planning	4.9	per cent
Maternal and newborn health	20	17	Antenatal care	96.6	per cent
	44		Content of antenatal care		
			Blood test taken	72.0	per cent
			Blood pressure measured	75.8	per cent
			Urine specimen taken	57.4	per cent
			Weight measured	94.3	per cent
	4		Skilled attendant at delivery	28.5	per cent
	5		Institutional deliveries	27.5	per cent
			Total fertility rate	5.1	Rate
EDUCATION					
Education	52	6	Pre-school attendance	29.9	per cent
	53		School readiness	96.7	per cent
	54		Net intake rate in primary education	37.0	per cent
	55		Net primary school attendance rate	85.0	per cent
	56		Net secondary school attendance rate	15.2	per cent
			Adult literacy rate (female)	82.9	per cent
CHILD PROTECTION					
Birth registration	62		Birth registration	36.1	per cent
Child labour	71		Child labour	16.3	per cent
	72		Labourer students	94.7	per cent
	73		Student labourers	16.3	per cent
Child discipline	74		Any psychological/physical punishment	94.3	per cent
Early marriage and polygamy	67		Marriage before age 15	6.0	per cent
			Marriage before age 18	28.0	per cent
	68		Young women aged 15-19 currently married/in union	11.4	per cent
Female genital mutilation/ Cutting	66		Approval of FGM/C	9.9	per cent
	63		Prevalence of female genital mutilation/cutting (FGM/C)	29.3	per cent
	64		Prevalence of extreme form of FGM/C	3.9	per cent
	65		FGM/C prevalence among daughters	4.2	per cent
Domestic violence	100		Attitudes towards domestic violence	47.7	per cent
HIV/AIDS, SEXUAL BEHAVIOUR, AND ORPHANED AND VULNERABLE CHILDREN					
HIV/AIDS knowledge and attitudes	82	19b	Comprehensive knowledge about HIV/AIDS prevention among young people	37.7	per cent
	89		Knowledge of mother- to-child transmission of HIV/AIDS	96.9	per cent
	86		Negative attitude towards people with HIV/AIDS	11.8	per cent
	87		Women who know the location of HIV testing sites	90.4	per cent
	88		HIV/AIDS testing rates among women	47.7	per cent
	90		Counselling coverage for the PMTCT of HIV virus	71.6	per cent
	91		Testing coverage for the PMTCT of HIV virus	72.2	per cent
Support to orphaned and vulnerable children	75	20	Prevalence of orphans (and single parent)	9.4	per cent
	78		Children's living arrangements	7.2	per cent
	76		Prevalence of vulnerable children	7.8	per cent
	77		School attendance of orphans versus non-orphans	1.01	ratio
	81		External support to children orphaned and made vulnerable by HIV/AIDS	34.9	per cent

1.1 Background

This report is based on the Kitui 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 Kitui district and was largely based on the need to monitor progress towards goals and targets emanating from recent international agreements: the Millennium Development Goals, adopted by all 191 United Nations Member States in September 2000, and the Plan of Action of A World Fit For Children, adopted by 189 Member States at the United Nations Special Session on Children in May 2002. All the above commitments build upon promises made by the international community at the 1990 World Summit for Children.

In signing these international agreements, governments committed themselves to improving conditions for the children and to monitor 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 are more vulnerable to social-economic hardships. In regard to children, the Government of Kenya (GOK) formulated the National Plan of Action (NPA) for children in 1992 soon after the World Summit for Children (WSC) which was held in 1990. The main objective of this programme was to identify issues affecting children and the strategies to address them. Measuring indicators of progress towards declared goals through proper monitoring and evaluation of projects/programmes

and other interventions e.g. emergency response and humanitarian assistance, are vital components of the NPA.

Proper monitoring and evaluation of targeted projects and programmes by the government and development partners requires a wide range of data to track progress towards achievement of desired outcomes. In this respect, MICS data from the district will be helpful in appraising national programme such as Poverty Reduction Strategy (PRS), Economic Recovery Strategy (ERS) and 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 Kitui district of Eastern Province are presented in this report.

1.2 Survey Objectives

The 2008 Kitui 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 Kitui district of Eastern Province;
- To furnish data needed for monitoring progress toward the goals established in the Millennium Declaration, the goals of the “World Fit For Children” (WFFC) and other internationally agreed upon goals, as a basis for future action;
- To contribute to the improvement of data and monitoring systems in Kenya and to strengthen technical expertise in the design, implementation and analysis of such systems.

2.1 Sample Design

The sample for the Kitui 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, and the sample was selected in two stages. Within the district, 50 clusters (census enumeration areas) were selected with probability proportional to size. After, a household listing was carried out within the selected enumeration areas and households were stratified into two groups; first one having children below 3 years and second not having children below 3 years. A 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. A more detailed description of the sample design can be found in Appendix A.

2.2 Questionnaires

Three sets of questionnaires were used in the survey:

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

The Household Questionnaire included the following modules:

- o Household Listing
- o Education
- o Water and Sanitation
- o Malaria-related questions
- o Child Labour
- o Child Discipline
- o 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:

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

The Questionnaire for Children under 5 was administered to mothers or caretakers of children below 5 years of age² living in the households. The questionnaire was administered to primary caretakers of

² The terms "children under 5", "children age 0-4 years", and "children aged 0-59 months" are used interchangeably in this report. Under 5 and 0-59 months refers to the same age group.

children below 5 years in cases where the mother was not listed in the household roster. The questionnaire included the following modules:

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

The questionnaires are based on the MICS 3 model questionnaire³. 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 between 0-59 months. Details and findings of these measurements are provided in the respective sections of the report.

2.3 Training and Fieldwork

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

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

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

³ The model MICS3 questionnaire can be found at 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 MICS 3 project and adapted to the modified questionnaire were used throughout.

Data processing began simultaneously with data collection taking place between the months of July 2008 to September 2008. Data was analysed using the Statistical Package for Social Sciences (SPSS) software program and the model syntax and tabulation plans developed by UNICEF were customized for this purpose.

3.1 Sample Coverage

Among the 1,200 households selected for the sample, 1,197 were found to be occupied. From these, 1,101 households were successfully interviewed yielding a household response rate of 92 per cent. In the interviewed households, 1,343 women (age 15-49) were identified. Of these, 1,215 were successfully interviewed, yielding a response rate of 90.5 per cent. In addition, 1,258 children under age five were listed in the household questionnaire. Questionnaires were completed for 1,238 of these children, yielding a response rate of 98 per cent. The overall response rates were 83 per cent for the women and 91 for the under five interviews, respectively (Table 3.1 (HH.1)).

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

Number of households, women and children under 5 by results of the interviews and household, women's and under-five's response rates, MICS Kitui district, Eastern Province, Kenya 2008

Number of households

Sampled (H_s)	1200
Occupied (H_o)	1197
Interviewed (H_i)	1101
Response rate (H_r)	92.0

Number of women

Eligible (W_e)	1343
Interviewed (W_i)	1215
Response rate (W_r)	90.5
Overall response rate (W_{or})	83.2

Number of children under 5

Eligible (C_e)	1258
Information collected (C_i)	1238
Response rate (C_r)	98.4
Overall response rate (C_{or})	90.5

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

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

$C_r = C_i / C_e$; $C_{or} = C_r \times H_r$

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

3.2 Characteristics of Households

The age and sex distribution of survey population is provided in Table 3.2 (HH.2) below. The distribution is also used to produce the population pyramid in Figure 3.1. In the 1,100 households successfully interviewed, 5,411 household members were listed. The interviewed members were 2,499 males and 2,913 females. These figures also indicate that the survey average household size estimate of 4.91 is more or less similar to the projected household size of 4.9 for the year 2008.

The age distribution from Table 3.2 (HH.2) shows that 46 per cent of the sampled households' population is below 15 years of age, while 48 per cent are aged between 15-64 years. The child population aged between 0-17 years is 53 per cent, highlighting a high dependency burden in Kitui district.

Table 3.2 (HH.2): Household Age Distribution by Sex						
Percentage distribution of the household population by age groups and dependency, and number of children aged 0-17 years, by sex, MICS Kitui district, Eastern Province, Kenya 2008						
Characteristics	Males		Females		Total	
	Number	per cent	Number	per cent	Number	per cent
Age						
0-4	432	17.3	455	15.6	887	16.4
5-9	438	17.5	449	15.4	887	16.4
10-14	359	14.4	371	12.7	730	13.5
15-19	317	12.7	271	9.3	588	10.9
20-24	159	6.3	225	7.7	384	7.1
25-29	109	4.4	207	7.1	316	5.8
30-34	129	5.2	160	5.5	289	5.3
35-39	119	4.8	167	5.7	286	5.3
40-44	75	3.0	107	3.7	182	3.4
45-49	68	2.7	93	3.2	161	3.0
50-54	60	2.4	102	3.5	162	3.0
55-59	67	2.7	59	2.0	125	2.3
60-64	41	1.6	86	3.0	127	2.3
65-69	25	1.0	44	1.5	69	1.3
70+	99	4.0	103	3.5	203	3.7
Missing/DK	3	0.1	13	0.4	16	0.3
Dependency age groups						
< 15	1229	49.2	1275	43.8	2504	46.3
15-64	1142	45.7	1478	50.7	2620	48.4
65 +	124	5.0	147	5.0	271	5.0
Missing/DK	3	0.1	13	0.4	16	0.3
Children aged 0-17	1417	56.7	1444	49.6	2861	52.9
Adults 18+ /Missing/ DK	1082	43.3	1469	50.4	2551	47.1
Total	2499	100.0	2913	100.0	5411	100.0

Table 3.3 (HH.3) provides basic background information on the household, the gender of the household head and number of household members. The weighted and un-weighted numbers of total households are equal, since sample weights were normalized (See Appendix A). The table also shows the proportions of households with at least one child under 18, those with at least one child under 5 and at least one eligible woman aged 15-49 years.

In Kitui district, about 43 per cent of the households are reportedly headed by females and approximately 53 per cent of the households have at least one child below 5 years of age. About 79 per cent of the households have both i.e. at least one child below 18 years of age and at least one female in the reproductive age group 15-49 years. The mean household size in Kitui district is 4.91 persons, and the district has a negligible proportion of households who were reportedly displaced during the one year period preceding the survey.

Figure 3.1: Age and sex distribution of household population, MICS Kitui, 2008

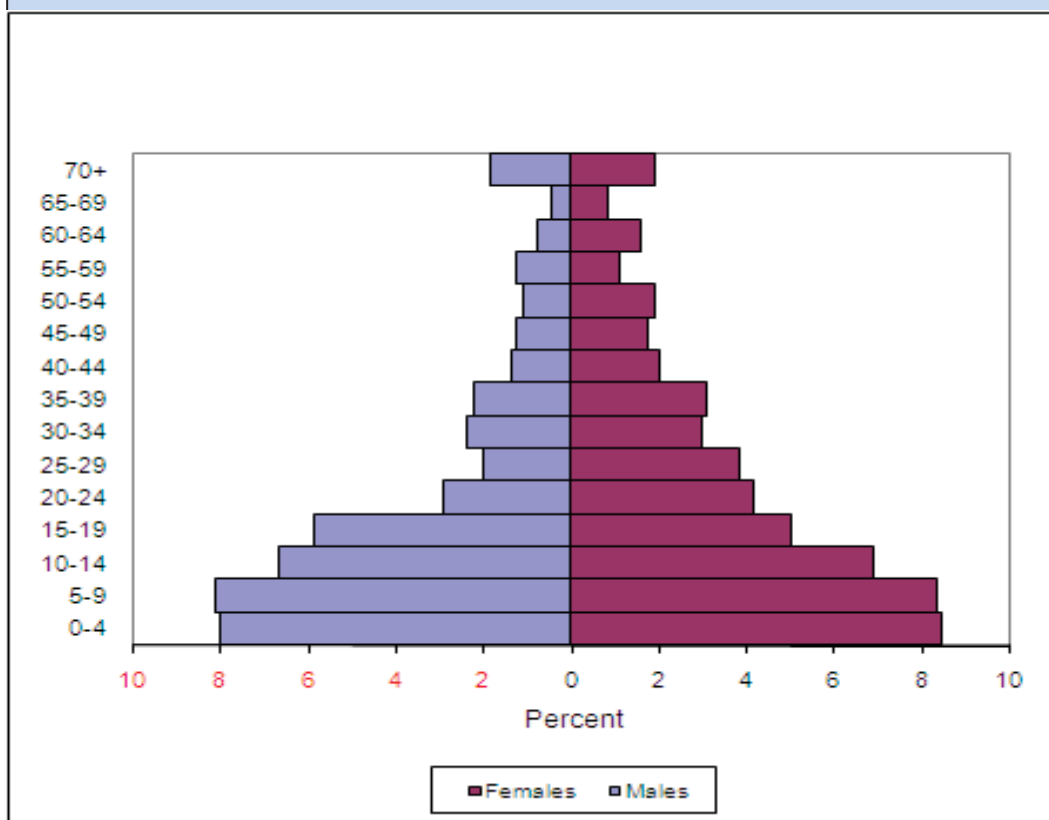


Table 3.3 (HH.3): Household Composition

Percentage distribution of households by selected characteristics, MICS Kitui district, Eastern Province, Kenya 2008

Characteristics	Weighted per cent	Number of households	
		Weighted	Un-weighted
Sex of household head			
Male	57.5	634	652
Female	42.5	467	449
Number of household members			
1	12.0	132	67
2-3	20.3	224	183
4-5	27.2	300	326
6-7	25.0	276	320
8-9	9.8	108	119
10+	5.6	62	86
Mean household size	4.91	1102	1101
At least one child aged < 18 years	78.6	1101	1101
At least one child aged < 5 years	52.7	1101	1101
At least one woman aged 15-49 years	79.0	1101	1101

3.3 Characteristics of Female Respondents

Tables 3.4 (HH.4) and 3.5 (HH.5) provide information on the background characteristics of female respondents aged 15-49 years and children under 5 years. In both tables, the total numbers of weighted and un-weighted observations are equal, since sample weights have been normalized (standardized). In addition to providing useful information on the background characteristics of women and children, the tables are also intended to show the numbers of observations in each background category. These categories are used in the subsequent tabulations of this report.

Table 3.4(HH.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 and wealth index.

Majority of the women sampled were aged below 34 years, with many having attained a primary level education (74 per cent).

Table 3.4 (HH.4): Women's background characteristics			
Percentage distribution of women aged 15-49 years by background characteristics, MICS Kitui district, Eastern Province, Kenya 2008			
Characteristics	Weighted percentage	Number of women	
		Weighted	Un-weighted
Age			
15-19	19.5	237	241
20-24	16.4	199	233
25-29	18.5	224	245
30-34	14.2	173	203
35-39	14.4	174	136
40-44	9.2	112	86
45-49	7.9	96	71
Marital/Union status			
Currently married/in union	62.9	764	802
Formerly married/in union	11.8	143	121
Never married/in union	25.4	308	292
Motherhood status			
Ever gave birth	77.2	938	971
Never gave birth	22.8	277	244
Mothers Education			
None	8.7	106	82
Primary	73.7	895	931
Secondary +	17.6	214	202
Wealth index			
Low	34.7	421	477
Medium	33.2	404	420
High	32.1	390	318
Total	100.0	1215	1215

Overall 63 per cent of the women aged 15-49 years in Kitui district are currently married and 77 per cent have ever given birth. This implies that quite a reasonable proportion (14 per cent) of women have children out of wedlock. Considering the wealth status, women are almost equally spread across the wealth rankings with up to approximately one third of the women belonging to each of the wealth index categories i.e. 35 per cent, 33 per cent and 32 per cent for the low medium and high household wealth index categories, respectively.

3.4 Characteristics of Children under Five

Some background characteristics of children under 5 are presented in Table 3.5 (HH.5). These include distribution of children by several attributes: sex, age in months, mothers' or caretakers' education and household wealth index. As expected, the sex ratios at birth show more or less similar numbers of male and female children aged 0-4 years, with 48 per cent and 52 per cent of the children being males and females, respectively.

In Kitui district, close to 75 per cent of the children belong to mothers who have attained a primary education level, leaving only 11 per cent and 14 per cent of children with mothers reporting no education and secondary education, respectively.

The distribution of children below 5 years by wealth index shows that majority (45 per cent) of children belong to low wealth index households, 34 per cent belong to medium wealth index households and the remaining proportion (21 per cent) to high wealth index households.

Table 3.5 (HH.5): Children's background characteristics			
Percentage distribution of children under five years of age by background characteristics, MICS Kitui district, Eastern Province, Kenya 2008			
Characteristics	Weighted percentage	Number of under-5 children	
		Weighted	Un-weighted
Sex			
Male	48.3	598	611
Female	51.7	640	627
Age			
< 6 months	10.9	135	154
6-11 months	8.8	109	121
12-23 months	19.9	247	272
24-35 months	19.3	239	251
36-47 months	21.5	267	246
48-59 months	19.6	242	194
Mother's education			
None	10.9	135	128
Primary	74.9	927	929
Secondary +	14.3	177	181
Wealth index			
Low	44.9	556	552
Medium	33.7	417	437
High	21.4	264	249
Total	100.0	1238	1238

One of the overarching goals of the Millennium Development Goals (MDGs) is to reduce child mortality by two thirds between 1990 and 2015. The World Fit for Children (WFFC) goal is to reduce infant and under-five mortality rate by at least one-third by 2015. Specifically, the MDGs call for the reduction in under-five mortality by two-thirds between 1990 and 2015. Monitoring progress towards this goal is an important but challenging objective. Measuring childhood mortality may seem easy, but attempts' using direct questions, such as "asking to know whether someone in the household died in the previous year?" gives inaccurate results. However, in Kenya district level MICS, direct measures of child mortality from birth histories were used. 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 born. If the child is not alive at the time of the survey, information on age of the child at the time of death is obtained. This method is also used by Demographic Health Surveys (DHS) worldwide including that of Kenya Demographic Health Survey (KDHS), which allows us to compare the MICS mortality rates with KDHS.

The infant mortality rate is the probability of dying before reaching one year while the under-five mortality rate is the probability of a child dying before their fifth birthday. The neonatal mortality rate is the probability of dying before one month of life. Post neonatal mortality rate is the probability of a new born dying between one month and one year of life. The child mortality rate refers to probability of a child dying between one year and five years of age. 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, the quality of the estimates depend on the completeness of information obtained in the birth histories. In many cases women tend to avoid reporting their dead children and this underestimates the mortality levels.

4.1 Levels of Childhood Mortality

Table 4.1 provides estimates of childhood mortality for the ten year periods preceding the survey. The infant mortality rate is estimated as 63 per 1000 live births, while the under-five mortality rate is 86 per 1000 live births. These estimates have been calculated based on births during the ten year period preceding the survey.

Table 4.1: Child mortality					
Infant, neonatal, post-neonatal, child and under-five mortality rates for 10-year period preceding the survey, MICS Kitui District, Eastern Province, Kenya 2008					
Periods of analysis of ten years	Infant mortality rate	Neonatal mortality rate	Post-neonatal mortality rate	Child mortality rate	Under-five mortality rate
0-9	63	43	20	24	86
10-19	81	49	33	39	117

The table shows that mortality rates have generally reduced in the last ten years for all age groups of children. Most notable is the high drop in the under-five mortality rate in Kitui district from 117 to 86 deaths per 1000 live births.

Children's nutritional status is a reflection of their overall health. When children have access to an adequate food supply with no exposure to repeated illnesses and are well cared for, they reach their growth potential, usually considered as well nourished children.

Malnutrition is associated with more than half of all child deaths worldwide. Undernourished children are more likely to die from common childhood ailments, and for those who survive, they are more likely to 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 target is to reduce by half the proportion of people who suffer from hunger between 1990 and 2015. The World Fit for Children goal is to reduce the prevalence of malnutrition among children below five years of age by at least one-third (between the year 2000 and 2010), with special attention to children under 2 years of age. A reduction in the prevalence of malnutrition contributes to achieving the goal of reducing child mortality.

5.1 Nutritional Status

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 is recommended for use by UNICEF and the World Health Organization. Each of the three nutritional status indicators are expressed in standard deviation units (z-scores) from the median of the reference population.

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

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

Finally, children whose weight-for-height (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, weights and heights of all children aged 6-59 months were measured using anthropometric equipment recommended by UNICEF (UNICEF, 2006). Findings in this section are based on the results of these measurements.

Table 5.1 (NU.1) shows percentages of children classified into each of these categories, based on the anthropometric measurements that were taken during fieldwork. Additionally, the table includes the percentages 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.

In Table 5.1, children who were not weighed and measured (approximately two per cent of children) and those whose measurements are outside a plausible range are excluded. About 3 per cent children are excluded from the analysis either because the child was not measured or the age information is missing or flagged (outliers).

More than one in every four (almost 26 per cent) children aged 6-59 months in Kitui district are moderately underweight (Table 5.1 NU.1). Thirty eight per cent are moderately stunted or too short for their age and about 11 per cent are severely stunted or too short for their age.

Figure 5.1 shows percentages of nutritional status of the children between 6-59 months. Those children whose mothers have secondary or higher education are less likely to be underweight and stunted compared to children of mothers with no education. Boys are more likely to be underweight, stunted and wasted than girls.

The age pattern shows that a higher proportion of children aged 12-23 months are undernourished according to all three indices in comparison to children who are younger and older (Figure 5.1). This pattern is expected and is related to the age at which many children cease to breastfeed and are exposed to contamination from water, food, and the environment. The nutritional patterns by wealth index show a decline in levels of malnutrition by increasing levels of the household wealth index.

Table 5.1 (NU.1): Child nutritional status

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

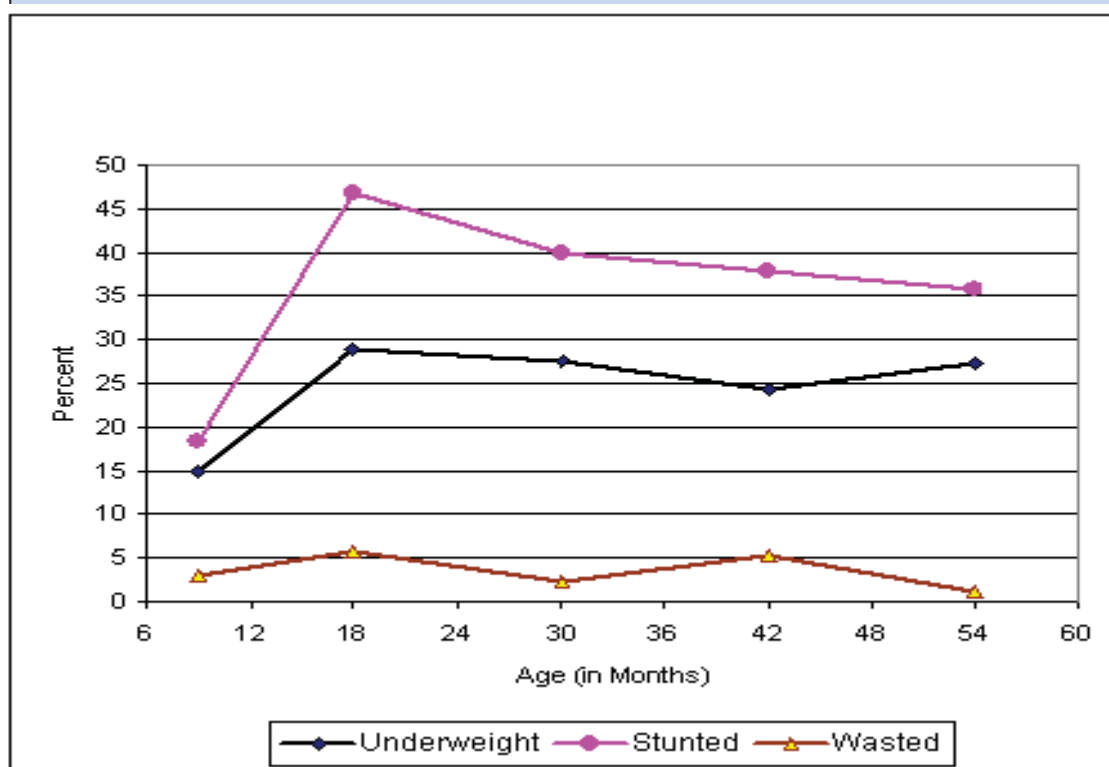
Characteristics	Weight-for-age		Height-for-age		Weight-for-height			Number of children aged 6-59 months
	per cent below - 2 SD	per cent below - 3 SD	per cent below - 2 SD	per cent below - 3 SD	per cent below - 2 SD	per cent below - 3 SD	per cent above + 2 SD	
Sex								
Male	25.8	3.2	41.0	12.0	5.1	0.2	1.1	514
Female	25.7	4.2	34.9	9.9	2.2	0.0	2.1	539
Age								
6-11 months	16.0	1.9	18.4	3.8	3.1	0.0	5.5	101
12-23 months	29.0	4.8	46.9	12.7	5.7	0.3	1.6	237
24-35 months	27.6	3.4	39.8	14.3	2.3	0.0	0.0	228
36-47 months	24.3	5.8	37.9	12.4	5.3	0.0	1.6	247
48-59 months	27.2	1.6	35.8	7.6	1.1	0.0	1.3	231
Mother's education								
None	17.2	1.9	37.7	7.2	4.4	0.0	5.5	116
Primary	28.5	4.4	40.6	12.3	3.7	0.1	0.7	798
Secondary +	17.0	1.5	22.5	6.0	2.0	0.0	3.5	139
Wealth index								
Low	31.2	5.6	44.9	14.7	4.8	0.2	1.0	470
Medium	25.1	2.8	39.9	9.4	2.6	0.0	1.8	363
High	15.3	1.1	19.5	5.3	2.6	0.0	2.6	220
Total	25.7	3.7	37.9	10.9	3.6	0.1	1.6	1053

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

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



5.2 Breastfeeding

Breastfeeding for the first few years of life protects children from infection, provides an ideal source of nutrients, is affordable 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, micronutrient deficiency and is unsafe if clean water is not readily available. The World Fit for Children goal states that children should be exclusively breastfed for 6 months and continue to be breastfed with safe, appropriate and adequate complementary feeding for up to 2 years of age and beyond.

WHO/UNICEF 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)

Initial Breastfeeding Status

Table 5.2 (NU.2) 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). A higher proportion of mothers with no education started breastfeeding their new born within one hour of birth compared with mothers with secondary or higher education (59 per cent and 51 per cent respectively), and a similar pattern is observed for the proportion that breastfed their child within one day.

Table 5.2 (NU.2): Initial breastfeeding			
Percentage of women aged 15-49 years with a birth in the two years preceding the survey who breastfed their baby within one hour of birth and within one day of birth, MICS Kitui district, Eastern Province, Kenya 2008			
Characteristics	percentages who started breastfeeding within one hour of birth	percentages 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	48.7	92.1	92
6-11 months	54.9	94.9	97
12-23 months	52.4	93.9	180
Mother's education			
None	59.3	98.5	27
Primary	51.0	93.5	308
Secondary +	50.8	89.6	53
Wealth index			
Low	45.0	94.5	171
Medium	58.2	91.3	128
High	54.6	94.1	89
Total	51.6	93.3	388

Exclusive Breastfeeding status

Table 5.3a (NU.3) and 5.3b (NU.3) present breastfeeding status based on the reports of mothers or caretakers of children's consumption of food and fluids in the 24 hours prior to the interview. 'Exclusively breastfed' refers to infants who received only breast milk within a specified period of time.

Table 5.3a (NU.3) shows exclusive breastfeeding of infants during the first six months of life (separately for 0-3 months and 0-5 months), as well as complementary feeding of children 6-9 months and continued breastfeeding of children at 12-15 and 20-23 months of age.

In the first three months of life, girls were more likely to be exclusively breastfed than boys. However, boys show a slight edge over girls for the overall 0-5 month's period. Approximately 23 per cent of children aged less than six months are exclusively breastfed, which is considerably low as exclusive breastfeeding is recommended for the first 6 months of birth. At age 6-9 months, almost 78 per cent of children are receiving complimentary solid or mushy food in addition to breast milk. By

age 12-15 months, about 88 per cent of children are still breastfeeding and by age 20-23 months, 47 per cent are still breastfed.

Table 5.3a (NU.3): Exclusive breastfeeding				
Percentages of living children according to breastfeeding status at each age group, MICS Kitui district, Eastern Province, Kenya 2008				
Characteristics	Children age 0-3 months		Children age 0-5 months	
	Per cent exclusively breastfed	Number of children	Per cent exclusively breastfed	Number of children
Sex				
Male	30.7	35	23.6	48
Female	35.0	40	21.9	70
Mother's education				
None	(31.3)	(2)	(16.7)	(4)
Primary	38.9	52	26.4	85
Secondary +	17.7	20	12.1	29
Wealth index				
Low	31.0	42	25.2	57
Medium	38.4	17	21.2	35
High	32.2	15	18.7	26
Total	33.0	74	22.6	119
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.				
NS: Based on less than 25 un-weighted cases, hence not shown.				

Comparison of exclusive breastfeeding by wealth index indicates that children in the medium wealth index households are more likely to be exclusively breastfed compared to those from higher wealth index households. This may be partly due to the ability of such wealthier households to purchase complementary food for children, especially if the mothers or caregivers are in formal employment.

Table 5.3b (NU.3) shows the percentage of children aged 6-23 months by breastfeeding status and is subdivided into children aged 6-9 months; 12-25 months and 20-23 months. Majority of children are female and most children have mothers who have attained a primary education level.

Children who come from high wealth index households are more likely to be receiving complementary foods as early as 6 months of age compared to those from lower wealth index households. For example, 82 per cent of children aged 6-9 months from high wealth index households are receiving breast milk and solid food in Kitui district compared to 73 per cent for children from low wealth index households. For the older children, majority of those who are still breastfed belong to the low wealth index households (93 per cent) compared to the high wealth index households (89 per cent).

Table 5.3b (NU.3): Complementary feeding

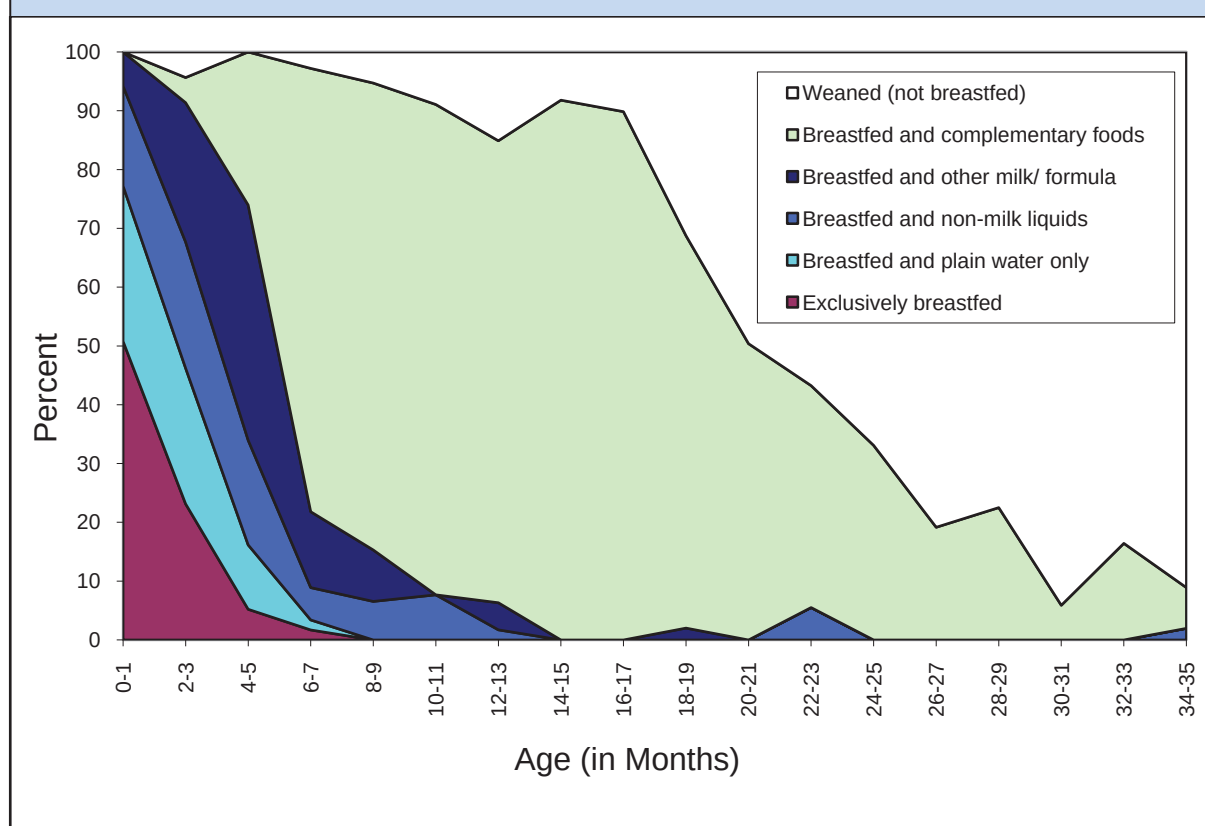
Percentage of living children according to breastfeeding status at each age group, MICS Kitui district, Eastern Province, Kenya 2008

Characteristics	Children age 6-9 months		Children age 12-15 months		Children age 20-23 months	
	Percentage receiving breast milk and solid/mushy food	Number of children	percentage breastfed	Number of children	Percentage breastfed	Number of children
Sex						
Male	70.1	41	92.4	45	50.9	41
Female	84.2	49	83.9	44	42.7	35
Mother's education						
None	51.0	7	93.4	9	47.4	10
Primary	80.2	70	87.8	69	46.9	62
Secondary +	73.0	12	86.8	11	49.7	3
Wealth index						
Low	73.0	34	92.8	36	44.6	38
Medium	79.6	29	83.4	38	49.1	23
High	82.3	27	89.7	15	50.3	15
Total	77.8	90	88.2	89	47.1	76

Infant Feeding Patterns

Figure 5.2 shows a detailed pattern of breastfeeding by child's age in months. Even at the earliest ages, majority of children are receiving liquids or foods other than breast milk, which is not a recommended practise. By the end of the sixth month, the percentages of children exclusively breastfed is below five per cent. However, one in three children (33 per cent) continue to receive breast milk after 2 years.

Figure 5.2: Percent distribution of children under 3 years by feeding pattern by age group, MICS Kitui district, 2008



The adequacy of infant feeding in children less than 12 months is presented in Table 5.4 (NU.4). Different criteria of adequate feeding are used depending on the age of the child. For infants aged 0-5 months, they are considered to be adequately fed if they are exclusively breastfed. For those aged 6-8 months they are considered 'adequately fed' if they are receiving breast milk and complementary food at least two times per day, while infants aged 9-11 months are considered to be 'adequately fed' if they are receiving breast milk and eating complementary food at least three times a day.

The table shows that 23 per cent of children aged 0-5 months are adequately fed compared to 65 per cent of those aged 6-11 months. Overall, around 44 per cent of the infants aged 6-11 months in Kitui district are adequately fed. This is less than half of the children interviewed and is a pointer to nutritional deficiencies among the children below five years in the district. More female children are adequately fed compared to their male counterparts, except for the exclusive breastfeeding among children aged 0-5 months old.

As expected, the proportion of infants aged 0-11 month who are appropriately fed is slightly higher among those from the high wealth index households (approximately 49 per cent) compared to those from low wealth index households (43 per cent).

Table 5.4 (NU.4): Adequately fed infants

Percentage of infants under 6 months of age exclusively breastfed, percentages 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 percentages of infants adequately fed, MICS Kitui district, Eastern Province, Kenya 2008

Characteristics	percentage of infants					Number of infants aged 0-11 months
	0-5 months exclusively breastfed	6-8 months who received breast milk and complementary food at least 2 times in prior 24 hours	9-11 months who received breast milk and complementary food at least 3 times in prior 24 hours	6-11 months who received breast milk and complementary food at least the minimum recommended number of times per day	0-11 months who were appropriately fed	
Sex						
Male	23.6	60.8	60.0	60.4	43.2	104
Female	21.9	71.1	65.9	68.3	45.0	140
Mother's education						
None	(*)	(*)	(*)	(*)	(*)	13
Primary	26.4	67.4	60.9	63.9	46.3	182
Secondary +	(12.1)	(69.5)	(74.4)	(71.5)	(36.0)	49
Wealth index						
Low	25.2	55.9	71.5	63.2	42.6	106
Medium	21.2	82.4	38.1	60.2	43.0	80
High	18.7	59.4	82.6	73.6	48.9	59
Total	22.6	66.3	63.4	64.8	44.2	244
(*) Based on 0-25 un-weighted figures and has been suppressed.						
() Based on 25-50 un-weighted figures.						

5.3 Salt Iodization

Iodine Deficiency Disorders (IDD) is the world's leading cause of preventable mental retardation and impaired psycho-motor development in young children. In its most extreme form, iodine deficiency causes cretinism. It also increases the risks of stillbirth and miscarriage in pregnant women. Iodine deficiency is most commonly and visibly associated with goitre. IDD takes its greatest toll in impaired mental growth and development, contributing in turn to poor performance in school, reduced intellectual ability and impaired work performance. The international goal is to achieve elimination of iodine deficiency by 2005 and the indicator used is the proportion of households consuming adequately iodized salt (>15 parts per million).

Iodised salt consumption

As shown in Table 5.5 (NU.5), cooking salt was tested for iodine content by using salt test kits and testing for the presence of potassium iodide in about 85 per cent of households. From the table, majority of households use iodized salt while nine per cent of the interviewed households had no salt. In 74 per cent of the households, table salt was found to contain 15 or more parts per million (ppm) of iodine, i.e. adequately iodized salt. Little variation were observed in the use pattern of iodized salt by household wealth index.

Table 5.5 (NU.5): Iodized salt consumption							
Percentage of households consuming adequately iodized salt MICS Kitui district, Eastern Province, Kenya 2008							
Wealth index	Percentage of households in which salt was tested	Number of households interviewed	Percentage of households with			Total	Number of households in which salt was tested or with no salt
			No salt	Salt test result			
				< 15 PPM	15+ PPM*		
Low	85.5	396	9.7	17.6	72.7	100.0	375
Medium	86.7	350	8.1	16.3	75.6	100.0	330
High	81.8	355	9.3	16.8	73.9	100.0	320
Total	84.7	1101	9.1	17.0	74.0	100.0	1025

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, where 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 deaths.

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

For countries with Vitamin A deficiency, current international recommendations call for high-dose Vitamin A supplementation every four to six months, targeted to all children between the ages of 6- 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 aged 6-59 months receiving at least one high dose Vitamin A supplement in the last six months.

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

In Kitui district, 34 per cent of children aged 6-59 months have never received Vitamin A supplements. Within the six months prior to the survey, almost 39 per cent of children aged 6-59 months received a high dose Vitamin A supplement (Table 5.6 (NU.6)) which is way below the recommendation that all infants under six months receive the supplement. Vitamin A supplementation coverage is lower among female children compared to male children. About 23 per cent did not receive the supplement in the last 6 months but did receive one prior to that time.

Table 5.6 (NU.6): Vitamin A supplementation among children								
Percentage distribution of children aged 6-59 months by whether they have received a high dose vitamin A supplement in the last 6 months, MICS Kitui district, Eastern Province, Kenya 2008								
Characteristics	Percentage of children who received vitamin A:			Not sure if received vitamin A	Never received vitamin A	Missing	Total	Number of children aged 6-59 months
	Within last 6 months*	Prior to last 6 months	Not sure when					
Sex								
Male	39.4	24.1	4.0	0.3	32.1	1.1	100.0	549
Female	37.7	21.5	1.9	2.8	36.2	0.6	100.0	570
Age								
6-11 months	51.6	2.8	1.9	0.6	3.6	5.8	100.0	125
12-23 months	40.2	21.8	1.6	1.1	35.3	0.9	100.0	247
24-35 months	35.8	27.7	2.7	2.2	31.5	0.0	100.0	239
36-47 months	37.5	27.1	6.3	2.2	26.9	0.0	100.0	265
48-59 months	36.1	24.7	1.4	1.2	36.7	0.0	100.0	242
Mother's education								
None	29.5	25.7	1.6	8.0	35.2	0.0	100.0	130
Primary	38.7	22.2	2.7	0.8	35.5	1.0	100.0	841
Secondary +	45.3	23.6	5.2	0.0	25.9	0.5	100.0	148
Wealth index								
Low	34.1	22.3	1.6	1.3	40.8	0.7	100.0	499
Medium	40.8	24.4	3.2	2.1	29.6	0.8	100.0	382
High	44.2	21.3	5.3	1.1	28.1	1.2	100.0	238
Total	38.5	22.8	2.9	1.6	34.2	0.8	100.0	1119

The age pattern of Vitamin A supplementation shows that supplementation in the last six months declined from 52 per cent among children aged 6-11 months to 40 per cent among children aged 12-23 months. There is no substantial variation observed between the other age groups.

The mother's level of education is also related to the likelihood of receiving a Vitamin A supplementation. The proportion of children receiving Vitamin A supplements in the last six months increases with increasing levels of mother's education. About 30 per cent of children whose mothers have no education received Vitamin A supplements compared to 39 per cent and 54 per cent for children among those who have mothers with primary and secondary education levels, respectively. Household wealth index category also reveal a similar trend like mothers education levels i.e., the proportions of children receiving Vitamin A supplementation increases with increasing levels of household wealth index.

About two out of five mothers (almost 40 per cent) who gave birth in the previous two years before the survey received a Vitamin A supplement within eight weeks of the birth (Table 5.7 (NU.7)). This is one of the lowest levels in the province and there is a high correlation between the low Vitamin A supplementation for mothers and that of children. Vitamin A supplementation increases with mothers' education. Fewer mothers with no education (29 per cent) received Vitamin A compared with mothers with secondary or higher education (60 per cent).

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, Kitui 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	(29.1)	(0.0)	27
Primary	37.0	0.0	308
Secondary +	60.3	0.0	53
Wealth index			
Low	31.3	0.0	171
Medium	43.2	0.0	128
High	50.5	0.0	89
Total	39.6	0.0	410
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.			
() Based on 25-50 un-weighted figures.			

Women from the low wealth index households are less likely to have received Vitamin A supplements in the eight weeks post-partum period compared to those from high wealth index households.

5.5 Birth Weight

Weight at birth is a good indicator not only of a mother's health and nutritional status but also the newborn's chances for survival, growth, long-term health and psychosocial development. Low birth weight (less than 2,500 grams) carries a range of grave health risks for children. Babies who were undernourished in the womb face 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 cognitive disabilities which affects their performance in school and their work performance as adults.

In developing countries, 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, if she is of short stature (due mostly to under nutrition and infections during her childhood), and poor nutrition during the pregnancy. Inadequate weight gain during pregnancy is particularly important since it accounts for a large proportion of foetal growth retardation. Moreover, diseases such as diarrhoea and malaria, which are common in many developing countries, can significantly impair foetal growth if the mother becomes infected while pregnant. In the industrialized world, cigarette smoking during pregnancy is the leading cause of low birth weight. In developed and developing countries alike, teenagers who give birth when their own bodies have yet to finish growing run the risk of bearing underweight babies.

One of the major challenges in measuring the incidence of low birth weight is the fact that more than half of infants in the developing world are not weighed at birth. 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. Therefore those delivered in health facilities and weighed are only a small sample of all births. Because many infants are not weighed at birth and those who are weighed may be a biased sample of all births, the reported birth weights usually cannot be used to estimate the prevalence of low birth weight among all children. Therefore, the percentages of births weighing below 2500 grams is estimated from two items in the questionnaire: the mother's assessment of the child's size at birth (i.e., very small, smaller than average, average, larger than average, very large) and the mother's recall of the child's weight or the weight as recorded on a health card if the child was weighed at birth⁴.

Table 5.8 (NU.8) presents the proportion of births in the two years prior to the MICS survey that were weighed in Kitui district. Overall, only 31 per cent of births were weighed at birth and approximately nine per cent of infants are estimated to weigh less than 2500 grams at birth (Table 5.8). This is a very small proportion of births that were weighed compared to the provincial estimate of 53 per cent. In addition, the incidence of low birth weight reported for Kitui district was the highest in the province for the MICS 2008.

⁴ For a detailed description of the methodology, see Boerma, Weinstein, Rutstein and Sommerfelt, 1996.

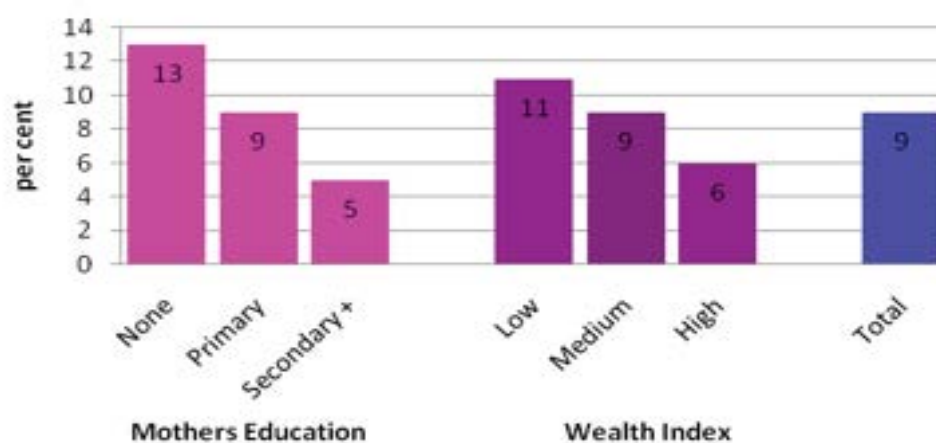
Table 5.8 (NU.8): Low birth weight infants

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

	percentage of live births:		
Characteristics	Below 2500 grams	Weighed at birth	Number of live births
Mother's education			
None	(11.8)	(47.4)	27
Primary	8.8	25.4	308
Secondary +	6.3	56.1	53
Wealth index			
Low	10.1	19.6	171
Medium	8.6	29.4	128
High	6.3	55.6	89
Total	8.7	31.1	388
() Based on 25-50 un-weighted figures			

() Based on 25-50 un-weighted figures

There is small variation in the prevalence of low birth weights for infants by education levels of the mothers and by the household wealth index (Figure 5.3). Infants whose mothers have no education are two and half times more likely to have low birth weight (13 per cent) compared to those whose mothers have secondary or higher levels of education (5 per cent). Comparison across household wealth index shows that children from low wealth index households are twice as likely to be reported as infants of low birth weight compared to those from high wealth index households.

Figure 5.3: Percentage of Infants weighing less than 2,500 grams at birth, MICS Kitui district, 2008

5.6 Food Relief

The table below presents households that were registered as beneficiaries of food distribution programs in Kitui district. About nine per cent of the households were registered as beneficiaries of food distribution program. However, only 40 per cent received food supplies during last one month. This is an indicator of the food stress facing households in the district and corroborates with the high incidence of low birth weight infants in Kitui district that was observed earlier in this report.

Table 5.9 (NU 9): Food relief									
Percentage of households registered as beneficiary of food distribution program, and of those registered time of last receipt of food and whether meeting their full requirement or not, MICS Kitui district, Eastern Province, Kenya 2008									
Wealth index	Percentage households registered as beneficiary of food distribution	Total number of households	Percentage of households by time last receipt of food distribution					Percentage of households reporting supply meeting all their food needs	Number of households registered as beneficiary of food distribution
			Within one month	Between 1-3 months	Between 3-6 months	Before 6 months	Total per cent		
Low	12.5	396	()	()	()	()	()	()	49
Medium	8.2	350	()	()	()	()	()	()	29
High	4.9	355	(*)	(*)	(*)	(*)	(*)	(*)	18
Total	8.7	1101	39.8	1.3	3.2	55.6	100.0	1.2	96
(*) Based on 0-25 un-weighted figures and has been suppressed.									
() Based on 25-50 un-weighted figures.									

6.1 Immunization

The Millennium Development Goal (MDG) number 4 aims at reducing child mortality by two thirds between 1990 and 2015. Immunization is an integral component of this goal. Immunizations have managed to save the lives of millions of children in the past three decades since the launch of the Expanded Programme on Immunization (EPI) in 1974. Worldwide there are still 27 million children not reached by routine immunization and as a result, vaccine-preventable diseases continue to cause more than 2 million deaths every year.

A World Fit for Children goal is to ensure full immunization of children below 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, 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 care givers of children under five years of age were asked to provide vaccination cards, from which interviewers copied vaccination information about the child. Information from children without immunization cards was obtained using a set of structured direct questions on immunization. The immunization coverage shown in this report includes information from the card as well as re-calls from mothers and care givers.

Percentages of children aged 12 to 23 months who received each of the vaccinations are shown in Table 6.1 (CH.1). The denominator for the table comprises of children aged 12-23 months, so that only children who are old enough to be fully vaccinated are included. 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.

Among children aged 12-23 months, 98 per cent had received a BCG vaccination by the age of 12 months. The percentage in uptake of DPT dosages declines marginally for subsequent doses to slightly above 95 per cent for the second dose, and around 91 per cent for the third dose (Figure 6.1). Similarly, 99 per cent of children received Polio 1 by age 12 months with a subsequent decline to almost 85 per cent for the third dose. The coverage for measles vaccine by 12 months is lower at 76 per cent compared to other vaccines. This is primarily because, although 86 per cent of children received the vaccine, only 76 per cent received it by their first birthday. The results show a high drop out rate for childhood vaccinations in Kitui district. Full immunisation is only 64 per cent for children under five years in the district, which is way below the Provincial estimate of 71 per cent in MICS 2008.

Table 6.1 (CH.1): Vaccinations among children

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

Vaccinated at any time before the survey	Percentages of children who received:											Number of children aged 12-23 months
	BCG	DPT 1	DPT 2	DPT 3	Polio 0	Polio 1	Polio 2	Polio 3	Measles	All*	None	
<i>According to:</i>												
Vaccination card	80.5	83.2	81.2	80.1	50.3	83.5	82.3	81.7	71.9	71.8	0.0	247
Mother's report	18.1	15.4	14.7	11.9	12.7	15.4	13.4	4.3	14.3	3.2	1.0	247
Either	98.6	98.7	95.9	92.0	63.1	99.0	95.7	86.0	86.1	75.0	1.0	247
Vaccinated by 12 months of age	98.4	97.0	95.2	90.8	63.1	98.7	94.7	84.8	76.3	63.6	1.0	247
Total number of 12-23 month olds vaccinated with BCG, (OPV3, DPT3, Measles, Hep B, or Hib) before 12 months, as validated by card or mother's recall. To estimate the number of children without a card to have received vaccine before 1 st birthday the proportion of vaccinations given during the first year of life is assumed to be the same as for the proportion of children with a card that received the vaccine before 1 st birthday.												
*Children who received 'all' vaccinations are those who have received 3 doses of DPT, 3 doses of Polio (excluding Polio 0), BCG, and Measles.												

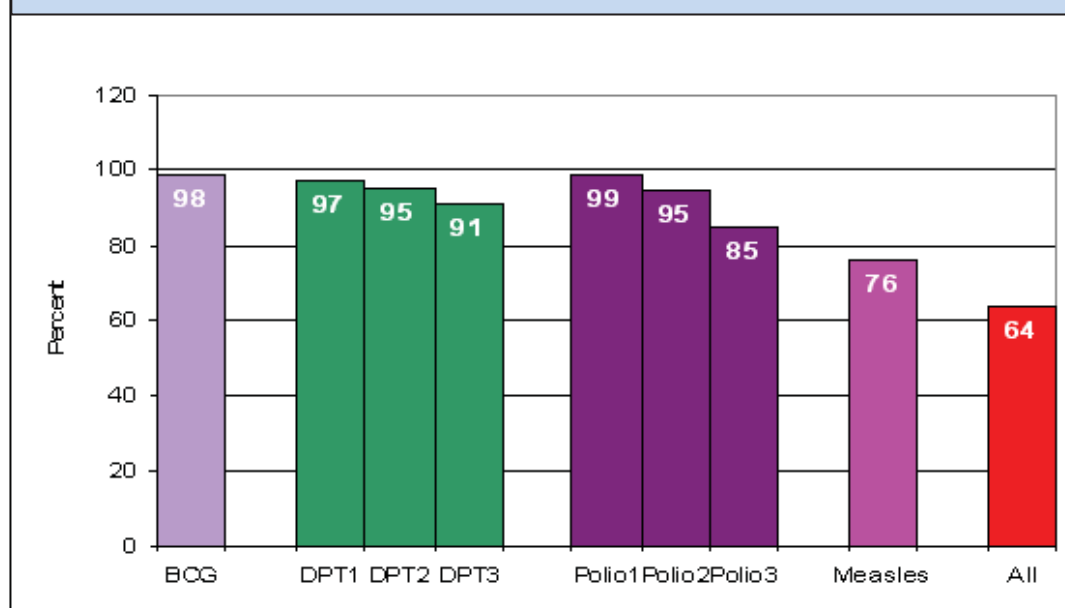
Figure 6.1: Percentage of children aged 12-23 months who received the recommended vaccinations by 12 months, Kitui, 2008

Table 6.2 (CH.2) shows vaccination coverage among children aged 12-23 months by background characteristics. The results show the proportion of children receiving vaccinations at any time up to the date of the survey, and are based on information from both the vaccination cards and reports from the mothers/caretakers. The coverage of BCG, DPT1 and Polio 1 is near universal in Kitui district. However the coverage of DPT3 and Polio 3 drops by seven per cent and 13 per cent respectively for subsequent doses. The measles vaccination was received by 86 per cent of children aged 12-23 months. Overall, 75 per cent of children aged 12-23 months in Kitui district are fully vaccinated, i.e., received BCG, 3 doses of DPT, 3 doses of Polio and measles vaccines. There is a minimal difference in the immunization coverage among boys and girls, but striking differentials are

noticed with respect to education level of the mother. For example about 55 per cent of all children with mothers who have no education are fully vaccinated in comparison to 81 per cent for those whose mothers are educated up to secondary or a higher level.

The table presents the percentage of children aged 12-23 months by background characteristics. For Kitui district, approximately 84 per cent of children had health cards. For those who 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, they additionally had to state how many times the child had received immunisation.

Table 6.2 (CH.2): Vaccinations by background characteristics													
Percentage of children aged 12-23 months currently vaccinated against childhood diseases, MICS, Kitui district, Eastern Province, Kenya 2008													
	Percentage of children who received:											percentage with health card	Number of children aged 12-23 months
	BCG	DPT 1	DPT 2	DPT 3	Polio 0	Polio 1	Polio 2	Polio 3	Measles	All	None		
Sex													
Male	98.0	98.0	96.1	92.0	65.7	98.0	96.9	86.4	85.0	75.3	2.0	84.7	132
Female	99.3	99.4	95.6	92.0	60.0	100.0	94.3	85.5	87.4	74.7	0.0	82.8	115
Mother's education													
None	(96.9)	(100.0)	(100.0)	(93.1)	(74.7)	(100.0)	(100.0)	(72.6)	(84.1)	(54.6)	(0.0)	(68.8)	25
Primary	98.7	98.3	96.1	90.8	58.7	98.7	94.5	87.0	85.8	76.8	1.3	84.8	195
Secondary +	(100.0)	(100.0)	(90.3)	(100.0)	(84.0)	(100.0)	(100.0)	(91.0)	(90.3)	(81.3)	(0.0)	(91.0)	27
Wealth index													
Low	97.0	97.7	94.5	89.9	50.2	97.7	93.8	84.1	86.2	76.6	2.3	83.0	112
Medium	100.0	100.0	97.1	92.2	68.6	100.0	96.6	90.9	81.8	73.6	0.0	86.3	89
High	(100.0)	(98.5)	(96.8)	(96.8)	(83.8)	(100.0)	(98.4)	(80.9)	(94.3)	(73.7)	(0.0)	(80.9)	46
Total	98.6	98.7	95.9	92.0	63.1	99.0	95.7	86.0	86.1	75.0	1.0	83.8	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.													
() Based on 25-50 un-weighted figures.													

6.2 Tetanus Toxoid

The Millennium Development Goal number 5 strives to reduce by three quarters the prevailing maternal mortality ratio, with one key strategy being the elimination of maternal tetanus. In addition, other goals include reducing the incidence of neonatal tetanus to less than 1 case of neonatal tetanus per 1,000 live births in every district. A World Fit for Children goal is to eliminate maternal and neonatal tetanus by 2005.

Prevention of maternal and neonatal tetanus can be achieved by ensuring that all pregnant women receive at least two doses of tetanus toxoid vaccine during antenatal and/or postnatal care. However, if women have not received two doses of the vaccine during pregnancy, they (and their newborn) are also considered to be protected if the following conditions are met:

- Two doses of tetanus toxoid vaccine, the last within the previous three years;
- Received at least 3 doses, the last within the previous five years;

- Received at least 4 doses, the last within 10 years;
- Received at least 5 doses during lifetime.

Table 6.3 (CH.3) shows the protection status from tetanus for women who have had a live birth within the 12 months preceding the survey. Overall, 71 per cent of women who had a child birth during the 12 months preceding the survey had adequate protection against tetanus. Almost all of the women with adequate protection (69 per cent) had received at least two doses during the last pregnancy.

Table 6.3 (CH.3): Neonatal tetanus protection							
Percentage of mothers with a birth in the last 12 months protected against neonatal tetanus, MICS, Kitui district, Eastern Province, Kenya 2008							
Characteristics	Percentage of mothers with a birth in the last 12 months who:					Protected against tetanus*	Number of mothers
	Received at least 2 doses during last pregnancy	Received at least 2 doses, the last within prior 3 years	Received at least 3 doses, last within prior 5 years	Received at least 4 doses, last within prior 10 years	Received at least 5 doses during lifetime		
Age							
15-19	(75.9)	(0.0)	(0.0)	(0.0)	(0.0)	(75.9)	34
20.-24	71.2	1.0	0.0	0.0	0.0	72.2	106
25-29	69.4	1.2	0.3	0.0	0.0	71.0	118
30-34	69.7	5.0	0.8	0.0	0.7	76.2	78
35-49	57.8	1.1	0.0	0.0	0.0	58.9	52
Education							
None	(77.1)	(2.1)	(0.0)	(0.0)	(0.0)	(79.3)	27
Primary	68.3	1.6	0.3	0.0	0.0	70.3	308
Secondary +	68.8	2.6	0.0	0.0	1.1	72.5	53
Wealth index							
Low	63.0	2.6	0.6	0.0	0.0	66.3	171
Medium	75.1	1.0	0.0	0.0	0.0	76.0	128
High	71.7	1.3	0.0	0.0	0.6	73.7	89
Total	69.0	1.8	0.3	0.0	0.1	71.2	388
Tetanus toxoid injections are given to women during pregnancy to protect infants from neonatal tetanus, a major cause of infant death that is due primarily to unsanitary conditions during childbirth. Two doses of tetanus toxoid during pregnancy offer full protection. However, if a woman was vaccinated during a previous pregnancy, she may only need a booster to give full protection. Five doses are thought to provide lifetime protection.							
() Based on 25–50 un-weighted cases.							

6.3 Oral Rehydration Treatment

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

The goals are to: 1) reduce by one half death due to diarrhoea among children under five by 2010 compared to 2000 (A World Fit for Children); and 2) reduce by two thirds the mortality rate among children under five by 2015 compared to 1990 (MDGs).

The indicators for management of diarrhoea are:

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

In the MICS 2008 questionnaire, mothers (or caretakers) were asked to report whether their child had diarrhoea in the two weeks prior to the survey. 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 what the child usually ate and drank.

Table 6.4 shows percentages of children who had diarrhoea in the two weeks prior to the MICS 2008 survey and those receiving various types of recommended liquids during the episode of diarrhoea. Since mothers were able to name more than one type of liquid, percentages do not necessarily add up to 100. Overall, about 13 per cent of children below five years of age had diarrhoea in the two weeks preceding the survey. The peak of diarrhoea prevalence occurs in the weaning period, among children aged 6-23 months.

Majority of children with diarrhoea received oral rehydration treatment (28 per cent), 14 per cent received pre-packaged ORS fluids and about nine per cent received recommended homemade fluids. Overall, 23 per cent of children with diarrhoea received one or more of the recommended home treatments (i.e., were treated with ORS or RHF), while 62 per cent received no treatment. This is a huge number of children who are missing appropriate care during diarrhoea given that its a leading cause of infant and child deaths.

Table 6.4 (CH.4): Oral rehydration treatment

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

Characteristics	Had diarrhea in last two weeks	Number of children aged 0-59 months	Children with diarrhea who received:					Number of children aged 0-59 months with diarrhea
			Fluid from ORS packet	Recommend-ed homemade fluid	Pre-packaged ORS fluid	No treatment	ORT Use Rate	
Sex								
Male	12.9	598	29.0	9.3	15.9	59.1	40.9	77
Female	12.9	640	26.3	8.1	11.6	64.6	35.4	82
Age								
<6 months	16.4	135	(*)	(*)	(*)	(*)	(*)	22
6-11 months	30.4	109	(32.5)	(14.6)	(15.9)	(53.9)	(45.4)	33
12-23 months	24.7	247	34.6	7.6	17.8	57.7	42.3	61
24-35 months	9.7	239	(*)	(*)	(*)	(*)	(*)	23
36-47 months	4.1	267	(*)	(*)	(*)	(*)	(*)	11
48-59 months	3.8	242	(*)	(*)	(*)	(*)	(*)	9
Mother's education								
None	10.2	135	(*)	(*)	(*)	(*)	(*)	14
Primary	14.2	927	29.0	9.1	14.5	60.1	39.9	131
Secondary +	8.1	177	13.9	8.7	15.6	74.4	25.6	14
Wealth index								
Low	14.5	556	30.9	6.2	16.3	60.0	40.0	81
Medium	11.5	417	20.6	10.5	9.3	70.5	29.5	48
High	11.5	264	(30.0)	(12.2)	(13.6)	(53.5)	(46.5)	30
Total	12.9	1238	27.6	8.7	13.7	61.9	38.1	159
Note: Percentages receiving various treatments will not add to 100 since some children may have received more than one type of treatment. The ORT use rate includes those who received oral rehydration salts from a packet or any appropriate household solution or pre-packaged ORS fluid.								
(*) Based on 0-25 un-weighted figures and has been suppressed.								
() Based on 25- 50 un-weighted figures.								

Table 6.5 (CH.5) presents home management of diarrhoea amongst children below 5 years of age. Amongst children who had diarrhoea during the two weeks preceding the survey, about 40 per cent had increased fluids intake (Table 6.5). Overall, about 17 per cent of the children who had diarrhoea received proper home management of the illness through increased fluids intake and increased feeding. Surprisingly, children from high wealth index households were less likely to receive ORT or increased fluids and continued feeding during diarrhoea compared with children from poor households. For example, around 31 per cent of children from low wealth index households with diarrhoea received ORT or increased fluid and continued feeding compared with only 12 per cent for children from high wealth index households.

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

Percentage of children aged 0-59 months with diarrhea in the last two weeks who took increased fluids and continued to feed during the episode, MICS, Kitui district, Eastern Province, Kenya 2008

Children with diarrhea who: _____									
Characteristics	Had diarrhea in last two weeks	Number of children aged 0-59 months	Drank more	Drank the same or less	Ate somewhat less, same or more	Ate much less or none	Home management of diarrhea	Received ORT or increased fluids and continued feeding	Number of children aged 0-59 months with diarrhoea
Sex									
Male	12.9	598	38.4	60.8	38.0	61.2	14.5	18.7	77
Female	12.9	640	40.8	59.2	45.5	54.5	19.9	27.4	82
Age									
0-11 months	21.6	229	26.7	73.3	32.7	67.3	6.1	13.9	52
12-23 months	25.9	247	42.6	57.4	43.3	56.7	19.3	25	64
24-35 months	8.9	241	(*)	(*)	(*)	(*)	(*)	(*)	21
36-47 months	5.6	263	(*)	(*)	(*)	(*)	(*)	(*)	15
48-59 months	3.6	258	(*)	(*)	(*)	(*)	(*)	(*)	9
Mother's education									
None	10.2	135	(*)	(*)	(*)	(*)	(*)	(*)	14
Primary	14.2	927	40.3	59.2	41.5	58.0	18.0	22.9	131
Secondary +	8.1	177	(*)	(*)	(*)	(*)	(*)	(*)	14
Wealth index									
Low	14.5	556	45.6	53.7	48.3	51.0	24.8	31.3	81
Medium	11.5	417	(32.6)	(67.4)	(40.5)	(59.5)	(8.1)	(16.9)	48
High	11.5	264	(34.9)	(65.1)	(27.2)	(72.8)	(11.7)	(11.7)	30
Total	12.9	1238	39.6	60.0	41.9	57.7	17.3	23.2	159
(*) Based on 0-25 un-weighted figures and has been suppressed.									
() Based on 25-50 un- weighted figures.									

6.4 Care Seeking and Antibiotic Treatment of Pneumonia

Pneumonia is among the leading causes of death in children. The use of antibiotics in children below five years with suspected pneumonia is a key intervention. A World Fit for Children goal is to reduce by one-third the deaths due to acute respiratory infections.

Children with suspected pneumonia are those who had an illness with a cough accompanied by rapid or difficult breathing and whose symptoms were NOT due to a problem in the chest and a blocked nose. The 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 source of care for children under five years of age. The results indicate good care seeking behaviour for pneumonia treatment in the district. In Kitui district, about 14 per cent of children aged 0-59 months were reported to have had acute respiratory infection (which is a symptom of pneumonia) during the two weeks preceding the survey.

Among these children who had symptoms of pneumonia, 64 per cent were taken to an appropriate health service provider. Majority of children (52 per cent) received treatment from a government facility or service was provided by a government health worker; 18 per cent received services from private sector providers and the remaining two per cent received services from other sources, such as a shop or a friend.

The differentials in the treatment pattern (by selected characteristics) show that a higher proportion of female children (69 per cent) are taken to an appropriate health service provider compared with male children (58 per cent). The younger children are also more likely to be taken to an appropriate health provider relative to their older counterparts. For example, among younger children (0-11months), nearly 77 per cent were taken to an appropriate health service provider compared to only 53 per cent among those aged 48-59 months.

As expected, the data also indicates that children from households categorised as high wealth index are more likely to receive care from an appropriate health service provider compared with children from poor or low wealth index households. The proportion of children receiving appropriate treatment is also higher among children with mothers who have secondary or higher levels of education.

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

* Includes village health worker or mobile/outreach clinic.
 Note: Percentages taken to various providers will not add to 100 since some children may have been taken to see more than one type of provider.
 (*) Based on 0-25 un-weighted figures and has been suppressed.
 () Based on 25-50 un-weighted figures.

Table 6.7 (CH.7) presents results for the use of antibiotics in the treatment of suspected pneumonia among under five year old children by sex, age and socio-economic factors. In Kitui district, 44 per cent of children below five years with suspected pneumonia infection received an antibiotic treatment during the two weeks prior to the survey.

There are no discernible differences between male and female children in the use of antibiotics in the treatment of suspected pneumonia. However, the younger children in the age band 0-11 months (about 54 per cent) and 12-23 months (50 per cent) are more likely to receive antibiotic treatment compared to older children aged 48-59 months (about 39 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, MICS, Kitui district, Eastern Province, Kenya 2008		
Characteristics	Percentages 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	43.8	80
Female	43.9	89
Age		
0-11 months	(53.7)	39
12-23 months	(50.4)	41
24-35 months	(27.4)	32
36-47 months	(44.2)	31
48-59 months	(38.7)	28
Mother's education		
None	(*)	15
Primary	43.7	136
Secondary +	(*)	19
Wealth index		
Low	41.7	83
Medium	40.3	66
High	(*)	21
Total	43.8	170
(*) Based on 0-25 un-weighted figures and has been suppressed.		
() Based on 25-50 un-weighted figures.		

Issues related to knowledge of danger signs of pneumonia are presented in Table 6.8 (CH.7A). Obviously, mothers' knowledge of the danger signs of pneumonia is an important determinant of care-seeking behaviour. Overall, about 17 per cent of women know of the two danger signs of pneumonia, fast and difficulty in breathing. The most commonly identified symptom for taking a child to a health facility by the mother/caretaker is the child's development of fever. Twenty four per cent of the mothers/caretakers identified fast breathing as a pneumonic symptom with close to 27 per cent of mothers identifying difficulty in breathing as a symptom that requires seeking immediate medical attention.

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 percentages of mothers/caretakers who recognize fast and difficult breathing as signs for seeking care immediately, MICS Kitui district, Eastern Province, Kenya 2008

Characteristics	Percentage of mothers/caretakers of children aged 0-59 months who think that a child should be taken immediately to a health facility if the child:								Mothers/ caretakers who recognize the two danger signs of pneumonia*	Number of mothers/ caretakers of children aged 0-59 months
	Is not able to drink or breastfeed	Becomes sicker	Develops a fever	Has fast breathing	Has difficulty breathing	Has blood in stool	Is drinking poorly	Has other symptoms		
Mother's education										
None	12.6	38.1	89.8	23.4	28.3	4.7	9.4	57.8	18.2	135
Primary	17.4	35.6	84.3	25.1	26.2	12.4	5.7	56.7	15.8	927
Secondary +	17.1	30.3	83.3	18.7	29.2	9.8	5.9	57.0	14.0	177
Wealth index										
Low	17.5	35.8	82.3	25.5	25.5	11.8	4.2	63.8	16.6	556
Medium	17.2	36.0	84.3	25.9	31.2	12.5	7.6	47.1	17.2	417
High	15.0	32.2	90.6	17.7	22.8	8.0	7.8	57.4	12.1	264
Total	16.9	35.1	84.7	24.0	26.9	11.2	6.1	56.8	15.8	1238

* percentages of mothers/caretakers who state fast AND difficult breathing as signs for taking a child to a health facility immediately

Note: Percentages will not add to 100 since some mothers/caretakers may have indicated more than one symptom.

6.5 Solid Fuel Use

More than 3 billion people around the world rely on solid fuels (biomass and coal) for their basic energy needs, including cooking and heating. Cooking and heating with solid fuels leads to high levels of indoor smoke, a complex mix of health-damaging pollutants. The main problem associated with the use of solid fuels is the tendency of incomplete combustion, thereby producing harmful gases like carbon monoxide (CO), polyaromatic hydrocarbons, sulphur dioxide (SO₂) 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.

The use of solid fuels for cooking is near universal in Kitui district, with 95 per cent of the households reportedly using this type of fuel (Table 6.9). The most common source of solid fuel in the district is wood, which is used by 83 per cent of the households. Charcoal is an alternative source of fuel, used by 12 per cent of the households. These are the most common types of fuel used for cooking in Kitui district.

Table 6.9 (CH.8): Solid fuel use

Percentage distribution of households according to type of cooking fuel, and percentages of households using solid fuels for cooking, MICS, Kitui, District Eastern Province, Kenya 2008

Characteristic	Percentages of households using:									Solid fuels for cooking*	Number of households
	Liquefied Petroleum Gas (LPG)	Natural Gas	Biogas	Kerosene	Charcoal	Wood	Straw, shrubs, grass	Other source	Total		
Education of household head											
None	0.0	0.0	0.9	4.9	12.1	82.1	0.0	0.0	100.0	94.2	315
Primary	0.0	0.1	0.0	1.8	10.7	86.1	0.2	1.1	100.0	97.0	606
Secondary +	1.1	0.6	0.0	5.4	19.0	71.5	1.2	1.2	100.0	91.8	169
Wealth index											
Low	0.0	0.0	0.0	0.0	1.4	98.6	0.0	0.0	100.0	100.0	396
Medium	0.0	0.0	0.0	0.0	5.3	94.0	0.7	0.0	100.0	100.0	350
High	0.5	0.4	0.8	10.0	31.5	54.1	0.2	2.4	100.0	85.8	355
Total	0.2	0.1	0.3	3.2	12.3	82.8	0.3	0.8	100.0	95.4	1101

6.6 Malaria

Malaria is a known leading cause of death among children below five years of age. It also contributes to anaemia in children and is a common cause of school absenteeism. Preventive measures, especially the use of Insecticide Treated Nets (ITNs), can dramatically reduce malaria mortality rates among children. In areas where malaria is common it is recommended that any fever in children should be treated as if it were malaria and the sick child should receive a full course of recommended anti-malarial tablets. Children with severe malarial symptoms, such as fever or convulsions, should be taken to a health facility. Also, children recovering from malaria should be given extra liquids and food or continued breastfeeding for younger children.

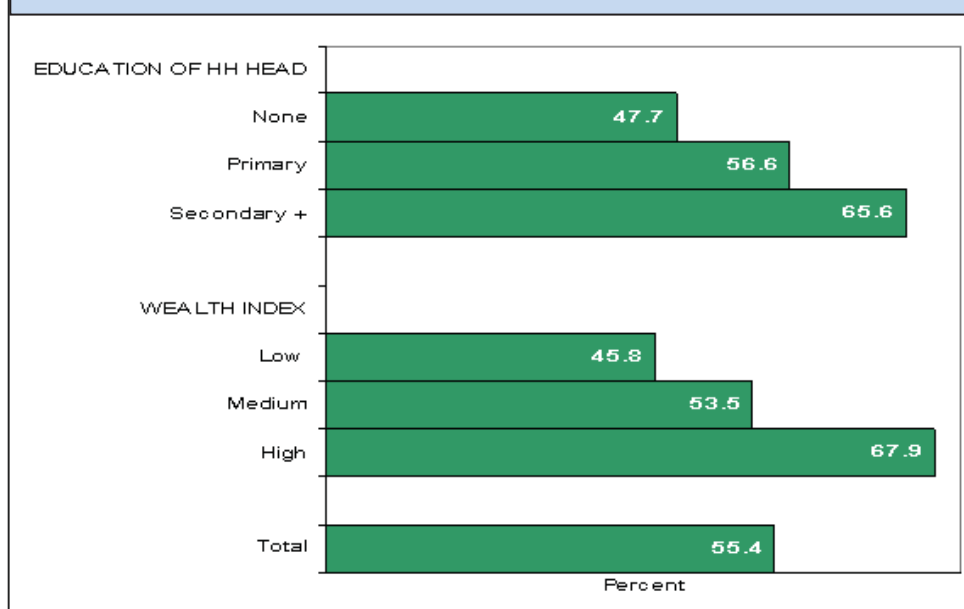
The MICS 2008 questionnaire incorporated questions on the availability and use of bed nets, both at household level and among children under five years of age, as well as anti-malarial treatment, and intermittent preventive therapy for malaria. The survey results indicate that 55 per cent of households have at least one insecticide treated net (Table 6.10).

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

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

Characteristics	Percentages of households with			Mean number of mosquito nets per household	Number of households
	At least one mosquito net	Two or more mosquito nets	at least one insecticide treated net (ITN)*		
Education of household head					
None	60.0	32.4	47.7	1.8	315
Primary	72.0	41.6	56.6	1.9	606
Secondary +	84.1	54.6	65.6	1.9	169
Wealth index					
Low	60.9	33.5	45.8	1.8	396
Medium	66.8	42.3	53.5	1.9	350
High	84.1	48.5	67.9	2.0	355
Total	70.3	41.1	55.4	1.9	1101

Forty one per cent of the households have two or more mosquito nets and each household has an average of two mosquito nets in Kitui district. The differentials in ownership of insecticide treated nets by household characteristics show that the proportion of households with mosquito nets increases with increasing levels of education of the head of the household as well as by the household wealth index. For example, about 48 per cent of the households whose head has no education have an insecticide treated mosquito net compared to 66 per cent of households headed by a member who is educated up to secondary or higher (see Figure 6.2).

Figure 6.2: Percentage of households with at least one treated mosquito net, MICS Kitui district, 2008.

The survey results indicate that 48 per cent of children below the age of five slept under a mosquito net the night prior to the survey with almost 46 per cent sleeping under an insecticide treated net (Table 6.11). The findings show that slightly more than half the children under five years old in Kitui are not sleeping under any bed nets (51 per cent). There is a slight difference in the proportions using ITN among children below five years by levels of the household wealth index. Low wealth index households have fewer children using mosquito nets compared to their wealthier counterparts.

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, MICS, Kitui district, Eastern Province, Kenya 2008							
Characteristics	Percentage of children who:						Number of children aged 0-59 months
	Slept under a bed net*	Slept under an insecticide treated net**	Slept under an untreated net	Slept under a net but don't know if treated	Don't know if slept under a net	Did not sleep under a bed net	
Sex							
Male	46.5	45.0	1.5	0.0	0.2	53.2	598
Female	50.0	46.3	3.7	0.0	0.5	49.5	640
Age							
0-11 months	52.1	51.5	.7	0.0	0.0	47.9	229
12-23 months	52.7	50.5	2.2	0.0	0.0	47.3	247
24-35 months	50.6	49.1	1.6	0.0	0.3	49.1	241
36-47 months	41.1	37.5	3.6	0.0	0.3	58.7	263
48-59 months	46.1	41.1	5.0	0.0	1.3	52.6	258
Wealth index							
Low	38.9	37.1	1.8	0.0	0.4	60.7	556
Medium	52.0	50.0	2.0	0.0	0.5	47.5	417
High	62.4	56.8	5.6	0.0	0.3	37.3	264
Total	48.3	45.7	2.7	0.0	0.4	51.3	1238

Questions on the prevalence and treatment of fever were asked for all children under age five. Twenty two per cent of the children below five years were ill with fever in the two weeks prior to the survey (Table 6.12). Fever prevalence peaks at 12-23 months (about 24 per cent) but later declines with increasing ages of children. Slightly higher proportion of female children reported to have fever compared to their male counterparts (24 per cent among females and 20 per cent among male children).

Mothers were asked to report on all of the medicines given to a child to treat the fever, including both medicines given at home and medicines prescribed at a health facility. Among children who had fever in the two weeks preceding the survey, 31 per cent were treated with an “appropriate” anti-malarial drug and about 13 per cent received anti-malarial drugs within 24 hours of onset of symptoms. Children whose mothers have secondary or higher levels of education are more likely to receive appropriate anti-malarial drugs particularly within 24 hours of onset of symptoms. A similar pattern is observed by household wealth index in favour of households from high wealth index. For example, only 21 per cent of the children who had fever and who are from low wealth index households received any appropriate anti-malarial drugs compared to 43 percent for those from the high wealth index households.

“Appropriate” anti-malarial drugs include ; chloroquine, SP/fansidar, artemisinin combination drugs, etc. In Kitui district, 5 per cent of children with fever were given SP/fansidar and 18 per cent received Amodiaquine for treatment. Only five per cent received artemisinin combination therapy. A large percentage of children (24 per cent) were given other types of medicines that are not anti-malarials, including anti-pyretics such as paracetamol, aspirin, or ibuprofen. The proportion receiving appropriate anti-malarial drugs was comparable across male and female children. For example, about 29 per cent of boys with fever in the two weeks prior to the survey were treated with an “appropriate” anti-malarial drug compared to 32 per cent for girls.

Table 6.12 (CH.12): Treatment of children with anti-malarial drugs Percentage of children aged 0-59 months who were ill with fever in the last two weeks who received anti-malarial drugs, MICS, Kitui district, Eastern Province, Kenya 2008													
Characteristics	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-malarials:			Other medications:					Any appropriate anti-malarial drug within 24 hours of onset of symptoms*		
			SP/ Fansidar	Chloro-quine	Amodia-quine	Qui-ning	Artemis-inin based combinations	Other anti-malarial	Any appropriate anti-malarial drug	Paracetamol/ Panadol/ Acetaminophen	Aspirin	Ibu-phen	Don't know
Sex													
Male	20.4	598	3.8	0.0	19.9	1.4	5.5	0.5	28.9	38.0	3.1	2.1	3.8
Female	24.0	640	6.6	0.0	16.9	0.0	4.9	5.8	31.7	32.7	6.3	7.3	12.1
Age													
0-11 months	24.5	229	4.6	0.0	25.4	0.0	1.4	2.5	32.7	33.8	0.0	0.0	5.0
12-23 months	24.4	247	9.7	0.0	16.1	0.0	13.9	2.9	36.2	33.5	4.7	0.0	6.2
24-35 months	20.6	241	3.9	0.0	17.5	0.0	1.6	3.5	26.5	32.3	2.0	5.2	5.7
36-47 months	22.2	263	5.2	0.0	15.1	3.0	3.2	2.2	27.1	29.9	9.1	0.0	11.5
48-59 months	19.8	258	2.6	0.0	17.3	0.0	4.7	6.2	28.9	46.9	8.4	21.8	13.9
Mother's education													
None	21.5	135	6.2	0.0	12.7	0.0	7.7	4.9	31.5	22.2	2.6	2.6	2.4
Primary	23.1	927	5.6	0.0	16.6	0.8	4.6	3.7	29.0	34.0	5.9	6.1	10.3
Secondary +	18.5	177	3.0	0.0	34.1	0.0	6.5	0.0	39.2	53.5	0.0	0.0	1.7
Wealth index													
Low	23.6	556	2.0	0.0	14.4	1.3	1.2	2.5	21.4	30.5	5.1	0.6	14.0
Medium	20.2	417	8.4	0.0	19.1	0.0	9.9	3.5	35.8	31.5	5.4	0.0	3.3
High	22.6	264	8.4	0.0	25.6	0.0	7.3	5.2	42.9	50.2	3.7	21.7	3.5
Total	22.3	1238	5.4	0.0	18.2	0.6	5.2	3.4	30.5	35.1	4.9	5.0	8.4
* The percentages given various drugs will not add to 100 since some children may have been given more than one type of drug.													

Pregnant women living in places where malaria is highly prevalent are four times more likely than other adults to get malaria and twice as likely to die of the disease. Once infected, pregnant women risk becoming anemic, having premature delivery and also having a stillbirth. In addition, 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, in addition to offering treatment during antenatal check-ups with drugs that prevent malaria infection (Intermittent preventive treatment or IPT). In Kitui district MICS 2008, women were asked about the malaria treatment they had received in their last pregnancy during the two years preceding the survey. Intermittent preventive treatment for malaria in pregnant women who gave birth in the two years preceding the survey is presented in Table 6.13 (CH.13). From the results, 59 per cent of the women received intermittent preventive therapy; that is, they received at least 2 doses of SP/Fansidar during the pregnancy.

About one in four (26 per cent) women received SP/Fansidar only once and 22 per cent received treatment two or more times. The differentials by educational level and wealth index shows an increasing proportion of women who received medicine to prevent malaria during pregnancy with increasing levels of these variables. For example, about 48 per cent of women with no education received intermittent preventive treatment for malaria compared to nearly over 71 per cent among those who have completed secondary or higher level of education.

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, MICS, Kitui district, Eastern Province, Kenya 2008

Characteristics	Percentage of pregnant women who took:						Number of women who gave birth in prior two years
	Medicine to prevent malaria during pregnancy	SP/Fansidar only one time	SP/Fansidar two or more times*	Chloroquine	Other medicines	Don't know	
Education							
None	(47.5)	(25.0)	(13.9)	(0.0)	(0.0)	(8.6)	27
Primary	58.5	24.7	23.5	3.5	0.6	7.2	308
Secondary +	70.8	32.7	20.1	7.9	1.2	9.0	53
Wealth index							
Low	52.3	18.8	20.6	3.5	0.7	9.8	171
Medium	65.9	29.5	25.6	4.8	1.0	5.0	128
High	63.7	34.0	21.1	3.1	0.0	6.8	89
Total	59.4	25.8	22.4	3.8	0.6	7.5	388

7.1 Water

Safe drinking water is a basic necessity for good health. Unsafe drinking water is linked with many diseases such as trachoma, cholera, typhoid and schistosomiasis. Drinking water can also be tainted with chemical, physical and radiological contaminants which are highly harmful to human health. In addition to unsafe water being associated with infections, access to safe drinking water may be particularly important for women and children, especially in rural areas, who bear the primary responsibility of carrying water, often for long distances.

The Millennium Development Goal 7 seeks to ensure environmental sustainability with a target of reducing by half, the proportion of people without sustainable access to safe drinking water and basic sanitation by 2015. The World Fit for Children goal also calls for a reduction in the proportion of households without access to hygienic sanitation facilities, affordable and safe drinking water by at least one-third.

The lists of indicators used to measure water and sanitation in MICS are 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

Use of water by source

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.

In Kitui district, about 31 per cent of the population is using an improved source of drinking water (Table 7.1 (EN.1)). Among the households where the household head either has no education or is educated up to primary level, 29 per cent use some form of improved source of drinking water, with the proportion increasing to slightly over 40 per cent in households where the household head has secondary or higher education. Clearly, the education level of the household head is an important factor in determining use of improved water sources. Similarly, about 13 per cent of the population living in low wealth index households use drinking water from improved sources compared to 57 per cent among those from high wealth index households.

Households were asked of ways of treating water at home to make it safer for drinking. Boiling, adding bleach or chlorine (chlorination), using a water filter and using solar disinfection were considered as proper water treatment methods. The methods used for household water treatment is presented in Table 7.2 (EN.2). The table shows the percentages of household members using appropriate water treatment methods separately for all households, and comparing households using improved and unimproved drinking water sources. Two out of five households in Kitui district (about 40 per cent), drink appropriately treated water. For households using drinking water from unimproved sources, about 40 per cent are using appropriate water treatment methods. A third of the households in Kitui district (33 per cent) add chlorine or bleaching to treat their drinking water, with 10 per cent of households simply boiling their water before drinking. Majority of the households in Kitui (60 per cent) do not treat the drinking water at all.

Table 7.1 (EN.1): Use of improved water sources																
Percentage distribution of household population according to main source of drinking water and percentages of household population using improved drinking water sources, MICS, Kitui district, Eastern Province, Kenya 2008																
	Main source of drinking water						Unimproved sources									
	Improved sources															
Characteristics	Piped into dwelling	Piped into yard/plot	Public tap/stand-pipe	Piped water from neighbour	Tube-well/bore-hole with pump	Protected well	Protected spring	Unprotected well	Unprotected spring	Tanker truck	Cart with tank/drum	Surface water	Other	Total	Improved source of drinking water	Number of household members
Education of household head																
None	5.8	2.0	1.1	2.4	11.0	5.3	0.5	21.8	2.6	0.5	2.5	42.9	0.5	100.0	29.2	1401
Primary	3.7	1.8	4.0	4.1	8.4	5.0	0.5	20.1	2.5	0.6	2.4	43.9	1.4	100.0	29.1	3181
Secondary +	6.7	7.8	3.8	7.5	8.8	3.7	0.0	20.0	3.1	0.9	1.8	32.9	0.9	100.0	40.5	781
Wealth index																
Low	0.0	0.0	0.5	0.8	6.0	3.6	0.3	27.1	2.9	0.0	1.9	54.5	0.9	100.0	12.7	2156
Medium	1.0	1.9	4.0	5.3	12.3	5.9	0.9	20.8	3.1	0.0	1.0	41.2	1.5	100.0	32.4	1845
High	16.6	8.6	6.8	7.7	9.4	5.5	0.0	9.6	1.5	2.2	4.5	24.8	0.9	100.0	56.5	1410
Total	4.7	2.9	3.3	4.1	9.0	4.9	0.4	20.4	2.6	0.6	2.3	42.2	1.1	100.0	30.8	5411

Figure 7.1: Percentage distributions of household members by source of drinking water, MICS Kitui district, 2008

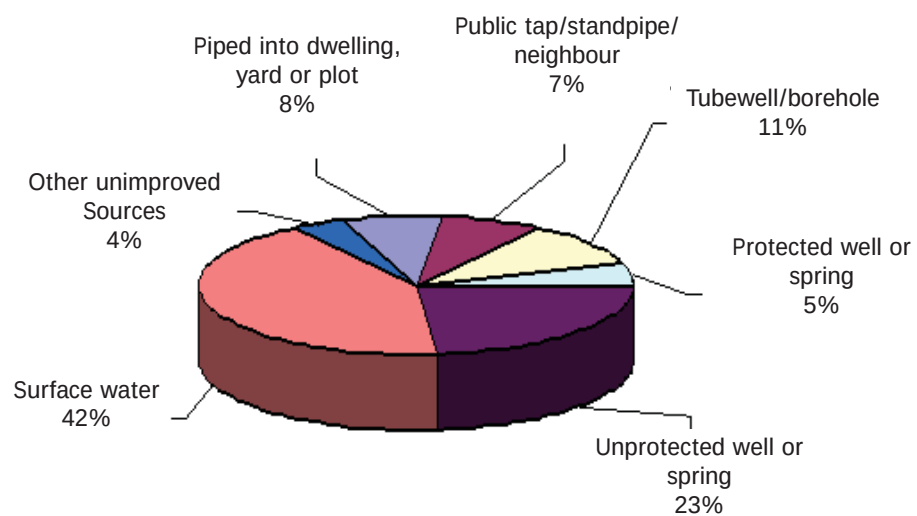


Table 7.2 (EN.2): Household water treatment												
Percentage distribution of household population according to drinking water treatment method used in the household, and percentages of household population that applied an appropriate water treatment method, MICS, Kitui district, Eastern Province, Kenya 2008												
Characteristics	Water treatment method used in the household						All drinking water sources		Improved drinking water sources		Unimproved drinking water sources	
	None	Boil	Add bleach/chlorine	Strain through a cloth	Use water filter	Let it stand and settle	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	63.9	7.5	29.4	0.0	0.9	0.9	35.3	1401	38.9	375	33.9	1026
Primary	61.2	9.5	30.3	0.2	0.4	0.8	38.2	3181	35.8	793	38.9	2388
Secondary +	43.8	13.6	48.4	0.3	0.0	0.3	55.6	781	62.2	258	52.4	523
Wealth index												
Low	72.4	6.9	20.7	0.3	0.6	1.5	26.3	2156	16.2	257	27.7	1899
Medium	56.5	6.2	37.6	0.1	0.4	0.3	43.2	1845	35.9	500	46.0	1345
High	43.0	18.9	44.0	0.0	0.3	0.1	57.0	1410	55.1	689	58.7	722
Total	59.3	9.8	32.6	0.2	0.5	0.7	40.1	5411	41.5	1446	39.5	3966
Note that multiple response categories may be used and responses may total to more than 100 per cent.												

The time taken to fetch water from available sources is presented in Table 7.3 (EN.3). The results show that majority (43 per cent) of households in Kitui district spend more than one hour to fetch their drinking water. Nine per cent of the households have their drinking water source within the premises. Another 14 per cent of all the households take less than 15 minutes to get to the water source and back. About 21 per cent of households spend between half an hour to one hour for a round trip of fetching drinking water. On average, households in Kitui district take at least one hour to obtain water from its source and deliver it back to the household.

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, MICS, Kitui district, Eastern Province, Kenya 2008									
Characteristics	Time to source of drinking water						Total	Mean time to source of drinking water*	Number of households
	Water on premises	Less than 15 minutes	15 minutes to less than 30 minutes	30 minutes to less than 1 hour	1 hour or more	Don't know			
Education of household head									
None	11.5	11.0	9.6	21.7	46.0	0.2	100.0	72.6	315
Primary	5.8	13.4	12.2	22.0	46.6	0.0	100.0	68.1	606
Secondary +	17.0	25.7	14.1	17.5	25.7	0.0	100.0	44.4	169
Wealth index									
Low	0.1	7.9	5.3	23.1	63.5	0.0	100.0	90.7	396
Medium	2.6	12.9	17.4	25.7	41.4	0.0	100.0	58.2	350
High	26.5	23.3	13.0	15.4	21.7	0.1	100.0	39.1	355
Total	9.4	14.4	11.6	21.4	43.0	0.0	100.0	66.1	1101
*The mean time to source of drinking water is calculated based on those households that do not have water on the premises.									

Table 7.4 (EN.4) presents information on the person who collects water. Note that these results refer to one round trip from home to drinking water source. Information on the number of trips made in one day was not collected. In majority of households in Kitui district, an adult female is more likely to collect drinking water from sources outside the household premises. Collection of water in Kitui district is predominantly an activity for women. For example, adult men collect water in 31 per cent of the households compared to 71 per cent for adult females. While the male and female children under the age of 15 years collect water in 12 per cent of the households, in 17 per cent of such cases an adult female always accompanies them to collect the drinking water compared to about 7 per cent of the cases where an adult male accompanies them. This finding corroborates many studies that have shown that women are tasked with the domestic duty of fetching water for their families.

Table 7.4 (EN.4): Person collecting water

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

Characteristics	Person collecting drinking water*							Don't know	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		
Education of household head									
None	64.2	25.8	11.4	11.3	13.1	5.9	10.1	0.0	230
Primary	74.8	31.2	12.7	11.2	18.7	6.4	15.7	0.0	568
Secondary +	66.9	33.7	11.5	13.4	17.8	7.9	15.7	0.0	295
Wealth index									
Low	78.6	32.5	17.8	21.9	21.8	13.2	15.1	0.0	125
Medium	83.3	30.7	16.7	12.1	20.8	7.1	17.6	0.0	368
High	61.0	30.7	8.0	9.5	14.1	5.1	12.7	0.0	608
Total	70.5	30.9	12.0	11.8	17.2	6.7	14.6	0.0	1101
*Total percentage may add to more than 100.0 due to multiple responses.									

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

7.2 Sanitation

Disposal of human waste is a key public health concern in the world. Inadequate disposal of human excreta and personal hygiene is associated with a range of diseases including diarrhoea diseases and polio. 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.

From Table 7.5 (EN.5), 36 per cent of the households in Kitui district are using sanitary means of excreta disposal. However, 34 per cent of households in the district have no sanitation facilities at all. The table further indicates that the proportion using improved sanitation facilities increases with increasing levels of the household wealth index, with 75 per cent of those from the high wealth index using sanitary means of excreta disposal compared to 38 per cent for those from the middle wealth index. Almost a third (29 per cent) of the households are not using an improved sanitation facility but use pit latrines without slab or just open pits.

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 percentages of household population using sanitary means of excreta disposal, MICS Kitui district, Eastern Province, Kenya 2008													
Characteristics	Type of toilet facility used by household												
	Improved sanitation facility					Unimproved sanitation facility							
	Flush/pour flush to:					Flush/ pour flush to			No facilities / bush / field				
	Piped sewer system	Septic tank	Pit latrine	Ventilated improved pit latrine	Pit latrine with slab	Composting toilet	Flush/ pour flush to somewhere else	Flush/ pour flush to unknown place/ not sure/ don't know	Pit latrine without slab/ open pit	Bucket hanging latrine	Other	Total	Percentage of population using sanitary means of excreta disposal*
Education of household head													
None	1.8	0.0	0.3	3.0	11.3	0.0	0.0	0.0	28.7	0.0	0.2	36.6	100.0
Primary	1.2	0.0	0.1	2.9	16.9	0.0	0.0	0.0	27.9	0.0	1.1	37.4	100.0
Secondary +	1.9	0.0	0.0	7.4	18.1	0.0	0.0	0.0	27.5	0.0	2.7	17.0	100.0
Wealth index													
Low	0.0	0.0	0.0	0.3	3.0	0.0	0.0	0.0	21.6	0.0	0.3	68.6	100.0
Medium	0.0	0.0	0.0	1.5	22.8	0.0	0.0	0.0	41.7	0.0	1.5	18.5	100.0
High	5.7	0.0	0.5	11.5	25.3	0.0	0.0	0.0	21.9	0.0	1.8	1.4	100.0
Total	1.5	0.0	0.1	3.5	15.5	0.0	0.0	0.0	28.5	0.0	1.2	34.0	100.0

Safe disposal of a child's faeces refers to either disposing of the stool using a toilet or by rinsing the stool into a toilet or latrine. Disposal of the faeces of children between 0-2 years of age is presented in Table 7.6 (EN.6). In majority of cases, children stool are disposed off safely in Kitui district. Forty seven per cent of children had their stools disposed off safely by putting or rinsing into a toilet or latrine. There are some cases where the stool was thrown into garbage, which is an unsafe practise that was reported by 16 per cent of the households in the district.

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 percentages of children aged 0-2 years whose stools are disposed of safely, MICS Kitui district, Eastern Province, Kenya 2008

Characteristics	Place of disposal of child's faeces									Proportion of children whose stools are disposed of safely	Number of children aged 0-2 years
	Child used toilet	Put/rinsed into toilet or latrine	Put/rinsed into drain or ditch	Thrown into garbage	Buried	Left in the open	Other	Don't know/missing	Total		
Mother's education											
None	2.6	34.7	1.1	23.0	13.2	16.2	4.6	4.5	100.0	37.3	66
Primary	2.1	44.8	2.9	16.7	7.8	11.9	10.8	2.9	100.0	46.9	559
Secondary +	0.8	66.4	2.7	10.7	3.9	4.2	8.4	2.8	100.0	67.2	115
Wealth index											
Low	1.0	26.8	3.1	23.4	11.1	13.9	16.5	4.178	100.0	27.8	321
Medium	3.4	52.2	2.8	14.4	6.8	11.3	7.1	2.0	100.0	55.6	261
High	1.6	80.6	1.9	5.1	2.2	5.0	0.9	2.8	100.0	82.2	158
Total	2.0	47.2	2.7	16.4	7.7	11.1	9.9	3.1	100.0	49.2	740

An overview of the percentage of the household members using improved sources of drinking water and sanitary means of excreta disposal is presented in Table 7.7 (EN.7). The results show that only 20 per cent of households in Kitui district are using improved sources of drinking water and sanitary means of excreta disposal. This proportion increases with educational level of the head of the household and the wealth status of the household. The levels are however still low and efforts should be made to increase access to improved water and sanitation for this community.

Table 7.7 (EN.7): Use of improved water sources and improved sanitation

Percentages of household population using both improved drinking water sources and sanitary means of excreta disposal, MICS Kitui district, Eastern Province, Kenya 2008

Characteristics	Percentages of household population:			Number of household members
	Using improved sources of drinking water	Using sanitary means of excreta disposal	Using improved sources of drinking water and using sanitary means of excreta disposal	
Education of household head				
None	29.2	54.7	19.3	1401
Primary	29.1	53.6	19.3	3181
Secondary +	40.5	61.4	24.8	781
Wealth index				
Low	12.7	27.9	3.9	2156
Medium	32.4	73.2	23.2	1845
High	56.5	73.8	41.5	1410
Total	30.8	55.3	20.3	5411

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

8.1 Fertility

Achieving national economic goals is directly linked to the fertility levels in the country and resources available to support a country's population. Studies have shown that, in most developing countries the resources are meagre and inadequate to support its large population and hence it is very important to balance the population growth with development goals. To achieve this balance, each and every district has to play its role. To develop programs that are appropriate for achieving optimal fertility, information about prevailing fertility levels becomes a crucial component. In MICS 2008, birth histories of children of women aged 15-49 years from the sampled households were collected to measure the fertility level in Kitui District. Birth histories include details of all children ever born to a woman, such as child's name, sex, month and year of birth, survival status and if dead, the age at death.

Table 8.1 presents the measures of current fertility levels in Kitui district for the three-year period preceding the survey. Current fertility measures such as age-specific fertility rates (ASFRs) and total fertility rate (TFR) are calculated. ASFR's are calculated by dividing the number of births to women in a specific age group by the number of women-years lived during a given period. The TFR is defined as the average number of children a woman would have if she went through her entire reproductive period (15-49 years) reproducing at the prevailing age-specific fertility rates (ASFR).

Table 8.1: Current fertility

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

Age group	Total
15-19	98
20-24	303
25-29	251
30-34	193
35-39	87
40-44	70
45-49	19
TFR	5.1
TFR: Total fertility rate for women age 15-49 years expressed per woman.	

The total fertility rate in Kitui district is 5.1 children per woman for the three year period preceding the survey (mid-2005 to mid 2008). This is one of the highest fertility levels in the province.

Similar to the overall Kenyan context, fertility in Kitui district peaks at age 20-24 years. Majority of the births (54 per cent) are contributed by women aged 20-29 years, while the older women (40-49 years) contribute less than 10 per cent. Adolescents (15-19 years) contribute about 10 per cent of the total fertility of Kitui district.

The percentage distribution of all women and married women based on the number of children ever born and living are shown in Table 8.2. The mean number of children ever born to married women in the reproductive ages in Kitui is 4.4; while mean number of surviving children is 4.0. Most of the currently married women had live births but five per cent of women aged 45-49 had no live births. This confirms the high fertility of the women in the district.

In addition, 41 per cent of the currently married women aged 45-49 years have 8 or more children ever born, and this proportion drops to 33 per cent for women aged 40-44 years.

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, MICS, Kitui district, Eastern Province, Kenya 2008													
Age group	Number of children ever born										Number of women	Mean number of children	
	0	1	2	3	4	5	6	7	8+	Total		Ever born	Living
All women													
15-19	85.3	12.6	1.0	0.8	0.2	0.0	0.0	0.0	0.0	100.0	237	1.2	1.2
20-24	24.9	30.9	25.0	15.5	3.1	0.6	0.0	0.0	0.0	100.0	199	1.9	1.8
25-29	4.4	10.0	24.1	31.6	23.2	4.0	2.6	0.2	0.0	100.0	224	3.0	2.8
30-34	4.0	3.9	6.9	21.8	23.1	20.8	13.9	3.7	2.1	100.0	173	4.4	4.0
35-39	3.1	4.6	2.2	14.8	19.1	19.5	13.3	12.7	10.6	100.0	174	5.4	4.8
40-44	0.0	5.9	1.9	2.0	12.1	14.6	4.9	25.7	32.8	100.0	112	7.7	7.1
45-49	3.9	0.0	5.7	6.1	11.6	16.7	8.7	12.1	35.3	100.0	96	7.9	7.0
Total	22.8	11.1	10.7	14.4	12.9	9.3	5.5	5.7	7.6	100.0	1215	4.5	4.1
Currently Married Women													
15-19	30.9	54.1	6.2	6.8	1.9	0.0	0.0	0.0	0.0	100.0	27	0.9	0.9
20-24	3.1	33.8	34.0	23.0	4.9	1.1	0.0	0.0	0.0	100.0	114	2.0	1.8
25-29	0.6	9.4	25.3	32.6	24.2	4.4	3.2	0.2	0.0	100.0	185	3.0	2.8
30-34	3.8	4.1	7.7	19.3	20.4	23.6	14.5	4.5	2.3	100.0	141	4.2	3.8
35-39	0.0	1.1	2.8	17.3	21.8	19.1	12.3	13.8	12.0	100.0	134	5.5	4.8
40-44	0.0	6.1	2.3	2.5	14.4	16.3	6.1	19.1	33.2	100.0	90	7.6	6.9
45-49	5.2	0.0	0.0	7.6	12.7	15.8	10.9	6.4	41.4	100.0	72	7.7	7.1
Total	2.9	10.9	13.6	19.2	17.1	12.4	7.4	6.2	10.3	100.0	764	4.4	4.0

8.2 Teenage Pregnancy and Motherhood

Teenage pregnancy is currently on the rise in Kenya and reducing pregnancy among adolescents is one of the flagship programs of the Government of Kenya. The proportion of women aged 15-19 years who have given birth, or currently pregnant and those who have begun child bearing by selected characteristics in Kitui district are shown in Table 8.3.

About 19 per cent of teenage women (aged 15-19 years) have already begun child bearing, with 15 per cent already having a child and four per cent are pregnant with their first child. Teenage motherhood is higher among women with no education (81 per cent) compared to those with secondary or higher education (12.5 per cent). This shows the importance of education as a factor that can delay child bearing for teenagers.

Table 8.3: Teenage pregnancy and motherhood				
Percentages of women age 15-19 years who are mothers or pregnant with their first child and percentages who have begun child bearing, MICS Kitui district, Eastern Province, Kenya 2008				
Characteristic	Percentages who		Percentages who have begun child bearing	Number of women
	Have had a live birth	Are pregnant with first child		
Age				
15	1.5	2.6	4.1	35
16	2.7	0.0	2.7	67
17	7.9	6.1	14.1	44
18	27.1	6.5	33.7	55
19	39.4	7.9	47.2	36
Education				
None	81.3	0.0	81.3	3
Primary	14.2	4.8	19.0	197
Secondary +	12.5	1.4	13.9	37
Wealth index				
Low	15.2	4.3	19.5	97
Medium	11.7	6.1	17.8	94
High	19.8	0.0	19.8	45
Total	14.7	4.2	18.9	237

8.3 Contraception

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. The World Fit for Children goal stipulates clearly the need to ensure access by all couples to information and services to prevent pregnancies that are too early, too closely spaced, too late or too many.

Current use of contraception was reported by almost 58 per cent of women who are either currently married or in union (Table 8.4 (RH.1)). The use of modern method of contraception was reported by 44 per cent while 13 per cent reported traditional method use.

Table 8.4 (RH.1): Use of contraception

Percentages of women aged 15-49 years currently married or in union who are using (or whose partner is using) a contraceptive method, MICS Kitui district, Eastern Province, Kenya 2008

Percentage of women (currently married or in union) who are using:																			
Characteristics	Not using any method	Female sterilization	Male sterilization	Pill	IUD	Inject -ions	Impl ants	Condom	Female condom	Diaphragm/foam/jelly	LAM	Periodic abstinence	Other	Total	Any modern method	Any traditional method	Any method*	Number of women	
Age																			
15-19	(60.3)	(0.0)	(0.0)	(0.0)	(0.0)	(12.8)	(1.9)	(1.7)	(0.0)	(6.2)	(17.2)	(0.0)	(0.0)	(0.0)	(100.0)	(22.5)	(17.2)	(39.7)	27
20-24	41.2	0.0	0.0	8.1	0.0	22.9	0.0	0.9	0.0	9.7	17.2	0.0	0.0	0.0	100.0	41.6	17.2	58.8	114
25-29	38.4	0.9	0.0	8.1	0.0	30.6	1.5	0.8	0.0	7.3	12.5	0.0	0.0	0.0	100.0	49.1	12.5	61.6	185
30-34	42.0	4.3	0.0	3.7	0.0	30.0	0.0	1.2	0.0	5.3	11.4	2.2	0.0	0.0	100.0	44.4	13.6	58.0	141
35-39	38.1	14.7	0.0	5.8	1.9	25.6	0.0	0.0	0.0	2.5	11.3	0.0	0.0	0.0	100.0	50.6	11.3	61.9	134
40-44	43.4	10.0	0.0	5.1	0.0	25.5	0.0	1.3	0.0	2.7	12.1	0.0	0.0	0.0	100.0	44.6	12.1	56.6	90
45-49	57.1	11.8	0.0	6.3	0.0	10.0	0.0	0.0	0.0	3.1	11.6	0.0	0.0	0.0	100.0	31.3	11.6	42.9	72
Number of living children**																			
0	(100.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(100.0)	(0.0)	(0.0)	(0.0)	27
1	51.6	0.0	0.0	5.6	0.0	19.7	0.5	0.6	0.0	5.9	16.1	0.0	0.0	0.0	100.0	32.4	16.1	48.4	94
2	40.2	0.0	0.0	9.9	0.0	30.1	1.2	0.3	0.0	4.7	13.5	0.0	0.0	0.0	100.0	46.3	13.5	59.8	136
3	35.7	5.3	0.0	4.9	1.8	35.9	0.3	0.7	0.0	5.7	9.6	0.0	0.0	0.0	100.0	54.6	9.6	64.3	144
4+	39.6	10.3	0.0	5.7	0.0	22.6	0.1	1.0	0.0	5.9	13.9	0.9	0.0	0.0	100.0	45.6	14.8	60.4	363
Education																			
None	43.2	8.4	0.0	6.8	0.0	14.6	0.0	1.2	0.0	5.3	20.5	0.0	0.0	0.0	100.0	36.3	20.5	56.8	74
Primary	44.0	5.8	0.0	5.5	0.5	25.1	0.5	0.5	0.0	5.5	12.1	0.5	0.0	0.0	100.0	43.4	12.6	56.0	572
Secondary +	34.9	4.6	0.0	8.2	0.0	32.8	0.4	1.6	0.0	5.3	11.6	0.5	0.0	0.0	100.0	53.0	12.1	65.1	117
Wealth index																			
Low	50.3	5.1	0.0	2.5	0.0	18.3	0.0	0.5	0.0	9.6	12.6	1.1	0.0	0.0	100.0	36.0	13.7	49.7	277
Medium	44.6	4.9	0.0	7.0	0.0	28.0	0.2	0.5	0.0	4.3	10.6	0.0	0.0	0.0	100.0	44.9	10.6	55.4	253
High	31.2	8.0	0.0	9.3	1.1	30.6	1.2	1.3	0.0	1.8	15.6	0.0	0.0	0.0	100.0	53.2	15.6	68.8	233
Total	42.5	5.9	0.0	6.1	0.3	25.3	0.4	0.8	0.0	5.5	12.8	0.4	0.0	0.0	100.0	44.2	13.2	57.5	764
Note: Male sterilization, female condoms and withdrawal method are used by less than 0.05 per cent and are not shown.																			
() Based on 25*50 un-weighted figures																			

Note: Male sterilization, female condoms and withdrawal method are used by less than 0.05 per cent and are not shown.

() Based on 25*50 un-weighted figures

The most popular modern method is the injection method which is used by one in every four married women in Kitui district. The other popular methods include; pills, female sterilization and diaphragm/foam/jelly, which account for about six per cent each among married women age 15-49 years in Kitui district. The most popular traditional method is lactational amenorrhea (LAM) and is reported by about 13 per cent of the married women.

Younger women are far less likely to use contraception than older women in Kitui district, except for 45-49 years age group. About 40 per cent of married women or women in union aged 25-29 years are currently using a method of contraception, compared to 62 per cent among those aged 35-39 year.

8.4 Unmet Need

Unmet need⁵ for contraception refers to fecund women who are not using any method of contraception, but who wish to postpone the next birth or who wish to stop childbearing altogether. Unmet need is identified in MICS 2008 by using a set of questions eliciting current behaviours and preferences pertaining to contraceptive use, fecundity and fertility preferences.

Women with an unmet need for spacing 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 who want to space their births. Pregnant women are considered to want to space their births when they did not want the child at the time they got pregnant. Women who are not pregnant are classified in this category if they want to have 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. This group includes women who are currently pregnant but who had not wanted the pregnancy at all, and women who are not currently pregnant but do not want to have a (another) child.

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

Using information on contraception and unmet need, the percentage of demand for contraception satisfied is also estimated from the MICS 2008 data. Demand for contraception satisfied is defined as the proportion of currently married or in union women who are currently using contraception out of the total demand for contraception. The total demand for contraception includes women who currently have an unmet need (for spacing or limiting), plus those who are currently using contraception.

Table 8.5 shows the results of the survey on contraception, unmet need and the demand for contraception satisfied. Majority of currently married women in Kitui district are using contraception (58 per cent). Among these, over 92 per cent have their demand for contraception satisfied. Unmet need for contraception is low in the district.

⁵ Unmet need measurement in MICS is somewhat different than that used in other household surveys, such as the Demographic and Health Surveys (DHS). In DHS, more detailed information is collected on postpartum amenorrhoea, and sexual activity. Results from the two types of surveys are strictly not comparable.

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

Percentage of women aged 15-49 years currently married or in union with an unmet need for family planning and percentages of demand for contraception satisfied, MICS Kitui district, Eastern Province, Kenya 2008

Characteristics	Current use of contraception	Unmet need for contraception			Number of women currently married or in union	percentages 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	39.7	(7.4)	(0.0)	(7.4)	(27)	(*)	13
20-24	58.8	10.1	0.0	10.1	114	85.3	79
25-29	61.6	6.0	0.3	6.3	185	90.7	126
30-34	58.0	5.2	0.0	5.2	141	91.8	89
35-39	61.9	2.2	1.0	3.2	134	95.1	87
40-44	56.6	0.0	0.6	0.6	90	99.0	52
45-49	42.9	0.0	0.0	0.0	72	(100.0)	31
Education							
None	56.8	0.8	0.0	0.8	74	98.5	43
Primary	56.0	5.6	0.4	6.0	572	90.3	355
Secondary +	65.1	2.1	0.0	2.1	117	96.9	79
Wealth index							
Low	49.7	5.5	0.9	6.3	277	88.7	155
Medium	55.4	6.2	0.0	6.2	253	89.9	156
High	68.8	1.7	0.0	1.7	233	97.6	164
Total	57.5	4.6	0.3	4.9	764	92.2	476

** Unmet need for spacing is defined as women who are fecund and not currently using contraception and want to space their births.

*** Unmet need to limit is defined as women who are fecund and not currently using contraception and want to limit their births.

***** Proportion of demand satisfied is defined as the proportion of currently married or in union women who are currently using contraception of the total demand for contraception.

(*) Based 0-25 un-weighted figures and has been suppressed

() Based on 25-50 un-weighted figures.

8.5 Antenatal Care

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

The antenatal period also provides an opportunity to supply information on birth spacing, which is recognized as an important factor in improving infant survival. Tetanus immunization during pregnancy can be life-saving for both the mother and infant. The prevention and treatment of malaria among pregnant women, management of anaemia during pregnancy and treatment of sexually transmitted infections (STIs) can significantly improve foetal outcomes and improve maternal health. Adverse outcomes such as low birth weight can be reduced through a combination of interventions to

improve women's nutritional status and prevent infections (e.g., malaria and STIs) during pregnancy. More recently, the potential of the antenatal period as an entry point for HIV/AIDS prevention and care, in particular for the prevention of HIV/AIDS 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 care visits for pregnant women based on a review of the effectiveness of different models of antenatal care. WHO guidelines are specific on the content on antenatal care visits, which should include:

- Blood pressure measurement
- Urine testing for bacteriuria 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 presented in Table 8.6 (RH.3). Coverage of antenatal care by any skilled personnel (a doctor, nurse, or midwife) is relatively high in Kitui district with 97 per cent of women receiving antenatal care by any skilled personnel at least once during the pregnancy. Majority of the women received antenatal care from nurses or midwives, while three per cent of the women did not receive any care at all.

Table 8.6 (RH.3): Antenatal care provider								
Percentage distribution of women aged 15-49 who gave birth in the two years preceding the survey by type of personnel providing antenatal care, MICS Kitui district, Eastern Province, Kenya 2008								
Characteristics	Person providing antenatal care**					Total	Antenatal care by any skilled personnel*	Number of women who gave birth in the preceding two years
	Medical doctor	Nurse/ midwife	Traditional birth attendant	Other	No antenatal care			
Age								
15-19	(33.0)	(65.6)	(0.0)	(0.0)	(1.4)	(100.0)	(98.6)	34
20-24	33.5	63.8	0.0	0.0	2.8	100.0	97.2	106
25-29	26.8	70.4	0.0	0.8	2.1	100.0	97.1	118
30-34	27.4	70.7	0.0	0.0	1.9	100.0	98.1	78
35-49	29.6	60.8	1.2	0.0	8.4	100.0	90.4	52
Education								
None	(14.4)	(78.4)	(0.0)	(0.0)	(7.2)	(100.0)	(92.8)	27
Primary	30.4	65.9	0.2	0.3	3.2	100.0	96.3	308
Secondary +	33.0	67.0	0.0	0.0	0.0	100.0	100.0	53
Wealth index								
Low	28.0	66.7	0.4	0.0	4.9	100.0	94.8	171
Medium	29.3	68.6	0.0	0.7	1.4	100.0	97.9	128
High	33.3	64.8	0.0	0.0	1.8	100.0	98.2	89
Total	29.7	66.9	0.2	0.2	3.0	100.0	96.6	388
* 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								
() Based on un-weighted figures 25-50.								

The type of antenatal care services which pregnant women received in Kitui district are shown in Table 8.7. Among women who gave birth to a child during the two years preceding the survey, 72 per cent reported that their blood sample was taken during antenatal care visits, about 76

per cent reported that their blood pressure was checked, 57 per cent reported that urine specimen were taken and 94 per cent had weights measured. Overall, younger pregnant women are more likely to have received most of the services compared to their older counter parts. The differentials by education level of mothers clearly show an increasing trend in the different types of services received with increasing levels of education. A similar pattern is also observed with respect to household wealth index.

The findings also reveal that, while most women reported having their weight measured, fewer women reported having their urine tested during the antenatal care visits. This may indicate that the antenatal care services are not standardised for all women in the district. Weight measuring is the most common check done for all pregnant women in the district.

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 percentages of pregnant women receiving specific care as part of the antenatal care received, MICS Kitui district, Eastern Province, Kenya 2008						
		Percentage of pregnant women who had:				
	Percentage of pregnant women receiving ANC one or more times during pregnancy	Blood test taken*	Blood pressure measured*	Urine specimen taken*	Weight measured*	Number of women who gave birth in two years preceding survey
Characteristics						
Age						
15-19	(98.6)	(77.3)	(66.8)	(48.1)	(93.7)	34
20-24	97.2	76.3	78.8	66.2	95.3	106
25-29	97.9	68.9	74.5	55.9	93.4	118
30-34	98.1	72.7	77.4	58.1	97.3	78
35-49	91.6	66.0	76.0	48.4	90.4	52
Education						
None	(92.8)	(73.8)	(80.6)	(59.3)	(92.8)	27
Primary	96.8	69.0	73.3	54.2	93.7	308
Secondary +	100.0	89.0	87.9	75.5	99.0	53
Wealth index						
Low	95.1	60.3	65.2	42.8	90.9	171
Medium	98.6	77.0	81.3	66.9	97.1	128
High	98.2	87.3	88.1	71.8	96.9	89
Total	97.0	72.0	75.8	57.4	94.3	388
* Proportions are calculated separately: Total number of women weighed, blood pressure measured, gave urine sample, and gave blood sample.						
() Based on un-weighted figures 25-50.						

8.6 Assistance at Delivery

Three quarters of all maternal deaths occur during delivery or in the immediate post-partum period. The single most critical intervention for safe motherhood is to ensure a competent health worker with midwifery skills is present at every birth, and transport is available to a referral facility for obstetric care in case of obstetric emergency. A World Fit for Children goal is to ensure that women have ready and affordable access to skilled attendance at delivery. The indicators for this goal 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 towards the Millennium

Development Goal 5, which seeks to improve maternal health by 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. Table 8.8 (RH.5) presents the proportion of women with births in the two years prior to the survey by the type of assistance received during delivery. Almost 29 per cent of births that occurred during the two years preceding the survey were delivered by skilled personnel such as a doctor, nurse or midwife. Only two per cent of women were not assisted by anyone during birth.

The more educated a woman is, the more likely she is to have delivered with the assistance of a skilled attendant. For women who had a birth in the two years preceding the survey and had no education, only 47 per cent received skilled personnel assistance at delivery compared to almost 53 per cent for women with secondary or higher education. The proportion of women receiving assistance at delivery by skilled personnel increased with increasing levels of household wealth index.

One in eight births (13 per cent) during the two years prior to the MICS 2008 survey was delivered with the assistance of a doctor. About one in seven (15 per cent) deliveries was assisted by either a relative or friend. However, about 28 per cent of the women who gave birth in the two years preceding the survey delivered in a health facility. Nurse/midwife assisted with the delivery of 16 per cent of births, i.e., one out of 6 deliveries. Notably, 52 per cent of births in Kitui district were assisted by traditional birth attendants.

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, Kitui district Eastern Province, Kenya 2008

Characteristics	Person assisting at delivery									Number of women who gave birth in preceding two years	
	Medical doctor	Nurse/ midwife	Traditional birth attendant	Community health worker	Relative/ friend	Other attendant	No attendant	Total	Any skilled personnel*		Delivered in health facility
Age											
15-19	(15.2)	(17.7)	(46.9)	(0.0)	(20.2)	(0.0)	(0.0)	(100.0)	(32.9)	34	
20-24	11.9	17.6	45.7	1.4	21.5	1.0	1.0	100.0	29.5	106	
25-29	12.4	14.1	61.5	0.0	10.5	1.0	0.5	100.0	26.6	118	
30-34	11.1	19.0	53.5	0.0	11.4	2.0	2.9	100.0	30.1	78	
35-49	17.4	8.4	46.3	0.8	14.1	4.5	8.5	100.0	25.8	52	
Education											
None	(2.9)	(14.5)	(42.6)	(0.0)	(3.3)	(0.0)	(6.7)	(100.0)	(47.4)	27	
Primary	8.3	14.4	56.0	0.4	16.9	2.0	2.0	100.0	22.7	308	
Secondary +	29.6	23.2	35.3	1.0	10.1	0.0	0.8	100.0	52.8	53	
Wealth index											
Low	8.0	9.4	63.4	0.9	15.1	1.3	2.0	100.0	17.3	171	
Medium	10.0	18.0	49.6	0.0	17.5	1.4	3.4	100.0	28.0	128	
High	26.6	24.0	34.8	0.5	11.3	2.4	0.5	100.0	50.6	89	
Total	12.9	15.6	52.2	0.5	15.0	1.6	2.1	100.0	28.5	27.5	388

* Skilled health personnel include doctors, nurses, midwives, and auxiliary midwives.
() Based on 25-50 un-weighted figures.

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 a 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 MICS 2008 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 assisting children to name, count, or draw things.

Table 9.1 (CD.1) presents the proportion of children under five years of age for whom household members engaged in activities that promote learning and school readiness. For three out of five children under five years of age (59 per cent), an adult engaged in about four activities that promote learning and school readiness during the 3 days preceding the survey.

The results indicate that the father's involvement in such activities was somewhat limited. Fathers were involved in about 21 per cent of the activities, meaning that mothers are more likely to engage in learning activities of their young children. Surprisingly, a very high proportion of children (48 per cent) were living in a household without their natural fathers. This may be a pointer to out-migration in the area where male households members move to other areas in search of economic activities.

No significant differentials were observed in the adult involvement in child development by background characteristics such as education levels and household wealth index.

Table 9.1 (CD.1): Family support for learning

Percentage of children aged 0-59 months for whom household members are engaged in activities that promote learning and school readiness, MICS Kitui district, Eastern Province, Kenya 2008

Characteristics	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	60.2	3.8	21.3	0.4	50.8	598
Female	58.2	3.7	20.3	0.4	45.3	640
Age						
0-23 months	32.5	2.6	16.6	0.3	46.9	490
24-59 months	76.7	4.5	23.5	0.4	48.7	748
Mother's education						
None	70.1	4.3	15.7	0.3	56.4	135
Primary	58.0	3.7	21.8	0.4	45.5	927
Secondary +	56.7	3.6	19.4	0.4	54.4	177
Father's education						
None	58.6	3.4	33.4	0.5	0.0	51
Primary	58.7	3.7	35.8	0.6	0.0	497
Secondary +	54.2	3.7	29.4	0.6	0.0	96
Father not in HH	60.4	3.8	NA	NA	100.0	594
Wealth index						
Low	58.6	3.7	22.2	0.4	41.9	556
Medium	58.5	3.7	17.7	0.3	52.3	417
High	61.3	3.8	22.7	0.4	53.9	264
Total	59.1	3.7	20.8	0.4	48.0	1238
* Any adult has engaged in 4 or more activities to promote learning and school readiness in the past 3 days.						
** Father has provided one or more activities to promote learning and school readiness.						

10.1 Pre-School Attendance and School Readiness

Attendance to pre-school education 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. The MDG 2 is to achieve universal primary education with a target to ensure that by 2015 all children, both boys and girls alike will be able to complete a full course of primary schooling.

Almost 30 per cent of children aged 36-59 months are attending pre-school (Table 10.1). Surprisingly, more female children (36 per cent) are enrolled in early childhood education compared with male children (23 per cent). Fifty seven per cent of children living in high wealth index households attend pre-school, while the figure drops to approximately 18 per cent for those from low wealth index households. As expected, children in the young age group 36-47 months are less likely (13 per cent) to attend pre-school in comparison to older ones (48-59 months) at 48 per cent.

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 percentages of first graders who attended pre-school, MICS Kitui district, Eastern Province, Kenya 2008

Characteristics	Percentage of children aged 36-59 months currently attending early childhood education	Number of children aged 36-59 months	Percentage of children attending first grade who attended preschool program in previous year	Number of children attending first grade
Sex				
Male	23.3	243	98.1	27
Female	36.3	266	95.5	34
Age of child				
36-47 months	13.4	267	NA	0
48-59 months	48.1	242	NA	0
6 years*	(*)	0	96.7	61
Mother's education				
None	32.0	50	(*)	7
Primary	28.2	394	95.8	48
Secondary +	39.0	65	100.0	5
Wealth index				
Low	17.7	242	(*)	21
Medium	30.1	159	(*)	23
High	57.3	108	(*)	17
Total	29.9	509	96.7	61

* 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.

NA: Not applicable; Not shown, based on less than 25 un-weighted cases

(*) Based on un-weighted figures 0-25 and has been suppressed.

The table also shows the proportion of children in the first grade of primary school who attended pre-school the previous year, an important indicator of school readiness. Overall, about 96 per cent of children who are currently aged 6 years and attending the standard one of primary school attended pre-school the previous year. The proportion is marginally higher among males (98 per cent) than females (96 per cent).

10.2 Primary and Secondary School Participation

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

The 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 shows the proportion of primary school entry age children who are attending grade one in Kitui district. For children who are of primary school entry age (6 years) in Kitui district, only 37 per cent are attending standard one of primary school. More female children are attending standard one (44 per cent) compared to male children (33 per cent). There is a positive relationship between the proportion attending school and the level of education of mother, as well as the economic conditions of the household. For example, 37 per cent of children aged 6 years whose mothers have at least primary school education are attending the first grade compared with almost 30 per cent among those with mothers who have no education. Among high wealth index households, 76 per cent of children are attending standard one compared to only 25 per cent for children from low wealth index households.

Table 10.2 (ED.2): Primary school entry		
Percentage of children of primary school entry age (6 years old) attending grade 1, MICS Kitui district, Eastern Province, Kenya 2008		
Characteristics	Percentage of children of primary school entry age currently attending grade 1	Number of children of primary school entry age
Sex		
Male	31.8	89
Female	42.2	89
Mother's education		
None	(29.5)	25
Primary	37.4	139
Secondary +	*	14
Wealth index		
Low	25.4	89
Medium	37.1	63
High	76.2	26
Total	37.0	178
() Based on un-weighted figures 25-50.		
(*) Based on 0-25 un-weighted figures and has been suppressed		

Table 10.3 (ED.3) provides the percentage of children of primary school age (6-13 years) attending primary or secondary school. The majority of children of primary school age in Kitui district are attending school (85 per cent). As observed earlier regarding primary school attendance, female children have a slight advantage over male children (87 per cent for females against 83 per cent for males). There are some differences in attendance by education of the mother and household wealth index. For example, about 77 per cent of the primary school age children from low wealth index households are currently attending primary school or higher compared to almost 95 per cent for children from high wealth index households.

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), MICS Kitui district, Eastern Province, Kenya 2008

Characteristics	Net attendance ratio*			Number of children		
	Male	Female	Total	Male	Female	Total
Age						
6	33.2	44.2	38.7	89	89	178
7	65.7	82.6	73.3	90	74	165
8	88.0	91.9	89.9	100	93	193
9	92.9	96.7	95.0	70	83	152
10	100.0	99.1	99.5	69	80	149
11	99.2	92.1	96.1	99	76	175
12	99.0	100.0	99.6	54	84	137
13	99.2	96.1	97.7	66	60	126
Mother's education						
None	84.9	87.2	86.0	125	109	234
Primary	80.6	85.6	83.1	437	446	883
Secondary +	92.2	95.6	94.0	75	83	158
Wealth index						
Low	76.8	83.6	80.2	291	291	582
Medium	84.4	87.7	86.0	236	225	461
High	95.3	94.5	94.9	110	122	232
Total	82.8	87.2	85.0	637	639	1276

* The primary school net attendance ratio (NAR) is percentages of children of primary school age that are attending primary or secondary school. Children of primary school age (6-13 years) currently attending primary or secondary school are included in the numerator. All children of primary school age are included in the denominator.

The secondary school net attendance ratio is presented in Table 10.4 (ED.4). The results are more dramatic than in primary school net attendance ratio. Whereas 85 per cent of primary school age children were attending school, only 15 per cent of secondary school age children (14-17 years) are attending secondary school in Kitui district. Majority of the children are either out of school or still attending primary school. Gender differentials in secondary school attendance are very apparent and in favour of girls; 53 per cent of the girls are in secondary schools compared with only 24 per cent for boys. As expected, the proportion of children attending secondary schools increases with increasing levels of the household wealth index.

Table 10.4 (ED.4): Secondary school net attendance ratio						
Percentage of children of secondary school age (14-17 years) attending secondary school or higher (NAR), MICS Kitui district, Eastern Province, Kenya 2008						
	Net attendance ratio			Number of children		
	Male	Female	Total	Male	Female	Total
Age						
14	0.7	2.5	1.6	71	72	143
15	6.4	18.6	11.7	57	44	102
16	14.9	11.6	13.5	85	68	153
17	(24.1)	53.2	(40.3)	45	57	102
Mother's education						
None	11.3	12.3	11.8	62	64	126
Primary	10.1	15.8	12.7	146	118	264
Secondary +	(*)	40.3	34.2	14	34	48
Mother not in HH	(9.4)	(*)	18.4	37	24	61
Wealth index						
Low	3.6	14.7	9.2	97	99	196
Medium	6.8	12.0	9.3	100	91	191
High	28.5	44.5	35.7	62	51	112
Total	10.8	19.9	15.2	258	241	499
* The secondary school net attendance ratio (NAR) is the percentages 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. (*) Based on 0-25 un-weighted figures and has been suppressed. () Based on 25-50 un-weighted figures.						

The proportion of secondary school age children who are attending primary school is presented in Table 10.5. Two out of five children (39 per cent) of secondary school age are still attending primary school. Children from high wealth index households are less likely to be in primary school when they should be in secondary school. Education level of mothers is an important factor since mothers with higher education have most of their children attending the right school at the right age. For example, 40 per cent of children whose mothers have no education are currently attending primary school whereas they should be in secondary school compared to only 14 per cent of children whose mothers have higher education.

The findings also show that there is low transition from primary to secondary school for children from poor households compared to those from wealthier households.

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, MICS Kitui district, Eastern Province, Kenya 2008

Characteristics	Percentage attending primary school			Number of children		
	Male	Female	Total	Male	Female	Total
Age						
14	56.4	62.3	59.4	71	72	143
15	62.9	35.9	51.1	57	44	102
16	28.7	24.4	26.8	85	68	153
17	24.1	10.6	16.6	45	57	102
Mother's education						
None	36.9	43.5	40.3	62	64	126
Primary	50.0	40.4	45.7	146	118	264
Secondary +	11.6	14.9	14.0	14	34	48
Mother not in HH	37.6	11.5	27.3	37	24	61
Wealth index						
Low	54.7	40.8	47.6	97	99	196
Medium	46.9	40.5	43.9	100	91	191
High	18.7	11.9	15.6	62	51	112
Total	43.1	34.6	39.0	258	241	499
* 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, also known as Gender Parity Index (GPI) is provided in Table 10.6 (ED.7). The ratios included here are obtained from net attendance ratios rather than gross attendance ratios since the latter may contain errors if there are huge gender differences in school attendance.

Table 10.6 (ED.7): Education gender parity						
Ratio of girls to boys attending primary education and ratio of girls to boys attending secondary education, MICS Kitui district, Eastern Province, Kenya 2008						
Characteristics	Primary school net attendance ratio (NAR)		Gender parity index (GPI) for primary school NAR*	Secondary school net attendance ratio (NAR)		Gender parity index (GPI) for secondary school NAR*
	Girls	Boys		Girls	Boys	
Sex						
Male	NA	82.8	NA	NA	10.8	NA
Female	87.2	NA	NA	19.9	NA	NA
Mother's education						
None	87.2	84.9	1.03	12.3	11.3	1.09
Primary	85.6	80.6	1.06	15.8	10.1	1.56
Secondary +	95.6	92.2	1.04	40.3	19.1	2.11
Wealth index						
Low	83.6	76.8	1.09	14.7	3.6	4.03
Medium	87.7	84.4	1.04	12.0	6.8	1.78
High	94.5	95.3	0.99	44.5	28.5	1.56
Total	87.2	82.8	1.05	19.9	10.8	1.85
* 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.						

The table shows that gender parity for primary school is 1.05, indicating there is not much of a difference in the attendance of primary school by girls compared to boys. However, the indicator increases to 1.85 for secondary education indicating that more girls are attending secondary schools compared to boys. As expected, the attendance ratio increases with the level of wealth index of the household and educational level of the mother.

However, a striking difference is observed in the school attendance of boys with respect to the household wealth index. The secondary school net attendance ratio for boys from low wealth index households is only 3.6 compared to 28.5 among boys from high wealth index households.

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 Kitui MICS 2008, since only the women's questionnaire was administered, the results are based only on females aged between 15-24 years. Literacy was assessed on the ability of women aged 15-24 years to read a short simple statement or on school attendance. The percentage literate is presented in Table 10.7 (ED.8).

Table 10.7 (ED.8): Adult literacy			
Percentage of women aged 15-24 years that are literate*,MICS Kitui district, Eastern Province, Kenya 2008			
Characteristics	Percentage literate*	Percentage not known**	Number of women aged 15-24 years
Education			
None	(*)	(*)	16
Primary	80.7	0.2	344
Secondary +	100.0	0.0	75
Age			
15-19	87.8	0.0	237
20-24	77.2	0.3	199
Wealth index			
Low	78.7	0.0	161
Medium	85.1	0.4	157
High	85.9	0.0	118
Total	82.9	0.1	436
* Percentages 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 percentages not known include 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.			
(*) Based on 0-25 un-weighted figures and has been suppressed.			

From the table, adult female literacy is high in Kitui district with almost 83 per cent of women aged 15-24 years able to read. The proportion of literate women is higher among the younger age group 15-19 years (about 88 per cent) compared with older age group 20-24 years (77 per cent). The level of literacy increases with increasing levels of the household wealth index.

11.1 Birth Registration

The Convention on the Rights of the Child states that every child has the right to a name and a nationality and the right to protection from being deprived of his or her identity. Birth registration is a fundamental means of securing these rights for children. The World Fit for Children states the goal to develop systems to ensure the registration of every child at or shortly after birth, and fulfil his or her right to acquire a name and a nationality, in accordance with national laws and relevant international instruments. The indicator is the proportion of children under 5 years of age whose birth is registered. This is presented in Table 11.1 (CP.1) below.

Birth registration is very low in Kitui district with only 36 per cent of births for children under five years registered. This is one of the lowest registrations in the Province. For these unregistered births the main reasons given include: lack of knowledge that the child should be registered (36 per cent), lack of knowledge of where to register the birth (15 per cent), travel distance (10 per cent) and cost (about seven per cent).

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, MICS Kitui district, Eastern Province, Kenya 2008											
Characteristics	Birth is Registered	Number of children aged 0-59 months	Birth is not registered because:							Total	Number of children aged 0-59 months without birth registration
			Costs too much	Must travel too far	Didn't know child should be registered	Late, did not want to pay fine	Doesn't know where to register	Other	Don't know		
Sex											
Male	35.9	598	7.3	9.0	35.1	0.0	16.6	30.8	1.2	100.0	358
Female	36.3	640	6.0	11.0	37.2	0.5	14.3	28.0	3.0	100.0	369
Age											
0-11 months	36.7	244	5.6	10.4	39.8	0.8	15.6	26.5	1.3	100.0	149
12-23 months	36.9	247	4.5	14.3	30.5	0.0	12.7	35.7	2.4	100.0	146
24-35 months	36.7	239	9.6	6.9	38.1	0.6	14.0	30.2	0.6	100.0	126
36-47 months	32.3	265	4.7	15.2	31.7	0.0	18.4	25.0	5.1	100.0	167
48-59 months	38.6	242	10.0	1.9	42.2	0.0	14.6	30.7	0.6	100.0	139
Mother's education											
None	36.5	135	0.9	8.1	48.0	0.0	12.4	28.5	2.2	100.0	67
Primary	35.7	927	8.1	9.9	34.5	0.2	16.9	28.1	2.3	100.0	563
Secondary +	37.9	177	2.7	12.1	37.4	0.8	9.0	37.3	0.8	100.0	97
Wealth index											
Low	33.6	556	7.9	9.8	36.8	0.3	12.7	29.2	3.3	100.0	358
Medium	33.7	417	6.1	10.6	37.7	0.3	18.6	26.5	0.3	100.0	249
High	45.2	264	4.2	9.5	31.0	0.0	16.9	36.1	2.3	100.0	121
Total	36.1	1238	6.7	10.0	36.1	0.3	15.4	29.4	2.1	100.0	727

11.2 Child Labour

Article 32 of the Convention on the Rights of the Child states that: "State Parties recognize the right of the child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development..." The World Fit for Children mentions nine strategies to combat child labour and the MDGs call for the protection of children against exploitation.

In the MICS 2008 questionnaire, a number of questions addressed the issue of child labour, that is, children 5-14 years of age involved in labour activities. A child is considered to be involved in child labour activities at the moment of the survey if during the week preceding the survey:

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

This definition allows differentiation between child labour and child work to identify the type of work that should be eliminated. As such, the estimate provided here is a minimum of the prevalence of child labour since some children may be involved in hazardous labour activities for a number of hours that could be less than the numbers specified in the criteria explained above.

Table 11.2 (CP.2) presents the results of child labour by the type of work. Percentages do not add up to the total child labour as children may be involved in more than one type of work. For children aged 5-14 years in Kitui district, 16 per cent are engaged in child labour. The most common activity the children were engaged in is household chores for more than 28 hours in a week. In addition, more girls compared to boys were involved in child labour. The younger children, aged 5-11 years are more involved in child labour activities than the older ones (age 12-14 years).

Table 11.2 (CP.2): Child labour						
Percentage of children aged 5-14 years who are involved in child labour activities by type of work, MICS Kitui district, Eastern Province, Kenya 2008						
Characteristics	Working outside household		Household chores for 28+ hours/ week	Working for family business	Total child labour*	Number of children aged 5-14 years
	Paid work	Unpaid work				
Sex						
Male	1.2	1.8	9.1	4.0	15.7	797
Female	1.2	3.0	9.9	4.6	16.9	820
Age						
5-11 years	1.4	3.2	9.6	5.5	18.2	1211
12-14 years	0.7	0.1	9.3	0.9	10.9	406
School participation						
Yes	1.2	2.5	9.4	4.3	16.3	1535
No	2.6	0.0	10.8	5.0	16.9	83
Mother's education						
None	2.5	1.3	12.1	2.3	17.7	304
Primary	0.3	2.7	8.7	4.7	15.4	1114
Secondary +	4.7	2.3	10.1	5.0	19.3	199
Wealth index						
Low	1.2	2.2	10.2	5.7	18.3	721
Medium	2.0	2.0	10.6	3.2	16.2	590
High	0.0	3.7	5.7	3.2	12.1	306
Total	1.2	2.4	9.5	4.3	16.3	1617
* 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 percentages includes: (a) children 5-11 years of age that during the week preceding the survey did at least one hour of economic activity or at least 28 hours of domestic chores, and (b) children 12-14 years of age that during the week preceding the survey did at least 14 hours of economic activity or at least 28 hours of domestic chores.						

Table 11.3 (CP.3) presents the percentages of children classified as 'student labourers' and those classified as 'labourer students'. Student labourers are the children currently attending school (of school going age) who are also involved in child labour activities at the time of the surveys; while labourer students are children who are beyond school going age, who engage in income generating activities and also attend school.

The results show that 16 per cent of children aged 5-11 years in Kitui district are involved in child labour, hence are student labourers. In addition, 95 per cent of the older children (12-14 years) are involved in child labour, hence are labourer students.

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

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

Characteristics	Percentages 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	15.7	94.7	797	93.9	126	15.6	755
Female	16.9	95.0	820	95.4	139	17.0	779
Age							
5-9 years	18.2	93.4	1211	93.9	220	18.3	1132
10-14 years	10.9	99.3	406	98.8	44	10.8	403
Mother's education							
None	17.7	96.6	304	100.0	54	18.4	293
Primary	15.4	93.8	1114	93.2	172	15.3	1044
Secondary +	19.3	98.6	199	94.1	38	18.4	196
Wealth index							
Low	18.3	93.5	721	92.7	132	18.1	675
Medium	16.2	94.9	590	96.0	95	16.4	560
High	12.1	98.1	306	98.7	37	12.1	300
Total	16.3	94.9	1617	94.7	264	16.3	1535
* 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 percentages includes: (a) children 5-11 years of age that during the week preceding the survey did at least one hour of economic activity or at least 28 hours of domestic chores, and (b) children 12-14 years of age that during the week preceding the survey did at least 14 hours of economic activity or at least 28 hours of domestic chores. ** Labourer students: Number of children 5-14 years of age involved in child labour activities that are also attending school divided by the total number of children 5-14 years of age involved in child labour activities. **** Student labourers: Number of children 5-14 years of age attending school that are also involved in child labour activities divided by the total number of children 5-14 attending school.							

11.3 Child Discipline

As stated in A World Fit for Children, “children must be protected against any acts of violence ...” and the Millennium Declaration calls for the protection of children against abuse, exploitation and violence. In the Kitui district MICS 2008, mothers/caretakers of children age 2-14 years were asked a series of questions on the ways parents discipline their children when they misbehave. For the child discipline module, a child aged 2-14 per household was selected randomly during fieldwork.

Two indicators used to describe aspects of child discipline are:

1. The number of children 2-14 years that experience psychological aggression as punishment or minor physical punishment or severe physical punishment
2. The numbers 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.

In Kitui district, majority of children (94 per cent) aged 2-14 years were subjected to at least one form of psychological or physical punishment by their mothers/caretakers or other household members (see Table 11.4).

Table 11.4 (CP.4): Child discipline									
Percentage of children aged 2-14 years according to method of disciplining the child, MICS Kitui district, Eastern Province, Kenya 2008									
Characteristics	Percentage of children 2-14 years of age who experience:							Mother/ caretaker believes that the child needs to be physically punished	Number of children aged 2-14 years**
	Only non-violent discipline	Type of punishment				No discipline or punishment	Missing		
		Psycho-logical	Minor physical	Severe physical	Any psychological or physical				
Sex									
Male	6.0	48.3	90.6	11.3	93.4	0.5	0.1	86.5	1102
Female	4.3	52.4	92.0	13.0	95.4	0.3	0.0	80.2	959
Age									
2-4 years	4.2	43.2	93.5	15.5	94.7	1.0	0.0	83.8	441
5-9 years	3.6	51.1	94.4	11.2	96.1	0.1	0.2	85.0	829
10-14 years	7.3	53.2	86.6	11.2	92.3	0.4	0.0	81.8	791
Mother's education									
None	6.4	49.7	88.3	12.1	92.3	1.3	0.0	87.2	339
Primary	4.2	51.5	92.8	12.4	95.6	0.1	0.1	83.4	1462
Secondary +	9.2	43.8	86.3	10.5	90.1	0.7	0.0	79.7	259
Wealth index									
Low	3.7	50.6	93.6	11.9	96.1	0.0	0.2	85.8	911
Medium	2.8	56.6	92.5	12.6	96.6	0.6	0.0	82.4	739
High	12.6	37.9	83.7	11.5	86.4	1.0	0.0	80.6	410
Total	5.2	50.2	91.2	12.1	94.3	0.4	0.1	83.6	2061
** 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.									

More importantly, 12 per cent of children were subjected to severe physical punishment. Surprisingly, a very high proportion (about 84 per cent) of mothers/caretakers believed that children should be physically punished, which corroborates with the proportion of children who were subjected to minor physical punishment (91 per cent). There are no significant differentials noticed in the punishment pattern for male and female children. However, more mothers/caretakers felt the need for punishing boys than girls (87 per cent for boys compared with 80 per cent in case of girls). Children aged 5-9 years are more likely to receive any form of punishment compared with their younger and older counterparts.

11.4 Early Marriage

Marriage before the age of 18 years is a reality for many young girls. According to UNICEF's worldwide estimates, over 60 million women aged 20-24 were married or 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 hoping that the marriage will benefit them both financially and socially, while also relieving financial burdens on the family. In actual fact, child marriage is a violation of human rights, compromising the development of girls and often resulting in early pregnancy and social isolation, with little education and poor vocational training reinforcing the gendered nature of poverty.

The right to 'free and full' consent to a marriage is recognized in the *Universal Declaration of Human Rights* - with the recognition that consent cannot be 'free and full' when one of the parties involved is not sufficiently mature to make an informed decision about a life partner. The *Convention on the Elimination of all Forms of Discrimination against Women* mentions the right to protection from child marriage in article 16, which states: "The betrothal and the marriage of a child shall have no legal effect, and all necessary action, including legislation, shall be taken to specify a minimum age for marriage..." While marriage is not considered directly in the *Convention on the Rights of the Child*, child marriage is linked to other rights - such as the right to express their views freely, the right to protection from all forms of abuse, and the right to be protected from harmful traditional practices - and is frequently addressed by the *Committee on the Rights of the Child*. Other international agreements related to child marriage are the *Convention on Consent to Marriage, Minimum Age for Marriage and Registration of Marriages* and the *African Charter on the Rights and Welfare of the Child* and the *Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa*. Child marriage was also identified by the *Pan-African Forum against the Sexual Exploitation of Children* as a type of commercial sexual exploitation of children.

Research suggests that many factors interact to place a child at risk of marriage. Poverty, protection of girl's 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 marry at younger ages are more likely to believe that it is sometimes acceptable for a husband to beat his wife and are more likely to experience domestic violence themselves. The age gap between partners is thought to contribute to these abusive power dynamics and to increase the risk of untimely widowhood.

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

The percentage of women aged 15-49 years married before 15 years of age, women aged 20-49 years married before 18 years of age and for women aged 15-19 years either married or in union are presented in Table 11.5 (CP.5). The results indicate that in Kitui district, among adolescent girls aged 15-19 years, one in every nine (11 per cent) is currently married or in union. In addition, six per cent of all women aged 15-49 years, were married before reaching age 15. Finally, 28 per cent women in the reproductive age group were married by age 18.

Table 11.5 (CP.5): Early marriage						
Percentage of women aged 15-49 years in marriage or union before their 15th birthday, percentages of women aged 20-49 years in marriage or union before their 18th birthday, and percentages of women aged 15-19 years currently married or in union, Kitui district, Eastern Province, Kenya 2008						
Characteristics	Percentage married before age 15*	Number of women aged 15-49 years	Percentage married before age 18*	Number of women aged 20-49 years	Percentage of women 15-19 married/in union**	Number of women aged 15-19 years
Age						
15-19	1.7	237	NA	NA	11.4	237
20-24	2.7	199	26.1	199	NA	NA
25-29	4.3	224	22.9	224	NA	NA
30-34	7.1	173	29.4	173	NA	NA
35-39	12.1	174	35.0	174	NA	NA
40-45	12.0	112	31.8	112	NA	NA
45-49	8.0	96	24.7	96	NA	NA
Education						
None	15.7	106	28.6	103	81.3	3
Primary	6.0	895	33.2	698	10.2	197
Secondary +	1.4	214	7.3	177	12.6	37
Wealth index						
Low	7.7	421	33.0	324	12.6	97
Medium	5.1	404	33.1	309	10.6	94
High	5.3	390	18.9	345	10.3	45
Total	6.0	1215	28.0	978	11.4	237
NA: Not shown; based on less than 25 un-weighted cases						

Another important aspect of child protection is the spousal age difference for young women aged 15-24 years. The indicator for this is the percentage of married/in union women with a difference of 10 or more years younger than their current spouse. Table 11.6 (CP.6) presents the results of the age difference between husbands and wives.

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, MICS Kitui district, Eastern Province, Kenya 2008							
Age	Percentage of currently married/in union women whose husband or partner is:						Number of women currently married/ in union
	Younger	0-4 years older	5-9 years older	10+ years older*	Husband' s age unknown	Total	
15-19	0.0	33.7	44.9	21.4	0.0	100.0	27
20-24	1.0	28.7	42.8	27.4	0.0	100.0	114
Total	0.8	29.7	43.2	26.3	0.0	100.0	141

From the table, majority of young married women have husbands who are 5-9 years older than them (43 per cent). About one in four women reported having a husband who is 10 or more years older than themselves. There were no women who had married men younger than themselves, although almost one third of the women have husbands who are 0-4 years older than them.

11.5 Female Genital Mutilation /Cutting

Female genital mutilation or 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 death. The procedure is generally carried out on girls between the ages of 4 and 14; it is also done to infants, women who are about to be married and, sometimes, to women who are pregnant with their first child or who have just given birth. It is often performed by traditional practitioners, including midwives and barbers, without anaesthesia, using scissors, razor blades or broken glass.

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

In Kitui district survey, 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. Table 11.7 presents the prevalence of FGM/C among women and the type and extent of the procedure in the district. Awareness of female genital mutilation or cutting is very high in Kitui district i.e. 93 per cent of women aged 15-49 years have heard about FGM/C. The practise is also less prevalent with only 29 per cent of women confirming that they had undergone some form of FGM/C with the most common practise being the removal of flesh.

Women with no education were more likely to have undergone FGM/C compared to those with higher education (56 per cent and 19 per cent respectively). Women from low wealth index households were also more likely to have undergone FGM/C compared to those from wealthier households.

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 percentages who have had the extreme form of FGM/C (infibulations), MICS Kitui district, Eastern Province, Kenya 2008

Characteristics	Heard about FGM/C	Had any form of FGM/C*	Number of women aged 15-49 years	Percentage of women with FGM/C who:				Total	Had an extreme form of FGM/C**	Number of women with FGM/C
				Had flesh removed	Were nicked	Were sewn closed	Form of FGM/C not determined			
Age										
15-19	77.9	3.4	237	100.0	0.0	0.0	0.0	100.0	0.0	8
20-24	94.6	12.8	199	87.8	2.0	10.2	0.0	100.0	2.4	25
25-29	96.2	19.5	224	95.4	1.1	3.6	0.0	100.0	3.6	44
30-34	98.2	38.0	173	94.1	0.0	2.6	3.3	100.0	2.6	66
35-39	98.0	47.8	174	94.5	0.0	5.5	0.0	100.0	2.9	83
40-44	100.0	57.7	112	98.4	0.0	1.6	0.0	100.0	1.6	64
45-49	97.9	67.5	96	88.1	0.0	9.8	2.2	100.0	9.8	65
Education										
None	96.6	56.5	106	99.3	0.0	0.7	0.0	100.0	0.7	60
Primary	92.0	28.6	895	93.0	0.4	5.2	1.4	100.0	3.8	256
Secondary +	97.7	18.7	214	89.9	0.0	10.1	0.0	100.0	9.1	40
Wealth index										
Low	92.1	35.9	421	96.5	0.3	2.3	0.9	100.0	2.0	151
Medium	91.4	28.6	404	93.7	0.0	4.4	1.9	100.0	3.0	115
High	96.9	22.8	390	89.0	0.6	10.5	0.0	100.0	8.1	89
Total	93.4	29.3	1215	93.7	0.3	5.0	1.0	100.0	3.9	356

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

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

In Kitui MICS 2008, women who have ever heard about FGM/C were asked about their attitude towards the practice, specifically whether the practice should be continued or not. The results are presented in Table 11.8 (CP.8). Only one in ten women aged 15-49 years who have heard about FGM/C in Kitui district would like the practice to be continued. Majority of women (87 per cent) would like the practice to be stopped.

Striking differentials by level of education were observed. About 23 per cent of women with no education who have heard about FGM/C wanted the practice to be continued compared with a mere one per cent among those educated up to secondary or higher. This clearly indicates that educating the women is an important factor in empowering women to overcome this practice.

Table 11.8 (CP.8): Attitude towards Female genital mutilation/cutting

Percentage distribution of women age 15-49 years who have heard about FGM/C according to attitudes towards whether the practice of FGM/C should be continued, MICS Kitui district, Eastern Province, Kenya 2008

Characteristics	Percentage distribution of women age 15-49 years who believe the practice of FGM/C should:					Number of women aged 15-49 years who have heard of FGM/C
	Continue	Be discontinued	Depends on situation	Don't know	Total	
Age						
15-19	8.1	86.0	1.3	4.6	100.0	184
20-24	7.0	89.9	2.7	0.3	100.0	188
25-29	9.4	85.9	4.0	0.7	100.0	216
30-34	6.7	90.9	1.2	1.1	100.0	169
35-39	15.6	81.2	2.8	0.3	100.0	171
40-44	11.7	87.8	0.6	0.0	100.0	112
45-49	13.6	84.8	1.7	0.0	100.0	94
Education						
None	22.6	76.3	0.0	1.1	100.0	103
Primary	10.5	85.8	2.5	1.2	100.0	823
Secondary +	1.3	95.4	2.4	1.0	100.0	209
FGM/C experience						
No	4.5	91.1	2.8	1.6	100.0	779
Yes	21.7	77.2	1.0	0.2	100.0	356
Wealth index						
Low	11.1	85.8	2.7	0.4	100.0	388
Medium	10.4	84.5	2.9	2.2	100.0	369
High	8.3	89.8	1.1	0.8	100.0	378
Total	9.9	86.7	2.2	1.1	100.0	1135

Table 11.9 (CP.9) presents the prevalence and extent of FGM/C performed on daughters of the respondents. All women aged 15-49 with at least one daughter were asked whether their daughter had undergone FGM/C or not. Twenty two per cent of women with no education reported that their daughters have undergone FGM/C. Women with secondary education and higher did not have any daughters who had undergone FGM, a pointer to the importance of education of women in curbing this practise.

Table 11.9 (CP.9): 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 percentages by type of FGM/C of the daughters, MICS Kitui district, Eastern Province, Kenya 2008										
Percentage of women whose daughters:										
Characteristics	Daughter had any form of FGM/C*	Number of women aged 15-49 years with at least one daughter	Had flesh removed	Were nicked	Were sewn closed	Form of FGM/C not determined	Total	Daughter had an extreme form of FGM/C	Daughter had extreme form of FGM	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	NS	0	NS	100	NS	10.6	0
25-34	0.2	317	100	NS	0	NS	0	0	0	1
35-49	9.1	354	86.1	NS	13.9	NS	100	100	13.9	32
Education										
None	22.2	82	87.7	NS	12.3	NS	100	100	12.3	18
Primary	2.5	580	84.8	NS	15.2	NS	100	100	15.2	14
Secondary +	0.0	125	0	NS	0	NS	0	0	0	0
Mother's FGM/C experience										
Had any FGM/C	11.2	293	84.6	NS	13.6	NS	100	100	13.6	33
No FGM/C	0.0	494	0	NS	0	NS	0	0	NS	0
Wealth index										
Low	4.8	277	95.3	NS	4.7	NS	100	100	4.7	13
Medium	4.1	250	80.8	NS	19.2	NS	100	100	19.2	10
High	3.5	260	79.6	NS	20.4	NS	100	100	20.4	9
Total	4.2	787	86.4	13.6	13.6	0.0	100.0	100	13.6	33
NS: Not shown based on less than 25 un-weighted cases										

11.6 Domestic Violence

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

About 48 per cent of women aged 15-49 years in Kitui district believe that a husband is justified to beat his wife for either going out without seeking permission from him, neglecting children, arguing with him, refusing to have sex with him or if she burns the food while cooking. Majority of the women said a husband was justified to beat his wife or partner when she neglects the children, but only nine per cent of the women feel that a husband is justified in beating his wife if she burns the food.

Table 11.10 (CP.10): Attitudes toward domestic violence

Percentage of women aged 15-49 years who believe a husband is justified in beating his wife/partner in various circumstances, MICS Kitui district, Eastern Province, Kenya 2008

Characteristics	Percentage of women aged 15-49 years who believe a husband is justified in beating his wife/partner:						Number of women aged 15-49 years
	When she goes out without telling him	When she neglects the children	When she argues with him	When she refuses sex with him	When she burns the food	For any of these reasons*	
Age							
15-19	19.6	30.5	17.2	19.8	7.3	39.5	237
20-24	17.1	33.9	22.6	24.5	8.6	47.8	199
25-29	26.6	40.2	22.8	28.1	11.8	54.3	224
30-34	24.1	34.7	20.6	23.0	8.0	47.4	173
35-39	17.4	31.9	15.9	22.5	6.4	40.4	174
40-44	21.5	45.4	21.3	32.9	6.5	60.4	112
45-49	21.6	39.7	21.0	36.4	13.6	51.2	96
Marital/Union status							
Currently married/in union	23.3	39.4	22.0	27.8	9.2	52.8	764
Formerly married/in union	24.0	38.0	20.9	24.3	10.1	45.3	143
Never married/in union	14.6	25.5	15.0	20.3	7.1	36.3	308
Education							
None	15.0	30.4	10.5	19.7	3.6	37.6	106
Primary	23.6	38.6	22.7	26.7	9.9	50.1	895
Secondary +	14.1	26.3	14.0	23.3	6.5	42.5	214
Wealth index							
Low	26.8	42.4	26.3	26.3	11.1	53.1	421
Medium	23.0	37.8	19.8	29.2	10.2	50.4	404
High	13.1	26.5	13.7	20.7	4.7	39.2	390
Total	21.2	35.7	20.1	25.5	8.8	47.7	1215

12.1 Knowledge of HIV/AIDS Transmission and Condom Use

One of the most important prerequisites for reducing the rate of HIV/AIDS infection is accurate knowledge of how HIV/AIDS is transmitted and strategies for preventing transmission. Correct information is the first step toward raising awareness and giving young people the tools to protect them from infection. Misconceptions about HIV/AIDS are common and can confuse young people and hinder prevention efforts. Different regions are likely to have variations in misconceptions although some appear to be universal (for example that sharing food can transmit HIV/AIDS or that mosquito bites can transmit HIV/AIDS). The UN General Assembly Special Session on HIV/AIDS (UNGASS) called on governments to improve the knowledge and skills of young people to protect themselves from HIV/AIDS. The indicators to measure this goal as well as the MDG of reducing HIV/AIDS infections by half include 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 15-49 years of age.

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

In Kitui district, almost all of the women interviewed (98 per cent) have heard of HIV/AIDS. However, the percentage of women who know of all the three main ways of preventing HIV/AIDS transmission is only 59 per cent. Most of the women know that having one faithful uninfected partner can prevent HIV transmission (92 per cent). Fewer women knew that using a condom every time can prevent HIV transmission (68 per cent).

Overall, knowledge of at least one way to prevent transmission of HIV/AIDS among women in Kitui district is near universal (97 per cent).

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, MICS Kitui district, Eastern Province, Kenya 2008								
Characteristics	Heard of HIV/AIDS	Percentage who know transmission can be prevented by:			Knows all three ways	Knows at least one way	Doesn't know any way	Number of women
		Having only one faithful uninfected sex partner	Using a condom every time	Abstaining from sex				
Age								
15-19	95.2	86.7	65.3	81.2	55.7	94.2	5.8	237
20-24	98.7	89.1	68.7	80.2	54.4	96.6	3.4	199
25-29	100.0	94.7	73.5	86.4	63.4	99.0	1.0	224
30-34	98.9	93.7	64.3	87.0	58.7	97.6	2.4	173
35-39	98.5	91.1	61.8	90.5	56.4	97.6	2.4	174
40-44	99.3	98.3	74.1	92.6	72.0	98.8	1.2	112
45-49	100.0	92.5	72.1	85.4	59.8	97.3	2.7	96
Education								
None	97.7	84.3	68.5	86.9	61.7	94.1	5.9	106
Primary	98.1	92.0	66.9	83.1	56.8	96.8	3.2	895
Secondary +	100.0	94.3	72.9	95.0	68.4	100.0	0.0	214
Wealth index								
Low	97.3	89.4	64.6	81.4	55.4	95.6	4.4	421
Medium	98.2	93.5	71.5	84.4	61.5	96.6	3.4	404
High	99.9	92.3	68.4	91.2	61.0	99.3	0.7	390
Total	98.4	91.7	68.1	85.5	59.3	97.1	2.9	1215
Note: This table is based on all women age 15-49 years								

Table 12.2 (HA.2) presents the percentage of women who can correctly identify misconceptions concerning HIV/AIDS. The indicator is based on the most common misconceptions, that HIV/AIDS can be transmitted by supernatural means and by mosquito bites, or that HIV/AIDS cannot be transmitted by sharing food, and that HIV/AIDS can be transmitted by sharing needles.

Overall, 92 per cent of the women interviewed are aware that HIV/AIDS cannot be transmitted by supernatural means, while 81 per cent of the women are aware that HIV/AIDS cannot be transmitted by sharing food. While more women (96 per cent) are aware that HIV cannot be transmitted through sharing needles, few (65 per cent) knew that HIV cannot be transmitted through mosquito bites.

From the table it is evident that a higher proportion of educated women have correct knowledge about HIV/AIDS compared with women who are not educated or with primary level education. For example, 50 per cent of the women with primary education rejected the two most common misconceptions and knew that a healthy-looking persons can be infected compared with a higher percentage of about 73 among those with secondary level education.

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

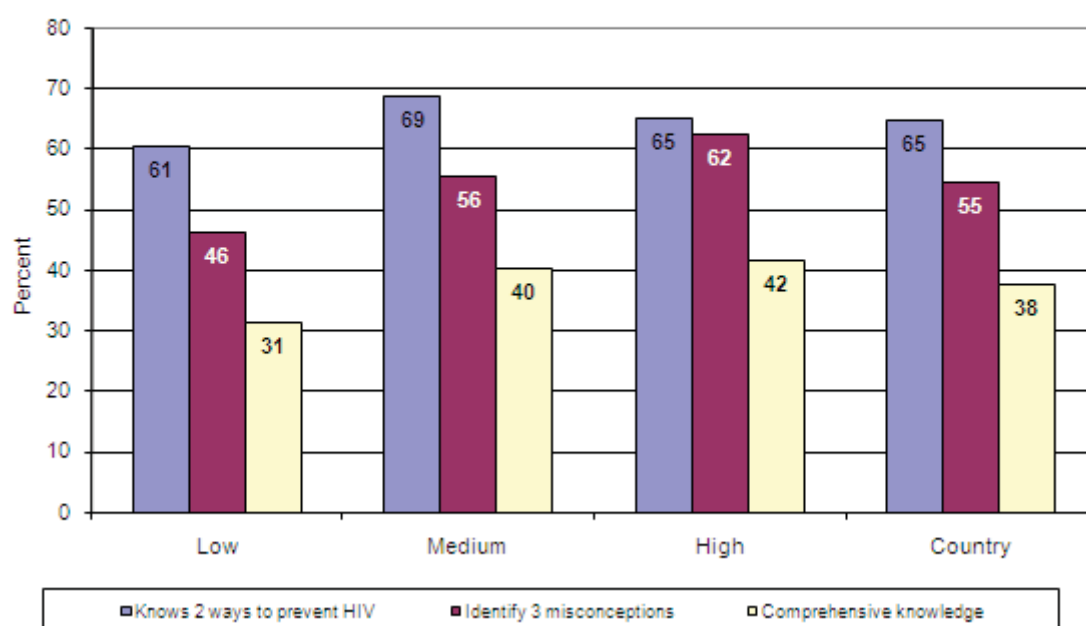


Table 12.2 (HA.2): Identifying misconceptions about HIV/AIDS

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

Characteristics	Percentage who know that:			per cent who know that:			Number of women
	HIV/AIDS cannot be transmitted by:		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		
	Option 1: Supernatural means	Option 2: Mosquito bites				A healthy looking person can be infected	
Age							
15-19	91.1	66.5	73.7	49.0	75.6	94.1	237
20-24	94.3	67.5	84.1	55.7	80.1	95.7	199
25-29	95.2	70.5	89.3	62.1	86.8	98.0	224
30-34	94.8	60.6	92.0	54.6	80.1	97.0	173
35-39	86.4	61.3	89.6	50.7	80.2	95.5	174
40-44	91.7	63.7	88.6	55.7	80.8	95.2	112
45-49	91.2	63.2	93.0	54.4	86.2	96.5	96
Education							
None	85.2	61.7	87.1	54.6	78.0	94.4	106
Primary	92.0	62.2	84.0	50.2	80.3	95.9	895
Secondary +	96.8	79.9	93.9	72.9	85.4	96.9	214
Wealth index							
Low	90.6	57.6	83.0	46.4	76.5	94.6	421
Medium	92.5	67.7	84.1	55.6	81.9	96.2	404
High	93.8	71.2	91.4	62.3	85.0	97.2	390
Total	92.3	65.3	86.1	54.6	81.0	96.0	1215
Note: This table is based on all women age 15-49 years							

Table 12.3 (HA.3) summarizes information from Tables 12.1 (HA.1) and 12.2 (HA.2) and presents percentages of women who know at least 2 ways of preventing HIV/AIDS transmission and reject the three common misconceptions about HIV/AIDS. The results show that comprehensive knowledge of HIV/AIDS prevention methods and transmission is still fairly low in Kitui district. Approximately 38 per cent of women aged 15-49 years in Kitui district have comprehensive knowledge about HIV/AIDS. As expected, the percentage of women with comprehensive knowledge increases with the level of household wealth index (Figure 12.1) and woman's education level.

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

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

Characteristics	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	59.8	49.0	34.7	237
20-24	64.4	55.7	38.5	199
15-24	61.9	52.0	36.4	436
25-29	70.7	62.1	46.7	224
30-34	61.4	54.6	34.1	173
35-39	58.7	50.7	31.2	174
40-44	74.1	55.7	41.0	112
45-49	69.2	54.4	36.6	96
Education				
None	66.6	54.6	40.5	106
Primary	63.0	50.2	33.9	895
Secondary +	70.8	72.9	52.0	214
Wealth index				
Low	60.5	46.4	31.4	421
Medium	68.7	55.6	40.3	404
High	65.0	62.3	41.7	390
Total	64.7	54.6	37.7	1215

Knowledge of mother-to-child transmission of HIV/AIDS is also an important first step for women to seek HIV/AIDS testing when they are pregnant to avoid infection of the baby. 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). Nearly all the women (97 per cent) know that HIV/AIDS can be transmitted from mother to child. Whereas majority of the women knew that HIV can be transmitted through breast milk (94 per cent), fewer knew that HIV could be transmitted during pregnancy (57 per cent). Overall, 50 per cent of the women knew all possible modes of transmission of HIV from mother to child.

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, MICS Kitui district, Eastern Province, Kenya 2008

Characteristics	Know HIV/AIDS can be transmitted from mother to child	Percentage who know HIV/AIDS can be transmitted:				Did not know any specific way	Number of women
		During pregnancy	At delivery	Through breast milk	All three ways		
Age							
15-19	94.3	46.1	75.3	90.4	41.4	0.9	237
20-24	97.7	49.0	82.9	95.2	45.1	1.0	199
25-29	98.6	59.5	84.5	96.7	52.3	1.4	224
30-34	98.0	61.7	82.1	93.0	50.3	0.9	173
35-39	97.4	67.4	82.7	93.1	59.5	1.1	174
40-44	99.3	56.8	81.2	94.9	48.2	0.0	112
45-49	91.6	65.4	76.8	91.0	53.9	8.4	96
Education							
None	93.5	54.5	81.0	90.0	46.7	4.1	106
Primary	97.4	57.8	79.9	94.4	50.4	0.7	895
Secondary +	96.3	54.0	85.3	92.1	47.2	3.7	214
Wealth index							
Low	95.4	58.8	76.9	92.3	49.0	1.9	421
Medium	96.9	54.3	82.3	94.0	47.8	1.3	404
High	98.3	57.3	83.9	94.5	51.8	1.5	390
Total	96.9	56.8	80.9	93.6	49.5	1.6	1215

Indicators on attitudes toward 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 questions:

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

Table 12.5 (HA.5) presents the attitudes of women towards people living with HIV/AIDS. For women who have heard about HIV/AIDS, 69 per cent reported that if a family member is sick with HIV/AIDS they would like to keep it a secret; about 45 per cent believe that a teacher should not be allowed to work if he/she has HIV/AIDS and nearly 54 per cent will not buy food from a person who has HIV/AIDS. In summary, 88 per cent agree with at least one discriminatory statements mentioned above, while 11 per cent agree with all the discriminatory statements. This shows that persons infected with HIV/AIDS are more likely to be discriminated in this district.

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

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

Characteristics	Percentage of women who:						Number of women who have heard of HIV/AIDS
	Would not care for a family member who was sick with HIV/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	Agree with at least one discriminatory statement	Agree with none of the discriminatory statements	
Age							
15-19	3.5	73.6	46.9	53.8	88.5	11.5	225
20-24	2.1	67.5	37.8	54.3	84.7	15.3	197
25-29	2.1	65.0	51.6	50.0	86.6	13.4	224
30-34	2.4	75.0	38.1	50.9	90.0	10.0	171
35-39	1.4	70.4	49.6	49.4	91.0	9.0	172
40-44	0.0	71.9	44.7	59.5	93.2	6.8	111
45-49	0.0	58.3	38.7	68.9	84.0	16.0	96
Education							
None	0.5	56.2	48.6	53.6	78.7	21.3	104
Primary	2.6	72.0	47.7	56.6	91.0	9.0	878
Secondary +	0.0	64.9	29.5	42.7	81.0	19.0	214
Wealth index							
Middle	2.3	68.8	52.5	63.3	93.0	7.0	410
Fourth	1.6	73.8	45.6	54.9	90.6	9.4	396
Richest	1.9	65.4	35.2	42.9	80.6	19.4	390
Total	1.9	69.3	44.5	53.9	88.2	11.8	1196
Note: This table is based on women who have heard of HIV/AIDS.							

Another important indicator is the knowledge of where to be tested for HIV/AIDS and use of such services. Questions related to knowledge of women about where to test for HIV/AIDS and whether they have ever been tested is presented in Table 12.6 (HA.6). Most of the women in Kitui district know where to be tested (90 per cent), while 48 per cent have actually been tested. For women who have been tested for HIV, a large proportion were told the result (97 per cent). Differentials by level of education and wealth index show that the knowledge about various aspects related to HIV/AIDS testing increases with increasing levels of education levels and household wealth index.

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

Percentage of women aged 15-49 years who know where to get an HIV/AIDS test, percentages of women who have been tested and, of those tested the percentages who have been told the result, MICS Kitui district, Eastern Province, Kenya 2008

Characteristics	Know a place to get tested*	Have been tested**	Number of women	If tested, have been told result	Number of women who have been tested for HIV/AIDS
Age					
15-19	81.3	21.7	237	97.8	51
20-24	91.6	62.9	199	94.5	125
25-29	94.7	58.0	224	97.4	130
30-34	92.1	62.5	173	98.2	108
35-39	94.5	48.4	174	97.8	84
40-44	91.8	46.9	112	96.6	52
45-49	88.4	29.0	96	100.0	28
Education					
None	89.1	57.6	106	99.3	61
Primary	89.3	46.1	895	96.5	412
Secondary +	95.7	49.6	214	98.1	106
Wealth index					
Low	87.0	45.7	421	97.1	193
Medium	89.4	44.1	404	96.1	178
High	95.1	53.5	390	97.8	209
Total	90.4	47.7	1215	97.1	580

* 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.

** 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 HIV/AIDS.

Among women who gave birth within the two years preceding the survey, the percentage who received counselling and HIV/AIDS testing during antenatal care is presented in Table 12.7. (HA.7). About 97 per cent of mothers who gave birth in the two years preceding the survey in Kitui district received some antenatal care from a health professional. In addition, 72 per cent of the women were provided with information about HIV/AIDS prevention and were tested for HIV/AIDS during the antenatal care visit. About 70 per cent received the results of the HIV/AIDS test done following an antenatal care visit.

Women with secondary level education were more likely to have been tested for HIV during pregnancy and receive results compared to those with no education. Testing for HIV was also higher among women from high wealth index households.

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

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

Characteristics	Percentage of women who:				Number of women who gave birth in the 2 years preceding the survey
	Received antenatal care from a health care professional for last pregnancy	Were provided information about HIV/AIDS prevention during ANC visit	Were tested for HIV/AIDS at ANC visit	Received results of HIV/AIDS test at ANC visit	
Age					
15-19	98.6	77.6	80.9	79.1	34
20-24	97.2	75.1	76.5	72.6	106
25-29	97.1	65.5	67.3	65.9	118
30-34	98.1	75.4	73.0	71.2	78
35-49	90.4	68.7	67.3	66.2	52
Education					
None	92.8	74.5	76.8	75.3	27
Primary	96.3	69.1	69.9	67.5	308
Secondary +	100.0	85.1	83.2	82.1	53
Wealth index					
Low	94.8	62.5	61.3	60.6	171
Medium	97.9	75.6	77.5	74.4	128
High	98.2	83.3	85.2	81.7	89
Total	96.6	71.6	72.2	70.0	388

12.2 Orphans and Vulnerable Children

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 increased risk of neglect or exploitation if the parents are not available to assist them. Monitoring the variations in different outcomes for orphans and vulnerable children and comparing them to their peers gives us a measure of how well communities and governments are responding to their needs.

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

The results of children living with neither parent, mother only and father only is presented in Table 12.8 (HA.10). In Kitui district, only 48 per cent of children of school going age live with both parents, while seven per cent of these children are not living with one of their biological parent. Majority of the children who are not orphaned (34 per cent) are living with only their mother although the father is alive. This may be an indication of children born out of wedlock or increased divorce/separation rate. For those children who are orphaned, nine per cent of the children have lost one parent. The results also show that children are less likely to live with their fathers if their mother is alive or dead. This implies that women are more likely to be caregivers for children who are orphaned or vulnerable.

Characteristics	Living with both parents	Living with neither parent				Living with mother only		Living with father only		Impossible to determine	Total	Not living with a biological parent*	One or both parents dead**	Number of children
		Only father alive	Only mother alive	Both are alive	Both are dead	Father alive	Father dead	Mother alive	Mother dead					
Sex														
Male	46.6	1.2	0.5	4.8	1.1	34.7	6.2	1.4	0.7	2.9	100.0	7.5	10.2	1417
Female	49.7	0.3	0.8	5.1	0.7	34.1	5.7	1.0	0.7	1.9	100.0	6.9	8.6	1444
Age														
0-4 years	50.8	0.1	0.7	2.8	0.1	39.2	2.5	1.3	0.1	2.5	100.0	3.6	3.5	887
5-9 years	50.8	0.5	0.4	5.1	0.3	35.6	4.4	0.5	0.4	2.0	100.0	6.3	6.4	887
10-14 years	43.9	0.9	1.0	6.2	1.8	30.6	9.2	2.0	1.6	2.8	100.0	9.9	15.4	730
15-17 years	43.6	2.3	0.5	7.4	2.5	27.4	12.0	1.2	1.1	2.1	100.0	12.7	19.6	356
Wealth index														
Low	52.5	0.6	0.9	4.6	0.3	31.4	5.5	0.8	0.8	2.6	100.0	6.4	8.6	1258
Medium	44.3	1.0	0.6	5.5	1.4	37.4	6.2	0.9	0.8	2.0	100.0	8.4	10.1	1021
High	45.4	0.6	0.2	4.8	1.2	35.6	6.6	2.6	0.4	2.6	100.0	6.7	10.0	581
Total	48.1	0.7	0.7	4.9	0.9	34.4	6.0	1.2	0.7	2.4	100.0	7.2	9.4	2861
*Children who are not living with at least one biological parent, either because the parents live elsewhere or because the parents are dead. **Children for whom one or both biological parents are dead. The denominator in this table is children age 0-17 years enumerated in the household listing.														

Table 12.9 (HA.11) shows the prevalence of orphaned and vulnerable children among children of school going age (0-17 years) due to HIV/AIDS. Overall, about eight per cent of the children are vulnerable in Kitui district. Orphaned and vulnerable children are found in 16 per cent of the households in the district.

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 HIV/AIDS, MICS Kitui district, Eastern Province, Kenya 2008							
Characteristics	Chronically ill parent	Adult death in household	Chronically ill adult in household	Vulnerable children*	One or both parents dead**	Orphans and vulnerable children	Number of children aged 0-17 years
Sex							
Male	0.7	0.7	7.8	8.9	10.2	18.1	1417
Female	0.7	0.4	5.9	6.7	8.6	14.3	1444
Age							
0-4 years	0.3	0.3	6.2	6.7	3.5	9.9	887
5-9 years	0.8	0.8	7.2	8.6	6.4	13.7	887
10-14 years	0.7	0.5	7.4	8.3	15.4	22.3	730
15-17 years	1.1	0.6	5.9	7.4	19.6	25.4	356
Wealth index							
Low	0.7	0.2	7.8	8.4	8.6	16.1	1258
Medium	1.0	1.2	6.4	8.3	10.1	17.3	1021
High	0.0	0.0	5.5	5.5	10.0	14.6	581
Total	0.7	0.5	6.8	7.8	9.4	16.2	2861
The columns of the table are produced as follows: 1) Either parent has been chronically ill for 3 of the 12 months preceding the survey 2) Adult death in the household after a chronic illness of 3 of the 12 months preceding the survey 3) Any adult in the household has been sick for 3 of the 12 months preceding the survey 4) A vulnerable child is defined as a child who lives in a household where any of the preceding 3 conditions is true. 5) A child is an orphan if one or both of his/her biological parents is dead 6) Orphaned or vulnerable children are those defined in columns 4 or 5. 7) Total number of children aged 0-17 years as enumerated in the household listing. An orphan is a child aged 0-17 years who has lost one or both parents							

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

Table 12.10 (HA.12) presents school attendance of orphaned and vulnerable children in Kitui district. The results show that almost all children who have lost at least one parent are currently attending school. The school attendance ratio of orphaned versus non-orphaned children is 1:01 indicating no significant differences between the levels of attendance by the two groups. This suggests that orphans in Kitui district are not disadvantaged compared to the non-orphaned children in terms of school attendance.

Table 12.10 (HA.12): School attendance of orphaned and vulnerable children School attendance of children aged 10-14 years by orphan hood and vulnerability due to HIV/AIDS, MICS Kitui district, Eastern Province, Kenya 2008										
Characteristics	Percentage of children whose mother and father have died	School attendance rate of children whose mother and father have died	per cent 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	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	2.3	100.0	76.9	99.3	1.01	23.2	100.0	99.3	1.01	359
Female	1.2	100.0	76.2	98.7	1.01	21.4	93.5	99.2	0.94	371
Wealth index										
Low	0.3	100.0	77.4	98.6	1.01	22.0	97.9	98.4	0.99	312
Medium	2.3	100.0	74.3	98.8	1.01	22.4	94.0	99.8	0.94	277
High	3.8	100.0	78.9	100.0	1.00	22.7	100.0	100.0	1.00	141
Total	1.8	100.0	76.5	99.0	1.01	22.3	96.8	99.2	0.98	730
A double orphan is a child whose mother and father have both died. Orphaned and vulnerable children due to HIV/AIDS (OVC) includes children whose mother or father have died (regardless of cause), who live in a household with a chronically ill adult, whose parents are chronically ill, or who live in a household where an adult who was chronically ill has died in the past year.										

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

Table 12.11 (HA.13): Support for children orphaned and vulnerable due to HIV/AIDS								
Percentage of children aged 0-17 years orphaned or made vulnerable due to HIV/AIDS whose households receive free basic external support in caring for the child, MICS Kitui district, Eastern Province, Kenya 2008								
Characteristics	Percentage of orphans and vulnerable children whose households received:							Number of children orphaned or vulnerable aged 0-17 years
	Medical support (in last 12 months)	Emotional and psychosocial support (in last 3 months)	Social/material support (in last 3 months)	Educational support (in last 12 months)	Any support*	All types of support	No support at all	
Sex								
Male	4.7	3.8	4.7	29.6	35.1	0.4	64.9	257
Female	3.8	3.8	5.1	28.8	34.6	0.0	65.4	206
Age								
0-4 years	3.8	2.2	3.2	0.0	6.6	1.0	93.4	88
5-9 years	4.5	3.9	2.5	29.7	32.6	0.0	67.4	122
10-14 years	3.4	2.6	4.5	38.5	42.6	0.0	57.4	163
15-17 years	6.2	7.3	10.6	40.5	51.4	0.0	48.6	91
Wealth index								
Low	0.9	0.8	3.1	27.6	30.1	0.0	69.9	202
Medium	6.2	3.7	4.6	31.1	37.9	0.5	62.1	176
High	8.4	11.3	9.8	29.4	39.8	0.0	60.2	85
Total	4.3	3.8	4.9	29.3	34.9	0.2	65.1	463
Orphaned and vulnerable children due to HIV/AIDS (OVC) includes children whose mother or father have died (regardless of cause), who live in a household with a chronically ill adult, whose parents are chronically ill, or who live in a household where an adult who was chronically ill has died in the past year.								
NA: Not applicable.								

Majority of the households (65 per cent) with orphaned and vulnerable children in Kitui district did not receive any support at all in the the year preceding the survey. About 30 per cent of the orphaned or vulnerable children received educational support. Overall, 35 per cent of the orphaned and vulnerable children in the district received some support.

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

Sample Size and Sample Allocation

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

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

Where

n is the required sample size, expressed as number of households

4 is a factor to achieve the 95 per cent level of confidence

r is the predicted or anticipated prevalence (coverage rate) of the indicator

1.1 is the factor necessary to raise the sample size by 10 per cent for non-response

f is the shortened symbol for deff (design effect)

0.12r is the margin of error to be tolerated at the 95 per cent level of confidence, defined as 12 per cent of r (relative sampling error of r)

p is the proportion of the total population upon which the indicator, r, is based

nh is the average household size.

For the calculation, r (the immunization coverage) was assumed to be 65 Per cent. 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 Per cent, and nh (average household size) was taken as 4.4 households.

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

Sampling Frame and Selection of Clusters

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

Listing and Mapping Activities

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

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

Selection of Households

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

Calculation of Sample Weights

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

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

Where,

Zd = total population of the district 'd',

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

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

⁶ 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.

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

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

These weights were then standardized (or normalized), one purpose of which is to make the sum of the interviewed sample units equal the total sample size at the district level. Normalization is performed by multiplying the aforementioned unadjusted weights by the ratio of the number of completed households to the total unadjusted weighted number of households. A similar standardization procedure was followed in obtaining standardized weights for the women's and under-5's questionnaires. For the anthropometry additional weights were computed using the non-response for anthropometry section.

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

Appendix B: List of Personnel Involved in the Survey

Project Director

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

Technical Co-ordinators

Mr. James Gatungu, KNBS

Mr. Christopher Omolo, KNBS

Cluster Development Co-ordinator

Mr. Reuben Tonui

Supervisor

Lucia Mulwa

Enumerators

Christopher Mutinda Kimalya

Joseph M. Singa Mailu

Bibiana Mulwa

Milly Mwanzia

Ednah Musyoki

Jackline Mueni Hamisi

Data Collection Co-ordinator

Mr. Patrick Mwaniki

Supervisors

Daniel Nguli

Janet Mutanu Wambua

Field Editors

Sarah Mbithi Mbithe

Munyoki Nyamai

Research Assistants

Wanza Muthemba

Loise Mumbua Makau

Margaret Musee

Penina Kalekye Willie

Stacy Mumbua Mutuku

Rose Mulewa Matheka

Appendix C: Estimates of Sampling Errors

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

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

Standard error (se): Sampling errors are usually measured in terms of standard errors for particular indicators (means, proportions etc). Standard error is the square root of the variance. The Taylor linearization method is used for the estimation of standard errors.

Coefficient of variation (se/r) is the ratio of the standard error to the value of the indicator.

Design effect (*deff*) is the ratio of the actual variance of an indicator, under the sampling method used in the survey, to the variance calculated under the assumption of simple random sampling. The square root of the design effect (*deft*) is used to show the efficiency of the sample design. A *deft* value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a *deft* value above 1.0 indicates the increase in the standard error due to the use of a more complex sample design.

Confidence limits are calculated to show the interval within which the true value for the population can be reasonably assumed to fall. For any given statistic calculated from the survey, the value of that statistics will fall within a range of plus or minus two times the standard error ($p + 2.se$ or $p - 2.se$) of the statistic in 95 Per cent of all possible samples of identical size and design.

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

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

	Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Un-weighted Count	Confidence limits
Iodized salt consumption	0.7399	0.02121	0.029	2.453	1.566	1,655	1,050	0.698 0.782
Child discipline	0.9293	0.01825	0.020	4.514	2.125	1,266	892	0.893 0.966
	Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Un-weighted Count	Confidence limits
Use of improved drinking water sources	0.2527	0.04464	0.177	63.851	7.991	8,738	6,052	0.163 0.342
Use of improved sanitation facilities	0.2070	0.02383	0.115	20.931	4.575	8,738	6,052	0.159 0.255
Net primary school attendance rate	0.8491	0.01144	0.013	1.452	1.205	2,060	1,423	0.826 0.872
Net secondary school attendance rate	0.1520	0.02353	0.155	2.152	1.467	806	502	0.105 0.199
Primary completion rate	0.0224	0.01698	0.758	1.765	1.329	203	135	-0.012 0.056
Child labour	0.1634	0.01135	0.069	1.696	1.302	2,612	1,800	0.141 0.186
Prevalence of orphans	0.0941	0.00891	0.095	3.183	1.784	4,619	3,420	0.076 0.112
Prevalence of vulnerable children	0.0777	0.01191	0.153	6.769	2.602	4,619	3,420	0.054 0.102
	Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Un-weighted Count	Confidence limits
Skilled attendant at delivery	0.2853	0.03760	0.132	3.765	1.940	626	544	0.210 0.360
Antenatal care	0.9659	0.01005	0.010	1.664	1.290	626	544	0.946 0.986
Contraceptive prevalence	0.5746	0.02513	0.044	2.069	1.438	1,232	802	0.524 0.625
Adult literacy	0.8294	0.02705	0.033	2.446	1.564	703	474	0.775 0.884
Prevalence of FGM/C	0.2927	0.02403	0.082	3.386	1.840	1,959	1,215	0.245 0.341
Marriage before age 18	0.2608	0.02787	0.107	0.935	0.967	321	233	0.205 0.317
Comprehensive knowledge about HIV prevention among young people	0.3767	0.02000	0.053	2.068	1.438	1,959	1,215	0.337 0.417
Attitudes towards people with HIV/AIDS	0.1183	0.01613	0.136	2.989	1.729	1,928	1,200	0.086 0.151
Women who have been tested for HIV	0.4770	0.03746	0.079	6.828	2.613	1,959	1,215	0.402 0.552
Knowledge of mother-to-child transmission of HIV	0.4951	0.02904	0.059	4.097	2.024	1,959	1,215	0.437 0.553

	Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Un-weighted Count	Confidence limits
Underweight prevalence	0.3361	0.01898	0.056	1.920	1.386	1,975	1,190	0.298 0.374
Tuberculosis immunization coverage	0.9864	0.01048	0.011	2.224	1.491	406	272	0.965 1.007
Polio immunization coverage	0.8598	0.02788	0.032	1.747	1.322	406	272	0.804 0.916
Immunization coverage for DPT	0.9200	0.01515	0.016	0.846	0.920	406	272	0.890 0.950
Measles immunization coverage	0.8614	0.03802	0.044	3.282	1.812	406	272	0.785 0.937
Fully immunized children	0.7500	0.03875	0.052	2.170	1.473	406	272	0.672 0.827
Acute respiratory infection in last two weeks	0.1370	0.01384	0.101	2.005	1.416	2,038	1,238	0.109 0.165
Antibiotic treatment of suspected pneumonia	0.4385	0.04767	0.109	1.615	1.271	279	176	0.343 0.534
Diarrhoea in last two weeks	0.1287	0.01138	0.088	1.430	1.196	2,038	1,238	0.106 0.151
Received ORT or increased fluids and continued feeding	0.2319	0.05562	0.240	2.831	1.683	262	164	0.121 0.343
Fever in last two weeks	0.2225	0.02047	0.092	2.997	1.731	2,038	1,238	0.182 0.263
Anti-malarial treatment	0.1268	0.01978	0.156	0.965	0.982	454	274	0.087 0.166
Support for learning	0.5915	0.02458	0.042	3.092	1.758	2,038	1,238	0.542 0.641
Birth registration	0.3612	0.02657	0.074	3.785	1.946	2,038	1,238	0.308 0.414

Appendix D: Data Quality Tables

Table DQ.2: Age distribution of eligible and interviewed women, Kitui District					
		Household population of women age 10-54	Interviewed women age 15-49		4
		Number	Number	Percent	Percentage of eligible women interviewed
Age	10-14	371	0.0	0.0	0.0
	15-19	271	213	19.3	78.3
	20-24	225	184	16.7	81.6
	25-29	207	203	18.5	98.2
	30-34	160	157	14.2	97.9
	35-39	167	157	14.3	93.9
	40-44	107	97	8.8	90.4
	45-49	93	90	8.2	96.6
	50-54	102	0.0	0.0	0.0
	15-49	1231	1100	100.0	89.4
6					

Appendix E: MICS Indicators - Numerators and Denominators

INDICATOR	NUMERATOR	DENOMINATOR
1 Under-five mortality rate	Probability of dying by exact age 5 years	
2 Infant mortality rate	Probability of dying by exact age 1 year	
3 Maternal mortality ratio	Number of deaths of women from pregnancy-related causes in a given year	Number of live births in the year (expressed per 100,000 births)
4 Skilled attendant at delivery	Number of women aged 15-49 years with a birth in the 2 years preceding the survey that were attended during childbirth by skilled health personnel	Total number of women surveyed aged 15-49 years with a birth in the 2 years preceding the survey
5 Institutional deliveries	Number of women aged 15-49 years with a birth in the 2 years preceding the survey that delivered in a health facility	Total number of women surveyed aged 15-49 years with a birth in 2 years preceding the survey
6 Underweight prevalence	Number of children under age five that fall below minus two standard deviations from the median weight for age of the NCHS/WHO standard (moderate and severe); number that fall below minus three standard deviations (severe)	Total number of children under age five that were weighed
7 Stunting prevalence	Number of children under age five that fall below minus two standard deviations from the median height for age of the NCHS/WHO standard (moderate and severe); number that fall below minus three standard deviations (severe)	Total number of children under age five measured
8 Wasting prevalence	Number of children under age five that fall below minus two standard deviations from the median weight for height of the NCHS/WHO standard (moderate and severe); number that fall below minus three standard deviations (severe)	Total number of children under age five weighed and measured
9 Low-birth weight infants	Number of last live births in the 2 years preceding the survey weighing below 2,500 grams	Total number of last live births in the 2 years preceding the survey
10 Infants weighed at birth	Number of last live births in the 2 years preceding the survey that were weighed at birth	Total number of last live births in the 2 years preceding the survey
11 Use of improved drinking water sources	Number of household members living in households using improved sources of drinking water	Total number of household members in households surveyed
12 Use of improved sanitation facilities	Number of household members using improved sanitation facilities	Total number of household members in households surveyed
13 Water treatment	Number of household members using water that has been treated	Total number of household members in households surveyed
14 Disposal of child's faeces	Number of children under age three whose (last) stools were disposed of safely	Total number of children under age three surveyed
15 Exclusive breastfeeding rate	Number of infants aged 0-5 months that are exclusively breastfed	Total number of infants aged 0-5 months surveyed

INDICATOR	NUMERATOR	DENOMINATOR
16 Continued breastfeeding rate	Number of infants aged 12-15 months, and 20-23 months, that are currently breastfeeding	Total number of children aged 12-15 months and 20-23 months surveyed
17 Timely complementary feeding rate	Number of infants aged 6-9 months that are receiving breast milk and complementary foods	Total number of infants aged 6-9 months surveyed
18 Frequency of complementary feeding	Number of infants aged 6-11 months that receive breast milk and complementary food at least the minimum recommended number of times per day (two times per day for infants aged 6-8 months, three times per day for infants aged 9-11 months)	Total number of infants aged 6-11 months surveyed
19 Adequately fed infants	Number of infants aged 0-11 months that are appropriately fed: infants aged 0-5 months that are exclusively breastfed and infants aged 6-11 months that are breastfed and ate solid or semi-solid foods the appropriate number of times (see above) yesterday	Total number of infants aged 0-11 months surveyed
20 Antenatal care	Number of women aged 15-49 years that were attended at least once during pregnancy in the 2 years preceding the survey by skilled health personnel	Total number of women surveyed aged 15-49 years with a birth in the 2 years preceding the survey
21 Contraceptive prevalence	Number of women currently married or in union aged 15-49 years that are using (or whose partner is using) a contraceptive method (either modern or traditional)	Total number of women aged 15-49 years that are currently married or in union
22 Antibiotic treatment of suspected pneumonia	Number of children aged 0-59 months with suspected pneumonia in the previous 2 weeks receiving antibiotics	Total number of children aged 0-59 months with suspected pneumonia in the previous 2 weeks
23 Care-seeking for suspected pneumonia	Number of children aged 0-59 months with suspected pneumonia in the previous 2 weeks that are taken to an appropriate health provider	Total number of children aged 0-59 months with suspected pneumonia in the previous 2 weeks
24 Solid fuels	Number of residents in households that use solid fuels (wood, charcoal, crop residues and dung) as the primary source of domestic energy to cook	Total number of residents in households surveyed
25 Tuberculosis immunization coverage	Number of children aged 12-23 months receiving BCG vaccine before their first birthday	Total number of children aged 12-23 months surveyed
26 Polio immunization coverage	Number of children aged 12-23 months receiving OPV3 vaccine before their first birthday	Total number of children aged 12-23 months surveyed
27 Immunization coverage for diphtheria, pertussis and tetanus (DPT)	Number of children aged 12-23 months receiving DPT3 vaccine before their first birthday	Total number of children aged 12-23 months surveyed
28 Measles immunization coverage	Number of children aged 12-23 months receiving measles vaccine before their first birthday	Total number of children aged 12-23 months surveyed
29 Hepatitis B immunization coverage	Number of children aged 12-23 months immunized against hepatitis before their first birthday	Total number of children aged 12-23 months surveyed
30 Yellow fever immunization coverage	Number of children aged 12-23 months immunized against yellow fever before their first birthday	Total number of children aged 12-23 months surveyed

INDICATOR	NUMERATOR	DENOMINATOR
31 Fully immunized children	Number of children aged 12-23 months receiving DPT1-3, OPV-1-3, BCG and measles vaccines before their first birthday	Total number of children aged 12-23 months surveyed
32 Neonatal tetanus protection	Number of mothers with live births in the previous year that were given at least two doses of tetanus toxoid (TT) vaccine within the appropriate interval prior to giving birth	Total number of women surveyed aged 15-49 years with a birth in the year preceding the survey
33 Use of oral Rehydration therapy (ORT)	Number of children aged 0-59 months with diarrhoea in the previous 2 weeks that received oral Rehydration salts and/or an appropriate household solution	Total number of children aged 0-59 months with diarrhoea in the previous 2 weeks
34 Home management of diarrhoea	Number of children aged 0-59 months with diarrhoea in the previous 2 weeks that received more fluids AND continued eating somewhat less, the same or more food	Total number of children aged 0-59 months with diarrhoea in the previous 2 weeks
35 Received ORT or increased fluids and continued feeding	Number of children aged 0-59 months with diarrhoea that received ORT (oral Rehydration salts or an appropriate household solution) or received more fluids AND continued eating somewhat less, the same or more food	Total number of children aged 0-59 months with diarrhoea in the previous 2 weeks
36 Household availability of insecticide-treated nets (ITNs)	Number of households with at least one mosquito net, either permanently treated or treated within the previous year	Total number of households surveyed
37 Under-fives sleeping under insecticide- treated nets	Number of children aged 0-59 months that slept under an insecticide-treated mosquito net the previous night	Total number of children aged 0-59 months surveyed
38 Under-fives sleeping under mosquito nets	Number of children aged 0-59 months that slept under a mosquito net the previous night	Total number of children aged 0-59 months surveyed
39 Anti-malarial treatment (under- fives)	Number of children aged 0-59 months reported to have had fever in the previous 2 weeks that were treated with an appropriate anti-malarial within 24 hours of onset	Total number of children aged 0-59 months reported to have had fever in the previous 2 weeks
40 Intermittent preventive malaria treatment (pregnant women)	Number of women receiving appropriate intermittent medication to prevent malaria (defined as at least 2 doses of SP/Fansidar) during the last pregnancy, leading to a live birth within the 2 years preceding the survey	Total number of women that have had a live birth within the 2 years preceding the survey
41 Iodized salt consumption	Number of households with salt testing 15 parts per million or more of iodine/iodate	Total number of households surveyed
42 Vitamin A supplementation (under-fives)	Number of children aged 6-59 months receiving at least one high-dose vitamin A supplement in the previous 6 months	Total number of children aged 6-59 months surveyed
43 Vitamin A supplementation (post-partum mothers)	Number of women with a live birth in the 2 years preceding the survey that received a high-dose vitamin A supplement within 8 weeks after birth	Total number of women that had a live birth in the 2 years preceding the survey
44 Content of antenatal care	Number of women with a live birth in the 2 years preceding the survey that received antenatal care during the last pregnancy	Total number of women with a live birth in the 2 years preceding the survey
45 Timely initiation of breastfeeding	Number of women with a live birth in the 2 years preceding the survey that put the newborn infant to the breast within 1 hour of birth	Total number of women with a live birth in the 2 years preceding the survey
46 Support for learning	Number of children aged 0-59 months living in households in which an adult has engaged in four or more activities to promote learning and school readiness in the past 3 days	Total number of children aged 0-59 months surveyed

INDICATOR	NUMERATOR	DENOMINATOR
47 Father's support for learning	Number of children aged 0-59 months whose father has engaged in one or more activities to promote learning and school readiness in the past 3 days	Total number of children aged 0-59 months
48 Support for learning: children's books	Number of households with three or more children's books	Total number of households surveyed
49 Support for learning: non-children's books	Number of households with three or more non-children's books	Total number of households surveyed
50 Support for learning: materials for play	Number of households with three or more materials intended for play	Total number of households surveyed
51 Non-adult care	Number of children aged 0-59 months left alone or in the care of another child younger than 10 years of age in the past week	Total number of children aged 0-59 months surveyed
52 Pre-school attendance	Number of children aged 36-59 months that attend some form of early childhood education programme	Total number of children aged 36-59 months surveyed
53 School readiness	Number of children in first grade that attended some form of pre-school the previous year	Total number of children in the first grade surveyed
54 Net intake rate in primary education	Number of children of school-entry age that are currently attending first grade	Total number of children of primary- school entry age surveyed
55 Net primary school attendance rate	Number of children of primary-school age currently attending primary or secondary school	Total number of children of primary- school age surveyed
56 Net secondary school attendance rate	Number of children of secondary-school age currently attending secondary school or higher	Total number of children of secondary-school age surveyed
57 Children reaching grade five	Proportion of children entering the first grade of primary school that eventually reach grade five	
58 Transition rate to secondary school	Number of children that were in the last grade of primary school during the previous school year that attend secondary school	Total number of children that were in the last grade of primary school during the previous school year surveyed
59 Primary completion rate	Number of children (of any age) attending the last grade of primary school (excluding repeaters)	Total number of children of primary school completion age (age appropriate to final grade of primary school) surveyed
60 Adult literacy rate	Number of women aged 15-24 years that are able to read a short simple statement about everyday life	Total number of women aged 15-24 years surveyed
61 Gender parity index	Proportion of girls in primary and secondary education	Proportion of boys in primary and secondary education
62 Birth registration	Number of children aged 0-59 months whose births are reported registered	Total number of children aged 0-59 months surveyed
63 Prevalence of female genital mutilation/cutting (FGM/C)	Number of women aged 15-49 years that reported undergoing <u>any</u> form of genital mutilation/cutting	Total number of women aged 15-49 years surveyed

INDICATOR	NUMERATOR	DENOMINATOR
64	Prevalence of extreme form of FGM/C	Number of women aged 15-49 years that reported undergoing an extreme form of genital mutilation/cutting (such as infibulation)
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
66	Approval for FGM/C	Number of women aged 15-49 years favouring the continuation of female genital mutilation/cutting
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
68	Young women aged 15-19 years currently married or in union	Number of women aged 15-19 years currently married or in union
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
70	Polygyny	Number of women in a polygynous union
71	Child labour	Number of children aged 5-14 years that are involved in child labour
72	Labourer students	Number of children aged 5-14 years involved in child labour activities that attend school
73	Student labourers	Number of children aged 5-14 years attending school that are involved in child labour activities
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
75	Prevalence of orphans	Number of children under age 18 with at least one dead parent
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
77	School attendance of orphans versus non-orphans	Proportion of double orphans (both mother and father dead) aged 10-14 years attending school
78	Children's living arrangements	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
		Total number of children aged 0-17 years surveyed

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

INDICATOR	NUMERATOR	DENOMINATOR
92 Age-mixing among sexual partners	Number of women aged 15-24 years that had sex in the past 12 months with a partner who was 10 or more years older than they were	Total number of sexually active women aged 15-24 years surveyed
93 Security of tenure	Number of household members living in urban households that lack formal documentation for their residence or that feel at risk of eviction	Number of urban household members in households surveyed
94 Durability of housing	Number of household members living in urban dwellings that are not considered durable	Number of urban household members in households surveyed
95 Slum household	Number of household members living in urban slums	Number of household members in urban households surveyed
96 Source of supplies	Number of children (or households) for whom supplies were obtained from public providers, presented separately for each type of supply: insecticide-treated mosquito nets, oral Rehydration salts, antibiotics and anti-malarials	Total number of children (or households) for whom supplies were obtained
97 Cost of supplies	Median cost of supplies obtained, presented separately for each type of supply and whether sourced from public or private providers: insecticide-treated mosquito nets, oral Rehydration salts, antibiotics and anti-malarials.	Total number of children (or households) for whom supplies were obtained
98 Unmet need for family planning	Number of women that are currently married or in union that are fecund and want to space their births or limit the number of children they have and that are not currently using contraception	Total number of women interviewed that are currently married or in union
99 Demand satisfied for family planning	Number of women currently married or in union that are currently using contraception	Number of women currently married or in union that have an unmet need for contraception or that are currently using contraception
100 Attitudes towards domestic violence	Number of women that consider that a husband/partner is justified in hitting or beating his wife in at least one of the following circumstances: (1) she goes out without telling him, (2) she neglects the children, (3) she argues with him, (4) she refuses sex with him, (5) she burns the food	Total number of women surveyed
101 Child disability	Number of children aged 2-9 years with at least one of nine reported disabilities: (1) delay in sitting, standing or walking, (2) difficulty seeing, either in the daytime or at night, (3) appears to have difficulty hearing, (4) difficulty in understanding instructions, (5) difficulty walking or moving arms or has weakness or stiffness of limbs, (6) has fits, becomes rigid, loses consciousness, (7) does not learn to do things like other children his/her age, (8) cannot speak or cannot be understood in words, (9) appears mentally backward, dull or slow	Total number of children aged 2-9 surveyed

Appendix F: Questionnaires



FORM-A: HOUSEHOLD

H1. Identification		ENGLISH	
#	Question	Options	
HH-A	Province Name & Code		
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 ☐										For children age 0-17 year ask HL9 to HL12A															
Eligible for :										If age 18-59															
Women Interview										Child Labor															
Under-5 Interview										HL8															
HL6										HL7															
HL5										HL4															
HL3										HL2															
HL1										HL10															
HL9										HL10A															
HL11										HL12															
HL12A										HL12B															
Line	Name	Relation	M	F	Age	15-49	Mother/CT	Mother/CT	Mother/CT	Y	N	DK	Y	N	DK	Y	N	DK	Y	N	DK	Y	N	DK	
01		0 1	1	2		01				1	2	8	1	2	8										
02			1	2		02				1	2	8	1	2	8										
03			1	2		03				1	2	8	1	2	8										
04			1	2		04				1	2	8	1	2	8										
05			1	2		05				1	2	8	1	2	8										
06			1	2		06				1	2	8	1	2	8										
07			1	2		07				1	2	8	1	2	8										
08			1	2		08				1	2	8	1	2	8										
09			1	2		09				1	2	8	1	2	8										

Eligible for :										If age 18-59		For children age 0-17 year ask HL9 to HL12A													
Women Interview		Child Labor		Under-5 Interview		HL5		HL6		HL7		HL8		HL9		HL10		HL10A		HL11		HL12		HL12A	
HL1 LINE NO.	HL2 FIRST, PLEASE TELL ME THE NAME OF EACH PERSON WHO USUALLY LIVES IN THIS HOUSEHOLD, STARTING WITH THE HEAD OF THE HH?	HL3 WHAT IS THE RELATIONSHIP OF THE HH?	HL4 IS (name) MALE OR FEMALE?	HL5 HOW OLD IS (name)?	HL6 [Circle line no. if woman is age 15-49]	HL7 [For child age 5-14 years] WHO IS THE MOTHER OR PRIMARY CARETAKER OF (name)?	HL8 [For child <5] WHO IS THE MOTHER OR PRIMARY CARETAKER OF (name)?	HL9 IS (name's) MOTHER ALIVE?	HL10 [If alive:] DOES (name's) NATURAL FATHER LIVE IN THIS HH?	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) MOTHER ALIVE?	HL12 [If alive:] DOES (name's) NATURAL FATHER LIVE IN THIS HH?	HL12A [If '00' in HL12] HAS (name's) FATHER BEEN VERY SICK FOR AT LEAST 3 MONTHS IN THE PAST 12 MONTHS												
Line	Name	Relation	M F	Age	15-49	Mother/CT	Mother/CT	Y N DK	Y N DK	Y N DK	Y N DK	Y N DK	Y N DK												
10			1 2		10			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												
12			1 2		12			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												
14			1 2		14			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												
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.																									
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 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					
			1	2			1	2				1	2	8					
			1	2			1	2				1	2	8					
			1	2			1	2				1	2	8					
			1	2			1	2				1	2	8					
			1	2			1	2				1	2	8					
			1	2			1	2				1	2	8					

CODES FOR ED3, ED6 & ED8

0 - Pre-School

1 - Primary

2 - Post-Primary, Vocational

3 - Secondary, 'A' Level

4 - College - Middle Level

5 - University

6 - Non-standard curriculum

8 - Don't know

H.4: Water & Sanitation			WS
#	Question	Options	Skip
WS1	WHAT IS THE MAIN SOURCE OF DRINKING WATER FOR MEMBERS OF YOUR HOUSEHOLD?	<u>Piped water</u> Piped into dwelling.....11 Piped into yard or plot.....12 Public tap/standpipe.....13 Pipe water from neighbour's house.....14 Tubewell/borehole with hand-pump.....21 Tubewell/borehole with powered pump.....22 <u>Dug well</u> Protected well.....31 Unprotected well.....32 <u>Water from spring</u> Protected spring.....41 Unprotected spring.....42 Rainwater collection.....51 Tanker-truck.....61 Cart with small tank/drum.....71 Surface water (river, stream, dam, lake, pond, canal, irrigation channel).....81 Bottled water.....91 Other (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?	<u>Piped water</u> Piped into dwelling.....11 Piped into yard or plot.....12 Public tap/standpipe.....13 Pipe water from neighbour's house.....14 Tubewell/borehole with hand-pump.....21 Tubewell/borehole with powered pump.....22 <u>Dug well</u> Protected well.....31 Unprotected well.....32 <u>Water from spring</u> Protected spring.....41 Unprotected spring.....42 Rainwater collection.....51 Tanker-truck.....61 Cart with small tank/drum.....71 Surface water (river, stream, dam, lake, pond, canal, irrigation channel).....81 Other (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 premises995 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? <i>[Record all items mentioned]</i>	Boil A Add bleach/chlorine B Strain it through a cloth C Use water filter (ceramic, sand, composite, etc.) D Solar dis-infection E Let it stand and settle F Other (specify _____) X Don't know Z	
WS7	WHAT KIND OF TOILET FACILITY DO MEMBERS OF YOUR HOUSEHOLD USUALLY USE? 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 Kisi 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:	<u>Natural floor</u> Earth/sand 11 Dung 12 <u>Rudimentary floor</u> Wood planks 21 Palm/bamboo 22 <u>Finished floor</u> Parquet or polished wood 31 Vinyl or asphalt strips 32 Ceramic tiles 33 Cement 34 Carpet 35 Other (specify _____) 96	
HC4	Observe and record: Main material of the roof:	<u>Natural roofing</u> No Roof 11 Thatch/palm leaf 12 Sod 13 <u>Rudimentary Roofing</u> Rustic mat 21 Palm/bamboo 22 Wood planks 23 <u>Finished roofing</u> Metal 31 Wood 32 Calamine/cement fiber 33 Ceramic tiles 34 Cement 35 Roofing shingles 36 Other (specify _____) 96	

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

H.5: Household Characteristics			HC
#	Question	Options	Skip
HC9	DOES YOUR HOUSEHOLD HAVE	Yes No	
	A. ELECTRICITY?	1 2	
	B. RADIO?	1 2	
	C. TELEVISION?	1 2	
	D. MOBILE TELEPHONE?	1 2	
	E. TELEPHONE (LAND LINE)?	1 2	
	F. REFRIGERATOR?	1 2	
	G. COMPUTER?	1 2	
	H. INTERNET CONNECTION?	1 2	
HC10	DOES ANY MEMBER OF YOUR HH OWN:		
	A. WATCH?	1 2	
	B. BICYCLE?	1 2	
	C. MOTORCYCLE OR SCOOTER?	1 2	
	D. AN ANIMAL DRAWN CART?	1 2	
	E. A CAR OR TRUCK?	1 2	
	F. A BOAT WITH A MOTOR?	1 2	
HC11	DOES ANY MEMBER OF THIS HOUSEHOLD OWN ANY LAND THAT CAN BE USED FOR AGRICULTURE?	Yes..... 1 No..... 2	
HC12	DOES THIS HH OWN ANY LIVESTOCK, HERDS, OR FARM ANIMALS?	Yes..... 1 No..... 2	

H.6: Use of Mosquito Net			TN
#	Question	Options	Skip
TN1	DOES YOUR HOUSEHOLD HAVE ANY MOSQUITO NETS THAT CAN BE USED WHILE SLEEPING?	Yes 1 No 2	2⇒ (H.7)
TN2	HOW MANY MOSQUITO NETS DOES YOUR HH HAVE? [If 7 or more nets, record '7']	Number of nets	
	Ask the respondent to show you the nets in the household, if more than 2, tell them to show the two recently obtained ones.	Most Recent [Net #1]	Last But One [Net #2]
TN3	MAY I HAVE A LOOK AT THE TWO NET(S) YOU HAVE OBTAINED LAST, TO ESTABLISH THE BRAND?	Observed 1 Not observed 2	Observed 1 Not observed 2
TN4	HOW MANY MONTHS AGO DID YOUR HOUSEHOLD ACQUIRE THE <u>LAST/</u> <u>LAST BUT ONE</u> MOSQUITO NET? [If answer is "12 months" or "1 year", probe to determine if net was obtained exactly 12 months ago or earlier or later.]	No of Months 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?	<u>Long lasting nets</u> Permanet 1 ⇒ TN8 Olyset 2 ⇒ TN8 <u>Other nets</u> Supanet 3 Other(sp) 8 Don't know 9	<u>Long lasting nets</u> Permanet 1 ⇒ TN8 Olyset 2 ⇒ TN8 <u>Other nets</u> Supanet 3 Other(sp) 8 Don't know 9
TN6	SINCE YOU GOT THIS MOSQUITO NET, WAS IT EVER SOAKED OR DIPPED IN A LIQUID TO KILL OR REPEL MOSQUITOS?	Yes 1 No 2 ⇒ TN8 Don't know 9 ⇒ TN8	Yes 1 No 2 ⇒ TN8 Don't know 9 ⇒ TN8
TN7	HOW MANY MONTHS AGO WAS THIS NET LAST DIPPED OR SOAKED? [If answer is "12 months" or "1 year", probe to determine if net was dipped or soaked exactly 12 months ago or earlier or later.]	No of Months 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']	<u>Name</u> <u>Line No</u> 1 2 3 4	<u>Name</u> <u>Line No</u> 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)	1 st CHILD	2 nd CHILD	3 rd CHILD	4 th 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.														
Line No.	CL2 Name	CL3			CL4	CL5			CL6		CL7	CL8	CL9	
		During the past week, did (name) do any kind of work for someone, who is not a member of this HH?		CL5		During the past week, did (name) help with HH chores such as shopping, collecting firewood, cleaning, fetching water or caring for children?								
		If Yes: For pay in cash or kind? 1=Yes, for pay (cash or kind) 2=Yes, unpaid 3=No ⇒ CL5				If Yes: For pay in cash or kind? 1=Yes, for pay (cash or kind) 2=Yes, unpaid 3=No			Yes	No		Yes	No	
		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	
		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 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 iodized1 Less than 15 ppm.....2 15 ppm and more3 No salt at home6 Salt not tested7	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

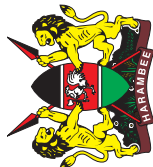
1. The child is reading a book.
2. The rains came late this year.
3. Parents must care for their children.
4. Farming is hard work.

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? <i>If "No" probe by asking:</i> 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? <i>If "No" probe by asking:</i> 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		



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
#	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] ⇒ next line	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 ... Day ... 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 ... Day ... 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 ... Day ... 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 ... Day ... 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 ... Day ... 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 ... Day ... 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 ... Day ... 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 ... Day ... 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?	IN WHAT MONTH AND YEAR WAS (name) BORN? Probe: WHAT IS HIS/HER BIRTHDAY? Month: / Year:	IS (name) STILL ALIVE? Yes ... 1 No 2 ⇒ BH9	HOW OLD WAS (name) AT HIS/HER LAST BIRTHDAY? [Record age in completed years] 	IS (name) LIVING WITH YOU? Y ... 1 N ... 2	Record HH line number of child [Record '00' if child not listed in HH] ⇒ BH10	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] Days 1 Month 2 Year 3	WERE THERE ANY OTHER LIVE BIRTHS BETWEEN (name of previous birth) AND (name)? Yes 1 [Add] No 2 [Next]
09		Sing .. 1 Mult ... 2	Month: / Year:	Yes ... 1 No 2 ⇒ BH9		Y ... 1 N ... 2	⇒ BH10		
10		Sing .. 1 Mult ... 2	Month: / Year:	Yes ... 1 No 2 ⇒ BH9		Y ... 1 N ... 2	⇒ BH10		
11		Sing .. 1 Mult ... 2	Month: / Year:	Yes ... 1 No 2 ⇒ BH9		Y ... 1 N ... 2	⇒ BH10		
12		Sing .. 1 Mult ... 2	Month: / Year:	Yes ... 1 No 2 ⇒ BH9		Y ... 1 N ... 2	⇒ BH10		
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]	<u>Health professional:</u> Doctor/Clinical Officer A Nurse/Midwife B <u>Other person:</u> Traditional birth attendant F Community health worker G Relative/friend H Other (specify _____) X No one Y	Y⇒MN5A
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⇒MN5A 8⇒MN5A
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]	<u>Health professional:</u> Doctor/Clinical Officer 11 Nurse/Midwife 12 <u>Other person:</u> 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)	<u>Home</u> Your home 11 Other home 12 <u>Public sector</u> Govt. hospital 21 Govt. clinic/health center 22 CHAM 23 Other public (specify _____) 26 <u>Private Medical Sector</u> 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 union3	3⇒MA3
MA2	HOW OLD WAS YOUR HUSBAND/PARTNER ON HIS LAST BIRTHDAY?	Age in years DK98	SKIP TO ⇒ MA5
MA3	HAVE YOU EVER BEEN MARRIED OR LIVED TOGETHER WITH A MAN?	Yes, formerly married1 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?	Widowed1 Divorced2 Separated3	
MA5	HAVE YOU BEEN MARRIED OR LIVED WITH A MAN ONLY ONCE OR MORE THAN ONCE?	Only once1 More than once.....2	
MA6	IN WHAT MONTH AND YEAR DID YOU <u>FIRST</u> MARRY OR START LIVING WITH A MAN AS IF MARRIED?	Month..... 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 <u>not</u> 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 BECAME PREGNANT DID YOU WANT TO BECOME PREGNANT <u>THEN</u> , DID YOU WANT TO WAIT UNTIL <u>LATER</u> , OR DID YOU <u>NOT WANT</u> TO HAVE ANY MORE CHILDREN?	Then 1 Later 2 Not want more children 3	1⇒ CP4 2⇒ CP4 3⇒ CP4
CP2	SOME PEOPLE USE VARIOUS WAYS OR METHODS TO DELAY OR AVOID A PREGNANCY. ARE YOU CURRENTLY DOING SOMETHING OR USING ANY METHOD TO DELAY OR AVOID GETTING PREGNANT?	Yes 1 No 2	2⇒ CP6
CP3	WHICH METHOD ARE YOU USING? Do not prompt. If more than one method is mentioned, circle each one.	Female sterilization/Tubeligation A Male sterilization/Vasectomy B Pill C IUD/coil D Injections E Implants F Condom G Female condom H Diaphragm I Lactational amenorrhoea method (LAM) J Periodic abstinence K Withdrawal L Other (specify _____) X	
CP4	NOW I WOULD LIKE TO ASK SOME QUESTIONS ABOUT THE FUTURE. WOULD YOU LIKE TO HAVE (A/ANOTHER) CHILD, OR WOULD YOU PREFER NOT TO HAVE ANY (MORE) CHILDREN? If currently pregnant: AFTER THE CHILD YOU ARE NOW EXPECTING, WOULD YOU LIKE TO HAVE ANOTHER CHILD OR YOU WOULD PREFER NOT TO HAVE ANY (MORE) CHILDREN?	Have (a/another) child 1 No more/none 2 Says she cannot get pregnant 3 Undecided/don't know 8	2⇒ CP6 3⇒ (W.8) 8⇒ CP6
CP5	HOW LONG WOULD YOU LIKE TO WAIT BEFORE THE BIRTH OF (A/ANOTHER) CHILD?	Months 1 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?	<u>TRADITIONAL PERSONS</u> Traditional 'circumciser' 11 Traditional birth attendant 12 Other traditional (<i>specify</i>) 16 <u>HEALTH PROFESSIONAL</u> Doctor 21 Nurse/midwife 22 Other health professional (<i>specify</i>) 26 Don't know 98	
FG8	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?	Yes1 No2 DK8	
FG13	WAS THE GENITAL AREA SEWN CLOSED (OR "SEALED")?	Yes1 No2 DK8	
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 know98	
FG15	WHO DID THE CIRCUMCISION FOR (name)?	<u>TRADITIONAL PERSONS</u> Traditional 'circumciser'11 Traditional birth attendant12 Other traditional (<i>specify</i>) ..16 <u>HEALTH PROFESSIONAL</u> Doctor21 Nurse/midwife22 Other health professional (<i>specify</i>) ..26 Don't know98	
FG16	DO YOU THINK THIS PRACTICE SHOULD BE CONTINUED OR SHOULD IT BE DISCONTINUED?	Continued1 Discontinued2 Depends3 DK8	

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 Don't know 8	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	
<u>Remarks</u>			

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

Introduction/Consent

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

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

MAY I START THE INTERVIEW NOW?

UF10	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?	Yes, seen 1 Yes, not seen 2 No 3 Don't know 8	1⇒BR5 2⇒BR5
	MAY I SEE IT?		
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?	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)? <i>Circle all that apply.</i>				
		Mother	Father	Other	None
BR8a	READ BOOKS OR LOOK AT PICTURE BOOKS WITH (name)?	A	B	X	Y
BR8b	TELL STORIES TO (name)?	A	B	X	Y
BR8c	SING SONGS WITH (name)?	A	B	X	Y
BR8d	TAKE (name) OUTSIDE THE HOME, COMPOUND, YARD OR ENCLOSURE?	A	B	X	Y
BR8e	PLAY WITH (name)?	A	B	X	Y
BR8f	SPEND TIME WITH (name) NAMING, COUNTING, AND/OR DRAWING THINGS?	A	B	X	Y

C.3: Vitamin A			VA
#	Question	Options	Skip
VA1	HAS (name) EVER RECEIVED A VITAMIN A CAPSULE (SUPPLEMENT) LIKE THIS ONE? SHOW CAPSULE OR DISPENSER FOR DIFFERENT DOSES: 100,000 IU FOR THOSE 6-11 MONTHS OLD (BLUE/YELLOW) 200,000 IU FOR THOSE 12-59 MONTHS OLD (RED)	Yes 1 No 2 Child below 6 months old 3 Don't know 8	2⇒ (C.4) 3⇒ (C.4) 8⇒ (C.4)
VA2	HOW MANY MONTHS AGO DID (name) TAKE THE LAST DOSE?	Months..... 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
	BF3A. VITAMIN, MINERAL SUPPLEMENTS OR MEDICINE?	1	2
	BF3B. PLAIN WATER?	1	2
	BF3C. SWEETENED, FLAVOURED WATER OR FRUIT JUICE OR TEA OR INFUSION?	1	2
	BF3D. ORAL REHYDRATION SOLUTION (ORS)?	1	2
	BF3E. INFANT FORMULA?	1	2
	BF3F. TINNED, POWDERED OR FRESH MILK?	1	2
	BF3G. ANY OTHER LIQUIDS?	1	2
	BF3H. SOLID OR SEMI-SOLID (MUSHY) FOOD?	1	2
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? <i>(If 7 or more times, record 7)</i>	No. of times Don't know 8	
BF5a	AT WHAT AGE DID (name) START RECIVING WATER OTHER THAN BREASTMILK? <i>(If 7 or more months old, record 7)</i>	Age in months Don't know 8	
BF5b	AT WHAT AGE DID (name) START RECIVING SOLID OR SEMI-SOLID FOOD? <i>(If 15 or more months old, record 15)</i>	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
	CA2a. A FLUID MADE FROM A SPECIAL PACKET CALLED (local name for ORS packet solution)?	1	2
	CA2b. GOVERNMENT-RECOMMENDED HOMEMADE FLUID?	1	2
	CA2c. A PRE-PACKAGED ORS FLUID FOR DIARRHOEA?	1	2
CA3	DURING (name's) ILLNESS, DID HE/SHE DRINK MUCH LESS, ABOUT THE SAME, OR MORE THAN USUAL?	Much less or none 1 About the same (or somewhat less) 2 More 3 Don't know 8	
CA4	DURING (name's) ILLNESS, DID HE/SHE EAT LESS, ABOUT THE SAME, OR MORE FOOD THAN USUAL? If "less", probe: MUCH LESS OR A LITTLE LESS?	None 1 Much less 2 Somewhat less 3 About the same 4 More 5 Don't know 8	
CA5	HAS (name) HAD AN ILLNESS WITH A COUGH AT ANY TIME IN THE LAST TWO WEEKS, THAT IS, SINCE (day of the week) OF THE WEEK BEFORE LAST?	Yes 1 No 2 Don't know 8	2⇒ CA12 8⇒ CA12
CA6	WHEN (name) HAD AN ILLNESS WITH A COUGH, DID HE/SHE BREATHE FASTER THAN USUAL WITH SHORT, QUICK BREATHS OR HAVE DIFFICULTY BREATHING?	Yes 1 No 2 Don't know 8	2⇒ CA12 8⇒ CA12
CA7	WERE THE SYMPTOMS DUE TO A PROBLEM IN THE CHEST OR A BLOCKED NOSE?	Problem in chest 1 Blocked nose 2 Both 3 Other (specify) 6 Don't know 8	2⇒ CA12 6⇒ CA12
CA8	DID YOU SEEK ADVICE OR TREATMENT FOR THE ILLNESS OUTSIDE THE HOME?	Yes 1 No 2 Don't know 8	2⇒ CA10 8⇒ CA10

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

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

C.6: Malaria			ML
#	Question	Options	Skip
ML8	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.		Date of Immunization							
	(b) Write '44' in day column if card shows that vaccination was given but no date recorded.		Day	Month	Year					
IM2	BCG	BCG								
IM3a	Polio 0	OPV 0								
IM3b	Polio 1	OPV 1								
IM3c	Polio 2	OPV 2								
IM3d	Polio 3	OPV 3								
IM4a	DPT - HepB + Hib: 1 (Pentavalent 1)	DPT 1								
IM4b	DPT - HepB + Hib: 2 (Pentavalent 2)	DPT 2								
IM4c	DPT - HepB + Hib: 3 (Pentavalent 3)	DPT 3								
IM6	Measles (or MMR)	Measles								
IM7	Yellow fever	Y Fever								
IM8a	Vitamin A (1)	Vit. A1								
IM8b	Vitamin A (2)	Vit. A2								
IM9	IN ADDITION TO THE VACCINATIONS AND VITAMIN A CAPSULES SHOWN ON THIS CARD, DID (name) RECEIVE ANY OTHER VACCINATIONS – INCLUDING VACCINATIONS RECEIVED IN CAMPAIGNS OR IMMUNIZATION DAYS? [Record 'Yes' only if respondent mentions BCG, OPV 0-3, DPT 1-3, Measles or Vitamin A supplements.]		Yes 1 (Probe for vaccinations and write '66' in the corresponding day column on IM2 to IM8B and go to IM19.) No 2 Don't know 8						2⇒IM19 8⇒IM19	
IM10	HAS (name) EVER RECEIVED ANY VACCINATIONS TO PREVENT HIM/HER FROM GETTING DISEASES, INCLUDING VACCINATIONS RECEIVED IN A CAMPAIGN OR IMMUNIZATION DAY?		Yes 1 No 2 Don't know 8						2⇒IM19 8⇒IM19	
IM11	HAS (name) EVER BEEN GIVEN A BCG VACCINATION AGAINST TUBERCULOSIS – THAT IS, AN INJECTION IN THE ARM OR SHOULDER THAT CAUSED A SCAR?		Yes 1 No 2 Don't know 8							
IM12	HAS (name) EVER BEEN GIVEN ANY "VACCINATION DROPS IN THE MOUTH" TO PROTECT HIM/HER FROM GETTING DISEASES – THAT IS, POLIO?		Yes 1 No 2						2⇒IM15	

C.7: Child Immunization					IM
		Don't know 8	8⇒IM15		
IM13	HOW OLD WAS (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, <i>HAEMOPHILUS INFLUENZAE TYPE B</i> ? SOMETIMES GIVEN AT THE SAME TIME AS POLIO.	Yes 1 No 2 Don't know 8	2⇒IM17 8⇒IM17		
IM16	HOW MANY TIMES?	No. of times			
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). <u>Length (cm)</u> Lying down ☐ Child age 24+ months ⇒ Measure height (standing up). <u>Height (cm)</u> 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:

