Kenya
Eastern Province
Machakos District



Monitoring the situation of children and women

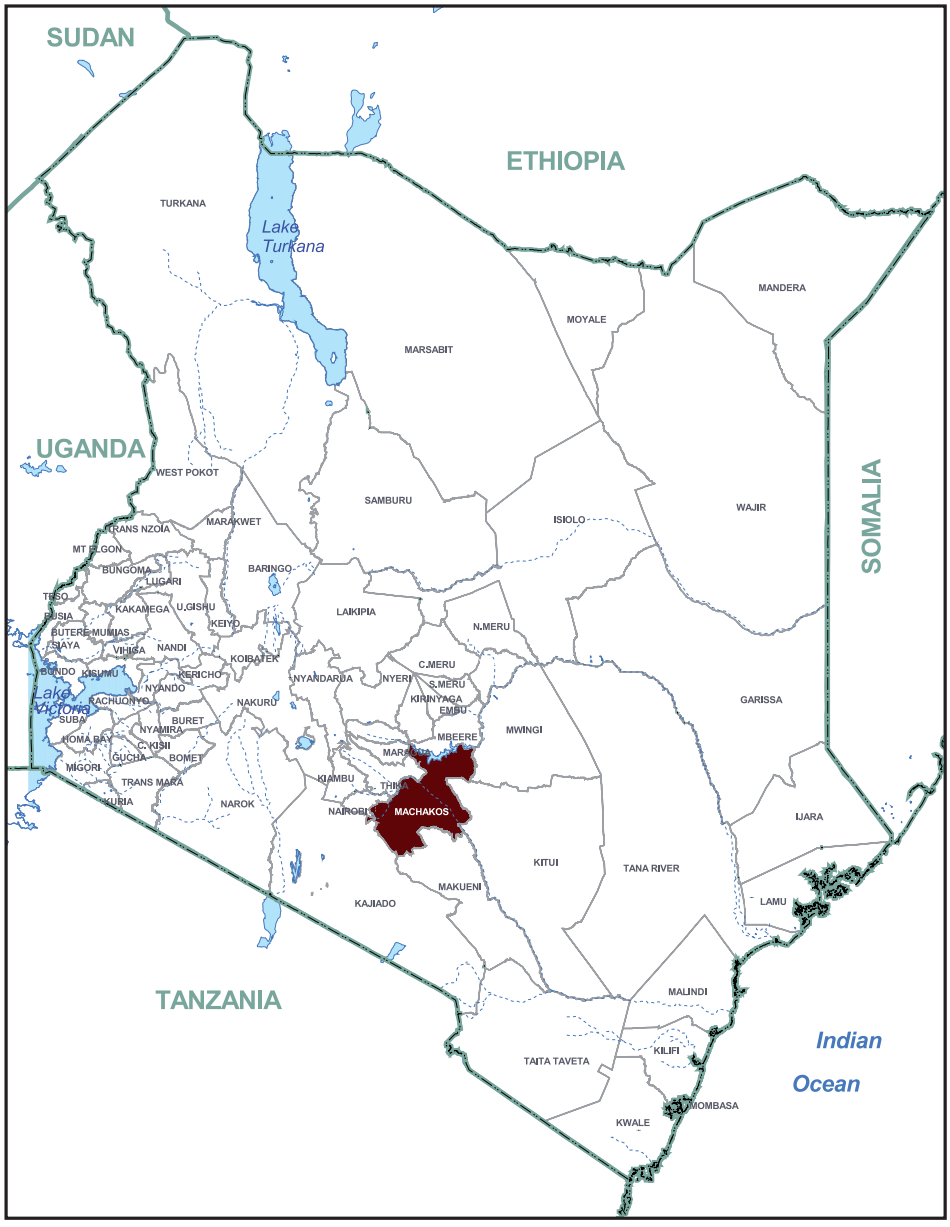
Multiple Indicator Cluster Survey 2008

Kenya National
Bureau of Statistics

United Nations
Children's Fund

MICS

Kenya
Eastern Province
Machakos District



Monitoring the situation of children and women

Multiple Indicator Cluster Survey 2008

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Contributors to the report:
Ms. Mary M. Wanyonyi
Dr. Alfred Agwanda
Zachary E. Gichohi

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

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

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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 Immunization
KESSP	Kenya Education Sector Support Programme
KNBS	Kenya National Bureau of Statistics
LAM	Lactational Amenorrhea Method
LPG	Liquefied Petroleum Gas
MDG	Millennium Development Goals
MICS	Multiple Indicator Cluster Survey
MoH	Ministry of Health
NAR	Net Attendance Rate
NPA	National Programme of Action
ORS	Oral Re-hydration Salts
ORT	Oral Rehydration Treatment
PPM	Parts Per Million
PRS	Poverty Reduction Strategy
RHF	Recommended Home Fluid
SPSS	Statistical Package for Social Sciences
STIs	Sexually Transmitted Infections
TFR	Total Fertility Rates
TT	Tetanus Toxoid
U5MR	Under-5 Mortality Rate
UNAIDS	United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNGASS	United Nations General Assembly Special Session on HIV/AIDS
UNICEF	United Nations Children's Fund
WASH	Water, Sanitation and Hygiene
WFFC	World Fit For Children
WHO	World Health Organization
WSC	World Summit for Children

Foreword

The Machakos district Multiple Indicator Cluster Survey (MICS) 2008 is a comprehensive district representative sample survey. The survey covered 1,101 households selected using appropriate statistical procedures.

The objective of the district level MICS is to provide estimates relating to the well being of children and women at the district level. Information contained in this report is useful for policymakers, planners, researchers and program managers in designing interventions and strategies that are based on credible evidence. In MICS 2008, information on specific areas such as reproductive health, child mortality, child health, nutrition, child protection, water and sanitation, education, and HIV/AIDS and orphanhood were collected.

Survey findings indicate that the infant and under 5 mortality rates are 27 and 38 per 1,000 live births in Machakos district, respectively. Exclusive breastfeeding for children aged below 6 months is quite low. In addition, the district reported low prevalence of wasting among children aged 6-59 months.

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

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



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

Executive Summary

The Machakos district Multiple Indicator Cluster Survey (MICS) is a representative sample survey drawn using the 1999 Census of Kenya Enumeration Areas (EAs) as the sampling frame. The 50 EAs are sampled using the probability proportional to size (PPS) sampling methodology. Information from a total of 1,101 households was collected using structured questionnaires.

The survey adopted a two-stage design where households were stratified into two at the EA level, i.e., households with a child below 3 years and with no children below 3 years at the time of household listing[1]. The stratification at EA level was done to increase the number of children and women who have given birth in the recent years in order to reduce the standard errors of child and women based estimates. The data was collected by two teams comprising of 5 members each, 1 supervisor, 1 editor/measurer and 3 investigators.

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

Child Mortality

The under-five mortality rate and the infant mortality rate were calculated using the birth history data for the 10-year period preceding the survey. The under-five mortality rate is 38 per 1,000 live births and infant mortality rate is 27 per 1,000 live births.

Nutritional Status and Breastfeeding

The proportion of children aged 6-59 months in Machakos who are moderately underweight is 17 per cent. Almost one third (31 per cent) of the target children are stunted while a negligible proportion was wasted.

Survey findings show that 47 per cent of the children are timely breastfed (given breast milk within an hour of birth). Exclusive breastfeeding rate for children aged 0-5 months in the district is 19 per cent. More than a half (58 per cent) of children born in Machakos are weighed at the time of birth.

A significant number of households (94 per cent) use iodized salt for cooking.

Immunization

Full immunization rate is 81 per cent among children aged 12-23 months. High immunization rates were reported for measles (96 per cent) and tuberculosis (97 per cent).

Overall, 69 per cent of the mothers who have given birth during the two years preceding the survey reportedly received tetanus toxoid (TT) injection.

Care of illness

The survey findings indicate a poor management of diarrhoea among children in Machakos District. Only 28 per cent of children with diarrhoea during the 2 weeks preceding the survey received oral re-hydration therapy while 14 per cent reported using home management of diarrhoea.

Among children suspected to have pneumonia, 47 per cent were reported to have sought treatment. However, only six per cent of the cases were given an antibiotic treatment.

Malaria prevention

In Machakos district, more than half (51 per cent) of the households have at least one insecticide treated mosquito net, and 53 per cent children below 5 years sleep under a treated net.

Among children aged below 5 years who had fever during the two weeks preceding the survey, only 21 per cent were given any anti-malarial treatment. Only 13 per cent of women

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

who had given birth during two years preceding the survey reported intermittent preventive malaria treatment.

Water and sanitation

Only 36 per cent of the Machakos population is using drinking water from an improved source and 48 per cent reportedly treat the drinking water.

Almost one third (32 per cent) of the population is using improved sanitation facilities. The district has a high incidence (78 per cent) of safe disposal of children stools.

Reproductive health

The Total Fertility Rate (TFR) for the 3-year period preceding the survey in Machakos is 4.1 children per woman. Teenage pregnancy is 19 per cent, i.e., proportion of women aged 15-19 years who have began child bearing.

Although 97 per cent of mothers who gave birth in the past two years had an antenatal check-up, only 42 per cent gave birth to their babies in an institution.

Eleven per cent of women aged 15-19 years are currently married or in a union.

Education

More than half (63 per cent) of the primary school entry age children in the district are attending primary school. The net primary school attendance rate is 94 per cent and that of secondary is only 18 per cent. Machakos district has a high female adult literacy rate of 91 per cent.

Child protection

The district has a low registration rate of births. Only 27 per cent of children under-five in Machakos have registered their births.

Less than 10 per cent of children aged 5-14 years are engaged in child labour.
A very high proportion (95 per cent) of children aged 2-14 years received some psychological or physical punishment during the one month period prior to the survey.

HIV and AIDS

Only 46 per cent of young women aged 15-24 years in Machakos have comprehensive knowledge about HIV prevention.

More than half (52 per cent) of the women have knowledge about mother-to-child transmission of HIV.

Less than half (48 per cent) of the women aged 15-49 years reported that they had been tested for HIV.

Of the women who delivered a child in the last 2 years preceding the survey, 78 per cent received counselling on prevention of mother-to-child transmission of HIV and 77 per cent had their HIV test done.

Orphans and vulnerable children

One in eleven children under 18 years (9 per cent) in Machakos are orphans and 1 in 18 are vulnerable.

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

Majority (95 per cent) of women aged 15-49 years in Machakos have heard about FGM/C, and 11 per cent had any form of FGM/C. Of those who had FGM/C, 13 per cent had an extreme form of FGM/C.

Only four per cent of women who have heard of FGM/C believe that the practice should be continued. This highlights the fact that the practice has limited acceptance in the community.

Forty-six per cent of women in Machakos believe that a husband is justified in beating his wife if she goes out without telling him, neglects children, argues with him, refuses to have sex with him or burns the food.

Summary Table of Findings

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

Topic	MICS Indicator Number	MDG Indicator Number	Indicator	Value & Unit	
CHILD MORTALITY					
Child mortality	1	13	Under-five mortality rate	38	per thousand
	2	14	Infant mortality rate	27	per thousand
NUTRITION					
Nutritional status			Underweight prevalence (below -2 SD)	17.0	per cent
			Stunting prevalence (below -2 SD)	31.3	per cent
			Wasting prevalence (below -2 SD)	2.2	per cent
Breastfeeding	45		Timely initiation of breastfeeding	47.1	per cent
	15		Exclusive breastfeeding rate	18.7	per cent
	16		Continued breastfeeding rate		
			at 12-15 months	92.2	per cent
			at 20-23 months	48.5	per cent
	17		Timely complementary feeding rate	83.7	per cent
	18		Frequency of complementary feeding	73.1	per cent
	19		Adequately fed infants	48.1	per cent
Salt iodization	41		Iodized salt consumption	94.2	per cent
Vitamin A	42		Vitamin A supplementation (under-fives)	34.8	per cent
	43		Vitamin A supplementation (post-partum mothers)	51.8	per cent
Low birth weight	9		Low birth weight infants	9.1	per cent
	10		Infants weighed at birth	58.1	per cent
CHILD HEALTH					
Immunization	25		Tuberculosis immunization coverage (by 24 months)	96.8	per cent
	26		Polio-3 immunization coverage (by 12 months)	84.5	per cent
	27		DPT immunization coverage (by 12 months)	92.6	per cent
	28	15	Measles immunization coverage (by 12 months)	95.7	per cent
	31		Fully immunized children (by 12 months)	81.0	per cent
Tetanus toxoid	32		Neonatal tetanus protection	69.3	per cent
Care of illness	33		Use of oral rehydration therapy (ORT)	28.4	per cent
	34		Home management of diarrhoea	13.7	per cent
	35		Received ORT or increased fluids, and continued feeding	18.2	per cent
	23		Care seeking for suspected pneumonia	47.3	per cent
	22		Antibiotic treatment of suspected pneumonia	6.1	per cent
Solid fuel use	24	29	Solid fuels	91.3	per cent
Malaria	36		Households having insecticide-treated nets (ITNs)	57.9	per cent
	37	22	Under-fives sleeping under insecticide-treated nets	52.8	per cent
	38		Under-fives sleeping under mosquito nets	54.6	per cent
	39	22	Anti-malarial treatment (under-fives)	21.3	per cent
	40		Intermittent preventive malaria treatment (pregnant women)	13.3	per cent
ENVIRONMENT					
Water and Sanitation	11	30	Use of improved drinking water sources	47.2	per cent
	13		Water treatment	47.9	per cent
	12	31	Use of improved sanitation facilities	32.4	per cent
	14		Disposal of child's faeces	77.5	per cent

Topic	MICS Indicator Number	MDG Indicator Number	Indicator	Value & Unit	
REPRODUCTIVE HEALTH					
Contraception and unmet need	21	19c	Contraceptive prevalence	62.4	per cent
	98		Unmet need for family planning	1.6	per cent
Maternal and newborn health	20		Antenatal care	96.9	per cent
	44		Content of antenatal care		
			Blood test taken	83.3	per cent
			Blood pressure measured	84.7	per cent
			Urine specimen taken	67.2	per cent
			Weight measured	95.0	per cent
	4	17	Skilled attendant at delivery	56.0	per cent
	5		Institutional deliveries	41.6	per cent
			Total fertility rate	4.1	Rate
EDUCATION					
Education	52		Pre-school attendance	39.5	per cent
	53		School readiness	89.6	per cent
	54		Net intake rate in primary education	62.8	per cent
	55	6	Net primary school attendance rate	93.5	per cent
	56		Net secondary school attendance rate	17.9	per cent
			Adult literacy rate (female)	91.3	per cent
CHILD PROTECTION					
Birth registration	62		Birth registration	26.6	per cent
Child labour	71		Child labour	9.2	per cent
	72		Labourer students	96.7	per cent
	73		Student labourers	9.3	per cent
Child discipline	74		Any psychological/physical punishment	94.5	per cent
Early marriage and polygyny	67		Marriage before age 15	4.0	per cent
			Marriage before age 18	20.4	per cent
	68		Young women aged 15-19 currently married/in union	10.9	per cent
Female genital mutilation/ Cutting	66		Approval for FGM/C	4.3	per cent
	63		Prevalence of female genital mutilation/cutting (FGM/C)	10.6	per cent
	64		Prevalence of extreme form of FGM/C	12.6	per cent
	65		FGM/C prevalence among daughters	1.0	per cent
Domestic violence	100		Attitudes towards domestic violence	46.1	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	45.6	per cent
	89		Knowledge of mother- to-child transmission of HIV	51.6	per cent
	86		Attitude towards people with HIV/AIDS	19.3	per cent
	87		Women who know where to be tested for HIV	89.8	per cent
	88		Women who have been tested for HIV	48.0	per cent
	90		Counselling coverage for the prevention of mother-to-child transmission of HIV	78.1	per cent
	91		Testing coverage for the prevention of mother-to-child transmission of HIV	77.1	per cent
Support to orphaned and vulnerable children	75		Prevalence of orphans	9.2	per cent
	78		Children's living arrangements	7.7	per cent
	76		Prevalence of vulnerable children	5.7	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	28.2	per cent

Introduction 1

Background

This report is based on the Machakos District Multiple Indicator Cluster Survey, conducted in 2008 by the Kenya National Bureau of Statistics. The survey provides valuable information on the situation of children and women in Machakos, and was based, in large part, on the need to monitor progress towards goals and targets emanating from recent international agreements: the Millennium Declaration, adopted by all 191 United Nations Member States in September 2000, and the Plan of Action of A World Fit For Children (WFFC), adopted by 189 Member States at the United Nations Special Session on Children in May 2002. All the above commitments build upon promises made by the international community at the 1990 World Summit for Children (WSC).

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

A Commitment to Action: National and International Reporting Responsibilities

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

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

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

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

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

Similarly, the **Millennium Declaration** (paragraph 31) calls for periodic reporting on progress: "…We request the General Assembly to review on a regular basis the progress made in implementing the provisions of this Declaration, and ask the Secretary-General to issue periodic reports for consideration by the General Assembly and as a basis for further action."

Kenya is committed to improving the welfare of its people particularly women and children who tend to be more vulnerable to social-economic hardships. With regard to children, the Government of Kenya (GOK) formulated the National Programme of Action (NPA) for children in 1992 soon after the World Summit for Children (WSC) that was held in 1990. The main objective of this programme was to identify issues affecting children and the strategies to address them. Measuring indicators of progress towards declared goals through proper monitoring and evaluation of projects/programmes and other interventions e.g. emergency response and humanitarian assistance are vital components of the NPA. The call for consolidated efforts in development was further stressed in the Vision 2030 document.

Proper monitoring and evaluation of targeted projects and programmes by the government and development partners requires a wide range of data and information to track progress towards achievement of the desired outcomes. In this respect, MICS data from the district is helpful in appraising such national programmes such as Poverty Reduction Strategy (PRS), Vision 2030, and Kenya Education Sector Support Programme (KESSP) 2005-2010 among other programmes.

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

1.2 Survey Objectives

The primary objectives of 2008 Machakos district Multiple Indicator Cluster Survey were to:

- Provide up-to-date information for assessing the situation of children and women in the district;
- Furnish data needed for monitoring progress toward goals established in the Millennium Declaration, the goals of A World Fit For Children (WFFC), other internationally agreed upon goals, and Vision 2030 as a basis for future action;
- Contribute to the improvement of data and monitoring systems in Kenya and to strengthen technical expertise in the design, implementation, and analysis of such systems.

Sample and Survey Methodology 2

2.1 Sample Design

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

2.2 Questionnaires

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

The Household Questionnaire:

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

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

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

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

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

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

- Breastfeeding
- Care of Illness
- Malaria
- Immunization
- Anthropometry

The questionnaires are based on the MICS3 model questionnaire[3]. The English version of this model questionnaires were translated into Kiswahili, Borana, Kamba, Meru, and Embu languages. In addition to the administration of questionnaires, fieldwork teams tested the salt used for cooking in the households for iodine content, and measured the weights and heights of children aged 0-59 months. Details and findings of these measurements are provided in the respective sections of the report.

2.3 Training and Fieldwork

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

The household listing was carried out by 3 teams, each comprising a lister and a mapper. The District Statistical Officer (DSO) supervised these three teams and the whole listing operation was monitored by the district co-ordinator.

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

2.4 Data Processing

Data was captured using the CSPro software. All questionnaires were double entered and internal consistency checks were performed to ensure quality control. Two supervisors monitored this whole process. Procedures and standard programs developed under the global MICS3 project were adapted to the modified questionnaire and used throughout data processing period. Data entry process began simultaneously with data collection in July 2008 and was completed in September 2008. Data were analysed using the Statistical Package for Social Sciences (SPSS) software program, and the model syntax and tabulation plans developed by UNICEF were customized for this purpose.

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

3.1 Sample Coverage

Table 3.1 (HH.1) summarises information on the survey coverage for the entire district. In the survey, 1,200 sampled households were occupied and 1,101 were successfully interviewed. This translates to a household response rate of 92 per cent. A total of 1,156 eligible women (aged 15-49 yrs) were identified and 1,130 were successfully interviewed, which corresponds to a 98 per cent response rate. Overall, 963 children under age five were listed in the household questionnaire. Information was collected for 956 of these children, which corresponds to a response rate of 99 per cent.

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, Machakos district, Eastern Province, Kenya 2008

Number of households	
Sampled (H_s)	1200
Occupied (H_o)	1200
Interviewed (H_i)	1101
Response rate (H_r)	91.8
Number of women	
Eligible (W_e)	1156
Interviewed (W_i)	1130
Response rate (W_r)	97.8
Overall response rate (W_{or})	89.7
Number of children under 5	
Eligible (C_e)	963
Information collected (C_i)	956
Response rate (C_r)	99.3
Overall response rate (C_{or})	91.1

$H_r = H_i / H_o$ (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 the Household Population

The age and sex distribution of the survey population is provided in Table 3.2 (HH.2) and in Figure 3.1 (HH.1). In the 1,101 households successfully interviewed, 4,954 household members were listed of whom 2,218 were males, and 2,377 were females. This translates to a sex ratio of 93 males per 100 females.

The district has a youthful population with 41 per cent of the total population aged below 15 years and 53 per cent aged between 15-64 years. Only six per cent of the population are 65 years and above. The figures indicate a moderate dependency ratio.

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

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

	Males		Females		Total	
	Number	Per cent	Number	Per cent	Number	Per cent
Age						
0-4	347	15.7	327	13.8	675	14.7
5-9	336	15.2	327	13.8	663	14.4
10-14	281	12.7	274	11.5	555	12.1
15-19	206	9.3	217	9.1	423	9.2
20-24	177	8.0	179	7.5	356	7.8
25-29	125	5.6	204	8.6	329	7.2
30-34	153	6.9	160	6.7	313	6.8
35-39	105	4.7	124	5.2	229	5.0
40-44	82	3.7	103	4.3	184	4.0
45-49	78	3.5	83	3.5	161	3.5
50-54	82	3.7	94	4.0	176	3.8
55-59	67	3.0	76	3.2	143	3.1
60-64	39	1.7	59	2.5	98	2.1
65-69	26	1.2	45	1.9	70	1.5
70+	94	4.2	98	4.1	192	4.2
Missing/DK	20	0.9	8	0.3	28	0.6
Dependency age groups						
< 15	965	43.5	928	39	1893	41.2
15-64	1113	50.2	1298	54.6	2411	52.5
65 +	119	5.4	143	6.0	262	5.7
Missing/DK	20	0.9	8	0.3	28	0.6
Children aged 0-17	1079	48.6	1059	44.6	2138	46.5
Adults 18+/Missing/ DK	1139	51.4	1317	55.4	2457	53.5
Total	**2218**	**100.0**	**2377**	**100.0**	**4594**	**100.0**

Figure 3.1: Age and Sex Distribution of Household Population

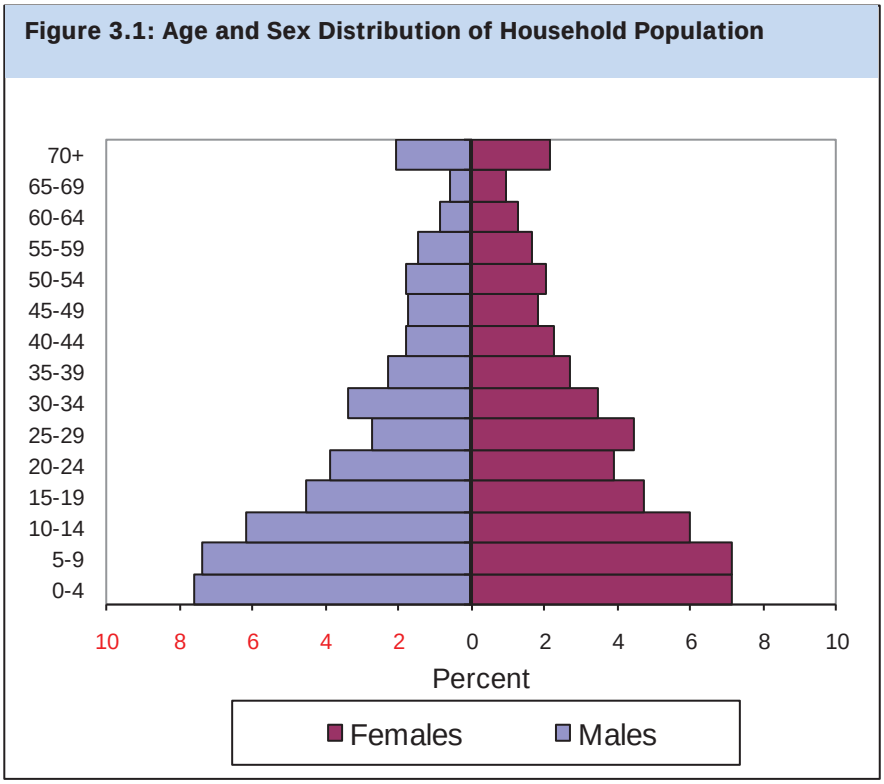


Table 3.3 (HH.3) provides information on the demographic characteristics of the households. The weighted and un-weighted numbers of total households are equal, since sample weights were normalized.

Thirty five per cent of the households are headed by a female member. The mean household size is 4.1 persons and majority of the surveyed households have between 4 to 5 members. Only one per cent of the household comprises of 10 or more members. Forty-five per cent of the households in the district have at least one child below 5 years of age and 75 per cent of households have at least one child below 18 years of age. Three out of four households (75 per cent) have at least one woman in the reproductive age group (15-49 years).

Table 3.3 (HH.3): Household composition

Percent age distribution of households by selected characteristics, Machakos district, Eastern Province, Kenya 2008

Characteristics	Weighted percentage	Number of households	
		Weighted	Un-weighted
Sex of household head			
Male	64.7	713	695
Female	35.3	388	406
Number of household members			
1	12.2	134	88
2-3	26.4	290	250
4-5	36.9	406	434
6-7	17.7	195	230
8-9	5.5	61	77
10+	1.3	14	22
Mean household size	4.1	NA	NA
At least one child aged < 18 years	75.2	1101	1101
At least one child aged < 5 years	45.2	1101	1101
At least one woman aged 15-49 years	75.0	1101	1101

3.3 Characteristics of Female Respondents

Table 3.4 (HH.4) provides information on the background characteristics of female respondents aged 15-49 years. About 63 per cent of women aged 15-49 years are currently married or in a union while 30 per cent have never been married. Seventy-six per cent have ever given birth while 24 per cent have never had a birth.

Majority (61 per cent) of the women have attained primary level education and more than a half (55 per cent) of the target group belong to a high wealth index household.

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

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

Characteristics	Weighted percentage	Number of women	
		Weighted	Un-weighted
Age			
15-19	19.5	220	205
20-24	16.7	188	213
25-29	19.5	220	241
30-34	15.4	174	178
35-39	11.8	134	129
40-44	9.5	108	86
45-49	7.6	86	78
Marital/Union status			
Currently married/in union	62.7	709	754
Formerly married	7.1	80	83
Never married	30.2	341	293
Motherhood status			
Ever gave birth	76.1	860	913
Never gave birth	23.9	270	217
Education			
None	7.5	85	81
Primary	61.1	690	719
Secondary +	31.2	352	329
Non-Standard Curriculum	0.2	3	1
Wealth index			
Low	10.4	118	127
Medium	34.2	387	418
High	55.3	625	585
Total	**100**	**1130**	**1130**

3.4 Characteristics of Children under Five

Table 3.5 (HH.5) presents background characteristics of children less than 5 years of age. There are slightly more male children in the district. Majority of the children are aged 36-47 months. Majority (64 per cent) of the children belong to mothers having primary education, while only 13 per cent of the children are from low wealth index households.

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

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

Characteristics	Weighted percentage	Number of children under-5	
		Weighted	Un-weighted
Sex			
Male	51.3	490	489
Female	48.7	466	467
Age			
< 6 months	10.9	104	109
6-11 months	9.4	90	98
12-23 months	22.0	211	235
24-35 months	17.6	169	186
36-47 months	22.6	216	185
48-59 months	17.4	167	143
Mother's education			
None	6.5	62	65
Primary	63.6	608	606
Secondary +	29.9	286	285
Wealth index			
Low	13.0	124	132
Medium	41.2	394	404
High	45.8	438	420
Total	**100.0**	**956**	**956**

Child Mortality 4

One of the overarching goals of the Millennium Development Goals (MDGs) (Goal 4) and the World Fit for Children (WFFC) is to reduce infant and under-five mortality. The MDGs called for the reduction in under-five mortality by two-thirds between 1990 and 2015. Monitoring progress towards this goal is an important objective. In this survey, direct estimation methodology was used to estimate the levels of child mortality based on information derived from birth histories The birth history obtained from women aged 15-49 years include; total number of children ever born and living by sex and date of birth of each child born alive. 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 also used by Demographic Health Surveys (DHS) worldwide including that of Kenya Demographic Health Survey (KDHS). This approach allows comparison of estimates with those obtained from Demographic Health Surveys.

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

- infant mortality; the probability of dying before the first birthday
- under-five mortality (U5MR); the probability of dying before the fifth birthday
- neonatal mortality; the probability of dying before one month of life
- Post neonatal mortality the probability of dying between one month and one year of life. It is the difference between infant and neonatal mortality.
- child mortality; probability of dying between the first and fifth year of life

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

Although 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 the birth histories. In many cases women tend to avoid reporting their dead children and this leads to an underestimation of mortality levels.

4.1 Levels of Childhood Mortality

Table 4.1 provides estimates of childhood mortality for the ten-year period preceding the survey. The infant mortality rate is 27 per thousand live births, while the under-5 mortality rate (U5MR) is 38 per thousand live births. It shows that for every 1000 children born in this district 27 do not live up to their first birth day and 38 do not live up to the fifth birth day. This data implies that about 71 per cent of Under- Five mortality occur in the first year of life. Furthermore, 67 per cent of the deaths during infancy occur in the first month of life.

Table 4.1: Child mortality

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

Period of Analysis of ten years	Infant mortality rate	Neonatal mortality rate	Post-neonatal mortality rate	Child mortality rate	Under-five mortality rate
0-9	27	18	8	12	38
10-19	33	22	11	15	47

Nutrition 5

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

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, recurring sicknesses and faltering growth is a common occurrence. The Millennium Development target aims to to reduce by half the proportion of people who suffer from hunger between 1990 and 2015 (goal 1; target 2). The World Fit for Children goal is to reduce the prevalence of malnutrition among children under five years of age by at least one-third (between 2000 and 2010). A reduction in the prevalence of malnutrition will assist in the goal to reduce child mortality.

5.1 Nutritional Status

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

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 and 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.

Weight-for-age is a composite index of height-for-age and weight-for-height. It does not distinguish between acute malnutrition (wasting) and chronic malnutrition (stunting). Thus a child can be underweight for his/her age because she/he is stunted, wasted or both. 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.*

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

Table 5.1 (NU.1) shows the distribution of children classified into each of the above categories. However, for the measure weight–for-height, the proportion whose weight-for-height is above 2 standard deviations from the median of the reference population has been included. Such children are considered to be overweight.

The information presented in Table 5.1 (NU.1) excludes children who were not weighed and measured (about 2 per cent) and those whose measurements are outside a plausible range. A total of about three per cent of children are therefore excluded from the analysis (not measured or age information missing or flagged as outliers).

The results indicate that 17 per cent of children aged 6-59 months are moderately underweight; 31 per cent are moderately stunted, while a negligible percentage is wasted.

Male children are slightly more likely to be underweight, stunted, and wasted than female children in this district. With respect to education, children whose mothers had primary education were more likely to be stunted (height for age) while stunting or wasting declines as wealth index increases.

Table 5.1 (NU.1): Child malnourishment

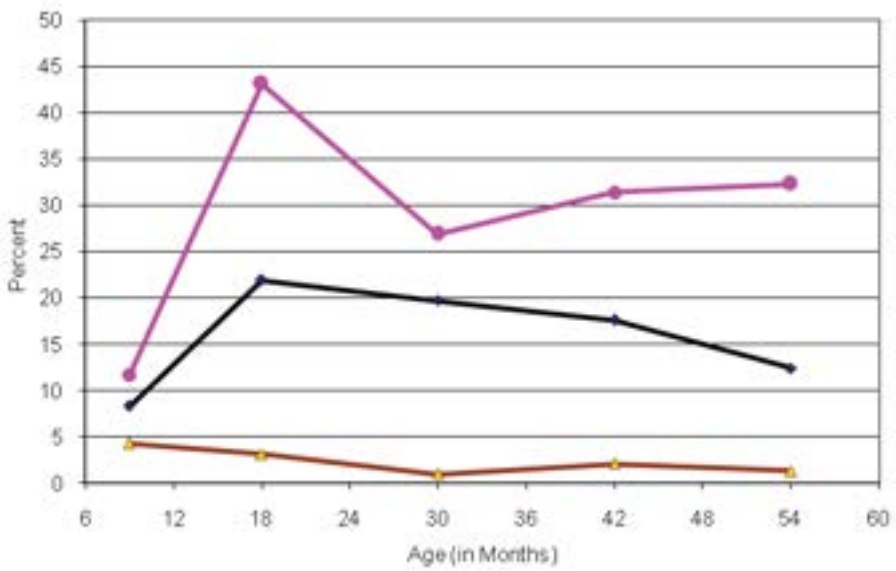
Percentage of children aged 6-59 months who are severely or moderately malnourished, Machakos district, Eastern Province, Kenya 2008

	Weight-for-age		Height-for-age		Weight-for-height			Number of children aged 6-59 months
Characteristics	% below - 2 SD*	% below - 3 SD*	% below - 2 SD**	% below - 3 SD**	% below - 2 SD***	% below - 3 SD***	% + 2 SD***	
Sex								
Male	20.3	2.6	35.1	13.3	2.6	0.4	2.9	427
Female	13.3	2.4	27.0	6.6	1.7	0.4	5.6	384
Age								
6-11 months	8.4	0.0	13.0	1.2	3.9	0.9	13.1	84
12-23 months	21.9	4.2	43.1	12.7	3.1	0.9	3.3	196
24-35 months	19.7	4.8	26.9	11.4	1	0.0	3.5	154
36-47 months	17.6	1.2	31.4	9.6	2.1	0.0	2.8	211
48-59 months	12.4	1.2	32.3	11.6	1.3	0.6	2.2	157
Mother's education								
None	12.6	1.5	36.0	9.5	0.0	0.0	4.3	52
Primary	19.4	2.7	33.5	11	2.8	0.5	4.4	517
Secondary +	12.6	2.1	25.5	8.3	1.4	0.3	3.6	242
Wealth index								
Low	22.4	4.0	42.6	12.8	2.7	0	4.4	99
Medium	21.3	3.2	36.6	11.9	2.7	0.7	3	338
High	11.6	1.4	23.4	7.8	1.7	0.2	5.2	374
Total	**17.0**	**2.5**	**31.3**	**10.1**	**2.2**	**0.4**	**4.2**	**811**

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

Children aged 12-23 months are more undernourished in comparison to children who are younger and older (Figure 5.1). This pattern is expected and is related to the age at which many children cease to be breastfed and are exposed to contamination in water, food and environment.

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



5.2 Breastfeeding

Breastfeeding for the first few years of life protects children from infection, provides an ideal source of nutrients and is economical and safe. However, many mothers stop breastfeeding too soon and there are often pressures to switch to infant formula, which can contribute to growth faltering and micronutrient deficiency. This may be compounded further if clean water is not readily available. The World Fit for Children goal states that children should be exclusively breastfed for the first 6 months of life and continue to be breastfed with safe, appropriate and adequate complementary feeding for up to 2 years of age and beyond.

WHO/UNICEF have the following feeding recommendations:

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

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

The indicators of recommended child feeding practices are as follows:

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

Table 5.2 (NU.2) provides the proportion of women who started breastfeeding their infants within one hour of birth, and within one day of birth (which includes those who started within one hour) respectively. About 87 per cent of mothers start breastfeeding their new born within one day of birth and about 47 per cent do so within one hour of birth. Women with primary education are more likely to initiate breastfeeding within one day or one hour of birth. Women from higher wealth index households are more likely to initiate breastfeeding within one day of giving birth.

Table 5.2 (NU.2): Initial breastfeeding

Percentage of women aged 15-49 years with a birth in the two years preceding the survey who breastfed their baby within one hour of birth and within one day of birth, Machakos 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	49.5	90.6	65
6-11 months	46.0	86.4	81
12-23 months	46.8	86.3	144
> 23 months	(*)	(*)	8
Mother's education			
None	39.8	85.3	17
Primary	50.1	88.0	198
Secondary +	41.3	86.6	82
Wealth index			
Low	31.9	83.4	43
Medium	51.6	87.3	118
High	47.9	88.8	136
Total	**47.1**	**87.4**	**297**

Tables 5.3a and 5.3b (NU.3) show breastfeeding status and complimentary feeding of children as reported by mothers/caretakers in the 24 hours prior to the interview. *Exclusively breastfed* refers to infants who received only breast milk (and vitamins, mineral supplements, or medicine).

One in four (26 per cent) children aged 0-3 months are exclusively breastfed. However, when the age bracket is extended to less than six months, only 19 per cent are exclusively breastfed. Female children are more likely to be exclusively breastfed irrespective of which duration is taken into account. Exclusive breastfeeding during the 0-3 months by mothers declines slightly with increasing wealth index levels.

Table 5.3a (NU.3): Breastfeeding

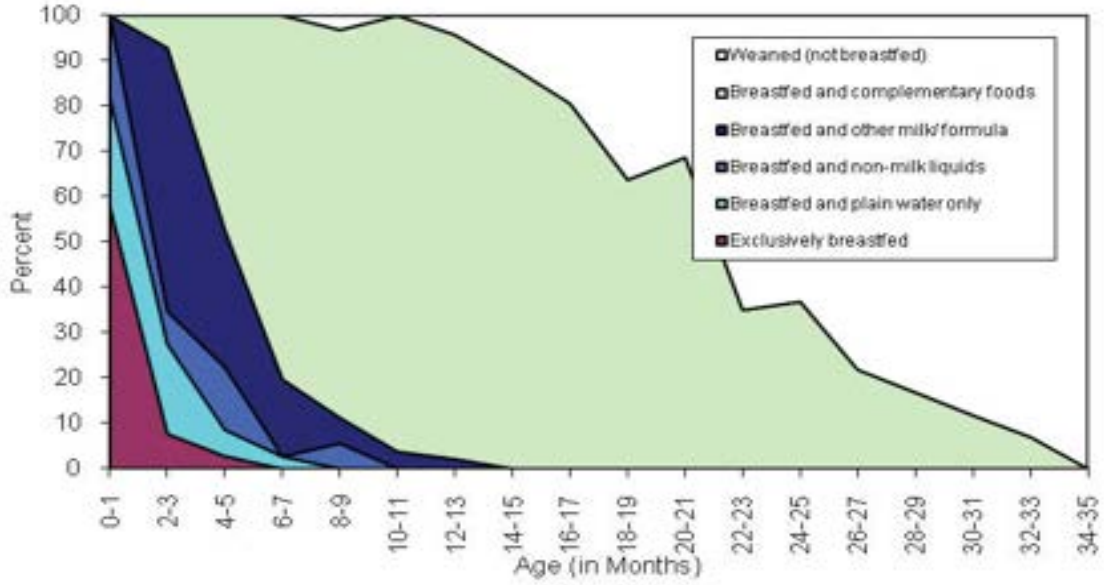
Percentage of living children according to breastfeeding status at each age group, Machakos district, Eastern Province, Kenya 2008

Characteristics	Children age 0-3 months		Children age 0-5 months	
	Percentage exclusively breastfed	Number of children	Percentage exclusively breastfed	Number of children
Sex				
Male	(23.7)	25	(16.3)	41
Female	(27.0)	37	(20.9)	48
Mother's education				
None	(0.0)	2	(*)	2
Primary	(29.0)	39	22.3	55
Secondary +	(*)	21	(14.0)	33
Wealth index				
Low	(*)	9	(*)	16
Medium	(26.4)	28	(20.4)	36
High	(24.3)	25	(18.3)	38
Total	**25.6**	62	**18.7**	89

Note: Breastfeeding status is based on mother's or caretaker's reports of children's consumption in the 24 hours prior to the interview. Exclusive breastfeeding refers to children who receive only breast milk, or breast milk and vitamins, mineral supplements, or medicine.
NS: Based on less than 25 un-weighted cases, hence not shown.

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 negligible, however approximately 35 per cent of children in the district continue receiving breast milk after 2 years of age.

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



At age 6-9 months, 84 per cent of children are receiving breast milk and solid or semi-solid foods (Table 5.3b (NU.3)). By ages 12-15 and 20-23 months, 92 per cent and 49 per cent of children, respectively, are still being breastfed. Initiation of complementary feeding among children aged 6-9 months depicts no clear sex differentials. However, complementary feeding rate increases with improvement in wealth status of households except for older children (20-23 months).

Table 5.3b (NU.3): Complementary feeding

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

Characteristics	Children age 6-9 months		Children age 12-15 months		Children age 20-23 months	
	Percentage receiving breastmilk and solid/ mushy food	Number of children	Percentage breastfed	Number of children	Percentage breastfed	Number of children
Sex						
Male	(83.7)	43	(93.6)	40	(40.5)	36
Female	(83.7)	34	(90.8)	38	(57.6)	31
Mother's education						
None	(*)	1	0.0	0	(*)	1
Primary	82.4	52	94.8	47	52.2	49
Secondary +	(85.8)	24	(88.3)	31	(*)	16
Wealth index						
Low	(*)	7	(*)	13	(*)	10
Medium	(83.6)	31	(89.7)	35	(55.4)	31
High	(84.4)	38	(94.1)	31	(29.9)	25
Total	**83.7**	**77**	**92.2**	**78**	**48.5**	**67**

The adequacy of infant feeding in children less than 12 months is provided in Table 5.4 (NU.4). Different criteria of adequate feeding are used depending on the age of the child. For infants aged 0-5 months, 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. 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. Only 19 per cent of children aged 0-5 months are currently exclusively breastfed and therefore adequately fed. Among those aged 6-8 months, 77 per cent are receiving breast milk and complementary food. About 73 per cent of children aged 6-11 months are adequately fed. However, the percentage of adequately fed infants (aged 0-11) declines to 48 per cent. In this district, more male children are adequately fed compared to female children, except for exclusive breastfeeding among 0-5 months old. The proportion of 6-8 and 0-11 month old infants appropriately fed is slightly higher in the high wealth index strata compared with low and medium wealth indices.

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, Machakos 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	16.3	80.1	71.0	75.1	51.6	104
Female	20.9	72.9	66.5	70.2	44.1	91
Mother's education						
None	(*)	(*)	(*)	(*)	(*)	5
Primary	22.3	78.3	72.8	75.4	52.2	126
Secondary +	14.0	72.7	59.9	67.4	40.0	63
Wealth index						
Low	(16.0)	(74.1)	(100.0)	(83.3)	(40.2)	25
Medium	20.4	75.0	61.5	66.8	45.7	78
High	18.3	78.1	74.3	76.5	52.4	91
Total	**18.7**	**76.7**	**69.5**	**73.1**	**48.1**	**194**

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 was to achieve sustainable elimination of iodine deficiency by 2005. The indicator for achieving sustainable elimination of iodine deficiency is the percentage of households consuming adequately iodized salt ($\geq$15 parts per million).

Salt used for cooking was tested in 96 per cent of households for iodine content, using salt test kits to check for the presence of potassium iodide. Table 5.5 (NU.5) shows that only three per cent of households had no salt available. In 94 per cent of the households, the tested salt was found to contain 15 parts per million (ppm) or more of iodine (i.e. adequately iodized salt). Low wealth index households are more likely to lack salt and use salt that is not adequately iodized compared to medium and high wealth index households.

Table 5.5 (NU.5): Iodized salt consumption

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

Wealth index	Percentage of households in which salt was tested	Number of households interviewed	Percentage of households: Salt test result: No salt	< 15 PPM	15+ PPM*	Total	Number of households in which salt was tested or with no salt
Low	87.8	125	12.2	4.8	83.0	100.0	125
Medium	96.3	368	3.3	2.0	94.7	100.0	366
High	98.2	608	1.7	2.0	96.3	100.0	608
Total	**96.4**	**1101**	**3.4**	**2.3**	**94.2**	**100.0**	**1099**

5.4 Vitamin A Supplements

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

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

For countries with vitamin A deficiency problems, current international recommendations call for high-dose vitamin A supplementation every four to six months, targeted at all children between the ages of six to 59 months living in affected areas. Providing young children with two high-dose vitamin A capsules a year is a safe, cost-effective, efficient strategy for eliminating vitamin A deficiency and improving child survival. Giving vitamin A to new mothers who are breastfeeding helps protect their children during the first months of life and assists in replenishment of the mother's stores of vitamin A, which are depleted during pregnancy and lactation. For countries with vitamin A supplementation programs, the definition of the indicator is the per cent of children 6-59 months of age, receiving at least one high dose vitamin A supplement in the last six months.

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

Within the six months prior to the survey, 35 per cent of children aged 6-59 months received a high dose vitamin A supplement (Table 5.6 (NU.6)). About 33 per cent did not receive the supplement in the last 6 months but did receive one prior to that time. Sixteen per cent of children received a vitamin A supplement at some time in the past but their mother/caretaker was unable to specify when. Within the last six months, there are no differences in the receipt of vitamin A supplementation between male and female children. More male children have never received any vitamin A supplementation compared to female children.

The age pattern of vitamin A supplementation shows that in the last six months, supplementation declines from a high of 77 per cent among children aged 6-11 months to 42 per cent among children aged 12-23 months.

Children whose mothers had higher education are more likely to receive vitamin A supplementation. The proportion receiving a supplement in the last six months increases from 21 per cent among children whose mothers have no education to 34 per cent for mothers with primary education and 39 per cent among children of mothers with secondary or higher education respectively.

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, Machakos district, Eastern Province, 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	Total	Number of children aged 6-59 months
Sex							
Male	34.9	29.9	15.6	4.6	14.9	100.0	449
Female	34.6	35.4	16.5	3.8	9.6	100.0	418
Age							
6-11 months	77.4	2.6	2.7	2.8	14.5	100.0	90
12-23 months	41.6	32.2	8.7	1.5	16.0	100.0	211
24-35 months	31.3	37.9	18.0	5.7	7.1	100.0	169
36-47 months	24.0	38.7	23.1	4.5	9.7	100.0	216
48-59 months	19.1	39.0	23.0	6.9	12.1	100.0	167
Mother's education							
None	20.9	20.4	21.4	23.1	14.1	100.0	60
Primary	34.3	33.2	15.9	2.9	13.6	100.0	553
Secondary +	39.1	34.1	15.1	2.5	9.2	100.0	253
Wealth index							
Low	26.6	35.2	10.7	6.2	21.3	100.0	108
Medium	35.5	32.6	14.1	4.2	13.6	100.0	359
High	36.3	31.8	19.3	3.7	8.8	100.0	400
Total	**34.8**	**32.6**	**16.1**	**4.2**	**12.4**	**100.0**	**867**

Approximately one in two mothers (52 per cent) with a birth in the two years before the survey, received a vitamin A supplement within eight weeks of the birth (Table 5.7 (NU.7)). vitamin A coverage increases with both increasing levels of education of the mother and by household wealth index.

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

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

Characteristics	Received vitamin A supplement*	Not sure if received vitamin A	Number of women aged 15-49 years
Education			
None	(33.7)	(4.1)	17
Primary	50.0	2.2	198
Secondary +	59.7	2.3	82
Wealth index			
Low	40.1	6.4	43
Medium	48.9	1.0	118
High	58.0	2.2	136
Total	**51.8**	**2.3**	**297**

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

5.5 Low Birth Weight

Weight at birth is a good indicator not only of a mother's health and nutritional status but also the newborn's chances for survival, growth, long-term health and psychosocial development. Low birth weight (less than 2,500 grams) carries a range of grave health risks for children. Babies who were undernourished in the womb face an increased risk of dying during their early months and years. Those who survive have impaired immune function and increased risk of disease. Low birth weight children are also likely to; remain undernourished, have 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 lower cognitive disabilities thereby affecting their performance later in school and job opportunities.

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

In the industrialized world, cigarette smoking during pregnancy is the leading cause of low birth weight. In developed and developing countries alike, teenagers who give birth when their own bodies have yet to fully develop, are at risk of bearing underweight babies.

One of the major challenges in measuring the incidence of low birth weight is the fact that more than half of infants in the developing world are not weighed at the time of birth. In the past, most estimates of low birth weight for developing countries were based on data compiled from health facilities. However, these estimates are biased since majority of newborns are not delivered in facilities and those who are, represent only a selected sample of all births.

As a result, the reported birth weights usually cannot be used to estimate the prevalence of low birth weight among all children. Therefore, the per cent age of births weighing below 2,500 grams was 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[4].

Slightly more than half (58 per cent) of births were weighed at birth and less than 10 per cent of infants weighed less than 2,500 grams (Table 5.8 (NU.8)). There is a slight variation in prevalence of low birth weight by wealth index (Figure 5.3). The corresponding results by level of education of the mother show that the prevalence of birth weight was highest for mothers without education (13 per cent) followed by the highly educated (10 per cent) and lowest for those with primary level education (8 per cent).

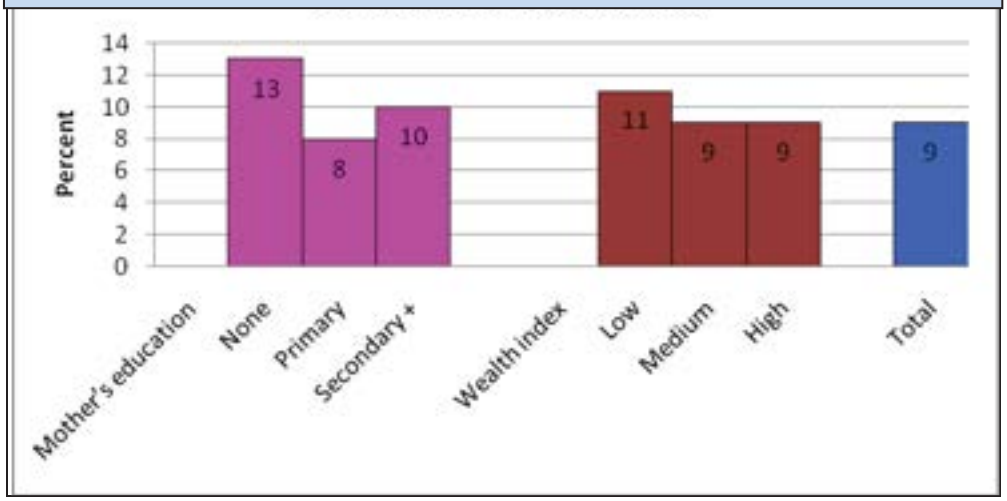
Table 5.8 (NU.8): Low birth weight infants

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

	Percentage of live births:		
	Below 2500 grams	Weighed at birth	Number of live births
Mother's education			
None	13.4	81.0	17
Primary	8.3	49.1	198
Secondary +	10.0	75.3	82
Wealth index			
Low	10.9	40.5	43
Medium	8.8	51.9	118
High	8.7	69.0	136
Total	**8.7**	**58.1**	**297**

[4] 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



5.6 Food Relief

Food relief in Machakos district is not widespread (Table 5.9 (NU11). Out of the 1,101 household surveyed, only a negligible percentage had registered for food relief.

Table 5.9 (NU9): 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, Machakos 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 week	After 6 months	Total per cent		
Low	0.0	125	0.0	0.0	100.0	0.0	0
Medium	0.8	368	17.7	82.3	100.0	0.1	3
High	1.6	608	22.5	77.5	100.0	0.6	10
Total	**1.2**	**1101**	**21.4**	**78.6**	**100.0**	**0.4**	**13**

Only one per cent of the households in the district registered as beneficiaries of the food distribution program. The results imply food relief is not a major issue in the District. Surprisingly, majority of the few households who registered as beneficiaries of food distribution belong to high wealth index category, followed by those from medium wealth index and none from the low wealth index group.

6.1 Immunization

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

A World Fit for Children goal is to 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 in this regard.

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

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

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

About 82 per cent of children had health cards. Almost all (97 per cent) children aged 12-23 months received a BCG vaccination by the age of 12 months and the first dose of DPT was given to 94 per cent. The proportion declines marginally for subsequent doses of DPT (Figure 6.1). Interestingly, 97 per cent of children received Polio 1 by age 12 months and this decreases to 94 per cent for the second dose and to 85 per cent by the third dose. The coverage for measles vaccine by the first 12 months of life is quite high (96 per cent) in the district compared to other vaccines such as DPT and Polio. Overall, 81 per cent of children in the district had received all the recommended vaccinations before their first birthday. Only three per cent of the target children reportedly did not receive any vaccine in Machakos district.

Table 6.1 (CH.1): Vaccinations among children

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

Vaccinated at any time before the survey	Percentage of children who received:											Number of children aged 12-23 months
	BCG	DPT 1	DPT 2	DPT 3	Polio 0	Polio 1	Polio 2	Polio 3	Measles	All*	None	
According to:												
Vaccination card	81.8	81.5	81.8	81.8	79.5	81.8	81.2	80.9	81.5	80.6	0	211
Mother's report	14.9	13.1	12.2	11.7	11.0	14.9	12.6	3.6	14.6	1.8	3.2	211
Either	96.8	94.6	94.1	93.6	90.5	96.8	93.8	84.5	96.1	82.3	3.2	211
Vaccinated by 12 months of age	96.8	94.1	93.6	92.6	90.5	96.8	93.8	84.5	95.7	81	3.2	211

Total number of 12-23 month olds vaccinated with BCG, (OPV3, DPT3, Measles, HepB, or HiB) before 12 months, as validated by card or mother's recall. To estimate the number of children without a card to have received vaccine before 1st birthday the proportion of vaccinations given during the first year of life is assumed to be the same as for the proportion of children with a card that received the vaccine before 1st birthday.
*Children who received 'all' vaccinations are those who have received 3 doses of DPT, 3 doses of Polio (excluding Polio 0), BCG, and Measles.

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

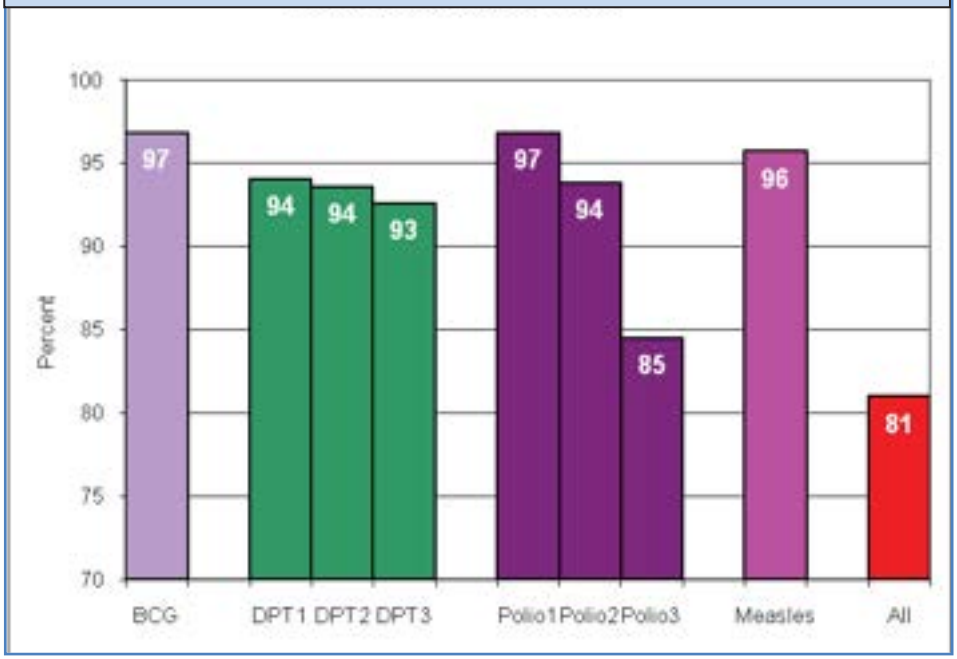


Table 6.2 (CH.2) shows vaccination coverage rates among children 12-23 months by background characteristics. The figures indicate children receiving the vaccinations at any time up to the date of the survey, and are based on information from both the vaccination cards and mothers'/caretakers' reports.

Except for BCG, Polio 1 and Measles, female children are more likely to get vaccinated compared to male children. In addition, female children are more likely to have vaccination card (85 per cent against 79 per cent). Surprisingly, the proportion of children receiving all vaccinations was slightly higher among children from low wealth index households in contrast to those from wealthier backgrounds. However, a higher proportion of children with mothers educated to secondary and above received all vaccinations (80 per cent) compared to those with mothers with no education (59 per cent).

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

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

	Percentage of children who received:												
Characteristics	BCG	DPT1	DPT2	DPT3	Polio0	Polio1	Polio2	Polio3	Mea-sles	All	None	Per cent with health card	Number of children aged 12-23 months
Sex													
Male	96.6	93.0	92.3	92.3	87.7	96.6	93.0	84.1	96.6	80.5	3.4	78.9	108
Female	97.0	96.2	96.0	95.0	93.5	97.0	94.7	85.0	95.6	84.2	3.0	84.9	102
Mother's education													
None	100.0	100.0	100.0	100.0	88.8	100.0	88.8	59.2	88.8	59.2	0.0	70.4	6
Primary	97.0	94.2	94.0	93.3	90.3	97.0	96.2	87.2	97	84.4	3.0	83.2	136
Secondary +	96.1	94.9	93.6	93.6	91.1	96.1	89.4	81.3	95	80.1	3.9	80.1	68
Wealth index													
Low	97.6	97.6	97.6	94.5	89.5	97.6	97.6	89.3	97.6	89.3	2.4	89	33
Medium	95.9	94.9	93.9	93.9	90.4	95.9	95.9	84.0	95.9	83.0	4.1	81.3	84
High	97.3	93.2	93.0	93.0	91.0	97.3	90.6	83.3	95.8	79.2	2.7	79.8	94
Total	**96.8**	**94.6**	**94.1**	**93.6**	**90.5**	**96.8**	**93.8**	**84.5**	**96.1**	**82.3**	**3.2**	**81.8**	**211**

Note: The calculation is the same as the top panel of Table 6.1 (i.e., the child's age at vaccination is not taken into account). Children who were vaccinated at any time before the survey are included in the numerator.

6.2 Tetanus Toxoid

One of the MDGs seeks to reduce by three quarters the maternal mortality ratio, with one strategy being the elimination of maternal tetanus. A similar goal seeks to reduce the incidence of neonatal tetanus to less than 1 case of neonatal tetanus per 1,000 live births in every district. These goals are well supported by the "A World Fit for Children" goal which sought to eliminate maternal and neonatal tetanus by 2005.

Prevention of maternal and neonatal tetanus is to ensure all pregnant women receive at least two doses of tetanus toxoid vaccine. However, if women have not received two doses of the vaccine during pregnancy, they (and their newborn) are also considered to be protected if the following conditions are met:

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

Table 6.3 (CH.3) shows the protection status from tetanus for women who had a live birth within the last 12 months. About 69 per cent of women who had a child birth during 2 years preceding the survey had adequate protection against tetanus. Surprisingly, the tetanus coverage by levels of educational attainment or the household wealth index categories shows that protection was highest among women with no education (92 per cent) and lowest for those with primary level education at 66 per cent, while the corresponding proportions for wealth index shows that protection was highest among women from households in the high wealth group (80 per cent) and lowest for those from the middle wealth index category (58 per cent). Younger (15-19 years) and older women (above age 35) were less likely to be protected compared to women in the middle age group.

Table 6.3 (CH.3): Neonatal tetanus protection

Percentage of mothers with a birth in the last 12 months protected against neonatal tetanus, Machakos 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	58.8	4.0	0.0	0.0	0.0	62.9	33
20.-24	72.6	1.6	0.0	0.0	0.0	74.1	84
25-29	68.3	3.2	0.0	0.0	0.0	71.5	85
30-34	64.2	8.3	0.0	0.0	0.0	72.5	53
35-49	53.4	2.7	0.0	0.0	0.0	56.1	42
Education							
None	92.5	0.0	0.0	0.0	0.0	92.5	17
Primary	61.3	4.9	0.0	0.0	0.0	66.2	198
Secondary +	70.7	1.5	0.0	0.0	0.0	72.2	82
Wealth index							
Low	61.7	3.2	0.0	0.0	0.0	64.9	43
Medium	54.1	4.3	0.0	0.0	0.0	58.4	118
High	76.9	3.2	0.0	0.0	0.0	80.1	136
Total	**65.6**	**3.7**	**0.0**	**0.0**	**0.0**	**69.3**	**297**

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

6.3 Oral Rehydration Treatment

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

Several goals have been specified to reduce incidence of diarrhoea among children. A World Fit for Children called for reduction by one half the deaths due to diarrhoea among children under five by 2010 with a reference as 2000. It also called for a reduction in the incidence of diarrhoea by 25 per cent. The indicators for reduction and management of diarrhoea are:

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

In the MICS questionnaire, mothers (or caretakers) were asked to report whether their child had diarrhoea in the two weeks prior to the survey. In case a child was reported to have had diarrhoea, a series of questions were asked about; what the child had to drink and eat during the episode and whether this was more or less than the child usually ate and drank.

Overall, eight per cent of under five children had diarrhoea in the two weeks preceding the survey (Table 6.4 (CH.4)). Contrary to the expected, the peak of diarrhoea prevalence in Machakos occurs among children age 24-35 months, which falls outside the usual weaning period (age 6-23 months).

Table 6.4 (CH.4) shows the percentage distribution 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 per cent ages do not necessarily add to 100. About 14 per cent received fluids from ORS packets; 14 per cent received pre-packaged ORS fluids, and 7 per cent received recommended homemade fluids. It is worth noting that a high proportion (72 per cent) of children with diarrhoea in the district did not receive any treatment at all.

Table 6.4 (CH.4): Oral rehydration treatment

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

Characteristics	Had diarrhoea in last two weeks	Number of children aged 0-59 months	Children with diarrhoea who received: Fluid from ORS packet	Recom-mended homemade fluid	Pre-packaged ORS fluid	No treatment	ORT Use Rate	Number of children aged 0-59 months with diarrhoea
Sex								
Male	7.8	490	9.0	6.9	14.4	74.2	25.8	38
Female	7.6	466	19.3	6.3	13.3	68.9	31.1	36
Age								
<6 months	9.3	104	11.0	8.7	19.0	72.3	27.7	10
6-11 months	6.5	90	13.3	15.6	0.0	71.2	28.8	6
12-23 months	9.3	211	29.6	7.6	13.0	62.7	37.3	20
24-35 months	11.1	169	10.3	4.0	8.6	81.7	18.3	19
36-47 months	8.3	216	4.2	4.7	23.6	67.5	32.5	18
48-59 months	1.2	167	0.0	0.0	0.0	100	0.0	2
Mother's education								
None	7.1	62	17.6	19	0.0	63.4	36.6	4
Primary	7.9	608	11.5	1.3	16.0	75.2	24.8	48
Secondary +	7.4	286	19.0	15.8	11.9	65.3	34.7	21
Wealth index								
Low	8.8	124	9.8	0.0	9.8	90.2	9.8	11
Medium	6.3	394	10.9	9.4	19.1	67.4	32.6	25
High	8.7	438	17.2	6.6	11.6	69.0	31.0	38
Total	**7.7**	**956**	**14.0**	**6.6**	**13.9**	**71.6**	**28.4**	**74**

Note: The percentages receiving various treatments will not add to 100 since some children may have received more than one type of treatment. The ORT use rate includes those who received oral rehydration salts from a packet or any appropriate household solution or pre-packaged ORS fluid.
NS: Not shown, based on less than 25 un-weighted cases.

Among all children less than five years who had diarrhoea during the two weeks preceding the survey, 41 per cent drank more than usual while 57per cent drank the same or less (Table 6.5 (CH.5)). Continued feeding (ate somewhat less, same or more) was reported for 32 per cent of the children, while 68 per cent ate much less or none. Only 18 per cent children received increased fluids and at the same time continued feeding. Surprisingly, children belonging to wealthy families are less likely to receive increased fluids during diarrhoea compared with those from poor households. Whereas 61 per cent of children from low wealth index households who had diarrhoea received increased fluid (drank more), only 30 per cent of affected children from the high wealth index households received the same.

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

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

Characteristics	Had diarrhoea in last two weeks	Number of children aged 0-59 months	Children with diarrhoea who:				Home manage-ment of diarrhea	Received ORT or increased fluids AND continued feeding	Number of children aged 0-59 months with diarrhoea
			Drank more	Drank the same or less	Ate somewhat less, same or more	Ate much less or none			
Sex									
Male	7.8	490	50.1	49.9	43.5	56.5	17.6	24.2	38
Female	7.6	466	31.9	65.2	20.0	80.0	9.5	11.9	36
Age									
0-11 months	8.1	182	39.1	54.0	38.6	61.4	7.1	13.3	15
12-23 months	10.0	195	37.6	62.4	27.5	72.5	4.0	4.0	20
24-35 months	10.0	186	57.2	42.8	53.7	46.3	39.5	48.0	19
36-47 months	9.2	203	30.5	69.5	13.6	86.4	4.5	9.1	19
48-59 months	1.0	190	46.5	53.5	0.0	100.0	0.0	0.0	2
Mother's education									
None	7.1	62	81.0	19.0	59.5	40.5	40.5	59.5	4
Primary	7.9	608	42.8	55.0	28.7	71.3	9.6	11.1	48
Secondary +	7.4	286	29.6	70.4	34.0	66.0	17.3	25.6	21
Wealth index									
Low	8.8	124	61.2	38.8	9.6	90.4	0.0	0.0	11
Medium	6.3	394	50.1	49.9	39.8	60.2	21.6	25.0	25
High	8.7	438	29.9	67.4	33.5	66.5	12.4	19.0	38
Total	**7.7**	**956**	**41.3**	**57.3**	**32.1**	**67.9**	**13.7**	**18.2**	**74**

6.4 Care Seeking and Antibiotic Treatment of Pneumonia

Pneumonia is the leading cause of death in children and the use of antibiotics in under-fives with suspected pneumonia is a key intervention. A World Fit for Children goal seeks to reduce by one-third the deaths due to acute respiratory infections.

Children with suspected pneumonia are those who had an illness with a cough accompanied by rapid or difficult breathing and whose symptoms were not due to a problem in the chest and a blocked nose. The following indicators are used to examine both the prevalence and care seeking behaviour:

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

Table 6.6 (CH.6) presents information regarding the prevalence of suspected pneumonia among children aged 0-59 months. Six per cent of children aged 0-59 months were reported to have had symptoms of pneumonia during the two weeks preceding the survey. Among these children with suspected symptoms of pneumonia 47 per cent were taken to an appropriate health service provider. Of those taken to a health service provider, 42 per cent were taken to a government facility or service was provided by a government health worker, 12 per cent received services from private sector and the remaining about 2 per cent received services from other sources, such as shop or a friend.

The proportion of children with suspected symptoms of pneumonia declines with the age of the child. Younger children are also more likely to be taken to an appropriate provider. More female children are taken to an appropriate health service provider compared with male children (54 per cent vs 42 per cent). Children from households categorised as medium wealth index households had the highest proportion of children receiving care from any appropriate health service provider, and the corresponding figure was lowest for those from the high wealth index (34 per cent).

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, Machakos district, Eastern Province, Kenya 2008

Characteristics	Had acute respiratory infection[1]	Number of children aged 0-59 months	Children with suspected pneumonia who were taken to:												Number of children aged 0-59 months with suspected pneumonia
			Public sources				Private sources				Other source				
			Govt. Hospital	Govt. health centre	Govt. health post	Other public*	Private hospital / clinic	Private physician	Phar-macy	Other private	Relative or friend	Shop	Trad. Practi-tioner	Any appropriate provider	
Sex												2.2			
Male	6.8	490	11.9	18.9	5.5	0	5.7	0.0	5.3	0.0	0.0	0.0	0.0	42.0	33
Female	5.7	466	18.2	27.2	2.8	0.0	5.9	0	6.8	0.0	0.0	0	0.0	54	26
Age															
0-11 months	3.6	182	23.3	16.3	0	0.0	0	0.0	0.0	0	0.0	11.6	0.0	39.6	6
12-23 months	10.8	195	19.0	24.7	3.5	0.0	8.7	0.0	10.0	0.0	0.0	0	0.0	52.1	21
24-35 months	5.0	186	7.9	45.0	0	0.0	8.4	0	0.0	0.0	0.0	0	0.0	69.3	9
36-47 months	5.8	203	0.0	9.1	0.0	0.0	7.2	0.0	6.2	0.0	0.0	0.0	0.0	16.2	12
48-59 months	5.9	190	22.7	17.7	16.5	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0	57.0	11
Mother's education															
None	5.8	62	21.6	54.9	0.0	0.0	23.4	0	0	0	0	0	0	100.0	4.0
Primary	6.5	608	12.3	23.9	6.5	0.0	4.6	0	3.7	0.0	0.0	1.9	0.0	47.3	40.0
Secondary +	5.7	286	18.9	12.1	0	0	4.7	0	12.8	0	0	0	0	35.7	16
Wealth index															
Low	11.5	124	5.4	39.5	0.0	0.0	0.0	0.0	5.1	0.0	0.0	0.0	0.0	39.5	14
Medium	6.0	394	24.3	14.6	11.0	0.0	11.4	0.0	3.2	0.0	0.0	0.0	0.0	64.6	24
High	5.0	438	10.4	19.9	0.0	0.0	3.5	0.0	9.6	0.0	0.0	3.4	0.0	33.8	22
Total	**6.3**	**956**	**14.7**	**22.5**	**4.3**	**0.0**	**5.8**	**0.0**	**6.0**	**0.0**	**0.0**	**1.3**	**0.0**	**47.3**	**60**

* 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.

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

Table 6.7 (CH.7) presents the use of antibiotics for the treatment of suspected pneumonia in children age 0-59 months by sex, mother's education and socio-economic status. Only 6 per cent of under-5 children with suspected pneumonia received an antibiotic during the two weeks prior to the survey. The proportion of children who received an antibiotic treatment was highest among children from the low wealth index households as well as those with mothers with no education.

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

Percentage of children aged 0-59 months with suspected pneumonia who received antibiotic treatment, Machakos 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	6.4	33
Female	5.7	26
Age		
0-11 months	0.0	6
12-23 months	8.8	21
24-35 months	19.4	9
36-47 months	0.0	12
48-59 months	0.0	11
Mother's education		
None	21.6	4
Primary	4.5	40
Secondary +	6.5	16
Wealth index		
Low	15	14
Medium	3.3	24
High	3.3	22
Total	**6.1**	**60**

Issues related to knowledge of danger signs of pneumonia are presented in Table 6.8 (CH.7A). Mothers' knowledge of the danger signs is an important determinant of care-seeking behaviour. The proportion of women who know of the two danger signs of pneumonia – fast and difficult breathing is negligible (1 per cent). The commonly identified symptom for taking a child to a health facility by the mother/caretaker is if she/he develops a fever (86 per cent). Five per cent of mothers/caretaker identified fast breathing and 10 per cent of mothers identified difficult breathing as symptoms for taking children immediately to a health care provider.

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, Machakos 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	15.8	14.2	77.4	3.3	11.4	1.6	3.1	54.4	1.6	62
Primary	17.4	15.4	87.8	4.6	9.9	1.7	1.8	56.0	1.4	608
Secondary +	21.7	15.1	85.3	5.0	11.0	2.5	3.7	55.9	1.2	286
Wealth index										
Low	29.9	14.6	78.9	3.1	11.6	1.4	.6	49.8	0.0	124
Medium	13.3	14.0	90.0	4.3	11.3	0.9	2.3	57.7	1.3	394
High	20.1	16.5	85.2	5.4	9.1	2.9	3.1	56.0	1.8	438
Total	**18.6**	**15.2**	**86.4**	**4.7**	**10.3**	**1.9**	**2.4**	**55.9**	**1.3**	**956**

* Percentage of mothers/caretakers who state fast and difficult breathing as signs for taking a child to a health facility immediately
Note: The percentages will not add to 100 since some mothers/caretakers may have indicated more than one symptom.

6.5 Solid Fuel Use

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

Use of solid fuels for cooking is common in the district with about 91 per cent of the households reportedly using these sources (Table 6.9 (CH.8)). Differentials with respect to household wealth index show that 86 per cent of the high wealth index households use solid fuels compared with 98 per cent and 100 per cent for households falling in the medium and low wealth index categories, respectively. The use of solid fuels is high due to high usage of wood for cooking purposes.

Table 6.9 (CH.8): Solid fuel use

Percentage distribution of households according to type of cooking fuel, and percentage of households using solid fuels for cooking, Machakos district, Eastern Province, Kenya 2008

Characteristic	Percentage of households using: Liquified Petroleum Gas (LPG)	Natural Gas	Biogas	Kero-sene	Char-coal	Wood	Straw, shrubs, grass	Other source	Total	Solid fuels for cooking *	Number of house-holds
Education of household head											
None	0.6	3.1	1.9	2.7	16.7	74.6	0.0	0.0	100.0	91.6	230
Primary	0.4	0.0	0.4	8.1	15.0	74.3	0.1	0.6	100.0	90.5	568
Secondary +	0.0	1.4	0.0	5.9	27.4	63.5	0.0	0.0	100.0	92.2	295
Non-standard curriculum	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	100.0	8
Wealth index											
Low	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	100.0	125
Medium	0.0	0.0	0.0	1.2	6.3	90.9	0.1	0.6	100.0	98.2	368
High	0.6	1.9	1.1	10.6	29.9	54.2	0.0	0.2	100.0	85.8	608
Total	**0.3**	**1.0**	**0.6**	**6.3**	**18.6**	**71.7**	**0.0**	**0.3**	**100.0**	**91.3**	**1101**

6.6 Malaria

Malaria is one of the leading causes of death among children under age five in Machakos 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), can drastically reduce malaria mortality rates among children. In malaria endemic areas, 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. Furthermore, children recovering from malaria should be given extra liquids and food, and for younger children, they should continue breastfeeding.

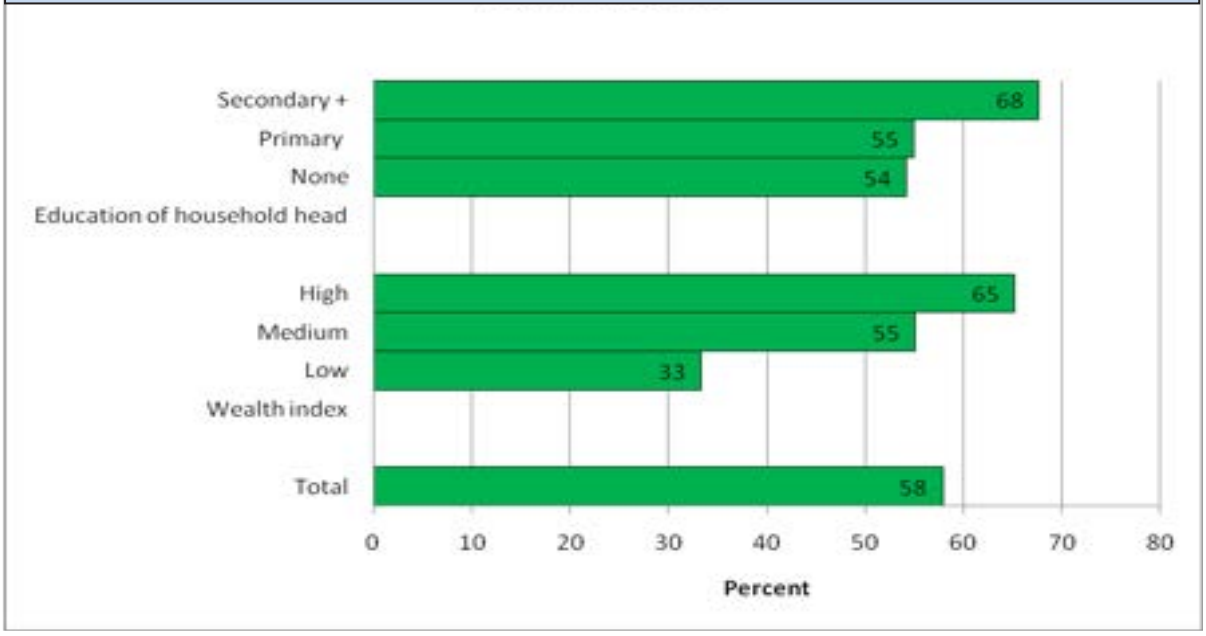
In the survey, information was sought on the availability and use of bed nets, both at household level and among children under five years of age, as well as anti-malarial treatment and intermittent preventive therapy for malaria. The results indicate that 58 per cent of households have at least one insecticide treated net (Table 6.10 (CH.10). Thirty two per cent of the households reported to have two or more mosquito nets and the mean number of nets per households in the district is about 2 nets. Fifty four per cent of the households headed by an uneducated member have at least one insecticide treated mosquito net compared with 68 per cent among households headed by a member who is educated up to secondary or above (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), Machakos district, Eastern Province, Kenya 2008

Characteristics	Percentage of households with at least one mosquito net	Two or more mosquito nets	at least one insecticide treated net (ITN)*	Mean number of mosquito nets per household	Number of households
Education of household head					
None	57.3	35.1	54.2	2.0	236
Primary	57.0	24.0	55.0	1.6	575
Secondary +	69.6	44.3	67.7	2.1	283
Wealth index					
Low	36.2	11.0	33.3	1.4	132
Medium	56.1	22.2	55.1	1.5	380
High	68.0	42.1	65.2	2.0	589
Total	**60.1**	**31.5**	**57.9**	**1.8**	**1101**

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



The results further indicate that 52.8 per cent of children aged less than five years slept under an insecticide treated net (Table 6.11 (CH.11). There were no significant disparities in ITN use among the children by gender. Analysis by wealth reveals that children from households categorised in the lower wealth index were less likely to sleep under treated nets (40 per cent) compared to their counterparts from the medium (50 per cent) and upper wealth index households (59 per cent).

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

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

	Percentage of children who:					
Characteristics	Slept under a bednet*	Slept under an insecticide treated net**	Slept under an untreated net	Don't know if slept under a net	Did not sleep under a bednet	Number of children aged 0-59 months
Sex						
Male	53.2	51.5	1.7	0.2	46.6	490
Female	56.0	54.2	1.9	0.0	44.0	466
Age						
0-11 months	60.7	57.0	3.7	0.0	39.3	182
12-23 months	63.0	62.1	0.9	0.0	37.0	195
24-35 months	52.1	51.3	0.8	0.0	47.9	186
36-47 months	44.5	42.1	2.4	0.4	55.1	203
48-59 months	53.3	52.1	1.3	0.0	46.7	190
Wealth index						
Low	39.5	39.5	0.0	0.0	60.5	124
Medium	50.0	49.6	0.4	0.2	49.8	394
High	63.0	59.4	3.6	0.0	37.0	438
Total	**54.6**	**52.8**	**1.8**	**0.1**	**45.3**	**956**

Questions on the prevalence and treatment of fever were asked for all children under age five. One in every five (20 per cent) children aged less than 5 years were ill with fever in the two weeks preceding the survey (Table 6.12 (CH.12). The prevalence of fever declined with age and peaked at 24-35 months (22 per cent). A slightly higher proportion of female children (23 per cent) were reported to have had fever compared with their male counterparts (18 per cent).

Mothers were asked to report all of the medicines given to a child to treat the fever, including both medicines given at home and medicines given or prescribed at a health facility. Overall, only 29 per cent of children with fever in the last two weeks were treated with an "appropriate" anti-malarial drug and 21 per cent received anti-malarial drugs within 24 hours of onset of symptoms. Children belonging to mothers with an education level of secondary or higher and children from households categorised as high wealth index were more likely to receive an appropriate anti-malarial drug and also receiving them within 24 hours of onset of symptoms. For example, while only 11 per cent of the children who had fever and were from the low wealth index households received any appropriate anti-malarial drug, the corresponding figure for those from high wealth index households was 43 per cent.

Table 6.12 (CH.12): Treatment of children with anti-malarial drugs

Percentage of children aged 0-59 months who were ill with fever in the last two weeks who received anti-malarial drugs, Machakos 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	Chloro-quine	Amodia-quine	Qui-nine	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	17.6	490	8.2	1.8	18.5	0.0	2.0	4.9	34.3	51.6	4.9	6.5	21.7	8.8	28.7	87
Female	22.8	466	1.7	6.4	10.3	3.2	1.7	2.5	25.0	51.5	5.0	9.0	15.9	15.2	15.4	106
Age																
0-11 months	21.8	182	1.9	1.6	13.5	0.0	0.0	0.0	17.0	38.3	0.0	12.1	27.8	21.1	13.0	40
12-23 months	20.5	195	6.7	2.6	8.3	0.0	2.0	6.0	23.3	42.7	10.2	7.4	27.9	9.3	15.3	40
24-35 months	22.3	186	2.5	4.4	17.6	0.0	2.0	2.0	26.7	44.9	4.3	12.6	20.7	15.7	18.0	41
36-47 months	20.0	203	2.1	3.9	13.2	8.2	4.5	0	31.9	67.7	1.8	1.8	4.0	10.2	23.6	41
48-59 months	16.4	190	11.4	10.6	18.2	0.0	0.0	11.9	52.1	67.3	9.6	4.9	10.7	3.4	41.2	31
Mother's education																
None	20.0	62	0.0	8.4	5.2	0.0	0.0	0.0	13.6	44.9	5.9	5.9	32.6	23.9	8.4	12
Primary	22.4	608	4.7	2.6	8.6	0.0	1.3	4.0	20.7	48.4	3.8	8.9	18.5	12.7	14.3	136
Secondary +	15.5	286	5.4	8.5	33.1	7.6	3.7	3.5	59.8	63.1	8.2	5.2	14.4	8.1	46.7	44
Wealth index																
Low	24.2	124	0.0	0.0	8.1	0.0	0.0	2.8	10.9	37.6	9.3	6.3	17.5	19.9	6.3	30
Medium	20.0	394	6.8	5.9	5.5	0.0	0.0	3.7	21.0	52.7	5.9	5.1	18.6	13.2	15.0	79
High	19.1	438	4.1	4.4	24.1	4.0	4.1	3.8	43.4	55.4	2.6	11.1	18.7	8.8	32.8	84
Total	**20.2**	**956**	**4.6**	**4.3**	**14.0**	**1.7**	**1.8**	**3.6**	**29.2**	**51.5**	**5.0**	**7.9**	**18.5**	**12.3**	**21.3**	**193**

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

"Appropriate" anti-malarial drugs at the time of the survey included; chloroquine, SP/fansidar, artimisine combination drugs, etc. In Machakos, only 4.6 per cent of children with fever were given SP/fansidar while 14 per cent reported receiving Amodiaquine. Slightly more than a half (52 per cent) of the children with fever were given other types of medicines that are not anti-malarials, such as paracetemol, aspirin, or ibuprofen. There are small differences noted between male and female children in the proportions receiving appropriate anti-malarial drugs.

Pregnant women living in malaria endemic places 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 anemia, premature delivery and stillbirth. Their babies are likely to be of low birth weight, which makes them unlikely to survive their first year of life. For this reason, steps are taken to protect pregnant women by distributing insecticide-treated mosquito nets and treatment during antenatal check-ups with drugs that prevent malaria infection (intermittent preventive treatment or IPT). In the Machakos district MICS, women were asked of the medicines they had received in their last pregnancy during the 2 years preceding the survey. Women are considered to have received intermittent preventive therapy if they received at least 2 doses of SP/Fansidar during the pregnancy.

Table 6.13 (CH.13) shows intermittent preventive treatment for malaria in pregnant women who gave birth in the two years preceding the survey. Sixty six per cent of mothers who delivered a child during the two year period preceding the survey received medicine to prevent malaria during pregnancy. Thirteen per cent received SP/Fansidar only once and another13 per cent received the same two or more times. One in three mothers reported 'don't know' an indication of unawareness of receiving such drugs 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, Machakos district, Eastern Province, Kenya 2008

	Percentage of pregnant women who took:						
Characteristics	Medicine to prevent malaria during pregnancy	SP/Fansidar only one time	SP/Fansidar two or more times*	Chloroquine	Other medicines	Don't know	Number of women who gave birth in prior two years
Education							
None	70.8	15.5	19.4	0.0	3.4	32.5	17
Primary	64.6	13.0	12.4	4.4	2.9	31.7	198
Secondary +	68.9	11.4	14.1	1.5	2.5	39.4	82
Wealth index							
Low	65.6	9.3	14.4	6.3	1.3	34.4	43
Medium	64.4	13.7	11.1	3	3.9	32.2	118
High	67.9	12.9	14.7	2.7	2.4	35.2	136
Total	**66.2**	**12.7**	**13.3**	**3.3**	**2.8**	**33.9**	**297**

7.1 Water

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

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

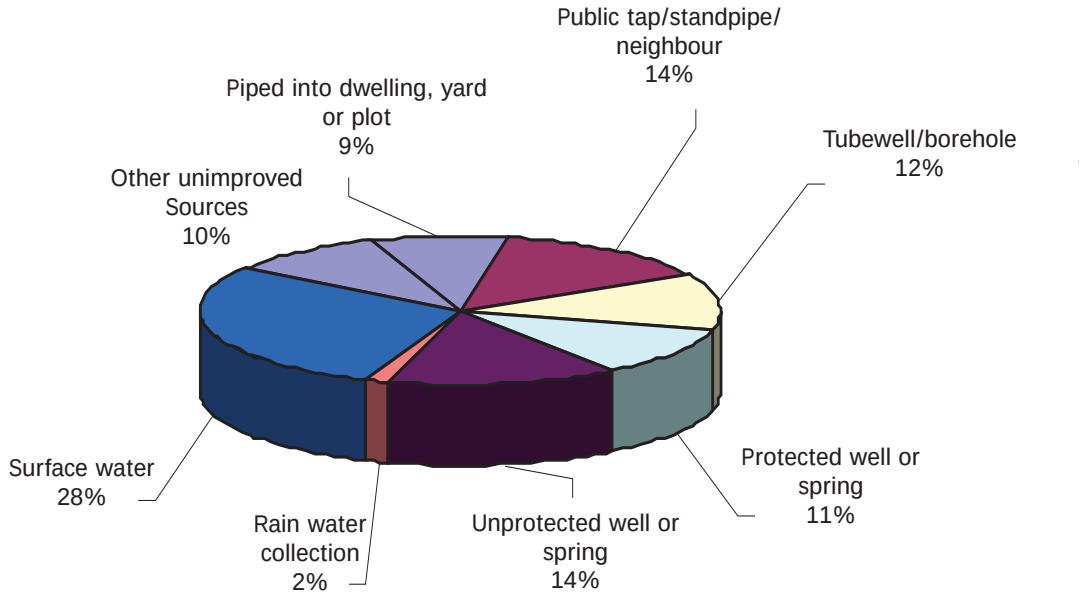
Water

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

Sanitation

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

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



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

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, Machakos 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	Pro-tected well	Prote-cted spring	Rain water collec tion	Unpro-tected well	Unpro-tected spring	Tanker truck	Cart with tank/ drum	Surface water	Bottled water	Other	Total	Improved source of drinking water	Number of household members
Education of household head																		
None	5.5	8.9	7.9	3.5	6.9	3.5	3.7	1.8	5.6	10.6	1.5	7.0	33.5	0.2	0.0	100	34.6	925
Primary	2.6	3.2	7.6	6.9	11.7	8.2	4.3	1.8	5.7	8.9	0.5	9.5	38.7	0.0	0.5	100	34.5	2340
Secondary +	2.7	7.2	12.6	3.8	15.3	8.5	2.2	1.0	7.3	4.9	0.3	9.4	24.1	0.0	0.6	100	41.3	1285
Wealth index																		
Low	0.0	0.0	2.1	3.5	11.0	5.0	3.6	0.0	7.9	12.4	0.0	2.7	52.1	0.0	0.0	100	19.1	555
Medium	0.3	0.3	7.1	6.5	11.2	6.5	4.3	0.3	7.3	9.8	0.0	11.3	34.4	0.0	0.6	100	24.1	1653
High	6.0	10.2	11.8	4.9	12.0	8.9	3.0	2.8	4.8	6.0	1.2	8.7	19.1	0.1	0.3	100	48.9	2387
Total	**3.2**	**5.4**	**9.0**	**5.3**	**11.6**	**7.6**	**3.5**	**1.6**	**6.1**	**8.2**	**0.6**	**8.9**	**28.6**	**0.0**	**0.4**	**100**	**36.4**	**4594**

In Machakos district, 36 per cent of the population use an improved source of drinking water. The proportion of population using an improved source of drinking water increases with educational status of the head of the household and wealth index. For example, only 19 per cent of the population living in households categorized as low wealth index use drinking water from improved sources compared with 49 per cent for those from high wealth index households.

Households were asked about the methods they use to treat water at home to make it safer to drink (i.e. boiling, adding bleach or chlorine, using a water filter and using solar disinfection are considered as proper treatment of drinking water). Use of in-house water treatment is presented in Table 7.2 (EN.2). About 48 per cent of households drink appropriately treated water. Adding chlorine or bleaching was reported by 37 per cent households, while 12 per cent reported that they boil the drinking water. Of those using drinking water from unimproved sources 44 per cent are using appropriate water treatment. More than half (55 per cent) of the households using drinking water from improved sources, use appropriate water treatment methods.

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, Machakos 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	Solar disinfe-ction	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	50.9	15.3	35.5	0.0	0.2	0.0	0.5	48.6	925	64.4	320	40.2	605
Primary	56.9	9.7	33.8	0.0	0.3	0.3	0.8	42.1	2340	46.3	807	39.9	1533
Secondary +	41.4	13.0	45.4	0.2	0.5	0.3	0.9	57.8	1285	61.3	530	55.4	755
Wealth index													
Low	72.5	9.7	18.8	0.0	0.4	0.0	0.4	27.1	555	30.6	106	26.3	449
Medium	58.5	9.9	31.6	0.0	0.0	0.0	1.2	40.3	1653	49.0	399	37.6	1254
High	41.3	14.0	45.6	0.1	0.5	0.4	0.6	58.0	2387	59.3	1167	56.9	1219
Total	**51.3**	**12**	**37.4**	**0.1**	**0.3**	**0.2**	**0.8**	**47.9**	**4594**	**55.0**	**1672**	**43.9**	**2922**

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

Table 7.3 (EN.3) shows the time taken to fetch water and the person who usually collects it. These results refer to one roundtrip from home to drinking water source. Only 12 per cent of the households have drinking water sources within their premises. It takes less than 15 minutes to get to the water source in about 23 per cent of all households. However in nearly one fifth of the households, it takes more than an hour. The average time for all households without water on the premises to get to the source and fetch water is 32 minutes. The differentials by household characteristics show that on average less than three per cent of households from low and medium wealth index have drinking water facility within their premises, while nearly 21 per cent of households from the high wealth index group have these facilities 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, Machakos district, Eastern Province, Kenya 2008

Characteristics	Time to source of drinking water							Mean time to source of drinking water*	Number of households
	Water on premises	Less than 15 minutes	15 minutes to less than 30 minutes	30 minutes to less than 1 hour	1 hour or more	Don't know	Total		
Education of household head									
None	17.9	24.0	11.5	29.4	16.5	0.6	100.0	31.5	230
Primary	9.0	21.9	21.5	26.3	21.0	0.4	100.0	33.0	568
Secondary +	14.8	24.8	16.5	27.7	16.0	0.2	100.0	31.1	295
Wealth index									
Low	1.7	18	15.7	40.1	23.4	1.2	100.0	38.8	125
Medium	2.5	22.3	21.1	31.9	22.3	0.0	100.0	33.2	368
High	20.5	24.6	16.5	22.4	15.5	0.5	100.0	29.8	608
Total	**12.3**	**23.1**	**17.9**	**27.6**	**18.7**	**0.4**	**100.0**	**32.2**	**1101**

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

In about 71 per cent of households, water is collected by an adult female where the source of drinking water is not on the premises (Table 7.4 (EN.4)). Water is collected by an adult male in only 31 per cent of the households. The proportion of adult women being responsible for collecting water was highest in medium wealth index households and as expected, lowest for those from high wealth index households.

Table 7.4 (EN.4): Person collecting water

Percentage distribution of households according to the person collecting drinking water used in the household, Machakos 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	64.2	25.8	11.4	11.3	13.1	5.9	10.1	0.0	230
Primary	74.8	31.2	12.7	11.2	18.7	6.4	15.7	0.0	568
Secondary +	66.9	33.7	11.5	13.4	17.8	7.9	15.7	0.0	295
Wealth index									
Low	78.6	32.5	17.8	21.9	21.8	13.2	15.1	0.0	125
Medium	83.3	30.7	16.7	12.1	20.8	7.1	17.6	0.0	368
High	61.0	30.7	8.0	9.5	14.1	5.1	12.7	0.0	608
Total	**70.5**	**30.9**	**12.0**	**11.8**	**17.2**	**6.7**	**14.6**	**0.0**	**1101**

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

7.2 Sanitation

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

In thirty two per cent of the households in Machakos district, members use improved sanitation facilities (Table 7.5 (EN.5)). Sixty one per cent of households in the district have pit latrines without slab or an open pit while six per cent have no toilet facility. Lack of toilets is predominant among low wealth index households.

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

Percentage distribution of household population according to type of toilet facility used by the household, and the percentage of household population using sanitary means of excreta disposal, Machakos 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	Compos-ting toilet	Flush/ pour flush to unknown place/ not sure/ don't know	Pit latrine without slab/ open pit	Hanging toilet/ hanging latrine	Other	No facilitie/ bush/ field	Total	Percentage of population using sanitary means of excreta disposal*	Number of household members
Education of household head														
None	7.4	0.3	0.0	10.4	8.7	1.1	0.0	55.6	0.0	0.0	6.7	100	37.7	925
Primary	1.2	0.0	0.4	10.5	8.1	0.5	0.3	67.0	0.2	0.1	6.2	100	26.2	2340
Secondary +	3.3	0.1	0.3	15.3	11.4	0.2	0.0	56.4	0.0	0.0	4.2	100	39.3	1285
Wealth index														
Low	0.0	0.0	0.0	0.9	0.9	0.0	0.0	67.0	0.8	0.3	28.4	100	3.3	555
Medium	0.0	0.0	0.0	4.6	5.7	1.5	0.0	78.5	0.0	0.2	5.0	100	16.5	1653
High	5.9	0.8	0.5	19.2	13.5	0.0	0.3	48.3	0.0	0.1	1.4	100	50.1	2387
Total	**3.0**	**0.4**	**0.3**	**11.7**	**9.1**	**0.5**	**0.1**	**61.4**	**0.1**	**0.1**	**5.9**	**100**	**32.4**	**4594**

Disposal of faeces of children aged 0-2 years is presented in Table 7.6 (EN.6). Children's stool is considered to be safely disposed when the child uses the toilet or the stool is rinsed in the toilet or latrine. The percentage of children aged 0-2 years whose stools are disposed safely is 78 per cent. Majority of children stools (74 per cent) are disposed off by rinsing or putting into the toilet/latrine.

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, Machakos 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	Left in the open	Other	Don't know/ missing	Total		
Mother's education										
None	9.4	85.8	4.8	0.0	0.0	0.0	0.0	100	95.2	22
Primary	3.7	69.7	4.4	10.7	7.4	1.8	2.3	100	73.4	386
Secondary +	4.2	79.8	2.3	8.1	1.7	0.4	3.5	100	84	179
Wealth index										
Low	2.8	47.3	3.5	22.7	18.6	2.9	2.1	100	50.1	80
Medium	3.1	73.3	4.3	11	5.3	1.7	1.3	100	76.4	237
High	5.3	81.2	3.4	4.4	1.5	0.6	3.7	100	86.5	270
Total	**4.1**	73.4	3.8	9.5	5.4	**1.3**	2.5	100	**77.5**	**587**

Table 7.7 (EN.7) presents information on use of improved water sources and sanitation. Only 13 per cent of household members use improved sources of drinking water and sanitary means of excreta disposal. This proportion increases with increase in wealth of the household. None of the households belonging to low wealth index use improved sources of drinking water and sanitary means of excreta disposal in comparison to 23 per cent among high wealth index households.

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

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

Characteristics	Percentage of household population: Using improved sources of drinking water	Using sanitary means of excreta disposal	Using improved sources of drinking water and using sanitary means of excreta disposal	Number of household members
Education of household head				
None	34.6	27.9	18.3	925
Primary	34.5	20.7	9.5	2340
Secondary +	41.3	30.7	15.6	1285
Wealth index				
Low	19.1	1.8	0.0	555
Medium	24.1	11.7	3.2	1653
High	48.9	39.9	22.6	2387
Total	**36.4**	**25.2**	**12.9**	**4594**

Reproductive Health 8

This chapter presents information about fertility, marriage, contraception, unmet need for contraceptives and antenatal care.

8.1 Fertility

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

The MICS collected information on birth histories of women aged 15-49 years from the sampled households. This included 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 estimates of current fertility levels in the district for the three-year period preceding the survey which corresponds to the period from mid-2005 to mid-2008. Current fertility measures used are the age-specific fertility rate (ASFRs) and total fertility rate (TFR). ASFR is calculated by dividing the number of births to women in a specific age group by the number of years lived during a given period. The TFR is defined as the average number of children a woman would have if she went through her entire reproductive period (15-49 years), reproducing at the prevailing ASFR.

Table 8.1: Current fertility

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

Age group	Births per 1000
15-19	95
20-24	236
25-29	244
30-34	149
35-39	72
40-44	54
45-49	0
TFR	**4.2**

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

The total fertility rate in Machakos is 4.2 children per woman for the three year period preceding the survey (mid-2005 to mid 2008). The fertility rates in the district peak at age 25-29 years. An analysis of the age-specific fertility rates shows that 51 per cent of the total fertility rate is contributed by women aged 20-29 years, and the contribution of older women 40-49 years is only 8 per cent. The contribution of the adolescent age group, i.e., 15-19 years to total fertility is 11 per cent, and this shows a high prevalence of teenage motherhood in the district.

Table 8.2 presents the percentage distribution of all women and those currently married, by number of children ever born and living. It provides information on lifetime fertility. The mean number of children ever born to all women aged 15-49 years is 2.6 while that of children surviving is 2.5. As would be expected, married women have a higher mean number of children ever born (3.5) and surviving (3.4).

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, Machakos 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	82.6	16.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	100.0	220	0.2	0.2
20-24	33.8	36.2	24.7	4.4	0.9	0.0	0.0	0.0	0.0	100.0	188	1.0	1.0
25-29	8.2	20.7	37.4	22.0	8.1	3.0	0.6	0.0	0.0	100.0	220	2.2	2.1
30-34	1.0	10.4	22.2	29.0	18.0	10.8	5.0	3.2	0.4	100.0	174	3.3	3.2
35-39	1.3	4.7	19.3	20.2	22.8	16.4	5.1	4.7	5.4	100.0	134	4.2	4.0
40-44	1.4	3.7	9.5	16.4	23.7	23.6	8.3	5.3	8.1	100.0	108	5.2	5.1
45-49	2.0	5.3	5.8	11.8	19.0	8.5	21.9	10.1	15.8	100.0	86	6.5	6.3
Total	23.9	16.1	18.7	14.3	10.9	7.1	4.0	2.3	2.7	100.0	1130	2.6	2.5
Currently Married Women													
15-19	17.8	71.5	10.7	0.0	0.0	0.0	0.0	0.0	0.0	100.0	24	1.0	0.9
20-24	8.1	42.2	40.6	7.5	1.6	0.0	0.0	0.0	0.0	100.0	101	1.5	1.5
25-29	1.6	17.2	41.0	25.2	10.3	4.0	0.8	0.0	0.0	100.0	167	2.4	2.3
30-34	0.0	6.5	24.3	31.2	18.1	10.8	5.4	3.3	0.5	100.0	152	3.4	3.3
35-39	0.0	3.0	19.0	21.8	24.7	16.8	4.9	5.2	4.6	100.0	110	4.2	4.1
40-44	0.0	0.8	6.0	14.5	25.8	27.2	9.8	6.3	9.6	100.0	91	5.7	5.6
45-49	2.7	0.0	7.8	14.6	22.3	10.6	11.9	11.8	18.3	100.0	64	6.6	6.3
Total	**2.4**	**14.4**	**25.4**	**20.3**	**15.7**	**10.3**	**4.4**	**3.4**	**3.7**	**100.0**	**709**	**3.5**	**3.4**

8.2 Teenage Pregnancy and Motherhood

Reducing pregnancy rates among adolescents is one of the flagship programs of the Government of Kenya. Information regarding teenage pregnancy and motherhood is presented in Table 8.3 by selected background characteristics. Seventeen per cent of women aged 15-19 years have given birth to at least one child. The percentage having a live birth by age increases rapidly from just two per cent by age 16 to just over 40 per cent by age 19. Additionally, the percentage that has begun child-bearing by age rises from three per cent by age 15 to 43 per cent by exact age 19.

Teenage women with secondary education or higher are less likely to have started child-bearing than those with primary (22 per cent) or no education (14 per cent).

Table 8.3 (RH.2): 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, MICS Meru South District, 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	0.0	3.3	3.3	39
16	2.1	0.0	2.1	52
17	13.9	0.0	13.9	38
18	30.5	1.2	31.7	48
19	40.7	1.9	42.6	42
Education				
None	13.8	0.0	13.8	4
Primary	21.2	1.2	22.4	155
Secondary +	8.4	1.3	9.8	59
Wealth index				
Low	14.4	0.0	14.4	28
Medium	21.0	0.7	21.7	86
High	15.3	2.0	17.3	106
Total	**17.4**	**1.2**	**18.6**	**220**

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.

Information on current use of contraception among currently married women of reproductive age is presented in Table 8.4 (RH.1). About 62 per cent of currently married or in union women are using any method of contraception. About half of currently married women use any modern method with 11 per cent relying on traditional methods. The method mix distribution shows that the most popular method is the injection (30 per cent) followed by pill (12 per cent) and Lactational Amenorrhoea Method (LAM) at 11 per cent.

The use of any method of contraception rises from about 57 per cent among women aged 15-19 to about 72 per cent among women in the age group 30-34. However, younger women (age 15-19) are the highest users of traditional methods (26 per cent). The use of injections is popular even among the younger women. The use of contraception by socio-economic characteristics is however mixed. Those with no education are the highest users of any method, however, when only modern methods are considered, women with secondary education emerge as highest users followed by those with no education. Use of any modern method increases with increasing levels of household wealth index.

Table 8.4 (RH.1): Use of contraception

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

		Percentage of women (currently married or in union) who are using:													
Characteristics	Not using any method	Female sterili-zation	Pill	IUD	Injections	Implants	Condom	Diaph-ragm/ foam/ jelly	LAM	Other	Total	Any modern method	Any traditional method	Any method *	Number of women
Age															
15-19	43.1	0.0	10.7	0.0	19.9	0.0	0.0	0.0	26.3	0.0	100.0	30.6	26.3	56.9	24
20-24	36.1	0.0	10.3	0.0	42.5	2.6	0.0	1.3	7.2	0.0	100.0	56.7	7.2	63.9	101
25-29	28.4	0.5	13.0	1.4	44.3	3.2	0.5	0.0	8.5	0.3	100.0	62.9	8.7	71.6	167
30-34	27.9	5.2	15.5	2.2	29.4	1.8	1.5	1.1	15.4	0.0	100.0	56.7	15.4	72.1	152
35-39	53.4	2.4	11.6	0.0	21.2	2.6	0.5	0.5	7.8	0.0	100.0	38.8	7.8	46.6	110
40-44	44.5	14.3	5.2	1.7	21.2	0.0	0.0	0.7	12.4	0.0	100.0	43.1	12.4	55.5	91
45-49	47.7	22.2	8.9	0.0	5.5	0.9	0.0	3.3	11.6	0.0	100.0	40.7	11.6	52.3	64
Number of living children															
0	76.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.7	0.0	100.0	0.0	23.7	23.7	19
1	42.5	0.0	15.0	0.0	32.9	3.5	0.0	0.5	5.5	0.0	100.0	52.0	5.5	57.5	110
2	30.9	1.1	10.4	3.1	40.5	3.4	1.3	0.4	8.9	0.0	100.0	60.2	8.9	69.1	185
3	32.3	1.4	17.8	1.1	33.7	1.3	0.5	0.8	11.0	0.0	100.0	56.6	11.0	67.7	146
4+	40.4	13.8	7.9	0.0	21.1	0.8	0.2	1.5	14.1	0.2	100.0	45.3	14.3	59.6	249
Education															
None	32.3	16.2	15.4	2.6	19.4	2.4	0.0	0.0	11.7	0.0	100.0	56.0	11.7	67.7	50
Primary	40.0	4.4	9.6	0.0	30.9	1.2	0.1	1.0	12.8	0.1	100.0	47.2	12.9	60.0	445
Secondary +	33.9	5.1	14.5	2.8	30.7	3.5	1.5	0.8	7.3	0.0	100.0	58.8	7.3	66.1	214
Wealth index															
Lowest	40.6	4.9	10.1	0.0	23.1	0.0	0.0	0.0	21.4	0.0	100.0	38.1	21.4	59.4	76
Middle	42.9	2.9	7.7	0.0	32.6	0.3	0.2	1.9	11.3	0.2	100.0	45.6	11.4	57.1	252
Upper	33.5	7.2	14.3	1.9	29.6	3.5	0.8	0.4	8.8	0.0	100.0	57.7	8.8	66.5	381
Total	**37.6**	**5.4**	**11.5**	**1.0**	**30.0**	**2.0**	**0.5**	**0.9**	**11.0**	**0.1**	**100.0**	**51.3**	**11.1**	**62.4**	**709**

Note: Male sterilization, female condoms and withdrawal method are used by less than 0.5 per cent and are not shown.

8.4 Unmet Need

Unmet need[5] for contraception refers to fecund women who are not using any method of contraception, but who wish to postpone the next birth or 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, 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 the unmet need for spacing and the unmet need for limiting.

Table 8.5 (RH.2) shows the results of the survey on contraception, unmet need, and the demand for contraception satisfied. 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 unmet need for contraception in Machakos is significantly low. Overall, among those wanting to use contraception, 97 per cent are currently using them or their demands are met. Although low, levels of unmet need are highest among women from poor households and younger women.

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

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

Percentage of women aged 15-49 years currently married or in union with an unmet need for family planning and percentage of demand for contraception satisfied, Machakos 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	56.9	9.3	0.0	9.3	24	86.0	16
20-24	63.9	2.6	0.6	3.2	101	95.2	68
25-29	71.6	1.2	0.0	1.2	167	98.4	122
30-34	72.1	2.2	0.0	2.2	152	97.0	113
35-39	46.6	0.7	0.0	0.7	110	98.5	52
40-44	55.5	0.0	0.0	0.0	91	100.0	50
45-49	52.3	0.0	0.0	0.0	64	100.0	33
Education							
None	67.7	1.4	0.0	1.4	50	98.0	35
Primary	60.0	2.1	0.1	2.3	445	96.3	277
Secondary +	66.1	0.4	0.0	0.4	214	99.5	142
Wealth index							
Low	59.4	4.6	0.0	4.6	76	92.8	49
Medium	57.1	1.1	0.0	1.1	252	98.2	146
High	66.5	1.3	0.2	1.4	381	97.9	259
Total	**62.4**	**1.5**	**0.1**	**1.6**	**709**	**97.4**	**454**

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

8.5 Antenatal Care

The antenatal period presents important opportunities for reaching pregnant women with a number of interventions that may be vital to their health and well-being, and that of their infants. Better understanding of foetal growth and development and its relationship to the mother's health has resulted in increased attention to the potential of antenatal care as an intervention to improve both maternal and newborn health. For example, if the antenatal period is used to inform women and families about the danger signs and symptoms and about the risks of labour and delivery, it may provide the route for ensuring that pregnant women do, in practice, deliver with the assistance of a skilled health care provider. The antenatal period also provides an opportunity to supply information on birth spacing, which is recognized as an important factor in improving infant survival. Tetanus immunization during pregnancy can be life saving for both the mother and infant. The prevention and treatment of malaria among pregnant women, management of anaemia during pregnancy and treatment of STIs can significantly improve foetal outcomes and improve maternal health. Adverse outcomes such as low birth weight can be reduced through a combination of interventions to improve women's nutritional status and prevent infections (e.g., malaria and STIs) during pregnancy. More recently, the potential of the antenatal period as an entry point for HIV prevention and care, in particular for the prevention of HIV transmission from mother to child, has led to renewed interest in access to and use of antenatal services.

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

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

The type of personnel providing antenatal care to women aged 15-49 years who gave birth in the two years preceding the survey is presented in Table 8.6 (RH.3). Coverage of antenatal care by any skilled personnel (a doctor, nurse, or midwife) is relatively high, with 97 per cent of women receiving antenatal care by skilled personnel during pregnancy.

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, Machakos district, Eastern Province, Kenya 2008

	Person providing antenatal care**							
Characteristics	Medical doctor	Nurse/ midwife	Traditional birth attendant	Other	No antenatal care	Total	Antenatal care by any skilled personnel *	Number of women who gave birth in the preceding two years
Age								
15-19	61.0	37.3	0.0	0.0	1.7	100.0	98.3	33
20-24	58.6	38.1	0.6	0.7	1.9	100.0	96.7	84
25-29	60.7	35.7	0.0	0.0	3.6	100.0	96.4	85
30-34	53.1	45.9	1.0	0.0	0.0	100.0	99.0	53
35-39	54.5	37.3	0.0	0.0	8.2	100.0	91.8	26
40-44	61.3	38.7	0.0	0.0	0.0	100.0	100.0	12
45-49	28.5	71.5	0.0	0.0	0.0	100.0	100.0	4
Education								
None	51.1	48.9	0.0	0.0	0.0	100.0	100.0	17
Primary	61.0	35.5	0.3	0.3	2.8	100.0	96.6	198
Secondary +	51.4	45.7	0.7	0.0	2.2	100.0	97.1	82
Wealth index								
Low	67.8	30.9	0.0	0.0	1.3	100.0	98.7	43
Medium	57.4	36.6	0.5	0.5	4.9	100.0	94.1	118
High	55.1	43.8	0.4	0.0	0.8	100.0	98.8	136
Total	**57.8**	**39.1**	**0.4**	**0.2**	**2.5**	**100.0**	**96.9**	**297**

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

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

Table 8.7 **(**RH.4**)** shows the types of services pregnant women received. Among all women who had a birth during the two years preceding the survey, 83 per cent reported that their blood sample was taken during antenatal care visits, 85 per cent reported that their blood pressure checked, 67 per cent had urine specimen taken and 95 per cent were weighed. Women from high wealth index households were more likely to have received most of these services compared to their counter parts in the medium and low wealth index households. On the contrary, minimal differences in proportions were observed in receiving these services by education levels of women.

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, Machakos district, Eastern Province, Kenya 2008

Characteristics	Percentage of pregnant women receiving ANC one or more times during pregnancy	Percentage of pregnant women who had:				Number of women who gave birth in two years preceding survey
		Blood test taken*	Blood pressure measured*	Urine specimen taken*	Weight measured*	
Age						
15-19	98.3	84.6	74.3	52.9	96.8	33
20-24	98.1	83.5	89.2	67.4	94.5	84
25-29	96.4	87.8	90.0	71.2	94.7	85
30-34	100.0	84.3	86.6	75.2	99.0	53
35-39	91.8	73.9	64.4	54.1	89.7	26
40-44	100.0	57.8	74.1	63.7	89.6	12
45-49	100.0	100.0	100.0	85.7	100.0	4
Education						
None	100.0	95.4	92.0	81.1	100.0	17
Primary	97.2	78.5	80.7	59.0	94.1	198
Secondary +	97.8	92.5	92.7	84.3	96.4	82
Wealth index						
Low	98.7	77.5	75.6	45.2	96.5	43
Medium	95.1	80.3	79.9	61.2	90.9	118
High	99.2	87.8	91.6	79.3	98.2	136
Total	97.5	83.3	84.7	67.2	95.0	297

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

8.6 Assistance at Delivery

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

The MICS included a number of questions to assess the proportion of births attended by a skilled attendant. *A skilled attendant* includes a doctor, nurse, midwife or auxiliary midwife. Table 8.8 (RH.5) shows the distribution of women aged 15-49 who had a birth in the two years preceding the survey by type of personnel assisting at delivery. Slightly over half (56 per cent) of births that occurred during this period were delivered by skilled personnel. About 42 per cent of women delivered in a health facility.

Twenty six per cent of births in the two years prior to the MICS were delivered by a doctor; 30 per cent by a nurse/midwife; 37 per cent by traditional birth attendants, while a negligible per cent age were self-delivered without assistance.

Women from high wealth index households are more likely to get assistance from skilled personnel. More than half (57 per cent) of women from high wealth index households are likely to deliver at a health facility, however, this figure declines to only 13 per cent for women from the low wealth index category. Similarly, women with secondary and above level of education are more likely to be assisted during delivery or deliver in a health facility.

Table 8.8 (RH.5): Assistance during delivery

Percent age distribution of women aged 15-49 with a birth in two years preceding the survey by type of personnel assisting at delivery, Machakos district, Eastern Province, Kenya 2008

	Person assisting at delivery										
Characteristics	Medical doctor	Nurse/ midwife	Tradi-tional birth atten-dant	Comm-unity health worker	Rela-tive/ friend	Other	No atten-dant	Total	Any skilled perso-nnel*	Deliv-ered in health facility	Number of women who gave birth in preceding two years
Age											
15-19	25.3	34.4	31.4	1.7	5.2	0.0	1.8	100.0	59.8	38.7	33
20-24	31.5	32.6	33.2	0.0	1.4	0.7	0.7	100.0	64.0	52.4	84
25-29	25.1	27.7	37.7	1.5	4.9	1.5	1.7	100.0	52.8	40.4	85
30-34	20.4	28.2	43.8	2.6	3.6	1.5	0.0	100.0	48.5	32.3	53
35-39	25.0	28.1	36.6	8.2	0.0	0.0	2.2	100.0	53.0	32.7	26
40-44	28.4	14.7	56.8	0.0	0.0	0.0	0.0	100.0	43.2	33.3	12
45-49	0.0	82.4	17.6	0.0	0.0	0.0	0.0	100.0	82.4	68.2	4
Education											
None	36.9	37.0	14.8	0.0	11.3	0.0	0.0	100.0	73.8	58.4	17
Primary	18.1	29.1	44.1	2.7	3.0	1.4	1.6	100.0	47.3	30.8	198
Secondary +	42.5	31.1	25.1	0.0	1.4	0.0	0.0	100.0	73.5	64.2	82
Wealth index											
Low	5.7	19.1	61.3	5.6	5.1	3.3	0.0	100.0	24.7	13.4	43
Medium	21.7	30.1	39.8	1.4	4.3	0.0	2.7	100.0	51.8	34.4	118
High	35.9	33.6	27.5	0.9	1.2	0.9	0.0	100.0	69.5	56.6	136
Total	**25.9**	**30.1**	**37.2**	**1.8**	**3.0**	**0.9**	**1.1**	**100.0**	**56.0**	**41.6**	**297**

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

Child Development 9

9.1 Child learning

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

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

For 62 per cent of children aged 0-5 years, household members engaged in about four activities that promote learning and school readiness during the 3 days preceding the survey (Table 9.1 (CD.1). Children whose mothers have no education tend to interact more with household members (77 per cent) compared to those who belong to mothers with primary (61 per cent) and secondary or higher (61 per cent) education. In addition, the average number of activities that adults engaged with children was 3.9. Fathers' involvement with one or more activities was reported for only 16 per cent of the children, with an average of 0.4 activities. However, a higher proportion of children (46 per cent) were living in a household without their natural fathers.

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

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

Characteristics	Percentage of children aged 0-59 months					Number of children aged 0-59 months
	For whom household members engaged in four or more activities that promote learning and school readiness*	Mean number of activities household members engage in with the child	For whom the father engaged in one or more activities that promote learning and school readiness**	Mean number of activities the father engaged in with the child	Living in a household without their natural father	
Sex						
Male	62.8	4.0	14.7	0.3	46.8	490
Female	61.6	3.9	17.0	0.4	44.1	466
Age						
0-23 months	31.2	2.7	8.0	0.1	49.8	405
24-59 months	85.0	4.9	21.6	0.5	42.3	551
Mother's education						
None	77.1	4.4	7.0	0.1	79.7	62
Primary	61.4	3.9	15.4	0.3	40.6	608
Secondary +	60.6	3.9	18.7	0.5	48.4	286
Father's education						
None	63.5	3.9	33.8	0.8	0.0	61
Primary	61.7	3.9	20.9	0.4	0.0	275
Secondary +	68.6	4.2	36.1	0.9	0.0	186
Father not in HH	59.6	3.8	1.5	0.0	100.0	435
Wealth index						
Low	61.1	3.7	9.3	0.1	49.2	124
Medium	60.1	3.9	12.9	0.2	45.7	394
High	64.4	4.0	20.4	0.5	44.2	438
Total	**62.2**	**3.9**	**15.8**	**0.4**	**45.5**	**956**

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

10.1 Pre-School Attendance and School Readiness

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

Table 10.1 (ED.1) shows that nearly 40 per cent of children aged 36-59 months are attending pre-school, with a negligible difference between female children attendance (40 per cent) and male children attendance (39 per cent). About 52 per cent of children from high wealth index households attend pre-school compared to 33 per cent for those from medium wealth index households. Children aged 36-47 months are less likely (31 per cent) to be attending pre-school in comparison to the 48-59 month - olds (50 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 first graders who attended pre-school, Machakos 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 1 who attended preschool program in previous year**	Number of children attending first grade
Sex				
Male	38.8	194	(94.2)	35
Female	40.4	188	(85.2)	38
Age of child				
36-47 months	31.2	216	(*)	0
48-59 months	50.2	167	(*)	0
6 years*	(*)	0.0	89.6	73
Mother's education				
None	(*)	25	(*)	6
Primary	31.4	253	92.3	48
Secondary +	58.5	101	(*)	20
Non-standard curriculum	(*)	4	(*)	0
Wealth index				
Low	(14.1)	45	(*)	7
Medium	33.2	164	(92.4)	27
High	52.3	172	(85.6)	39
Total	**39.5**	**382**	**89.6**	**73**

***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.
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 proportion of children in standard one who attended pre-school the previous year is an important indicator of school readiness. Overall, 90 per cent of children who are currently age 6 and attending standard one, attended pre-school the previous year. The proportion among males is higher (94 per cent) than for females (85 per cent).

10.2 Primary and Secondary School Participation

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

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

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

The indicators of school progression include:

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

Table 10.2 (ED.2) shows the distribution of children of primary school entry (6 years old in Kenya) in the district at the time of survey. Almost two-thirds of children of primary school entry are attending standard one of primary school. There is no observed difference in attendance across the sexes. In high wealth index households, 66 per cent are attending standard one, compared to 60 per cent among children living in the medium wealth index households.

Table 10.2 (ED.2): Primary school entry

Percentage of children of primary school entry age (6 years old) attending grade 1, Machakos 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	63.5	63
Female	62.2	71
Mother's education		
None	(*)	13
Primary	61.0	88
Secondary +	(71.6)	32
Wealth index		
Low	(*)	14
Medium	60.3	53
High	66.1	66
Total	**62.8**	**134**

***MICS indicator**

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

Table 10.3 (ED.3) provides the percentage distribution of children of primary school age attending primary or secondary school. The majority (94 per cent) of children of primary school age are attending school. Female children have a negligible advantage over their male counterparts, with attendance rates of 94 and 93 per cent, respectively. On average, primary school attendance by education of the mother and wealth index is high (all greater than 90 per cent) but rates are slightly higher for children with more educated mothers and for children from wealthier households.

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

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

	Net attendance ratio*			Number of children		
Characteristics	Male	Female	Total	Male	Female	Total
Age						
6	66.5	68.1	67.3	63	71	134
7	88.2	94.3	91.3	67	67	133
8	96.2	99.1	97.9	49	66	114
9	98.2	100.0	99.0	72	65	137
10	99.1	99.2	99.1	54	61	116
11	98.9	100.0	99.3	60	39	99
12	100.0	97.6	98.7	65	73	138
13	100.0	100.0	100.0	49	41	90
Mother's education						
None	92.7	93.7	93.2	56	58	114
Primary	92.1	92.9	92.5	308	323	631
Secondary +	95.7	97.4	96.5	116	100	216
Wealth index						
Low	95.0	86.9	91.2	69	61	130
Medium	91.2	95.9	93.6	181	186	368
High	94.0	94.2	94.1	229	235	465
Total	**93.1**	**93.9**	**93.5**	**480**	**482**	**962**

***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). Although net attendance in primary school is very high at 94 per cent, attendance of secondary school remains low for Machakos district at 18 per cent. Gender differentials in secondary school attendance remain comparable at 17 per cent for males and 19 per cent for females. The proportions of children aged 14-17 years attending secondary school are higher among children from wealthier households (24 per cent) compared to those from poorer backgrounds (14 and 13 percent for low and medium wealth index households).

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), Machakos district, Eastern Province, Kenya 2008

	Net attendance ratio*			Number of children		
Characteristics	Male	Female	Total	Male	Female	Total
Age						
14	6.5	7.7	7.1	52	60	112
15	(15.9)	(20.5)	18.1	45	42	87
16	(18.1)	27.8	23.8	35	51	86
17	(34.7)	(21.0)	27.3	33	39	72
Mother's education						
None	(*)	(*)	32.6	13	14	27
Primary	9.8	13.2	11.6	97	108	204
Secondary +	(33.4)	(23.3)	28.0	33	38	70
Mother not in HH	(*)	(22.8)	21.7	23	30	53
Non-standard curriculum	(*)	(*)	0.0	0	1	1
Wealth index						
Low	(19.2)	(7.6)	14.0	36	29	64
Medium	12.3	12.6	12.5	57	77	135
High	20.1	27.5	24.1	72	85	157
Total	**17.2**	**18.5**	**17.9**	**165**	**191**	**356**

***MICS indicator 56**

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

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 10.5 (ED.4W) presents the proportion of secondary school-age children (14-17 years) who are attending primary school. For every five secondary school age children, one is still attending primary school. Majority of these children belong to the low and medium wealth index households. The results indicate females have slightly higher likelihood (21 per cent) of lagging in education level than males (19 per cent).

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

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

	Per cent attending primary school			Number of children		
Characteristics	Male	Female	Total	Male	Female	Total
Age						
14	24.2	37.5	31.3	52	60	112
15	(20.7)	(25.6)	23.1	45	42	87
16	(11.5)	8.5	9.7	35	51	86
17	(17.5)	(9.1)	13.0	33	39	72
Mother's education						
None	(*)	(*)	21.0	13	14	27
Primary	22.0	26.9	24.6	97	108	204
Secondary +	(7.1)	(19.2)	13.6	33	38	70
Non-standard curriculum	NA	(*)	100.0	0	1	1
Mother not in HH	(*)	(7.7)	10.9	23	30	53
Wealth index						
Low	(34.2)	(37.7)	35.8	36	29	64
Medium	22.0	24.9	23.7	100	77	135
High	9.5	12.8	11.3	72	85	157
Total	**19.2**	**21.4**	**20.4**	**165**	**191**	**356**

* Children of secondary school age currently attending primary school are included in the numerator. All children of secondary school age are included in the denominator.
NS: Not shown, based on less than 25 un-weighted cases.

The ratio of girls to boys attending primary and secondary education is provided in Table 10.6 (ED.7). These ratios are also known as the Gender Parity Index (GPI). The GPI included here are obtained from net attendance ratios rather than gross attendance ratios. The latter ratios may not provide accurate description of the GPI mainly because in most of the cases, majority of over-age children attending primary education tend to be boys. The gender parity index for primary school is close to 1.01, indicating a negligible difference in primary school attendance across the sexes. However, the indicator increases marginally to 1.08 for secondary education, again depicting no much difference between boys and girls. A very striking difference is observed in the primary and secondary school attendance of girls with respect to the household wealth index. The ratios for girls who belong to low wealth index households are much lower compared with those for boys with a similar wealth index background resulting in a very low GPI.

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, Machakos district, Eastern Province, Kenya 2008

Characteristics	Primary school net attendance ratio (NAR)		Gender parity index (GPI) for primary school NAR*	Secondary school net attendance ratio (NAR)		Gender parity index (GPI) for secondary
	Girls	Boys		Girls	Boys	
Sex						
Male	NA	92.9	1.01	NA	17.2	1.07
Female	93.9	NA	NA	18.5	NA	NA
Mother's education						
None	93.7	92.7	1.01	38.3	26.3	1.46
Primary	92.9	92.1	1.01	13.2	9.8	1.35
Secondary +	97.4	95.1	1.02	23.3	33.4	0.7
Mother not in Household	NA	NA	NA	22.8	20.3	1.13
Wealth index						
Low	86.9	95.0	0.91	7.6	19.2	0.39
Medium	95.9	91.2	1.05	12.6	12.3	1.03
High	94.2	93.7	1.01	27.5	20.1	1.37
Total	**93.9**	**92.9**	**1.01**	**18.5**	**17.2**	**1.08**

***MICS indicator 61; MDG indicator 9**

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

NA: not applicable

10.3 Adult Literacy

One of the WFFC goals is to assure adult literacy. Adult literacy is also an MDG indicator, relating to both men and women. The MICS adult literacy rates are based only on females aged 15-24, since only a women's questionnaire was administered for this question. Literacy rates were derived from the ability of women to read a short simple statement or on school attendance. The per cent age of literate women aged 15-24 is presented in Table 10.7 (ED.8). Overall, 91 per cent of women aged 15-24 years in Machakos are literate. This percentage is higher among younger women in the age group 15-19 years (94 per cent) compared with those aged 20-24 years (88 per cent). However, it is surprising that there are more individuals who had not been to school who are literate compared to those who had some primary level of education. The level of literacy increases with increasing levels of in household wealth index.

Table 10.7 (ED.8): Adult literacy

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

Characteristics	Percentage literate*	Percentage not known**	Number of women aged 15-24 years
Education			
None	(92.7)	(0.0)	28
Primary	86.8	0.0	253
Secondary +	100.0	0.0	125
Non-standard curriculum	(*)	(*)	2
Age			
15-19	94.1	0.0	220
20-24	88.1	0.0	188
Wealth index			
Low	(82.5)	0.0	41
Medium	89.1	0.0	145
High	94.4	0.0	223
Total	**91.3**	**0.0**	**409**

***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.

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.

11.1 Birth Registration

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

Table 11.1(CP.1) shows the percentage distribution of children aged 0-59 months by whether their birth is registered and reasons for non-registration. Only 27 per cent of children under five years have been registered. There are no significant variations in birth registration across sex, age, or education categories of mothers. A lack of awareness that births should be registered is the predominant reason reported by women for not registering the birth. This is followed by other unspecified reasons and lack of knowledge on where to register.

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, Machakos district, Eastern Province, Kenya 2008

Characteristics	Birth is Regis-tered*	Number of children aged 0-59 months	Birth is not registered because: Costs too much	Must travel too far	Didn't know child should be registered	Late, did not want to pay fine	Doesn't know where to register	Other	Don't know	Total	Number of children aged 0-59 months without birth registration
Sex											
Male	27.4	490	5.1	7.7	39.6	0.2	17.0	25.4	4.9	100.0	315
Female	25.8	466	2.4	10.3	38.5	0.2	18.3	26.1	4.1	100.0	314
Age											
0-11 months	26.4	182	1.9	9.3	37.5	0.0	15.5	33.7	2.1	100.0	127
12-23 months	29.8	195	2.1	14.7	35.9	0.0	22.0	21.1	4.3	100.0	124
24-35 months	27.4	186	3.3	4.6	42.7	0.7	18.4	25.6	4.6	100.0	110
36-47 months	22.1	203	8.9	7.9	39.2	0.5	13.4	24.5	5.5	100.0	139
48-59 months	27.7	190	2.0	8.2	40.4	0.0	19.5	23.8	6.0	100.0	129
Mother's education											
None	18.9	62	(4.4)	(1.7)	(42.9)	(0.0)	(13.0)	(27.5)	(10.5)	(100.0)	38
Primary	22.6	608	3.4	9.1	36.9	0.0	19.6	27.1	3.9	100.0	430
Secondary +	37.0	286	4.5	10.6	43.9	0.9	13.7	21.7	4.7	100.0	161
Wealth index											
Low	16.8	124	2.8	5.4	44.0	0.0	21.7	20.8	5.4	100.0	94
Medium	21.1	394	3.3	10.5	38.2	0.5	17.1	27.5	2.9	100.0	288
High	34.4	438	4.7	8.6	38.2	0.0	16.8	25.6	6.1	100.0	246
Total	**26.6**	**956**	**3.8**	**9.0**	**39.1**	**0.2**	**17.7**	**25.7**	**4.5**	**100.0**	**629**

***MICS indicator 62**

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

11.2 Child Labour

Article 32 of the Convention on the Rights of the Child states: "State Parties recognize the right of the child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development...". The World Fit for Children mentions nine strategies to combat child labour and the MDGs call for the protection of children against exploitation. In the MICS questionnaire, a number of questions were asked on the issue of child labour. A child (5-14 years) is considered to be involved in child labour activities at the time of the survey if during the week preceding the survey: the child spent at least one hour of economic work or 28 hours of domestic work per week (for ages 5-11 years) or at least 14 hours of economic work or 28 hours of domestic work per week (for those aged 12-14 years).

This definition allows differentiation between child labour and child work in order 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 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. The percentages presented may not add up to the total child labour as children may be involved in more than one type of work. Among children aged 5-14 years, nine per cent are engaged in child labour.

The percentage of male children involved in child labour is slightly higher than female children (10 per cent versus eight per cent). Younger children (5-11 years) are more involved in child labour compared to those aged 12-14 years. Less than 10 per cent of children involved in child labour are not attending school. Child labour is more prevalent among children whose mothers have primary level education. Surprisingly, prevalence of child labour increases with household wealth index in Machakos district.

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, Machakos district, Eastern Province, Kenya 2008

	Working outside household					
Characteristics	Paid work	Unpaid work	Household chores for 28+ hours/ week	Working for family business	Total child labour*	Number of children aged 5-14 years
Sex						
Male	0.3	1.6	0.9	8.3	10.4	618
Female	1.0	1.0	0.0	6.2	7.9	601
Age						
5-11 years	0.8	1.8	0.0	10.0	11.9	878
12-14 years	0.2	0.0	1.6	0.2	2.2	340
School participation						
Yes	0.6	1.4	0.5	7.3	9.3	1166
No	1.0	0.0	0.0	6.0	7.0	52
Mother's education						
None	0.0	0.4	1.0	6.1	7.1	132
Primary	1.0	1.9	0.3	7.9	10.5	802
Secondary +	0.0	0.0	0.7	5.9	6.6	283
Wealth index						
Low	1.2	0.3	0.0	3.4	4.6	168
Medium	0.7	1.5	0.0	7.7	9.5	467
High	0.5	1.4	0.9	8.0	10.3	584
Total	**0.7**	**1.3**	**0.5**	**7.3**	**9.2**	**1219**

***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 that were involved in child labour activities at the moment of the survey. In particular, out of 96 per cent of the children 5-14 years of age attending school, nine per cent are also involved in child labour activities. Labourer students and student labourer incidences are more common among children aged 5-9 years compared to older children aged 10-14 years.

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

Percentage of children aged 5-14 years who are labourer students and student labourers, Machakos 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	10.4	94.9	618	94.3	65	10.4	586
Female	7.9	96.6	601	100.0	48	8.2	580
Age							
5-9 years	11.9	94.8	878	97.2	105	12.2	832
10-14 years	2.2	98.1	340	90.2	7	2.0	334
Mother's education							
None	7.1	96.3	132	100.0	9	7.4	127
Primary	10.5	95.5	802	96.5	84	10.6	766
Secondary +	6.6	95.9	283	96.0	19	6.6	271
Non-standard curriculum	(*)	(*)	2		(*)	(*)	2
Wealth index							
Low	4.6	92.8	168	100.0	8	4.9	156
Medium	9.5	95.6	467	95.0	44	9.5	446
High	10.3	96.7	584	97.6	60	10.4	564
Total	**9.2**	**95.7**	**1219**	**96.7**	**112**	**9.3**	**1166**

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

****MICS indicator 72**

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

*****MICS indicator 73**

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

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

11.3 Child Discipline

As stated in A World Fit for Children, "children must be protected against any acts of violence …" and the Millennium Declaration calls for the protection of children against abuse, exploitation and violence. In the MICS survey, mothers/caretakers of children aged 2-14 years, were asked a series of questions on the ways parents discipline their children when they misbehave. In the child discipline module, one child aged 2-14 per household was selected randomly during fieldwork. Out of these questions, the two indicators used to describe aspects of child discipline are: 1) the number of children 2-14 years that experience psychological aggression as punishment ***or*** minor physical punishment, 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.

Overall, 95 per cent of children aged 2-14 years were subjected to at least one form of psychological or physical punishment by their mothers/caretakers or other household members (Table 11.4 (CP.4)). More importantly, 14 per cent of children were subjected to severe physical punishment while 73 per cent were subjected to psychological punishment. The district has a very high percentage (76 per cent) of mothers/caretakers who believed that children should be physically punished.

There are minimal differences noticed with respect to the punishment patterns by gender. More mothers slightly favoured the need for punishing girls more than boys (79 per cent for girls' vs. 73 per cent for boys). Children aged 5-9 years are more likely to receive any kind of punishment compared with their younger and older counterparts. It is also of interest to note that the difference between the percentage of children receiving minor and those receiving severe punishment is very large.

Table 11.4 (CP.4): Child discipline

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

Characteristics	Percentage of children 2-14 years of age who experience:							Mother/ caretaker believes that the child needs to be physically punished	Number of children aged 2-14 years**
	Only non-violent discipline	Type of punishment				No discipline or punishment	Miss-ing		
		Psycho-logical	Minor physical	Severe physical	Any psychological or physical*				
Sex									
Male	4.0	70.1	87.6	13.5	95.3	0.3	0.3	73.2	807
Female	5.2	76.9	86.2	14.6	93.6	0.0	1.2	78.9	716
Age									
2-4 years	4.8	70.3	88.5	14.1	93.9	0.6	0.8	76.4	370
5-9 years	2.7	76.5	89.1	12.0	95.9	0.0	1.4	73.5	652
10-14 years	6.9	71.4	83.0	16.6	93.1	0.0	0.0	78.6	501
Mother's education									
None	6.3	66.5	87.5	6.9	93.7	0.0	0.0	72.8	154
Primary	4.6	77.2	86.5	14.5	94.2	0.2	0.9	77.5	1000
Secondary +	3.8	67.3	87.6	16.3	95.4	0.0	0.8	71.8	359
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	10
Wealth index									
Low	5.7	73.5	91.4	15.7	93.6	0.7	0.0	78.4	204
Medium	2.0	78.7	89.1	12.6	97.7	0.0	0.4	75.1	597
High	6.4	68.8	84.0	14.8	92.2	0.1	1.3	75.8	722
Total	**4.6**	**73.3**	**86.9**	**14.0**	**94.5**	**0.1**	**0.8**	**75.9**	**1523**

***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.

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

11.4 Early Marriage

In some 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. 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, the African Charter on the Rights and Welfare of the Child, and the Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa. Child marriage was also identified by the Pan-African Forum against the Sexual Exploitation of Children as a type of commercial sexual exploitation of children.

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

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

The information on early marriage is presented in Table 11.5 (CP.5). Among married or union women aged 15- 49 years, four per cent were married before the age of 15 years. Among married or in union women aged 20-49 years 20 per cent were married before the age of 18 years. Among adolescent girls aged 15-19 years, 11 per cent are currently married or in union and this percentage declines with increase in level of education.

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, Machakos district, Eastern Province, Kenya 2008

Characteristics	Percentage married before age 15*	Number of women aged 15-49 years	Percentage married before age 18*	Number of women aged 20-49 years	Percentage of women 15-19 married/in union**	Number of women aged 15-19 years
Age						
15-19	0.8	220	NA	NA	10.9	220
20-24	2.5	188	18.5	188	NA	NA
25-29	3.1	220	18.0	220	NA	NA
30-34	3.7	174	23.7	174	NA	NA
35-39	6.0	134	18.4	134	NA	NA
40-45	9.2	108	22.3	108	NA	NA
45-49	8.9	86	24.5	86	NA	NA
Education						
None	4.7	85	6.4	81	13.8	4
Primary	5.7	690	29.7	535	12.0	155
Secondary +	0.5	352	7.2	293	8.1	59
Non-standard curriculum	(*)	2	NA	0	(*)	2
Wealth index						
Low	1.5	118	25.6	90	10.6	28
Medium	5.5	387	25.5	301	16.6	86
High	3.6	625	16.5	519	6.4	106
Total	**4.0**	**1130**	**20.4**	**910**	**10.9**	**220**

***MICS indicator 67**
****MICS indicator 68**
NA: not applicable

Another component of early marriage is the spousal age difference. The indicator of interest is the percentage of married or 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. About one in five married (or in union) women aged 15-24 years in Machakos have a partner who is 10 or more years older. In 29 per cent of the women of this age, the partner is less than 5 years older and for another 47 per cent, the partner is 5-9 years older.

Table 11.6 (CP.6): Spousal age difference

Percentage distribution of currently married/in union women aged 15-19 and 20-24 years according to the age difference with their husband or partner, Machakos district, Eastern Province, Kenya 2008

Characteristics	Percentage of currently married/in union women whose husband or partner is:					Number of women currently married/ in union
	0-4 years older	5-9 years older	10+ years older*	Husband' s age unknown	Total	
Age						
15-19	(26.3)	(52.3)	(15.4)	(6.0)	(100.0)	24
20-24	29.1	45.5	21.6	3.8	100.0	101
Total	**28.6**	**46.8**	**20.4**	**4.2**	**100.0**	**125**

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

11.5 Female Genital Mutilation/Cutting

Female genital mutilation/cutting (FGM/C) is the partial or total removal of the female external genitalia or other injury to the female genital organs. FGM/C is always traumatic with immediate complications including excruciating pain, shock, urine retention, ulceration of the genitals and injury to adjacent tissue. Other complications include septicaemia, infertility, obstructed labour, and even death. The procedure is generally carried out on girls between the ages of 4 and 14; it is also done to infants, women who are about to 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, without anaesthesia, using scissors, razor blades or broken glass.

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

In MICS, a series of questions were asked to determine knowledge of FGM/C, prevalence of FGM/C, and details of the type of FGM/C performed. Tables 11.7 (CP.7) and 11.8 (CP.7) present the prevalence of FGM/C among women and the type and extent of the procedure as well as the woman's attitudes towards FGM/C. Knowledge about FGM/C is nearly universal (95 per cent) for Machakos district and about one in every ten women reported having undergone some form of FGM/C. Results also show that incidences of FGM/C are lowest among those with secondary and above level of education and among high wealth index households.

Among those who have undergone FGM/C, 13 per cent reported undergoing an extreme form, i.e., both the removal of flesh from the genital area and sewing to close the genital area. Among these, a higher percentage of the incidences were reported by women from high wealth index households.

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

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

Characteristics	Heard about FGM/C	Had any form of FGM/C*	Number of women aged 15-49 years	Percentage of women with FGM/C who:			Total	Had an extreme form of FGM/C**	Number of women with FGM/C
				Had flesh removed	Were sewn closed	Form of FGM/C not determined			
Age									
15-19	89.1	0.5	220	(*)	(*)	(*)	(*)	(*)	1
20-24	96.2	1.9	188	(*)	(*)	(*)	(*)	(*)	4
25-29	96.7	7.9	220	(*)	(*)	(*)	(*)	(*)	17
30-34	94.6	10.0	174	(*)	(*)	(*)	(*)	(*)	17
35-39	97.7	20.7	134	(78.4)	(19.5)	(2.2)	(100.0)	(19.5)	28
40-44	97.8	27.4	108	(98.0)	(0.0)	(2.0)	(100.0)	(0.0)	30
45-49	96.1	26.8	86	(*)	(*)	(*)	(*)	(*)	23
Education									
None	98.6	13.4	85	(*)	(*)	(*)	(*)	(*)	11
Primary	94.6	13.2	690	83.6	11.1	5.4	100.0	11.1	91
Secondary +	94.8	4.8	352	(*)	(*)	(*)	(*)	(*)	17
Wealth index									
Low	97.6	17.7	118	(*)	(*)	(*)	(*)	(*)	21
Medium	93.0	11.5	387	(82.8)	(7.5)	(9.6)	(100.0)	(7.5)	44
High	95.8	8.7	625	77.9	16.0	6.1	100.0	16.0	55
Total	**95.0**	**10.6**	**1130**	**80.6**	**12.6**	**6.8**	**100.0**	**12.6**	**120**

***MICS indicator 63**

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

***MICS indicator 64**

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

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

All those who have heard about FGM/C were asked questions to determine their attitude towards whether the practice should be continued or not. The results for these findings are presented in Table 11.8 (CP.7). Mainly older women aged 45-49 years who have heard about FGM/C reported that the practice needs to be continued. Among those who had an FGM/C, 17 per cent would like to continue the practice compared with only 3 per cent among those who did not have an FGM/C experience. Differentials by level of education indicate that more women with primary level education want the practise to continue.

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

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

Characteristics	Percentage distribution of women age 15-49 years who believe the practice of FGM/C should:					Number of women aged 15-49 years who have heard of FGM/C
	Continue*	Be discontinued	Depends on situation	Don't know	Total	
Age						
15-19	0.3	96.7	1.8	1.2	100.0	196
20-24	2.3	94.8	1.9	1.1	100.0	181
25-29	2.3	93.9	3.2	0.6	100.0	213
30-34	4.8	89.5	1.6	4.1	100.0	164
35-39	6.5	89.8	2.4	1.3	100.0	131
40-44	8.8	86.9	2.5	1.8	100.0	105
45-49	12.7	84.8	0.0	2.5	100.0	83
Education						
None	2.3	87.4	6.9	3.4	100.0	84
Primary	5.8	91.0	1.3	2.0	100.0	653
Secondary +	1.8	95.1	2.4	0.7	100.0	334
FGM/C experience						
No	2.7	93.6	2.0	1.7	100.0	954
Yes	17.0	79.0	2.5	1.6	100.0	120
Wealth index						
Low	5.8	89.3	3.0	1.8	100.0	115
Medium	7.9	88.5	0.9	2.7	100.0	359
High	1.8	94.6	2.6	1.0	100.0	599
Total	**4.3**	**92.0**	**2.0**	**1.7**	**100.0**	**1074**

***MICS indicator 66**

Table 11.9 (CP.8) presents the prevalence and extent of FGM/C performed on daughters of the respondents. All women aged 15-49 with at least one daughter were asked whether their daughter had undergone FGM/C or not. A negligible percentage (one per cent) reported that their daughter(s) had undergone the practice.

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, Machakos district, Eastern Province, Kenya 2008

Characteristics	Daughter had any form of FGM/C*	Number of women aged 15-49 years with at least one daughter	Percentage of women whose daughters: Had flesh removed	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	86	(*)	(*)	(*)	0
25-34	1.1	277	(*)	(*)	(*)	3
35-49	1.2	289	(*)	(*)	(*)	4
			(*)	(*)	(*)	
Education			(*)	(*)	(*)	
None	3.1	47	(*)	(*)	(*)	1
Primary	1.0	420	(*)	(*)	(*)	4
Secondary +	0.4	184	(*)	(*)	(*)	1
			(*)	(*)	(*)	
Mother's FGM/C experience			(*)	(*)	(*)	
Had any FGM/C	6.3	105	(*)	(*)	(*)	7
No FGM/C	0.0	547	(*)	(*)	(*)	0
			(*)	(*)	(*)	
Wealth index			(*)	(*)	(*)	
Low	1.1	74	(*)	(*)	(*)	1
Medium	0.7	231	(*)	(*)	(*)	2
High	1.2	347	(*)	(*)	(*)	4
Total	**1.0**	**652**	**100.0**	**100.0**	**0.0**	**7**

***MICS indicator 65**

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

11.6 Domestic Violence

Women aged 15-49 years were asked a set of questions to assess their attitudes towards domestic violence. The questions were asked so as to expound on cultural beliefs that tend to be associated with the prevalence of violence against women by their husbands/partners. The main assumption here is that women who agree with the statements indicating that husbands/partners are justified to beat their wives/partners under the situations described in reality tend to be abused by their own husbands/partners. The findings to these questions are found in Table 11.10 (CP.9).

In the district, 46 per cent of the women aged 15-49 believe that a husband is justified in beating his wife/partner when she goes out without telling him, neglects children, argues with him, refuses to have sex with him or burns food. Among the five reasons mentioned above; 35 per cent of women approve beating if she neglects children; 20 per cent approve if she goes out without telling him; 19 per cent if she argues with him; and 14 per cent if she refuses to have sex.

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, Machakos 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	18.6	34.8	16.2	13.5	6.0	43.9	220
20-24	24.2	37.3	18.3	12.5	3.2	49.5	188
25-29	24.3	35.4	22.0	14.1	5.0	50.3	220
30-34	14.6	31.2	18.8	12.3	2.7	42.8	174
35-39	17.6	33.1	17.2	16.2	4.4	44.7	134
40-44	20.7	31.8	18.2	14.6	4.7	41.3	108
45-49	18.1	39.9	22.4	15.6	4.0	48.8	86
Marital/Union status							
Currently married/in union	20.5	36.1	19.8	14.5	3.5	48.5	709
Formerly married/in union	20.2	41.7	22.7	14.1	11.4	46.1	80
Never married/in union	19.2	30.1	16.1	12.4	4.5	41.2	341
Education							
None	15.8	29.3	18.4	10.6	2.2	40.4	85
Primary	23.2	36.0	21.7	15.9	5.3	48.2	690
Secondary +	15.2	33.0	13.6	10.7	3.1	43.0	352
Non-Standard Curriculum	(*)	(*)	(*)	(*)	(*)	(*)	2
Wealth index							
oLow	20.4	37.2	19.1	17.7	5.2	48.6	118
Medium	27.1	42.8	23.3	15.3	5.5	53.6	387
High	15.7	29.2	16.1	12.2	3.5	41.0	625
Total	**20.1**	**34.7**	**18.9**	**13.8**	**4.4**	**46.1**	**1130**

***MICS indicator 100**

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

12.1 Knowledge of HIV Transmission and Condom Use

One of the most important prerequisites for reducing the rate of HIV infection is having good or accurate knowledge of how HIV is transmitted and strategies for preventing transmission. Misconceptions about HIV are common and can confuse young people and thus, hinder prevention efforts. Because of cultural, variations in educational levels and knowledge diffusion, 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 6 on reducing HIV infections by half include, improving the level of knowledge of HIV and its prevention, and changing behaviours to prevent further spread of the disease.

In the MICS, women aged 15-49 were asked whether they knew of the three main ways of preventing HIV transmission namely: having only one faithful uninfected partner; using a condom every time and abstaining from sex. The results are presented in Table 12.1 (HA.1).

Almost all of the interviewed women have heard of AIDS. However, the percentage of women who know of all three main ways of preventing HIV transmission is only 66 per cent. Ninety-five per cent of women know of having one faithful uninfected sex partner, 76 per cent know of using a condom every time, and 86 per cent know of abstaining from sex as main ways of preventing HIV transmission. Knowledge of at least one way to prevent transmission of HIV among women in Machakos is nearly universal (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, Machakos district, Eastern Province, Kenya 2008

Characteristics	Heard of AIDS	Percentage who know transmission can be prevented by: Having only one faithful uninfected sex partner	Using a condom every time	Abstaining from sex	Knows all three ways	Knows at least one way	Doesn't know any way	Number of women
Age								
15-19	100.0	91.8	73.7	87.4	64.7	97.6	2.4	220
20-24	100.0	93.8	71.7	85.7	62.2	99.2	0.8	188
25-29	100.0	97.8	77.3	90.0	70.1	99.5	0.5	220
30-34	99.0	93.3	81.4	86.3	70.3	98.0	2.0	174
35-39	100.0	96.9	82.6	75.4	64.3	99.6	0.4	134
40-44	100.0	94.9	74.6	85.8	65.8	98.2	1.8	108
45-49	98.0	95.9	67.5	88.6	61.5	98.0	2.0	86
Education								
None	100.0	98.3	83.1	93.8	78.4	100.0	0.0	85
Primary	99.8	94.5	74.4	83.9	63.2	98.5	1.5	690
Secondary +	99.5	94.4	77.0	88.7	68.9	98.5	1.5	352
Non-Standard Curriculum	(*)	(*)	(*)	(*)	(*)	(*)	(*)	2
Wealth index								
Low	100.0	89.0	71.6	74.5	55.5	98.0	2.0	118
Medium	99.6	96.8	74.8	86.6	65.9	98.9	1.1	387
High	99.7	94.6	77.4	87.8	68.1	98.6	1.4	625
Total	**99.7**	**94.8**	**75.9**	**86.0**	**66.0**	**98.6**	**1.4**	**1130**

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

Table 12.2 (HA.2) presents the proportion of women who can correctly identify misconceptions concerning HIV. The indicator is based on the two most common and relevant misconceptions; that HIV can be transmitted by supernatural means and by mosquito bites. The table also provides information on women who know that HIV cannot be transmitted by sharing food, but can be transmitted by sharing needles. Among interviewed women, 61 per cent rejected the two most common misconceptions and know that a healthy-looking person can be infected. Eighty four per cent of women know that HIV cannot be transmitted by supernatural means and 86 per cent of women know that HIV cannot be transmitted by sharing food, while 95 per cent know that a healthy-looking person can be infected. It is evident that a higher proportion of educated women have correct knowledge about HIV/AIDS compared with those with no education and those with primary education.

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

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

Characteristics	Percentage who know that: HIV cannot be transmitted				Per cent who know that:		
	Option 1: Supernatural means	Option 2: Mosquito bites	A healthy looking person can be infected	Reject two most common misconceptions and know a healthy-looking person can be infected	Option 3: HIV cannot be transmitted by sharing food	Option 4: HIV can be transmitted by sharing needles	Number of women
Age							
15-19	85.6	88.4	92.2	71.7	85.5	97.9	220
20-24	83.1	71.8	94.0	58.2	85.4	99.0	188
25-29	86.5	75.3	93.4	60.8	90.1	97.6	220
30-34	82.4	72.4	95.2	60.1	87.6	97.6	174
35-39	84.6	73.4	97.4	65.6	84.8	94.6	134
40-44	81.9	75.2	98.1	60.4	87.9	98.3	108
45-49	74.2	48.4	97.3	40.7	74.8	93.8	86
Education							
None	91.1	72.1	94.3	61.7	83.1	95.7	85
Primary	83.7	71.8	93.8	59.4	84.4	96.9	690
Secondary +	81.3	80.3	96.8	64.8	89.9	98.6	352
Wealth index							
Low	77.7	66.0	92.0	53.5	76.3	96.2	118
Medium	84.0	71.6	94.4	57.6	84.7	97.9	387
High	84.4	78.0	95.5	65.2	88.7	97.2	625
Total	**83.5**	**74.5**	**94.8**	**61.4**	**86.0**	**97.3**	**1130**

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 know 2 ways of preventing HIV transmission and the three common misconceptions. Comprehensive knowledge of HIV prevention methods and transmission is still fairly low. Forty six per cent of women aged 15-49 years have comprehensive knowledge about HIV/AIDS. As expected, the proportion of women with comprehensive knowledge increases with the level of household wealth index (Figure 12.1) and woman's education level.

Figure 12.1: Percentage of women who have comprehensive knowledge of HIV/AIDS transmission

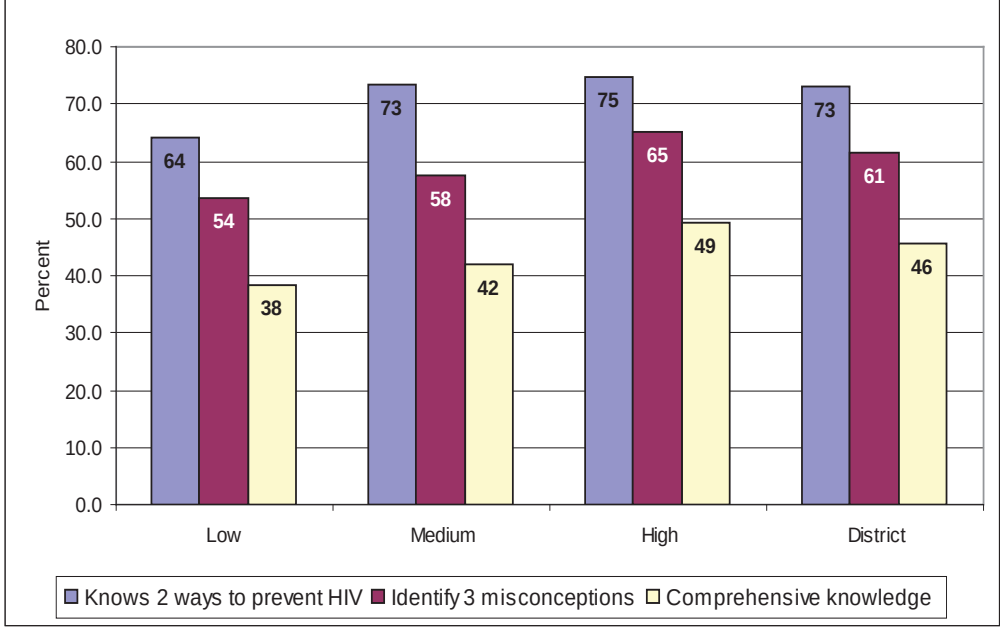


Table 12.3 (HA.3): Comprehensive knowledge of HIV/AIDS transmission

Percentage of women aged 15-49 years who have comprehensive knowledge of HIV/AIDS transmission, Machakos 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	69.3	71.7	50.0	220
20-24	69.2	58.2	42.9	188
15-24	69.2	65.4	46.7	409
25-29	76.2	60.8	45.1	220
30-34	77.9	60.1	48.6	174
35-39	79.9	65.6	51.7	134
40-44	71.3	60.4	45.6	108
45-49	65.4	40.7	25.6	86
Education				
None	82.2	61.7	56.7	85
Primary	71.2	59.4	43.3	690
Secondary +	74.4	64.8	46.9	352
Non-standard curriculum	(*)	(*)	(*)	3
Wealth index				
Low	64.0	53.5	38.4	118
Medium	73.3	57.6	42.1	387
High	74.7	65.2	49.1	625
Total	**73.1**	**61.4**	**45.6**	**1130**

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

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

Knowledge of mother-to-child transmission of HIV is also important for women as it empowers them to seek HIV testing when they are pregnant to avoid infecting the baby. Women need to know that HIV can be transmitted during pregnancy, delivery, and through breastfeeding. Knowledge about mother-to-child-transmission among women aged 15-49 years is presented in Table 12.4 (HA.4). Nearly all (99 per cent) women know that HIV can be transmitted from mother to child, while 52 per cent know all three ways of mother-to-child transmission.

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, Machakos 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 breast milk	All three ways*	Did not know any specific way	Number of women
Age							
15-19	98.2	55.8	76.5	97.6	47.8	1.8	220
20-24	99.7	63.4	82.0	96.8	53.5	0.3	188
25-29	99.3	63.3	82.4	98.2	56.6	0.7	220
30-34	98.2	58.9	79.9	96.5	51.1	0.8	174
35-39	98.0	61.3	73.6	94.2	48.9	2.0	134
40-44	98.3	60.3	81.1	97.7	54.3	1.7	108
45-49	98.0	49.3	76.0	98.0	46.5	0.0	86
Education							
None	100.0	53.2	95.6	96.4	49.5	0.0	85
Primary	98.5	60.5	75.4	97.9	52.1	1.3	690
Secondary +	98.6	59.8	82.4	95.6	51.4	0.9	352
Wealth index							
Low	97.1	62.0	69.6	96.6	54.0	2.9	118
Medium	99.2	61.7	75.3	97.9	51.8	0.4	387
High	98.6	57.8	83.3	96.7	51.0	1.1	625
Total	**98.6**	**59.6**	**79.1**	**97.1**	**51.6**	**1.1**	**1130**

***MICS indicator 89**

The indicators on attitudes toward people living with HIV/AIDS measure stigma and discrimination in the community. Stigma and discrimination are low if respondents report an accepting attitude on the following four questions: 1) would care for family member who is sick with AIDS; 2) would buy fresh vegetables from a vendor who was HIV positive; 3) thinks that a female teacher who is HIV positive should be allowed to teach in school; and 4) would ***not*** want to keep HIV status of a family member a secret.

Table 12.5 (HA.5) presents the attitudes of women towards people living with HIV/AIDS. Of those who have heard about HIV/AIDS, 56 per cent reported that if a family member is sick with HIV/AIDS, they would like to keep it a secret. Thirty four per cent believe that a teacher should not be allowed to work if he/she has HIV/AIDS while 36 per cent will not buy food from a person who has HIV/AIDS. One out of five women agrees with none of the mentioned discriminatory statements.

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, Machakos district, Eastern Province, Kenya 2008

	Percentage of women who:						
Characteristics	Would not care for a family member who was sick with AIDS	If a family member had HIV would want to keep it a secret	Believe that a teacher with HIV should not be allowed to work	Would not buy food from a person with HIV/AIDS	Agree with at least one discriminatory statement	Agree with none of the discriminatory statements*	Number of women who have heard of AIDS
Age							
15-19	2.5	61.5	25.8	30.1	76.6	23.4	220
20-24	3.2	55.6	34.7	36.4	84.6	15.4	188
25-29	0.7	55.3	36.8	33.2	82.0	18.0	220
30-34	1.3	50.8	30.3	34.4	78.7	21.3	172
35-39	1.0	52.2	36.2	35.1	77.7	22.3	134
40-44	2.1	51.1	35.3	47.1	81.0	19.0	108
45-49	0.0	61.4	50.8	41.8	87.5	12.5	84
Education							
None	0.0	39.8	28.4	27.4	68.2	31.8	85
Primary	2.0	60.1	36.9	40.9	86.2	13.8	689
Secondary +	1.4	51.0	29.6	27.2	72.8	27.2	350
Wealth index							
Middle	1.5	52.3	37.1	45.4	79.8	20.2	118
Fourth	1.7	58.6	34.2	39.2	86.7	13.3	385
Richest	1.7	54.3	33.5	31.3	77.1	22.9	624
Total	**1.7**	**55.6**	**34.1**	**35.5**	**80.7**	**19.3**	**1127**

***MICS indicator 86**

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

Knowledge of where to be tested for HIV and use of such services is another important indicator. Knowledge among women of a facility for HIV testing and whether they have ever been tested is presented in Table 12.6 (HA.6). Ninety per cent of the women in the district know where to be tested and 48 per cent have actually been tested. Among those tested, 96 per cent have been told the result. Differentials by level of education do not show a clear pattern. However, knowledge of where to be tested and the percentage actually tested increases with increase in household wealth index. Although a higher proportion of women in the high wealth index households have been tested than those from the low wealth group, the proportion of women who have reportedly been told their results is higher among those from low wealth index households.

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, Machakos District, Eastern Province, Kenya 2008

Characteristics	Know a place to get tested*	Have been tested**	Number of women	If tested, have been told result	Number of women who have been tested for HIV
Age					
15-19	80.9	21.3	220	90.7	47
20-24	96.0	69.5	188	95.1	131
25-29	97.5	72.4	220	98.7	160
30-34	91.2	57.9	174	94.1	101
35-39	92.6	42.1	134	100.0	56
40-44	(86.4)	(32.8)	(108)	(92.4)	35
45-49	(*)	(*)	(*)	(*)	13
Education					
None	98.5	57.9	85	98.4	49
Primary	86.3	43.0	690	95.7	297
Secondary +	94.6	55.7	352	95.3	196
Non-standard curriculum	(*)	(*)	(*)	NA	0
Wealth index					
Low	84.0	33.0	118	98.5	39
Medium	88.6	47.8	387	96.5	185
High	91.7	51.0	625	95.1	319
Total	**89.8**	**48.0**	**1130**	**95.8**	**542**

***MICS indicator 87**

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

****MICS indicator 88**

** Women who have been tested for HIV includes those tested during antenatal care.

The first two columns of the table include all women in the denominator, even those who have not heard of AIDS.

In the fourth column, the denominator consists of women who have been tested and the numerator consists of women who have been told the results.

Table 12.7 (HA.7) presents the distribution of women who had given birth within the two years preceding the survey and who received counselling and HIV testing during antenatal care. Ninety seven per cent of mothers in Machakos received antenatal care from a health professional and out of these 78 per cent were provided information about HIV prevention while 79 per cent were tested for HIV during antenatal care visit. Among those tested for HIV, 77 per cent received the 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, Machakos district, Eastern Province, Kenya 2008

	Percentage of women who:				
Characteristics	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	(98.3)	(85.8)	(84.2)	(78.1)	33
20-24	96.7	76.1	80.8	78.5	84
25-29	96.4	83.7	82.7	81.8	85
30-34	99.0	82.0	75.3	74.2	53
35-49	94.9	59.8	67.4	67.4	42
Education					
None	(100.0)	(89.4)	(96.4)	(96.4)	17
Primary	96.6	74.5	73.6	71.2	198
Secondary +	97.1	84.4	88.0	87.4	82
Wealth index					
Low	98.7	71.9	64.3	64.3	43
Medium	94.1	73.0	76.9	74.2	118
High	98.8	84.4	85.1	83.5	136
Total	**96.9**	**78.1**	**78.8**	**77.1**	**297**

***MICS indicator 90**
****MICS indicator 91**
Note: Figures in parentheses are based on 25-49 unweighted cases.

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 live 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.

The UNAIDS Monitoring and Evaluation Reference Group developed a proxy definition of children who have been affected by adult morbidity and mortality. This indicator should capture many of the children affected by AIDS in countries where a significant proportion of 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.

Information pertaining to children's living arrangements and orphanhood is presented in Table 12.8 (HA.10). Slightly more than half (52 per cent) of children aged 0-17 years in Machakos district, live with both parents. Slightly more than one out of four children (26 per cent) live with only their mother though their father is alive. Eight per cent of children do not live with a biological parent while 9 per cent are orphaned. As would be expected, the percentage of children not living with parents increases with 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, Machakos district, Eastern Province, Kenya 2008

		Living with neither parent				Living with mother only		Living with father only						
Characteristics	Living with both parents	Only father alive	Only mother alive	Both are alive	Both are dead	Father alive	Father dead	Mother alive	Mother dead	Impossible to determine	Total	Not living with a biological parent*	One or both parents dead**	Number of children
Sex														
Male	51.5	0.6	0.9	3.4	2.3	27.8	3.7	0.3	0.1	9.6	100.0	7.2	8.3	1079
Female	52.1	1.6	0.9	4.1	1.5	24.5	4.9	0.1	0.2	10.1	100.0	8.2	10.1	1059
Age														
0-4 years	54.3	0.4	0.6	1.5	0.0	31.2	1.2	0.0	0.0	10.8	100.0	2.5	2.6	675
5-9 years	52.5	0.6	0.9	4.6	1.1	26.5	3.9	0.1	0.1	9.7	100.0	7.2	7.4	663
10-14 years	49.8	1.8	1.1	3.7	4.4	22.4	6.6	0.5	0.3	9.3	100.0	11.0	15.6	555
15-17 years	47.3	2.6	1.5	8.0	3.7	19.9	8.3	0.0	0.2	8.5	100.0	15.7	17.7	245
Wealth index														
Low	48.6	1.0	0.0	5.0	4.2	25.2	5.4	0.7	0.0	10.0	100.0	10.1	11.6	301
Medium	50.7	0.6	0.6	2.8	2.2	28.0	5.5	0.2	0.2	9.2	100.0	6.2	10.4	837
High	53.6	1.5	1.5	4.3	1.0	24.9	2.9	0.0	0.1	10.3	100.0	8.2	7.4	1000
Total	**51.8**	**1.1**	**0.9**	**3.8**	**1.9**	**26.2**	**4.3**	**0.2**	**0.1**	**9.8**	**100.0**	**7.7**	**9.2**	**2138**

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

Table 12.9 (HA.11) shows the percentage of orphaned and vulnerable children aged 0-17 years. About 14 per cent of children can be classified as orphaned and vulnerable while nine per cent of children have lost either one or both parents.

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

Percentage of children aged 0-17 years who are orphaned or vulnerable due to AIDS, Machakos 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	0.2	1.3	4.1	5.5	8.3	12.7	1079
Female	0.4	1.2	4.5	6.0	10.1	14.3	1059
Age							
0-4 years	0.4	0.6	3.3	4.1	2.6	6.7	675
5-9 years	0.4	1.2	6.0	7.6	7.4	13.3	663
10-14 years	0.1	2.0	3.8	5.8	15.6	18.5	555
15-17 years	0.0	1.5	3.7	5.2	17.7	21.4	245
Wealth index							
Low	0.0	2.3	3.8	6.1	11.6	15.4	301
Medium	0.2	1.4	4.3	5.6	10.4	14.1	837
High	0.4	0.8	4.5	5.7	7.4	12.3	1000
Total	**0.3**	**1.3**	**4.3**	**5.7**	**9.2**	**13.5**	**2138**

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

One of the measures developed for the assessment of the status of orphaned and vulnerable children relative to their peers, looks at the school attendance of children 10-14 for children who have lost both parents (double orphans) versus children whose parents are alive (and who live with at least one of these parents). If children whose parents have died do not have the same access to school as their peers, then families and schools are not ensuring that the rights of these children are met. Table 12.10 (HA.12) presents information on school attendance of orphaned and vulnerable children.

All children who have lost both parents are currently attending school. Nearly all (99 per cent) children aged 10-14 years who are classified as orphaned or vulnerable are attending school compared to 98 per cent among those who are not orphans or vulnerable. This finding shows that in this district, orphans are not so disadvantaged compared to non-orphans in terms of school attendance.

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

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

School attendance of children aged 10-14 years by orphanhood and vulnerability due to AIDS, Machakos district, Eastern Province, Kenya 2008

Characteristics	Per cent of children whose mother and father have died	School attendance rate of children whose mother and father have died	Per cent of children of whom both parents are alive and child is living with at least one parent	School attendance rate of children of whom both parents are alive and child is living with at least one parent	Double orphans to non-orphans school attendance ratio*	Per cent of children who are orphaned or vulnerable	School attendance of children who are orphaned or vulnerable	Per cent 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	5.6	100.0	76.3	98.8	1.0	14.2	100.0	85.8	97.6	1.0	281
Female	3.1	100.0	69.1	99.7	1.0	23.0	98.8	77.0	99.3	1.0	274
Wealth index											
Low	6.0	100.0	69.8	97.4	1.0	21.3	95.6	78.7	95.7	1.0	81
Medium	4.8	100.0	69.5	99.3	1.0	20.4	100.0	79.6	99.4	1.0	211
High	3.6	100.0	76.2	99.7	1.0	16.2	100.0	83.8	98.4	1.0	264
Total	**4.4**	**100.0**	**72.7**	**99.2**	**1.0**	**18.5**	**99.3**	**81.5**	**98.4**	**1.0**	**555**

***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 orphaned or vulnerable children. Community-based organizations and governments need to ensure that families are supported to care for these children. The level and types of support provided to households caring for children who are orphaned and vulnerable due to AIDS is presented in Table 12.11 (HA.13). Majority (72 per cent) of the orphaned or vulnerable children aged 0-17 years had not received any support. On the other hand, about 18 per cent of the orphaned or vulnerable children received educational support. Overall, 28 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, Machakos 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	5.8	7.9	3.0	14.1	21.8	1.4	78.2	137
Female	8.4	9.4	1.9	22.1	34.0	0.0	66.0	151
Age								
0-4 years	6.3	12.9	3.3	0.0	19.9	0.0	80.1	45
5-9 years	7.0	7.1	3.3	23.3	30.4	0.0	69.6	88
10-14 years	4.7	6.2	0.6	24.0	30.0	0.0	70.0	103
15-17 years	13.1	12.5	3.8	14.5	28.2	3.8	71.8	52
Wealth index								
Low	(0.0)	(15.1)	(3.0)	(26.7)	(26.7)	(0.0)	(73.3)	46
Medium	5.6	7.9	2.5	19.7	29.3	0.0	70.7	118
High	11.3	7.0	2.1	13.8	27.7	1.6	72.3	123
Total	**7.2**	**8.7**	**2.4**	**18.3**	**28.2**	**0.7**	**71.8**	**288**

***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.

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

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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 Machakos 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:

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

Where

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

For the calculation, r (the immunization coverage) was assumed to be 65 per cent. The value of *deff* (design effect) was taken as 1.3 based on estimates from previous surveys, p (per cent age of children aged 12-23 months in the total population) was taken as 3.2 per cent, 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 Machakos, 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., without a child below 3 years) ($n_1 + n_2$ is the total number of households in each enumeration area) at the District Statistical Office, where selection of 16 households from stratum-1 and 8 households from straum-2 were carried out using systematic selection procedures using a random start.

†† 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.

Calculation of Sample Weights

The Machakos 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'.

As mentioned earlier, 50 clusters were selected from the Machakos 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
Mr. Rogers Mumo

Supervisor
Julius Kituma

Enumerators
Reuben Mule Nzonzi
Robert Munyao
Charles M. Mwando
Daniel Mutiso
Linda Katunge
Damaris Mwongeli Mutungi

Data Collection Co-ordinator
Mr. James Kinyanjui

Supervisors
Yale Makau John
Francis Kieti

Field Editors
Dorcas Malia Katee
Kennedy Kiamba

Research Assistants
Agnes Mwikali
Ann Wango Mwaniki
Priscilla Mueni Muthembwa
Everlyn M. Kinyumu
James M. Maithya
Rose Mueni Musili

Appendix C: Estimates of Sampling Errors

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

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

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

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

Machakos

	Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Unweighted Count	Confidence limits	
Iodized salt consumption	0.9424	0.00806	0.009	1.313	1.146	3,175	1,098	0.926	0.959
Child discipline	0.9294	0.01405	0.015	2.445	1.564	2,125	814	0.901	0.957

	Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect		Unweighted Count	Confidence limits	
Use of improved drinking water sources	0.3640	0.03431	0.094	25.566	5.056	13,274	5,030	0.295	0.433
Use of improved sanitation facilities	0.2517	0.02654	0.105	18.808	4.337	13,274	5,030	0.199	0.305
Net primary school attendance rate	0.9336	0.00819	0.009	1.141	1.068	2,780	1,056	0.917	0.950
Net secondary school attendance rate	0.1791	0.03370	0.188	2.712	1.647	1,029	352	0.112	0.246
Primary completion rate	0.0079	0.00784	0.997	0.812	0.901	261	104	-0.008	0.024
Child labour	0.0921	0.01093	0.119	1.890	1.375	3,520	1,324	0.070	0.114
Prevalence of orphans	0.0919	0.01246	0.136	4.705	2.169	6,176	2,529	0.067	0.117
Prevalence of vulnerable children	0.0574	0.00890	0.155	3.700	1.924	6,176	2,529	0.040	0.075

	Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Unweighted Count	Confidence limits	
Skilled attendant at delivery	0.5601	0.02913	0.052	1.474	1.214	801	429	0.502	0.618
Antenatal care	0.9693	0.00794	0.008	0.906	0.952	801	429	0.953	0.985
Contraceptive prevalence	0.6242	0.02989	0.048	2.868	1.693	1,910	754	0.564	0.684
Adult literacy	0.9134	0.01930	0.021	1.963	1.401	1,101	418	0.875	0.952
Prevalence of FGM/C	0.1059	0.01438	0.136	2.467	1.571	3,044	1,130	0.077	0.135
Marriage before age 18	0.1848	0.03106	0.168	1.358	1.165	508	213	0.123	0.247
Comprehensive knowledge about HIV prevention among young people	0.4558	0.02231	0.049	2.265	1.505	3,044	1,130	0.411	0.500
Attitudes towards people with HIV/AIDS	0.1932	0.01753	0.091	2.222	1.491	3,035	1,128	0.158	0.228
Women who have been tested for HIV	0.4801	0.02232	0.046	2.254	1.501	3,044	1,130	0.435	0.525
Knowledge of mother-to-child transmission of HIV	0.5160	0.01835	0.036	1.523	1.234	3,044	1,130	0.479	0.553

	Estimate	Standard Error	Coefficient of Variation	Design Effect	Square Root Design Effect	Population Size	Unweighted Count	Confidence limits	
Underweight prevalence	0.2573	0.01572	0.061	1.168	1.081	2,638	904	0.226	0.289
Tuberculosis immunization coverage	0.9678	0.01125	0.012	0.951	0.975	611	235	0.945	0.990
Polio immunization coverage	0.8451	0.02864	0.034	1.467	1.211	611	235	0.788	0.902
Immunization coverage for DPT	0.9358	0.02157	0.023	1.813	1.347	611	235	0.893	0.979
Measles immunization coverage	0.9612	0.01316	0.014	1.088	1.043	611	235	0.935	0.988
Fully immunized children	0.8231	0.03405	0.041	1.864	1.365	611	235	0.755	0.891
Acute respiratory infection in last two weeks	0.0626	0.01118	0.179	2.034	1.426	2,773	956	0.040	0.085
Antibiotic treatment of suspected pneumonia	0.0610	0.02114	0.346	0.476	0.690	173	62	0.019	0.103
Diarrhoea in last two weeks	0.0770	0.01032	0.134	1.432	1.197	2,773	956	0.056	0.098
Received ORT or increased fluids and continued feeding	0.1822	0.03949	0.217	0.775	0.880	214	75	0.103	0.261
Fever in last two weeks	0.2015	0.01846	0.092	2.021	1.422	2,773	956	0.165	0.238
Antimalarial treatment	0.2134	0.03380	0.158	1.313	1.146	559	194	0.146	0.281
Support for learning	0.6221	0.02103	0.034	1.796	1.340	2,773	956	0.580	0.664
Birth registration	0.2663	0.03028	0.114	4.480	2.117	2,773	956	0.206	0.327

Appendix D: Data Quality Tables

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

		Household population of women age 10-54	Interviewed women age 15-49		
		Number	Number	Percentage	Percentage of eligible women interviewed
Age	10-14	274	0.0	0.0	0.0
	15-19	217	205	18.1	94.4
	20-24	179	213	18.8	119.0
	25-29	204	241	21.3	118.2
	30-34	160	176	15.6	110.2
	35-39	124	129	11.4	104.1
	40-44	103	86	7.6	83.9
	45-49	83	80	7.1	96.8
	50-54	94	0.0	0.0	0.0
	15-49	1069	1130	100.0	105.7

Appendix E: MICS Indicators - Numerators and Denominators

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

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

INDICATOR		NUMERATOR	DENOMINATOR
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
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

INDICATOR		NUMERATOR	DENOMINATOR
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
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

INDICATOR		NUMERATOR	DENOMINATOR
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 vulnerable by HIV/AIDS	Proportion of orphaned or vulnerable children under age five that are moderately or severely underweight, of all orphaned and vulnerable children under age five that are weighed	Proportion of children not classified as orphaned or vulnerable under age five that are moderately or severely underweight, of all children not classified as orphaned or vulnerable under age five that are weighed
80	Early sex among children orphaned and made vulnerable by HIV/AIDS	Proportion of orphaned and vulnerable children aged 15-17 years that had sex before age 15, of all orphaned and vulnerable children aged 15-17 years surveyed	Proportion of children not classified as orphaned or vulnerable aged 15-17 years that had sex before age 15, of all children not classified as orphaned or vulnerable aged 15-17 years surveyed

INDICATOR		NUMERATOR	DENOMINATOR
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
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

INDICATOR		NUMERATOR	DENOMINATOR
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 [Circle line no. if woman is age 15-49]	HL7 [For child age 5-14 years] WHO IS THE MOTHER OR PRIMARY CARETAKER OF (name)? [record line no. of mother/ caretaker]	HL8 [For child < 5] WHO IS THE MOTHER OR PRIMARY CARETAKER OF (name)? [record line no. of mother/ caretaker]	HL8A HAS (name) BEEN VERY SICK FOR AT LEAST 3 MONTHS DURING THE PAST 12 MONTHS?	HL9 IS (name's) NATURAL MOTHER ALIVE? 1-YES 2 - NO ⇘ HL11 8 - DK ⇘ HL11	HL10 [If alive:] DOES (name's) NATURAL MOTHER LIVE IN THIS HH? [Record line no. of mother or 00 for 'no']	HL10A [If '00' in HL10] HAS (name's) MOTHER BEEN VERY SICK FOR AT LEAST 3 MONTHS IN THE PAST 12 MONTHS	HL11 IS (name's) NATURAL FATHER ALIVE? 1 YES 2 - NO ⇘ NEXT LINE 8 - DK ⇘ NEXT LINE	HL12 [If alive:] DOES (name's) NATURAL FATHER LIVE IN THIS HH? [Record line no. of father or 00 for 'no']	HL12A [If '00' in HL12] HAS (name's) FATHER BEEN VERY SICK FOR AT LEAST 3 MONTHS IN THE PAST 12 MONTHS
Line	Name	Relation	M F	Age	15-49	Mother/CT	Mother/CT	Y N DK	Y N DK	Mother	Y N DK	Y N DK	Father	Y N DK
10		☐☐	1 2	☐☐	10	☐☐	☐☐	1 2 8	1 2 8	☐☐	1 2 8	1 2 8	☐☐	1 2 8
11		☐☐	1 2	☐☐	11	☐☐	☐☐	1 2 8	1 2 8	☐☐	1 2 8	1 2 8	☐☐	1 2 8
12		☐☐	1 2	☐☐	12	☐☐	☐☐	1 2 8	1 2 8	☐☐	1 2 8	1 2 8	☐☐	1 2 8
13		☐☐	1 2	☐☐	13	☐☐	☐☐	1 2 8	1 2 8	☐☐	1 2 8	1 2 8	☐☐	1 2 8
14		☐☐	1 2	☐☐	14	☐☐	☐☐	1 2 8	1 2 8	☐☐	1 2 8	1 2 8	☐☐	1 2 8
15		☐☐	1 2	☐☐	15	☐☐	☐☐	1 2 8	1 2 8	☐☐	1 2 8	1 2 8	☐☐	1 2 8
ARE THERE ANY OTHER PERSONS LIVING HERE - EVEN IF THEY ARE NOT MEMBERS OF YOUR FAMILY OR DO NOT HAVE PARENTS LIVING IN THIS HH? INCLUDING CHILDREN AT SCHOOL OR WORK? [If yes, insert child's name and complete the information. Fill in the totals below:]														
*HL5: Ascertain age for all persons below 60 years; Code '00' for children below 1 year and '97' for 97+ years.					Women 15-49	Children 5-14	Children under 5	Very sick (1)	Mother dead (2)		Mother sick (1)	Father dead (2)		Father sick (1)
TOTALS					☐☐	☐☐	☐☐	☐☐	☐☐		☐☐	☐☐		☐☐

Codes for HL3 : Relationship to the Head of HH:

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

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

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

CODES FOR ED3, ED6 & ED8

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

H.4: Water & Sanitation — WS

#	Question	Options	Skip
WS1	WHAT IS THE MAIN SOURCE OF DRINKING WATER FOR MEMBERS OF YOUR HOUSEHOLD?	**Piped water** **Piped into dwelling** ..... 11 **Piped into yard or plot** ..... 12 **Public tap/standpipe** ..... 13 **Pipe water from neighbour's house** ..... 14 **Tubewell/borehole with hand-pump** ..... 21 **Tubewell/borehole with powered pump** ..... 22 **Dug well** **Protected well** ..... 31 **Unprotected well** ..... 32 **Water from spring** **Protected spring** ..... 41 **Unprotected spring** ..... 42 **Rainwater collection** ..... 51 **Tanker-truck** ..... 61 **Cart with small tank/drum** ..... 71 **Surface water (river, stream, dam, lake, pond, canal, irrigation channel)** ..... 81 Bottled water ..... 91 Other (specify_____) 96	11⇨WS5 12⇨WS5 13.81 ⇨WS3 96⇨WS3
WS2	WHAT IS THE MAIN SOURCE OF WATER USED BY YOUR HOUSEHOLD FOR OTHER PURPOSES SUCH AS COOKING AND HANDWASHING?	Piped water **Piped into dwelling** ..... 11 **Piped into yard or plot** ..... 12 Public tap/standpipe ..... 13 Pipe water from neighbour's house ..... 14 Tubewell/borehole with hand-pump ..... 21 Tubewell/borehole with powered pump ..... 22 Dug well Protected well ..... 31 Unprotected well ..... 32 Water from spring Protected spring ..... 41 Unprotected spring ..... 42 Rainwater collection ..... 51 Tanker-truck ..... 61 Cart with small tank/drum ..... 71 Surface water (river, stream, dam, lake, pond, canal, irrigation channel) ..... 81 Other (specify_____) 96	11⇨WS5 12⇨WS5
WS3	HOW LONG DOES IT TAKE TO GO THERE, GET WATER AND COME BACK? [Code '900' for over 15+ hours]	No. of minutes ..... ☐☐☐ **Water on premises** ..... **995** Don't know 998	995⇨WS4A
WS4	WHO USUALLY GOES TO THIS SOURCE TO FETCH THE WATER FOR YOUR HH? **Probe:** IS THIS PERSON UNDER AGE 15? WHAT SEX?	Adult woman (15+ years) ..... A Adult man (15+ years) ..... B Female child (under 15) ..... C Male child (under 15) ..... D Don't know ..... Z	

H.4: Water & Sanitation — WS

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

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

H.5: Household Characteristics — HC

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

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

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

H.6: Use of Mosquito Net — TN

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

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

H.7: Orphan-hood — OV

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

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

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

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

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

H.9: Child Discipline CD

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

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

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

Random Selection Of Child

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

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

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

H.9: Child Discipline CD

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

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

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

Random Selection Of Child

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

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

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

H.9: Child Discipline — CD

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

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

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

H.11: Salt Iodization — SI

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

Interviewer's Remarks:

Supervisor's Remarks:



FORM-B: WOMAN AGE 15-49 YEARS

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

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

Introduction/Consent

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

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

MAY I START THE INTERVIEW NOW?

ENGLISH

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

KISWAHILI

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

W.2: Woman Information — WI

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

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

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W.3a: Birth History — BH

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

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

W.3a: Birth History — BH

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

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

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

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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				
IM19	PLEASE TELL ME. IF (*name*) HAS PARTICIPATED IN ANY OF THE FOLLOWING CAMPAIGNS, NATIONAL IMMUNIZATION DAYS AND/OR VITAMIN A OR CHILD HEALTH DAYS:		Yes	No	DK	
IM19a	CHILD HEALTH DAYS, VIT-A CAMPAIGN		1	2	8	
IM19b	MEASLES & VITAMIN A CAMPAIGN		1	2	8	
IM19c	CHILD HEALTH DAYS - VIT. A & DEWORMING CAMPAIGN		1	2	8	
IM20	**Does another eligible child reside in the HH for whom this respondent is mother/caretaker? Check HH listing, column HL8.** ☐ **Yes ⇨ End the current Form and go for another 'Child < 5 Form' to administer the Form for the next eligible child.** ☐ **No ⇨ End the interview with this respondent by thanking him/her cooperation. If this the last eligible child in the HH, go on to Anthropometry Section (C.8).**					

C.8: Anthropometry — AN

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

Remarks/Observations by the Supervisor/Editor/Coordinators:

Kenya - Eastern Province, Machakos District

Multiple Indicator Cluster Survey

2008