Kenya
Eastern Province
Embu District



Monitoring the situation of children and women

Multiple Indicator Cluster Survey 2008

Kenya National
Bureau of Statistics

United Nations
Children's Fund

MICS

Kenya
Eastern Province
Embu District



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Multiple Indicator Cluster Survey 2008

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KENYA NATIONAL BUREAU OF STATISTICS
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MICS

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

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

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List of Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ASFRs	Age Specific Fertility Rates
BCG	Bacillus Calmette Guerin (Tuberculosis)
CSPro	Census and Survey Processing System
CDC	Center for Disease Control
NCHS	National Centre for Health Statistics
DHS	Demographic Health Survey
DPT	Diphtheria Pertussis Tetanus
DSO	District Statistical Officer
EA	Enumeration Areas
EPI	Expanded Programme on Immunization
ERS	Economic Recovery Strategy
FGM/C	Female Genital Mutilation/Cutting
GOK	Government Of Kenya
GPI	Gender Parity Index
HIV	Human Immunodeficiency Virus
IDD	Iodine Deficiency Disorders
IPT	Intermittent Preventive Treatment
ITN	Insecticide Treated Net
IUD	Intrauterine Device
KDHS	Kenya Demographic Health Survey
KEPI	Kenya Expanded Programme on Immunizations
KESSP	Kenya Education Sector Support Programme
KNBS	Kenya National Bureau of Statistics
LAM	Lactational Amenorrhea Method
LPG	Liquefied Petroleum Gas
MDGs	Millennium Development Goals
MICS	Multiple Indicator Cluster Survey
MoH	Ministry of Health
NAR	Net Attendance Rate
NPA	National Programme of Action
ORS	Oral Re-hydration Therapy
ORT	Oral Rehydration Treatment
PPM	Parts Per Million
PRS	Poverty Reduction Strategy
RHF	Recommended Home Fluid
SPSS	Statistical Package for Social Sciences
STIs	Sexually Transmitted Infections
TFR	Total Fertility Rate
TT	Tetanus Toxoid
U5MR	Under-5 Mortality Rate
UNAIDS	United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNGASS	United Nations General Assembly Special Session on HIV/AIDS
UNICEF	United Nations Children's Fund
WASH	Water, Sanitation and Hygiene
WFFC	World Fit For Children
WHO	World Health Organization
WSC	World Summit for Children

Foreword

This report presents the findings of the Embu district Multiple Indicator Cluster Survey (MICS), conducted in 2008 by the Kenya National Bureau of Statistics. The Survey is one of the largest district representative sample surveys conducted in the district. It covered 1,200 households selected using appropriate statistical procedures of which 1,154 were successfully interviewed.

The Embu MICS 2008 was designed to provide estimates for a large number of indicators on the situation of children and women at the district level, and was conducted in order to fulfil the need to monitor progress towards goals and targets emanating from international agreements. In particular, the MICS 2008, collected information on specific areas such as, reproductive health, child mortality, child health, nutrition, child protection, water and sanitation, education, HIV/AIDS and orphans and vulnerable children.

The survey provided valuable information on the situation of children and women in the district. This information will enable policymakers, planners, researchers and program managers to take actions based on credible evidence.

I wish to acknowledge the efforts of various organizations and individuals who contributed immensely towards the success of the survey. Special thanks go to the United Nations Children's Fund (UNICEF) for the technical and financial support. The hard work and dedication of the staff of the Kenya National Bureau of Statistics (KNBS) and the staff of UNICEF is also appreciated for successfully reviewing, editing the survey and making results available.

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



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Director General
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Executive Summary

The Embu district Multiple Indicator Cluster Survey is the largest household sample survey ever conducted in the district and was implemented by the Kenya National Bureau of Statistics (KNBS), with financial support from UNICEF Kenya.

The sample survey was designed using the 1999 Census of Kenya Enumeration Areas (EAs). Fifty EAs were sampled using the Probability Proportional to Size (PPS) sampling methodology. The survey used a two stage design and at the EA level, households were stratified into two; one household with a child below 3 years and the other with no children below 3 years at the time of household listing. The stratification at EA level was done to reduce the standard errors of child and women based estimates. The survey collected information from a total of 1,200 households using structured questionnaires on specific areas such as, reproductive health, child mortality, child health, nutrition, child protection, water and sanitation, education, and HIV/AIDS and orphans.

The highlights of the findings from the survey are presented below.

Child Mortality

The under-five mortality rate which refers to the probability of dying before reaching the 5th birthday and the infant mortality rate were calculated using the birth history data for the 10 year period preceding the survey. These were found to be 41 per 1,000 live births and 37 per 1,000 live births respectively.

Nutritional Status and Breast Feeding

About 10 per cent of children aged 6-59 months in Embu are moderately underweight, while 24 per cent are moderately stunted. A higher percentage of mothers who have not attained any level of education do not start breastfeeding their new born within one hour of birth. Half of the women with primary school education started breastfeeding within one hour of birth, while the figure was 42 per cent for mothers with secondary or higher level of education.

Immunization

Almost all (97 per cent) children aged 12-23 months received both BCG vaccination and the first dose of DPT by the age of 12 months. Ninety four per cent received Polio 1 by age 12 months, while the coverage for measles vaccine was at 96 per cent. Seventy four per cent of children received all the recommended vaccinations by their first birthday.

Oral Rehydration Treatment

Overall, only eight per cent of children under five had diarrhoea in the two weeks preceding the survey. The largest proportion of diarrhoea (11 per cent) was recorded among children aged 12-23 months. About 38 per cent received fluids from ORS packets, while 49 per cent did not receive any treatment.

Antibiotic Treatment of Pneumonia

Eleven per cent of children under 5 were reported to have had symptoms of pneumonia during the two weeks preceding the survey. Among these, 73 per cent were taken to an appropriate health service provider. Majority of those taken to an appropriate health service provider visited a public source, with 33 per cent visiting a Government health centre.

Malaria prevention

In Embu district, the survey results indicate that 63 per cent of households have at least one insecticide treated net. Furthermore, about 37 per cent of the households have two or more mosquito nets and the mean number of nets per households in the district is 2.

Water and sanitation

Overall, 64 per cent of the population was found to be using an improved source of drinking water in Embu. The main modes of water treatment at the household level in the district were boiling at 36 per cent followed by addition of chlorine or bleaching at seven per cent. Approximately 42 per cent of population drink appropriately treated water. On sanitation, over 47 per cent of the population is living in households having improved sanitation facilities.

Reproductive health

The total fertility rate in Embu is 2.8 children per woman for the three year period preceding the survey and it peaks at ages 20-24 years.

Education

Thirty five per cent of children aged 36-59 months were attending early childhood education, which is important for preparing children for school. Sixty seven per cent of children of primary school entry age are attending the standard one of primary school. The secondary school net attendance rate is 40 per cent.

Child protection

Eighty one per cent of the births in Embu are registered. Among those aged 5-14 years, 11 per cent are engaged in child labour. Among the 12 per cent of children classified as child labourers, majority are also attending school (99 per cent).

HIV and AIDS

Sixty seven per cent of interviewed women rejected the two most common misconceptions about HIV/AIDS. Eighty nine per cent of women know that HIV cannot be transmitted by supernatural means; 89 per cent knew that HIV cannot be transmitted by sharing food; while 98 per cent knew that a healthy-looking person can be infected. Almost all (99.6 per cent) women in the district know that HIV can be transmitted from mother to child. The percentage of women who know that HIV can be transmitted during pregnancy, delivery and through breastfeeding from mother-to-child was 52 per cent.

Orphans and Vulnerable Children

About 61 per cent of children aged 0-17 years in Embu live with both parents. One out of five children (21 per cent) lives with only the mother though the father is alive. Overall, 10 per cent of the children in Embu district are orphans and vulnerable children.

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

In Embu, 98 per cent of women aged 15-49 years have heard about FGM/C and about 50 per cent reported that they had undergone some form of FGM/C. Among those who had the FGM/C, about seven per cent reported an extreme form.

Summary Table of Findings

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

Topic	MICS Indicator Number	MDG Indicator Number	Indicator	Value & Unit	
CHILD MORTALITY					
Child mortality	1	13	Under-five mortality rate	41	per thousand
	2	14	Infant mortality rate	37	per thousand
NUTRITION					
Nutritional status			Underweight prevalence (below -2 SD)	10.4	per cent
			Stunting prevalence (below -2 SD)	23.7	per cent
			Wasting prevalence (below -2 SD)	1.5	per cent
Breastfeeding	45		Timely initiation of breastfeeding	45.5	per cent
	15		Exclusive breastfeeding rate	33.5	per cent
	16		Continued breastfeeding rate		
			at 12-15 months	92.7	per cent
			at 20-23 months	61.7	per cent
	17		Timely complementary feeding rate	86.8	per cent
	18		Frequency of complementary feeding	79.8	per cent
	19		Adequately fed infants	59.8	per cent
Salt iodization	41		Iodized salt consumption	97.3	per cent
Vitamin A	42		Vitamin A supplementation (under-fives)	62.7	per cent
	43		Vitamin A supplementation (post-partum mothers)	70.7	per cent
Low birth weight	9		Low birth weight infants	11.5	per cent
	10		Infants weighed at birth	95.3	per cent
CHILD HEALTH					
Immunization	25		Tuberculosis immunization coverage (by 12 months)	97.0	per cent
	26		Polio immunization coverage (by 12 months)	85.3	per cent
	27		DPT immunization coverage (by 12 months)	96.8	per cent
	28	15	Measles immunization coverage (by 12 months)	95.8	per cent
	31		Fully immunized children (by 12 months)	74.3	per cent
Tetanus toxoid	32		Neonatal tetanus protection	86.7	per cent
Care of illness	33		Use of oral rehydration therapy (ORT)	51.0	per cent
	34		Home management of diarrhoea	12.8	per cent
	35		Received ORT or increased fluids, and continued feeding	23.9	per cent
	23		Care seeking for suspected pneumonia	73.1	per cent
	22		Antibiotic treatment of suspected pneumonia	48.6	per cent
Solid fuel use	24	29	Solid fuels	86.6	per cent
Malaria	36		Households having insecticide-treated nets (ITNs)	62.9	per cent
	37	22	Under-fives sleeping under insecticide-treated nets	65.7	per cent
	38		Under-fives sleeping under mosquito nets	66.0	per cent
	39	22	Anti-malarial treatment (under-fives)	55.6	per cent
	40		Intermittent preventive malaria treatment (pregnant women)	43.2	per cent
ENVIRONMENT					
Water and Sanitation	11	30	Use of improved drinking water sources	70.8	per cent
	13		Water treatment	41.7	per cent
	12	31	Use of improved sanitation facilities	52.3	per cent
	14		Disposal of child's faeces	96.5	per cent
REPRODUCTIVE HEALTH					
Contraception and unmet need	21	19c	Contraceptive prevalence	75.1	per cent
	98		Unmet need for family planning	1.6	per cent

Topic	MICS Indicator Number	MDG Indicator Number	Indicator	Value & Unit	
Maternal and newborn health	20		Antenatal care	79.9	per cent
	44		Content of antenatal care		
			Blood test taken	95.9	per cent
			Blood pressure measured	97.3	per cent
			Urine specimen taken	91.0	per cent
			Weight measured	97.8	per cent
	4	17	Skilled attendant at delivery	86.0	per cent
	5		Institutional deliveries	83.4	per cent
			Total fertility rate	2.8	Rate
EDUCATION					
Education	52		Pre-school attendance	35.2	per cent
	53		School readiness	90.5	per cent
	54		Net intake rate in primary education	67.2	per cent
	55	6	Net primary school attendance rate	95.1	per cent
	56		Net secondary school attendance rate	40.0	per cent
			Adult literacy rate (female)	86.9	Per cent
CHILD PROTECTION					
Birth registration	62		Birth registration	80.6	per cent
Child labour	71		Child labour	11.3	per cent
	72		Labourer students	98.8	per cent
	73		Student labourers	11.5	per cent
Child discipline	74		Any psychological/physical punishment	95.4	per cent
Early marriage and polygyny	67		Marriage before age 15	3.2	per cent
			Marriage before age 18	15.8	per cent
	68		Young women aged 15-19 currently married/in union	10.7	per cent
Female genital mutilation/ Cutting	66		Approval for FGM/C	12.2	per cent
	63		Prevalence of female genital mutilation/cutting (FGM/C)	49.8	per cent
	64		Prevalence of extreme form of FGM/C	6.9	per cent
	65		FGM/C prevalence among daughters	8.8	per cent
Domestic violence	100		Attitudes towards domestic violence	55.9	per cent
HIV/AIDS, SEXUAL BEHAVIOUR, AND ORPHANED AND VULNERABLE CHILDREN					
HIV/AIDS knowledge and attitudes	82	19b	Comprehensive knowledge about HIV prevention among young people	46.2	per cent
	89		Knowledge of mother- to-child transmission of HIV	51.8	per cent
	86		Attitude towards people with HIV/AIDS	38.3	per cent
	87		Women who know where to be tested for HIV	95.7	per cent
	88		Women who have been tested for HIV	50.1	per cent
	90		Counselling coverage for the prevention of mother-to-child transmission of HIV	91.4	per cent
	91		Testing coverage for the prevention of mother-to-child transmission of HIV	90.6	per cent
Support to orphaned and vulnerable children	75		Prevalence of orphans	7.9	per cent
	78		Children's living arrangements	8.1	per cent
	76		Prevalence of vulnerable children	2.8	per cent
	77	20	School attendance of orphans versus non-orphans	1.0	ratio
	81		External support to children orphaned and made vulnerable by HIV/AIDS	30.1	per cent

Introduction 1

1.1 Background

This report presents the findings of the Embu district Multiple Indicator Cluster Survey, conducted in 2008 by the Kenya National Bureau of Statistics. The survey provided valuable information on the situation of children and women in the district, and was mainly motivated by the need to monitor progress towards goals and targets emanating from International Agreements: the Millennium Declaration, adopted by all 191 United Nations Member States in September 2000, and the Plan of Action of A World Fit For Children, adopted by 189 Member States at the United Nations Special Session on Children in May 2002. These two 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 living conditions for children, and to monitoring progress towards that end. UNICEF was assigned a supporting role in this task (see box below).

A Commitment to Action:
National and International Reporting Responsibilities

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

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

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

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

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

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

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

Kenya is committed to improving the welfare of its people particularly women and children who are more vulnerable to social-economic hardships. With regard to children, the Government of Kenya (GOK) formulated the National Plan of Action (NPA) for children in 1992 soon after the World Summit for Children (WSC) which was held in 1990. The main objective of this 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 is helpful in appraising national programmes such as Poverty Reduction Strategy (PRS), Economic Recovery Strategy (ERS) and Kenya Education Sector Support Programme (KESSP) 2005-2010 among 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.

This report highlights the findings from MICS 2008 conducted in Embu district of Eastern Province.

1.2 Survey Objectives

The 2008 Embu district Multiple Indicator Cluster Survey had the following primary objectives.

- To provide up-to-date information for assessing the situation of children and women in Embu 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.

Sample and Survey Methodology 2

2.1 Sample Design

The Embu district Multiple Indicator Cluster Survey (MICS) was designed to provide estimates for a large number of indicators on the situation of children and women at the district level. Sampling was done in two stages. Initially, 50 census Enumeration Areas were selected with Probability Proportional to Size (PPS). Household listing was then carried out within these areas. Two strata were then created depending on whether a household had a child below 3 years or not. A systematic sample of 16 households and 8 households was drawn from the stratum having children below 3 years and from the other strata respectively, using a random start. The sample was stratified and was not self-weighting. Therefore, during analysis, data was weighted. A more detailed description of the sample design can be found in Appendix A.

2.2 Questionnaires

Three sets of questionnaire[1] which are based on the MICS3 model were used in the survey. These questionnaires were translated from the English version into Kiswahili and Embu languages, and are as outlined below.

a) Household questionnaire: This was used to collect the particulars of the household and information on all *de jure* household members. It included the following modules.
   - Household Listing
   - Education
   - Water and Sanitation
   - Malaria-related questions
   - Child Labour
   - Child Discipline
   - Salt Iodization

b) Women's questionnaire: This was administered in every household and targeted all women aged 15-49 years. It comprised of the following modules.
   - Child Mortality
   - Tetanus Toxoid
   - Maternal and Newborn Health
   - Marriage and Union
   - Contraception
   - Attitudes Towards Domestic Violence
   - Female Genital Mutilation/Cutting
   - HIV knowledge

[1] The model MICS3 questionnaire can be found at http://www.childinfo.org, or in UNICEF, 2006.

c) Under-5 questionnaire: The Questionnaire was administered to mothers or caretakers of children less than 5 years of age[2] living in the households. The following modules had been factored in this questionnaire.
    - Birth Registration and Early Learning
    - Child Development
    - Vitamin A
    - Breastfeeding
    - Care of Illness
    - Malaria
    - Immunization
    - Anthropometry

2.3 Training and Fieldwork

The training for the fieldwork was undertaken in June 2008. It was undertaken in two parts with the first being a 3 days training for the mapping and listing teams. This was followed by a 12 days training for data collectors. The training mode adopted comprised; lectures on interviewing techniques, the contents of the questionnaires, and mock interviews between trainees to gain practice in asking questions. The trainees also spent a whole day interviewing households in the neighbourhood of the training venue. This was organised in order for the trainees to familiarize themselves with the contents of the questionnaires and to gain some field experience.

The household listing was carried out by 3 teams; each comprising of a lister and mapper. These teams were supervised by the District Statistics Officer (DSO) and the whole listing operation was monitored by a district co-ordinator from the KNBS headquarters. On the other hand, data were collected by 2 teams; each comprising of 3 interviewers, one driver, one editor/measurer and a supervisor. In addition to the administration of questionnaires, fieldwork teams tested the salt used for cooking in the households for iodine content, and took measurement (weights and heights) of children age 0-59 months. Fieldwork was concluded in August 2008. Details and findings of these measurements are provided in the respective sections of the report.

2.4 Data Processing

The data capture screens were designed using the CSPro software. Procedures and standard programs developed under the global MICS3 project were adapted to the modified questionnaire used throughout. Internal consistency checks were inbuilt in the programs. Further, for data verification, data were double centered. The data processing exercise started at same time as data collection, in July 2008 and was completed in September 2008. The model syntax and tabulation plans adopted, were those developed by UNICEF but customized for this purpose. Data were analysed using the Statistical Package for Social Sciences (SPSS) software.

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

Sample Coverage and Household Characteristics 3

This section presents details on the coverage and characteristics of households and respondents.

3.1 Sample Coverage

The results of the sample coverage and individual interviews are presented in Table 3.1 (HH.1). A total of 1,200 households were selected for the sample and were all found to be occupied. Of these, 1,154 were successfully interviewed, representing a response rate of 96 per cent. From the households that were interviewed, 1,241 women (age 15-49) were identified out of whom 1,181 were successfully interviewed leading to a 95 per cent response rate. In addition, 952 children under age five were listed in the household questionnaire. Questionnaires were completed for 944 of these children, which corresponded to a response rate of 98.4 per cent. Overall, response rates of 92 and 95 per cent were calculated for the women's and under-5's interviews respectively.

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, Embu district, Eastern Province, Kenya 2008

Number of households	
Sampled (H_s)	1,200
Occupied (H_o)	1,200
Interviewed (H_i)	1,154
Response rate (H_r)	96.2
Number of women	
Eligible (W_e)	1,241
Interviewed (W_i)	1,181
Response rate (W_r)	95.2
Overall response rate (W_{or})	91.5
Number of children under 5	
Eligible (C_e)	952
Information collected (C_i)	944
Response rate (C_r)	99.2
Overall response rate (C_{or})	95.4

$H_r = H_i / H_o$ (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 the survey population is provided in Table 3.2 (HH.2). The distribution is used to produce the population pyramid in Figure 3.1 (HH.1). The total listed household members from the 1,154 households successfully interviewed were 4,109, which reflect an average household size of 3.6 per cent. Of these, 2,000 were males and 2,109 were females.

The table further shows that the population aged below 15 years of age accounted for 36 per cent while those aged between 15-64 years were 59 per cent. Further, the population aged 60 years and above was only seven per cent. The child population aged 0-17 years was 41 per cent. This age group is significant and interventions for securing the future of this population need more attention.

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

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

	Males		Females		Total	
Characteristics	Number	Per cent	Number	Per cent	Number	Per cent
Age						
0-4	243	12.1	254	12.1	497	12.1
5-9	257	12.9	224	10.6	481	11.7
10-14	215	10.8	264	12.5	479	11.7
15-19	187	9.4	181	8.6	368	9
20-24	178	8.9	223	10.5	400	9.7
25-29	181	9.1	184	8.7	365	8.9
30-34	156	7.8	159	7.6	315	7.7
35-39	133	6.7	140	6.7	274	6.7
40-44	91	4.6	101	4.8	192	4.7
45-49	98	4.9	98	4.7	196	4.8
50-54	61	3.1	88	4.2	149	3.6
55-59	50	2.5	45	2.1	95	2.3
60-64	28	1.4	38	1.8	66	1.6
65-69	30	1.5	40	1.9	70	1.7
70+	72	3.6	59	2.8	131	3.2
Missing/DK	19	0.9	10	0.5	29	0.7
Dependency age groups						
< 15	715	35.8	742	35.2	1,457	35.5
15-64	1164	58.2	1,258	59.6	2,422	58.9
65 +	102	5.1	99	4.7	201	4.9
Missing/DK	19	0.9	10	0.5	29	0.7
Children aged 0-17	832	41.6	840	39.8	1,672	40.7
Adults 18+/Missing/ DK	1168	58.4	1,269	60.2	2,437	59.3
Total	**2000**	**100**	**2,109**	**100**	**4,109**	**100**

Figure 3.1: Age and Sex Distribution of Household Population

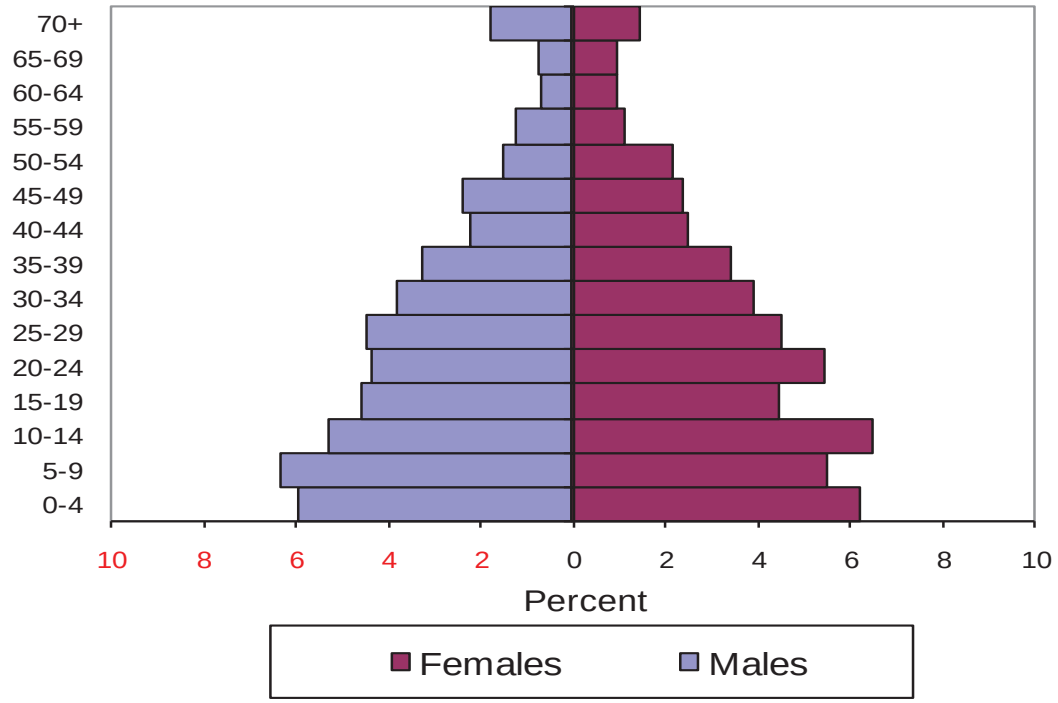


Table 3.3 (HH.3) provides basic household background information including; sex of the household head and number of household members. The weighted and un-weighted numbers of total households are equal since sample weights were normalized (See Appendix A). The table also shows the proportions of households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

The data indicates that only 28 per cent of the households were headed by a female and that about 37 per cent of the households had at least one child below 5 years of age. Furthermore, 67 per cent of the households had at least one child below 18 years of age, while slightly over 71 per cent of households had at least one woman in the reproductive age group i.e., 15-49 years.

Table 3.3 (HH.3): Household composition

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

Characteristics	Weighted percentage	Number of households	
		Weighted	Un-weighted
Sex of household head			
Male	71.6	827	861
Female	28.4	327	293
Number of household members			
1	18.8	218	117
2-3	32.9	380	372
4-5	32.5	375	444
6-7	11.4	132	163
8-9	3.3	38	43
10+	1	12	15
Mean household size	3.56	1,154	1,154
At least one child aged < 18 years	67.4	1,154	1,154
At least one child aged < 5 years	36.9	1,154	1,154
At least one woman aged 15-49 years	70.6	1,154	1,154

3.3 Characteristics of Female Respondents

Details on the background characteristics of female respondents aged 15-49 years and for children under age 5 are given in Tables 3.4 (HH.4) and 3.5 (HH.5), respectively. The total numbers of weighted and unweighted observations are equal in both tables as a result of normalization (Standardization) of weights. These categories are used in the subsequent tabulations of this report.

Detailed information on the distribution of women aged 15-49 years according to; age, marital and motherhood status, education[3] and wealth index[4] are highlighted in Table 3.4 (HH.4). Overall, 58 per cent of women aged 15-49 years in Embu are currently married and another 31 per cent have never been married. The number of those who have ever given birth is 76 per cent. The proportion of ever married/in union is lower than the proportion of ever had a birth, indicating that there were births out of marriage/ union in the district.

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

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

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

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

Characteristics	Weighted percentage	Number of women	
		Weighted	Un-weighted
Age			
15-19	12.3	146	151
20-24	20.8	245	271
25-29	18.0	212	243
30-34	15.7	185	208
35-39	13.8	163	137
40-44	10.4	123	90
45-49	9.1	107	81
Marital/Union status			
Currently married/in union	58.4	690	755
Formerly married	10.9	129	118
Never married	30.7	363	308
Motherhood status			
Ever gave birth	75.7	894	981
Never gave birth	24.3	287	200
Education			
None	13.7	162	139
Primary	52.0	614	660
Secondary +	34.3	405	382
Wealth index			
Low	3.5	42	63
Medium	32.0	378	431
High	64.5	762	687
Total	**100.0**	**1,181**	**1,181**

3.4 Characteristics of Children under Five

Some background characteristics of children under 5 are presented in Table 3.5 (HH.5). The distribution of children aged under 5 by sex, age in months, mother's or caretaker's education and wealth index are presented in the same table. The distribution by gender is comparable, with thefemale proportion standing at 51 per cent. Fifty seven per cent of the women had attained primary level of education. The distribution of children below 5 years by wealth index show that majority (57 per cent) of the children belong 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, Embu district, Eastern Province, Kenya 2008

Characteristics	Weighted percentage	Number of under-5 children	
		Weighted	Un-weighted
Sex			
Male	48.8	461	460
Female	51.2	483	484
Age			
< 6 months	8.7	82	2103
6-11 months	8.2	77	107
12-23 months	19.3	183	232
24-35 months	19.8	187	247
36-47 months	19.9	188	126
48-59 months	24.0	227	129
Mother's education			
None	6.8	64	67
Primary	56.9	537	532
Secondary +	36.3	342	345
Wealth index			
Low	6.1	57	70
Medium	37.3	352	384
High	56.7	535	490
Total	**100.0**	**944**	**944**

Child Mortality 4

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

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

Though, direct estimates of mortality obtained from birth histories are one of the best, the quality of these estimates depend on the completeness of information obtained. In many cases, due to under reporting on deaths in households, the mortality levels are underestimated.

4.1 Levels of Childhood Mortality

Table 4.1 provides estimates (calculated based on births during the ten year period preceding the survey) of childhood mortality. This allows us to see the changes in childhood mortality rates. The infant mortality rate is estimated as 37 per 1000 live births, while the probability of dying before attaining age 5 i.e., under 5 mortality rate, (U5MR) is 41 per 1000 live births.

Table 4.1: Child mortality

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

Ten year periods preceding the survey	Infant mortality rate	Neonatal mortality rate	Post-neonatal mortality rate	Child mortality rate	Under-five mortality rate
0-9	37	25	13	4	41
10-19	46	17	29	9	55

Nutrition 5

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

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

5.1 Nutritional Status

In a well-nourished population, there is a reference distribution of height and weight for children under age 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 which is recommended for use by UNICEF and the World Health Organization. Each of the three nutritional status indicators can be expressed in standard deviation units (z-scores) from the median of the reference population.

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

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

Children whose weight-for-height 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.

During the survey, measures for weights and heights of all children aged 6-59 months were taken using anthropometric equipment recommended by UNICEF (UNICEF, 2006). Table 5.1 (NU.1) shows percentages of children classified by the three nutritional status indicators, based on the anthropometric measurements that were taken during fieldwork. The table further gives the percentage of children who were overweight, which takes into account those children whose weight for height was above 2 standard deviations from the median of the reference population.

It should be noted that, children who were not weighed and measured, or whose age was missing and those whose measurements are outside a plausible range, are excluded in the analysis. As a result, three per cent of children are excluded. About 10 per cent of children aged 6-59 months in Embu are moderately underweight; 24 per cent are moderately stunted or too short for their age; while a negligible percentage were moderately wasted (below -2SD mean weight-for-height).

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 appear to be slightly more likely to be underweight, stunted and wasted than girls. The age pattern shows that a higher percentage 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 are weaned. With respect to household wealth index, it is observed that the prevalence of malnutrition declines with increasing levels of the household wealth index.

Table 5.1 (NU.1): Child malnourishment

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

	Weight-for-age		Height-for-age		Weight-for-height			
Characteristics	% below - 2 SD*	% below - 3 SD*	% below - 2 SD**	% below - 3 SD**	% below - 2 SD***	% below - 3 SD***	% above + 2 SD	Number of children aged 6-59 months
Sex								
Male	12.0	1.3	29.9	7.3	1.7	0.0	1.2	387
Female	8.9	1.1	18.0	3.6	1.2	0.2	1.2	419
Age								
6-11 months	6.4	13	6.7	2.0	0.0	0.0	3.6	75
12-23 months	10.8	0.9	32.5	8.6	2.7	0.4	1.8	171
24-35 months	10.9	1.4	16.5	4.2	0.4	0.0	1.1	172
36-47 months	10.6	0.3	23.1	5.5	3.0	0.0	0.0	170
48-59 months	10.9	2.0	29.2	5.0	0.3	0.0	0.0	212
Mother's education								
None	13.8	1.3	27	9.3	2.7	0.0	1.4	50
Primary	11.2	1.8	25.5	4.9	1.3	0.2	0.9	468
Secondary +	8.5	0.2	20.2	5.4	1.5	0.0	1.6	289
Wealth index								
Low	13.3	1.3	30.5	7.2	1.3	0.0	0.0	50
Medium	15.3	2.7	27.3	7.3	2.1	0.2	1.3	302
High	6.8	0.1	20.6	3.9	1.1	0.0	1.2	454
Total	**10.4**	**1.2**	**23.7**	**5.4**	**1.5**	**0.1**	**1.2**	**806**

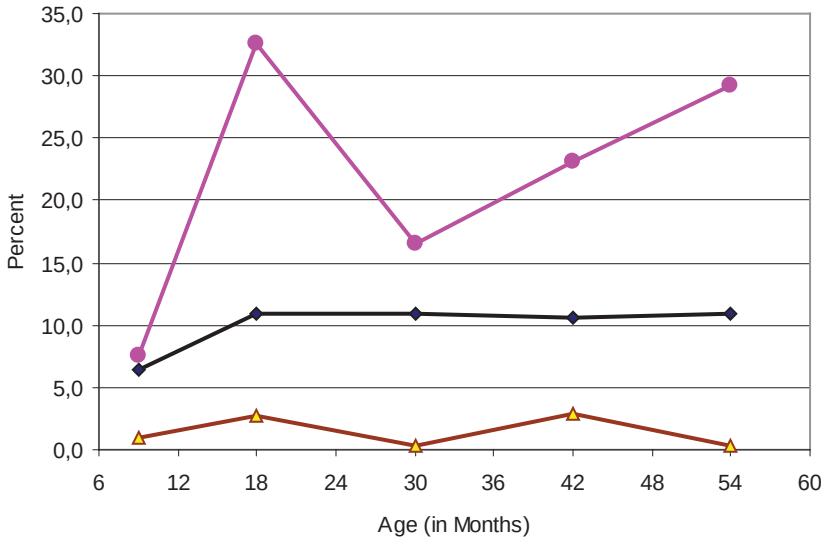
***MICS indicator 6; MDG indicator 4**
****MICS indicator 7**
*****MICS indicator 8**

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

The per cent 'below –2 standard deviations' includes those who fall -3 standard deviations below the median.

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

Figure 5.1: Percentage of children aged 6-59 months who are u ndernourished.



5.2 Breastfeeding

Breastfeeding a child for the first few years of life protects him/her from infection. In particular, it is recommended that breastfeeding be initiated within one hour after birth. Breastfeeding is an ideal source of nutrients and is economical and safe to the child. Many mothers, however, stop breastfeeding too soon and often switch to infant formula, which can contribute to growth faltering and micronutrient deficiency, and is unsafe if clean water is not readily available. The World Fit for Children goal recommends that children should be exclusively breastfed for 6 months and continue to be breastfed with safe, appropriate and adequate complementary feeding for up to 2 years of age and beyond. The World Health Organisation (WHO) and UNICEF have made similar recommendations. The latter two organisations, however, further recommend that the frequency of complementary feeding should be 2 times per day for 6-8 month olds and 3 times per day for 9-11 month old children.

The indicators of recommended child feeding practices are as follows:

- Exclusive breastfeeding rate (< 4 months & < 6 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)

Information on the proportion of women who started breastfeeding their infants within an hour of birth, and women who started breastfeeding within one day of birth (which includes those who started within one hour) is presented in Table 5.2 (NU.2). The data reveals that, a higher proportion of mothers who had not attained any level of education do not start breastfeeding their new born children within one hour of birth. Surprisingly, the percentage of mothers with primary level of education who started breastfeeding within one hour was higher than that of mothers with secondary or higher education (50 per cent versus 42 per cent respectively). Overall, the data shows that the percentage of mothers who started breastfeeding within one day was 89 per cent.

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, Embu district, Eastern Province, Kenya 2008

Characteristics	Percentage who started breastfeeding within one hour of birth*	Percentage who started breastfeeding within one day of birth**	Number of women with a live birth in the two years preceding the survey
Months since birth			
< 6 months	46.8	84.6	41
6-11 months	45.3	85.7	57
12-23 months	46	91.3	104
Mother's education			
None	26.6	86.1	22
Primary	50.3	89.6	131
Secondary +	42.1	87.3	67
Wealth index			
Low	(50.5)	(90.7)	12
Medium	53.8	89.7	75
High	40.4	87.7	133
Total	**45.5**	**88.5**	**219**

***MICS indicator 45**

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

In Table 5.3a and 5.3b (NU.3), breastfeeding status based on the reports of mothers/ caretakers of children's consumption of food and fluids in the 24 hours prior to the interview is presented. *Exclusively breastfed* refers to infants who received only breast milk. Also included in this definition are children who might have been given vitamins, mineral supplements or medicine. The tables give details of 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 aged 6-9 months, and continued breastfeeding of children at 12-15 and 20-23 months of age.

Though exclusive breastfeeding is recommended for the first 6 months of birth, only 34 per cent of children aged less than six months are exclusively breastfed in the district. This is considerably low. At ages 6-9 months, 87 per cent of children were receiving breast milk and solid or semi-solid foods. By age 12-15 months, 93 per cent of children were still being breastfed and by age 20-23 months, 62 per cent were still being breastfed. Boys were more likely to be exclusively breastfed than girls during 0-3 months. However, higher proportions of girls than boys are still breastfeeding above 12 months.

Table 5.3a (NU.3): Breastfeeding

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

Characteristics	Children age 0-3 months: Per cent exclusively breastfed	Children age 0-3 months: Number of children	Children age 0-5 months: Per cent exclusively breastfed*	Children age 0-5 months: Number of children
Sex				
Male	(54.3)	27	(46.2)	35
Female	(29.8)	20	(20.8)	35
Mother's education				
None	(*)	2	(*)	3
Primary	(49.0)	24	(34.8)	41
Secondary +	(*)	21	(35.5)	26
Wealth index				
Low	(*)	1	(*)	3
Medium	(39.8)	16	(30.2)	24
High	(44.9)	29	(34.9)	42
Total	**43.9**	**46**	**33.5**	**69**

***MICS indicator 15**

Note: Breastfeeding status is based on mother's or caretaker's reports of children's consumption in the 24 hours prior to the interview. Exclusive breastfeeding refers to children who receive only breast milk, or breast milk and vitamins, mineral supplements, or medicine.

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

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

Figure 5.2 shows the detailed pattern of breastfeeding by the child's age in months. Even at the earliest ages, the majority of children are receiving liquids or foods other than breast milk. By the end of the sixth month, the percentage of children exclusively breastfed is below five per cent.

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

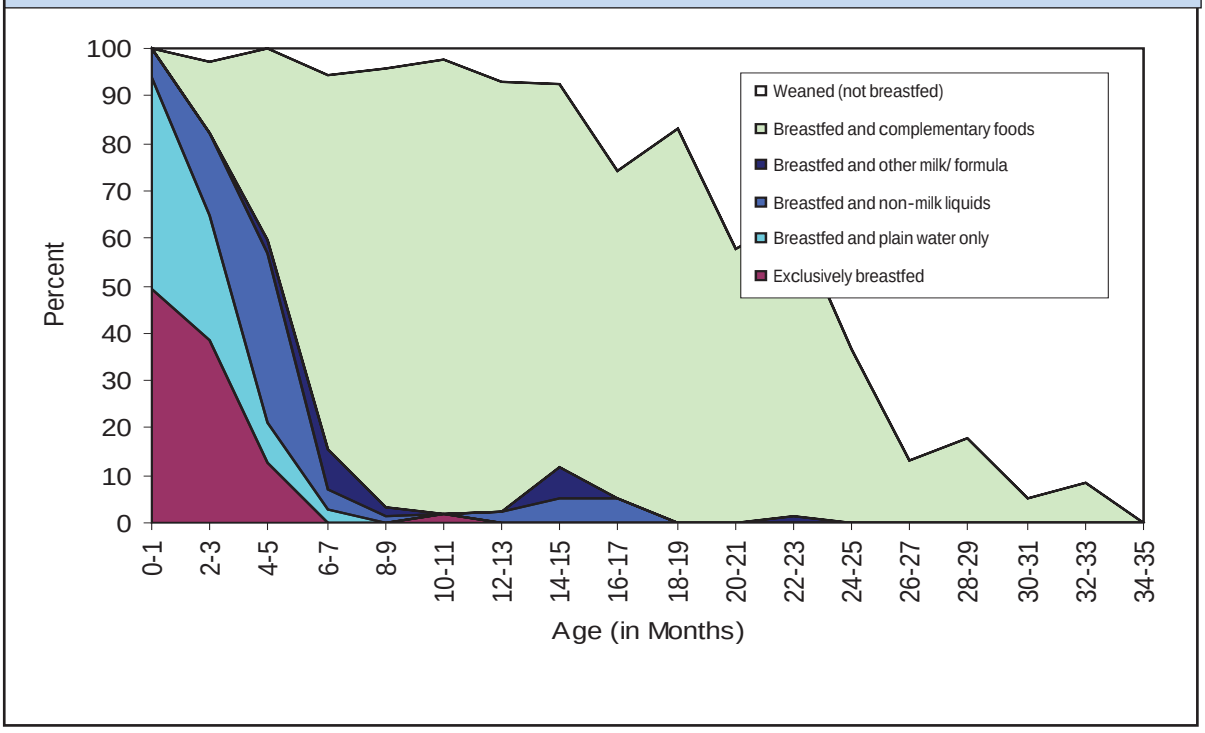


Table 5.3b (NU.3): Complementary feeding

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

	Children age 6-9 months		Children age 12-15 months		Children age 20-23 months	
Characteristics	Percentage receiving breastmilk and solid/ mushy food**	Number of children	Percentage breastfed***	Number of children	Percentage breastfed	Number of children
Sex						
Male	(86.8)	23	(90.8)	25	(58.6)	47
Female	(86.7)	34	(94.5)	25	(66.3)	31
Mother's education						
None	(*)	2	(*)	2	(*)	4
Primary	(88.8)	32	(94.2)	27	(66.5)	46
Secondary +	(86)	23	(90)	21	(55.1)	29
Wealth index						
Low	(*)	2	(*)	6	(*)	3
Medium	(88.8)	17	(90.6)	16	(74.5)	28
High	(85.2)	39	(94.8)	28	(52.9)	47
Total	**86.8**	**57**	**92.7**	**50**	**61.7**	**78**

****MICS indicator 17**
*****MICS indicator 16**
NOTE: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

The adequacy of infant feeding in children less than 12 months is provided in Table 5.4 (NU.4). Various criteria of adequate feeding are used depending on the age of the child. For infants aged 0-5 months, exclusive breastfeeding is considered as adequate feeding. Infants aged 6-8 months are considered to be adequately fed if they are receiving breast milk and complementary food at least two times per day, while infants aged 9-11 months are considered to be adequately fed if they are receiving breast milk and eating complementary food at least three times a day. Among children aged 0-5 months, 34 per cent are currently exclusively breastfed whereas among those aged 6-8 months 76 per cent are receiving breast milk and complementary food as recommended. As a result of these feeding patterns, about 80 per cent of children aged 6-11 months adequately fed. Adequate feeding among all infants (aged 0-11) drops to 60 per cent. Overall, more male children are fed adequately than female counterparts, except for exclusive breastfeeding among children aged 9-11 months.

Table 5.4 (NU.4): Adequately fed infants

Percentage of infants under 6 months of age exclusively breastfed, percentage of infants 6-11 months who are breastfed and who ate solid/semi-solid food at least the minimum recommended number of times yesterday and percentage of infants adequately fed, Embu district, Eastern Province, Kenya 2008

	Percentage of infants					
Characteristics	0-5 months exclusively breastfed	6-8 months who received breastmilk and complementary food at least 2 times in prior 24 hours	9-11 months who received breastmilk and complementary food at least 3 times in prior 24 hours	6-11 months who received breastmilk and complementary food at least the minimum recommended number of times per day*	0-11 months who were appropriately fed**	Number of infants aged 0-11 months
Sex						
Male	46.2	82.2	81.4	81.7	65.6	76
Female	20.8	70.9	83.3	78.2	54.6	84
Mother's education						
None	(*)	(*)	(*)	(*)	(*)	5
Primary	34.8	78.7	85.0	83.0	62.3	94
Secondary +	35.5	76.6	78.8	77.5	59.7	60
Wealth index						
Low	(*)	(*)	(*)	(*)	(*)	7
Medium	30.2	89.6	80.7	83.9	61.0	55
High	34.9	68.6	84.2	77.2	58.9	98
Total	**33.5**	**76.1**	**82.5**	**79.8**	**59.8**	**160**

***MICS indicator 18**
****MICS indicator 19**
NOTE: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

5.3 Salt Iodization

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

In this survey, salt used for cooking was tested using testing kits for iodine and for the presence of potassium iodide content. This was done in 96 per cent of the households. Table 5.5 (NU.5) reveals that a negligible percentage of households did not have any salt available. In 97 per cent of households, salt was found to contain 15 parts per million (ppm) or more of iodine, i.e., adequately iodized salt. Results based on household wealth index shows that there is not much variation 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, Embu district, Eastern Province, Kenya 2008

Wealth index	Percentage of households in which salt was tested	Number of households interviewed	Percentage of households with Salt test result: No salt	< 15 PPM	15+ PPM*	Total	Number of households in which salt was tested or with no salt
Low	94.2	72	3.3	0.0	96.7	100.0	70
Medium	95.8	370	3.6	0.4	96.1	100.0	367
High	95.4	712	1.8	0.2	98	100.0	692
Total	**95.5**	**1,154**	**2.5**	**0.2**	**97.3**	**100.0**	**1,130**

***MICS indicator 41**

5.4 Vitamin A Supplements

Vitamin A is essential for eye health and proper functioning of the immune system. Food stuffs such as milk, liver, eggs, orange fruits, red palm oil and green leafy vegetables are a source of this vitamin. The quantity available to the body from these sources however varies widely. Vitamin A is largely consumed in the form of fruits and vegetables in the developing world and is often insufficient. The daily per capita intake of Vitamin A in these areas is further compromised by increased requirements for the vitamin as children grow or during periods of illnesses. The deficiency in vitamin A is therefore quite prevalent in the developing world.

The 1990 World Summit for Children had set the goal of virtual elimination of vitamin A deficiency and its consequences, including blindness, by the year 2010. This goal was also endorsed at the Policy Conference on Ending Hidden Hunger in 1991, the 1992 International Conference on Nutrition, and the UN General Assembly's Special Session on Children in 2002. The critical role of vitamin A for child health and immune function also makes control of this deficiency a primary component of child survival efforts and therefore critical to the achievement of one of the fourth Millennium Development Goal target: a two-thirds reduction in under-five mortality by the year 2015.

For countries with vitamin A deficiency problems, current international recommendations call for administering a high-dose of vitamin A supplementation every four to six months for all children

between the ages of 6 to 59 months. Providing young children with two high-dose vitamin A capsules a year is a safe, cost-effective, efficient strategy of 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 monitoring indicator is the percentage of children 6-59 months of age receiving at least one high dose vitamin A supplement every 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 be given a vitamin A capsule every 6 months. In some parts of the country, Vitamin A capsules are linked to immunization services and are given when the child has contact with these services after six months of age. It is also recommended that mothers take a Vitamin A supplement within eight weeks of giving birth due to increased Vitamin A requirements during pregnancy and lactation.

Within the six months prior to the survey, 63 per cent of children aged 6-59 months received a high dose Vitamin A supplement (Table 5.6 (NU.6)). About 24 per cent did not receive the supplement in the last 6 months but had received one prior to that time. Further, about seven per cent of children had received a Vitamin A supplement but their mother/caretaker was unable to specify when.

The age pattern shows that supplementation in the last six months declines from 92 per cent among children aged 6-11 months, to 53 per cent among children aged 48-59 months. However, there is no substantial variation in Vitamin A supplementation between the age groups 24-35 months, 36-47 and 48-59 months children and by household wealth index.

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

Percentage distribution of children aged 6-59 months by whether they have received a high dose vitamin A supplement in the last 6 months, Embu district, Kenya 2008

Characteristics	Percentage of children who received vitamin A: Within last 6 months*	Prior to last 6 months	Not sure when	Not sure if received vitamin A	Never received vitamin A	Missing	Total	Number of children aged 6-59 months
Sex								
Male	62.4	24.5	6.9	0.6	5.3	0.3	100.0	426
Female	63.0	23.3	7.2	0.5	5.7	0.3	100.0	449
Age								
6-11 months	91.9	0.0	1.6	0.9	5.6	2.8	100.0	77
12-23 months	72.1	16.9	2.9	0.4	7.7	0.0	100.0	183
24-35 months	58.2	29.7	9.3	0.9	1.9	0.0	100.0	187
36-47 months	58.6	28.9	10.5	0.0	2.0	0.0	100.0	188
48-59 months	52.8	30.0	8.0	0.8	8.5	0.0	100.0	227
Mother's education								
None	61.0	9.0	21.0	5.0	4.1	0.0	100.0	61
Primary	61.3	24.8	7.0	0.2	6.5	0.2	100.0	497
Secondary +	65.2	25.4	4.5	0.2	4.3	0.4	100.0	317
Wealth index								
Low	60.3	23.9	6.2	0.0	9.7	0.0	100.0	54
Medium	61.7	22.4	7.6	1.3	6.7	0.2	100.0	328
High	63.6	24.8	6.8	0.1	4.3	0.4	100.0	493
Total	**62.7**	**23.9**	**7.1**	**0.6**	**5.5**	**0.3**	**100.0**	**875**

***MICS indicator 42**

The mother's level of education is also related to the likelihood of Vitamin A supplementation. The percentage, however, of those receiving a supplement in the last six months is almost equal among children whose mothers have no education and those whose mothers have primary education. This is however highest (65 per cent) among children with mothers having secondary or higher education. Although there is a slight increase in proportions receiving Vitamin A supplementation by wealth index, these differences are not very notable.

Over 70 per cent of women with a birth in the two years preceding the survey received a Vitamin A supplement within eight weeks of birth (Table 5.7 (NU.7)). As seen in the table, the coverage of Vitamin A increases with the education of the mother, with those who have attained no level of education having 60 per cent compared to 82 per cent among women with secondary or higher education.

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, Embu district, Kenya 2008

Characteristics	Received vitamin A supplement*	Not sure if received vitamin A	Number of women aged 15-49 years
Education			
None	60.1	5.7	22
Primary	66.7	0.7	131
Secondary +	82.0	0.6	67
Wealth index			
Low	(*)	(*)	12
Medium	68.1	0.6	75
High	72.6	1.6	133
Total	**70.7**	**1.2**	**219**

***MICS indicator 43**

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

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

5.5 Low Birth Weight

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

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. In the developing world however, low birth weight stems primarily from the mother's poor health and nutrition. Three factors have most impact: the mother's poor nutritional status before conception, short stature (due mostly to under nutrition and infections during her childhood), and poor nutrition during the pregnancy. Inadequate weight gain during pregnancy is particularly important since it accounts for a large proportion of foetal growth retardation. Moreover, diseases such as diarrhoea and malaria which are common in many developing countries can significantly impair foetal growth if the mother becomes infected while pregnant.

One of the major challenges in measuring the incidence of low birth weight is the fact that more than half of infants in the developing world are not weighed. In the past, most estimates of low birth weight for developing countries were based on data compiled from health facilities. However, these estimates are biased for most developing countries because the majority of newborns are not delivered in facilities and those who are, represent only a selected sample of all births. Hence, the reported birth weights cannot be used to estimate the prevalence of low birth weight among all children. Therefore, the percentage of births weighing below 2500 grams is estimated from two items

in the questionnaire: the mother's assessment of the child's size at birth (i.e., very small, smaller than average, average, larger than average, very large) and the mother's recall of the child's weight or the weight as recorded on a health card if the child was weighed at birth[5].

Overall, 95 per cent of births in the district were weighed at birth and approximately 12 per cent of infants are estimated to weigh less than 2500 grams at birth (Table 5.8 (NU.8)). There was no substantial variation noticed by education of the mother and by household wealth index (Figure 5.3).

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

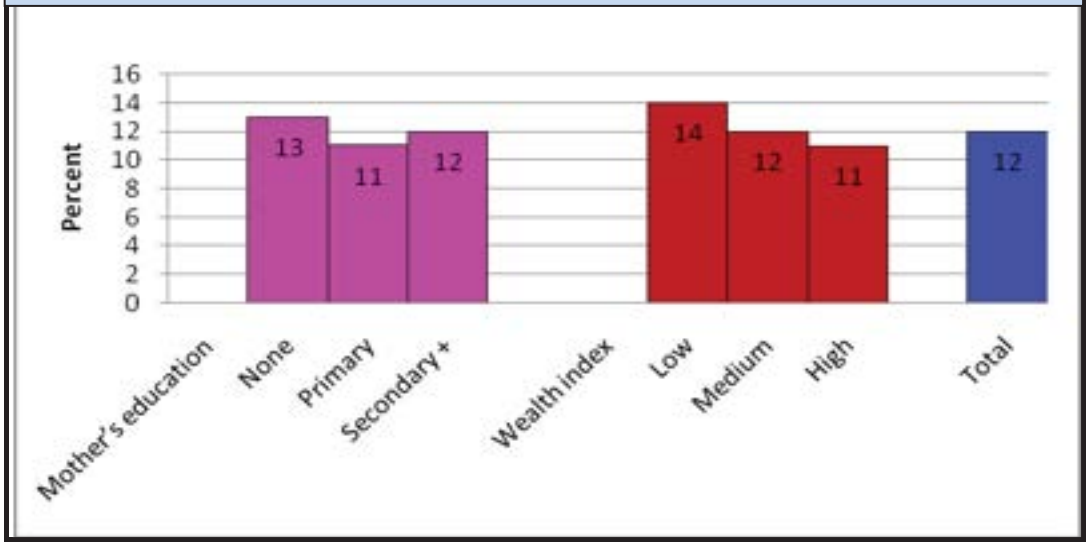
Percentage of live births in the 2 years preceding the survey that weighed below 2500 grams at birth, Embu district, Eastern Province, Kenya 2008

	Percentage of live births:		
	Below 2500 grams*	Weighed at birth**	Number of live births
Mother's education			
None	12.8	100.0	22
Primary	11.0	93.3	131
Secondary +	12.1	97.8	67
Wealth index			
Low	(14.4)	(87.1)	12
Medium	11.6	91.5	75
High	11.2	98.2	133
Total	**11.5**	**95.3**	**219**

***MICS indicator 9**
****MICS indicator 10**
NOTE: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
Figures in parentheses are based on 25-49 unweighted cases.

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

Figure 5.3: Percentage of infants weighing less than 2500 grams at birth



5.6 Food Relief

Table 5.9 (NU.11) presents information on food relief in Embu district based on the MICS survey. The number of households that registered as beneficiaries in the food distribution program was negligible.

Table 5.9 (NU.11): 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, Embu 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	After 6 months	Total per cent		
Low	0.0	72	0.0	0.0	5.5	0.0	100.0	0.0	0
Medium	1.3	370	40.4	45.0	4.8	14.5	100.0	0.5	5
High	0.3	712	10.0	0.0	9.9	0.0	100.0	0.0	2
Total	**0.6**	**1154**	**57.6**	**32.1**	**6.0**	**10.3**	**100.0**	**0.0**	**7**

6.1 Immunization

The Millennium Development Goal (MDG) 4 aims to reduce child mortality by two thirds between 1990 and 2015. Immunization plays a key part in this goal as it has saved the lives of millions of children in the three decades since the launch of the Expanded Programme on Immunization (EPI) in 1974. Worldwide, there are about 27 million children not reached by routine immunization and as a result, vaccine-preventable diseases still cause more than 2 million deaths every year.

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

In Kenya, and in accordance with the ministry of health guidelines, a child should receive a BCG vaccine 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 at the age of 9 months. This is in accordance with UNICEF and WHO guidelines.

In MICS, mothers or caretakers of children below five years of age were asked to provide vaccination cards from which interviewers copied vaccination information onto the questionnaire. Information about children with no immunization card was obtained using a set of structured direct questions. The immunization coverage shown in this report therefore includes information from cards as well as memory re-call unless mentioned otherwise.

The percentage of children aged 12 to 23 months who received each of the vaccinations before the first birthday is shown in Table 6.1 (CH.1). The denominator for the table is comprised of children aged 12-23 months so that only children who are old enough to be fully vaccinated are considered. Almost all (97 per cent) children aged 12-23 months received both BCG vaccination and the first dose of DPT by the age of 12 months. The proportion of DPT taken increases marginally to 98 per cent for the second dose and the third dose stands at the same level as DPT1 (Figure 6.1). The data further indicates that 94 per cent of children had received Polio 0 by age 12 months which rises to almost 99 per cent for subsequent polio doses and then falls to 85 per cent for polio 3. Though the coverage for measles vaccine is lower than for the other vaccines, it was still high at 96 per cent. The percentage of children who had received all the recommended vaccinations by their first birthday was 74 per cent.

Table 6.1 (CH.1): Vaccinations among children

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

	Percentage of children who received:											Number of children aged 12-23 months
Vaccinated at any time before the survey	BCG*	DPT1	DPT2	DPT3**	Polio 0	Polio 1	Polio 2	Polio 3***	Measles ****	All*****	None	
According to:												
Vaccination card	76.6	79.3	81.6	81.2	74.7	79.2	79.6	79.2	76.8	72.3	0.0	183
Mother's report	20.4	17.7	17.7	15.9	19.3	19.7	19.0	6.5	20.0	4.0	0.4	183
Either	97.0	97.0	99.2	97.2	94.0	98.9	98.6	85.6	96.7	76.4	0.4	183
Vaccinated by 12 months of age	97.0	97.0	98.3	96.8	94.0	98.9	98.6	85.3	95.8	74.3	0.4	183

***MICS indicator 25**
****MICS indicator 27**
*****MICS indicator 26**
******MICS indicator 28; MDG indicator 15**

Total number of 12-23 month olds vaccinated with BCG, (OPV3, DPT3, Measles, Hep B, or Hi B) before 12 months, as validated by card or mother's recall. To estimate the number of children without a card to have received vaccine before 1st birthday the proportion of vaccinations given during the first year of life is assumed to be the same as for the proportion of children with a card that received the vaccine before 1st birthday.

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

*****MICS indicator 31**

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



Table 6.2 (CH.2) provides information on vaccination coverage rates among children 12-23 months who had been vaccinated against childhood diseases at any time up to the date of the survey. The findings were based on information from both vaccination cards and mothers'/caretakers' reports. The percentage of children aged 12 to 23 months who had vaccination cards was 80 per cent. The coverage of BCG, DPT1 and Polio1 was nearly universal in the district, however the coverage of Polio3 stood at 86 per cent. The measles vaccination was reportedly received by 97 per cent of children in this age group. The percentage of children aged 12-23 months who were fully vaccinated, i.e. received BCG, three doses of DPT, three doses of Polio and measles vaccines was 76 per cent. Overall, more girls than boys had been vaccinated.

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

Percentage of children aged 12-23 months currently vaccinated against childhood diseases, Embu district, Kenya 2008

Characteristics	Percentage of children who received:											Percentage with health card	Number of children aged 12-23 months
	BCG	DPT1	DPT2	DPT3	Polio 0	Polio 1	Polio 2	Polio 3	Measles	All	None		
Sex													
Male	99.4	94.8	99.3	97.1	96.6	99.3	99.3	82.4	96.5	71.4	0.0	74.2	93
Female	94.5	99.2	99.2	97.2	91.3	98.5	97.9	89.0	97.0	81.2	0.8	85.1	90
Mother's education													
None	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	10
Primary	94.6	94.9	98.7	97.6	94.2	98.7	98.7	88.6	96.9	75.2	0.7	87.9	103
Secondary +	100.0	100.0	100.0	96.8	96.1	100.0	100.0	82.4	97.1	78.0	0.0	69.2	70
Wealth index													
Low	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	13
Medium	100.0	100.0	99.0	98.4	98.6	100.0	99.2	89.1	96.0	84.1	0.0	88.1	64
High	95.3	94.7	99.3	96.0	92.0	98.0	98.0	83.4	96.8	70.6	0.7	74.8	105
Total	**97.0**	**97.0**	**99.2**	**97.2**	**94.0**	**98.9**	**98.6**	**85.6**	**96.7**	**76.4**	**0.4**	**79.6**	**183**

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.

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

6.2 Tetanus Toxoid

One of the MDGs goals (5) is to reduce by three quarters the maternal mortality ratio, with one strategy to eliminate maternal tetanus. The World Fit for Children goal was to eliminate maternal and neonatal tetanus by 2005.

To prevent maternal and neonatal tetanus, pregnant women should receive at least two doses of tetanus toxoid vaccine during pregnancy. However, mothers and their newborns are also considered to be protected if they have:

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

Table 6.3 (CH.3) shows the protection status from tetanus for women who delivered within the 12 months preceding the survey. Overall, 87 per cent of women had adequate protection against tetanus. The results do not reveal any major differences in tetanus coverage by varying educational levels or by household wealth index.

Table 6.3 (CH.3): Neonatal tetanus protection

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

	Percentage of mothers with a birth in the last 12 months who:						
Characteristics	Received at least 2 doses during last pregnancy	Received at least 2 doses, the last within prior 3 years	Received at least 3 doses, last within prior 5 years	Received at least 4 doses, last within prior 10 years	Received at least 5 doses during lifetime	Protected against tetanus*	Number of mothers
Age							
15-19	(85.3)	(0.0)	(0.0)	(0.0)	(0.0)	(85.3)	12
20.-24	79.0	4.8	0.0	0.0	0.0	83.7	74
25-29	78.1	7.7	0.0	0.0	0.0	85.8	54
30-34	82.2	6.2	0.7	0.0	0.0	89.1	41
35-49	84.5	7.2	0.8	0.0	0.0	91.4	38
Education							
None	81.3	7.8	0.0	0.0	0.0	89.1	22
Primary	79.4	6.4	0.5	0.0	0.0	86.3	131
Secondary +	82.3	4.3	0.0	0.0	0.0	86.6	67
Wealth index							
Low	(75.8)	(0.0)	(2.5)	(0.0)	(0.0)	(78.3)	12
Medium	76.7	10.3	0.4	0.0	0.0	87.4	75
High	83.0	4.0	0.0	0.0	0.0	87.0	133
Total	**80.5**	**5.9**	**0.3**	**0.0**	**0.0**	**86.7**	**219**

***MICS indicator 32**

Tetanus toxoid injections are given to women during pregnancy to protect infants from neonatal tetanus, a major cause of infant death that is due primarily to unsanitary conditions during childbirth. Two doses of tetanus toxoid during pregnancy offer full protection. However, if a woman was vaccinated during a previous pregnancy, she may only need a booster to give full protection. Five doses are thought to provide lifetime protection.

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

6.3 Oral Rehydration Treatment

Diarrhoea is the second leading cause of death among children under five worldwide. Most diarrhoea-related deaths among 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.

A World Fit for Children goal is to reduce by one half, the deaths due to diarrhoea among children under five by 2010 compared to 2000. In addition, it calls for a reduction in the incidence of diarrhoea by 25 per cent. The Millennium Development Goal aims at reducing by two thirds between 1990 and 2015 the mortality rate among children under five.

The monitoring indicators include:

- Prevalence of diarrhoea
- Oral rehydration therapy (ORT)
- Home management of diarrhoea

In this survey, mothers or caretakers were asked to report whether their children had diarrhoea in the two weeks prior to the survey. If so, they were asked a series of questions about what the child had been given to drink and eat during the episode, and whether this was more or less than the child usually ate and drank under normal circumstances. Details are presented in Table 6.4 (CH.4).

Eight per cent of children had diarrhoea in the two weeks preceding the survey. The highest proportion of children with the disease was observed among those aged 12-23 months.

The table further gives the percentage of children receiving various types of recommended liquids during the episode of diarrhoea. Since mothers were able to name more than one type of liquid, the percentages do not necessarily add up to 100 per cent. Overall, 49 per cent did not receive any treatment, while 51 per cent received ORT.

Table 6.4 (CH.4): Oral rehydration treatment

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

Characteristics	Had diarrhea in last two weeks	Number of children aged 0-59 months	Children with diarrhoea who received: Fluid from ORS packet	Recom-mended home made fluid	Pre-packaged ORS fluid	No treatment	ORT Use Rate*	Number of children aged 0-59 months with diarrhoea
Sex								
Male	7.6	461	(35.1)	(9.2)	(3.4)	(52.3)	(47.7)	35
Female	7.7	483	(40.2)	(22.2)	(4.0)	(45.9)	(54.1)	37
Age								
<6 months	6.7	82	(*)	(*)	(*)	(*)	(*)	5
6-11 months	7.6	77	(*)	(*)	(*)	(*)	(*)	6
12-23 months	11.3	183	(49.3)	(16.9)	(6.7)	(30.6)	(69.4)	21
24-35 months	8.7	187	(24.2)	(7.4)	(3.4)	(65.1)	(34.9)	16
36-47 months	8.3	188	(*)	(*)	(*)	(*)	(*)	16
48-59 months	3.6	227	(*)	(*)	(*)	(*)	(*)	8
Mother's education								
None	10.8	64	(*)	(*)	(*)	(*)	(*)	7
Primary	8.1	537	28.8	12.8	3.4	56.7	43.3	44
Secondary +	6.3	342	(*)	(*)	(*)	(*)	(*)	22
Wealth index								
Low	11.4	57	59.9	11.4	0.0	40.1	59.9	81
Medium	8.1	352	(33.4)	(23.6)	(0.0)	(56.3)	(43.7)	48
High	6.9	535	(37.1)	(10.8)	(7.2)	(44.9)	(55.1)	30
Total	**7.6**	**944**	**37.7**	**15.9**	**3.7**	**49.0**	**51.0**	**72**

***MICS indicator 33**

Note: The percentages receiving various treatments will not add to 100 since some children may have received more than one type of treatment. The ORT use rate includes those who received oral dehydration salts from a packet or any appropriate household solution or pre-packaged ORS fluid.

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

The details of home management of diarrhoea are presented in Table 6.5 (CH.5). Children under five years who had diarrhoea during the two weeks preceding the survey and drank more liquids than usual were 45 per cent while those who drank less or the same liquids were 55 per cent. About 51 per cent ate somewhat less, same or more while 49 per cent ate much less or ate almost none during the period. Based on these findings, among children with diarrhoea, 13 per cent received home management of the disease and 24 per cent received increased fluids and at the same time continued feeding.

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, Embu district, Eastern Province, Kenya 2008

Characteristics	Had diarrhea in last two weeks	Number of children aged 0-59 months	Children with diarrhea who: Drank more	Drank the same or less	Ate somewhat less, same or more	Ate much less or none	Home manage-ment of diarrhea*	Received ORT or increased fluids AND continued feeding**	Number of children aged 0-59 months with diarrhea
Sex									
Male	7.6	461.0	(44.6)	(55.4)	(51.0)	(49.0)	(9.3)	(18.3)	35
Female	7.7	483.0	(45.5)	(54.5)	(50.4)	(49.6)	(16.1)	(29.2)	37
Age									
0-11 months	7.6	144	(*)	(*)	(*)	(*)	(*)	(*)	11
12-23 months	11.0	175	(56.1)	(43.9)	(40.9)	(59.1)	(14.0)	(21.2)	19
24-35 months	9.6	191	(46.3)	(53.7)	(54.2)	(45.8)	(20.4)	(34.5)	18
36-47 months	8.0	196	(*)	(*)	(*)	(*)	(*)	(*)	16
48-59 months	3.4	240	(*)	(*)	(*)	(*)	(*)	(*)	8
Mother's education									
None	10.8	64.4	(*)	(*)	(*)	(*)	(*)	(*)	7
Primary	8.1	537.3	38.8	61.2	54.9	45.1	12.8	27.8	44
Secondary +	6.3	342.3	(*)	(*)	(*)	(*)	(*)	(*)	21
Wealth index									
Low	11.4	57.3	(*)	(*)	(*)	(*)	(*)	(*)	7
Medium	8.1	351.7	(42.3)	(57.7)	(45.8)	(54.2)	(4.2)	(15.4)	29
High	6.9	535.0	(46.3)	(53.7)	(59.9)	(40.1)	(20.0)	(33.0)	37
Total	**7.6**	**944.0**	**45.1**	**54.9**	**50.7**	**49.3**	**12.8**	**23.9**	**72**

***MICS indicator 34**
****MICS indicator 35**
NOTE: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
Figures in parentheses are based on 25-49 unweighted cases.

6.4 Care Seeking and Antibiotic Treatment of Pneumonia

Pneumonia is one of the leading causes of death in children and the use of antibiotics in under-5s with suspected pneumonia is a key intervention. The World Fit for Children goal, is to reduce by one-third 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 findings on the prevalence of suspected pneumonia. Among the observed cases for children aged 0-59 months, 11 per cent were reported to have had symptoms of pneumonia during the two weeks preceding the survey. Among these children who had pneumonia

symptoms, 73 per cent were taken to an appropriate health service provider. Majority of those taken to an appropriate health service provider were treated in public facilities (69 per cent). The differentials in the treatment pattern by different characteristics show that a higher proportion of female children (78 per cent) are taken to an appropriate health service provider compared with male children (69 per cent). It's also notable that children belonging to households from high wealth index category are also more likely to receive care from an appropriate health service provider, compared with children belonging to low wealth index households.

Table 6.6 (CH.6): Care seeking for suspected pneumonia

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

Characteristics	Had acute respiratory infection[1]	Number of children aged 0-59 months	Children with suspected pneumonia who were taken to:												Number of children aged 0-59 months with suspected pneumonia
			Public sources				Private sources				Other source				
			Govt. Hospital	Govt. health centre	Govt. health post	Other public *	Private hospital/ clinic	Private physician	Pharmacy	Other private	Relative or friend	Shop	Trad. Practitioner	Any appropriate provider*	
Sex															
Male	12.7	461.0	28.9	30.2	4.3	2.8	8.8	0.0	1.5	0.0	0.0	0.0	0.0	69.0	58
Female	10.0	483.0	19.2	36.3	11.7	4.3	4.9	0.0	0.0	1.9	0.0	2.5	0.0	78.2	48
Age															
0-11 months	9.0	141	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	13
12-23 months	15.3	175	(15.0)	(41.1)	(7.4)	(7.7)	(2.5)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(73.7)	27
24-35 months	11.8	191	(13.4)	(33.6)	(5.5)	(3.1)	(4.4)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(60.0)	23
36-47 months	6.8	196	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	13
48-59 months	13.1	240	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	31
Mother's education															
None	11.6	64.0	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	7
Primary	14.3	537.0	26.8	32.8	5.7	4.2	3.7	0.0	1.2	1.2	0.0	1.6	0.0	74.4	77
Secondary +	6.6	342.0	(24.8)	(38.7)	(16.8)	(2.2)	(5.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(87.5)	23
Wealth index															
Low	13.2	57.0	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	8
Medium	14.3	352.0	22.7	39.9	7.5	3.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	74.1	50
High	9.1	535.0	(29.0)	(25.0)	(8.9)	(3.3)	(7.2)	(0.0)	(0.0)	(1.8)	(0.0)	(1.4)	(0.0)	(75.2)	49
Total	**11.3**	**944.0**	**24.5**	**32.9**	**7.6**	**3.5**	**3.7**	**0.0**	**0.8**	**0.8**	**0.0**	**1.1**	**0.0**	**73.1**	**107**

***MICS indicator 23**

* Includes village health worker or mobile/outreach clinic.

Note: The percentages taken to various providers will not add to 100 since some children may have been taken to see more than one type of provider.

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

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

Table 6.7 (CH.7) presents the use of antibiotics for the treatment of suspected pneumonia in children under-5 by sex, age, and socioeconomic factors. In Embu district, 49 per cent of under-5 children with suspected pneumonia were treated using antibiotics during the two weeks prior to the survey. It can also be observed that antibiotic treatment was higher among children with mothers who were more educated. With regard to wealth index, the proportion of children receiving antibiotic treatment was highest among children from the medium wealth index households.

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

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

Characteristics	Percentage of children aged 0-59 months with suspected pneumonia who received antibiotics in the last two weeks*	Number of children aged 0-59 months with suspected pneumonia in the two weeks prior to the survey
Sex		
Male	46.6	58
Female	51.1	48
Age		
0-11 months	(*)	13
12-23 months	(70.1)	27
24-35 months	(31.3)	23
36-47 months	(*)	13
48-59 months	(*)	31
Mother's education		
None	(*)	8
Primary	(46.6)	77
Secondary +	(65.6)	23
Wealth index		
Low	(*)	8
Medium	60.2	50
High	(38.9)	49
Total	**48.6**	**107**

***MICS indicator 22**
NOTE: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

Issues related to knowledge of danger signs of pneumonia are presented in Table 6.8 (CH.7A). Mothers' knowledge of the danger signs is an important determinant of care-seeking behaviour. Overall, only a dismal percentage of women or caretakers know of the two danger signs of pneumonia – fast and difficult breathing. The most commonly identified symptom for taking a child to a health facility by the mother/caretaker is developing fever (83 per cent), followed by becoming sicker (17 per cent) and 16 per cent for difficult breathing. On the other hand, there is no clear pattern in Embu district between knowledge of the danger signs and mothers level of education. In terms of wealth index, none of the mothers of children from low wealth index households knew of the two danger signs of pneumonia.

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

Percentage of mothers/caretakers of children aged 0-59 months by knowledge of types of symptoms for taking a child immediately to a health facility, and percentage of mothers/caretakers who recognize fast and difficult breathing as signs for seeking care immediately, Embu 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 difficult breathing	Has blood in stool	Is drinking poorly	Has other symptoms		
Mother's education										
None	14.4	19.9	74.1	16.4	23.1	1.1	1.6	71.3	5.6	64
Primary	7.6	13.2	80.3	8.2	15.1	0.9	2.0	85.7	2.6	537
Secondary +	12	21.3	88.4	17.4	15.8	2.8	3.4	72.8	7.0	342
Wealth index										
Low	14.5	12	80.5	3.2	13.3	0.0	8.5	85.4	0.0	57
Medium	8.2	14.4	81.9	11.1	19.2	0.8	1.6	83.3	4.2	352
High	10.1	18.5	83.7	13.7	14.1	2.3	2.4	77.3	5.0	535
Total	**9.7**	**16.6**	**82.8**	**12.1**	**15.9**	**1.6**	**2.5**	**80**	**4.4**	**944**

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

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

6.5 Solid Fuel Use

More than 3 billion people around the world rely on solid fuels (biomass and coal) for their basic energy needs, including cooking and heating. The use of these fuels leads to high levels of indoor smoke; a complex mix of health-damaging pollutants. The main problem with the use of solid fuels is products of incomplete combustion, including carbon monoxide (CO), polyaromatic hydrocarbons, sulphur dioxide (SO_2), and other toxic elements. Use of solid fuels increases the risks of acute respiratory illness, pneumonia, chronic obstructive lung disease, cancer, tuberculosis, low birth weight, cataracts, and asthma. The primary indicator is the proportion of the population using solid fuels as the primary source of domestic energy for cooking.

Overall, the use of solid fuels for cooking is at 87 per cent in Embu district (Table 6.9 (CH.8)). Differentials with respect to household wealth index show that nearly all households in the low and medium wealth index categories use solid fuels compared with 72 per cent among those from high wealth index households.

Table 6.9 (CH.8): Solid fuel use

Percentage distribution of households according to type of cooking fuel, and percentage of households used solid fuels for cooking, Kenya, Embu district, 2008

Characteristics		Type of fuel using for cooking										Number households
		Electricity	Liquid propane gas (LPG)	Biogas	Kerosene	Charcoal	Wood	Straw/ shrubs /grass	Other	Total	Solid fuels for cooking *	Biogas
Education of household head	None	2.8	15.6	0.1	10.5	14.7	55.5	0.0	0.8	**100.0**	70.1	278
	Primary	0.0	0.3	0.0	2.4	14.0	82.0	0.5	0.8	**100.0**	96.5	545
	Secondary +	0.0	5.2	0.0	9.6	23.0	61.1	0.0	1.1	**100.0**	84.1	326
	Missing/DK	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	1
Wealth index												
	Lowest	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	**100.0**	100.0	72
	Middle	0.0	0.0	0.0	0.7	1.8	96.7	0.7	0.1	**100.0**	99.2	370
	Upper	1.1	8.7	0.0	10.0	26.0	52.7	0.0	1.4	**100.0**	78.8	712
Total		**0.7**	**5.4**	**0.0**	**6.4**	**16.6**	**69.8**	**0.2**	**0.9**	**100.0**	**86.6**	**1,154**

***MICS indicator 24; MDG indicator 29**
NOTE: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

6.6 Malaria

Malaria is the number one killer disease of children under age five in Embu district. It also contributes to anaemia in children and is a common cause of school absenteeism. Preventive measures especially the use of insecticide treated mosquito nets (ITNs) are recommended to reduce malaria mortality rates among children. In areas where malaria is common, international recommendations suggest treating any fever in children as if it were malaria and immediately giving the child a full course of recommended anti-malarial tablets. Children with severe malaria symptoms, such as fever or convulsions should be taken to a health facility. Also, children recovering from malaria should be given extra liquids and food and younger children should continue breastfeeding.

The questionnaire incorporated questions on the availability and use of bed nets, both at the 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 63 per cent of households have at least one insecticide treated net (Table 6.10 (CH.10). About 37 per cent of households have two or more mosquito nets, while the mean number of nets per households in the district is 2. Differentials by household characteristics indicate that the proportion of those using mosquito nets was higher among households where the educational level of the head of the household was high and where the household wealth index was higher. For example, 62 per cent of households headed by a non-educated member had a mosquito net compared to 68 per cent of households headed by a member with secondary or higher level of education (see Figure 6.2).

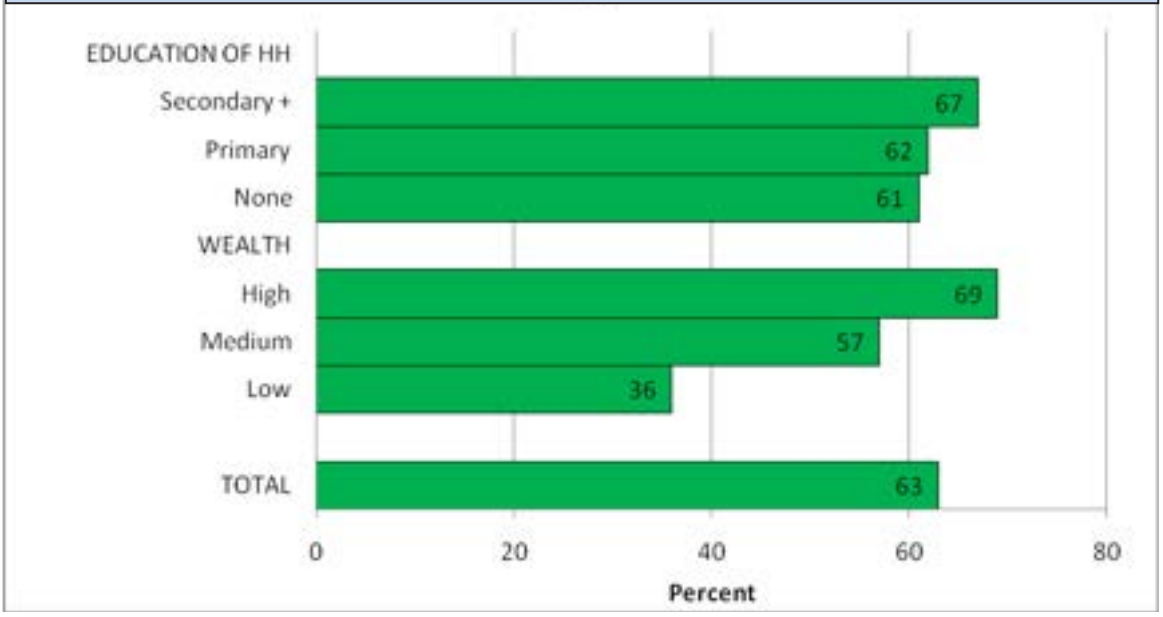
Table 6.10 (CH.10): Availability of insecticide treated nets

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

Characteristics	Percentage of households with			Mean number of mosquito nets per household	Number of households
	at least one mosquito net	Two or more mosquito nets	at least one insecticide treated net (ITN)*		
Education of household head					
None	61.5	42.0	60.5	2.4	279
Primary	61.9	32.0	61.8	1.8	549
Secondary +	68.1	42.7	67.3	2.1	321
Non-standard curriculum	(*)	(*)	(*)	(*)	4
Wealth index					
Low	36.2	16.2	36.2	1.4	78
Medium	56.9	31.7	56.8	1.9	379
High	70.0	42.8	69.2	2.1	697
Total	**63.4**	**37.4**	**62.9**	**2.0**	**1154**

***MICS indicator 36**
NOTE: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Figure 6.2: Percentage of households with at least one insecticide



Information on children who slept under a bed net is presented in Table 6.11 (CH.11). The data indicates that the percentage of children who slept under a bed net and those who slept under insecticide treated nets was 66 per cent each. However, distribution by gender shows that more females slept under a bed net (70 per cent) compared to males (62 per cent). The same pattern is reflected in the case of those who slept under insecticide treated nets. With respect to age, the largest percentage (69 per cent) that slept under an insecticide treated net was among those aged 48-59 months. There was a notable difference in the number of children who slept under bed nets by household wealth index; 36 per cent for low wealth index households compared to 72 per cent for high wealth index households.

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

Percentage of children aged 0-59 months who slept under an insecticide treated net during the previous night, Embu district, 2008

Characteristics		Slept under a bed net *	Sleep under an insecticide treated net **	Don't know if slept under a net	Did not sleep under a bed net	Number of children aged 0-59 months
Sex	Male	62.3	62.2	0.0	37.7	461
	Female	69.6	69.0	0.7	29.7	483
Area	Urban	82.6	71.1	1.9	15.5	182
	Rural	65.2	45.6	0.0	34.8	762
Age	0-11 months	66.6	66.6	0.0	33.4	141
	12-23 months	67.3	66.9	0.0	32.7	175
	24-35 months	67.4	66.4	0.0	32.6	191
	36-47 months	60.1	60.1	1.8	38.1	196
	48-59 months	68.5	68.5	0.0	31.5	240
Wealth index quintiles						
	Lowest	36.2	36.2	0.0	63.8	57
	Middle	62.5	62.3	0.0	37.5	352
	Upper	71.6	71.0	00.7	27.8	535
Total		**66.0**	**65.7**	**0.4**	**33.6**	**944**

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

In the survey, questions on the prevalence and treatment of fever were asked for all children under age five. As reflected in Table 6.12 (CH.12), about one in five (20 per cent) children were ill with fever in the two weeks prior to the survey. Prevalence of fever was almost the same for male and female children. There were no differentials by mother's education with the levels remaining almost the same at around 20 per cent. However, the prevalence of fever was high among low wealth index households (28 per cent) and declined to 20 per cent for children from high wealth index households.

Mothers or caretakers were asked to provide information on medicines given to treat fever. This included both medicines given at home and medicines given or prescribed at a health facility. Overall, 56 per cent of children with fever in the last two weeks were treated with an "appropriate" anti-malarial drug and received the drugs within 24 hours of onset of symptoms.

The "Appropriate" anti-malarial drugs include chloroquine, SP/fansidar, artimisine combination drugs, etc. In Embu, only 14 per cent received artemisinin combination therapy. A large percentage of children (44 per cent) were given other types of medicines that are not anti-malarials, including anti-pyretics such as paracetemol, aspirin, or ibuprofen. There is a notable difference between boys and girls receiving any appropriate anti-malarial drugs; 59 per cent for boys with fever compared with 52 per cent among 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, Embu district, Eastern Province, Kenya 2008

			Children with a fever in the last two weeks who were treated with:													
			Anti-malarials:							Other medications:						
Characteristics	Had a fever in last two weeks	Number of children aged 0-59 months	SP/ Fansidar	Chloroquine	Amodia-quine	Quinine	Artemis-inin based combin-ations	Other anti-malarial	Any appropriate anti-malarial drug	Paracet-amol/ Panadol/ Acetamin-ophen	Aspirin	Ibu-profen	Other	Don't know	Any appropriate anti-malarial drug within 24 hours of onset of symptoms*	Number of children with fever in last two weeks
Sex																
Male	19.8	461	9.1	1.6	23.4	8.6	8.6	8.7	58.6	62.1	0.6	0.0	37.3	0.6	52.1	91
Female	20.4	483	4.1	5.3	17.4	19.1	19.8	12.6	70.4	67.8	1.2	0.0	50.4	0.7	58.9	98
Age																
0-11 months	20.5	141	(4.1)	(0.0)	(19.5)	(29.6)	(14.2)	(5.3)	(65.7)	(80.2)	(0.0)	(0.0)	(44.0)	(1.9)	(35.8)	29
12-23 months	24.4	175	6.2	1.7	36.0	6.8	4.4	8.9	62.6	65.7	0.0	0.0	47.7	1.6	54.5	43
24-35 months	24.9	191	7.3	1.5	17.2	8.8	11.8	12.7	56.0	67.1	2.6	0.0	38.8	0.0	48.1	48
36-47 months	14.5	196	(2.3)	(0.0)	(15.3)	(20.4)	(41.4)	(11.3)	(73.4)	(71.4)	(1.9)	(0.0)	(69.8)	(0.0)	(71.0)	29
48-59 months	17.5	240	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	42
Mother's education																
None	20.2	64	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	13
Primary	20.1	537	7.0	5.5	16.5	21.5	12.0	7.3	63.7	54.2	1.2	0.0	34.7	1.1	52.5	108
Secondary +	20.1	342	5.0	1.1	27.1	5.0	20.9	9.7	66.0	83.4	0.7	0.0	53.9	0.0	59.7	69
Wealth index																
Low	27.6	57	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	16
Medium	19.8	352	13.0	1.0	25.9	13.2	16.8	13.5	73.0	64.8	1.1	0.0	49.3	0.0	65.8	70
High	19.5	535	1.4	5.7	14.1	16.0	14.4	10.4	60.2	67.9	1.0	0.0	42.2	1.2	49.1	104
Total	**20.1**	**944**	**6.5**	**3.5**	**20.3**	**14.0**	**14.4**	**10.7**	**64.7**	**65.1**	**0.9**	**0.0**	**44.1**	**0.6**	**55.6**	**190**

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

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

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

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

Expectant mothers living in places where malaria is highly prevalent are four times more likely than other adults to get malaria and twice as likely to die of the disease. Once infected, pregnant women risk becoming anemic, or having premature delivery and stillbirth. Their babies are likely to be of low birth weight, which makes them unlikely to survive their first year of life. For this reason, steps are taken to protect pregnant women by distributing insecticide-treated mosquito nets and treatment during antenatal check-ups with drugs that prevent malaria infection (Intermittent Preventive Treatment or IPT). In Embu district, women aged 15-49 years were asked about the medicines they had received during their last pregnancy within the 2 years preceding the survey. Women are considered to have received Intermittent Preventive Treatment if they had taken at least 2 doses of SP/Fansidar during the pregnancy.

Intermittent Preventive Treatment for malaria in pregnant women who gave birth in the two years preceding the survey is presented in Table 6.13 (CH.13). Eighty five per cent of mothers who delivered a child during the two year period preceding the survey received medicine to prevent malaria during pregnancy. Only one out of five (22 per cent) received SP/Fansidar once and about 43 per cent received the same two or more times. Approximately 13 per cent did not know whether they had received any IPT for malaria during pregnancy.

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, Embu district, Eastern Province, Kenya 2008

	Percentage of pregnant women who took:						Number of women who gave birth in prior two years
Characteristics	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	88.9	20.1	52.3	0.0	5.3	11.1	22
Primary	84.0	25.1	37.7	1.2	4.6	15.4	131
Secondary +	87.0	15.2	51.3	2.0	8.5	9.4	67
Wealth index							
Low	(76.5)	(29.3)	(31.6)	(0.0)	(3.3)	(12.3)	12
Medium	85.5	21.6	45.1	1.6	5.9	11.9	75
High	86.1	20.9	43.2	1.3	6.1	13.8	133
Total	**85.4**	**21.6**	**43.2**	**1.3**	**5.9**	**13.1**	**219**

***MICS indicator 40**
NOTE: Figures in parentheses are based on 25-49 unweighted cases.

7.1 Water

Safe and clean drinking water is a basic necessity for good health. Unsafe drinking water, however, can be a significant carrier of diseases such as trachoma, cholera, typhoid and schistosomiasis. Drinking water, if tainted with chemical or physical and radiological contaminants, has harmful effects on human health. Access to clean drinking water may be particularly important for women and children, who bear the primary responsibility for carrying water especially in rural areas, often for long distances.

The MDG goal is to reduce by half, between 1990 and 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation (goal 7, target 10). The World Fit for Children goal calls for a reduction in the proportion of households without access to hygienic sanitation facilities and affordable and safe drinking water by at least one-third.

The list of indicators used to monitor this goal are as follows:

Water

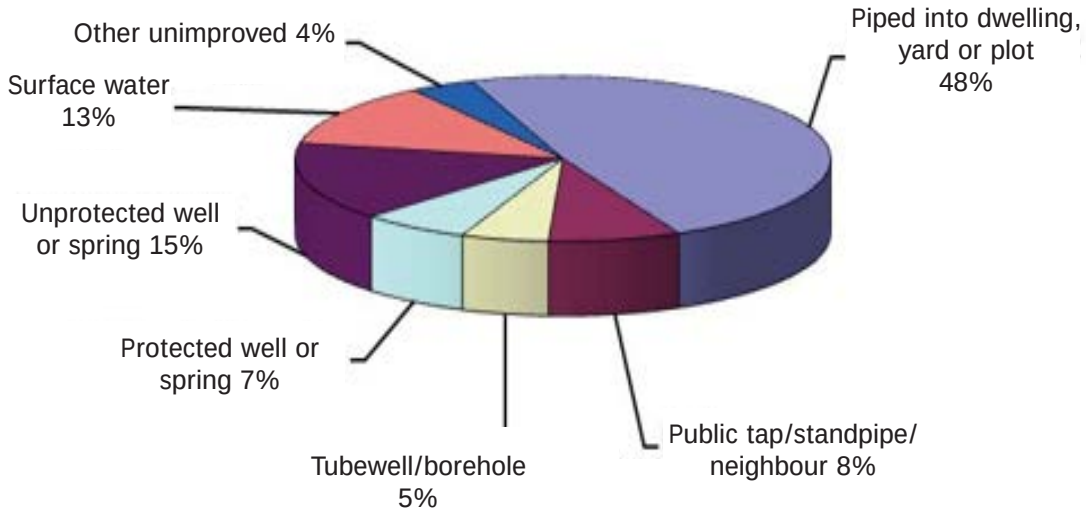
- Use of improved drinking water sources
- Use of adequate water treatment method
- Time taken to source of drinking water
- Person collecting drinking water

Sanitation

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

The distribution of the population by source of drinking water is shown in Table 7.1 (EN.1) and Figure 7.1 (EN.1). The population that has *improved sources* of drinking water are those using any of the following types of supply: piped water (into dwelling, yard or plot), public tap/ standpipe, tubewell/ borehole, protected well, protected spring, and rainwater collection. Bottled water is considered as an improved water source only if the household is using the water for other purposes, such as hand washing and cooking.

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



Overall, 64 per cent of the population is using an improved source of drinking water in Embu district. The percentage of the population using an improved source of drinking water increases with an increase in the levels of the household wealth index, but no clear pattern is observed with respect to education level of the household head.

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

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

	Main source of drinking water															
	Improved sources							Unimproved sources								
Characteristics	Piped into dwelling	Piped into yard/ plot	Public tap/ stand-pipe	Piped water from neigh-bour	Tube-well/ bore-hole	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	36.0	23.6	0.8	3.2	2.5	1.0	36.0	4.7	4.5	0.0	0.9	14.2	0.1	100.0	69.8	837
Primary	15.4	21.3	1.5	6.5	3.4	4.0	15.4	9.8	12.2	0.0	0.3	16.4	0.1	100.0	52.2	2075
Secondary+	23.3	42.2	0.2	5.0	6.7	1.2	23.3	3.1	6.7	0.0	0.2	5.7	0.2	100.0	79.1	1184
Non-standard Curriculum	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	9
Wealth Index																
Low	0.0	0.0	0.6	5.3	1.6	10.8	0.0	31.4	15.9	0.0	0.0	31.6	0.0	100.0	18.4	228
Medium	9.5	9.5	0.3	8.9	4.7	4.0	9.5	9.5	14.6	0.0	0.4	23.8	0.2	100.0	37.4	1454
High	31.5	41.3	1.4	3.2	4.1	1.0	31.5	2.8	5.1	0.0	0.4	4.5	0.1	100.0	83.6	2427
Total	**22.0**	**27.8**	**1.0**	**5.4**	**4.1**	**2.6**	**22.0**	**6.8**	**9.0**	**0.0**	**0.4**	**12.9**	**0.1**	**100.0**	**63.6**	**4109**

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

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

Use of in-house water treatment is presented in Table 7.2 (EN.2). Information was sought from the households on the ways and means for treating water at home to make it safer to drink. Among methods used, boiling, adding bleach or chlorine, using a water filter and using solar disinfection were considered as proper treatment of drinking water. The table gives the percentages of household members using appropriate water treatment methods and also that of households using improved and unimproved drinking water sources. Approximately 42 per cent of the population in the district drink appropriately treated water. The reported main modes of water treatment at the household level were boiling (36 per cent) followed by addition of chlorine or bleaching at seven per cent. Among those using drinking water from unimproved sources, 35 per cent are using appropriate water treatment method.

Table 7.2 (EN.2): Household water treatment

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

	Water treatment method used in the household							All drinking water sources		Improved drinking water sources		Unimproved drinking water sources	
Characteristics	None	Boil	Add bleach/ chlorine	Strain through a cloth	Use water filter	Let it stand and settle	Other	Appropriate water treatment method*	Number of household members	Appropriate water treatment method	Number of household members	Appropriate water treatment method:	Number of household members
Education of household head													
None	40.4	52.6	7.1	0.0	0.2	0.0	0.7	57.6	837	63.7	584	43.5	253
Primary	65.9	29.1	5.5	0.0	0.0	0.0	0.1	34.0	2075	36.8	1084	30.9	991
Secondary +	56.0	34.7	10.7	0.0	0.2	0.0	0.0	44.0	1184	44.8	936	40.8	248
Wealth index													
Low	65.6	33.7	0.8	0.0	0.0	0.0	0.0	33.7	228	29.5	42	34.6	187
Medium	66.8	28.0	4.7	0.0	0.0	0.0	0.5	32.7	1454	31.0	544	33.7	910
High	51.6	40.3	9.5	0.0	0.1	0.0	0.0	47.9	2427	50.2	2028	36.5	399
Total	**57.7**	**35.6**	**7.3**	**0.0**	**0.1**	**0.0**	**0.2**	**41.7**	**4109**	**45.8**	**2614**	**34.6**	**1495**

***MICS indicator 13**

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

Table 7.3 (EN.3) and Table 7.4 (EN.4) present information on the amount of time it takes to obtain water, and on the person who usually collects the water, respectively. The results presented here refer to one roundtrip from home to drinking water source since information on the number of trips made in one day was not collected.

Table 7.3 shows that for 55 per cent of the households, the drinking water source was in the premises. A further 19 per cent of all households said that it takes them less than 15 minutes to get to the water source, while a negligible percentage reported spending more than 1 hour for this purpose. Excluding those households with water on the premises, the mean time to the source of drinking water is 20 minutes. Differentials by background characteristics show that none of the low wealth index households had their drinking water facility within their premises.

Table 7.3 (EN.3): Time to source of water

Percentage distribution of households according to time to go to source of drinking water, get water and return, and mean time to source of drinking water, Embu district, Eastern Province, Kenya 2008

	Time to source of drinking water								
Characteristics	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	Total	Mean time to source of drinking water*	Number of households
Education of household head									
None	65.8	16.7	7.5	7.8	1.5	0.7	100.0	18.1	278
Primary	40.8	21.6	17.9	14.2	5.5	0.0	100.0	21.9	545
Secondary +	68.5	17.5	6.0	6.8	1.3	0.0	100.0	16.8	326
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	5
Wealth index									
Low	0.0	29.0	28.2	35.2	7.6	0.0	100.0	24.1	72
Medium	23.8	34.6	17.8	15.3	8.5	0.1	100.0	21.2	370
High	76.5	10.1	7.3	5.5	0.3	0.3	100.0	17.1	712
Total	**54.8**	**19.2**	**12.0**	**10.5**	**3.4**	**0.2**	**100.0**	**20.3**	**1154**

*The mean time to source of drinking water is calculated based on those households that do not have water on the premises.
NOTE: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

From Table 7.4 (EN.4), it's clear that in most cases (37 per cent), an adult female is usually the person who collects water, when the source is not on the premises. This percentage is lower (11 per cent) for adult men.

Table 7.4 (EN.4): Person collecting water

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

Characteristics	Person collecting drinking water*								Number of households
	Adult woman	Adult man	Female child under age 15	Male child under age 15	Adult woman and child	Adult man and child	Adult man and woman	Don't know	
Education of household head									
None	27.1	7.6	1.3	3.2	2.4	0.9	1.2	0.0	278
Primary	47.8	15.8	6.7	5.0	7.8	2.3	5.0	0.0	545
Secondary +	26.3	7.0	2.9	2.3	3.1	0.4	1.9	0.0	326
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	5
Wealth index									
Low	85.6	15.4	8.1	5.6	12.6	0.0	1.0	0.0	72
Medium	64.2	16.9	8.5	8.3	9.4	2.8	5.7	0.0	370
High	17.4	7.9	1.7	1.2	2.1	0.9	2.1	0.0	712
Total	**36.6**	**11.3**	**4.3**	**3.8**	**5.1**	**1.4**	**3.2**	**0.0**	**1154**

*Total per cent may add to more than 100.0 due to multiple responses.
NOTE: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

7.2 Sanitation

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

Over 47 per cent of the population in Embu live in households using improved sanitation facilities (Table 7.5 (EN.5)). Other details indicate that the use of improved sanitation facilities increases with improving levels of the household wealth index. Further, 47 per cent of the population in the district use pit latrines without slab or an open pit, while a negligible percentage had no toilet facility.

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

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

	Type of toilet facility used by household															
	Improved sanitation facility						Unimproved sanitation facility									
	Flush/pour flush to:															
Characteristics	Piped sewer system	Septic tank	Pit latrine	Ventilated improved pit latrine	Pit latrine with slab	Compo-siting toilet	Flush/ pour flush to some-where else	Flush/ pour flush to unknown place/ not sure/ don't know	Pit latrine without slab/ open pit	Bucket	Hanging toilet/ hanging latrine	Other	No facilities / bush / field	Total	Percentage of population using sanitary means of excreta disposal*	Number of household members
Education of household head																
None	19.1	7.3	4.3	15.8	16.4	0.0	0.0	0.0	33.4	0.5	3.0	0.0	0.2	100.0	62.9	837
Primary	1.2	0.3	1.6	7.6	24.0	0.0	0.1	0.1	60.5	0.0	3.8	0.5	0.5	100.0	34.6	2075
Secondary +	7.2	2.6	0.1	26.0	22.0	0.0	0.0	0.5	33.4	0.6	6.6	1.0	0.0	100.0	57.9	1184
Wealth index																
Low	0.0	0.0	0.0	2.0	1.7	0.0	0.0	0.0	88.0	0.0	3.2	0.0	5.2	100.0	3.7	228
Medium	1.0	0.0	0.0	3.4	15.8	0.0	0.0	0.0	78.1	0.0	1.0	0.6	0.0	100.0	20.2	1454
High	10.6	4.0	2.9	22.3	27.5	0.0	0.1	0.3	24.8	0.5	6.6	0.5	0.0	100.0	67.3	2427
Total	**6.6**	**2.4**	**1.7**	**14.5**	**21.9**	**0.0**	**0.0**	**0.2**	**47.2**	**0.3**	**4.4**	**0.5**	**0.3**	**100.0**	**47.1**	**4109**

***MICS indicator 12; MDG indicator 31**

The safest method of disposing a child's stool is using a toilet or by rinsing the stool into a toilet or latrine. Disposal of faeces of children 0-2 years of age is presented in Table 7.6 (EN.6). In almost all cases (97 per cent), stools from children aged 0-2 years are disposed safely, with 87 per cent of respondents indicating that they put the stool in the toilet/latrine. There were no major differences in the way households dispose off the child's waste by levels of mother's education and household wealth index.

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

Percentage distribution of children aged 0-2 years according to place of disposal of child's faeces, and the percentage of children aged 0-2 years whose stools are disposed of safely, Embu 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	(12.0)	(88.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(100.0)	(100.0)	27
Primary	10.2	84.8	0.4	0.6	1.1	0.0	1.1	1.7	100.0	95.0	311
Secondary +	8.5	89.9	0.3	0.4	0.3	0.0	0.0	0.6	100.0	98.5	195
Wealth index											
Low	(6.1)	(86.0)	(0.0)	(4.2)	(2.1)	(0.0)	(0.0)	(1.6)	(100.0)	(92.1)	31
Medium	8.8	86.9	1.0	0.4	1.5	0.0	1.0	0.4	100.0	95.7	188
High	10.6	86.8	0.0	0.2	0.2	0.0	0.5	1.7	100.0	97.4	315
						0.0					
Total	**9.7**	**86.8**	**0.4**	**0.5**	**0.8**	**0.0**	**0.7**	**1.2**	**100.0**	**96.5**	**534**

***MICS indicator 14**

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

Tabulation of the percentage of household members using improved sources of drinking water and sanitary means of excreta disposal is presented in Table 7.7 (EN.7). Sixty seven per cent of households reported using improved sources of drinking water and sanitary means of excreta. Those that reported using improved sources of drinking water in the survey were 71 per cent. This percentage increases with increasing levels of household wealth index, rising from 21 per cent for the low wealth index to 87 per cent for high wealth index households. However, there are no major differences in the of improved sources of drinking water by education level of household head.

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

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

	Percentage of household population:			
Characteristics	Using improved sources of drinking water*	Using sanitary means of excreta disposal**	Using improved sources of drinking water and using sanitary means of excreta disposal***	Number of household members
Education of household head				
None	75.7	96.8	74.1	837
Primary	61.3	95.1	58.1	2075
Secondary +	84.2	91.9	77.9	1184
Non-standard curriculum	(*)	(*)	(*)	9
Wealth index				
Low	21.1	91.7	17.3	228
Medium	51.5	98.3	50.7	1454
High	87.1	92.6	81.6	2427
Total	**70.8**	**94.6**	**67.1**	**4109**

***MICS indicator 11; MDG indicator 30**
****MICS indicator 31**
NOTE: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

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

8.1 Fertility

Achievement of national goals is directly linked to the size of the population and resources available to support it. Studies have shown that, in most of the developing countries resources are meagre to support the population and hence it is very important to balance population growth with the resource base.

To achieve this, it becomes necessary to develop population programmes that target a desired level of fertility. Such programmes invariably require information about prevailing fertility levels. In MICS, birth histories of women aged 15-49 years from the sampled households were collected to measure the fertility level in the district. Birth history includes 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 (RH (A) presents the measures of current fertility levels in Embu district for the three-year period preceding the survey; from mid-2005 to mid-2008. Current fertility measures include age-specific fertility rates (ASFRs) and total fertility rate (TFR). ASFR's are calculated by dividing the number of births to women in a specific age group by the number of 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 ASFR.

Table 8.1 (RH (A): Current fertility

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

Age group	Total
15-19	66
20-24	147
25-29	137
30-34	86
35-39	70
40-44	29
45-49	16
TFR	2.8

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

The total fertility rate in Embu is 2.8 children per woman for the three year period preceding the survey (mid-2005 to mid 2008). It's also observed that fertility in Embu peaks at age 20-24 years (147) and declines to 16 at ages 45 – 49years.

Table 8.2 presents data on the percentage distribution of all women and currently married women based on the number of children ever born and living. The mean number of children ever born to married women age 15-49 years is 3.2 and that of surviving is 3.0.

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, Embu district, Eastern Province, Kenya 2008

Age group	Number of children ever born									Total	Number of women	Mean number of children	
	0	1	2	3	4	5	6	7	8+			Ever born	Living
All women													
15-19	90.9	8.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0	100.0	146	1.0	1.0
20-24	43.3	39.9	13.4	3.3	0.1	0.0	0.0	0.0	0.0	100.0	245	1.4	1.4
25-29	13.8	42.7	27.6	12.2	3.3	0.4	0.0	0.0	0.0	100.0	212	1.8	1.7
30-34	3.6	21.1	31.4	29.0	8.5	3.4	0.4	0.0	2.5	100.0	185	2.6	2.5
35-39	7.7	12.3	26.6	22.6	14.8	12.5	2.7	0.2	0.5	100.0	163	3.2	3.1
40-44	0.0	6.6	6.2	24.1	21.3	13.7	3.2	14.8	10.2	100.0	123	5.6	5.3
45-49	0.3	6.4	2.6	14.9	25.1	21.3	8.7	1.7	19.1	100.0	107	6.1	5.8
Total	**24.3**	**23.3**	**17.2**	**14.4**	**8.5**	**5.7**	**1.6**	**1.7**	**3.2**	**100.0**	**1181**	**3.2**	**3.0**
Currently Married Women													
15-19	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	16	0.5	0.5
20-24	12.4	61.0	18.8	7.6	0.3	0.0	0.0	0.0	0.0	100.0	103	1.3	1.2
25-29	0.0	44.6	34.3	15.6	5.0	0.5	0.0	0.0	0.0	100.0	141	1.8	1.7
30-34	1.6	18.2	36.5	28.7	8.8	2.7	0.3	0.0	3.2	100.0	145	2.6	2.5
35-39	2.6	6.1	23.8	27.8	16.4	18.3	3.8	0.4	0.8	100.0	109	3.5	3.4
40-44	0.0	4.5	5.0	26.8	21.7	11.7	0.8	20.3	9.3	100.0	89	5.5	5.2
45-49	56.0	41.6	0.5	18.4	24.7	22.6	10.2	1.2	20.0	100.0	87	6.4	6.0
Total	**3.9**	**24.8**	**22.0**	**20.6**	**11.4**	**7.9**	**2.0**	**2.8**	**4.5**	**100.0**	**690**	**3.2**	**3.0**

8.2 Teenage Pregnancy and Motherhood

Reducing pregnancy rates among adolescents is one of the flagship programs of the Kenya Government. The proportion of women aged 15-19 years who had given birth, or currently pregnant, and those who began child bearing by selected characteristics are shown in Table 8.3. Results show that 15 per cent of women aged 15-19 years have began child bearing. This percentage is highest at 39 per cent among women from low wealth index households and lowest among women belonging to high wealth index households.

Table 8.3: Teenage pregnancy and motherhood

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

Characteristic	Percentage who		Percentage who have began child bearing	Number of women
	Have had a live birth	Are pregnant with first child		
Age				
15	4.0	.0	4.0	23
16	1.6	.0	1.6	25
17	7.2	8.8	16.0	27
18	15.7	9.3	25.0	25
19	13.0	9.5	22.5	46
Education				
None	.0	.0	.0	5
Primary	15.2	3.2	18.3	74
Secondary +	3.1	10.1	13.1	67
Wealth index				
Low	38.7	.0	38.7	6
Medium	10.0	.0	10.0	56
High	6.4	10.8	17.2	84
Total	**9.1**	**6.2**	**15.3**	**146**

8.3 Contraception

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

Results from the survey indicate that contraceptive prevalence among currently married or in union women in the district was 75 per cent (Table 8.4 (RH.1)). Use of modern methods was reported by 71 per cent, while the most popular method is injection (38 per cent).

The highest proportion of contraceptive use was recorded amongst women aged 30-34 followed by those aged 25-29 years at 82 and 80 per cent, respectively. The use of contraceptive methods increases with increasing levels of mothers' education.

Table 8.4 (RH.1): Use of contraception

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

Characteristics	Percentage of women (currently married or in union) who are using:														
	Not using any method	Female sterili-zation	Pill	IUD	Injections	Implants	Condom	Diaph-ragm/ foam/ jelly	LAM	Other	Total	Any modern method	Any tradi-tional method	Any method *	Number of women
Age															
15-19	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	16
20-24	30.0	0.0	17.6	1.5	40.2	5.1	0.0	2.7	2.9	0.0	100.0	67.1	2.9	70.0	103
25-29	20.0	0.3	15.0	1.0	51.2	9.3	0.3	0.3	2.4	0.4	100.0	77.2	2.8	80.0	141
30-34	18.0	0.7	13.9	3.8	45.8	12.2	2.1	0.3	3.1	0.0	100.0	78.9	3.1	82.0	145
35-39	27.8	10.9	12.4	6.0	37.6	1.4	0.6	0.6	0.0	2.6	100.0	69.6	2.6	72.2	109
40-44	24.7	1.0	17.1	12.4	23.2	6.9	0.8	1.0	10.4	2.4	100.0	62.4	12.8	75.3	89
45-49	29.2	7.3	13.4	26.2	15.8	5.6	0.0	0.0	0.0	2.5	100.0	68.3	2.5	70.8	87
Number of living children **															
0	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	29
1	27.7	0.0	16.7	1.0	42.7	8.7	0.0	1.3	2.0	0.0	100.0	70.3	2.0	72.3	179
2	9.8	0.0	18.1	6.1	51.3	10.1	2.2	0.5	1.7	0.3	100.0	88.1	2.1	90.2	164
3	24.8	2.8	12.9	12.3	37.4	5.8	0.4	0.9	2.6	0.0	100.0	72.6	2.6	75.2	140
4+	24.0	9.3	12.8	11.5	26.7	5.2	0.4	0.4	5.6	4.0	100.0	66.4	9.7	76.0	179
Education															
None	27.5	6.5	18.6	12.4	21.5	8.5	1.1	0.0	3.8	0.0	100.0	68.7	3.8	72.5	98
Primary	25.9	1.4	10.6	3.9	42.8	7.4	1.0	1.2	4.2	1.5	100.0	68.4	5.7	74.1	375
Secondary +	22.0	4.1	19.4	10.6	36.3	6.2	0.0	0.2	0.3	1.0	100.0	76.7	1.3	78.0	217
Wealth index															
Low	(9.8)	(0.0)	(18.2)	(7.6)	(36.6)	(4.6)	(0.0)	(0.0)	(23.1)	(0.0)	(100.0)	(67.1)	(23.1)	(90.2)	26
Medium	23.6	2.3	18.2	4.3	41.3	4.7	1.5	0.8	0.9	2.2	100.0	73.3	3.1	76.4	229
High	26.5	3.5	12.3	8.7	35.9	8.6	0.3	0.7	2.8	0.6	100.0	70.1	3.4	73.5	434
Total	**24.9**	**3.0**	**14.5**	**7.2**	**37.7**	**7.2**	**0.7**	**0.7**	**2.9**	**1.1**	**100.0**	**71.0**	**4.0**	**75.1**	**690**

***MICS indicator 21; MDG indicator 19C**

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

8.4 Unmet Need

Unmet need[6] for contraception refers to fecund women who are not using any method of contraception, but who wish to postpone the next birth or who wish to stop childbearing altogether. Unmet need is identified in MICS by using a set of questions eliciting current behaviours and preferences pertaining to contraceptive use, fecundity, and fertility preferences.

Women with an unmet need for spacing include women who are currently married (or in union), fecund (are currently pregnant or think that they are physically able to become pregnant), currently not using contraception, and want to space their births. Pregnant women are considered to want to space their births when they did not want the child at the time they got pregnant. Women who are not pregnant are classified in this category if they want to have a child or 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 women who are currently married (or in union), fecund (are currently pregnant or think that they are physically able to become pregnant), currently not using contraception, and want to limit their births. The latter group includes women who are currently pregnant but had not wanted the pregnancy at all, and women who are not currently pregnant but do not want to have a child or 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 was also estimated from the MICS data. The percentage of demand for contraception satisfied is defined as the proportion of women currently married or in union, who are currently using contraception out of the total demand for contraception. The total demand for contraception includes women who currently have an unmet need (for spacing or limiting), plus those who are currently using contraception.

The results of the survey on contraception, unmet need, and the demand for contraception satisfied are presented in Table 8.5 (RH.2). The unmet need for contraception is about two per cent in Embu, while 98 per cent of those wanting to use contraception have their demands met.

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

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

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

Characteristics	Current use of contraception	Unmet need for contraception			Number of women currently married or in union	Percentage of demand for contraception satisfied*****	Number of women currently married or in union with need for contraception
		For spacing**	For limiting***	Total ****			
Age							
15-19	(*)	(*)	(*)	(*)	(*)	(*)	11
20-24	70.0	1.5	0.0	1.5	102.7	97.9	73
25-29	80.0	0.3	0.2	0.5	141.3	99.4	114
30-34	82.0	1.6	0.3	1.9	144.9	97.7	122
35-39	72.2	0.0	0.0	0.0	109.3	100.0	79
40-44	75.3	0.0	0.6	0.6	89.3	99.2	68
45-49	70.8	0.0	0.6	0.6	86.5	99.1	62
Education							
None	72.5	2.8	0.6	3.4	97.8	95.6	74
Primary	74.1	0.3	0.1	0.4	374.9	99.4	279
Secondary +	78.0	2.3	0.4	2.8	216.9	96.6	175
Wealth index							
Low	(90.2)	(0.0)	(0.0)	(0.0)	(26.0)	(100.0)	23
Medium	76.4	0.5	0.4	0.9	229.4	98.9	177
High	73.5	1.8	0.2	2.0	434.1	97.3	328
Total	**75.1**	**1.3**	**0.3**	**1.6**	**689.6**	**98.0**	**529**

***MICS indicator 21; MDG indicator 19C**

******MICS indicator 98**

*******MICS indicator 99**

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

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

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

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

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 well-being and that of their infants. Better understanding of foetal growth, 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, symptoms and about the risks of labour and delivery, it may provide the route for ensuring that pregnant women do in practice deliver with the assistance of a skilled health care provider. The antenatal period also provides an opportunity to supply information on birth spacing, which is recognized as an important factor in improving infant survival. Tetanus immunization during pregnancy can be life-saving for both the mother and infant. Prevention and treatment of malaria among pregnant women, management of anaemia during pregnancy and treatment of STIs can significantly improve foetal outcomes and improve maternal health. Adverse outcomes such as low birth weight can be reduced through a combination of interventions to improve women's nutritional status and prevent infections (e.g., malaria and STIs) during pregnancy. More recently, the potential

of the antenatal period as an entry point for HIV prevention and care, in particular for the prevention of HIV transmission from mother to child, has led to renewed interest in access to and use of antenatal services.

WHO recommends a minimum of four antenatal visits based on a review of the effectiveness of different models of antenatal care. WHO has provided guidelines on the content on antenatal care visits. These include:

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

The type of personnel providing antenatal care to women aged 15-49 years who gave birth in the two years preceding the survey is presented in Table 8.6 (RH.3). Findings from the survey indicate that majority of the women (98 per cent) received antenatal care from a skilled personnel during pregnancy. Skilled personnel in this case refers to either a doctor, nurse, or a midwife. In Embu district, the two main antenatal care providers were medical doctors and nurses/midwifes (44 per cent and 54 per cent respectively).

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, Embu district, Eastern Province, Kenya 2008

Characteristics	Person providing antenatal care**				No antenatal care	Total	Antenatal care by any skilled personnel*	Number of women who gave birth in the preceding two years
	Medical doctor	Nurse/ midwife	Traditional birth attendant	Other				
Age								
15-19	(49.7)	(50.3)	(0.0)	(0.0)	(0.0)	(100.0)	(100.0)	12
20-24	38.3	60.5	0.0	0.0	1.3	100.0	98.7	74
25-29	49.4	48.1	0.0	0.0	2.5	100.0	97.5	54
30-34	49.2	50.1	0.0	0.0	0.7	100.0	99.3	41
35-49	40.2	56.2	0.0	0.0	3.6	100.0	96.4	38
Education								
None	64.4	35.6	0.0	0.0	0.0	100.0	100.0	22
Primary	39.8	57.5	0.0	0.0	2.7	100.0	97.3	131
Secondary +	45.7	53.6	0.0	0.0	0.6	100.0	99.4	67
Wealth index								
Low	(48.9)	(46.5)	(0.0)	(0.0)	(4.6)	(100.0)	(95.4)	12
Medium	43.8	53.4	0.0	0.0	2.8	100.0	97.2	75
High	43.7	55.3	0.0	0.0	1.0	100.0	99.0	133
Total	**44.0**	**54.2**	**0.0**	**0.0**	**1.8**	**100.0**	**98.2**	**219**

***MICS indicator 20**

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

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

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

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

Table 8.7 (RH.4) provides details on the types of services pregnant women received during the antenatal period. Results show that about 96 per cent reported that their blood sample was taken; 97 per cent had their blood pressure checked; and 91 per cent indicated that their urine specimen was taken while 98 per cent had their weight measurements taken.

Differentials by wealth index level of households clearly show an increasing trend in the different types of services received with increasing levels of the household wealth index.

Table 8.7 (RH.4): Antenatal care

Percentage of pregnant women receiving antenatal care among women aged 15-49 years who gave birth in two years preceding the survey and percentage of pregnant women receiving specific care as part of the antenatal care received, Embu district, Eastern Province, Kenya 2008

Characteristics	Percentage of pregnant women receiving ANC one or more times during pregnancy	Percentage of pregnant women who had: Blood test taken*	Blood pressure measured*	Urine specimen taken*	Weight measured*	Number of women who gave birth in two years preceding survey
Age						
15-19	(100.0)	(96.4)	(93.1)	(80.7)	(96.4)	12
20-24	98.7	97.4	98.7	94.7	98.7	74
25-29	97.5	95.8	97.5	85.4	97.5	54
30-34	99.3	94.7	96.5	93.1	98.4	41
35-49	96.4	94.1	96.4	92.8	96.4	38
Education						
None	100.0	96.3	100.0	95.5	100.0	22
Primary	97.3	94.4	95.8	86.8	96.7	131
Secondary +	99.4	98.7	99.4	97.9	99.4	67
Wealth index						
Low	(95.4)	(90.3)	(92.1)	(77.8)	(95.4)	12
Medium	97.2	95.4	96.7	90.4	97.2	75
High	99.0	96.7	98.1	92.6	98.4	133
Total	**98.2**	**95.9**	**97.3**	**91.0**	**97.8**	**219**

***MICS indicator 44**

* Proportions are calculated separately: Total number of women weighed, blood pressure measured, urine sample taken, blood sample taken.

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

8.6 Assistance at Delivery

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

The Embu survey 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.

Eighty six per cent of births that occurred during the two year period preceding the MICS were delivered by skilled personnel (Table 8.8 (RH.5). The wealthier the household is, the more likely the woman is to have delivered with the assistance of a skilled attendant. The differentials in education level do not, however, show any specific trend with over 80 per cent in all levels reporting to have been assisted by skilled medical personnel. The two main health providers of assistance during delivery were a nurse/midwife (44 per cent) and medical doctor (42 per cent).

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, Embu district, Eastern Province, Kenya 2008

	Person assisting at delivery										
Characteristics	Medical doctor	Nurse/ midwife	Traditional birth attendant	Community health worker	Relative/ friend	Other	No attendant	Total	Any skilled personnel*	Delivered in health facility**	Number of women who gave birth in preceding two years
Age											
15-19	(42.3)	(46.4)	(7.7)	(0.0)	(3.6)	(0.0)	(0.0)	(100.0)	(88.7)	(88.7)	12
20-24	39.6	48.6	1.4	1.0	7.6	1.7	0.0	100.0	88.2	81.4	74
25-29	45.6	41.9	4.3	0.0	4.5	3.0	0.7	100.0	87.4	87.4	54
30-34	44.2	42.8	1.7	0.0	9.6	0.0	1.8	100.0	87.0	86.1	41
35-49	40.2	37.7	1.0	0.0	11.8	6.7	2.6	100.0	77.8	77.0	38
Education											
None	58.4	38.0	0.0	0.0	3.5	0.0	0.0	100.0	96.5	93.9	22
Primary	36.3	44.4	3.8	0.6	11.3	2.0	1.6	100.0	80.8	77.7	131
Secondary +	48.4	44.7	0.6	0.0	2.1	4.3	0.0	100.0	93.0	91.2	67
Wealth index											
Low	(31.4)	(28.5)	(7.9)	(0.0)	(22.8)	(2.5)	(7.0)	(100.0)	(59.9)	(59.9)	12
Medium	41.1	35.2	4.1	1.0	13.5	3.3	1.7	100.0	76.4	77.1	75
High	43.7	50.1	1.0	0.0	3.1	2.0	0.0	100.0	93.8	89.0	133
Total	**42.2**	**43.9**	**2.4**	**0.3**	**7.7**	**2.5**	**1.0**	**100.0**	**86.0**	**83.4**	**219**

***MICS indicator 4; MDG indicator 17**
****MICS indicator 5**
* Skilled health personnel include doctors, nurses, midwives, and auxiliary midwives.
NOTE: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
Figures in parentheses are based on 25-49 unweighted cases.

Child Development 9

9.1 Child learning

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

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

In about 55 per cent of children aged under-five, an adult engaged in about four activities that promote learning and school readiness during the 3 days preceding the survey (Table 9.1 (CD.1)). The average number of activities that adults engaged in with the children was 3.8. The table also provides details of the father's involvement in activities for the children. It was reported that father's involvement with one or more activities was reported for about 44 per cent of the children, with an average of 1.3 number of activities. The percentage of children living in a household without their natural fathers was 37 per cent. About 47 per cent of households from the low wealth index category reported not having a natural father living in the households compared to 34 per cent for households from the high wealth index households.

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, Embu 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	57.8	3.9	45.3	1.3	36.3	461
Female	52.1	3.7	42.2	1.2	36.9	483
Age						
0-23 months	31.6	3.0	40.3	1.0	35.0	342
24-59 months	68.1	4.3	45.7	1.4	37.6	602
Mother's education						
None	51.4	3.6	20.2	0.4	63.8	64
Primary	50.1	3.6	45.2	1.2	32.6	537
Secondary +	63.0	4.1	45.7	1.5	37.9	342
Father's education						
None	65.1	4.1	75.7	2.7	0.0	72
Primary	48.7	3.6	63.5	1.7	0.0	336
Secondary +	51.4	3.8	64.8	1.7	0.0	188
Father not in HH	60.6	4.0	6.3	0.2	100.0	346
Missing/DK	(*)	(*)	(*)	(*)	(*)	1
Wealth index						
Low	34.0	3.1	27.5	0.6	47.1	57
Medium	51.2	3.7	38.7	1.1	39.2	352
High	59.6	4.0	48.7	1.4	33.8	535
Total	**54.9**	**3.8**	**43.7**	**1.3**	**36.6**	**944**

*** MICS indicator 46**
**** MICS indicator 47**
* 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 initiation of children to school. One of the World Fit for Children goals is the promotion of early childhood education.

The survey indicates that 35 per cent of children aged 36-59 months were attending early childhood education (Table 10.1 (ED.1)). The data shows that more male (39 per cent) than female (32 per cent) children attended early childhood education. Over 52 per cent of children from the high wealth index households were attending pre-school, while the figure drops to 15 per cent for children from medium wealth index households. As would be expected, young children in the age group 36-47 months are less likely (13 per cent) to attend pre-school in comparison to those aged 48-59 months (53 per cent).

The table also presents the proportion of children in standard one of primary school who attended pre-school the previous year. Overall, the percentage of children aged 6 years and who were attending standard one and had reportedly attended pre-school the previous year were 91 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 percentage of standard one who attended pre-school, Embu district, Eastern Province, Kenya 2008

Characteristics	Percentage of children aged 36-59 months currently attending early childhood education*	Number of children aged 36-59 months	Percentage of children attending std one who attended preschool program in previous year**	Number of children attending std. one
Sex				
Male	39.0	188	(93.8)	34
Female	32.0	227	(84.1)	18
Age of child				
36-47 months	13.2	188	(*)	0
48-59 months	53.4	227	(*)	0
6 years*	.	0	90.5	52
Mother's education				
None	39.1	59	(*)	6
Primary	28.4	244	(86.3)	32
Secondary +	47.9	112	(*)	13
Wealth index				
Low	(*)	27	(*)	3
Medium	15.2	166	(90.2)	15
High	52.3	226	(96.4)	34
Total	**35.2**	**415**	**90.5**	**52**

*** MICS indicator 52**
**** MICS indicator 53**
* Primary school entry age should be defined at the country level (usually based on UNESCO's ISCED1 classification). Here, it is assumed that primary education starts at age 6.
NA: Not applicable; NS: Not shown, based on less than 25 un-weighted cases.

10.2 Primary and Secondary School Participation

Universal access to basic education and the achievement of primary education by the world's children is one of the most important goals of the Millennium Development Goals 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. These goals are monitored through both school attendance and progression.

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

Among children in Embu district who are of primary school entry age (6 years), 67 per cent are attending standard one of primary school (Table 10.2(ED.2)). There are no gender differences in attendance of standard one with both reporting a rate of about 67 per cent. Among children from households from the high wealth index category, 76 per cent were attending standard one compared to 57 per cent among children from medium wealth index households.

Table 10.2 (ED.2): Primary school entry

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

Characteristics	Percentage of children of primary school entry age currently attending std 1	Number of children of primary school entry age
Sex		
Male	67.1	52
Female	67.4	35
Mother's education		
None	(*)	10
Primary	65.1	53
Secondary +	(61.9)	25
Wealth index		
Low	(*)	6
Medium	57.0	33
High	76.0	49
Total	**67.2**	**88**

*** MICS Indicator 54**

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

Table 10.3 (ED.3) provides the percentage of children of primary school age attending primary or secondary school. About 66 per cent of children of primary school age are attending school. Male children have a negligible difference in the proportion of those attending primary school (67 per cent) versus female children (65 per cent). Slight differentials by household wealth index are also noted.

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), Embu district, Eastern Province, Kenya 2008

	Male		Female		Total	
	Net attendance ratio	Number of children	Net attendance ratio	Number of children	Net attendance ratio*	Number of children
Age						
6	20.3	102	33.9	104	27.2	205
7	50.3	76	46.9	58	48.8	134
8	66.7	72	65.7	90	66.1	162
9	75.5	74	74.9	69	75.2	143
10	80.8	90	81.1	105	81.0	195
11	81.1	65	(74.5)	46	78.4	112
12	84.8	69	75.0	71	79.8	140
13	91.1	70	73.7	73	82.2	143
Mother's education						
None	63.2	474	59.6	477	61.4	951
Primary	72.7	117	80.8	112	76.7	229
Secondary+	(95.4)	28	(94.3)	25	94.9	52
Non-standard curriculum	(*)	1	(*)	0	(*)	1
Wealth index						
Low	54.9	367	54.9	367	54.9	734
Medium	89.7	95	76.3	107	82.6	203
High	79.5	156	82.1	141	80.7	297
Total	**66.5**	**619**	**64.9**	**615**	**65.7**	**1234**

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

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

The secondary school net attendance ratio is presented in Table 10.4 (ED.4). The secondary net attendance ratio in the district is 40 per cent. Gender differentials in secondary school attendance are apparent and in favour of boys i.e., 45 per cent of secondary school age boys are in secondary schools compared to only 35 per cent in for girls. The table also shows that the higher the socio-economic status of the household, the higher the percentage of children attending secondary schools. Notable as well is the finding that 66 per cent of children whose mothers had attained secondary school level or above were attending school.

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), Embu district, Eastern Province, Kenya 2008

	Male		Female		Total	
	Net attendance ratio	Number of children	Net attendance ratio	Number of children	Net attendance ratio*	Number of children
Age						
14	(21.8)	33	(8.0)	58	13.0	91
15	(48.2)	41	(43.0)	26	46.2	67
16	(45.4)	29	(58.5)	36	52.6	65
17	(58.9)	46	(49.1)	36	54.6	82
Mother's education						
None	(*)	16	(36.2)	33	(41.2)	49
Primary	34.1	77	35.2	72	34.6	149
Secondary+	(79.2)	33	(49.7)	26	66.2	60
Non-standard curriculum	(*).	0	(*)	0	(*)	0
Mother not in Household	(*)	23	(15.8)	24	21.8	47
Wealth index						
Low	22.3	11	(*)	7	(*)	18
Medium	41.5	59	14.6	52	28.9	110
High	50.7	80	47.9	97	49.2	177
Total	**45.1**	**150**	**35.1**	**156**	**40.0**	**305**

*** MICS indicator 56**

Table 10.5 (ED.4w) presents details on secondary school aged children attending primary school. Overall, 16 per cent of children are attending primary school when they should be attending secondary school. Majority of these (23 per cent) are males compared to 9 per cent for females. As expected, the percentage of children in primary school that are supposed to be in secondary school decreases as age increases.

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

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

Characteristics	Male		Female		Total	
	Per cent attending primary school	Number of children	Per cent attending primary school	Number of children	Per cent attending primary school	Number of children
Age						
14	(25.2)	33	15.9	58	19.3	91
15	(21.0)	41	(5.9)	26	15.1	67
16	(28.8)	29	(5.4)	36	15.8	65
17	(18.0)	46	(4.4)	36	12.0	82
Mother's education						
None	(*)	16	(12.0)	33	(16.2)	49
Primary	21.0	77	9.2	72	15.3	149
Secondary+	(14.6)	33	(7.6)	26	11.6	60
Non-standard curriculum	(*).	0	(*)	0	(*)	0
Mother not in Household	(*)	23	(6.7)	24	21.6	47
Wealth index						
Low	44.3	(*)	(*)	7	(*)	18
Medium	31.9	59	17.7	52	25.2	110
High	12.8	80	4.7	97	8.4	177
Total	**22.5**	**150**	**9.1**	**156**	**15.7**	**305**

The Gender Parity Index (GPI) for children attending primary and secondary education is provided in Table 10.6 (ED.7). The ratios included here are obtained from net attendance ratios rather than gross attendance ratios. Since majority of over-aged children attending primary education tend to be boys, these ratios can only be used as a proxy of the GPI. The table shows that gender parity for primary school is close to 1.0, indicating equal attendance to primary school by both girls and boys. However, the indicator increases to 1.55 for secondary education indicating a higher attendance of secondary schools among girls compared to boys.

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, Embu district, Eastern Province, Kenya 2008

Characteristics	Primary school net attendance ratio (NAR), girls	Primary school net attendance ratio (NAR), boys	Gender parity index (GPI) for primary school NAR*	Secondary school net attendance ratio (NAR), girls	Secondary school net attendance ratio (NAR), boys	Gender parity index (GPI) for secondary school NAR*
Sex						
Male	.	88.6	.	.	24.6	.
Female	88.7	.	.	38.2	.	.
Mother's education						
None	88.6	81.1	1.09	44.8	22.3	2.01
Primary	88.4	89.2	.99	31.8	29.3	1.09
Secondary+	88.9	93.2	.95	39.3	31.3	1.25
Non-standard curriculum	100.0	52.2	1.92	.	.	.
Mother not in Household	.	.	.	46.8	13.4	3.49
Wealth index						
Low	70.3	87.0	.81	87.0	16.5	5.27
Medium	84.2	87.9	.96	35.2	15.6	2.25
High	92.6	89.1	1.04	38.2	28.6	1.33
Total	**88.7**	**88.6**	**1.00**	**38.2**	**24.6**	**1.55**

* MICS Indicator 61; MDG Indicator 9

10.3 Adult Literacy

One of the World Fit for Children goals is to achieve adult literacy. Adult literacy is also an MDG indicator, relating to both men and women. In MICS, since only a women's questionnaire was administered, the results are based only on females aged 15-24. Literacy was assessed on the ability of women to read a short simple statement or on school attendance. Findings on adult literacy are presented in Table 10.7 (ED.8). Overall, about 87 per cent of women aged 15-24 years in the district are literate. The level of literacy increases with increasing levels of the household wealth index. The same pattern is replicated in the case of mothers' education level.

Table 10.7 (ED.8): Adult literacy

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

Characteristics	Percentage literate*	Percentage not known**	Number of women aged 15-24 years
Education			
None	(86.1)	(0.0)	38
Primary	76.5	0.3	195
Secondary +	100.0	0.0	158
Age			
15-19	87.2	0.3	146
20-24	86.7	0.1	245
Wealth index			
Low	(*)	(*)	10
Medium	82.9	0.0	122
High	90.6	0.3	260
Total	**86.9**	**0.2**	**391**

*** MICS Indicator 60; MDG Indicator 8**

* Percentage of women aged 15-24 years who are able to read a short simple statement about every day life or who attended secondary or higher education.

** The percentage not known includes those for whom no sentence in the required language was available or for whom no response was reported. If the percentage of the population for whom literacy status is not known exceeds 10 per cent in any category, caution should be exercised in the interpretation of the results.

11.1 Birth Registration

The Convention on the Rights of the Child states that every child has the right to a name and a nationality and the right to protection from being deprived of his or her identity. Birth registration is a fundamental means of securing these rights for children. The World Fit for Children calls for developing 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 monitoring indicator is the percentage of children under 5 years of age whose birth is registered.

Findings from the survey indicate that 81 per cent of the births of children under five years in Embu are registered (Table 11.1 (CP.1)). Birth registration for both male and female children was the same. Variations across levels of mothers' education and wealth index status of the household were observed. For example, mothers with secondary or higher level of education reported birth registrations for 74 per cent of their children versus over 82 per cent among mothers with lower education levels. Likewise, mothers from households with high wealth index reported lower birth registration percentage (75 per cent) compared to those from low wealth index (88 per cent) households.

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, Embu district, Eastern Province, Kenya 2008

Characteristics	Birth is registered*	Don't know if birth is registered	Number of children aged 0-59 months	Birth is not registered because: Costs too much	Must travel too far	Didn't know child should be registered	Doesn't know where to register	Other	Total	Number of children aged 0-59 months without birth registration
Sex										
Male	80.6	0.5	461	(*)	(*)	(*)	(*)	(*)	(*)	29
Female	80.6	0.5	483	(*)	(*)	(*)	(*)	(*)	(*)	19
Age										
0-11 months	88.9	0.0	141	(*)	(*)	(*)	(*)	(*)	(*)	10
12-23 months	82.5	0.7	175	(*)	(*)	(*)	(*)	(*)	(*)	6
24-35 months	82.4	0.6	191	(*)	(*)	(*)	(*)	(*)	(*)	7
36-47 months	74.9	1.0	196	(*)	(*)	(*)	(*)	(*)	(*)	7
48-59 months	77.6	0.2	240	(*)	(*)	(*)	(*)	(*)	(*)	18
Mother's education										
None	82.7	2.9	64	(*)	(*)	(*)	(*)	(*)	(*)	6
Primary	84.6	0.5	537	(*)	(*)	(*)	(*)	(*)	(*)	29
Secondary+	73.9	0.0	342	(*)	(*)	(*)	(*)	(*)	(*)	14
Wealth index										
Low	88.0	2.1	57	(*)	(*)	(*)	(*)	(*)	(*)	5
Medium	87.7	0.7	352	(*)	(*)	(*)	(*)	(*)	(*)	20
High	75.2	0.2	535	(*)	(*)	(*)	(*)	(*)	(*)	23
Total	**80.6**	**0.5**	**944**	**6.5**	**2.9**	**25.0**	**10.8**	**54.8**	**00.0**	**48**

*** MICS Indicator 62**

11.2 Child Labour

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

- at least one hour of economic work or 28 hours of domestic work per week for those Aged 5-11 years
- at least 14 hours of economic work or 28 hours of domestic work per week for those Aged 12-14 years

This definition allows differentiation between child labour and child work and helps 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. Among those aged 5-14 years, 11 per cent are engaged in child labour. More males (13 per cent) than females (10 per cent) were engaged in child labour. Child labour is high in households where the wealth index is low.

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, Embu 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	2.0	2.7	0.6	7.8	12.9	473
Female	0.5	1.8	1.1	6.8	9.8	487
Age						
5-11 years	1.8	3.2	0.8	10.2	15.4	677
12-14 years	0.1	0.0	1.1	0.4	1.5	283
School participation						
Yes	1.3	2.2	0.8	7.5	11.5	928
No	(0.0)	(1.9)	(2.2)	(0.0)	(4.1)	32
Mother's education						
None	0.2	0.3	0.2	3.5	4.0	139
Primary	1.4	2.9	1.1	8.1	13.4	584
Secondary +	1.5	1.8	0.6	7.4	10.3	237
Wealth index						
Low	0.4	1.4	0.5	16.8	18.7	69
Medium	1.2	3.1	1.8	8.9	14.7	388
High	1.4	1.7	0.2	4.7	7.6	502
Total	**1.3**	**2.2**	**0.9**	**7.3**	**11.3**	**960**

*** MICS Indicator 71**

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

Table 11.3 (CP.3) presents the percentage of children classified as student labourers or as labourer students. Student labourers are the children attending school and at the same time were involved in child labour activities at the time of the surveys. More specifically, of the 97 per cent of the children aged 5-14 years attending school, 12 per cent were involved in child labour activities. Further, out of the 12 per cent of the children classified as child labourers majority of them are also attending school (99 per cent).

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

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

Characteristics	Percentage of children in child labour*	Percentage of children attending school	Number of children 5-14 years of age	Percentage of child labourers who are also attending school	Number of child labourers aged 5-14	Percentage of students who are also involved in child labour****	Number of students aged 5-14
Sex							
Male	12.9	95.8	472.6	99.4	60.7	13.3	453
Female	9.8	97.6	487.3	98.0	47.6	9.8	476
Age							
5-9 years	15.4	96.3	677.2	99.1	104.1	15.8	652
10-14 years	1.5	97.7	282.7	(*)	4.3	1.4	276
Mother's education							
None	4.0	93.8	138.7	(*)	5.6	4.0	130
Primary	13.4	97.9	583.8	98.8	78.5	13.6	572
Secondary +	10.3	95.4	237.4	(*)	24.3	10.7	226
Wealth index							
Low	18.7	94.3	69.2	(*)	12.9	19.8	65
Medium	14.7	98.3	388.3	98.4	57.3	14.8	382
High	7.6	95.8	502.4	(99.1)	38.2	7.9	481
Total	**11.3**	**96.7**	**959.9**	**98.8**	**108.4**	**11.5**	**928**

**** MICS Indicator 72**
****** MICS Indicator 73**
* The table is based on the responses to a series of questions in the child labour module which is administered to the caretaker of each child in the household 5-14 years of age. The numerator to estimate the child labour percentage includes: (a) children 5-11 years of age that during the week preceding the survey did at least one hour of economic activity or at least 28 hours of domestic chores, and (b) children 12-14 years of age that during the week preceding the survey did at least 14 hours of economic activity or at least 28 hours of domestic chores.
** Labourer students: Number of children 5-14 years of age involved in child labour activities that are also attending school divided by the total number of children 5-14 years of age involved in child labour activities.
**** Student labourers: Number of children 5-14 years of age attending school that are also involved in child labour activities divided by the total number of children 5-14 attending school.

11.3 Child Discipline

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

The mothers/ caretakers that believed the child needs to be physically punished were 18 per cent (Table 11.4 (CP.4)). Children from high wealth index were however less likely to be subjected to severe punishment than their counterparts from low wealth index households. Further, a high proportion (95 per cent) of children was either physically or psychologically punished. There were no differentials in terms of level of education for the mothers who believed in physical punishment of children. With respect to the punishment pattern of male and female children, mothers were more likely to use non violent discipline on the girl child (7 per cent) than on the male child (2 per cent). However, more mothers felt the need for physically punishing boys than girls (74 per cent for boys compared to 71 per cent in the case of girls).

Table 11.4 (CP.4): Child discipline

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

	Percentage of children 2-14 years of age who experience:								
		Type of punishment							
Characteristics	Only non-violent discipline	Psycho-logical	Minor physical	Severe physical	Any psychological or physical	No discipline or punishment	Miss-ing	Mother/ caretaker believes that the child needs to be physically punished	Number of children aged 2-14 years**
Sex									
Male	1.8	76.4	92.2	18.4	97.7	0.6	0.0	74.4	645
Female	6.6	71.8	86.9	17.1	93.0	0.4	0.0	71.0	588
Age									
2-4 years	6.0	69.3	88.4	13.9	93.1	0.8	0.0	71.0	293
5-9 years	4.0	72.8	91.7	14.6	95.7	0.2	0.0	69.1	540
10-14 years	2.7	79.6	87.8	24.9	96.7	0.6	0.0	79.1	400
Mother's education									
None	9.0	71.6	76.9	11.3	89.4	1.6	0.0	72.6	177
Primary	3.7	73.3	92.3	18.8	96.1	0.1	0.0	72.6	745
Secondary +	2.1	77.8	90.5	19.1	97.1	0.7	0.0	73.4	312
Wealth index									
Low	1.3	85.6	96.5	27.8	97.8	0.9	0.0	81.9	79
Medium	3.6	75.2	92.1	22.2	96.3	0.1	0.0	72.9	493
High	4.7	72.1	87.0	13.3	94.5	0.8	0.0	71.6	661
Total	**4.1**	**74.2**	**89.7**	**17.8**	**95.4**	**0.5**	**0.0**	**72.8**	**1233**

*** MICS Indicator 74**

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

11.4 Early Marriage

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

In many parts of the world parents encourage the marriage of their daughters while they are still children in hopes that the marriage will benefit them both financially and socially, while also relieving financial burdens on the family. In 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.

Young married girls are a unique, though often invisible group, required to perform heavy amounts of domestic work are under pressure to demonstrate fertility, and are responsible for raising children while still children themselves. Hence, married girls and child mothers face constrained decision-making and reduced life choices. Boys are also affected by child marriage but the issue impacts girls in far larger numbers and with far reaching consequences. Cohabitation - when a couple lives together as if married - raises the same human rights concerns as marriage. Where a girl lives with a man and takes on the role of caregiver for him, the assumption is often that she has become an adult woman, even if she has not yet reached the age of 18. Additional concerns due to the informality of the relationship - for example, inheritance, citizenship and social recognition - might make girls in informal unions vulnerable in different ways than those who are in formally recognized marriages.

Research suggests that many factors interact to place a child at risk of marriage. Poverty, protection of girls, family honour and the provision of stability during unstable social periods are considered as significant factors in determining a girl's risk of becoming married while still a child. Women who married at younger ages were more likely to believe that it is sometimes acceptable for a husband to beat his wife and were 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. Parents seek to marry off their girls to protect their honour, and men often seek younger women as wives as a means to avoid choosing a wife who might already be infected. The demand for the young wife to prove her fertility, and the power imbalance resulting 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, percentage of women age 20-49 years married before 18 years of age and the percentage of women aged 15-19 years married or in union are presented in Table (CP.5). Among those women aged 20-49 years, 16 per cent married before reaching the age of 18 years. Among adolescent girls aged 15-19 years, 11 per cent are currently married or in union. This is however mainly prevalent in low wealth index householdsx.

Table 11.5 (CP.5): Early marriage

Percentage of women aged 15-49 years in marriage or union before their 15th birthday, percentage of women aged 20-49 years in marriage or union before their 18th birthday, and percentage of women aged 15-19 years currently married or in union, Embu 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	Number of women aged 15-49 currently married/in union
Age							
15-19	1.4	146	(*)	0	(*)	145.5	16
20-24	5.9	245	17	245		0	103
25-29	1.4	212	14.3	212		0	141
30-34	5.2	185	16	185		0	145
35-39	4.1	163	14.3	163		0	109
40-45	0	123	18.6	123		0	89
45-49	2.1	107	15	107		0	87
Education							
None	5.4	162	7.9	157	0	5.3	98
Primary	4.2	614	24.2	540	14.1	73.6	375
Secondary +	0.9	405	6	338	7.7	66.6	217
Wealth index							
Low	(8)	42	24.9	36	18.6	(5.8)	26
Medium	4.7	378	20.2	321	11.4	56.1	229
High	2.3	762	13.3	678	9.6	83.6	434
Total	**3.2**	**1181**	**15.8**	**1035**	**10.7**	**145.5**	**690**

*** MICS Indicator 67**
**** MICS Indicator 68**
***** MICS Indicator 70**

Another component is the spousal age difference with an indicator being 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. The data reveals that for married (or in union) women age 15-24 years in Embu district, over 43 per cent of the partners are older by 5 to 9 years. For women in Embu district, almost 25 per cent have their partners being older than them by at least 10 years.

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, Embu district, Eastern Province, Kenya 2008

Characteristics	Percentage of currently married/in union women whose husband or partner is: 0-4 years older	5-9 years older	10+ years older*	Total	Number of women currently married/ in union
Age					
15-19	(*)	(*)	(*)	(*)	16
20-24	32.5	43.5	24.0	100.0	103
Total	**31.9**	**43.3**	**24.8**	**100.0**	**118**

*** MICS Indicator 69**

11.5 Female Genital Mutilation/Cutting

Female genital mutilation/cutting (FGM/C) is the partial or total removal of the female external genitalia or other injury to the female genital organs. FGM/C is always traumatic and the immediate complications include excruciating pain, shock, urine retention, ulceration of the genitals and injury to adjacent tissue. Other complications include septicaemia, infertility, obstructed labour, and even death. The procedure is generally carried out on girls between the ages of 4 and 14. It is also performed to infants, women who are about to be married and, sometimes, to women who are pregnant with their first child or who have just given birth. It is often performed by traditional practitioners, including midwives and barbers, without anaesthesia, using scissors, razor blades or broken glass.

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

In MICS, a series of questions were asked to determine knowledge of FGM/C, prevalence of FGM/C, and details of the type of FGM/C performed. Tables 11.7 and 11.8 (CP.7) presents the prevalence of FGM/C among women and the type and extent of the procedure as well as the woman's attitudes towards FGM/C. In Embu, 98 per cent of women aged 15-49 years were aware of FGM/C and about 50 per cent reported that they had undergone some form FGM/C. No clear pattern is noted based on the educational level but the highest percentage (64 per cent) of those who had undergone FGM/C were of primary level education. Further, going by the household wealth Index, the percentage of those who had some form of FGM/C decreased from 76 per cent for those from low wealth index households to 45 per cent among those from high wealth index households.

Among those who had undergone FGM/C, about seven per cent had an extreme form of FGM/C i.e., both the removal of flesh from the genital area and sewing closed of the genital area.

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

Percentage of women aged 15-49 years who have heard about female genital mutilation/cutting (FGM/C), had any form of FGM/C, type of FGM/C among those who have had FGM/C, the percentage who have had the extreme form of FGM/C (infibulation), Embu 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: Had flesh removed	Were nicked	Were sewn closed	Form of FGM/C not determined	Total	Had an extreme form of FGM/C**	Number of women with FGM/C
Age										
15-19	96.3	22.5	146	(76.0)	(3.0)	(21.0)	(0.0)	(100.0)	(21.0)	33
20-24	98.1	37.9	245	90.5	0.0	8.6	0.9	100.0	8.6	93
25-29	98.5	44.9	212	90.7	0.0	8.1	1.2	100.0	8.1	95
30-34	97.8	59.3	185	89.2	0.4	10.1	0.4	100.0	10.1	110
35-39	99.7	60.2	163	96.0	0.4	3.6	0.0	100.0	3.6	98
40-44	99.7	67.6	123	96.6	3.4	0.0	0.0	100.0	0.0	83
45-49	97.8	70.9	107	95.2	0.0	4.8	0.0	100.0	4.8	76
Education										
None	96.6	26.3	162	(88.6)	(0.0)	(9.6)	(1.8)	(100.0)	(9.6)	43
Primary	97.9	64.0	614	92.8	0.4	6.7	0.1	100.0	6.7	393
Secondary +	99.5	37.6	405	90.3	2.1	6.9	0.8	100.0	6.9	152
FGM/C experience										
No FGM/C	96.6	0.0	593	(*)	(*)	(*)	(*)	(*)	(*)	0
Had FGM/C	100.0	100.0	588	91.9	0.8	6.9	0.4	100.0	6.9	588
Wealth index										
Low	100.0	76.2	42	(98.8)	(0.0)	(1.2)	(0.0)	(100.0)	(1.2)	32
Medium	98.6	57.2	378	90.7	0.6	8.3	0.4	100.0	8.3	216
High	98.0	44.7	762	92.0	0.9	6.7	0.5	100.0	6.7	340
Total	**98.3**	**49.8**	**1181.0**	**91.9**	**0.8**	**6.9**	**0.4**	**100.0**	**6.9**	**588**

*** MICS Indicator 63**
**** MICS Indicator 64**
* 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 (infibulations) is defined as both the removal of flesh from the genital area AND sewing closed the genital area.

All those who have heard about FGM/C were asked about their attitude towards whether the practice should be continued or not and the results are presented in Table 11.8 (CP. 7). Only 12 per cent of women aged 15-49 who had heard about FGM/ advocated for the continuation of the practice. Differentials by level of education were notable, the percentage of those with primary level education advocating for the practice (17 per cent) to continue was more than that of other levels. There were no observable differences in terms of household wealth index for those advocating for the practice to be continued.

Table 11.8 (CP.7): Attitude towards Female genital mutilation/cutting (FGM/C)

Percentage distribution of women age 15-49 years who have heard about FGM/C according to attitudes towards whether the practice of FGM/C should be continued, Embu 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	Total	
Age					
15-19	10.0	90.0	0.0	100.0	140
20-24	15.1	84.9	0.0	100.0	241
25-29	8.1	91.9	0.0	100.0	209
30-34	15.1	81.9	3.1	100.0	181
35-39	13.8	85.9	0.3	100.0	162
40-44	7.5	90.3	2.2	100.0	122
45-49	14.8	82.5	2.8	100.0	105
Education					
None	6.4	93.3	0.3	100.0	157
Primary	17.2	81.3	1.5	100.0	601
Secondary +	7.0	92.4	0.6	100.0	403
FGM/C experience					
No	1.2	98.3	0.6	100.0	573
Yes	23.0	75.6	1.4	100.0	588
Wealth index					
Low	12.6	80.7	6.7	100.0	42
Medium	12.0	87.2	0.8	100.0	372
High	12.3	86.9	0.8	100.0	747
Total	**12.2**	**86.8**	**1.0**	**100.0**	**1161**

***** MICS Indicator 66**

Table 11.9 (CP.8) presents the prevalence and extent of FGM/C performed on daughters of the respondents. All women age 15-49 with at least one daughter were asked whether their daughter(s) had undergone FGM/C or not. Almost nine per cent reported that their daughter(s) had undergone FGM/C. Mother's level of education is a key determinant in daughters having the FGM/C or not. Approximately 11 per cent of the women who had no education reported that their daughters have undergone FGM/C.

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

Percentage of women with at least one living daughter who has had female genital mutilation/cutting (FGM/C), and the percentage by type of FGM/C of the daughters, Embu district, Eastern Province, Kenya 2008

			Percentage of women whose daughters:						
	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	Number of women aged 15-49 years with at least one living daughter who had FGM/C
Age of woman									
15-24	0.0	83	(*)	(*)	(*)	(*)	(*)	(*)	0
25-34	1.7	247	(*)	(*)	(*)	(*)	(*)	(*)	4
35-49	16.9	304	85.7	0.0	14.3	0.0	100.0	14.3	51
Education									
None	11.1	87	(*)	(*)	(*)	(*)	(*)	(*)	10
Primary	11.2	374	89.1	0.0	10.9	0.0	100.0	10.9	42
Secondary +	2.4	173	(*)	(*)	(*)	(*)	(*)	(*)	4
Mother's FGM/C experience									
Had any FGM/C	14.1	394	86.8	0.0	13.2	0.0	100.0	13.2	56
No FGM/C	0.0	240	0.0	0.0	0.0	0.0	0.0	0.0	0
Wealth index									
Low	(20.1)	31	(*)	(*)	(*)	(*)	(*)	(*)	6
Medium	7.8	227	(*)	(*)	(*)	(*)	(*)	(*)	18
High	8.4	376	(*)	(*)	(*)	(*)	(*)	(*)	32
Total	**8.8**	**634**	**86.8**	**13.2**	**100.0**	**0.0**	**100.0**	**13.2**	**56**

***MICS indicator 65**

11.6 Domestic Violence

A number of questions were addressed to of 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 intended to give 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 agreed with the statements indicating that husbands/partners were justified to beat their wives/partners under the situations described in reality tend to be abused by their own husbands/partners. The results to these questions are presented in Table 11.10 (CP.9).

In total, 56 per cent of women aged 15-49 reportedly believe that the husband/partner is justified in beating his wife/partner when she goes out without telling him or when she neglects children or argues with him or if she refuses to have sex with him or if she burns food. Among the five circumstances mentioned above, beating is approved by about 50 per cent if the woman neglects children and by 22 per cent in case of refusing to have sex. About 22 per cent approved beating during instances where the woman went out without informing the partner.

Table 11.10 (CP.9): Attitudes toward domestic violence

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

Characteristics	Percentage of women aged 15-49 years who believe a husband is justified in beating his wife/partner: When she goes out without telling him	When she neglects the children	When she argues with him	When she refuses sex with him	When she burns the food	For any of these reasons*	Number of women aged 15-49 years
Age							
15-19	19.0	46.3	20.4	16.2	10.8	55.7	146
20-24	23.6	56.8	19.8	20.3	9.0	59.5	245
25-29	20.6	47.4	18.4	17.8	9.2	52.9	212
30-34	22.7	52.3	20.9	24.4	7.6	61.2	185
35-39	20.6	40.7	25.6	24.8	8.7	47.9	163
40-44	23.7	50.8	18.0	28.2	7.4	57.5	123
45-49	18.9	50.4	21.3	27.7	7.0	54.4	107
Marital/Union status							
Currently married/ in union	26.0	52.3	24.1	26.8	7.6	59.1	690
Formerly married/ in union	17.4	54.6	23.0	24.4	11.0	58.8	129
Never married/in union	14.5	43.0	12.8	12.3	9.7	48.7	363
Education							
None	10.9	34.5	3.3	11.0	3.6	35.5	162
Primary	29.6	57.2	27.8	31.3	12.6	65.6	614
Secondary +	13.6	44.3	16.4	12.6	4.7	49.3	405
Wealth index							
Low	32.1	59.1	36.1	43.2	17.6	68.7	42
Medium	29.3	55.6	24.4	26.6	13.6	62.9	378
High	17.1	46.2	17.8	18.7	5.7	51.7	762
Total	**21.5**	**49.7**	**20.5**	**22.1**	**8.6**	**55.9**	**1181**

*** MICS Indicator 100**

12.1 Knowledge of HIV Transmission and Condom Use

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

One measure which is both an MDG and UNGASS indicator is the percentage of young women who have comprehensive and correct knowledge of HIV prevention and transmission. Women were asked whether they knew of the three main ways of HIV transmission i.e. 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). As indicated in the table, all the interviewed women were aware of HIV/AIDS. However, the percentage of women who knew of all three ways of preventing HIV transmission was 66 per cent. Further, 93 per cent of women knew of having one faithful uninfected sex partner, 92 per cent knew of abstaining from sex, and 74 per cent knew of using a condom every time as main ways of preventing HIV transmission. Knowledge of at least one way to prevent transmission of HIV among women in Embu is quite high at 99 per cent.

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

Percentage of women aged 15-49 years who know the main ways of preventing HIV transmission, Embu district, Eastern Province. Kenya 2008

Characteristics	Heard of AIDS	Percentage who know transmission can be prevented by:			Knows all three ways	Knows at least one way	Doesn't know any way	Number of women
		Having only one faithful uninfected sex partner	Using a condom every time	Abstaining from sex				
Age								
15-19	100.0	88.2	69.2	92.2	62.4	98.3	1.7	146
20-24	99.8	91.9	76.8	91.7	64.7	99.0	1.0	245
25-29	100.0	94.6	79.8	90.9	69.5	99.8	0.2	212
30-34	100.0	96.1	76.4	91.9	70.1	98.7	1.3	185
35-39	100.0	93.4	79.9	99.3	76.0	100.0	0.0	163
40-44	100.0	96.5	57.3	91.7	50.3	100.0	0.0	123
45-49	100.0	92.6	71.2	87.7	61.3	100.0	0.0	107
Education								
None	100.0	96.6	82.3	96.5	76.5	99.5	0.5	162
Primary	99.9	92.1	70.4	94.0	64.4	99.0	1.0	614
Secondary +	100.0	93.9	76.9	88.2	63.8	99.8	0.2	405
Wealth index								
Low	100.0	90.7	65.1	99.1	62.5	100.0	0.0	42
Medium	100.0	94.9	68.3	92.1	61.4	99.8	0.2	378
High	99.9	92.7	77.7	92.1	68.3	99.1	0.9	762
Total	**100.0**	**93.3**	**74.2**	**92.3**	**65.9**	**99.3**	**0.7**	**1.181**

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

Table 12.2 (HA.2) presents the details of women who can correctly identify misconceptions concerning HIV. The information is based on the two most common and relevant misconceptions that HIV can be transmitted by supernatural means and mosquito bites. The table also provides information on whether women know that HIV cannot be transmitted by sharing food, and that HIV can be transmitted by sharing needles. The results indicate that 67 per cent of women reject the two most common misconceptions and know that a healthy looking person can be infected. The percentage of women who knew that HIV cannot be transmitted by supernatural means was 89 per cent, and that those who knew that HIV cannot be transmitted by sharing food was 89 per cent. Also, a higher percentage (98 per cent) of women knew that a healthy looking person can be infected. From the table it is evident that generally, correct knowledge about HIV/AIDS increases as the household wealth index levels increase (Table 12.2 (HA.2)).

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

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

Characteristics	Percentage who know that: HIV cannot be transmitted by: Option 1: Supernatural means	Option 2: Mosquito bites	A healthy looking person can be infected	Reject two most common misconceptions and know a healthy-looking person can be infected	Percentage who know that: Option 3: HIV cannot be transmitted by sharing food	Option 4: HIV can be transmitted by sharing needles	Number of women
Age							
15-19	91.5	81.7	96.0	74.4	92.6	99.2	146
20-24	90.4	76.5	98.1	70.3	93.7	99.8	245
25-29	91.8	75.0	98.3	69.4	93.8	97.9	212
30-34	86.3	71.2	98.3	64.2	85.8	98.5	185
35-39	89.8	67.5	99.5	63.8	86.8	98.6	163
40-44	88.7	67.0	98.7	63.0	83.7	99.7	123
45-49	77.4	59.3	94.9	54.8	79.0	100.0	107
Education							
None	92.6	88.0	99.4	84.0	90.9	98.2	162
Primary	84.3	63.4	97.0	54.7	88.4	99.3	614
Secondary +	93.8	79.3	98.5	77.8	89.2	98.9	405
Wealth index							
Low	77.1	65.7	100.0	56.5	86.1	100.0	42
Medium	86.1	67.4	97.9	60.1	85.5	99.8	378
High	90.7	75.0	97.8	70.4	91.0	98.6	762
Total	**88.7**	**72.2**	**97.9**	**66.6**	**89.0**	**99.0**	**1181**

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 the percentage of women who knew of 2 ways of preventing HIV transmission and also disapproved three common misconceptions. Comprehensive knowledge of HIV prevention methods and transmission is still fairly low. Overall, only 46 per cent of women aged 15-49 years in Embu were found to have comprehensive knowledge about HIV/AIDS. The survey findings revealed that the proportion of women with comprehensive knowledge increases with increasing levels of the household wealth index (Figure 12.1).

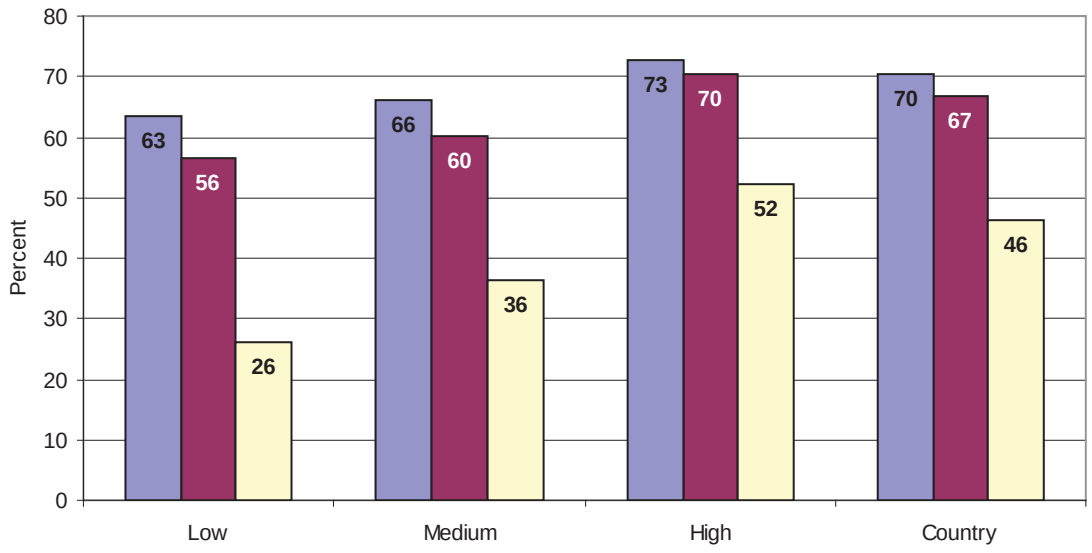
Table 12.3 (HA.3): Comprehensive knowledge of HIV/AIDS transmission

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

Characteristics	Know 2 ways to prevent HIV transmission	Correctly identify 3 misconceptions about HIV transmission	Have comprehensive knowledge (identify 2 prevention methods and 3 misconceptions)*	Number of women
Age				
15-19	65.0	74.4	50.4	146
20-24	70.8	70.3	49.9	245
15-24	68.6	71.9	50.1	391
25-29	75.3	69.4	53.0	212
30-34	74.2	64.2	46.7	185
35-39	76.7	63.8	46.5	163
40-44	53.7	63.0	29.4	123
45-49	69.3	54.8	36.5	107
Education				
None	79.4	84.0	66.6	162
Primary	66.4	54.7	34.2	614
Secondary +	72.6	77.8	56.3	405
Wealth index				
Low	63.4	56.5	26.1	42
Medium	66.0	60.1	36.4	378
High	72.9	70.4	52.2	762
Total	**70.3**	**66.6**	**46.2**	**1181**

*** MICS Indicator 82; MDG Indicator 19b**

Figure 12.1: Percent of women who have comprehensive knowledge of HIVAIDS transmission



Knowledge of mother-to-child transmission of HIV is also an important first step for women to seek HIV testing when they are pregnant to avoid infecting the baby. Women should know that HIV can be transmitted during pregnancy, delivery, and through breastfeeding. The level of knowledge among women age 15-49 years concerning mother-to-child transmission is presented in Table 12.4 (HA.4). Almost all (100 per cent) women in the district knew that HIV can be transmitted from mother to child. The percentage of women who knew all three ways of mother-to-child transmission is 52 per cent. However, the percentage that have knowledge regarding mother-to-child transmission is higher for women who have not attained any level of education (63 per cent) than for those who have attained secondary school and higher (47 per cent).

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

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

Characteristics	Know AIDS can be transmitted from mother to child	Percentage who know AIDS can be transmitted: During pregnancy	At delivery	Through breastmilk	All three ways	Did not know any specific way	Number of women
Age							
15-19	99.8	66.3	70.9	99.0	50.2	0.2	146
20-24	99.6	63.9	78.6	96.4	46.6	0.1	245
25-29	98.9	66.2	80.8	97.6	56.4	1.1	212
30-34	99.6	63.0	86.1	97.1	53.7	0.4	185
35-39	99.8	61.7	87.1	95.8	50.7	0.2	163
40-44	99.7	62.5	85.5	97.2	51.6	0.3	123
45-49	100.0	65.8	78.0	90.0	55.2	0.0	107
Education							
None	98.3	70.3	89.1	94.8	62.9	1.7	162
Primary	99.7	67.6	77.8	96.4	52.1	0.2	614
Secondary +	99.8	56.6	82.8	97.3	46.8	0.2	405
Wealth index							
Low	100.0	73.9	74.2	98.1	56.5	0.0	42
Medium	99.6	58.9	80.1	96.7	47.0	0.4	378
High	99.5	66.3	81.9	96.3	53.9	0.4	762
Total	**99.6**	**64.2**	**81.1**	**96.5**	**51.8**	**0.4**	**1181**

*** MICS Indicator 89**

The indicators on attitudes toward people living with HIV measure stigma and discrimination in the community. Stigma and discrimination are low if respondents report an accepting attitude on the following four questions: 1) would care for family member sick with AIDS; 2) would buy fresh vegetables from a vendor who was HIV positive; 3) thinks that a female teacher who is HIV positive should be allowed to teach in school; and 4) would ***not*** want to keep HIV status of a family member a secret. Table 12.5 (HA.5) presents the attitudes of women towards people living with HIV/AIDS. Among those who were aware about HIV/AIDS, about five per cent of the women reported that they would not care for a family member who is sick with HIV/AIDS, 41 per cent reported that if a family member was sick with HIV/AIDS they would prefer to keep it a secret, about one in every five believe that a teacher should not be allowed to work if he/she has HIV/AIDS and, 31 per cent would not buy food from a person who has HIV/AIDS. Overall, approximately 62 per cent agree with at least one of discriminatory statements mentioned above and 38 per cent agree with none of the discriminatory statements. Differentials by background characteristics were comparable.

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

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

Characteristics	Per cent of women who: Would not care for a family member who was sick with AIDS	If a family member had HIV would want to keep it a secret	Believe that a teacher with HIV should not be allowed to work	Would not buy food from a person with HIV/AIDS	Agree with at least one discriminatory statement	Agree with none of the discriminatory statements	Number of women who have heard of AIDS
Age							
15-19	4.1	52.7	29.1	39.2	71.8	28.2	146
20-24	7.2	51.5	20.1	37.3	72.9	27.1	245
25-29	3.4	43.9	16.9	33.2	66.6	33.4	212
30-34	5.6	23.5	17.3	24.1	49.2	50.8	185
35-39	4.4	35.0	16.7	22.1	52.7	47.3	163
40-44	3.2	28.8	15.6	28.5	49.3	50.7	123
45-49	3.3	42.9	23.4	26.7	61.7	38.3	107
Education							
None	3.4	39.6	10.5	25.8	57.5	42.5	162
Primary	6.0	38.5	26.7	39.0	64.8	35.2	614
Secondary +	3.4	43.8	12.4	20.3	58.7	41.3	405
Wealth index							
Lowest	2.4	43.2	31.8	38.5	63.5	36.5	42
Middle	3.6	33.3	23.3	34.0	61.1	38.9	378
Upper	5.4	43.9	17.0	28.7	61.9	38.1	761
Total	**4.7**	**40.5**	**19.6**	**30.8**	**61.7**	**38.3**	**1.180**

*** MICS Indicator 86**

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

Another important indicator is the knowledge of where to be tested for HIV and use of such services. Results from questions related to knowledge among women of a facility for HIV testing and whether they have ever been tested are presented in Table 12.6 (HA.6). Over 95 per cent of the women in Embu knew where to be tested, while about 50 per cent have actually been tested. Among these, 98 per cent had been told the results. The proportion of women who know where to be tested, those tested and to a certain extent those who have collected their results tends to be moderately spread with no particular trend across levels of education and household wealth index. For example, while 58 per cent of women from low wealth index households have been tested, the corresponding figures for those from medium and high wealth index households were 43 and 53 per cent, respectively.

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

Percentage of women aged 15-49 years who know where to get an HIV test. Percentage of women who have been tested and. of those tested the percentage who have been told the result. Embu district. Eastern Province. Kenya 2008

Characteristics	Know a place to get tested*	Have been tested**	Number of women	If tested. have been told result	Number of women who have been tested for HIV
Age					
15-19	87.2	21.6	146	100.0	31
20-24	94.8	68.3	245	99.0	168
25-29	97.6	64.4	212	95.8	137
30-34	97.0	57.3	185	100.0	106
35-39	98.4	55.1	163	99.6	90
40-44	99.8	32.9	123	(91.9)	40
45-49	94.4	18.7	107	(100.0)	20
Education					
None	97.8	64.3	162	98.9	104
Primary	94.9	49.2	614	98.1	302
Secondary +	96.0	45.8	405	97.8	185
Wealth index					
Low	100.0	58.2	42	(95.5)	24
Medium	96.7	42.9	378	99.8	162
High	95.0	53.3	762	97.6	406
Total	**95.7**	**50.1**	**1181**	**98.1**	**592**

* Women who know of a place to get tested for HIV include those women who have already been tested. including those tested during antenatal care.
** Women who have been tested for HIV includes those tested during antenatal care.
The first two columns of the table include all women in the denominator. Even those who have not heard of AIDS. In the fourth column. the denominator consists of women who have been tested and the numerator consists of women who have been told the results.

Table 12.7 shows the findings on HIV testing and counselling coverage during antenatal care. The results indicate that among women who had given birth within the two years preceding the survey, 91 per cent received information about HIV prevention during an ANC visit. A similar percentage was tested during antenatal care and received results of the HIV test.

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

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

Characteristics	Percentage of women who: Received antenatal care from a health care professional for last pregnancy	Were provided information about HIV prevention during ANC visit	Were tested for HIV at ANC visit	Received results of HIV test at ANC visit	Number of women who gave birth in the 2 years preceding the survey
Age					
15-19	(100.0)	(96.7)	(100.0)	(100.0)	12
20-24	98.7	94.2	95.0	94.2	74
25-29	97.5	96.1	95.0	94.3	54
30-34	99.3	90.2	94.2	94.2	41
35-49	96.4	79.0	71.6	71.6	38
Education					
None	100.0	94.9	88.5	88.5	22
Primary	97.3	90.5	92.2	91.5	131
Secondary +	99.4	92.0	89.5	89.5	67
Wealth index					
Low	(95.4)	(82.6)	(90.4)	(87.0)	12
Medium	97.2	90.8	89.8	89.8	75
High	99.0	92.5	91.8	91.4	133
Total	**98.2**	**91.4**	**91.0**	**90.6**	**219**

12.2 Orphans and Vulnerable Children

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

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

The results for living arrangements and orphanhood status are presented in Table 12.8 (HA.10). The results indicate that about 60 per cent of children age 0-17 years in Embu district lives with both parents. The percentage of those who were not living with a biological parent was eight per cent. One out of five children (21 per cent), are living with mother only though the father is alive. About eight per cent of the children have lost either one or both parents. As expected, the proportion of children living with parents generally decreases with increasing age of the child.

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

Percentage distribution of children aged 0-17 years according to living arrangements. Percentage of children aged 0-17 years in households not living with a biological parent and percentage of children who are orphans. Embu district. Eastern Province. Kenya 2008

Characteristics	Living with both parents	Living with neither parent				Living with mother only		Living with father only		Impossible to determine	Total	Not living with a biological parent*	One or both parents dead**	Number of children
		Only father alive	Only mother alive	Both are alive	Both are dead	Father alive	Father dead	Mother alive	Mother dead					
Sex														
Male	59.4	0.4	0.5	6.2	1.1	21.2	5.1	1.5	1.0	3.7	100.0	8.2	8.4	832
Female	61.1	0.5	0.5	5.9	1.0	21.2	3.6	1.4	0.8	3.9	100.0	8.0	7.4	840
Age														
0-4 years	63.1	0.0	0.1	3.1	0.5	28.2	1.4	0.3	0.0	3.4	100.0	3.6	2.0	497
5-9 years	60.9	0.6	0.4	6.4	1.0	19.3	5.2	2.3	1.0	3.0	100.0	8.4	8.1	481
10-14 years	61.1	0.8	1.2	6.0	1.1	17.1	5.6	1.9	1.1	4.1	100.0	9.1	11.5	479
15-17 years	50.4	0.3	0.3	12.2	2.4	18.4	6.5	1.0	2.6	5.9	100.0	15.2	13.1	215
Wealth index														
Low	55.5	0.0	0.5	2.4	0.0	20.0	9.1	3.0	2.6	6.9	100.0	2.9	12.2	104
Medium	61.8	1.0	0.5	6.7	0.1	19.6	2.1	1.1	1.6	5.5	100.0	8.3	6.5	649
High	59.7	0.1	0.5	6.0	1.9	22.5	5.3	1.5	0.3	2.2	100.0	8.5	8.4	919
Total	**60.2**	**0.4**	**0.5**	**6.0**	**1.1**	**21.2**	**4.3**	**1.4**	**0.9**	**3.8**	**100.0**	**8.1**	**7.9**	**1672**

*** MICS Indicator 78**
**** MICS Indicator 75**
*Children who are not living with at least one biological parent. either because the parents live elsewhere or because the parents are dead.
**Children for whom one or both biological parents are dead.
The denominator in this table is children age 0-17 years enumerated in the household listing.

Table 12.9 (HA.11) shows the percentage of orphaned and vulnerable children aged 0-17 years. Overall, 10 per cent of the children in Embu district are orphans and vulnerable children.

One of the measures developed for the assessment of the status of orphaned and vulnerable children relative to their peers is school attendance of children aged 10-14. The assessment is made through comparing school attendance for children who have lost both parents (double orphans) with 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 12.9 (HA.11): Prevalence of orphan hood and vulnerability among children

Percentage of children aged 0-17 years who are orphaned or vulnerable due to AIDS. Embu 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	0.0	0.1	3.0	3.1	8.4	11.2	832
Female	0.3	0.1	2.1	2.5	7.4	9.6	840
Age							
0-4 years	0.1	0.1	2.7	2.8	2.0	4.8	497
5-9 years	0.1	0.1	0.9	1.1	8.1	9.1	481
10-14 years	0.5	0.2	3.5	4.1	11.5	14.6	479
15-17 years	0.0	0.1	3.7	3.9	13.1	16.9	215
Wealth index							
Low	0.0	0.0	3.7	3.7	12.2	15.9	104
Medium	0.1	0.4	4.3	4.8	6.5	10.7	649
High	0.3	0.0	1.1	1.3	8.4	9.5	919
Total	**0.2**	**0.1**	**2.5**	**2.8**	**7.9**	**10.4**	**1672**

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

In Embu, all children whose parents are dead are currently attending school. Further, among children aged 10-14 who have not lost a parent and who live with at least one parent, the school attendance is universal. The double orphans to non-orphans school attendance ratio is 1.0, which means that there is equal opportunity for school attendance among orphans and non orphans in Embu district.

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

School attendance of children aged 10-14 years by orphan hood and vulnerability due to AIDS. Embu district. Eastern Province. Kenya 2008

Characteristics	Percentage of children whose mother and father have died	School attendance rate of children whose mother and father have died	Percentage of children of whom both parents are alive and child is living with at least one parent	School attendance rate of children of whom both parents are alive and child is living with at least one parent	Double orphans to non-orphans school attendance ratio*		Percentage of children who are orphaned or vulnerable	School attendance of children who are orphaned or vulnerable	Percentage of children who are not orphaned or vulnerable	School attendance of children who are not orphaned or vulnerable	OVC vs non-OVC school attendance ratio	Total number of children aged 10-14 years
Sex												
Male	1.1	100.0	79.4	99.8	1.0		14.4	87.9	85.6	99.8	0.9	215
Female	1.0	100.0	80.7	100.0	1.0		14.8	98.2	85.2	99.2	1.0	264
Wealth index												
Low	(0.0)	0.0	(77.1)	(100.0)	0.0		(18.4)	(96.5)	(81.6)	(100.0)	(1.0)	40
Medium	0.0	0.0	81.9	99.8	0.0		16.6	100.0	83.4	99.8	1.0	193
High	2.1	100.0	79.2	100.0	1.0		12.4	86.3	87.6	99.1	0.9	246
Total	**1.1**	**100.0**	**80.1**	**99.9**	**1.0**	**1**	**14.6**	**93.7**	**85.4**	**99.5**	**0.9**	**479**

*** MICS Indicator 77; MDG Indicator 20**

A double orphan is a child whose mother and father have both died.

Orphaned and vulnerable children due to AIDS (OVC) includes children whose mother or father have died (regardless of cause). who live in a household with a chronically ill adult. whose parents are chronically ill. or who live in a household where an adult who was chronically ill has died in the past year.

In many countries few services are available to families that have taken in children who are orphaned or vulnerable. Community-based organizations and governments need to be sure that families are supported to care for these children. The level and types of support provided to households caring orphans and vulnerable children due to AIDS is presented in Table 12.11 (HA.13). Almost 70 per cent of the orphaned or vulnerable children age 0-17 years had not received any support and none received any medical support during the year preceding the survey. However, about 21 per cent of the orphaned or vulnerable children had received educational support. Overall, only 30 per cent of the orphaned and vulnerable children received some kind of support.

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

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

	Percentage of orphans and vulnerable children whose households received:							
Characteristics	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	Number of children orphaned or vulnerable aged 0-17 years
Sex								
Male	0	7.9	4.6	18.5	28.5	0	71.5	93
Female	0	15.3	2.3	23.5	32.0	0	68.0	81
Age								
0-4 years	0	9.9	0.0	0.0	9.9	0	90.1	24
5-9 years	(0)	(7.0)	(4.3)	(14.2)	(18.5)	(0)	(81.5)	44
10-14 years	0	10.5	3.3	25.8	36.2	0	63.8	70
15-17 years	(0)	(19.2)	(5.5)	(33.1)	(45.8)	(0)	(54.2)	36
Wealth index								
Low	(0)	(0.0)	(0.0)	(7.2)	(7.2)	(0)	(92.8)	17
Medium	0	21.2	3.4	25.7	40.2	0	59.8	69
High	0	5.8	4.3	19.6	26.5	0	73.5	88
Total	**0**	**11.4**	**3.6**	**20.8**	**30.1**	**0**	**69.9**	**174**

*** MICS Indicator 81**

Orphaned and vulnerable children due to AIDS (OVC) includes children whose mother or father have died (regardless of cause). who live in a household with a chronically ill adult. whose parents are chronically ill. or who live in a household where an adult who was chronically ill has died in the past year.

NA: Not applicable.

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

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

Where

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

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

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

Sampling Frame and Selection of Clusters

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

Listing and Mapping Activities

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

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

Selection of Households

Lists of households were prepared by the listing teams in the field for each enumeration area. The households were grouped into two stratums based on whether the household has a child below 3 years or not. The households were then sequentially numbered from 1 to n_1 and n_2, where n_1 is the total number of households in stratum-1 (i.e., with a child below 3 years) and n_2 is the total number of households in stratum-2 (i.e., with out a child below 3 years) (n_1 + n_2 is the total number of households in each enumeration area) at the District Statistical Office, where selection of 16 households from stratum-1 and 8 households from straum-2 were carried out using systematic selection procedures using a random start.

Calculation of Sample Weights

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

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

Where,

Zd = total population of the district ‘d’,

nd = total number of clusters in district ‘d’,

zdi = number of households in the ith cluster of district ‘d’,

sdi = number of segments in the ith cluster of district ‘d’,

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

$hdji$ = number of households surveyed in the jth stratum of ith cluster in the district ‘d’.

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

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

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

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

Appendix B: List of Personnel Involved in the Survey

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

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

Cluster Development Co-ordinator
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Anisia Marigu Njiru
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Data Collection Co-ordinator

Mr. John Bore

Supervisors
Stephen Kathia
Elizabeth Mukami

Field Editors
Eliud Maina Kuria
Susan M. Mungai

Research Assistants
Grace Waithero Mwangi
Luke Njagi
Gladys Rwamba
Winfred Wahito Ireri
Roseline Muthoni Nthiga
Bridget Njoki Ngare

Appendix C: Estimates of Sampling Errors

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

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

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

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

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

Embu

	Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Unweighted Count	Confidence limits	
Iodized salt consumption	0.9732	0.00744	0.008	2.408	1.552	788	1,137	0.958	0.988
Child discipline	0.9358	0.01054	0.011	1.433	1.197	468	776	0.915	0.957

	Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Unweighted Count	Confidence limits	
Use of improved drinking water sources	0.6361	0.02255	0.035	10.196	3.193	2,867	4,643	0.591	0.681
Use of improved sanitation facilities	0.4712	0.03295	0.070	20.228	4.498	2,867	4,643	0.405	0.537
Net primary school attendance rate	0.9426	0.01042	0.011	1.596	1.263	523	797	0.922	0.963
Net secondary school attendance rate	0.3996	0.05202	0.130	3.203	1.790	213	285	0.296	0.504
Primary completion rate	0.0511	0.02216	0.434	0.860	0.928	61	86	0.007	0.095
Child labour	0.1129	0.02581	0.229	6.589	2.567	670	992	0.061	0.165
Prevalence of orphans	0.0792	0.01927	0.243	10.961	3.311	1,167	2,152	0.041	0.118
Prevalence of vulnerable children	0.0281	0.00879	0.312	6.081	2.466	1,167	2,152	0.011	0.046

	Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Unweighted Count	Confidence limits	
Skilled attendant at delivery	0.8603	0.02192	0.025	1.871	1.368	139	469	0.816	0.904
Antenatal care	0.9818	0.00794	0.008	1.651	1.285	139	469	0.966	0.998
Contraceptive prevalence	0.7507	0.02220	0.030	1.986	1.409	436	755	0.706	0.795
Adult literacy	0.8690	0.02299	0.026	1.955	1.398	247	422	0.823	0.915
Prevalence of FGM/C	0.4978	0.02439	0.049	2.809	1.676	747	1,181	0.449	0.547
Marriage before age 18	0.1703	0.03463	0.203	2.291	1.514	155	271	0.101	0.240
Comprehensive knowledge about HIV prevention among young people	0.4621	0.01949	0.042	1.803	1.343	747	1,181	0.423	0.501
Attitudes towards people with HIV/AIDS	0.3831	0.02435	0.064	2.957	1.720	747	1,180	0.334	0.432
Women who have been tested for HIV	0.5013	0.02796	0.056	3.690	1.921	747	1,181	0.445	0.557
Knowledge of mother-to-child transmission of HIV	0.5177	0.02138	0.041	2.161	1.470	747	1,181	0.475	0.560

	Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Unweighted Count	Confidence limits	
Underweight prevalence	0.1774	0.02016	0.114	2.531	1.591	469	910	0.137	0.218
Tuberculosis immunization coverage	0.9697	0.02309	0.024	4.195	2.048	96	232	0.924	1.016
Polio immunization coverage	0.8564	0.03154	0.037	1.868	1.367	96	232	0.793	0.919
Immunization coverage for DPT	0.9436	0.02566	0.027	2.856	1.690	96	232	0.892	0.995
Measles immunization coverage	0.9674	0.00649	0.007	0.309	0.556	96	232	0.954	0.980
Fully immunized children	0.7444	0.05089	0.068	3.144	1.773	96	232	0.643	0.846
Acute respiratory infection in last two weeks	0.1132	0.01214	0.107	1.385	1.177	494	944	0.089	0.137
Antibiotic treatment of suspected pneumonia	0.4864	0.08304	0.171	3.147	1.774	56	115	0.320	0.652
Diarrhoea in last two weeks	0.0764	0.01152	0.151	1.773	1.332	494	944	0.053	0.099
Received ORT or increased fluids and continued feeding	0.2394	0.04474	0.187	0.923	0.961	38	85	0.150	0.329
Fever in last two weeks	0.2012	0.01451	0.072	1.235	1.112	494	944	0.172	0.230
Antimalarial treatment	0.5562	0.05992	0.108	2.837	1.684	99	196	0.436	0.676
Support for learning	0.5488	0.02190	0.040	1.827	1.352	494	944	0.505	0.593
Birth registration	0.8061	0.02206	0.027	2.936	1.714	494	944	0.762	0.850

Appendix D: Data Quality Tables

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

		Household population of women age 10-54	Interviewed women age 15-49		
		Number	Number	Percent	Percentage of eligible women interviewed
Age	10-14	264	.	.	.
	15-19	181	124	12.3	68.7
	20-24	223	210	20.8	94.3
	25-29	184	182	18.0	99.1
	30-34	159	159	15.7	99.8
	35-39	140	140	13.9	99.7
	40-44	101	101	10.0	99.6
	45-49	98	95	9.4	96.9
	50-54	88	.	.	.
	15-49	1086	1011	100.0	93.1

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

INDICATOR		NUMERATOR	DENOMINATOR
			surveyed
16	Continued breastfeeding rate	Number of infants aged 12-15 months, and 20-23 months, that are currently breastfeeding	Total number of children aged 12-15 months and 20-23 months surveyed
17	Timely complementary feeding rate	Number of infants aged 6-9 months that are receiving breast milk and complementary foods	Total number of infants aged 6-9 months surveyed
18	Frequency of complementary feeding	Number of infants aged 6-11 months that receive breast milk and complementary food at least the minimum recommended number of times per day (two times per day for infants aged 6-8 months, three times per day for infants aged 9-11 months)	Total number of infants aged 6-11 months surveyed
19	Adequately fed infants	Number of infants aged 0-11 months that are appropriately fed: infants aged 0-5 months that are exclusively breastfed and infants aged 6-11 months that are breastfed and ate solid or semi-solid foods the appropriate number of times (see above) yesterday	Total number of infants aged 0-11 months surveyed
20	Antenatal care	Number of women aged 15-49 years that were attended at least once during pregnancy in the 2 years preceding the survey by skilled health personnel	Total number of women surveyed aged 15-49 years with a birth in the 2 years preceding the survey
21	Contraceptive prevalence	Number of women currently married or in union aged 15-49 years that are using (or whose partner is using) a contraceptive method (either modern or traditional)	Total number of women aged 15-49 years that are currently married or in union
22	Antibiotic treatment of suspected pneumonia	Number of children aged 0-59 months with suspected pneumonia in the previous 2 weeks receiving antibiotics	Total number of children aged 0-59 months with suspected pneumonia in the previous 2 weeks
23	Care-seeking for suspected pneumonia	Number of children aged 0-59 months with suspected pneumonia in the previous 2 weeks that are taken to an appropriate health provider	Total number of children aged 0-59 months with suspected pneumonia in the previous 2 weeks
24	Solid fuels	Number of residents in households that use solid fuels (wood, charcoal, crop residues and dung) as the primary source of domestic energy to cook	Total number of residents in households surveyed
25	Tuberculosis immunization coverage	Number of children aged 12-23 months receiving BCG vaccine before their first birthday	Total number of children aged 12-23 months surveyed
26	Polio immunization coverage	Number of children aged 12-23 months receiving OPV3 vaccine before their first birthday	Total number of children aged 12-23 months surveyed
27	Immunization coverage for diphtheria, pertussis and tetanus (DPT)	Number of children aged 12-23 months receiving DPT3 vaccine before their first birthday	Total number of children aged 12-23 months surveyed
28	Measles immunization 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	Antimalarial treatment (under-fives)	Number of children aged 0-59 months reported to have had fever in the previous 2 weeks that were treated with an appropriate antimalarial within 24 hours of onset	Total number of children aged 0-59 months reported to have had fever in the previous 2 weeks
40	Intermittent preventive malaria treatment (pregnant women)	Number of women receiving appropriate intermittent medication to prevent malaria (defined as at least 2 doses of SP/Fansidar) during the last pregnancy, leading to a live birth within the 2 years preceding the survey	Total number of women that have had a live birth within the 2 years preceding the survey
41	Iodized salt consumption	Number of households with salt testing 15 parts per million or more of iodine/iodate	Total number of households surveyed
42	Vitamin A supplementation (under-fives)	Number of children aged 6-59 months receiving at least one high-dose vitamin A supplement in the previous 6 months	Total number of children aged 6-59 months surveyed
43	Vitamin A supplementation (post-partum mothers)	Number of women with a live birth in the 2 years preceding the survey that received a high-dose vitamin A supplement within 8 weeks after birth	Total number of women that had a live birth in the 2 years preceding the survey
44	Content of antenatal care	Number of women with a live birth in the 2 years preceding the survey that received antenatal care during the last pregnancy	Total number of women with a live birth in the 2 years preceding the survey
45	Timely initiation of breastfeeding	Number of women with a live birth in the 2 years preceding the survey that put the newborn infant to the breast within 1 hour of birth	Total number of women with a live birth in the 2 years preceding the survey
46	Support for learning	Number of children aged 0-59 months living in households in which an adult has engaged in four or more activities to promote learning and school readiness in the past 3 days	Total number of children aged 0-59 months surveyed

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

INDICATOR		NUMERATOR	DENOMINATOR
64	Prevalence of extreme form of FGM/C	Number of women aged 15-49 years that reported undergoing an extreme form of genital mutilation/cutting (such as infibulation)	Total number of women aged 15-49 years surveyed
65	Prevalence of FGM/C among daughters	Number of women aged 15-49 years that reported that at least one daughter had undergone female genital mutilation/cutting	Total number of women aged 15-49 years surveyed that have at least one living daughter
66	Approval for FGM/C	Number of women aged 15-49 years favouring the continuation of female genital mutilation/cutting	Total number of women aged 15-49 years surveyed
67	Marriage before age 15 and age 18	Number of women that were first married or in union by the exact age of 15 and the exact age of 18, by age groups	Total number of women aged 15-49 years and 20-49 years surveyed, by age groups
68	Young women aged 15-19 years currently married or in union	Number of women aged 15-19 years currently married or in union	Total number of women aged 15-19 years surveyed
69	Spousal age difference	Number of women married/in union aged 15-19 years and 20-24 years with a difference in age of 10 or more years between them and their current spouse	Total number of women aged 15-19 and 20-24 years surveyed that are currently married or in union
70	Polygyny	Number of women in a polygynous union	Total number of women aged 15-49 years surveyed that are currently married or in union
71	Child labour	Number of children aged 5-14 years that are involved in child labour	Total number of children aged 5-14 years surveyed
72	Labourer students	Number of children aged 5-14 years involved in child labour activities that attend school	Total number of children aged 5-14 years involved in child labour activities
73	Student labourers	Number of children aged 5-14 years attending school that are involved in child labour activities	Total number of children aged 5-14 years attending school
74	Child discipline	Number of children aged 2-14 years that (1) experience only non-violent aggression, (2) experience psychological aggression as punishment, (3) experience minor physical punishment, (4) experience severe physical punishment	Total number of children aged 2-14 years selected and surveyed
75	Prevalence of orphans	Number of children under age 18 with at least one dead parent	Total number of children under age 18 surveyed
76	Prevalence of vulnerable children	Number of children under age 18 that have a chronically ill parent, that live in a household where an adult aged 18-59 years has died in the past year, or that live in a household where an adult aged 18-59 years has been chronically ill in the past year	Total number of children under age 18 surveyed
77	School attendance of orphans versus non-orphans	Proportion of double orphans (both mother and father dead) aged 10-14 years attending school	Proportion of children aged 10-14 years, both of whose parents are alive, that are living with at least one parent and are attending school
78	Children's living arrangements	Number of children aged 0-17 years not living with a biological parent	Total number of children aged 0-17 years surveyed
79	Malnutrition among children orphaned and made	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

INDICATOR		NUMERATOR	DENOMINATOR
	vulnerable by HIV/AIDS		moderately or severely underweight, of all children not classified as orphaned or vulnerable under age five that are weighed
80	Early sex among children orphaned and made vulnerable by HIV/AIDS	Proportion of orphaned and vulnerable children aged 15-17 years that had sex before age 15, of all orphaned and vulnerable children aged 15-17 years surveyed	Proportion of children not classified as orphaned or vulnerable aged 15-17 years that had sex before age 15, of all children not classified as orphaned or vulnerable aged 15-17 years surveyed
81	External support to children orphaned and made vulnerable by HIV/AIDS	Number of orphaned and vulnerable children under age 18 whose households received free basic external support in caring for the child	Number of orphaned and vulnerable children under age 18 surveyed
82	Comprehensive knowledge about HIV prevention among young people	Number of women aged 15-24 years that correctly identify two ways of avoiding HIV infection and reject three common misconceptions about HIV transmission	Total number of women aged 15-24 years surveyed
83	Condom use with non-regular partners	Number of women aged 15-24 years reporting the use of a condom during sexual intercourse with their last non-marital, non-cohabiting sex partner in the previous 12 months	Total number of women aged 15-24 years surveyed that had a non-marital, non-cohabiting partner in the previous 12 months
84	Age at first sex among young people	Number of women aged 15-24 years that have had sex before age 15	Total number of women aged 15-24 surveyed
85	Higher risk sex in the last year	Number of sexually active women aged 15-24 years that have had sex with a non-marital, non-cohabitating partner in the previous 12 months	Total number of women aged 15-24 that were sexually active in the previous 12 months
86	Attitude towards people with HIV/AIDS	Number of women expressing acceptance on all four questions about people with HIV or AIDS	Total number of women surveyed
87	Women who know where to be tested for HIV	Number of women that state knowledge of a place to be tested	Total number of women surveyed
88	Women who have been tested for HIV	Number of women that report being tested for HIV	Total number of women surveyed
89	Knowledge of mother-to-child transmission of HIV	Number of women that correctly identify all three means of vertical transmission	Total number of women surveyed
90	Counselling coverage for the prevention of mother-to-child transmission of HIV	Number of women that gave birth in the previous 24 months and received antenatal care reporting that they received counselling on HIV/AIDS during this care	Total number of women that gave birth in the previous 24 months surveyed
91	Testing coverage for the prevention of mother-to-child transmission of HIV	Number of women that gave birth in the previous 24 months and received antenatal care reporting that they received the results of an HIV test during this care	Total number of women that gave birth in the previous 24 months surveyed
92	Age-mixing among sexual partners	Number of women aged 15-24 years that had sex in the past 12 months with a partner who was 10 or more years older than they were	Total number of sexually active women aged 15-24 years surveyed

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



FORM-A: HOUSEHOLD

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

Introduction/Consent

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

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

MAY I START THE INTERVIEW NOW?

H.2: HH Member Listing — HL

List the head of the HH in line 01. List all HH members (HL2), their relationship to the HH head (HL3), and their sex (HL4)
Then ask: ARE THERE ANY OTHERS WHO LIVE HERE, EVEN IF THEY ARE NOT AT HOME NOW? THESE MAY INCLUDE CHILDREN IN SCHOOL OR AT WORK. If yes, complete listing.

Then, ask questions starting with HL5 for each person at a time. Add a continuation sheet if there is more than 15 members. Tick here if continuation sheet used ☐

					Eligible for :			If age 18-59	For children age 0-17 year ask HL9 to HL12A						
					Women Interview	Child Labor	Under-5 Interview								
HL1 LINE NO.	HL2 FIRST, PLEASE TELL ME THE NAME OF EACH PERSON WHO USUALLY LIVES IN THIS HOUSEHOLD, STARTING WITH THE HEAD OF THE HH?	HL3 WHAT IS THE RELATION-SHIP OF (name) TO THE HEAD OF THE HH?	HL4 IS (name) MALE OR FEMALE? 1 MALE 2 FEMALE	HL5 HOW OLD IS (name)? HOW OLD WAS (name) ON HIS/HER LAST BIRTHDAY? [record in completed years] 98=DK*	HL6 [Circle line no. if woman is age 15-49]	HL7 [For child age 5-14 years] WHO IS THE MOTHER OR PRIMARY CARETAKER OF (name)? [record line no. of mother/ caretaker]	HL8 [For child < 5] WHO IS THE MOTHER OR PRIMARY CARETAKER OF (name)? [record line no. of mother/ caretaker]	HL8A HAS (name) BEEN VERY SICK FOR AT LEAST 3 MONTHS DURING THE PAST 12 MONTHS?	HL9 IS (name's) NATURAL MOTHER ALIVE? 1-YES 2 - NO ⇘ HL11 8 - DK ⇘ HL11	HL10 [If alive:] DOES (name's) NATURAL MOTHER LIVE IN THIS HH? [Record line no. of mother or 00 for 'no']	HL10A [If '00' in HL10] HAS (name's) MOTHER BEEN VERY SICK FOR AT LEAST 3 MONTHS IN THE PAST 12 MONTHS	HL11 IS (name's) NATURAL FATHER ALIVE? 1 YES 2 - NO ⇘ NEXT LINE 8 - DK ⇘ NEXT LINE	HL12 [If alive:] DOES (name's) NATURAL FATHER LIVE IN THIS HH? [Record line no. of father or 00 for 'no']	HL12A [If '00' in HL12] HAS (name's) FATHER BEEN VERY SICK FOR AT LEAST 3 MONTHS IN THE PAST 12 MONTHS
Line	Name	Relation	M F	Age	15-49	Mother/CT	Mother/CT	Y N DK	Y N DK	Mother	Y N DK	Y N DK	Father	Y N DK
01		0 1	1 2	☐☐	01	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
02		☐☐	1 2	☐☐	02	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
03		☐☐	1 2	☐☐	03	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
04		☐☐	1 2	☐☐	04	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
05		☐☐	1 2	☐☐	05	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
06		☐☐	1 2	☐☐	06	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
07		☐☐	1 2	☐☐	07	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
08		☐☐	1 2	☐☐	08	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
09		☐☐	1 2	☐☐	09	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8

					Eligible for :			If age 18-59	For children age 0-17 year ask HL9 to HL12A					
HL1 LINE NO.	HL2 FIRST, PLEASE TELL ME THE NAME OF EACH PERSON WHO USUALLY LIVES IN THIS HOUSEHOLD, STARTING WITH THE HEAD OF THE HH?	HL3 WHAT IS THE RELATION-SHIP OF (name) TO THE HEAD OF THE HH?	HL4 IS (name) MALE OR FEMALE? 1 MALE 2 FEMALE	HL5 HOW OLD IS (name)? HOW OLD WAS (name) ON HIS/HER LAST BIRTHDAY? [record in completed years] 98=DK*	HL6 Women Interview [Circle line no. if woman is age 15-49]	HL7 Child Labor [For child age 5-14 years] WHO IS THE MOTHER OR PRIMARY CARETAKER OF (name)? [record line no. of mother/ caretaker]	HL8 Under-5 Interview [For child < 5] WHO IS THE MOTHER OR PRIMARY CARETAKER OF (name)? [record line no. of mother/ caretaker]	HL8A HAS (name) BEEN VERY SICK FOR AT LEAST 3 MONTHS DURING THE PAST 12 MONTHS?	HL9 IS (name's) NATURAL MOTHER ALIVE? 1-YES 2 - NO ⇘ HL11 8 - DK ⇘ HL11	HL10 [If alive:] DOES (name's) NATURAL MOTHER LIVE IN THIS HH? [Record line no. of mother or 00 for 'no']	HL10A [If '00' in HL10] HAS (name's) MOTHER BEEN VERY SICK FOR AT LEAST 3 MONTHS IN THE PAST 12 MONTHS	HL11 IS (name's) NATURAL FATHER ALIVE? 1 YES 2 - NO ⇘ NEXT LINE 8 - DK ⇘ NEXT LINE	HL12 [If alive:] DOES (name's) NATURAL FATHER LIVE IN THIS HH? [Record line no. of father or 00 for 'no']	HL12A [If '00' in HL12] HAS (name's) FATHER BEEN VERY SICK FOR AT LEAST 3 MONTHS IN THE PAST 12 MONTHS
Line	Name	Relation	M F	Age	15-49	Mother/CT	Mother/CT	Y N DK	Y N DK	Mother	Y N DK	Y N DK	Father	Y N DK
10		☐☐	1 2	☐☐	10	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
11		☐☐	1 2	☐☐	11	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
12		☐☐	1 2	☐☐	12	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
13		☐☐	1 2	☐☐	13	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
14		☐☐	1 2	☐☐	14	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
15		☐☐	1 2	☐☐	15	☐☐	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8	1 **2** **8**	☐☐	1 2 8
ARE THERE ANY OTHER PERSONS LIVING HERE - EVEN IF THEY ARE NOT MEMBERS OF YOUR FAMILY OR DO NOT HAVE PARENTS LIVING IN THIS HH? INCLUDING CHILDREN AT SCHOOL OR WORK? [If yes, insert child's name and complete the information. Fill in the totals below:]														
*HL5: Ascertain age for all persons below 60 years; Code '00' for children below 1 year and '97' for 97+ years.					Women 15-49	Children 5-14	Children under 5	Very sick (1)	Mother dead (2)		Mother sick (1)	Father dead (2)		Father sick (1)
TOTALS					☐☐	☐☐	☐☐	☐☐	☐☐		☐☐	☐☐		☐☐

Codes for HL3 : Relationship to the Head of HH:

01 - Head
02 - Wife or Husband
03 - Son or Daughter
04 - Son-in-law or daughter-in-law
05 - Grand child
06 - Parent
07 - Parent-in-law
08 - Brother or Sister
09 - Brother-in-law or sister-in-law
10 - Uncle/Aunt
11 - Niece/Nephew by blood
12 - Niece/Nephew by marriage
13 - Other relative
14 - Adopted/Foster/Step child
15 - Not related
98 - Don't know

H.3: Education (For all age 5 and above) ED

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

CODES FOR ED3, ED6 & ED8

0 - Pre-School
1 - Primary
2 - Post-Primary, Vocational
3 - Secondary, 'A' Level
4 - College – Middle Level
5 - University
6 - Non-standard curriculum
8 – Don't know

H.4: Water & Sanitation — WS

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

H.4: Water & Sanitation — WS

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

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

H.5: Household Characteristics — HC

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

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

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

H.6: Use of Mosquito Net — TN

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

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

H.7: Orphan-hood — OV

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

H.8: Child Labour (for 5-14 years of age only) CL

To be administered to mother/caretaker of each child in the HH age 5 through 14 years.

NOW, I WOULD LIKE TO ASK ABOUT ANY WORK CHILDREN IN THIS HH MAY DO.

CL1 Line no.	CL2 Name	CL3 DURING THE PAST WEEK, DID *(name)* DO ANY KIND OF WORK FOR SOMEONE, WHO IS NOT A MEMBER OF THIS HH? **If Yes:** FOR PAY IN CASH OR KIND? 1=Yes, for pay (cash or kind) 2=Yes, unpaid **3=No ⇨ CL5**			CL4 SINCE LAST *(day of the week)*, ABOUT HOW MANY HOURS DID *(name)* DO THIS WORK FOR SOMEONE WHO IS NOT A MEMBER OF THIS HH? *[If more than one job, include all hours at all jobs]* **Record & skip to ⇨ CL6**	CL5 AT ANY TIME DURING THE PAST YEAR, DID *(name)* DO ANY KIND OF WORK FOR SOMEONE WHO IS NOT A MEMBER OF THIS HH? **If Yes:** FOR PAY IN CASH OR KIND? 1=Yes, for pay (cash or kind) 2=Yes, unpaid 3=No			CL6 DURING THE PAST WEEK, DID *(name)* HELP WITH HH CHORES SUCH AS SHOPPING, COLLECTING FIREWOOD, CLEANING, FETCHING WATER OR CARING FOR CHILDREN? 1= Yes **2= No ⇨ CL8**		CL7 SINCE LAST *(day of the week)*, ABOUT HOW MANY HOURS DID *(name)* SPEND DOING THESE CHORES?	CL8 DURING THE PAST WEEK, DID *(name)* DO ANY OTHER FAMILY WORK (ON THE FARM OR IN A BUSINESS OR SELLING GOODS IN THE STREET?) 1=Yes **2=No ⇨Next Line**		CL9 SINCE LAST *(day of the week)*, ABOUT HOW MANY HOURS DID *(name)* DO THIS WORK?
Line No.	Name	Yes		No	No. of hours	Yes		No	Yes	No	No. of hours	Yes	No	No. of hours
		Paid	Unpaid			Paid	Unpaid							
		1	2	**3**	☐☐	1	2	3	1	**2**	☐☐	1	**2**	☐☐
		1	2	**3**	☐☐	1	2	3	1	**2**	☐☐	1	**2**	☐☐
		1	2	**3**	☐☐	1	2	3	1	**2**	☐☐	1	**2**	☐☐
		1	2	**3**	☐☐	1	2	3	1	**2**	☐☐	1	**2**	☐☐
		1	2	**3**	☐☐	1	2	3	1	**2**	☐☐	1	**2**	☐☐
		1	2	**3**	☐☐	1	2	3	1	**2**	☐☐	1	**2**	☐☐
		1	2	**3**	☐☐	1	2	3	1	**2**	☐☐	1	**2**	☐☐
		1	2	**3**	☐☐	1	2	3	1	**2**	☐☐	1	**2**	☐☐

H.9: Child Discipline CD

Review the household listing and list all children aged 2-14 years below in order according to their line number (HL1). Do not include other HH members outside of the age range 2-14 years. Record the line number, [name, sex, age, and the line number of the mother or caretaker] for each child. Then record the total number of children aged 2-14 in the box provided (CD7). {write the name, sex, age and the mother/caretaker line no. only for the eligible child}

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

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

Random Selection Of Child

Use the grid below to select one child between the ages of 2 and 14 years, if there is more than one child in that age range in the household. Look for the last digit of the household number from the cover page. This is the number of the row you should go to in the table below. Check the total number of eligible children (2-14) in CD7 above. This is the number of the column you should go to. Find the box where the row and the column meet and circle the number that appears in the box. This is the rank number of the child about whom the questions will be asked. Record the rank number in CD9 below. Finally, record the line number and name of the selected child in CD11 on the next page. Then, find the mother or primary caretaker of that child, and ask the questions, beginning with CD12.

CD8	Number of Eligible Children in the Household							
Last digit of HH. No.	1	2	3	4	5	6	7	8+
0	1	2	2	4	3	6	5	4
1	1	1	3	1	4	1	6	5
2	1	2	1	2	5	2	7	6
3	1	1	2	3	1	3	1	7
4	1	2	3	4	2	4	2	8
5	1	1	1	1	3	5	3	1
6	1	2	2	2	4	6	4	2
7	1	1	3	3	5	1	5	3
8	1	2	1	4	1	2	6	4
9	1	1	2	1	2	3	7	5

CD9	Record the rank number of the child.....	__ __

H.9: Child Discipline CD

Review the household listing and list all children aged 2-14 years below in order according to their line number (HL1). Do not include other HH members outside of the age range 2-14 years. Record the line number, [name, sex, age, and the line number of the mother or caretaker] for each child. Then record the total number of children aged 2-14 in the box provided (CD7). (write the name, sex, age and the mother/caretaker line no. only for the eligible child)

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

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

Random Selection Of Child

Use the grid below to select one child between the ages of 2 and 14 years, if there is more than one child in that age range in the household. Look for the last digit of the household number from the cover page. This is the number of the row you should go to in the table below. Check the total number of eligible children (2-14) in CD7 above. This is the number of the column you should go to. Find the box where the row and the column meet and circle the number that appears in the box. This is the rank number of the child about whom the questions will be asked. Record the rank number in CD9 below. Finally, record the line number and name of the selected child in CD11 on the next page. Then, find the mother or primary caretaker of that child, and ask the questions, beginning with CD12.

CD8	Number of Eligible Children in the Household							
Last digit of HH. No.	1	2	3	4	5	6	7	8+
0	1	2	2	4	3	6	5	4
1	1	1	3	1	4	1	6	5
2	1	2	1	2	5	2	7	6
3	1	1	2	3	1	3	1	7
4	1	2	3	4	2	4	2	8
5	1	1	1	1	3	5	3	1
6	1	2	2	2	4	6	4	2
7	1	1	3	3	5	1	5	3
8	1	2	1	4	1	2	6	4
9	1	1	2	1	2	3	7	5

CD9	Record the rank number of the child.....	__ __

H.9: Child Discipline — CD

Identify eligible child aged 2-14 in the household using the tables on the preceding page.
Request and interview the mother or primary caretaker of the selected child (identified by the line number in CD6).

#	Question	Options	Skip
CD11	Write name and line no. of the child selected for the module from CD3 and CD2, based on the rank number in CD9.	Name & Line No.: ☐☐	
CD12	ALL ADULTS USE CERTAIN WAYS TO TEACH CHILDREN THE RIGHT BEHAVIOUR OR TO ADDRESS A BEHAVIOUR PROBLEM. I WILL READ VARIOUS METHODS THAT ARE USED AND I WANT YOU TO TELL ME IF *YOU OR ANYONE ELSE IN YOUR HOUSEHOLD* HAS USED THIS METHOD WITH *(name)* IN THE PAST MONTH.		
CD12a	TOOK AWAY PRIVILEGES, FORBADE SOMETHING *(name)* LIKED OR DID NOT ALLOW HIM/HER TO LEAVE HOUSE).	Yes 1 No 2	
CD12b	EXPLAINED WHY SOMETHING (THE BEHAVIOR) WAS WRONG.	Yes 1 No 2	
CD12c	SHOOK HIM/HER.	Yes 1 No 2	
CD12d	SHOUTED, YELLED AT OR SCREAMED AT HIM/HER.	Yes 1 No 2	
CD12e	GAVE HIM/HER SOMETHING ELSE TO DO.	Yes 1 No 2	
CD12f	SPANKED, HIT OR SLAPPED HIM/HER ON THE BOTTOM WITH BARE HAND.	Yes 1 No 2	
CD12g	HIT HIM/HER ON THE BOTTOM OR ELSEWHERE ON THE BODY WITH SOMETHING LIKE A BELT, HAIRBRUSH, STICK OR OTHER HARD OBJECT.	Yes 1 No 2	
CD12h	CALLED HIM/HER DUMB, LAZY, OR ANOTHER NAME LIKE THAT.	Yes 1 No 2	
CD12i	HIT OR SLAPPED HIM/HER ON THE FACE, HEAD OR EARS.	Yes 1 No 2	
CD12j	HIT OR SLAPPED HIM/HER ON THE HAND, ARM, OR LEG.	Yes 1 No 2	
CD12k	BEAT HIM/HER UP WITH AN IMPLEMENT (HIT OVER AND OVER AS HARD AS ONE COULD).	Yes 1 No 2	
CD12l	PINCH HIM/HER.	Yes 1 No 2	
CD13	DO YOU BELIEVE THAT IN ORDER TO BRING UP (RAISE, EDUCATE) *(name)* PROPERLY, YOU NEED TO PHYSICALLY PUNISH HIM/HER?	Yes 1 No 2 Don't know/no opinion 8	

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

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

Interviewer's Remarks:

Supervisor's Remarks:



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

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

Introduction/Consent

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

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

MAY I START THE INTERVIEW NOW?

ENGLISH

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

KISWAHILI

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

W.2: Woman Information			WI
#	Question	Options	Skip
WM8	IN WHAT MONTH AND YEAR WERE YOU BORN? [Date of birth]	Month ☐☐ DK Month 98 Year ☐☐☐☐ DK Year 9998	
WM9	HOW OLD WERE YOU AT YOUR LAST BIRTHDAY?	Age in completed years ☐☐	
WM10	HAVE YOU EVER ATTENDED SCHOOL OR PRE-SCHOOL?	Yes 1 **No 2**	2⇨WM14
WM11	WHAT IS THE HIGHEST LEVEL OF SCHOOL YOU ATTENDED?	Pre-School 0 Primary 1 Post-Primary, Vocational 2 Secondary, 'A' Level 3 College – Middle Level 4 University 5 Non-standard curriculum 6	
WM12	WHAT IS THE HIGHEST GRADE YOU COMPLETED AT THAT LEVEL?	Grade ☐☐	
WM13	**Check WM11: Level of schooling** ☐ **Secondary/College/University (codes 3 or 4 or 5)** ⇨ **WM15** ☐ **Other** ⇨ **Continue to WM14**		
WM14	NOW I WOULD LIKE YOU TO READ THIS SENTENCE TO ME. [Show language test card to respondent]	Cannot read at all 1 Able to read only parts of sentence 2 Able to read whole sentence 3 No sentence in required language 4 (specify language_____) Blind/mute, visually/speech impaired 5	
WM15	HOW OFTEN DO YOU LISTEN TO RADIO?	Almost everyday 1 At least once a week 2 At least once a month 3 Rarely/Never 4	
WM16	HOW OFTEN DO YOU WATCH TELEVISION?	Almost everyday 1 At least once a week 2 At least once a month 3 Rarely/Never 4	
WM17	HOW OFTEN DO YOU READ NEWSPAPERS?	Almost everyday 1 At least once a week 2 At least once a month 3 Rarely/Never 4	

W.3: Child Mortality			CM
#	Question	Options	Skip
To be administered to all women age 15-49. All questions refer to LIVE births only.			
CM1	NOW I WOULD LIKE TO ASK ABOUT ALL THE BIRTHS YOU HAVE HAD DURING YOUR LIFE. HAVE YOU EVER GIVEN BIRTH? ***If "No" probe by asking:*** I MEAN, TO A CHILD WHO EVER BREATHED OR CRIED OR SHOWED OTHER SIGNS OF LIFE – EVEN IF HE OR SHE LIVED ONLY A FEW MINUTES OR HOURS?	Yes ..... 1 **No** **2**	2⇨(W.6)
CM3	DO YOU HAVE ANY SONS OR DAUGHTERS TO WHOM YOU HAVE GIVEN BIRTH WHO ARE NOW LIVING WITH YOU?	Yes ..... 1 **No** **2**	2⇨CM5
CM4	HOW MANY SONS LIVE WITH YOU? HOW MANY DAUGHTERS LIVE WITH YOU?	A. Sons at home ☐☐ B. Daughters at home ☐☐	
CM5	DO YOU HAVE ANY SONS OR DAUGHTERS TO WHOM YOU HAVE GIVEN BIRTH WHO ARE ALIVE BUT DO NOT LIVE WITH YOU?	Yes ..... 1 **No** **2**	2⇨CM7
CM6	HOW MANY SONS ARE ALIVE BUT DO NOT LIVE WITH YOU? HOW MANY DAUGHTERS ARE ALIVE BUT DO NOT LIVE WITH YOU?	A. Sons elsewhere ☐☐ B. Daughters elsewhere ☐☐	
CM7	HAVE YOU EVER GIVEN BIRTH TO A BOY OR GIRL WHO WAS BORN ALIVE BUT LATER DIED? **If "No" probe by asking:** ANY BABY WHO EVER BREATHED OR CRIED OR SHOWED OTHER SIGNS OF LIFE BUT DID NOT SURVIVE – EVEN IF HE OR SHE LIVED ONLY A FEW MINUTES OR HOURS?	Yes ..... 1 **No** **2**	2⇨CM9
CM8	HOW MANY BOYS HAVE DIED? HOW MANY GIRLS HAVE DIED?	A. Boys dead ☐☐ B. Girls dead ☐☐	
CM9	**Sum answers to** CM4, CM6, & CM8.	Sum ☐☐	
CM10	**JUST TO MAKE SURE THAT I HAVE THIS RIGHT, YOU HAVE HAD IN TOTAL _____ BIRTHS DURING YOUR LIFE. IS THIS CORRECT?** ☐ **Yes** ⇨ **Continue to W.3a (next page).** ☐ **No** ⇨ **Check responses and make corrections before proceeding to W.3a**		

W.3a: Birth History — BH

NOW I WOULD LIKE TO RECORD THE NAMES OF ALL YOUR BIRTHS, WHETHER STILL ALIVE OR NOT, STARTING WITH THE FIRST ONE YOU HAD.
Record names of all the births in BH1. Record twins and triplets on separate lines.

BH1		BH2	BH3	BH4	BH5	BH6	BH7	BH8	BH9		BH10
#	WHAT NAME WAS GIVEN TO YOUR (FIRST/ NEXT) BABY?	WERE ANY OF THESE BIRTHS TWINS?	IS *(name)* A BOY OR GIRL?	IN WHAT MONTH AND YEAR WAS *(name)* BORN? **Probe:** WHAT IS HIS/HER BIRTHDAY?	IS *(name)* STILL ALIVE?	HOW OLD WAS *(name)* AT HIS/HER LAST BIRTHDAY? [Record age in completed years]	IS *(name)* LIVING WITH YOU?	Record HH line number of child [Record '00' if child not listed in HH]	*If dead:* HOW OLD WAS *(name)* WHEN HE/SHE DIED? HOW MANY MONTHS OLD WAS *(name)*? [Record days if less than 1 month; months if less than 2 years; or years]		WERE THERE ANY OTHER LIVE BIRTHS BETWEEN *(name of previous birth)* AND *(name)*?
01		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ Year ☐☐☐☐	Yes ... 1 **No ..... 2** **⇨ BH9**	☐☐	Y .... 1 N 2	☐☐ **⇨ next line**	Days ..... 1 Month ..... 2 Year 3	☐☐	
02		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ Year ☐☐☐☐	Yes ... 1 **No ..... 2** **⇨ BH9**	☐☐	Y .... 1 N 2	☐☐ **⇨ BH10**	Days ..... 1 Month ..... 2 Year 3	☐☐	Yes ..... 1 [Add] No ..... 2 [Next]
03		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ Year ☐☐☐☐	Yes ... 1 **No ..... 2** **⇨ BH9**	☐☐	Y .... 1 N 2	☐☐ **⇨ BH10**	Days ..... 1 Month ..... 2 Year 3	☐☐	Yes ..... 1 [Add] No ..... 2 [Next]
04		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ Year ☐☐☐☐	Yes ... 1 **No ..... 2** **⇨ BH9**	☐☐	Y .... 1 N 2	☐☐ **⇨ BH10**	Days ..... 1 Month ..... 2 Year 3	☐☐	Yes ..... 1 [Add] No ..... 2 [Next]
05		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ Year ☐☐☐☐	Yes ... 1 **No ..... 2** **⇨ BH9**	☐☐	Y .... 1 N 2	☐☐ **⇨ BH10**	Days ..... 1 Month ..... 2 Year 3	☐☐	Yes ..... 1 [Add] No ..... 2 [Next]
06		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ Year ☐☐☐☐	Yes ... 1 **No ..... 2** **⇨ BH9**	☐☐	Y .... 1 N 2	☐☐ **⇨ BH10**	Days ..... 1 Month ..... 2 Year 3	☐☐	Yes ..... 1 [Add] No ..... 2 [Next]
07		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ Year ☐☐☐☐	Yes ... 1 **No ..... 2** **⇨ BH9**	☐☐	Y .... 1 N 2	☐☐ **⇨ BH10**	Days ..... 1 Month ..... 2 Year 3	☐☐	Yes ..... 1 [Add] No ..... 2 [Next]
08		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ Year ☐☐☐☐	Yes ... 1 **No ..... 2** **⇨ BH9**	☐☐	Y .... 1 N 2	☐☐ **⇨ BH10**	Days ..... 1 Month ..... 2 Year 3	☐☐	Yes ..... 1 [Add] No ..... 2 [Next]

W.3a: Birth History — BH

NOW I WOULD LIKE TO RECORD THE NAMES OF ALL YOUR BIRTHS, WHETHER STILL ALIVE OR NOT, STARTING WITH THE FIRST ONE YOU HAD.
Record names of all the births in BH1. Record twins and triplets on separate lines.

BH1		BH2	BH3	BH4	BH5	BH6	BH7	BH8	BH9		BH10
#	WHAT NAME WAS GIVEN TO YOUR (FIRST/ NEXT) BABY?	WERE ANY OF THESE BIRTHS TWINS?	IS *(name)* A BOY OR GIRL?	IN WHAT MONTH AND YEAR WAS *(name)* BORN? **Probe:** WHAT IS HIS/HER BIRTHDAY?	IS *(name)* STILL ALIVE?	HOW OLD WAS *(name)* AT HIS/HER LAST BIRTHDAY? [Record age in completed years]	IS *(name)* LIVING WITH YOU?	Record HH line number of child [Record '00' if child not listed in HH]	*If dead:* HOW OLD WAS *(name)* WHEN HE/SHE DIED? HOW MANY MONTHS OLD WAS *(name)*? [Record days if less than 1 month; months if less than 2 years; or years]		WERE THERE ANY OTHER LIVE BIRTHS BETWEEN *(name of previous birth)* AND *(name)*?
09		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ Year ☐☐☐☐	Yes ... 1 **No..... 2** ⇨ BH9	☐☐	Y .... 1 N 2	☐☐ ⇨ BH10	Days ..... 1 Month ..... 2 Year 3	☐☐	Yes ..... 1 [Add] No ..... 2 [Next]
10		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ Year ☐☐☐☐	Yes ... 1 **No..... 2** ⇨ BH9	☐☐	Y .... 1 N 2	☐☐ ⇨ BH10	Days ..... 1 Month ..... 2 Year 3	☐☐	Yes ..... 1 [Add] No ..... 2 [Next]
11		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ Year ☐☐☐☐	Yes ... 1 **No..... 2** ⇨ BH9	☐☐	Y .... 1 N 2	☐☐ ⇨ BH10	Days ..... 1 Month ..... 2 Year 3	☐☐	Yes ..... 1 [Add] No ..... 2 [Next]
12		Sing .. 1 Mult ... 2	Boy .... 1 Girl 2	Month ☐☐ Year ☐☐☐☐	Yes ... 1 **No..... 2** ⇨ BH9	☐☐	Y .... 1 N 2	☐☐ ⇨ BH10	Days ..... 1 Month ..... 2 Year 3	☐☐	Yes ..... 1 [Add] No ..... 2 [Next]

BH11	HAVE YOU HAD ANY LIVE BIRTHS SINCE THE BIRTH OF (name of last birth)? **If yes**, record birth(s)	Yes ..... 1 No 2	
BH12	**Compare CM9 with number of births in history above and mark:** ☐ **Numbers are different ⇨ Probe and reconcile** ☐ **Numbers are same** ⟹	**Check:** **For all birth:** Year of birth is recorded ..... ☐ **For each living child:** Current age is recorded ..... ☐ **For each dead child:** Age of death is recorded..... ☐ **For age at death 12 months or 1 year:** Probe to ..... ☐ determine exact number of months	

W.3a: Birth History			BH
BH13	SOME PREGNANCIES END BEFORE FULL TERM AS A MISCARRIAGE OR AN ABORTION, WHILE OTHERS MAY RESULT IN A STILLBIRTH. HAVE YOU HAD A MISCARRIAGE OR ABORTION?	Yes ..... 1 **No** **2**	2⇨ BH15
BH14	IN ALL HOW MANY PREGNANCIES DID YOU HAVE THAT ENDED IN A MISCARRIAGE OR AN ABORTION?	Miscarriages/abortions ..... ☐☐ DK 98	
BH15	HAVE YOU HAD A STILLBIRTH?	Yes ..... 1 **No** **2**	2⇨CM12
BH16	IN ALL HOW MANY PREGNANCIES DID YOU HAVE THAT ENDED IN A STILLBIRTH?	Still births ..... ☐☐ DK 98	
CM12	**Check BH4 of last birth: Did the woman's last birth occur within the last 2 years, that is, since (day and month of interview in 2006)? If child has died, take special care when referring to this child by name in the following sections.** ☐ **No live birth in last 2 years** ⇨ **MARRIAGE/UNION Section [W.6]** ☐ **Yes, live birth in last 2 years** ⇨ **Continue to CM13** **Name of child:**_____		
CM13	AT THE TIME YOU BECAME PREGNANT WITH (name), DID YOU WANT TO BECOME PREGNANT THEN, DID YOU WANT TO WAIT UNTIL LATER, OR DID YOU WANT NO (MORE) CHILDREN AT ALL?	Then ..... 1 Later ..... 2 No more 3	

W.4: Tetanus Toxoid — TT

#	Question	Options	Skip
This section is to be administered to all women with a live birth in the 2 years preceding the date of interview.			
TT1	DO YOU HAVE A CARD OR OTHER DOCUMENT WITH YOUR OWN IMMUNIZATIONS LISTED? [If a card is presented, use it to assist with answers to the following questions]	Yes (card seen) ..... 1 Yes (card not seen) ..... 2 No ..... 3 DK 8	
TT2	WHEN YOU WERE PREGNANT WITH YOUR LAST CHILD, DID YOU RECEIVE ANY INJECTION TO PREVENT HIM OR HER FROM GETTING TETANUS, WHICH IS CONVULSIONS AFTER BIRTH (AN ANTI-TETANUS SHOT, AN INJECTION AT THE TOP OF THE ARM OR SHOULDER OR THIGH)?	Yes ..... 1 **No ..... 2** **DK 8**	2⇨TT5 8⇨TT5
TT3	HOW MANY TIMES DID YOU RECEIVE THIS ANTI-TETANUS INJECTION DURING YOUR LAST PREGNANCY?	No. of times ..... ☐☐ **DK 98**	98⇨TT5
TT4	***Check:* How many TT doses during last pregnancy were reported in TT3?**	**At least 2 TT inj. during last pregnancy ..... 1** Fewer than 2 TT inj. during last preg 2	**1⇨(W.5)**
TT5	DID YOU RECEIVE ANY TT INJECTION AT ANY TIME BEFORE YOUR LAST PREGNANCY?	Yes ..... 1 **No ..... 2** **DK 8**	**2⇨(W.5)** **8⇨(W.5)**
TT6	HOW MANY TIMES DID YOU RECEIVE IT?	No. of times ..... ☐☐	
TT7	IN WHAT MONTH AND YEAR DID YOU RECEIVE THE LAST ANTI-TETANUS INJECTION BEFORE THAT LAST PREGNANCY? Skip to next section only if year of injection is given. Otherwise, continue with TT8.	Month ..... ☐☐ DK month ..... 98 **Year** ..... ☐☐☐☐ DK year 9998	**Skip to (W.5)**
TT8	HOW MANY YEARS AGO DID YOU RECEIVE THE LAST ANTI-TETANUS INJECTION BEFORE THAT LAST PREGNANCY?	Years ago ..... ☐☐	

W.5: Maternal and Newborn Health — MN

#	Question	Options	Skip
	This section is to be administered to all women with a live birth in the 2 years preceding date of interview. Check CM12 (in section W.3a) and record name of last-born child here _____. Use this child's name in the following questions, where indicated.		
MN1	IN THE FIRST TWO MONTHS AFTER YOUR LAST BIRTH *[THE BIRTH OF name]*, DID YOU RECEIVE A VITAMIN A DOSE LIKE THIS? Show 200,000 IU capsule or dispenser (Red).	Yes ..... 1 No ..... 2 DK 8	
MN2	DID YOU SEE ANYONE FOR ANTENATAL CARE FOR THIS PREGNANCY? **If yes:** WHOM DID YOU SEE? ANYONE ELSE? [Probe for the type of person seen and circle all answers given]	Health professional: Doctor/Clinical Officer ..... A Nurse/Midwife ..... B Other person: Traditional birth attendant ..... F Community health worker ..... G Relative/friend ..... H Other (*specify* _____) ..... X **No one** ..... **Y**	Y⇨MN6A
MN2A	HOW MANY TIMES DID YOU RECEIVE ANTENATAL CARE DURING THIS PREGNANCY?	No. of times ..... ☐☐ Don't know 98	
MN2B	DURING THIS PREGNANCY, WERE YOU GIVEN OR DID YOU BUY ANY IRON TABLETS? [Show Tablets]	Yes ..... 1 **No** ..... **2** **Don't know** **8**	2⇨MN3 8⇨MN3
MN2C	DURING THE WHOLE PREGNANCY, FOR HOW MANY DAYS DID YOU TAKE THE TABLETS? [If the answer is not numeric, probe for approximate number of days]	No. of days ..... ☐☐☐ Don't know 998	
MN3	AS PART OF YOUR ANTENATAL CARE, WERE ANY OF THE FOLLOWING DONE AT LEAST ONCE?	Y N	
	MN3a. WERE YOU WEIGHED?	Weighed 1 2	
	MN3b. WAS YOUR BLOOD PRESSURE MEASURED?	Blood pressure 1 2	
	MN3c. DID YOU GIVE A URINE SAMPLE?	Urine sample 1 2	
	MN3d. DID YOU GIVE A BLOOD SAMPLE?	Blood sample 1 2	
MN4	DURING ANY OF THE ANTENATAL VISITS FOR THE PREGNANCY, WERE YOU GIVEN ANY INFORMATION OR COUNSELED ABOUT AIDS OR THE AIDS VIRUS?	Yes ..... 1 No ..... 2 Don't know 8	
MN5	I DON'T WANT TO KNOW THE RESULTS, BUT WERE YOU TESTED FOR HIV/AIDS AS PART OF YOUR ANTENATAL CARE?	Yes ..... 1 **No** ..... **2** **Don't know** **8**	2⇨MN6A 8⇨MN6A
MN6	I DON'T WANT TO KNOW THE RESULTS, BUT DID YOU GET THE RESULTS OF THE TEST?	Yes ..... 1 No ..... 2 Don't know 8	
MN6A	DURING THIS PREGNANCY, DID YOU TAKE ANY MEDICINE IN ORDER TO PREVENT YOU FROM GETTING MALARIA?	Yes ..... 1 **No** ..... **2** **Don't know** **8**	2⇨MN7 8⇨MN7

W.5: Maternal and Newborn Health			MN
#	Question	Options	Skip
MN6B	WHICH MEDICINES DID YOU TAKE TO PREVENT MALARIA? [Circle all medicines taken. If type of medicine is not determined, **show typical anti-malarial** to the respondent]	SP/Fansidar ..... A Chloroquine ..... B Others (*specify*_____) .. X DK ..... Z	***If 'A' is not circled, skip to MN7***
MN6C	HOW MANY TIMES DID YOU TAKE SP/FANSIDAR DURING THIS PREGNANCY TO PREVENT MALARIA?	Number of times ..... ☐☐	
MN7	WHO ASSISTED WITH THE DELIVERY OF YOUR LAST CHILD (*name*)? ANYONE ELSE? [Probe for the type of person assisting and circle all answers given]	Health professional: Doctor/Clinical Officer ..... A Nurse/Midwife ..... B Other person: Traditional birth attendant ..... F Community health worker ..... G Relative/friend ..... H Other (*specify*_____) ..... X No one ..... Y	
MN8	WHERE DID YOU GIVE BIRTH TO (*name*)? [If the facility is hospital, health center, or clinic; write the name of the place below. Probe to identify the type of source and circle the appropriate code] _____ (NAME OF PLACE?)	Home Your home ..... 11 Other home ..... 12 Public sector Govt. hospital ..... 21 Govt. clinic/health center ..... 22 CHAM ..... 23 Other public (*specify*) _____ 26 Private Medical Sector Private hospital ..... 31 Private clinic ..... 32 Private maternity home ..... 33 Other pvt. medical (*specify*_____) .. 36 Other (*specify*_____) .. 96	
MN8A	AFTER (*name*) WAS BORN, DID A HEALTH PROFESSIONAL OR A TRADITIONAL BIRTH ATTENDANT CHECK ON YOUR HEALTH?	Yes ..... 1 **No** ..... **2** **DK** **8**	2⇨MN8D 8⇨MN8D
MN8B	HOW MANY DAYS OR WEEKS AFTER DELIVERY DID THE FIRST CHECK TAKE PLACE? [Record '00' days if same day]	Days after delivery ..... 1 Weeks after delivery ..... 2 ☐☐ Don't Know 998	
MN8C	WHO CHECKED ON YOUR HEALTH AT THAT TIME? [Probe for most qualified person]	Health professional: Doctor/Clinical Officer ..... 11 Nurse/Midwife ..... 12 Other person: Traditional birth attendant ..... 21 Community health worker ..... 22 Other (*specify*_____) 96	

W.5: Maternal and Newborn Health			MN
#	Question	Options	Skip
MN8D	**Check MN8 for place of birth:** ☐ **Birth at home (Code 11 or 12)** ⇨ **Continue to MN8E** ☐ **Otherwise** ⇨ **Skip to MN9**		
MN8E	IN THE TWO MONTHS AFTER *(name)* WAS BORN, DID ANY HEALTH CARE PROVIDER OR A TRADITIONAL BIRTH ATTENDANT CHECK ON HIS/HER HEALTH?	Yes ..... 1 **No** ..... **2** **DK** **8**	 2⇨MN9 8⇨MN9
MN8F	HOW MANY HOURS, DAYS OR WEEKS AFTER THE BIRTH OF *(name)* DID THE FIRST CHECK TAKE PLACE? [If less than one day, record in hours. If less than one week, record in days.]	Hours after birth ..... 1 Days after birth ..... 2 Weeks after birth ..... 3 ☐☐ Don't Know 998	
MN8G	WHO CHECKED ON *(name)*'S HEALTH AT THAT TIME? [Probe for most qualified person]	Health professional: Doctor/Clinical Officer ..... 11 Nurse/Midwife ..... 12 Other person: Traditional birth attendant ..... 21 Community health worker ..... 22 Other (*specify*_____) 96	
MN8H	WHERE DID THIS FIRST CHECK OF *(name)* TAKE PLACE? [Probe to identify the type of source and circle the appropriate code. If unable to determine if a hospital, health centre or clinic is public or private medical, write the name of the place] _____ (NAME OF THE PLACE)	Home Your home ..... 11 Other home ..... 12 Public sector Govt. hospital ..... 21 Govt. clinic/health center ..... 22 CHAM ..... 23 Other public (*specify*_____) ..... 26 Private Medical Sector Private hospital ..... 31 Private clinic ..... 32 Private maternity home ..... 33 Other pvt. medical (*specify*_____) ..... 36 Other (*specify*_____) 96	
MN9	WHEN YOUR LAST CHILD *(name)* WAS BORN, WAS HE/SHE VERY LARGE, LARGER THAN AVERAGE, AVERAGE, SMALLER THAN AVERAGE, OR VERY SMALL?	Very large ..... 1 Larger than average ..... 2 Average ..... 3 Smaller than average ..... 4 Very small ..... 5 DK 8	
MN10	WAS *(name)* WEIGHED AT BIRTH?	Yes ..... 1 **No** ..... **2** **DK** **8**	 2⇨MN12 8⇨MN12

W.5: Maternal and Newborn Health — MN

#	Question	Options	Skip
MN11	HOW MUCH DID *(name)* WEIGH? [Record weight from health card, if available]	Card ..... 1 Re-call ..... 2 (Record in Kgs) ☐.☐☐☐ Don't know 99998	
MN12	DID YOU EVER BREASTFEED *(name)*?	Yes ..... 1 **No 2**	 2⇨ (W.6)
MN13	HOW LONG AFTER BIRTH DID YOU FIRST PUT *(name)* TO THE BREAST? If less than 1 hour, record '00' hours. If less than 24 hours, record hours. Otherwise, record days.	Immediately ..... 000 Hours after ..... 1 Days after ..... 2 ☐☐ Don't know/remember 998	
MN14	DID *(name)* RECEIVE ANYTHING ELSE BEFORE STARTING TO BREASTFEED?	Yes ..... 1 **No ..... 2** **Don't know 8**	 2⇨ (W.6) 8⇨ (W.6)

		Yes	No	
MN15	DID (name) RECEIVE ANY OF THE FOLLOWING:			
	MN15A. PLAIN WATER?	Plain water 1	2	
	MN15B. MINERAL WATER?	Mineral water 1	2	
	MN15C. SWEETENED, FLAVOURED WATER?	Sweetened/Flavored water 1	2	
	MN15D. FRUIT JUICE OR TEA?	Fruit juice or tea 1	2	
	MN15E. ANYTHING ELSE?	Other (specify_____) ... 1	2	

W.6: Marriage/Union — MA

#	Question	Options	Skip
MA1	ARE YOU CURRENTLY MARRIED OR LIVING TOGETHER WITH A MAN AS IF MARRIED?	Yes, currently married ..... 1 Yes, living with a man ..... 2 **No, not in union** **3**	3⇨MA3
MA2	HOW OLD WAS YOUR HUSBAND/PARTNER ON HIS LAST BIRTHDAY?	**Age in years** ..... ☐☐ **DK** **98**	**SKIP TO ⇨ MA5**
MA3	HAVE YOU EVER BEEN MARRIED OR LIVED TOGETHER WITH A MAN?	Yes, formerly married ..... 1 Yes, formerly lived with a man ..... 2 **No** **3**	3⇨(W.7)
MA4	WHAT IS YOUR MARITAL STATUS NOW: ARE YOU WIDOWED, DIVORCED OR SEPARATED?	Widowed ..... 1 Divorced ..... 2 Separated 3	
MA5	HAVE YOU BEEN MARRIED OR LIVED WITH A MAN ONLY ONCE OR MORE THAN ONCE?	Only once ..... 1 More than once 2	
MA6	IN WHAT MONTH AND YEAR DID YOU **FIRST** MARRY OR START LIVING WITH A MAN AS IF MARRIED?	Month ..... ☐☐ DK month ..... 98 Year ..... ☐☐☐☐ DK year 9998	
MA7	**Check MA6: For month and year of marriage** ☐ **Both Month and year of marriage are known?** **⇨ Next Section (W.7)** ☐ **Either month or year of marriage/union not known?** **⇨ Continue to MA8**		
MA8	HOW OLD WERE YOU WHEN YOU STARTED LIVING WITH YOUR FIRST HUSBAND/PARTNER?	Age in years ..... ☐☐	

W.7: Contraception and Unmet Need — CP

#	Question	Options	Skip
CP1	I WOULD LIKE TO TALK WITH YOU ABOUT ANOTHER SUBJECT – FAMILY PLANNING – AND YOUR REPRODUCTIVE HEALTH. ARE YOU PREGNANT NOW?	Yes, currently pregnant ..... 1 **No ..... 2** **Unsure or Don't know 8**	 2⇨ CP2 8⇨ CP2
CP1A	AT THE TIME YOU BECOME PREGNANT DID YOU WANT TO BECOME PREGNANT THEN, DID YOU WANT TO WAIT UNTIL LATER, OR DID YOU NOT WANT TO HAVE ANY MORE CHILDREN?	Then ..... 1 Later ..... 2 Not want more children 3	1⇨ CP4 2⇨ CP4 3⇨ CP4
CP2	SOME PEOPLE USE VARIOUS WAYS OR METHODS TO DELAY OR AVOID A PREGNANCY. ARE YOU CURRENTLY DOING SOMETHING OR USING ANY METHOD TO DELAY OR AVOID GETTING PREGNANT?	Yes ..... 1 **No 2**	 2⇨ CP6
CP3	WHICH METHOD ARE YOU USING? Do not prompt. If more than one method is mentioned, circle each one.	Female sterilization/Tubeligation ..... A Male sterilization/Vasectomy ..... B Pill ..... C IUD/coil ..... D Injections ..... E Implants ..... F Condom ..... G Female condom ..... H Diaphragm ..... I Lactational amenorrhoea method (LAM) ..... J Periodic abstinence ..... K Withdrawal ..... L Other (*specify* _____) X	
CP4	NOW I WOULD LIKE TO ASK SOME QUESTIONS ABOUT THE FUTURE. WOULD YOU LIKE TO HAVE (A/ANOTHER) CHILD, OR WOULD YOU PREFER NOT TO HAVE ANY (MORE) CHILDREN? **If currently pregnant:** AFTER THE CHILD YOU ARE NOW EXPECTING, WOULD YOU LIKE TO HAVE ANOTHER CHILD OR YOU WOULD PREFER NOT TO HAVE ANY (MORE) CHILDREN?	Have (a/another) child ..... 1 **No more/none ..... 2** **Says she cannot get pregnant ..... 3** **Undecided/don't know 8**	 2⇨CP6 3⇨(W.8) 8⇨CP6
CP5	HOW LONG WOULD YOU LIKE TO WAIT BEFORE THE BIRTH OF (A/ANOTHER) CHILD?	Months ..... 1 ☐☐ Years ..... 2 Soon/now ..... 993 **Says she cannot get pregnant ..... 994** After marriage ..... 995 Other ..... 996 Don't know 998	 994⇨ (W.8)
CP6	**Check CP1: Pregnancy status** ☐ **Currently pregnant (code = 1) ⇨ Next Section (W.8)** ☐ **Not currently pregnant ⇨ Continue to CP7**		
CP7	DO YOU THINK YOU ARE PHYSICALLY ABLE TO GET PREGNANT AT THIS TIME?	Yes ..... 1 No ..... 2 Don't know 3	

W.8: Female Genital Mutilation/Cutting — FG

#	Question	Options	Skip
FG1	HAVE YOU EVER HEARD OF FEMALE CIRCUMCISION?	**Yes** ..... **1** No 2	1⇨FG3
FG2	IN A NUMBER OF COMMUNITIES, THERE IS A PRACTICE IN WHICH A GIRL MAY HAVE PART OF HER GENITALS CUT. HAVE YOU EVER HEARD ABOUT THIS PRACTICE?	Yes ..... 1 **No** **2**	2⇨(W.9)
FG3	HAVE YOU YOURSELF EVER BEEN CIRCUMCISED?	Yes ..... 1 **No** **2**	2⇨FG8
FG4	NOW I WOULD LIKE TO ASK YOU WHAT WAS DONE TO YOU AT THIS TIME. WAS ANY FLESH REMOVED FROM THE GENITAL AREA?	**Yes** ..... **1** No ..... 2 DK 8	1⇨FG6
FG5	WAS THE GENITAL AREA JUST NICKED WITHOUT REMOVING ANY FLESH?	Yes ..... 1 No ..... 2 DK 8	
FG6	WAS THE GENITAL AREA SEWN CLOSED (OR 'SEALED')?	Yes ..... 1 No ..... 2 DK 8	
FG7	WHO CIRCUMCISED YOU?	TRADITIONAL PERSONS Traditional 'circumciser' ..... 11 Traditional birth attendant ..... 12 Other traditional (***specify*** _____) .. 16 HEALTH PROFESSIONAL Doctor ..... 21 Nurse/midwife ..... 22 Other health professional (***specify*** _____) .. 26 Don't know 98	
FG8	**Check CM4 and CM6 (in Section W.3): Woman has living daughter?** ☐ **Yes, has living daughter** ⇨ **Continue with FG9** ☐ **No living daughter** ⇨ **Go to FG16**		
FG9	HAVE ANY OF YOUR DAUGHTERS BEEN CIRCUMCISED? **If yes**, HOW MANY?	No. of daughters circumcised ..... ☐☐ **No daughters circumcised** **00**	00⇨FG16
FG10	TO WHICH OF YOUR DAUGHTERS DID THIS HAPPEN MOST RECENTLY? [Record the daughter's name]	Name of daughter: _____	
FG11	NOW I WOULD LIKE TO ASK YOU WHAT WAS DONE TO *(name)* AT THAT TIME. WAS ANY FLESH REMOVED FROM THE GENITAL AREA?	**Yes** ..... **1** No ..... 2 DK 8	1⇨FG13

W.8: Female Genital Mutilation/Cutting			FG
#	Question	Options	Skip
FG12	WAS THE GENITAL AREA JUST NICKED WITHOUT REMOVING ANY FLESH?	Yes ..... 1 No ..... 2 DK 8	
FG13	WAS THE GENITAL AREA SEWN CLOSED (OR 'SEALED')?	Yes ..... 1 No ..... 2 DK 8	
FG14	HOW OLD WAS *(name)* WHEN THIS OCCURRED? [If the respondent does not know the age, probe to get an estimate]	Daughter's age at circumcision ..... ☐☐ Don't know 98	
FG15	WHO DID THE CIRCUMCISION FOR *(name)*?	TRADITIONAL PERSONS Traditional 'circumciser' ..... 11 Traditional birth attendant ..... 12 Other traditional (***specify*** _____) .. 16 HEALTH PROFESSIONAL Doctor ..... 21 Nurse/midwife ..... 22 Other health professional (***specify*** _____) .. 26 Don't know 98	
FG16	DO YOU THINK THIS PRACTICE SHOULD BE CONTINUED OR SHOULD IT BE DISCONTINUED?	Continued ..... 1 Discontinued ..... 2 Depends ..... 3 DK 8	

W.9: Domestic Violence						DV
#	Question	Options				Skip
DV1	SOMETIMES A HUSBAND IS ANNOYED OR ANGERED BY THINGS THAT HIS WIFE DOES. IN YOUR OPINION, IS A HUSBAND JUSTIFIED IN HITTING OR BEATING HIS WIFE IN THE FOLLOWING SITUATIONS:		Yes	No	DK	
	DV1A. IF SHE GOES OUT WITH OUT TELLING HIM?	Goes out without telling.....	1	2	8	
	DV1B. IF SHE NEGLECTS THE CHILDREN?	Neglects the children.....	1	2	8	
	DV1C. IF SHE ARGUES WITH HIM?	Argues with husband.....	1	2	8	
	DV1D. IF SHE REFUSES SEX WITH HIM?	Refuses sex.....	1	2	8	
	DV1E. IF SHE BURNS THE FOOD?	Burns the food.....	1	2	8	

W.10: HIV/AIDS			HA
#	Question	Options	Skip
HA1	NOW I WOULD LIKE TO TALK WITH YOU ABOUT SOMETHING ELSE. HAVE YOU EVER HEARD OF THE VIRUS HIV OR AN ILLNESS CALLED AIDS?	Yes ..... 1 **No** **2**	2⇨ END
HA2	CAN PEOPLE PROTECT THEMSELVES FROM GETTING INFECTED WITH THE AIDS VIRUS BY HAVING ONE SEX PARTNER WHO IS NOT INFECTED AND ALSO HAS NO OTHER PARTNERS?	Yes ..... 1 No ..... 2 Don't know 8	
HA3	CAN PEOPLE GET INFECTED WITH THE AIDS VIRUS BECAUSE OF WITCHCRAFT OR OTHER SUPERNATURAL MEANS?	Yes ..... 1 No ..... 2 Don't know 8	
HA4	CAN PEOPLE REDUCE THEIR CHANCE OF GETTING THE AIDS VIRUS BY USING A CONDOM EVERY TIME THEY HAVE SEX?	Yes ..... 1 No ..... 2 Don't know 8	
HA5	CAN PEOPLE GET THE AIDS VIRUS FROM MOSQUITO BITES?	Yes ..... 1 No ..... 2 Don't know 8	
HA6	CAN PEOPLE REDUCE THEIR CHANCE OF GETTING INFECTED WITH THE AIDS VIRUS BY NOT HAVING SEX AT ALL?	Yes ..... 1 No ..... 2 Don't know 8	
HA7	CAN PEOPLE GET THE AIDS VIRUS BY SHARING FOOD WITH A PERSON WHO HAS AIDS?	Yes ..... 1 No ..... 2 Don't know 8	
HA7A	CAN PEOPLE GET THE AIDS VIRUS BY GETTING INJECTIONS WITH A NEEDLE THAT WAS ALREADY USED BY AN INFECTED PERSON?	Yes ..... 1 No ..... 2 Don't know 8	
HA8	IS IT POSSIBLE FOR A HEALTHY-LOOKING PERSON TO HAVE THE AIDS VIRUS?	Yes ..... 1 No ..... 2 Don't know 8	
HA9	CAN THE AIDS VIRUS BE TRANSMITTED FROM A MOTHER TO A BABY (.....)	Yes / No / DK	
	HA9A. DURING PREGNANCY?	During pregnancy 1 2 8	
	HA9B. DURING DELIVERY?	During delivery 1 2 8	
	HA9C. BY BREASTFEEDING?	By breastfeeding 1 2 8	
HA10	IF A FEMALE TEACHER HAS THE AIDS VIRUS BUT IS NOT SICK, SHOULD SHE BE ALLOWED TO CONTINUE TEACHING IN SCHOOL?	Yes ..... 1 No ..... 2 Don't know/not sure/depends 8	
HA11	WOULD YOU BUY FRESH VEGETABLES FROM A SHOPKEEPER OR VENDOR IF YOU KNEW THAT THIS PERSON HAD THE AIDS VIRUS?	Yes ..... 1 No ..... 2 Don't know/not sure/depends 8	

W.10: HIV/AIDS			HA
HA12	IF A MEMBER OF YOUR FAMILY BECAME INFECTED WITH THE AIDS VIRUS, WOULD YOU WANT IT TO REMAIN A SECRET?	Yes ..... 1 No ..... 2 Don't know/not sure/depends 8	
HA13	IF A MEMBER OF YOUR FAMILY BECAME SICK WITH THE AIDS VIRUS, WOULD YOU BE WILLING TO CARE FOR HIM OR HER IN YOUR HH?	Yes ..... 1 No ..... 2 Don't know/not sure/depends 8	
HA14	**Check MN5 (in Section W.5): Tested for HIV during antenatal care?** ☐ **Yes ⇨ HA19** ☐ **No ⇨ Continue to HA15**		
HA15	I DO NOT WANT TO KNOW THE RESULTS, BUT HAVE YOU EVER BEEN TESTED TO SEE IF YOU HAVE HIV, THE VIRUS THAT CAUSES AIDS?	Yes ..... 1 **No 2**	2⇨HA18
HA16	I DO NOT WANT YOU TO TELL ME THE RESULTS OF THE TEST, BUT HAVE YOU BEEN TOLD THE RESULTS?	Yes ..... 1 No 2	
HA17	DID YOU, YOURSELF, ASK FOR THE TEST, WAS IT OFFERED TO YOU AND YOU ACCEPTED, OR WAS IT REQUIRED?	**Asked for the test ..... 1** **Offered and accepted ..... 2** **Required 3**	**END**
HA18	AT THIS TIME, DO YOU KNOW OF A PLACE WHERE YOU CAN GO TO GET SUCH A TEST TO SEE IF YOU HAVE THE AIDS VIRUS?	**Yes ..... 1** **No 2**	**END**
HA19	OTHER THAN AT THE ANTENATAL CLINIC, DO YOU KNOW OF A PLACE WHERE YOU CAN GO TO GET A TEST TO SEE IF YOU HAVE THE AIDS VIRUS?	Yes ..... 1 No 2	

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

Remarks/Observations by the Supervisor/Editor/Coordinators:



FORM-C: CHILD BELOW 5 YEARS

C.1: General Information — ENGLISH

This FORM is to be administered to all mothers/caretakers (See Column HL8 of HH Listing Form) who care for a child that lives with them and is under the age of 5 years (See Column HL5 of HH Listing Form). Use a separate Form for each eligible child.

UF-A	Province Name & Code.		☐
UF-B	District Name & Code.		☐☐
UF1	Cluster Name and Number ☐☐	UF-C	Stratum Code: ☐ [Child < 3 = 1/Other = 2]
UF2	HH No.		☐☐☐
UF4	Child Name & Line No.		☐☐
UF6	Mother/Caretaker Name & Line No.		☐☐
UF7	Interviewer's Name & Code		☐☐☐
UF8	Day/Month/Year of interview		☐☐/☐☐/☐☐☐☐
UF9	Result of interview for children under 5 [Codes refer to mother/caretaker]		Completed ..... 1 Not at home ..... 2 Refused ..... 3 Partly completed ..... 4 Incapacitated ..... 5 Other (Specify)_____ 6

Remarks

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

Introduction/Consent

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

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

MAY I START THE INTERVIEW NOW?

UF10	NOW I WOULD LIKE TO ASK YOU SOME QUESTIONS ABOUT THE HEALTH OF EACH CHILD UNDER THE AGE OF 5 IN YOUR CARE, WHO LIVES WITH YOU/IN THIS HH NOW. NOW I WANT TO ASK YOU ABOUT (*name*). IN WHAT MONTH AND YEAR WAS (*name*) BORN? **Probe:** WHAT IS HIS/HER BIRTHDAY? DOES HE/SHE HAVE A BIRTH CERTIFICATE? [If the mother/caretaker knows the exact birth date, also enter the day; otherwise, circle 98 for day]	**Date of birth:** Day ☐☐ Don't know the day of birth 98 Month ☐☐ Year ☐☐☐☐
UF11	HOW MANY MONTHS OLD IS (*name*)? [Record age in completed months]	Age in months ☐☐

C.2: Birth Registration and Early Learning — BR

#	Question	Options	Skip
BR1	DOES (*name*) HAVE A BIRTH CERTIFICATE? MAY I SEE IT?	**Yes, seen** 1 **Yes, not seen** 2 No 3 Don't know 8	1⇨BR5 2⇨BR5
BR2	HAS (*name's*) BIRTH BEEN REGISTERED WITH THE CIVIL AUTHORITIES?	**Yes** 1 No 2 **Don't know** 8	1⇨BR5 8⇨BR4
BR3	WHY IS (*name's*) BIRTH NOT REGISTERED? PROBE: DID YOU KNOW THAT A BIRTH HAS TO BE REGISTERED? DID YOU TRY TO REGISTER THIS ONE? WHY DID YOU FAIL TO REGISTER THIS BIRTH?	Costs too much 1 Must travel too far 2 Did not know it should be registered 3 Did not want to pay fine 4 Does not know where to register 5 Other (*specify*_____) 6 Don't know 8	
BR4	DO YOU KNOW HOW TO REGISTER YOUR CHILD'S BIRTH?	Yes 1 No 2	
BR4A	DO YOU KNOW WHERE TO REGISTER YOUR CHILD'S BIRTH?	Yes 1 No 2	
BR5	**Check UF11 (age of the child): Child is 36-59 months old?** ☐ **Yes ⇨ Continue to BR6** ☐ **No ⇨ Go to BR8**		
BR6	DOES (*name*) ATTEND ANY ORGANIZED LEARNING OR EARLY CHILDHOOD EDUCATION PROGRAMME, SUCH AS A PRIVATE OR GOVERNMENT FACILITY, INCLUDING KINDERGARTEN OR COMMUNITY CHILD CARE?	Yes 1 **No** 2 **Don't know** 8	 2⇨BR7A 8⇨BR8
BR7	WITHIN THE LAST SEVEN DAYS, ABOUT HOW MANY HOURS DID (*name*) ATTEND?	No. of Hours ☐☐	**Skip to BR8**

C.2: Birth Registration and Early Learning — BR

BR7A	WHAT IS THE MAIN REASON FOR (*name*) NOT ATTENDING ANY PRE-SCHOOL LEARNING/EARLY CHILDHOOD EDUCATION PROGRAM?	No facility nearby ..... 1 The facility is not good ..... 2 No money to pay the fees/expensive ..... 3 Child is too young ..... 4 Other (specify_____) .... 6 Don't know 8				
BR8	IN THE PAST 3 DAYS, DID YOU OR ANY HOUSEHOLD MEMBER OVER 15 YEARS OF AGE ENGAGE IN ANY OF THE FOLLOWING ACTIVITIES WITH (*name*): ***If yes, ask:*** WHO ENGAGED IN THIS ACTIVITY WITH THE CHILD - THE MOTHER, THE CHILD'S FATHER OR ANOTHER ADULT MEMBER OF THE HOUSEHOLD (INCLUDING THE CARETAKER/RESPONDENT)? *Circle all that apply.*	Mother	Father	Other	None	
BR8a	READ BOOKS OR LOOK AT PICTURE BOOKS WITH (*name*)?	A	B	X	Y	
BR8b	TELL STORIES TO (*name*)?	A	B	X	Y	
BR8c	SING SONGS WITH (*name*)?	A	B	X	Y	
BR8d	TAKE (*name*) OUTSIDE THE HOME, COMPOUND, YARD OR ENCLOSURE?	A	B	X	Y	
BR8e	PLAY WITH (*name*)?	A	B	X	Y	
BR8f	SPEND TIME WITH (*name*) NAMING, COUNTING, AND/OR DRAWING THINGS?	A	B	X	Y	

C.3: Vitamin A — VA

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

C.4: Breastfeeding — BF

#	Question	Options	Skip
BF1	HAS (*name*) EVER BEEN BREASTFED?	Yes ..... 1 **No** ..... **2** **Don't know** **8**	 2⇨ BF3 8⇨ BF3
BF1a	HOW LONG AFTER BIRTH WAS (*name*) PUT TO THE BREAST FOR THE FIRST TIME?	Immediately after birth ..... 000 Hours ..... 1 ☐☐ Days ..... 2 Don't know 998	
BF2	IS HE/SHE STILL BEING BREASTFED?	**Yes** ..... **1** No ..... 2 **Don't know** **8**	1⇨ BF2b 8⇨ BF3
BF2a	FOR HOW MANY MONTHS DID (*name*) BREASTFEED?	Months ☐☐ Don't know 98	Skip to BF3
BF2b	SINCE THIS TIME YESTERDAY, HOW MANY TIMES HAS (*name*) BREASTFED? *(If answer is not numeric, probe for approximate number)*	Times Breastfed ☐☐ Don't know 98	

BF3 — SINCE THIS TIME YESTERDAY, DID HE/SHE RECEIVE ANY OF THE FOLLOWING:
(Read each item aloud and record response before proceeding to the next item)

Item	Yes	No	DK	
BF3A. VITAMIN, MINERAL SUPPLEMENTS OR MEDICINE?	1	2	8	
BF3B. PLAIN WATER?	1	2	8	
BF3C. SWEETENED, FLAVOURED WATER OR FRUIT JUICE OR TEA OR INFUSION?	1	2	8	
BF3D. ORAL REHYDRATION SOLUTION (ORS)?	1	2	8	
BF3E. INFANT FORMULA?	1	2	8	
BF3F. TINNED, POWDERED OR FRESH MILK?	1	2	8	
BF3G. ANY OTHER LIQUIDS?	1	2	8	
BF3H. SOLID OR SEMI-SOLID (MUSHY) FOOD?	1	2	8	

BF4 — **Check BF3H. Child received solid or semi-solid (mushy) food?**

☐ **Yes** ⇨ **Continue to BF5**

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

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

C.5: Care of Childhood Illness — CI

#	Question	Options	Skip
CA1	HAS (*name*) HAD DIARRHOEA IN THE LAST TWO WEEKS, THAT IS, SINCE (*day of the week*) OF THE WEEK BEFORE LAST? *(Diarrhoea is determined as perceived by mother or caretaker, or as three or more loose or watery stools per day, or blood in stool)*	Yes ..... 1 **No ..... 2** **Don't know 8**	 2⇨CA5 8⇨CA5
CA2	DURING THIS LAST EPISODE OF DIARRHOEA, DID (*name*) DRINK ANY OF THE FOLLOWING: *Read each item aloud and record response before proceeding to the next item.*		

Item	Yes	No	DK	
CA2A. A FLUID MADE FROM A SPECIAL PACKET CALLED (*local name for ORS packet solution*)?	1	2	8	
CA2B. GOVERNMENT-RECOMMENDED HOMEMADE FLUID?	1	2	8	
CA2C. A PRE-PACKAGED ORS FLUID FOR DIARRHOEA?	1	2	8	

CA3	DURING (*name's*) ILLNESS, DID HE/SHE DRINK MUCH LESS, ABOUT THE SAME, OR MORE THAN USUAL?	Much less or none ..... 1 About the same (or somewhat less) ..... 2 More ..... 3 Don't know 8	
CA4	DURING (*name's*) ILLNESS, DID HE/SHE EAT LESS, ABOUT THE SAME, OR MORE FOOD THAN USUAL? **If "less", probe:** MUCH LESS OR A LITTLE LESS?	None ..... 1 Much less ..... 2 Somewhat less ..... 3 About the same ..... 4 More ..... 5 Don't know 8	
CA5	HAS (*name*) HAD AN ILLNESS WITH A COUGH AT ANY TIME IN THE LAST TWO WEEKS, THAT IS, SINCE (*day of the week*) OF THE WEEK BEFORE LAST?	Yes ..... 1 **No ..... 2** **Don't know 8**	 2⇨CA12 8⇨CA12
CA6	WHEN (*name*) HAD AN ILLNESS WITH A COUGH, DID HE/SHE BREATHE FASTER THAN USUAL WITH SHORT, QUICK BREATHS OR HAVE DIFFICULTY BREATHING?	Yes ..... 1 **No ..... 2** **Don't know 8**	 2⇨CA12 8⇨CA12
CA7	WERE THE SYMPTOMS DUE TO A PROBLEM IN THE CHEST OR A BLOCKED NOSE?	Problem in chest ..... 1 **Blocked nose ..... 2** Both ..... 3 **Other (*specify* _____) ... 6** Don't know 8	 2⇨CA12 6⇨CA12
CA8	DID YOU SEEK ADVICE OR TREATMENT FOR THE ILLNESS OUTSIDE THE HOME?	Yes ..... 1 **No ..... 2** **Don't know 8**	 2⇨CA10 8⇨CA10

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

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

C.6: Malaria			ML
#	Question	Options	Skip
ML8	**Check ML4 and/or ML7: Anti-malarial mentioned (Codes A-H)?** ☐ **Yes ⇨ Continue to ML9** ☐ **No ⇨ ML10**		
ML9	HOW LONG AFTER THE FEVER STARTED DID (*name*) FIRST TAKE (*name of anti-malarial from ML4 or ML7*)? [If multiple anti-malarials mentioned in ML4 or ML7, name all anti-malarial medicines mentioned] [Record the code for the day on which the first anti-malarial was given]	Same day ..... 0 Next day ..... 1 2 days after the fever ..... 2 3 days after the fever ..... 3 4 or more days after the fever ..... 4 DK 8	
ML10	DID (*name*) SLEEP UNDER A MOSQUITO NET LAST NIGHT?	Yes ..... 1 No ..... 2 Don't' know 8	

C.7: Child Immunization — IM

#	Question		Options	Skip
If an immunization card is available, copy the dates in IM2-IM8b for each type of immunization or vitamin A dose recorded on the card. IM9 is for recording vaccinations that are not recorded on the card. IM10-IM17 will only be asked when a card is not available.				
IM1	IS THERE A VACCINATION CARD FOR (*name*)?		Yes, seen ..... 1 **Yes, not seen ..... 2** **No 3**	 2⇨IM10 3⇨IM10
	(a) Copy dates for each vaccination from the card. (b) Write '44' in day column if card shows that vaccination was given but no date recorded.		Date of Immunization Day | Month | Year	
IM2	BCG	BCG		
IM3a	Polio 0	OPV 0		
IM3b	Polio 1	OPV 1		
IM3c	Polio 2	OPV 2		
IM3d	Polio 3	OPV 3		
IM4a	DPT - HepB + Hib: 1 (Pentavalent 1)	DPT 1		
IM4b	DPT - HepB + Hib: 2 (Pentavalent 2)	DPT 2		
IM4c	DPT - HepB + Hib: 3 (Pentavalent 3)	DPT 3		
IM6	Measles (or MMR)	Measles		
IM7	Yellow fever	Y Fever		
IM8a	Vitamin A (1)	Vit. A1		
IM8b	Vitamin A (2)	Vit A2		
IM9	IN ADDITION TO THE VACCINATIONS AND VITAMIN A CAPSULES SHOWN ON THIS CARD, DID (*name*) RECEIVE ANY OTHER VACCINATIONS – INCLUDING VACCINATIONS RECEIVED IN CAMPAIGNS OR IMMUNIZATION DAYS? [Record 'Yes' only if respondent mentions BCG, OPV 0-3, DPT 1-3, Measles or Vitamin A supplements.]		Yes ..... 1 (Probe for vaccinations and write '66' in the corresponding day column on IM2 to IM8B and go to IM19.) **No ..... 2** **Don't know 8**	 2⇨IM19 8⇨IM19
IM10	HAS (*name*) EVER RECEIVED ANY VACCINATIONS TO PREVENT HIM/HER FROM GETTING DISEASES, INCLUDING VACCINATIONS RECEIVED IN A CAMPAIGN OR IMMUNIZATION DAY?		Yes ..... 1 **No ..... 2** **Don't know 8**	 2⇨IM19 8⇨IM19
IM11	HAS (*name*) EVER BEEN GIVEN A BCG VACCINATION AGAINST TUBERCULOSIS – THAT IS, AN INJECTION IN THE ARM OR SHOULDER THAT CAUSED A SCAR?		Yes ..... 1 No ..... 2 Don't know 8	
IM12	HAS (*name*) EVER BEEN GIVEN ANY "VACCINATION DROPS IN THE MOUTH" TO PROTECT HIM/HER FROM GETTING DISEASES – THAT IS, POLIO?		Yes ..... 1 **No 2**	 2⇨IM15

C.7: Child Immunization — IM

		Don't know **8**	8⇨IM15
IM13	HOW OLD WAS (*name*) WHEN THE FIRST DOSE WAS GIVEN – JUST AFTER BIRTH (WITHIN TWO WEEKS) OR LATER?	Just after birth (within two weeks) ..... 1 Later 2	
IM14	HOW MANY TIMES (*name*) BEEN GIVEN THESE DROPS?	No. of times ..... ☐☐	
IM15	HAS (*name*) EVER BEEN GIVEN "**DPT/ HepB/ Hib1** VACCINATION INJECTIONS" – THAT IS, AN INJECTION IN THE THIGH AND BUTTOCKS – TO PREVENT HIM/HER FROM GETTING TETANUS, WHOOPING COUGH, DIPHTHERIA, HEPATITIS B, *HAEMOPHILIS INFLUENZAE TYPE B*? SOMETIMES GIVEN AT THE SAME TIME AS POLIO.	Yes ..... 1 **No** ..... **2** **Don't know** **8**	2⇨IM17 8⇨IM17
IM16	HOW MANY TIMES?	No. of times ..... ☐	
IM17	HAS (*name*) EVER BEEN GIVEN "MEASLES VACCINATION INJECTIONS" OR MMR – THAT IS, A SHOT IN THE ARM AT THE AGE OF 9 MONTHS OR OLDER - TO PREVENT HIM/HER FROM GETTING MEASLES?	Yes ..... 1 No ..... 2 Don't know 8	
IM18	HAS (*name*) EVER BEEN GIVEN "YELLOW FEVER VACCINATION INJECTIONS" – THAT IS, A SHOT IN THE ARM AT THE AGE OF **9** MONTHS OR OLDER - TO PREVENT HIM/HER FROM GETTING YELLOW FEVER? SOMETIMES GIVEN AT THE SAME TIME AS MEASLES	Yes ..... 1 No ..... 2 Don't know 8	

			Yes	No	DK	
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:					
IM19a	CHILD HEALTH DAYS, VIT-A CAMPAIGN		1	2	8	
IM19b	MEASLES & VITAMIN A CAMPAIGN		1	2	8	
IM19c	CHILD HEALTH DAYS - VIT. A & DEWORMING CAMPAIGN		1	2	8	

IM20 **Does another eligible child reside in the HH for whom this respondent is mother/caretaker? Check HH listing, column HL8.**

☐ **Yes ⇨ End the current Form and go for another 'Child < 5 Form' to administer the Form for the next eligible child.**

☐ **No ⇨ End the interview with this respondent by thanking him/her cooperation. If this the last eligible child in the HH, go on to Anthropometry Section (C.8).**

C.8: Anthropometry — AN

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

Remarks/Observations by the Supervisor/Editor/Coordinators:

Kenya - Eastern Province, Embu District

Multiple Indicator Cluster Survey

2008