Kenya
Coast Province
Mombasa - Informal Settlements

Monitoring the situation of children and women

Multiple Indicator Cluster Survey 2009

Kenya National Bureau of Statistics

United Nations Children's Fund

MICS

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The MICS4 in Mombasa Informal Settlements in Kenya was carried out by Kenya National Bureau of Statistics (KNBS). Financial and technical support was provided by the United Nations Children's Fund (UNICEF).

The survey has been conducted as part of the fourth round of MICS Surveys (MICS4). Survey tools are based on the MICS4 Pilot version, designed to collect information on the situation of children and women in countries around the world. Additional information on the global MICS project and the newer versions of the MICS4 tool may be obtained from www.childinfo.org.

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Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ASFRs	Age Specific Fertility Rates
BCG	Bacillus Calmette Guerin (Tuberculosis)
CSPro	Census and Survey Processing System
CDC	Center for Disease Control
NCHS	National Centre for Health Statistics
DHS	Demographic Health Survey
DPT	Diphtheria Pertussis Tetanus
DSO	District Statistical Officer
EA	Enumeration Areas
EPI	Expanded Programme on Immunization
ERS	Economic Recovery Strategy
FGM/C	Female Genital Mutilation/Cutting
GoK	Government of Kenya
GPI	Gender Parity Index
HIV	Human Immunodeficiency Virus
IDD	Iodine Deficiency Disorders
IPT	Intermittent Preventive Treatment
ITN	Insecticide Treated Net
IUD	Intrauterine Device
KDHS	Kenya Demographic Health Survey
KEPI	Kenya Expanded Programme on Immunizations
KESSP	Kenya Education Sector Support Programme
KNBS	Kenya National Bureau of Statistics
LAM	Lactational Amenorrhea Method
LPG	Liquefied Petroleum Gas
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 Therapy
ORT	Oral Rehydration Treatment
PPM	Parts Per Million
PRS	Poverty Reduction Strategy
RHF	Recommended Home Fluid
SPSS	Statistical Package for Social Sciences
STIs	Sexually Transmitted Infections
TFR	Total Fertility 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

Following the Multiple Indicator Cluster Survey 4 (MICS4) Global Pilot exercise in Mombasa and Kwale districts in the Cost Province of Kenya during January-February 2009, the Mombasa Informal Settlement Survey 2009 was conducted in sampled clusters of informal settlements in the district using the same set of trained investigators and tools. The Informal Settlement Survey covered 1,080 households selected using appropriate statistical procedures.

The objective of the Mombasa Informal Settlement Survey 2009 is to provide estimates relating to the well being of children and women living in the informal settlements of Mombasa, to create baseline information and to enable policymakers, planners, researchers, and program managers to take actions based on credible evidence. In Mombasa Informal Settlement Survey 2009, information on specific areas such as, reproductive health, child mortality, child health, nutrition, child protection, childhood development, water and sanitation, hand washing practices, education, and HIV/AIDS and orphans were collected.

The results indicate that the conditions of people living in the informal settlements are very poor and need immediate attention. For example, the infant and under five mortality rates in Mombasa informal settlements (IMR - 70 and Under-five mortality rate- 91 per 1,000 live births) are much higher than the national total figures observed in the recently published Kenya Demographic Health Survey (KDHS) 2008-09 estimates (IMR - 52 and Under-five mortality rate – 74). The proportion of children fully immunised is also much below the national average of 77 per cent (KDHS, 2008-09) vis-a-vis 56 per cent in Mombasa informal settlements.

I wish to acknowledge the efforts of various organisations and individuals who contributed immensely towards the success of the Mombasa Informal Settlement Survey 2009. First, I would like to acknowledge the technical and financial assistance from the United Nations Children's Fund (UNICEF) to this survey and also for choosing Mombasa for its MICS4 Global Pilot exercise. I also commend the hard work and dedication of Kenya National Bureau of Statistics (KNBS) and UNICEF Kenya Country Office staff in 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.

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

Executive Summary

The Mombasa Informal Settlement Survey 2009 is a representative sample survey drawn using the informal settlement classification of 1999 Census Enumeration Areas (EAs) as the sample frame. The classification of 1999 Census EAs was carried out in major cities of Kenya by the Kenya National Bureau of Statistics (KNBS) under a project funded by United Nations Environment Program (UNEP) in 2003. The 45 EAs were sampled using the probability proportional to size (PPS) sampling methodology, and information from a total of 1,080 households were collected using structured questionnaires. The Mombasa informal settlement survey is one of the largest household sample surveys ever conducted exclusively for the informal settlements in Mombasa district.

The survey used a two stage design. In the first stage, EAs were selected and in the second stage households were selected circular systematically using a random start from the list of households[1]. The data was collected by three teams comprising of six members each (one supervisor, one editor, one measurer and three investigators).

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

Child Mortality

The mortality rates for children under-five were calculated using the birth history data for the 10 year period preceding the survey. The under-five mortality rate is 91 per 1,000 live births and infant mortality rate is 70 per 1,000 live births. This shows a much higher mortality rate among children born to mothers living in these informal settlements compared with national estimates (IMR - 52 and under-5 mortality rate - 74 per 1,000 live births).

Nutritional Status and Breastfeeding

Based on the new WHO standards, 14 per cent of children under-five years old in Mombasa informal settlements are severely or moderately underweight and a much higher proportion were stunted (24 per cent). The proportion of wasted children stands at five per cent.

Only 37 per cent of the children are timely breastfed (given breast milk within an hour of birth), and a meagre seven per cent of children age 0-5 months are exclusively breastfed. Overall, one in four (25 per cent) infants in Mombasa informal settlements are appropriately fed for their age.

Little more than four out of five (81 per cent) children under 5 years who live in Mombasa informal settlements were reportedly weighed at the time of birth and the low birth weight prevalence was at 12 per cent.

In 87 per cent of the sampled households the cooking salt was tested for iodine content and of those, 90 per cent were found to have adequate iodine content (15ppm or more).

Immunisation

Only 49 per cent of children age 12-23 months received full vaccination (BCG, 3 doses of Polio, 3 doses of DPT and measles) before reaching age 12 months. BCG is given to 94 per cent of children age 12-23 months and the measles vaccine is received by 85 per cent. The dropout rate of DPT and polio vaccines from first dose to third dose was substantial, 19 and 31 per cent respectively.

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

The yellow fever vaccination coverage among children age 12-23 months in the informal settlements was low at 31 per cent.

Seventy nine per cent of the mothers who gave birth during the year preceding the survey reportedly received adequate protection against tetanus (i.e., received two or more doses of TT injection during the two year period prior to delivery).

Care of illness

Reported prevalence of diarrhoea during the last two weeks preceding the survey among children aged 0-59 months stood at 19 per cent. Among the reported diarrhoea cases, 43 per cent received oral re-hydration therapy and 10 per cent reported home management of diarrhoea.

One in ten children under-five years reportedly had acute respiratory infection (ARI) during the two weeks prior to the survey.

Little more than three out of four (76 per cent) children who had suspected pneumonia reportedly sought treatment, however only 29 per cent reported that the child was given antibiotic treatment.

Malaria prevention

In Mombasa Informal Settlements, 73 per cent of the households have at least one mosquito net, but only 64 per cent have at least one treated net. The mean number of mosquito nets per household is 1.2 and that of treated net is 1.1. Sixty three per cent of children below 5 years slept under any type of mosquito net and 57 per cent slept under a treated net the previous night. The proportion of pregnant women who reported sleeping under a treated net the previous night of the survey was 48 per cent.

More than one in four (27 per cent) children under five had fever during the two weeks preceding the survey. Of those who had fever, 30 per cent were given appropriate anti-malarial treatment.

Seventy two per cent of mothers who gave birth during two years preceding the survey reported intermittent preventive treatment for malaria during pregnancy.

Water and sanitation

Eighty seven per cent of the population living in Mombasa informal settlements use drinking water from an improved source and 49 per cent are reportedly treating the drinking water. More than 80 per cent of the households take less than 15 minutes to fetch drinking water. Among those households who fetch water, in 54 per cent cases an adult man, in 44 per cent cases an adult woman and in less than two per cent cases, a child below 15 years is usually engaged.

Sixty seven per cent of the population is using improved sanitation facilities, 38 per cent using a pit latrine with slab, 12 per cent use pit latrine with flush, 10 per cent use flush to piped sewer system and eight per cent use flush to septic tank. The pit latrine without a slab is used by 24 per cent of the population who live in the informal settlements. In 89 per cent of cases, stool of children below 3 years of age are disposed off safely.

Only six per cent of the households in Mombasa informal settlements have a designated place for hand washing. However, 76 per cent of the households reportedly use soap for washing hands.

Reproductive health

The total fertility rate (TFR) in Mombasa informal settlements for the three year preceding the survey is 3.4 children per woman, which is higher than the national urban TFR of 2.9 reported by the latest KDHS 2008-09. Teenage pregnancy is 20 per cent, i.e., proportion of women age 15-19 years who began child bearing, of these 16 per cent are pregnant with their first child.

Little more than one in three (35 per cent) married women aged 15-49 years who live in Mombasa informal settlements use any modern contraceptive method and another five per cent use a traditional method of contraception. The unmet need for contraception is very high at 24 per cent (14 per cent for spacing and 10 per cent for limiting). This implies that less than two in three women have their contraceptive demand met/satisfied (62 per cent).

The antenatal care is near universal in Mombasa informal settlements, 94 per cent of mothers who gave birth in the past 2 years had an antenatal check-up and 57 per cent had four or more antenatal care visits. Sixty seven per cent of the deliveries during the 2 year period preceding the survey were assisted by a skilled personnel.

Childhood development

Twenty six per cent of children below five years of age received support from any household member by engaging in four or more activities with the child during the three days preceding the survey that promote learning and school readiness. In 33 per cent of cases children have three or more types of playing things.

About one in five children (19 per cent) below five years of age who live in Mombasa informal settlements were left with inadequate care some time during the week preceding the survey.

Sixty two per cent of children aged 36-59 months currently attend any early childhood education and the child development index score is 40. Child development index is calculated as the per centage of children who are developmentally on target in at least three of the four component domains such as language-cognitive, physical, social-emotional, and approaches to learning.

Education

More than 90 per cent of the primary school entry age children in Mombasa informal settlement are attending primary school. However, the secondary school net attendance rate is only 27 per cent.

Female adult literacy rate in Mombasa informal settlements is 84 per cent.

Child protection

Seven out of ten children (69 per cent) under five years who live in Mombasa informal settlements have their births registered. Of those not registered, the major reasons for not registering births were, 39 per cent reported that they 'don't know the place to register' the child birth followed by 27 per cent who 'don't know that child birth is to be registered'.

Six per cent of children aged 5-14 years in Mombasa informal settlements are engaged in child labour.

Little more than three out of four children (78 per cent) aged 2-14 years received some form of psychological or physical punishment during one month prior to the survey. Sixty eight per cent received minor physical punishment while 19 per cent received severe physical punishment.

In Mombasa informal settlements 20 per cent of the women in the adolescent age group 15-19 years are married or in union.

Among married women aged 15-24 years, one in five (20 per cent) have partners who are 10 or more years older than their age.

Disability among children

Twenty nine per cent of children aged 2-9 years in Mombasa informal settlements reported to have at least one disability. Delay in sitting/standing/walking is reported by 13 per cent and seven per cent can't speak or understand in words.

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

Eighty eight per cent of women aged 15-49 years in Mombasa informal settlements had heard about FGM/C and 12 per cent had some form of FGM/C. Of those who had FGM/C, 13 per cent reportedly had an extreme form of FGM/C. Among those women age 15-49 years with at least one living daughter, only two per cent reported that their daughter had some form of FGM/C.

Of those women aged 15-49 years who have heard about FGM/C, only 4 per cent believe that the practice should be continued.

Forty seven per cent of women in Mombasa informal settlements agree to wife beating under various circumstances. For example, 34 per cent of women believe that a husband can beat his wife if she neglects children and 24 per cent support beating if she argues with her husband.

HIV and AIDS

Almost all women aged 15-49 years (99 per cent) in Mombasa informal settlement have heard about HIV. However, only 43 per cent have comprehensive knowledge about HIV prevention.

Knowledge about mother-to-child transmission of HIV is near universal in Mombasa informal settlements, with 97 per cent reporting that 'HIV can be transmitted from mother-to-child'.

Sixty nine per cent of women age 15-49 years reported that they had been tested for HIV. Of those reportedly tested for HIV in Mombasa informal settlements, 98 per cent were informed about the result.

In Mombasa informal settlements, 79 per cent of women who delivered a child in the last 2 years received counselling on prevention of mother-to-child transmission of HIV and 85 per cent had the HIV test done during antenatal care visits.

Close to two out of three (64 per cent) women age 15-24 years in Mombasa informal settlements reported to have sex during the year preceding the survey. Of those who had sex, 33 per cent had sex with non-marital/non-cohabitating partner. Among those who had sex with non-marital/non-cohabitating partner, only 54 per cent reported condom use at last sex.

Orphans and vulnerable children

Eleven per cent of the children under 18 years are not living with any biological parent and 12 per cent have one or both parents dead.

Summary Table of Findings

Topic	MICS4 Indicator Number[2]	MDG Indicator Number	Indicator	Value & Unit	
SAMPLE					
Households			Households interviewed	1,016	Number
Women			Number of women interviewed	821	Number
Children			Number of children under-5 years with completed information	454	Number
CHILD MORTALITY					
Child mortality	1.1	4.1	Under-five mortality rate	91	Per thousand
	1.2	4.2	Infant mortality rate	70	Per thousand
NUTRITION					
Underweight	2.1a	1.8	Underweight prevalence (below -2 SD)	14.4	Percent
(Weight-for-age)	2.1b	1.8	Underweight prevalence (below -3 SD)	3.2	Percent
Stunting	2.2a		Stunting prevalence (below -2 SD)	23.5	Percent
(Height-for-age)	2.2b		Stunting prevalence (below -3 SD)	7.2	Percent
Wasting	2.3a		Wasting prevalence (below -2 SD)	6.1	Percent
(Weight-for-height)	2.3b		Wasting prevalence (below -3 SD)	1.3	Percent
Breastfeeding	2.5		Early initiation of breastfeeding	37.3	Percent
	2.6		Exclusive breastfeeding rate	7.2	Percent
	2.7		Continued breastfeeding rate at 12-15 months	80.6	Percent
	2.8		Continued breastfeeding rate at 20-23 months	39.4	Percent
			Timely complementary feeding rate	94.0	Percent
			Frequency of complementary feeding	38.0	Percent
			Adequately fed infants	24.8	Percent
Salt iodization	2.16		Iodized salt consumption	89.8	Percent
Vitamin A	2.17		Vitamin A supplementation (under-fives)	32.8	Percent
			Vitamin A supplementation (post-partum mothers)	44.7	Percent
Low birth weight	2.18		Low birth weight infants	11.6	Percent
	2.19		Infants weighed at birth	80.9	Percent
CHILD HEALTH					
Immunization by 12 months	3.1		Tuberculosis immunization coverage	93.8	Percent
	3.2		Polio immunization coverage	65.9	Percent
	3.3		DPT immunization coverage	78.1	Percent
	3.4	4.3	Measles immunization coverage	84.8	Percent
			Fully immunized children	48.7	Percent
	3.6		Yellow fever vaccination	31.2	Percent
Tetanus toxoid	3.7		Neonatal tetanus protection	78.1	Percent
Care of illness			Use of oral rehydration therapy (ORT)	42.9	Percent
			Home management of diarrhoea	10.0	Percent
	3.8		Received ORT or increased fluids, and continued feeding	20.8	Percent
	3.9		Care seeking for suspected pneumonia	75.8	Percent
	3.10		Antibiotic treatment of suspected pneumonia	28.5	Percent
Solid fuel use	3.11		Solid fuels	44.0	Percent
Malaria	3.12		Households having insecticide-treated nets (ITNs)	64.4	Percent
	3.14		Under-fives sleeping under mosquito nets	63.6	Percent
	3.15	6.7	Under-fives sleeping under insecticide-treated nets	57.5	Percent
	3.18	6.8	Anti-malarial treatment (under-fives)	20.2	Percent
	3.20		Intermittent preventive malaria treatment (pregnant women)	23.2	Percent
			Women aged 15-49 years sleeping under insecticide-treated nets	47.2	Percent
	3.19		Pregnant women aged 15-49 years sleeping under insecticide-treated nets	48.2	Percent

2 The MICS4 indicator list version 2.1 dated 7 April 2010. See Appendix E for more information about these indicators.

Topic	MICS4 Indicator Number[2]	MDG Indicator Number	Indicator	Value & Unit	
ENVIRONMENT					
Water and sanitation	4.1	7.8	Use of improved drinking water sources	86.8	Percent
	4.2		Water treatment	48.8	Percent
	4.3	7.9	Use of improved sanitation facilities	67.4	Percent
	4.4		Safe disposal of child's faeces	89.0	Percent
	3.21		Place for handwashing	63.1	Percent
	3.22		Availability of soap for handwashing	75.8	Percent
REPRODUCTIVE HEALTH					
Contraception and unmet need	5.3	5.3	Contraceptive prevalence	39.5	Percent
	5.4	5.6	Unmet need for family planning	23.8	Percent
			Demand satisfied for family planning	62.3	Percent
Maternal and newborn health	5.5a	5.5	Antenatal care by a skilled personnel	93.8	Percent
	5.5b	5.5	Four or more antenatal care visits	56.5	Percent
			Content of antenatal care		
			Blood test taken	89.0	Percent
			Blood pressure measured	89.5	Percent
			Urine specimen taken	86.8	Percent
			Weight measured	91.9	Percent
	5.7	5.2	Skilled attendant at delivery	66.9	Percent
	5.8		Institutional deliveries	65.4	Percent
			Total fertility rate	3.4	Rate
			Adolescent pregnancy (15-19 began child bearing)	20.0	Percent
	5.1	5.4	Adolescent birth rate (ASFR 15-19 years)	82	Rate
CHILD DEVELOPMENT					
Child development	6.1		Support for learning	25.6	Percent
	6.2		Father's support for learning	38.7	Percent
	6.3		Learning materials: children's books	6.7	Percent
	6.4		Learning materials: materials for play	33.1	Percent
	6.5		Inadquate care	19.2	Percent
	6.6		Early child development index	40.0	Percent
	6.7		Pre-school attendance	62.4	Percent
EDUCATION					
Education	7.1	2.3	Adult female literacy rate (female aged 15-24 years)	84.3	Percent
	7.3		Net intake rate in primary education	57.4	Percent
	7.4		Net primary school attendance ratio	91.2	Percent
	7.5		Net secondary school attendance ratio	25.5	Percent
	7.7		Primary completion rate	42.0	Percent
	7.9	3.1	Gender parity index -primary school	0.98	Ratio
	7.10	3.2	Gender parity index -secondary school	0.95	Ratio
CHILD PROTECTION					
Birth registration	8.1		Birth registration	69.1	Percent
Child labour	8.2		Child labour	6.4	Percent
	8.3		Labourer students	100.0	Percent
	8.4		Student labourers	95.1	Percent
Child discipline	8.5		Any psychological/physical punishment	77.7	Percent
Early marriage and polygyny	8.6		Marriage before age 15	8.9	Percent
	8.7		Marriage before age 18	27.1	Percent
	8.8		Young women aged 15-19 currently married/in union	20.1	Percent
	8.9		Polygyny	12.3	Percent
	8.10		Spousal age difference of women aged 15-24	20.3	Percent
Female genital mutilation/ cutting	8.11		Approval for FGM/C	3.8	Percent
	8.12		Prevalence of female genital mutilation/cutting (FGM/C)	12.4	Percent
	8.13		FGM/C prevalence among daughters	2.0	Percent
Domestic violence	8.14		Attitudes towards domestic violence	46.5	Percent
Disability			Reported child disability	29.1	Percent

Topic	MICS4 Indicator Number[2]	MDG Indicator Number	Indicator	Value & Unit	
HIV/AIDS, SEXUAL BEHAVIOUR, AND ORPHANED AND VULNERABLE CHILDREN					
HIV/AIDS knowledge and attitudes	9.1		Comprehensive knowledge about HIV prevention among women aged 15-49 years	42.8	Percent
	9.2	6.3	Comprehensive knowledge about HIV prevention among women aged 15-24 years	42.1	Percent
	9.3		Knowledge of mother- to-child transmission of HIV	52.7	Percent
	9.4		Attitude towards people with HIV/AIDS	39.0	Percent
	9.5		Women who know where to be tested for HIV	92.9	Percent
			Women aged 15-49 years tested for HIV	69.2	Percent
			Young women aged 15-24 years tested for HIV	64.2	Percent
	9.8		Counselling coverage for the prevention of mother-to-child transmission of HIV	78.6	Percent
	9.9		Testing coverage for the prevention of mother-to-child transmission of HIV	82.8	Percent
Sexual behaviour	9.11		Sex before age 15 years among young people	9.2	percent
	9.12		Age-mixing among sexual partners	18.8	percent
	9.16		Condom use with non-regular partners	54.1	percent
	9.15		Higher risk sex in the last year	33.3	percent
Support to orphaned and vulnerable children	9.17		Children's living arrangements	11.3	Percent
	9.18		Prevalence of orphans	12.0	Percent
			Prevalence of vulnerable children	8.2	Percent

Introduction 1

1.1 Background

This report is based on the Mombasa Informal Settlement Survey conducted in 2009 by the Kenya National Bureau of Statistics following the MICS4 Global Pilot exercise[3]. The survey provides valuable information on the situation of children and women in the informal settlements in Mombasa and was informed largely by 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, 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.

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 Plan of Action (NPA) for children in 1992 soon after the World Summit for Children (WSC) held in 1990. The main objective of this programme was to identify issues affecting children and the strategies to address them. Measuring indicators of progress towards declared goals through proper monitoring and evaluation of projects/programmes and other interventions e.g. emergency response and humanitarian assistance are vital components of the NPA.

Proper monitoring and evaluation of targeted projects and programmes by the government and development partners requires a wide range of data to track progress towards achievement of desired outcomes. In this respect, data from the informal settlement survey will be helpful in appraising national programmes such as the Kenya's Vision 2030 and its sector specific Medium Term Plans (MTPs) 2008-2012, among other programmes.

Mombasa has been in existence as an established town for some thirty centuries according to records by ancient Phoenicians, Egyptians and Chinese historians. The Town is located on longitude 39^0 41' East and latitude 4^0 3' South. Mombasa Municipal Council was established in 1928 as a Board by the Local Government amendment Ordinance. The 2009 Kenya Population and Housing Census enumerated a resident population of about 523,183 people.

The coastal city of Mombasa is one of Africa's major tourist destinations, with some of the best beaches in the world. Located on Kenya's Eastern coastline bordering the Indian Ocean, Mombasa has become popular for its exotic beaches, diverse marine life, world-class hotels and friendly people. Being an important tourist and port city in East Africa, Mombasa attracted a lot of migrant workers from different parts of Kenya and other countries in the region. This influx of migrant workers influenced the growth of slum/informal settlements in Mombasa. Similar to other such settlements elsewhere in Kenya, the living conditions of Mombasa informal settlements are very poor. As part of Kenya's Vision 2030, the Government acknowledges the growing challenges of urbanization and the urban poor and is committed to addressing their concerns. So far, the government has developed a slum upgrading strategy which is in line with the poverty reduction programmes and other international goals such as the MDGs. Together with the local authorities and other development partners, the government has initiated the Kenya Slum Upgrading Program that aims to

3 More information on MICS4 Global Pilot can be obtained from www.childinfo.org

improve the living conditions of the residents of informal settlements in the main cities of Kenya. While several specific initiatives are planned depending on the priorities identified for each city, in Mombasa the government is working with the municipal council to improve social and physical infrastructure facilities that range from increasing class room blocks, upgrading access roads to medical facilities, and improving street lighting and access to clean water.

The GOK /UNICEF Country Programme 2009-2013 has a sizeable component of production of high quality and sufficiently disaggregated data for effective child friendly policy formulation, equity-focused resource allocation, programme implementation, monitoring and evaluation. However, there is no evidence of any focused study carried out in the Mombasa informal settlements in the recent past to understand the health and wellbeing of children and women living in these settlements. Therefore, this study is a pioneering attempt to create evidence to fill this gap, and to assist the program and policy planners in developing strategies to improve the wellbeing of children and women living in these informal settlements.

The results from the Mombasa Informal Settlement Survey conducted in 2009 are presented in this report.

1.2 Survey Objectives

The 2009 Mombasa Informal Settlement Survey has as its primary objectives:

- To provide up-to-date information for assessing the situation of children and women in Mombasa Informal Settlements;
- To contribute to the improvement of data and monitoring systems in Kenya and to strengthen technical expertise in the design, implementation, and analysis of such systems.

Sample and Survey Methodology 2

2.1 Sample Design

The sample for the Mombasa Informal Settlement Survey (MISS) was designed to provide estimates on a large number of indicators on the situation of children and women living in the informal settlements of Mombasa district, and the sample was selected in two stages. From the list of Enumeration Areas (EAs) classified as informal settlements[4], 45 EAs were selected using the probability proportional to population size sampling methodology. A household listing operation was carried out in all the selected enumeration areas and a sample of 24 households was selected circular systematically using a random start in the second stage. For reporting the results, sample weights were calculated and applied in the estimations. A detailed description of the sample design is presented in Appendix A.

2.2 Questionnaires

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

The Household Questionnaire included the following modules:

- Household Listing
- Education
- Water and Sanitation
- Indoor Residual Spraying
- Insecticide Treated Mosquito Nets (ITN)
- Children Orphaned & Made Vulnerable By HIV/AIDS
- Child Labour
- Child Discipline
- Disability
- Handwashing Facility
- Salt Iodization

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

- Child Mortality
- Birth history
- Tetanus Toxoid
- Maternal and Newborn Health
- Marriage/Union
- Contraception
- Attitudes Towards Domestic Violence
- Female Genital Mutilation/Cutting
- Sexual Behaviour
- HIV/AIDS

4 The list of 1999 Census Enumeration Areas in Urban Mombasa classified as informal and other type of settlements by KNBS in 2003-04.

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

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

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

The questionnaires used were the same as the MICS4 Pilot version. From the MICS4 Pilot English version, the questionnaires were translated into Kiswahili, the language spoken in Mombasa.

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 under-5 (0-59 months). Details and findings of these measurements are provided in the respective sections of the report.

2.3 Training and Fieldwork

Training for the fieldwork was conducted in two parts, two days training for the mapping and listing teams and 10 days training for the main survey teams in January-February 2009. Training included lectures on interviewing techniques and the contents of the questionnaires, and mock interviews between trainees to gain practice in asking questions. Towards the end of the training period, trainees spent one full day in practice interviewing in different locations in Mombasa and the neighbouring district of Kwale. The training sessions were facilitated by experts and staff from UNICEF HQ, UNICEF Regional Office for Eastern and Southern Africa/MICS Unit and KNBS.

The household listing was carried out by four teams. Each team comprised of a lister and mapper, and one supervisor for the four teams. The whole listing operation was monitored by the KNBS staff from headquarters and Mombasa. Further, a few UNICEF professionals who were involved in the MICS4 Global Pilot exercise also made field monitoring visits to oversee the household listing operations.

The data were collected by three teams; each was comprised of three interviewers, one editor, one measurer and a supervisor. Each team was provided with a vehicle along with driver for the field work operations. Fieldwork was carried out during February-March 2009 in which the initial 8-9 days were spent in collecting information from the MICS4 Global Pilot clusters.

2.4 Data Processing

Data were entered using the CSPro software. In order to ensure quality control, all questionnaires were double entered and internal consistency checks were performed, and the whole process was monitored initially by the MICS Global data processing specialist, followed by KNBS data processing expert. Procedures and standard programs developed under the global MICS project and adapted to the modified questionnaire were used throughout. Data entry began simultaneously with data collection in February 2009 and was completed at the end of March 2009. 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.

Sample Coverage and the Characteristics of Households and Respondents

3

3.1 Sample Coverage

Of the 1,080 households selected for the sample, 1,076 were found occupied. Of these, 1,016 were successfully interviewed yielding a household response rate of 94.4 per cent. In the interviewed households, 878 women (age 15-49) were identified and information collected from 821 women in these households, yielding a response rate of 93.5 per cent. In addition, 464 children under age five were listed in the household questionnaire, and information on 454 children were obtained, which corresponds to a response rate of 97.8 per cent. Overall response rates of 88.3 and 92.4 are calculated for the women's and under-5's interviews respectively (Table 3.1).

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

Number of households, women, and children under 5 by results of the interviews, and household, women's and under-five's response rates, Mombasa Informal Settlement Survey, Kenya, 2009

Number of households	
Sampled (H_s)	1,080
Occupied (H_o)	1,076
Interviewed (H_i)	1,016
Not found/destroyed	4
Household response rate (H_r)	94.4
Number of women	
Eligible (We)	878
Interviewed (Wi)	821
Response rate (Wr)	93.5
Overall women response rate (Wor)	88.3
Number of children under 5	
Eligible (Ce)	464
Information collected (Ci)	454
Response rate (Cr)	97.8
Overall children response rate (Cor)	92.4

$H_r = H_i / H_o$

$W_r = W_i / W_e$; $W_{or} = W_r \times H_r$; $C_r = C_i / C_e$; $C_{or} = C_r \times H_r$

Note: This table is un-weighted, however all other tables presented in this report are weighted unless mentioned otherwise. More information about sample design and weights is given in Appendix A.

3.2 Characteristics of Households

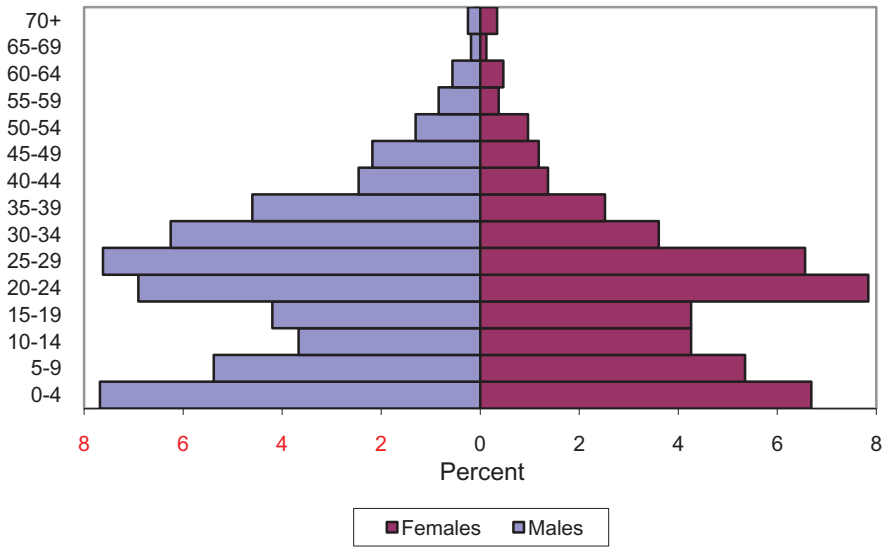
The age and sex distribution of survey population in Mombasa informal settlements is provided in Table 3.2. The distribution is also used to produce the population pyramid in Figure 3.1. In the 1,016 households successfully interviewed in the survey, 3,219 household members were listed. Of these, 1,742 were males and 1,476 were females. The population pyramid shows a high proportion of the population in the working age groups, i.e., 20-54 years. The proportion of males in the age group 20-24 years is less than that of females in the same group- 13 and 17 per cent respectively. However, the proportion of males aged 30-49 years is much higher than that of females- 29 and 19 per cent respectively. The higher proportion of people in the potential working age groups clearly show the selective migration of young workers from other areas to the informal settlements of Mombasa.

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

Percent distribution of the household population by five-year age groups and dependency age groups, and number of children aged 0-17 years, by sex, Mombasa Informal Settlement Survey, Kenya, 2009

	Males		Females		Total	
	Number	Percent	Number	Percent	Number	Percent
Age						
0-4	247	14.2	215	14.6	462	14.4
5-9	173	9.9	172	11.6	345	10.7
10-14	118	6.8	137	9.3	255	7.9
15-19	135	7.8	137	9.3	272	8.5
20-24	222	12.7	252	17.1	474	14.7
25-29	245	14.1	211	14.3	456	14.2
30-34	201	11.5	116	7.9	317	9.9
35-39	148	8.5	81	5.5	229	7.1
40-44	79	4.5	44	3.0	123	3.8
45-49	70	4.0	38	2.6	108	3.4
50-54	42	2.4	31	2.1	74	2.3
55-59	27	1.6	12	0.8	39	1.2
60-64	18	1.0	15	1.0	33	1.0
65-69	6	0.4	4	0.3	10	0.3
70+	8	0.5	11	0.7	19	0.6
Missing/DK	2	0.1	0	0.0	2	0.1
Dependency age groups						
<15 years	538	30.9	524	35.5	1062	33.0
15-64 years	1188	68.2	937	63.5	2125	66.0
65+ years	14	0.8	15	1.0	29	0.9
Missing/DK	2	0.1	0	0.0	2	0.1
Child and adult age groups						
Children aged 0-17	621	35.6	605	41.0	1226	38.1
Adults 18+/ Missing/DK	1122	64.4	872	59.0	1993	61.9
Total	**1,742**	**100.0**	**1,476**	**100.0**	**3,219**	**100.0**

Figure 3.1: Age and sex distribution of household population



Further, the age distribution from Table 3.2 shows that 33 per cent of the population is below 15 years of age and 66 per cent are aged between 15-64 years. The population aged 65 years and above is only one per cent. The child population aged 0-17 years is 38 per cent.

Table 3.3 provides basic background information on the households such as mean household size, sex of the household head and number of household members. The weighted and un-weighted numbers of total households are virtually equal, since sample weights were normalized (See Appendix A).

Table 3.3: Household composition (HH.3)

Percent distribution of households by selected characteristics, Mombasa Informal Settlement Survey, Kenya, 2009

Characteristics	Weighted percent	Number of households	
		Weighted	Un-weighted
Sex of household head			
Male	81.8	831	832
Female	18.2	185	184
Number of household members			
1	27.1	275	275
2-3	39.4	401	401
4-5	20.7	210	211
6-7	7.7	78	77
8-9	2.8	29	29
10+	2.3	23	23
Mean household size	3.2	NA	NA
Education of household head			
None	7.8	79	78
Primary	45.9	466	467
Secondary +	45.3	461	461
Non-standard curriculum	0.7	7	7
DK/missing	0.3	3	3
Wealth index			
Low	36.1	367	369
Medium	37.8	384	382
High	26.0	265	265
Religion of household head			
Catholic	20.8	211	212
Other Christian	49.4	502	504
Muslim	27.3	278	275
Other	2.5	25	25
Total	**100.0**	**1016**	**1016**
At least one child aged < 18 years	49.6	1016	1016
At least one child aged < 5 years	33.9	1016	1016
At least one woman aged 15-49 years	64.0	1016	1016

In Mombasa informal settlements, only 18 per cent of the households are female headed which is lower than the urban national average of 29 per cent (KDHS, 2008-2009). Thirty four per cent of the households have at least one child below five years of age and 50 per cent of the households have at least one child below

18 years of age. About, two in three households (64 per cent) have at least one woman in the 15-49 years reproductive age group. It is also important to note that more than one in four households in these informal settlements is one-member households and another 39 per cent have 2-3 persons. The mean household size in the Mombasa informal settlements is 3.2 persons. The distribution of the sampled households by educational level of the household head shows that, 46 per cent are primary educated and another 45 per cent are educated up to secondary or higher. The table also shows that 21 per cent of all household heads are Catholics, 49 per cent are other Christian, 27 per cent Muslim and the remaining three per cent have no-religion or belong to other religious groups.

3.3 Characteristics of Female Respondents

Table 3.4 provides information on the background characteristics of female respondents aged 15-49 years. The total number of weighted and un-weighted observations is equal, since sample weights have been normalized. In addition to providing useful information on the background characteristics of women, the table also shows the number of observations in each background category. These categories are used in the subsequent tabulations of this report.

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

Percent distribution of women aged 15-49 years by background characteristics, Mombasa Informal Settlement Survey, Kenya, 2009

		Number of women	
Characteristics	Weighted percent	Weighted	Un-weighted
Age			
15-19	14.3	118	116
20-24	29.5	242	244
25-29	22.7	186	187
30-34	14.7	121	121
35-39	9.0	74	74
40-44	5.3	44	44
45-49	4.4	36	35
Marital/Union status			
Currently married/in union	58.7	482	483
Formerly married/in union	11.5	94	94
Never married/in union	29.8	245	244
Motherhood status			
Ever gave birth	69.9	574	575
Never gave birth	30.1	247	246
Education			
None	8.0	65	66
Primary	55.7	457	458
Secondary +	36.0	295	294
Non-standard/DK/missing	0.4	3	3
Wealth index			
Low	30.2	248	255
Medium	33.5	275	271
High	36.3	298	295
Religion of household head			
Catholic	17.1	140	141
Other Christian	50.9	418	422
Muslim	30.1	248	243
Other	1.8	15	15
Total	**100.0**	**821**	**821**

The table includes information on the distribution of women according to age, marital status, motherhood status, education[6], and wealth index[7]. Overall, 59 per cent of the women age 15-49 years in Mombasa District informal settlements are currently married or in union and another 30 per cent are never married or in union. Seventy per cent have ever given birth while eight per cent have no education and 36 per cent have secondary or higher level of education. The wealth index ranked 30 and 34 per cent of the women in the low and medium income categories respectively.

3.4 Characteristics of Children Under-Five

Some background characteristics of children under-five are presented in Table 3.5. These include distribution of children by attributes such as sex, age in months, mother's or caretaker's education, wealth index and religion of the household head. A higher proportion of male children under-five years (54 per cent) were found in the sample compared to female children (46 per cent). About nine per cent of children below-five years belong to 0-5 months of age and 12 per cent in 6-11 month category. Thirty per cent of the children belong to mothers/care taker having secondary or higher education, 59 per cent belong to mothers having primary education and 10 per cent belong to mothers with no education. The distribution of children below 5 years by the religion of the household head shows that, 14 per cent are Catholics, 49 per cent other Christians and 36 per cent Muslim headed households. These categories are mostly used in the subsequent tabulations of this report.

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

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

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

Percent distribution of children under five years of age by background characteristics, Mombasa Informal Settlement Survey, Kenya, 2009

Characteristics	Weighted percent	Number of under-5 children	
		Weighted	Un-weighted
Sex			
Male	54.3	246	246
Female	45.7	208	208
Age			
< 6 months	8.9	40	41
6-11 months	11.9	54	54
12-23 months	21.9	100	99
24-35 months	16.3	74	75
36-47 months	23.4	106	105
48-59 months	17.7	80	80
Mother's education			
None	11.7	53	54
Primary	59.0	268	268
Secondary +	29.3	133	132
Wealth index			
Low	33.1	150	153
Medium	32.2	146	147
High	34.7	157	154
Religion of household head			
Catholic	14.1	64	64
Other Christian	48.8	222	222
Muslim	35.6	162	161
Other	1.5	7	7
Total	**100.0**	**454**	**454**

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

The Infant Mortality Rate (IMR) is the probability of dying before the first birthday. The Under-five Mortality Rate (U5MR) is the probability of dying before the fifth birthday. The neonatal mortality rate is the probability of dying before one month of life. Post neonatal mortality rate is the probability of dying between one month and one year of life. The child mortality rate refers to probability of dying between one and five year of life. All mortality rates mentioned above are expressed per 1,000 live births, except for child mortality rate, which is expressed per 1,000 children surviving up to 12 months of age.

Though direct estimates of mortality obtained from birth histories are the best, the quality of these mortality 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 tends to under estimate the mortality levels.

4.1 Levels of Childhood Mortality

Table 4.1 provides estimates of childhood mortality for the ten year period preceding the survey for the Mombasa informal settlements. This permits monitoring of changes in childhood mortality rates among the under privileged population in the urban areas of Mombasa. The infant mortality rate (IMR) is estimated as 70 per thousand live births, while the under-5 mortality rate (U5MR) is 91 per thousand live births. These estimates have been calculated based on births during the ten year period preceding the survey. Based on the recent Kenya Demographic and Health Survey, the infant mortality for Kenya as a whole is 52 and the under-five mortality is 74, which shows higher mortality among children living in the informal settlements of Mombasa (KDHS, 2008-9).

Table 4.1: Child mortality

Infant, neonatal, post-neonatal, child and under-five mortality rates for 10-year period preceding the survey, Mombasa Informal Settlement Survey, Kenya, 2009

	Infant mortality rate[1]	Neonatal mortality rate	Post-neonatal mortality rate	Child mortality rate	Under-five mortality rate[2]
Total	**70**	**39**	**31**	**22**	**91**

[1] MICS indicator 1.2 and MDG indicator 4.2
[2] MICS indicator 1.1 and MDG indicator 4.1

Children's nutritional status is a reflection of their overall health. Children who are well cared for and have access to an adequate food intake are not prone to repeated illness and are more likely to reach their growth potential and are considered well nourished.

Malnutrition is associated with more than half of all child deaths worldwide. Undernourished children are more likely to die from common childhood ailments, and for those who survive, they are more likely to experience recurring sicknesses and faltering growth. Three-quarters of the children who die from causes related to malnutrition are only mildly or moderately malnourished – showing no outward sign of their vulnerability. The Millennium Development Goal 1, Target 1c, is to reduce by half the proportion of people who suffer from hunger between 1990 and 2015. The World Fit for Children goal is to reduce the prevalence of malnutrition among children under five years of age by at least one-third (between 2000 and 2010), with special attention to children under 2 years of age. A reduction in the prevalence of malnutrition will assist in the attainment of the goal towards reduction in child mortality.

5.1 Nutritional Status

In a well-nourished population, there is a reference distribution of height and weight for children under age five. Under-nourishment in a population can be gauged by comparing children to a reference population. The new WHO reference populations is used in this report, however estimates based on the old WHO/CDC/NCHS reference standards are also shown in Appendix E. Each of the three nutritional status indicators can be expressed in standard deviation units (z-scores) from the median of the reference population.

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

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

Finally, children whose weight-for-height is less than two standard deviations below the median of the reference population are classified as moderately or severely wasted, while those who fall less than three standard deviations below the median are severely wasted. Wasting is usually the result of a recent nutritional deficiency. The indicator may exhibit significant seasonal shifts associated with changes in the availability of food or disease prevalence.

During the MISS, 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 shows per centages of children classified into each of these categories, based on the anthropometric measurements that were taken during fieldwork and selected characteristics. Additionally, the table includes the percentage of children who are overweight, which takes into account those children whose weight for height is above 2 standard deviations from the median of the reference population.

Table 5.1: Child malnourishment (WHO Standard)

Percentage of children aged 0-59 months who are severely or moderately malnourished, Mombasa Informal Settlement Survey, Kenya, 2009

	Weight-for-age *(Under-weight)*			Height-for-age *(Stunted)*			Weight-for-height *Wasted*			
Characteristics	% below - 2 SD[1]	% below - 3 SD[2]	Number of children	% below - 2 SD[3]	% below - 3 SD[4]	Number of children	% below - 2 SD[5]	% below - 3 SD[6]	% above + 2 SD	Number of children
Sex										
Male	16.2	3.8	242	27.2	8.2	240	7.9	1.6	2.1	241
Female	12.1	2.5	204	19.0	5.9	203	4.1	1.0	2.8	204
Age										
< 6 months	(10.2)	(5.5)	39	(13.3)	(5.7)	38	(7.7)	(2.8)	(7.7)	38
6-11 months	10.8	3.7	54	10.7	3.6	53	14.0	1.8	0.0	53
12-23 months	19.0	3.2	98	25.6	6.1	98	6.0	2.0	3.1	99
24-35 months	15.3	4.2	72	32.9	11.0	72	5.6	1.3	2.6	72
36-47 months	8.7	2.0	104	24.2	6.0	104	3.8	0.9	1.0	104
48-59 months	19.8	2.6	78	24.9	9.7	77	3.7	0.0	2.4	78
Mother's education										
None	18.6	4.2	53	31.5	8.3	51	1.9	0.0	1.8	52
Primary	16.9	4.3	261	26.9	9.4	260	8.2	1.5	2.7	261
Secondary +	7.6	0.7	131	13.6	2.4	131	3.7	1.5	2.2	131
Wealth index										
Low	19.5	5.6	146	32.8	11.7	145	5.5	2.0	2.8	146
Medium	12.8	2.9	144	21.1	6.7	143	7.7	0.0	0.0	143
High	11.0	1.3	155	16.9	3.3	154	5.3	1.9	4.3	155
Religion of household head										
Catholic	11.4	5.0	63	23.9	9.8	63	4.7	1.5	4.6	64
Other Christian	11.4	3.2	218	21.3	4.6	217	4.8	0.9	2.7	217
Muslim	19.6	2.7	158	26.6	9.9	157	8.8	1.9	1.2	158
Total	**14.4**	**3.2**	**445**	**23.5**	**7.2**	**442**	**6.1**	**1.3**	**2.4**	**444**

[1] MICS indicator 2.1a and MDG indicator 1.8, [2] MICS indicator 2.1b, [3] MICS indicator 2.2a, [4] MICS indicator 2.2b
[5] MICS indicator 2.3a, [6] MICS indicator 2.3b

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 WHO reference population. Columns 4 and 5 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 7 and 8 refer to children whose weight for height z-scores fall -2 standard deviations (moderately wasted) or -3 standard deviations (severely wasted) from the weight for height of the reference population. Wasting is usually the result of a recent nutritional deficiency. The table also includes the percentage of children who are overweight, which takes into account those children whose weight for height is above 2 standard deviations from the median of the reference population.

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

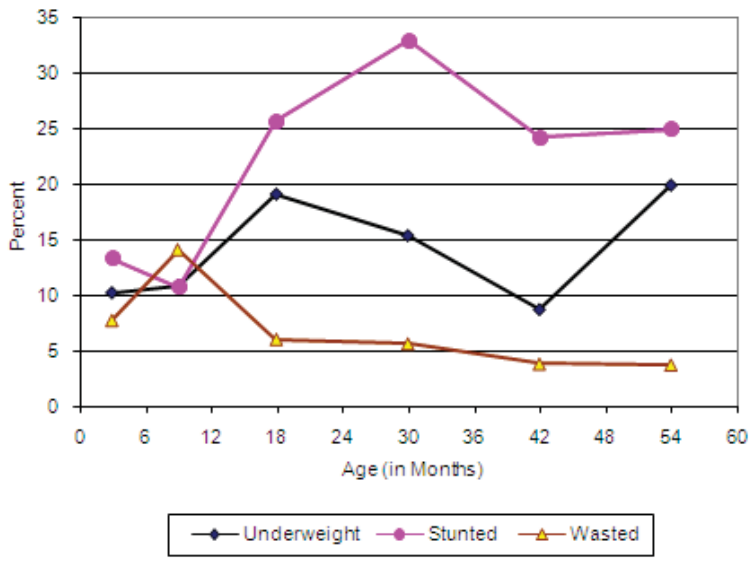
( ) Based on 25-49 un-weighted cases.

Note: 7 children belong to other religion is not shown separately.

Fourteen per cent of children below five years of age living in Mombasa informal settlement are underweight (below -2SD from the WHO reference mean) and three per cent are severely underweight (below -3SD from the WHO reference mean). Twenty four per cent are stunted or short for their age and seven per cent are severely stunted or too short for their age. Six per cent of children aged 6-59 months are wasted (below -2SD median weight-for-height) and little more than one per cent are severely wasted. The differentials in the anthropometry indicators by age are shown in Figure 5.1.

The nutritional status by sex differentials show a higher proportion of male children being under nourished compared to female children. It is also of interest to note that the malnutrition levels declines with an increase in the levels of the wealth index. For example, 20 per cent of children from low wealth index households are under-weight compared with 11 per cent among those from high wealth index households. A similar pattern is also noticed with respect to educational level of mother and children's nutritional status.

Figure 5.1: Percentage of children under-5 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 and traditional feeding practices, which can contribute to growth faltering and micronutrient malnutrition and is unsafe if clean water is not readily available. The World Fit for Children goal states that children should be exclusively breastfed for 6 months and continue to be breastfed with safe, appropriate and adequate complementary feeding for up to 2 years of age and beyond.

WHO/UNICEF have the following feeding recommendations:

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

It is also recommended that breastfeeding be initiated within one hour of birth. This is to ensure that the colostrums available in the first breast milk are received by the child.

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 provides the proportion of women who started breastfeeding their infants within one hour of birth, and women who started breastfeeding within one day of birth (which includes those who started within one hour). Only 37 per cent of newborn children in Mombasa informal settlements are receiving breast milk within one hour of their birth and 75 per cent are receiving the breast milk within one day of birth. In other words, one in four children born in Mombasa informal settlements are not receiving breast milk within 24 hours of their birth, implying that these children are receiving something other than breast milk. A higher proportion of children born to mothers with secondary or higher level of education receive breast milk within one hour of birth compared with those born to mothers who are educated up to primary (42 per cent compared to 35 per cent). A similar pattern is observed in case of proportions breastfeeding their child within one day.

Table 5.2: Initial breastfeeding (NU.2)

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, Mombasa Informal Settlement Survey, Kenya, 2009

Characteristics	Percentage who started breastfeeding within one hour of birth[1]	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	(34.8)	(77.7)	40
6-11 months	45.0	75.2	63
12-23 months	33.6	73.8	108
Mother's education			
Primary	35.4	72.9	122
Secondary +	42.0	77.5	66
Wealth index			
Low	38.2	79.9	68
Medium	39.0	64.7	69
High	34.8	80.0	73
Religion of household head			
Catholic	(30.7)	(68.7)	31
Other Christian	39.4	75.9	111
Muslim	37.6	74.7	65
Total	**37.3**	**75.0**	**211**

[1] MICS indicator 2.5
*Not shown, based on less than 25 un-weighted cases. ( ) Based on 25-49 un-weighted cases.
Note: 23 women with no education and 4 women belong to other religion are not shown separately.

Table 5.3 presents breastfeeding status based on the reports of mothers/caretakers of children's consumption of food and fluids in the 24 hours prior to the interview. Exclusively breastfed refers to infants who received only breast milk (and vitamins, mineral supplements, or medicine). The tables show exclusive breastfeeding of infants during the first six months of life, as well as complementary feeding of children 6-9 months and continued breastfeeding of children at 12-15 and 20-23 months of age.

Only seven per cent of the children aged 0-5 months in Mombasa informal settlements are exclusively breastfed, which is extremely low. However, 94 per cent of the children aged 6-9 months are receiving breast

milk and solid or semi-solid foods. By age 12-15 months, 81 per cent of children are still being breastfed and by age 20-23 months less than half of that are being breastfed (39 per cent). Little less than two in five (38 per cent) children aged 6-11 months are receiving breast milk and complementary food at least the minimum recommended number (two or more) of times per day.

Table 5.3: Breastfeeding and supplementary feeding

Breastfeeding and supplementary feeding status of living children at each age group, Mombasa Informal Settlement Survey, Kenya, 2009

Items	Percent	Number of children
Children age 0-5 months exclusively breastfed[1]	(7.2)	40
Children age 6-9 months receiving breast-milk and solid/mushy food	(94.0)	33
Children age 12-15 months breastfed[2]	(80.6)	36
Children age 20-23 months breastfed[3]	(39.4)	39
Children age 6-11 months who received breast-milk and complementary food at least the minimum recommended number of times per day	38.0	54
Children age 0-11 months who were appropriately fed		
Male	26.1	51
Female	(23.4)	43
Total	24.8	94

[1] MICS indicator 2.6, [2] MICS indicator 2.7, [3] MICS indicator 2.8
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.
( ) Based on 25-49 un-weighted cases.

The adequacy of infant feeding in children under 12 months is provided in Table 5.3. 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, while infants aged 9-11 months are considered to be adequately fed if they are receiving breast milk and eating complementary food at least three times a day. Of those aged 0-11 months, 25 per cent were adequately fed. Overall, slightly more male children are fed adequately than female children.

5.3 Meal Frequency

It is well recognized that the period from birth to two years of age is the "critical window" for the promotion of good growth, health, and behavioural development among children. Therefore, optimal infant and young child feeding is crucial during this period. In addition to initiation of breastfeeding within one hour of birth and exclusive breastfeeding during the first six months of the child's life, optimal infant and young child feeding includes continued breastfeeding for two years or more together with safe, age-appropriate feeding of solid, semi-solid and soft foods starting at six months of age. In fact, evidence suggests that even with optimum breastfeeding children may be at risk for stunting if they do not receive sufficient quantities of quality complementary foods after six months of age.

Adequate complementary feeding of children from 6 months to two years of age is particularly important for growth and development and the prevention of undernutrition. Childhood undernutrition remains a major health problem in resource-poor settings. Approximately one-third of children less than five years of age in developing countries are stunted (low height-for-age), and large proportions are also deficient in one or more micronutrients. That means they require the addition of nutrient dense, high quality foods in sufficient quantities to their diet along with continued breastfeeding.

Continued breastfeeding beyond six months should be accompanied by consumption of nutritionally adequate, safe and appropriate complementary foods that help meet nutritional requirements when breast milk is no longer sufficient. This requires that for breastfed children, two or more meals of solid, semi-solid or soft foods are needed if they are six to eight months old, and three or more meals if they are 9-23 months of age. For children aged 6-23 months and older who are not breastfed, four or more meals of solid, semi-solid or soft foods or milk feeds are needed.

Table 5.4 presents the proportion of children aged 6-23 months who received semi-solid or soft foods the minimum number of times or more during the previous day according to breastfeeding status (see the note (a) in Table 5.4 for a definition of minimum number of times for different age groups). Overall, more than one-third of the children aged 6-23 months (35 per cent) were receiving solid, semi-solid and soft foods the minimum number of times. A slightly higher proportion of females (39 per cent) were enjoying the minimum meal frequency compared to males (32 per cent).

Table 5.4: Minimum meal frequency (NU.7)

Percentage of children age 6-23 months who received solid, semi-solid, or soft foods (and milk feeds for non-breastfeeding children) the minimum number of times or more during the previous day, according to breastfeeding status, Mombasa Informal Settlement Survey, Kenya, 2009

	Currently breastfeeding		Currently not breastfeeding			All	
	Percent receiving solid, semi-solid and soft foods the minimum number of times	Number of children age 6-23 months	Percent receiving at least 2 milk feeds[1]	Percent receiving solid, semi-solid and soft foods or milk feeds 4 times or more	Number of children age 6-23 months	Percent with minimum meal frequency[2]	Number of children age 6-23 months
Sex							
Male	26.8	65	*	*	18	32.4	83
Female	37.1	53	*	*	18	38.9	70
Age							
6-8 months	(38.4)	25	*	*	0	(38.4)	25
9-11 months	(38.9)	28	*	*	1	(40.9)	29
12-17 months	(24.5)	43	*	*	8	28.7	51
18-23 months	*	21	(36.5)	(45.5)	27	(37.6)	48
Education							
Primary	31.3	68	*	*	20	31.3	88
Secondary	(26.4)	37	*	*	13	(39.6)	49
Wealth index							
Low	(30.7)	34	*	*	11	(32.4)	46
Medium	(34.5)	41	*	*	8	(31.0)	49
High	(29.1)	42	*	*	17	41.4	59
Religion of household head							
Other Christian	26.4	67	*	*	15	32.7	82
Muslim	(37.3)	33	*	*	15	(36.7)	49
Total	**31.4**	**117**	**41.4**	**48.2**	**36**	**35.4**	**153**

[1] MICS indicator 2.15; [2] MICS indicator 2.13

*Not shown, based on less than 25 un-weighted cases; () Based on 25-49 un-weighted cases.

Note: a) Among currently breastfeeding children age 6-8 months, minimum meal frequency is defined as children who also received solid, semi-solid or soft foods 2 times or more. Among currently breastfeeding children age 9-23 months, receipt of solid, semi-solid or soft foods at least 3 times constitutes minimum meal frequency. For non-breastfeeding children age 6-23 months, minimum meal frequency is defined as children receiving solid, semi-solid or soft foods, and milk feeds, at least 4 times during the previous day.

b) 16 children with missing information on mother's/caretaker's education, 21 children belong to Catholic and 2 children belong to other religion are not shown separately.

Among currently breastfeeding children aged 6-23 months, nearly one-third (31 per cent) were receiving solid, semi-solid and soft foods the minimum number of times and this proportion was higher among females (37 per cent) compared to males (27 per cent). Among non-breastfeeding children, nearly half of the children were receiving solid, semi-solid and soft foods or milk feeds four times or more.

5.4 Salt Iodization

Iodine Deficiency Disorders (IDD) is the world's leading cause of preventable mental retardation and impaired psychomotor development in young children. In its 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 results in poor school performance, reduced intellectual ability, and impaired work performance. The international goal is to achieve sustainable elimination of iodine deficiency by 2005. This is monitored by the indicator "percentage of households consuming adequately iodized salt (>15 parts per million)".

In 87 per cent of households in Mombasa informal settlements, salt used for cooking was tested for iodine content by using salt test kits and testing for the presence of potassium iodide. Table 5.5 shows that 10 per cent of households reported having no salt available, a figure that is much higher than expected. In 90 per cent of households, salt was found to be adequately iodized, .i.e., the salt contained 15 parts per million (ppm) or more of iodine. Differentials by wealth index show that, a slightly higher proportion (93 per cent) of households from high wealth index category use adequately iodized salt compared with those from the low wealth index category (86 per cent).

Table 5.5: Iodized salt consumption (NU.5)

Percentage of households consuming adequately iodized salt, Mombasa Informal Settlement Survey, Kenya, 2009

Wealth index	Percent of households in which salt was tested	Number of households interviewed	Percent of households with Salt test result: No salt	< 15 PPM	15+ PPM[1]	Total	Number of households in which salt was tested or with no salt
Low	83.0	367	13.2	0.6	86.2	100.0	351
Medium	88.0	384	8.4	0.3	91.3	100.0	369
High	91.7	265	6.5	0.8	92.7	100.0	260
Total	87.2	1016	9.6	0.5	89.8	100.0	980

[1] MICS indicator 2.16

5.5 Vitamin A Supplements

Vitamin A is essential for eye health and proper functioning of the immune system. It is found in foods such as milk, liver, eggs, red and orange fruits, red palm oil and green leafy vegetables. However, the amount of vitamin A readily available to the body from these sources varies widely. In developing 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 intake is 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 a high incidence 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 its deficiency a primary component of child survival efforts, and therefore critical to the achievement of the fourth Millennium Development Goal: “a two-thirds reduction in under-five mortality by the year 2015”.

For countries with vitamin A deficiency problems, current international recommendations call for high-dose vitamin A supplementation every four to six months, targeted to 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 helps to replenish the mother’s stores of vitamin A, which are depleted during pregnancy and lactation. For countries with vitamin A supplementation programs, the definition of the indicator is the proportion of children aged 6-59 months receiving at least one high dose vitamin A supplement in the last six months.

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

Table 5.6 shows children’s vitamin A supplementation by selected background characteristics such as sex, and age of child, mother’s education, household’s wealth index and religion of household head. Within the six months prior to the survey, 33 per cent of children aged 6-59 months received a high dose Vitamin A supplement. Forty six per cent received the supplement prior to last 6 months and in about 12 per cent of cases their mother/caretaker was unable to specify when. Only seven per cent of children aged 6-59 months reported to have never received the Vitamin A supplementation at any point in time.

The differentials by sex show slightly higher proportion of female children (35 per cent) receiving Vitamin A supplementation within the last six months compared with male children (31 per cent). There is a consistent decline in Vitamin A supplementation with the age of children. For example, supplementation in the last six months preceding the survey declines from 75 per cent among children aged 6-11 months to 14 per cent among children aged 48-59 months. The differentials by household wealth index show a positive association with Vitamin A supplementation coverage. For example, 39 per cent of children from low wealth index households received Vitamin A supplementation compared with 52 per cent among high wealth index households.

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

Percent distribution of children aged 6-59 months by whether they have received a high dose vitamin A supplement in the last 6 months, Mombasa Informal Settlement Survey, Kenya, 2009

Characteristics	Percent of children who received vitamin A: Within last 6 months[1]	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	31.0	45.7	12.5	2.1	8.6	100.0	224
Female	35.0	46.4	10.9	2.1	5.6	100.0	190
Age							
6-11 months	74.8	3.4	3.5	0.0	18.3	100.0	54
12-23 months	49.0	44.9	3.1	1.0	1.9	100.0	100
24-35 months	28.2	45.5	17.1	4.0	5.2	100.0	74
36-47 months	14.2	60.3	19.0	3.6	2.9	100.0	106
48-59 months	13.5	57.6	13.7	1.2	14.1	100.0	80
Mother's education							
None	(24.8)	(43.0)	(17.9)	(0.0)	(14.3)	(100.0)	48
Primary	35.1	47.6	9.8	3.6	3.8	100.0	241
Secondary +	31.6	44.1	13.1	0.0	11.2	100.0	124
Wealth index							
Low	26.6	47.0	12.8	2.2	11.4	100.0	137
Medium	34.9	48.0	9.1	2.2	5.8	100.0	132
High	36.9	43.3	13.2	1.9	4.6	100.0	145
Religion of household head							
Catholic	39.9	46.5	6.8	0.0	6.8	100.0	58
Other Christian	35.3	45.5	12.0	2.4	4.7	100.0	200
Muslim	27.5	46.4	13.8	2.6	9.7	100.0	150
Total	**32.8**	**46.0**	**11.8**	**2.1**	**7.2**	**100.0**	**414**

[1] MICS indicator 2.17.
( ) Based on 25-49 un-weighted cases.
Note: 6 children belong to other religion are not shown separately.

Table 5.7 shows post-partum mother's vitamin A supplementation by the education level of mother, household wealth index and religion of household head. About 45 per cent mothers with a birth in the previous two years before the survey received a Vitamin A supplement within eight weeks of the birth. As expected, the vitamin A supplementation coverage increases with increaseing levels of the household wealth index. For example, 39 per cent of women who live in a low wealth index household reported receiving vitamin A supplementation compared with 52 per cent among high wealth index category.

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

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, Mombasa Informal Settlement Survey, Kenya, 2009

Characteristics	Received vitamin A supplement	Not sure if received vitamin A	Number of women aged 15-49 years
Education			
Primary	46.0	4.2	122
Secondary +	42.8	3.0	66
Wealth index			
Low	38.6	0.0	68
Medium	42.5	2.9	69
High	52.4	7.1	73
Religion of household head			
Catholic	(38.1)	(0.0)	31
Other Christian	44.7	5.6	111
Muslim	47.7	1.5	65
Total	**44.7**	**3.4**	**211**

( ) Based on 25-49 un-weighted cases.

Note: 23 women with no education and 4 women belong to other religion are not shown separately.

5.6 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 are undernourished in the womb face a greatly increased risk of dying during their early months and years. Those who survive have impaired immune function and increased risk of disease. They are likely to remain undernourished, with reduced muscle strength, throughout their lives, and suffer a higher incidence of diabetes and heart disease in later life. Children born underweight also tend to have a lower IQ and cognitive abilities which affect their performance in school and their job opportunities as adults.

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

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

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

Because many infants are not weighed at birth and those who are weighed may be a biased sample of all births, the reported birth weights usually cannot be used to estimate the prevalence of low birth weight among all children. Therefore, the percentage of births weighing below 2500 grams is estimated from two items in the questionnaire: the mother's assessment of the child's size at birth (i.e., very small, smaller than average, average, larger than average, very large) and the mother's recall of the child's weight or the weight as recorded on a health card if the child was weighed at birth8.

Table 5.8 shows the incidence of low birth weight infants by the education level of mother, household wealth index and religion of household head. Overall, 81 per cent of births were weighed at birth and 12 per cent of infants weighed less than 2500 grams at birth. A higher proportion of children born to mothers who have secondary and above level of education were weighed at birth (88 per cent) compared with those born to mothers with primary education (80 per cent). There is a noticeable increasing trend in the proportion of children weighed at birth with increase in the household wealth index. For example, 65 per cent of the children from the low wealth index households were weighed compared to 95 per cent for the high wealth index category.

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

Percentage of live births in the 2 years preceding the survey that weighed below 2500 grams at birth, Mombasa Informal Settlement Survey, Kenya, 2009

	Percent of live births:		
	Below 2500 grams[1]	Weighed at birth[2]	Number of live births
Education			
Primary	11.6	79.9	122
Secondary +	9.4	87.9	66
Wealth index			
Low	12.8	64.5	68
Medium	11.0	82.6	69
High	11.0	94.6	73
Religion of household head			
Catholic	(8.2)	(84.2)	31
Other Christian	9.3	83.1	111
Muslim	16.5	79.2	65
Total	**11.6**	**80.9**	**211**

[1] MICS indicator 2.18, [2] MICS indicator 2.19
( ) Based on 25-49 un-weighted cases.
Note: 23 women with no education and 4 women belong to other religion are not shown separately.

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

6.1 Immunization

The fourth Millennium Development Goal (MDG) is to reduce child mortality by two thirds between 1990 and 2015. Immunization plays a key part in the progress towards attainment of 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. Worldwide there are still 27 million children 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 as well as the Kenya Child Survival and Development Strategy, 2009.

In the Mombasa Informal Settlement Survey, 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, information about children with no immunization cards was obtained using a set of structured direct questions on immunization. The immunization coverage shown in this report includes information from cards as well as mother's or caretaker's re-call, unless mentioned other-wise.

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

Ninety four per cent of the children aged 12-23 months received a BCG vaccination by the age of 12 months and the first dose of DPT was given to 96 per cent. The percentage declines marginally for subsequent doses of DPT to 92 per cent for the second dose, and 78 per cent for the third dose (Figure 6.1). Similarly, 96 per cent of children received Polio 1 by age 12 months and this declines to 66 per cent by the third dose. The coverage for measles vaccine by 12 months is higher than the third dose coverage of polio or DPT, at 85 per cent. The percentage of children who had received all the recommended vaccinations by their first birthday is only 49 per cent in Mombasa informal settlements. The low level of full immunization coverage is mainly because of the higher DPT and polio dropout rates. The proportion of children receiving yellow fever vaccination is also quite low in the Mombasa informal settlements at 31 per cent. The proportion of children not receiving any type of vaccination is only two per cent.

Table 6.1: Vaccinations among children (CH.1)

Percentage of children aged 12-23 months immunized against childhood diseases at any time before the survey and before the first birthday, Mombasa Informal Settlement Survey, Kenya, 2009

Vaccinated at any time before the survey	Percentage of children who received:												Number of children aged 12-23 months
	BCG[1]	DPT1	DPT2	DPT3[2]	Polio0	Polio1	Polio2	Polio3[3]	Mea-sles[4]	All#	None	Yellow fever[5]	
According to:													
Vaccination card	60.7	64.7	63.8	61.7	46.5	64.4	63.4	57.2	54.7	48.8	0.0	4.0	100
Mother's report	33.1	33.1	29.2	20.4	25.4	31.4	25.5	11.0	34.9	6.9	2.2	27.2	100
Either	93.8	97.8	93.1	82.1	71.8	95.8	88.9	68.2	89.6	55.7	2.2	31.2	100
Vaccinated by 12 months of age	93.8	96.2	91.5	78.1	71.8	95.8	87.4	65.9	84.8	48.7	2.2	31.2	100

[1] MICS indicator 3.1, [2] MICS indicator 3.2, [3] MICS indicator 3.3, [4] MICS indicator 3.4 and MDG indicator 3.6, [5] MICS indicator 3.6.

Total number of 12-23 month olds vaccinated with BCG, OPV3, DPT3 and Measles 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 & 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, Mombasa Informal Settlement Survey, Kenya, 2009

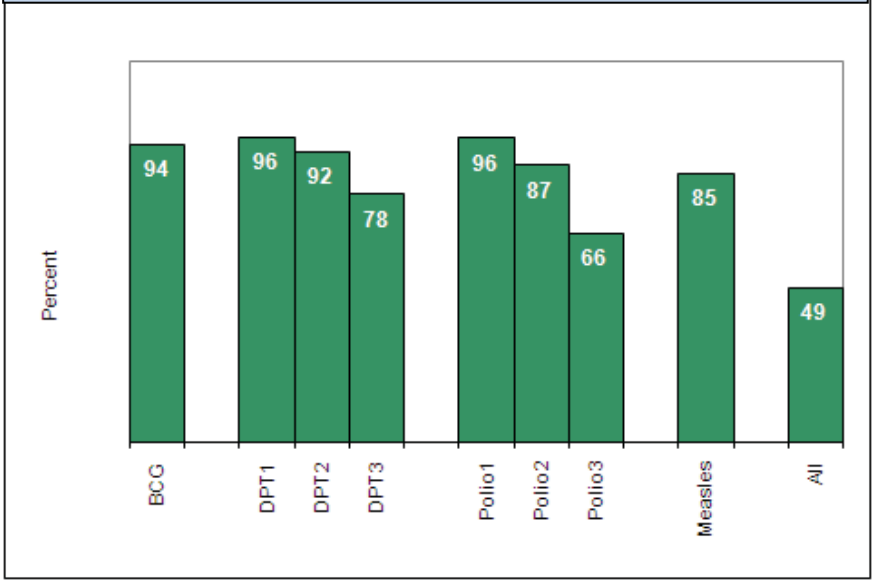


Table 6.2 shows vaccination coverage rates among children aged 12-23 months by sex of the child. Overall, only 65 per cent of children had health cards. If the child did not have a card, the mother was asked to recall whether or not the child had received each of the vaccinations and, for DPT and Polio, how many times. The 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. The coverage of BCG, DPT1 and Polio1 is near universal in Mombasa informal settlements. However, the coverage of DPT3 and Polio3 drops by 16 per cent and 28 percentage points respectively. The measles vaccination was received by 90 per cent of children aged 12-23 months. Overall, 56 per cent of children aged 12-23 months are fully vaccinated. That is, they received BCG, 3 doses of DPT, 3 doses of Polio and measles vaccines. The immunization coverage among girls was higher than that of boys.

Table 6.2: Vaccinations by sex of the child (CH.2)

Percentage of children aged 12-23 months currently vaccinated against childhood diseases by sex of the child, Mombasa Informal Settlement Survey, Kenya, 2009

	Percentage of children who received:												Percent with health card	Number of children aged 12-23 months
	BCG	DPT 1	DPT 2	DPT 3	Polio 0	Polio 1	Polio 2	Polio 3	Mea-sles	All	None	Yellow fever		
Male	92.2	96.0	94.3	82.3	70.6	92.2	84.6	60.9	88.1	52.2	4.0	26.6	61.8	54
Female	(95.6)	(100.0)	(91.6)	(81.8)	(73.2)	(100.0)	(94.0)	(76.9)	(91.4)	(59.9)	(0.0)	(36.6)	(68.3)	46
Total	**93.8**	**97.8**	**93.1**	**82.1**	**71.8**	**95.8**	**88.9**	**68.2**	**89.6**	**55.7**	**2.2**	**31.2**	**64.7**	**100**

Note: The calculation is the same as the top panel of Table 6.1 (i.e., children who are vaccinated at any time before the survey is included in the numerator).

( ) Based on 25-49 un-weighted cases.

6.2 Tetanus Toxoid

Goal 5, target 6 of the MDGs is to reduce by three quarters the Maternal Mortality Ratio (MMR), with one strategy being to eliminate maternal tetanus. Another goal (Goal 4) is to reduce the incidence of neonatal tetanus to less than 1 case of neonatal tetanus per 1,000 live births. One of the World Fit for Children goal was to eliminate maternal and neonatal tetanus by 2005.

Prevention of maternal and neonatal tetanus requires that 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 last 3 years;
- Received at least 3 doses, the last within the last 5 years;

Table 6.3 shows the protection status from tetanus of women who have had a live birth within the last two years. In Mombasa informal settlements, 78 per cent of women who had a child birth during one year preceding the survey had adequate protection against tetanus. The differentials in the neonatal tetanus protection coverage are also shown in Table 6.3. The women aged 25-34 years are more likely to receive neonatal tetanus protection compared with their younger and older counterparts. The differentials by wealth index of the household show a positive association, with the coverage among high wealth index at 80 per cent compared to 79 per cent and 76 per cent respectively for medium and low wealth index households. The differentials in the reported coverage by religions of the household head show a higher proportion of Muslim mothers receiving adequate neonatal protection (83 per cent) compared with Catholics (69 per cent).

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 a Recommended Home Fluid (RHF) - can prevent many of these deaths. Preventing dehydration and malnutrition by increasing fluid intake and continuing to feed the child are also important strategies for managing diarrhoea.

Table 6.3: Neonatal tetanus protection (CH.3)

Percentage of mothers with a birth in the last 12 months protected against neonatal tetanus, Mombasa Informal Settlement Survey, Kenya, 2009

	Percent of mothers with a birth in the last 12 months who:				
	Received at least 2 doses during last pregnancy	Received at least 2 doses, the last within prior 3 years	Received at least 3 doses, the last within 5 years	Protected against tetanus[1]	Number of mothers
Age					
15-24	73.9	1.1	0.0	75.0	104
25-34	(78.3)	(8.5)	(2.4)	(89.2)	46
30-49	67.2	7.9	0.0	75.1	61
Education					
Primary	75.3	4.8	0.0	80.1	122
Secondary +	74.1	0.0	1.7	75.7	66
Wealth index					
Low	66.8	8.8	0.0	75.6	68
Medium	77.1	1.4	0.0	78.5	69
High	74.6	3.9	1.5	80.1	73
Religion of household head					
Catholic	(68.6)	(0.0)	(0.0)	(68.6)	31
Other Christian	72.7	4.4	1.0	78.1	111
Muslim	75.1	7.7	0.0	82.8	65
Total	**72.9**	**4.7**	**.5**	**78.1**	**211**

[1] MICS indicator 3.7
( ) Based on 25-49 un-weighted cases.
Note: 23 women with no education and 4 women belong to other religion are not shown separately.

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

The indicators are:

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

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

Table 6.4 shows ORS treatment by background characteristics. It also shows the percentage of children receiving various types of recommended liquids during the episode of diarrhoea. Overall, 19 per cent of under five children had diarrhoea in the two weeks preceding the survey. The peak of diarrhoea prevalence occurs in the weaning period, among children aged 6-35 months. For example, 12 per cent of the children below 6 months of age reportedly had diarrhoea during the two weeks preceding the survey compared with 33 per cent among those aged 6-11 months. As expected, a higher proportion of children who live in low wealth index households had diarrhoea compared with those who live in high wealth index households- 23 and 16 per cent respectively.

Of those who had diarrhoea, 24 per cent received fluids from ORS packets; 14 per cent received pre-packaged ORS fluids, and about 21 per cent received recommended homemade fluids. Slightly more than two in five (43 per cent) children with diarrhoea received one or more of the recommended home treatments (i.e., received oral dehydration therapy or ORT), while 57 per cent received no treatment. The differentials in the treatment pattern show mixed results with respect to wealth index of the household. Children who live in a Muslim headed household are less likely to receive treatment for diarrhoea compared with those who live in Christian headed households.

Table 6.4: Oral rehydration treatment (CH.4)

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), Mombasa Informal Settlement Survey, Kenya, 2009

	Had diarrhoea in last two weeks	Number of children aged 0-59 months	Children with diarrhoea who received:				ORT Use Rate	Number of children aged 0-59 months with diarrhoea
			Fluid from ORS packet	Recom-mended homemade fluid	Pre-packaged ORS fluid	No treatment		
Sex								
Male	18.8	246	(19.8)	(14.8)	(10.2)	(61.7)	(38.3)	46
Female	20.0	208	(28.4)	(27.1)	(18.1)	(52.1)	(47.9)	42
Age								
<6 months	(11.8)	40	*	*	*	*	*	5
6-11 months	32.6	54	*	*	*	*	*	18
12-23 months	22.8	100	*	*	*	*	*	23
24-35 months	22.7	74	*	*	*	*	*	17
36-47 months	18.1	106	*	*	*	*	*	19
48-59 months	8.4	80	*	*	*	*	*	7
Mother's education								
None	24.0	53	*	*	*	*	*	13
Primary	22.6	268	20.4	20.4	11.0	61.5	38.5	61
Secondary +	10.9	133	*	*	*	*	*	15
Wealth index								
Low	23.3	150	(24.9)	(19.2)	(16.1)	(58.6)	(41.4)	35
Medium	18.9	146	(18.0)	(26.4)	(7.0)	(59.4)	(40.6)	28
High	15.9	157	(28.9)	(16.0)	(18.5)	(52.6)	(47.4)	25
Religion of household head								
Christian	19.1	286	27.8	19.2	15.5	57.4	42.6	55
Muslim	18.2	162	(19.7)	(22.4)	(12.9)	(54.5)	(45.5)	29
Other	*	7	*	*	*	*	*	4
Total	**19.3**	**454**	**23.9**	**20.6**	**13.9**	**57.1**	**42.9**	**88**

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.
*Not shown, based on less than 25 un-weighted cases. ( ) Based on 25-49 un-weighted cases.

Table 6.5 provides information on home management of diarrhoea by background characteristics such as sex, age of child in months, mother's education, wealth index and religion of household head. Of those under five children who had diarrhoea during the two weeks preceding the survey, 31 per cent drank more than usual while 69 per cent drank the same or less. Thirty eight per cent ate somewhat less, same or more (continued feeding), but 62 per cent ate much less or ate almost none.

The differentials in the home management of diarrhoea by sex of the child shows that a higher proportion of girls (28 per cent) received ORT or increased fluids and continued feeding compared to boys (15 per cent). As expected, the wealth index of the household and proportion receiving home management of diarrhoea are highly positively correlated.

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

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, Mombasa Informal Settlement Survey, Kenya, 2009

	Had diarrhoea in last two weeks	Number of children aged 0-59 months	Children with diarrhoea who: Drank more	Drank the same or less	Ate somewhat less, same or more	Ate much less or none	Home manage-ment of diarrhea	Received ORT or increased fluids AND continued feeding[1]	Number of children aged 0-59 months with diarrhoea
Sex									
Male	18.8	246	(38.7)	(61.3)	(31.4)	(68.6)	(10.6)	(14.8)	46
Female	20.0	208	(23.3)	(76.7)	(46.2)	(53.8)	(9.3)	(27.5)	42
Age									
0-11 months	23.7	94	*	*	*	*	*	*	22
12-23 months	22.8	100	*	*	*	*	*	*	23
24-35 months	22.7	74	*	*	*	*	*	*	17
36-47 months	18.1	106	*	*	*	*	*	*	19
48-59 months	8.4	80	*	*	*	*	*	*	7
Mother's education									
None	24.0	53	*	*	*	*	*	*	13
Primary	22.6	268	32.8	67.2	39.8	60.2	9.6	17.5	61
Secondary +	10.9	133	*	*	*	*	*	*	15
Wealth index									
Low	23.3	150	(25.3)	(74.7)	(35.6)	(64.4)	(2.8)	(16.3)	35
Medium	18.9	146	(45.7)	(54.3)	(34.6)	(65.4)	(13.6)	(17.2)	28
High	15.9	157	(24.3)	(75.7)	(46.5)	(53.5)	(16.1)	(30.9)	25
Religion of household head									
Christian	19.1	286	37.7	62.3	39.0	61.0	14.4	24.9	55
Muslim	18.2	162	(23.9)	(76.1)	(32.8)	(67.2)	(3.1)	(15.9)	29
Total	**19.3**	**454**	**31.4**	**68.6**	**38.4**	**61.6**	**10.0**	**20.8**	**88**

[1] MICS indicator 3.8

*Not shown, based on less than 25 un-weighted cases. ( ) Based on 25-49 un-weighted cases.

Note: 7 children belong to other religion is not shown separately.

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-5s with suspected pneumonia is a key intervention. A World Fit for Children goal is to reduce by one-third the deaths due to Acute Respiratory Infections (ARI).

Children with suspected pneumonia are those who had an illness with a cough accompanied by rapid or difficult breathing and whose symptoms were NOT due to a problem in the chest and a blocked nose. The indicators are:

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

Table 6.6 presents prevalence of acute respiratory infection (ARI or suspected pneumonia) among children aged 0-59 months during the two weeks preceding the survey by selected characteristics. Overall, 10 per cent of the children under five years of age reportedly had ARI during the two weeks prior to the survey. The differentials in the prevalence by selected characteristics show that level of mothers education and household wealth index are negatively associated with ARI prevalence among children. For example, 15 per cent of the children to mothers with no education had ARI compared with nine per cent among those educated up to secondary or higher.

Table 6.6: Suspected pneumonia (CH.6)

Percentage of children aged 0-59 months with suspected pneumonia in the last two weeks, Mombasa Informal Settlement Survey, Kenya, 2009

	Had acute respiratory infection	Number of children aged 0-59 months
Sex		
Male	9.7	246
Female	10.2	208
Age		
0-11 months	7.1	94
12-23 months	9.3	100
24-35 months	16.8	74
36-47 months	8.1	106
48-59 months	10.0	80
Mother's education		
None	14.5	53
Primary	9.2	268
Secondary +	9.4	133
Wealth index		
Low	14.8	150
Medium	7.4	146
High	7.6	157
Religion of household head		
Catholic	4.4	64
Other Christian	5.8	222
Muslim	18.2	162
Total	9.9	454

Note: 7 children belong to other religion is not shown separately.

The care seeking and treatment of children aged 0-59 months with suspected pneumonia (or ARI) are presented in Table 6.7. Overall, 76 per cent of the children with suspected pneumonia during the two weeks prior to the survey received treatment from any provider. Twenty-two per cent received treatment from government hospital, 17 per cent from government dispensary, four per cent from government health centre, 32 per cent from private hospital/clinic, five per cent from pharmacy and another two per cent from a relative/friend. Further, all mothers/caretakers of children who had suspected pneumonia in Mombasa informal settlement survey were asked on 'whether the child has received any medicine to treat the illness?' and 'what medicine was given to the child?' Twenty nine per cent of the mothers/caretakers reported that the child was given an antibiotic drug to treat the suspected pneumonia or ARI.

Table 6.7: Care seeking for pneumonia

Percentage of children aged 0-59 months with suspected pneumonia who received treatment, received antibiotic treatment, Mombasa Informal Settlement Survey, Kenya, 2009

	Percent
Percent of children who received treatment for pneumonia from:	
Government hospital	(22.4)
Government health centre	(4.2)
Government dispensary	(16.9)
Private hospital/clinic	(32.4)
Pharmacy	(4.7)
Relative/friend	(2.1)
Any provider[1]	(75.8)
Percent of children who received antibiotic treatment for suspected pneumonia[2]	(28.5)
Number of children age 0-50 months with suspected pneumonia during the 2 weeks preceding the survey	45

[1] MICS indicator 3.9; [2] MICS indicator 3.10
( ) Based on 25-49 un-weighted cases.

6.5 Solid Fuel Use

More than 3 billion people around the world rely on solid fuels (biomass and coal) for their basic energy needs, including cooking and heating. Cooking and heating with solid fuels leads to high levels of indoor smoke, a complex mix of health-damaging pollutants. The main problem with the use of solid fuels is products of incomplete combustion, including carbon monoxide (CO), polyaromatic hydrocarbons, sulphur dioxide (SO_2), and other toxic elements. Use of solid fuels increases the 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.

Information regarding solid fuel use by background characteristics such as education level of the household head, wealth index and religion of the household head are shown in Table 6.8. Forty four per cent of the households in Mombasa informal settlements use solid fuels for cooking. Forty five per cent of the households use kerosene for cooking followed by charcoal (38 per cent), wood (6 per cent) and liquefied petroleum gas (LPG, 5 per cent). Differentials with respect to household wealth index show that 13 per cent of the high wealth index households use LPG for cooking compared with less than one per cent among low wealth index households. The use of LPG also increases with increasing educational level of the household head.

Table 6.8: Solid fuel use (CH.8)

Percent distribution of households according to type of cooking fuel, and percentage of households using solid fuels for cooking, Mombasa Informal Settlement Survey, Kenya, 2009

Characteristic	Percent of households using (....) fuel for cooking							Total	Solid fuels for cooking[1]	Number of households
	Liquefied petroleum gas (LPG)	Natural/ bio gas	Kero-sene	Coal/ lignite	Charc oal	Wood	Missing			
Education of household head										
None	1.4	0.0	24.4	0.0	42.7	21.3	10.3	100.0	64.0	79
Primary	2.5	0.0	48.2	0.2	36.8	7.0	5.2	100.0	44.1	466
Secondary +	6.9	1.0	45.3	0.0	38.9	1.6	6.3	100.0	40.4	461
Wealth index										
Low	0.0	0.3	44.5	0.3	32.3	14.9	7.7	100.0	47.5	367
Medium	2.9	0.0	50.7	0.0	38.6	0.5	7.3	100.0	39.1	384
High	13.0	1.6	36.8	0.0	46.1	0.4	2.2	100.0	46.5	265
Religion of household head										
Catholic	4.3	0.5	55.4	0.0	28.6	2.7	8.5	100.0	31.3	211
Other Christian	5.9	0.6	48.9	0.0	37.4	2.6	4.7	100.0	39.9	502
Muslim	2.6	0.3	28.9	0.4	47.4	13.7	7.2	100.0	61.5	278
Other	(0.0)	(0.0)	(56.2)	(0.0)	(36.0)	(4.1)	(3.8)	(100.0)	(40.1)	25
Total	**4.5**	**0.5**	**44.8**	**0.1**	**38.3**	**5.7**	**6.1**	**100.0**	**44.0**	**1,016**

[1] MICS indicator 3.11

( ) Based on 25-49 un-weighted cases.

Note: 10 households with missing information on education of household head is not shown separately.

6.6 Malaria

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

The Mombasa informal settlement survey incorporated questions on the availability and use of bed nets, both at household level and among children under five years of age, as well as anti-malarial treatment, and intermittent preventive therapy for malaria. Availability of Insecticide Treated Nets (ITN) by education level of the household head, wealth index and religion of household head are shown in Table 6.9. The results indicate that 73 per cent of households in Mombasa informal settlements have at least one insecticide treated net. Thirty per cent of the households reported to have two or more mosquito nets and the mean number of nets per households in Mombasa informal settlements is 1.2. As shown in Figure 6.2, the differentials by household characteristics indicate that possession of insecticide treated mosquito nets increases with increasing educational level of the head of the household and the wealth index of the household. For example, 64 per cent of the households headed by an illiterate member have a mosquito net compared with 78 per cent in case of households headed by a member who is educated up to secondary level or above.

Table 6.9: Household possession of mosquito nets (TN01)

Percentage of households with at least one and more than one mosquito net (treated or untreated), Mombasa Informal Settlement Survey, Kenya, 2009

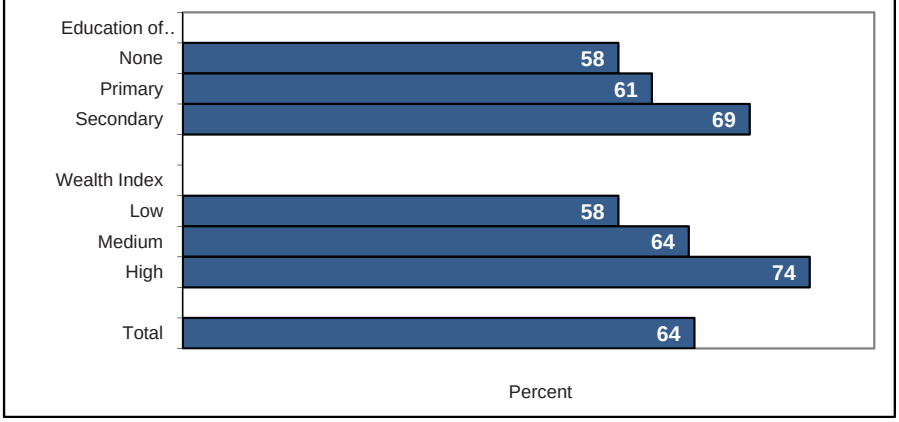
	Percent of households having any type of mosquito net			Percent of households having ever treated mosquito nets			Percent of households having insecticide treated mosquito nets (ITNs)			
	At least one	More than one	Average number of nets per household	At least one	More than one	Average number of ever treated nets per household	At least one[1]	More than one	Average number of ITNs per house-hold	Number of households
Education of household head										
None	64.3	30.8	1.2	64.3	30.8	1.2	57.8	30.8	1.1	79
Primary	68.2	23.4	1.0	67.1	23.0	1.0	60.7	23.0	0.9	466
Secondary +	78.0	34.8	1.3	77.1	34.8	1.3	69.2	34.8	1.2	461
Wealth index										
Low	65.6	20.5	0.9	65.6	20.2	0.9	57.8	20.2	0.8	367
Medium	70.6	26.2	1.1	69.3	26.0	1.1	63.9	26.0	1.0	384
High	84.9	46.7	1.7	83.0	46.4	1.7	74.4	46.4	1.5	265
Religion of household head										
Catholic	73.5	26.8	1.1	73.0	26.3	1.1	66.5	26.3	1.0	211
Other Christian	72.6	28.2	1.2	71.8	28.0	1.1	64.0	28.0	1.0	502
Muslim	72.8	35.5	1.3	71.3	35.1	1.3	65.1	35.1	1.2	278
Other	(60.2)	(12.2)	(0.8)	(56.2)	(12.2)	(0.7)	(48.5)	(12.2)	(0.6)	25
Total	**72.5**	**29.5**	**1.2**	**71.5**	**29.2**	**1.2**	**64.4**	**29.2**	**1.1**	**1,016**

[1] MICS indicator 3.12

( ) Based on 25-49 un-weighted cases.

Note: 10 households with missing information on education of household head is not shown separately.

Figure 6.2 Percentage of households having an insecticide treated net (ITN), Mombasa Informal Settlement Survey, Kenya, 2009



As shown in Table 6.10, 64 per cent of children under the age of five slept under any mosquito net the night prior to the survey while 58 per cent slept under an insecticide treated net. There are no significant gender disparities in ITN use among children under five. However, a positive relation is observed with respect to proportion of children sleeping under a mosquito net, and mother's education and household wealth index.

Table 6.10: Children sleeping under bednets (TN02)

Percentage of children aged 0-59 months who slept under an insecticide treated net during the previous night, Mombasa Informal Settlement Survey, Kenya, 2009

	Percentage of children who:			
	Slept under a bednet[1]	Slept under an ever treated net	Slept under an insecticide treated net (ITN)[2]	Number of children aged 0-59 months
Sex				
Male	62.3	61.5	57.0	246
Female	65.2	64.3	58.1	208
Age				
0-11 months	68.0	68.0	66.9	94
12-23 months	67.9	66.9	60.8	100
24-35 months	62.0	59.3	50.1	74
36-47 months	61.6	61.6	58.9	106
48-59 months	57.4	56.2	47.5	80
Mothers education				
None	44.6	41.0	31.7	53
Primary	60.1	59.7	53.7	268
Secondary +	78.3	77.6	75.4	133
Wealth index				
Low	59.3	59.3	53.3	150
Medium	61.7	61.0	54.3	146
High	69.6	67.8	64.5	157
Religion of household head				
Catholic	70.1	70.1	67.1	64
Other Christian	68.6	68.2	64.6	222
Muslim	55.1	53.3	44.7	162
Total	**63.6**	**62.8**	**57.5**	**454**

[1] MICS indicator 3.14, [2] MICS indicator 3.15

Note: 7 households belong to other religion is not shown separately.

Table 6.11 shows information on women aged 15-49 years who slept under a mosquito net the previous night by selected characteristics. Little more than half (52 per cent) of the women reportedly slept under a mosquito net and 47 per cent slept under an insecticide treated net. As expected the proportion of women sleeping under mosquito nets increases with women's level of education and household wealth index. Surprisingly, there are no significant differentials noticed with respect to proportion of pregnant and non-pregnant women sleeping under a mosquito net.

Table 6.11: Women sleeping under bednets (TN03)

Percentage of women aged 15-49 years who slept under an insecticide treated net during the previous night, Mombasa Informal Settlement Survey, Kenya, 2009

	Percentage of women aged 15-49 who:			
	Slept under a bednet	Slept under an ever treated net	Slept under an insecticide treated net (ITN) [1]	Number of women aged 15-49
Age				
15-19	38.6	38.6	35.2	118
20-24	48.7	48.3	46.6	242
25-29	58.8	57.3	54.2	186
30-34	57.4	56.5	47.8	121
35-39	51.7	51.7	44.7	74
40-44	(54.2)	(54.2)	(54.2)	44
45-49	(56.6)	(56.6)	(48.1)	36
Currently pregnant				
Yes	52.1	52.1	48.2	53
No	51.7	51.1	47.0	761
Education				
None	45.8	42.9	40.2	65
Primary	46.9	46.7	42.6	457
Secondary +	60.8	60.1	56.0	295
Wealth index				
Low	44.1	44.1	39.8	248
Medium	53.7	52.7	49.4	275
High	56.3	55.7	51.3	298
Religion of household head				
Catholic	60.9	60.9	57.5	140
Other Christian	52.8	52.4	48.1	418
Muslim	45.5	44.7	41.0	248
Total	**51.7**	**51.2**	**47.2**	**821**

[1] MICS indicator 3.19

( ) Based on 25-49 un-weighted cases.

Note: 15 women belong to other religions is not shown separately.

Table 6.12 shows information on treatment of children with anti-malarial drugs. More than one in four (27 per cent) of under five children were ill with fever in the two weeks prior to the survey. Fever prevalence declined with age but peaks at 12-23 months (35 per cent). However, contrary to the expectation, the differentials by mother's education and wealth index appear to be showing an inconsistent pattern.

Further, all mothers with a child below five years who had fever during the two weeks prior to the survey and sought treatment were asked 'was child given any medicine for fever or malaria?' and 'what medicine was given to the child?' to treat the fever. This includes both medicines given at home and medicines given or prescribed at a health facility. Only 30 per cent of children with fever in the last two weeks preceding the survey were treated with an appropriate anti-malarial drug and 20 per cent received anti-malarial drugs within 24 hours of onset of symptoms in Mombasa informal settlements. Children of mothers having education up to secondary or higher and those from households from the high wealth index were more likely to receive an appropriate anti-malarial drug. For example, only 17 per cent of children who had fever and belonged to low wealth index households received any appropriate anti-malarial drug compared with 31 per cent for those who belonged to high wealth index households.

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

Percentage of children aged 0-59 months who were ill with fever in the last two weeks who received anti-malarial drugs, Mombasa Informal Settlement Survey, Kenya, 2009

			Children with a fever in the last two weeks who were treated with:												
			Anti-malarials:						Other medications:						
	Had a fever in last two weeks	Number of children aged 0-59 months	SP/ Fansidar	Chloro-quine	Amodia-quine	Artemisinin 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[1]	Number of children with fever in last two weeks
Sex															
Male	26.8	246	1.5	0.0	1.5	13.8	5.8	21.0	49.8	2.9	4.3	50.3	3.1	15.0	66
Female	26.4	208	1.9	1.9	1.7	10.4	24.8	40.6	42.0	1.7	1.7	37.3	5.1	26.4	55
Age															
0-11 months	34.6	94	(0.0)	(0.0)	(2.8)	(14.8)	(17.9)	(35.6)	(38.1)	(0.0)	(2.8)	(60.2)	(2.8)	(26.8)	33
12-35 months	24.3	173	(0.0)	(2.4)	(2.3)	(7.0)	(11.4)	(23.0)	(58.4)	(2.2)	(2.2)	(43.7)	(0.0)	(16.0)	42
36-59 months	24.8	186	(4.4)	(0.0)	(0.0)	(15.3)	(14.7)	(32.1)	(40.9)	(4.2)	(4.2)	(33.8)	(8.5)	(19.3)	46
Mother's education															
None	27.3	53	*	*	*	*	*	*	*	*	*	*	*	*	15
Primary	28.1	268	2.7	1.4	0.0	5.3	10.3	18.3	44.7	1.3	2.6	45.5	2.6	10.4	75
Secondary +	23.5	133	(0.0)	(0.0)	(6.1)	(19.4)	(24.9)	(50.3)	(50.0)	(3.0)	(0.0)	(43.2)	(6.3)	(37.9)	31
Wealth index															
Low	26.1	150	(2.6)	(2.6)	(0.0)	(9.7)	(2.5)	(17.3)	(42.2)	(7.3)	(7.3)	(32.8)	(7.4)	(9.7)	39
Medium	27.2	146	(2.5)	(0.0)	(2.4)	(17.0)	(21.9)	(41.4)	(46.5)	(0.0)	(0.0)	(60.8)	(2.5)	(29.1)	40
High	26.7	157	(0.0)	(0.0)	(2.2)	(10.1)	(18.4)	(30.8)	(49.8)	(0.0)	(2.2)	(39.6)	(2.2)	(21.7)	42
Religion of household head															
Christian	27.7	286	2.6	0.0	1.2	12.7	14.8	29.9	43.5	2.5	1.2	45.9	6.1	21.2	79
Muslim	24.8	162	(0.0)	(2.5)	(2.4)	(11.9)	(14.4)	(31.3)	(51.5)	(2.3)	(7.1)	(41.1)	(0.0)	(19.2)	40
Total	**26.6**	**454**	**1.7**	**0.8**	**1.6**	**12.3**	**14.4**	**29.9**	**46.3**	**2.4**	**3.1**	**44.4**	**4.0**	**20.2**	**121**

[1] MICS indicator 3.18

*Not shown, based on less than 25 un-weighted cases. ( ) Based on 25-49 un-weighted cases.

Note: The percentages given various drugs will not add to 100 since some children may have been given more than one type of drug. Seven children belong to other religion are not shown separately.

Appropriate anti-malarial drugs include chloroquine, SP/fansidar, artemisinin combination drugs, etc. In Mombasa informal settlements, the most commonly administered anti-malarial drug is Artemisinin based combinations (12 per cent), however majority could not specify the type of anti-malarial drug given to the child (14 per cent). Other types of commonly administered medicines that are not anti-malarials include anti-pyretics such as paracetemol (46 per cent), aspirin (2 per cent), ibuprofen (3 per cent) and other (44 per cent). The sex differentials in treatment pattern are clearly evident. For example, 26 per cent of girls with fever in the last two weeks preceding the survey were treated with an "appropriate" anti-malarial drug within 24 hours of onset of symptoms compared with only 15 per cent of boys.

Pregnant women living in places where malaria is highly prevalent are four times more likely than other adults to get malaria and twice as likely to die of the disease. Once infected, pregnant women risk 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 Mombasa Informal Settlement Survey, 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.

The IPT for malaria in pregnant women who gave birth in the two years preceding the survey by background characteristics are presented in Table 6.13. Seventy two per cent of mothers who delivered a child during the two year period preceding the survey received medicine to prevent malaria during pregnancy. Seventeen per cent received SP/Fansidar only once while 23 per cent received the same two or more times. The differentials by wealth index of the household show a positive correlation with the use of medicine to prevent malaria during pregnancy. For example, 60 per cent of mothers who live in low wealth index households used medicine to prevent malaria during pregnancy compared with 83 per cent among those from high wealth index households.

Table 6.13: Intermittent preventive treatment for malaria (CH.13)

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, Mombasa Informal Settlement Survey, Kenya, 2009

	Percentage of pregnant women who took:							Number of women who gave birth in prior two years
	Medicine to prevent malaria during pregnancy	SP/ Fansidar only one time	SP/Fansidar two or more times[1]	SP/ Fansidar, but number of times not known	Chloro-quine	Other medi-cines	Don't know	
Education								
Primary	71.3	15.7	23.7	0.0	3.0	10.4	18.5	122
Secondary +	74.5	18.5	21.0	1.6	0.0	10.5	22.9	66
Wealth index								
Low	60.0	13.3	12.9	0.0	2.8	9.8	22.7	68
Medium	72.0	16.6	30.5	1.5	2.7	5.8	14.8	69
High	83.1	21.2	25.9	0.0	1.2	12.2	22.6	73
Religion of household head								
Catholic	(68.7)	(16.5)	(21.2)	(0.0)	(0.0)	(9.1)	(21.9)	31
Other Christian	72.4	16.3	21.6	1.0	4.2	12.5	17.8	111
Muslim	75.7	20.0	28.2	0.0	0.0	4.5	22.9	65
Total	72.0	17.1	23.2	0.5	2.2	9.3	20.1	211

[1] MICS indicator 3.20

( ) Based on 25-49 un-weighted cases.

Note: 23 women with no education and 4 women belong to other religion are not shown separately.

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 (or snail fever). Drinking water can also be polluted by 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 of carrying water, often over 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 list of indicators used in Mombasa Informal Settlement Survey is as follows:

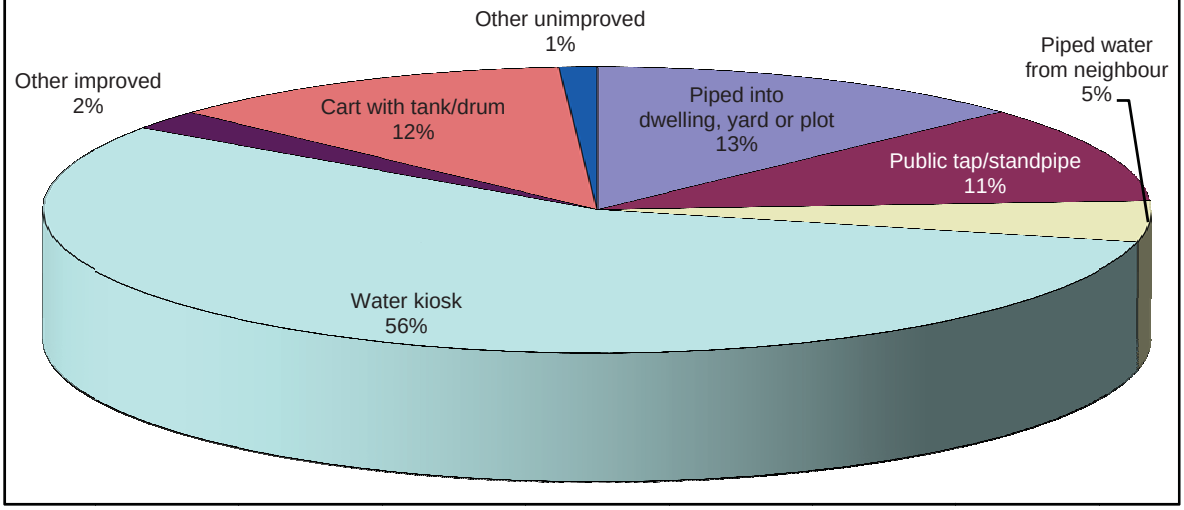
Water

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

Sanitation

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

Figure 7.1 Percentage distribution of household members by source of drinking water, Mombasa Informal Settlement Survey, Kenya, 2009



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

Overall, 87 per cent of the population in Mombasa informal settlement are using an improved source of drinking water. The differentials by level of education of the household head and wealth index of the household are not in the expected direction with respect to the proportion of population using an improved source of drinking water. This is mainly because of a higher proportion of households headed by highly educated members and those from the high wealth index households use water from 'cart with tank/drum', which is categorized under un-improved sources as per international classification of water sources. For example, only five per cent of the population who live in low wealth index households use water from 'cart with tank/drum' compared with 16 per cent of the population living in high wealth index households.

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

Percent distribution of household population according to main source of drinking water and percentage of household population using improved drinking water sources, Mombasa Informal Settlement Survey, Kenya, 2009

	Main source of drinking water												
	Improved sources							Unimproved sources					
	Piped into dwelling	Piped into yard/ plot	Public tap/ stand-pipe	Piped water from neighbour	Water kiosk	Protected well	Other improved #	Unprotected well	Cart with tank/ drum	Other unimproved $	Total	Improved source of drinking water[1]	Number of household members
Education of household head													
None	4.4	4.7	11.9	0.0	64.3	6.9	0.0	2.4	5.1	0.3	100.0	92.2	347
Primary	4.1	3.9	13.0	6.0	58.3	1.6	0.3	0.2	12.0	0.6	100.0	87.2	1,388
Secondary +	10.0	8.8	9.5	4.5	51.4	0.1	1.4	0.0	13.5	0.8	100.0	85.7	1,441
Non-standard/ DK	(20.0)	(0.0)	(4.6)	(0.0)	(38.2)	(0.0)	(2.2)	(0.0)	(35.1)	(0.0)	(100.0)	(64.9)	43
Wealth index													
Low	0.0	2.0	11.6	3.9	71.9	3.8	0.3	1.1	5.2	0.3	100.0	93.4	1,073
Medium	1.1	3.8	14.8	4.2	58.4	0.6	0.7	0.0	15.1	1.2	100.0	83.7	1,078
High	20.0	12.7	7.2	5.7	36.3	0.0	1.4	0.0	16.4	0.5	100.0	83.2	1,067
Religion of household head													
Catholic	6.1	6.2	8.9	4.8	56.6	.2	0.4	0.7	14.8	1.3	100.0	83.2	516
Other Christian	6.1	5.8	13.0	4.5	55.8	1.1	1.4	0.6	11.2	0.5	100.0	87.7	1,494
Muslim	8.7	6.9	9.3	4.2	54.9	2.2	.3	0.0	13.0	0.5	100.0	86.5	1,140
No religion	3.0	0.0	15.4	11.2	58.3	7.8	0.0	0.0	2.9	1.4	100.0	95.7	66
Total	7.0	6.1	11.2	4.6	55.6	1.5	0.8	0.4	12.2	0.6	100.0	86.8	3,219

[1] MICS indicator 4.1

#Includes tube well, borehole and bottled water; $Includes tanker/truck and bottled water.

( ) Based on 25-49 un-weighted cases.

Note: 3 persons belong to other religion is not shown separately.

Table 7.2 presents use of in-house water treatment by selected characteristics in Mombasa informal settlements. It shows the percentages of household members using appropriate water treatment methods, separately for all households, for those using improved and unimproved drinking water sources. Households were asked of ways they may be treating water at home to make it safer to drink such as boiling, adding bleach or chlorine, using a water filter, and using solar disinfection which are considered as proper treatment of drinking water. Roughly, one out of two households in Mombasa informal settlements drink appropriately treated water. The proportion of households treating the water is nearly the same for those households drawing water from improved (49%) and un-improved sources (50%). Adding bleach chlorine is the most common water treatment method reported at 36 per cent and another 19 per cent of the households boil the water. The proportion of households using appropriate water treatment is positively correlated with the wealth index and level of education of the head of the household. For example, 27 per cent of the low wealth index households appropriately treated drinking water compared with 67 per cent of the high wealth index households (see Figure 7.2).

Table 7.2: Household water treatment (EN.2)

Percent 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, Mombasa Informal Settlement Survey, Kenya, 2009

	Water treatment method used in the household				Percent of household members using appropriate water treatment method					
	None	Boil	Add bleach/ chlorine	Other	All water sources[1]	Number of house-hold members	Imp-roved sources	Number of house-hold members	Un-imp-roved sources	Number of house-hold members
Education of household head										
None	68.8	16.3	19.5	0.3	31.2	347	31.4	321	(28.4)	26
Primary	56.9	18.3	29.2	0.4	43.0	1,388	42.2	1209	48.3	178
Secondary +	40.7	20.7	47.5	0.4	59.0	1,441	60.2	1238	51.5	203
Non-standard/ DK	(62.5)	(19.1)	(18.4)	(0.0)	(37.5)	43	(3.7)	28	*	15
Wealth index										
Low	72.4	13.4	16.4	1.1	27.1	1,073	26.9	1004	29.6	69
Medium	47.4	19.9	39.5	0.1	52.6	1,078	53.8	905	46.4	174
High	33.3	24.2	52.8	0.0	66.7	1,067	67.6	888	62.3	180
Religion of household head										
Catholic	48.3	18.4	39.5	0.0	51.7	516	51.3	432	53.8	85
Other Christian	46.4	19.9	42.1	0.7	53.2	1,494	54.9	1312	40.9	181
Muslim	57.8	18.6	27.8	0.0	42.2	1,140	39.3	986	60.7	154
Other	63.6	18.7	24.2	0.0	36.4	66	38.0	63	*	3
Total	51.0	19.2	36.2	0.3	48.8	3,219	48.5	2796	50.4	422

[1] MICS indicator 4.2

Note: Multiple response categories may be used and hence total may add to more than 100 percent.

*Not shown, based on less than 25 un-weighted cases. ( ) Based on 25-49 un-weighted cases.

The amount of time it takes to obtain water is presented in Table 7.3. Note that these results refer to one roundtrip from home to drinking water source. Information on the number of trips made in one day was not collected. The majority (64 per cent) of households in Mombasa informal settlements spend less than 15 minutes for water collection. Excluding those households with water on the premises, the average time to the source to bring drinking water is 13 minutes. Among those households which fetch water from outside the household premises, the differentials by household characteristics and time taken to fetch water show a mixed pattern. However, as expected, the proportion of households having water on premises is positively associated with education of the household head and wealth index of the household.

Figure 7.2: Percentage of household members using appropriate water treatment method, Mombasa Informal Settlement Survey, Kenya, 2009

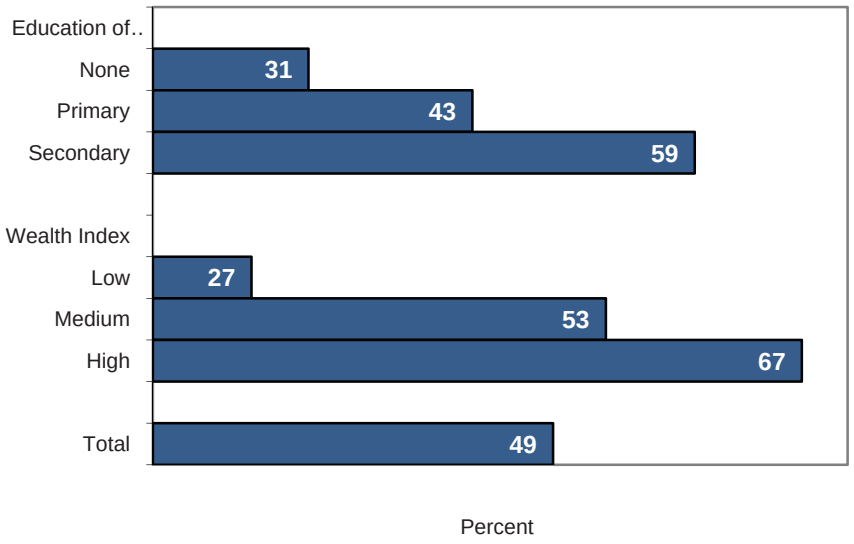


Table 7.3: Time to source of water (EN.3)

Percent 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, Mombasa Informal Settlement Survey, Kenya, 2009

	Time to source of drinking water							Mean time to source of drinking water#	Number of house-holds
	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	6.4	72.1	0.0	12.7	7.6	1.2	100.0	15.2	79
Primary	12.1	63.7	12.7	8.2	2.8	0.4	100.0	12.4	466
Secondary +	22.6	63.6	6.4	3.8	3.4	0.2	100.0	12.2	461
Wealth index									
Low	5.8	67.2	11.6	10.6	4.2	0.6	100.0	13.5	367
Medium	10.1	73.1	9.1	4.1	3.2	0.5	100.0	11.1	384
High	41.4	46.6	4.5	4.8	2.8	0.0	100.0	13.7	265
Religion of household head									
Catholic	3.0	13.1	2.3	1.5	0.7	0.1	20.7	13.0	211
Other Christian	8.8	32.3	3.9	2.7	1.7	0.1	49.6	12.7	502
Muslim	4.5	17.2	2.3	2.4	1.0	0.1	27.5	12.3	278
Other	(0.3)	(1.4)	(0.3)	(0.0)	(0.0)	(0.1)	(2.1)	(8.5)	25
Total	**16.5**	**64.2**	**8.8**	**6.6**	**3.4**	**0.4**	**100.0**	**12.6**	**1016**

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

( ) Based on 25-49 un-weighted cases.

Note: 10 households with missing or other category of education of household head is not shown separately.

Details on the person who usually collected the water are presented in Table 7.4. In most households, an adult male is likely to be the person collecting the water, accounting for 54 per cent of the households. The differentials by religion of household head show similar pattern. For instance, 55 per cent of adult males in the Muslim households usually collect water compared with 51 per cent or 62 per cent in Catholic or other Christian households respectively in Mombasa informal settlements. This is a unique observation in

Mombassa slum settlements, especially since results elsewhere in Kenya show that water collection activities have traditionally remained an activity for women and young children. Adult females usually collect water in 44 per cent of cases, and in less than two per cent of the cases a child under age 15 years.

Table 7.4: Person collecting water (EN.4)

Percent distribution of households according to the person collecting drinking water used in the household, Mombasa Informal Settlement Survey, Kenya, 2009

Characteristic	Person collecting drinking water						Number of households
	Adult woman	Adult man	Female child under age 15	Male child under age 15	Don't know	Total	
Education of household head							
None	50.3	45.5	0.0	2.8	1.5	100.0	74
Primary	43.8	54.2	1.8	0.2	0.0	100.0	391
Secondary +	43.0	56.1	0.6	0.3	0.0	100.0	338
Wealth index							
Low	46.3	50.7	2.1	0.6	0.3	100.0	332
Medium	41.7	57.4	0.6	0.3	0.0	100.0	332
High	44.5	54.7	0.0	0.7	0.0	100.0	146
Religion of household head							
Catholic	35.6	62.0	1.7	0.0	0.6	100.0	172
Other Christian	48.5	50.8	0.7	0.0	0.0	100.0	396
Muslim	42.1	55.2	0.9	1.8	0.0	100.0	223
Total	44.1	54.2	1.1	0.5	0.1	100.0	810

Note: 7 households from 'missing or other ' category of education of household head and 19 households belong to other religion are not shown separately.

7.2 Sanitation

Inadequate disposal of human excreta and personal hygiene is associated with a range of diseases including diarrhoeal diseases and polio. Improved sanitation facilities for excreta disposal include: flush or pour flush to a piped sewer system, septic tank, or latrine; ventilated improved pit latrine, pit latrine with slab, and composting toilet. Information regarding sanitation by education of the household head, wealth index and religion of household head is shown in Table 7.5. Slightly more than two in three persons (67 per cent) living in households in Mombasa informal settlements use improved sanitation facilities. Use of improved sanitation facilities is strongly correlated with educational level of household head and household wealth index. For example, 46 per cent of the population living in low wealth index households use improved sanitation compared with 82 per cent in case of high wealth index households. Pit latrines with flush or slab are the most commonly used facility with 50 per cent of the population in Mombasa informal settlements using the same and another 24 per cent using pit latrines without slab or an open pit. The pour/flush to piped sewer system or septic tank is used by 18 per cent.

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

Percent 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, Mombasa Informal Settlement Survey, Kenya, 2009

	Type of toilet facility used by household												
	Improved sanitation facility					Unimproved sanitation facility						Percentage of population using sanitary means of excreta disposal[1]	Number of household members
	Flush/pour flush to:												
	Piped sewer system	Septic tank	Pit latrine	Ventilated improved pit latrine	Pit latrine with slab	Flush/ pour flush to some-where else	Flush/ pour flush to unknown place/ not sure/ don't know	Pit latrine without slab/ open pit	Other/ missing	No facilities / bush / field	Total		
Education of household head													
None	4.7	0.9	6.5	0.0	22.7	0.0	0.0	42.7	0.0	22.6	100.0	34.7	347
Primary	6.3	8.2	12.1	0.3	40.2	0.4	2.0	24.3	0.5	5.6	100.0	67.1	1,388
Secondary +	14.8	8.2	11.8	1.2	38.8	0.4	5.2	18.9	0.2	0.6	100.0	74.7	1,441
Non-standard/DK	(0.0)	(26.3)	(33.6)	(0.0)	(35.6)	(0.0)	(0.0)	(4.6)	(0.0)	(0.0)	(100.0)	(95.4)	43
Wealth index													
Low	0.3	1.1	3.2	0.0	41.2	0.4	0.8	37.0	0.6	15.4	100.0	45.8	1,073
Medium	4.6	6.5	12.3	0.8	50.7	0.2	1.7	23.1	0.2	0.0	100.0	74.8	1,078
High	24.8	15.3	19.6	1.2	20.8	0.5	7.0	10.5	0.3	0.0	100.0	81.7	1,067
Religion of household head													
Catholic	11.3	9.3	6.5	0.4	44.5	0.4	6.6	18.8	0.5	1.7	100.0	72.0	516
Other Christian	11.1	8.7	10.3	0.9	38.1	0.5	3.3	23.9	0.5	2.8	100.0	69.0	1,494
Muslim	7.6	6.0	15.9	0.5	33.2	0.2	1.4	25.6	0.0	9.5	100.0	63.3	1,140
No religion	8.9	0.0	10.6	0.0	46.5	0.0	2.9	20.5	0.0	10.6	100.0	66.0	66
Total	9.8	7.7	11.7	0.6	37.6	0.4	3.2	23.6	0.4	5.1	100.0	67.4	3,219

[1] MICS indicator 4.3

( ) Based on 25-49 un-weighted cases.

Note: 3 persons belong to other religion is not shown separately.

Information on disposal of faeces of children aged 0-2 years of age is presented in Table 7.6. Safe disposal of a child's faeces is disposing of the stool, by the child using a toilet or by rinsing the stool into a toilet or latrine. In 89 per cent of the cases, the stool of children age 0-2 years are disposed safely and almost all of them reported putting the stool in the toilet/latrine as the mode of disposal. As expected, the proportion of households practising safe disposal of children waste increases with mother's education and household wealth index.

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

Percent 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, Mombasa Informal Settlement Survey, Kenya, 2009

	Place of disposal of child's faeces									Proportion of children whose stools are disposed of safely[1]	Number of children aged 0-2 years
	Child used toilet	Put/rinsed into toilet or latrine	Put/rinsed into drain or ditch	Thrown into garbage	Buried	Left in the open	Other	Don't know/ missing	Total		
Mother's education											
None	(0.0)	(78.7)	(0.0)	(6.2)	(0.0)	(12.1)	(0.0)	(3.0)	(100.0)	(78.7)	31
Primary	1.1	88.6	1.8	2.4	1.2	1.7	1.1	2.1	100.0	89.7	164
Secondary +	3.7	87.7	0.0	4.0	0.0	0.0	1.2	3.5	100.0	91.4	80
Wealth index											
Low	0.0	79.2	1.0	4.2	2.1	7.3	3.1	3.1	100.0	79.2	90
Medium	3.1	93.2	0.0	0.0	0.0	0.0	0.0	3.7	100.0	96.3	90
High	2.1	89.2	2.2	5.4	0.0	0.0	0.0	1.0	100.0	91.4	94
Religion of household head											
Catholic	(2.5)	(94.5)	(0.0)	(2.9)	(0.0)	(0.0)	(0.0)	(0.0)	(100.0)	(97.1)	37
Other Christian	1.4	86.8	1.4	3.6	1.4	2.7	2.0	0.7	100.0	88.2	140
Muslim	2.0	84.5	1.0	3.0	0.0	3.0	0.0	6.6	100.0	86.4	94
Total	1.7	87.2	1.1	3.3	0.7	2.4	1.0	2.6	100.0	89.0	275

[1] MICS indicator 4.4
( ) Based on 25-49 un-weighted cases.
Note: 4 children belong to other religion is not shown separately.

As shown in Table 7.7, the percentage share of households using improved sources of drinking water and sanitary means of excreta disposal is 58 per cent. This proportion increases with the education of household head and household wealth index. For example, about 30 per cent of household population living in households whose head has no education are using improved sources of drinking water and sanitary means of excreta disposal in contrast to 64 per cent among members whose household head is educated up to secondary or higher levels. A similar pattern is observed in case of household wealth index.

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

Percentage of household population using both improved drinking water sources and sanitary means of excreta disposal, Mombasa Informal Settlement Survey, Kenya, 2009

	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	92.2	34.7	29.6	347
Primary	87.2	67.1	57.6	1,388
Secondary +	85.7	74.7	64.1	1,441
Non-standard/DK	(64.9)	(95.4)	(60.4)	43
Wealth index				
Low	93.4	45.8	42.0	1,073
Medium	83.7	74.8	61.9	1,078
High	83.2	81.7	68.6	1,067
Religion of household head				
Catholic	83.2	72.0	59.9	516
Other Christian	87.7	69.0	61.1	1,494
Muslim	86.5	63.3	51.2	1,140
No religion	95.7	66.0	64.6	66
Total	**86.8**	**67.4**	**57.5**	**3,219**

( ) Based on 25-49 un-weighted cases.

Note: 3 persons belong to other religion is not shown separately.

7.3 Hand Washing Practices

Hand washing is a critical hygiene intervention to interrupt the transmission of diseases such as diarrhoea and respiratory infections. It is most effective when done using water and soap after visiting a toilet or cleaning a child, before eating or handling food and, before feeding a child. Monitoring correct hand washing behaviour at these critical times is challenging. A reliable alternative to observations or self-reported behaviour is assessing the likelihood that correct hand washing behaviour takes place by observing if a household has a specific place where people most often wash their hands and observing if water and soap (or other local cleansing materials) are present at a specific place for hand washing.

In Mombasa, only six per cent of the households had a specific place for hand washing observed leaving 94 per cent of households who could not indicate a specific place where household members usually wash their hands (Table 7.8). Among those with a specific hand washing place, almost two-thirds (63 per cent) had both water and soap present at the designated place. In 18 per cent of the households only water was available at the designated place, while in 17 per cent of the households the place only had soap but no water. The remaining two per cent of households had neither water nor soap available at the designated place for hand washing. Twenty four per cent of the households were not able to show any soap present in the household and in the remaining 76 per cent either the soap was observed or shown to the interviewer (Table 7.9).

Table 7.8: Water and soap at place for handwashing (CH.17)
Percentage of households where place for handwashing was observed and percent distribution of households by availability of water and soap at place for handwashing, Mombasa Informal Settlement Survey, Kenya, 2009

	Percentage of households where place for hand-washing was observed	Number of house-holds	Percent distribution of households where place for handwashing was observed, where:					Number of house-holds where place for hand-washing was observed
			Water and soap are available[1]	Water is available, soap is not available	Water is not available, soap is available	Water and soap are not available	Total	
Education of household head								
None	1.3	79	*	*	*	*	*	1
Primary	3.1	466	*	*	*	*	*	14
Secondary +	9.0	461	(65.5)	(12.6)	(21.9)	(0.0)	(100.0)	41
Wealth index								
Low	0.3	367	*	*	*	*	*	1
Medium	2.7	384	*	*	*	*	*	10
High	17.5	265	(67.3)	(17.7)	(15.0)	(0.0)	(100.0)	46
Religion of household head								
Catholic	6.2	211	*	*	*	*	*	13
Other Christian	5.0	502	(68.4)	(12.2)	(15.5)	(3.9)	(100.0)	25
Muslim	6.6	278	*	*	*	*	*	18
No religion/other	(3.9)	25	*	*	*	*	*	1
Total	5.7	1016	63.1	17.8	17.4	1.7	100.0	58

[1] MICS indicator 3.21
*Not shown, based on less than 25 un-weighted cases.
() Based on 25-49 un-weighted cases.
Note: 10 cases with 'missing or other' category of education of household head is not shown separately.

Table 7.9: Availability of soap (CH.18)
Percent distribution of households by availability of soap in the dwelling, Mombasa Informal Settlement Survey, Kenya, 2009

	Place for handwashing observed			Place for handwashing not observed					
		Soap not observed at place for handwashing						Percentage of households with soap anywhere in the dwelling[1]	Number of house-holds
	Soap observed	Soap shown	No soap in house-hold	Soap shown	No soap in house-hold	Not able/ Does not want to show soap	Total		
Education of household head									
None	1.3	0.0	0.0	54.4	44.3	0.0	100.0	55.7	79
Primary	1.8	1.3	0.0	71.5	25.0	0.4	100.0	74.6	466
Secondary +	7.8	0.4	0.7	72.5	17.9	0.7	100.0	80.8	461
Wealth index									
Low	0.3	0.0	0.0	67.8	31.5	0.5	100.0	68.0	367
Medium	1.9	0.8	0.0	76.1	20.7	0.5	100.0	78.8	384
High	14.4	1.9	1.2	65.9	16.2	0.4	100.0	82.2	265
Religion of household head									
Catholic	4.2	1.0	1.0	75.4	17.4	1.0	100.0	80.6	211
Other Christian	4.2	0.6	0.2	73.9	20.7	0.4	100.0	78.7	502
Muslim	5.5	1.1	0.0	61.3	32.1	0.0	100.0	67.9	278
No religion/other	(3.9)	(0.0)	(0.0)	(60.9)	(31.4)	(3.8)	(100.0)	(64.8)	25
Total	4.6	0.8	0.3	70.4	23.4	0.5	100.0	75.8	1016

[1] MICS indicator 3.22
( ) Based on 25-49 un-weighted cases.
Note: 10 cases with 'missing or other' category on education of household head is not shown separately.

8.1 Fertility

Achieving national development goals is directly linked to the fertility and resources available to support the country's population. Studies have shown that in most developing countries the resources are meagre to support their populations and hence it is very important to balance the population growth with resources available. To develop programs to target the fertility reduction, information about prevailing fertility levels become a crucial component. In Mombasa Informal Settlement Survey, birth histories of women age 15-49 years from the sampled households were collected to measure the fertility level. Birth histories include details of all children ever born alive to a woman, such as child's name, sex, month and year of birth, survival status and if dead, the age at death.

Table 8.1 presents current fertility levels in Mombasa informal settlements for the three-year period preceding the survey. This corresponds to the period from first quarter of 2006 to first quarter of 2009. Current fertility measures include Age-Specific Fertility Rates (ASFRs) and Total Fertility Rate (TFR). ASFRs are calculated by dividing the number of births to women in a specific age group by the number of women years lived during a given period. TFR is defined as the average number of children a woman would have if she went through her entire reproductive period (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 period preceding the survey, Mombasa Informal Settlement Survey, Kenya, 2009

Age group	ASFR
15-19	0.082[1]
20-24	0.170
25-29	0.149
30-34	0.173
35-39	0.098
40-44	0.016
45-49	0.000
Total fertility rate	**3.4**

[1] MICS indicator 5.1

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

The total fertility rate in Mombasa informal settlements is 3.4 children per woman for the three year period preceding the survey. This is higher than the replacement level of fertility. As expected, the ASFR is higher in the age groups of 20-24, 25-29 and 30-34 years, and the contribution of these ages to the total fertility rate is 72 per cent. It is also important to note that the contribution of the youngest age group 15-19 years to the total TFR is almost 12 per cent.

The percentage distribution of all women and married women based on the number of children ever born and living are shown in Table 8.2. The mean number of children ever born to all women aged 15-49 years is 1.9 and that of surviving is 1.7. In the case of currently married/in-union women aged 15-49 years, the mean number of children ever born is 2.5 and that of surviving is 2.3. Eleven per cent of the currently married/in-union women aged 15-49 years have not had any live births, which indicates a high level of infertility in Mombasa informal settlements compared to the national average of five per cent (KDHS, 2008-09). Little more than one in three (34 per cent) currently married/in union women aged 45-49 years reported seven or more children ever born, and this is more than one in five (22 per cent) in case of women aged 40-44 years.

Table 8.2: Children ever born and living (RH.11)

Percent 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, Mombasa Informal Settlement Survey, Kenya, 2009

Age group	Number of children ever born								Total	Number of women	Mean number of children	
	0	1	2	3	4	5	6	7 +			Ever born	Living
All women												
15-19	83.2	15.1	0.0	1.0	0.8	0.0	0.0	0.0	100.0	118	0.2	0.2
20-24	37.8	34.4	16.1	8.3	2.9	0.4	0.0	0.0	100.0	242	1.1	0.9
25-29	24.0	25.8	25.9	14.0	5.9	3.1	1.3	0.0	100.0	186	1.7	1.5
30-34	6.5	13.2	24.5	18.3	22.5	6.5	4.2	4.3	100.0	121	3.0	2.7
35-39	3.7	12.5	13.6	14.4	20.3	17.5	8.5	9.5	100.0	74	3.8	3.4
40-44	(2.4)	(15.7)	(12.9)	(4.7)	(25.4)	(12.0)	(10.7)	(16.2)	(100.0)	44	(4.1)	(3.7)
45-49	(3.0)	(9.2)	(8.1)	(13.0)	(14.1)	(17.2)	(8.1)	(27.2)	(100.0)	36	(5.1)	(4.3)
Total	30.1	22.5	16.5	10.6	9.4	4.8	2.6	3.6	100.0	821	1.9	1.7
Currently Married/In-union Women												
15-19	41.5	49.7	0.0	4.7	4.1	0.0	0.0	0.0	100.0	24	0.8	0.7
20-24	16.1	44.5	22.9	12.0	4.5	0.0	0.0	0.0	100.0	135	1.4	1.3
25-29	12.4	27.5	29.7	16.1	8.6	3.8	1.9	0.0	100.0	127	2.0	1.8
30-34	3.2	13.8	22.1	18.2	25.7	8.3	4.4	4.3	100.0	94	3.2	2.9
35-39	1.8	11.6	7.6	13.1	22.7	21.4	12.1	9.8	100.0	52	4.1	3.7
40-44	(3.8)	(6.9)	(13.3)	(7.4)	(25.6)	(11.0)	(10.4)	(21.5)	(100.0)	28	(4.5)	(4.1)
45-49	(0.0)	(14.5)	(4.0)	(15.8)	(8.7)	(18.0)	(4.6)	(34.3)	(100.0)	23	(5.3)	(4.6)
Total	10.8	27.1	20.3	14.0	13.1	6.4	3.5	4.8	100.0	482	2.5	2.3

( ) Based on 25-49 un-weighted cases.

8.2 Teenage Pregnancy and Motherhood

Reducing pregnancy among adolescents is one of the flagship programs of the Government of Kenya. The proportion of women aged 15-19 years who have had a live birth or are currently pregnant by selected characteristics are shown in Table 8.3. Twenty per cent of women aged 15-19 years have begun child bearing. Of those who begun child bearing, 84 per cent had a live birth. The proportion of women who begun child bearing is higher (25 per cent) among women who live in low wealth index households compared with 15 per cent among those from high wealth index households.

Table 8.3: Teenage pregnancy and motherhood (RH.12)

Percentage of women age 15-19 years who are mothers or pregnant with their first child and percentage who have begun child bearing, Mombasa Informal Settlement Survey, Kenya, 2009

Characteristic	Percentage who		Percentage who have began child bearing	Number of women
	Have had a live birth	Are pregnant with first child		
Age				
15-17 years	6.5	0.0	6.5	65
18-19 years	29.5	7.1	36.5	53
Education				
Primary	19.1	3.6	22.7	77
Secondary +	(8.5)	(0.0)	(8.5)	36
Wealth index				
Low	(22.3)	(2.1)	(24.5)	43
Medium	(17.3)	(2.7)	(20.0)	34
High	(10.5)	(4.7)	(15.3)	40
Total	16.8	3.2	20.0	118

8.3 Contraception

Appropriate family planning is important to the health of women and children by: 1) preventing pregnancies that are too early or too late; 2) spacing 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 i.e., unwanted pregnancies.

Details on current use of contraception are shown in Table 8.5. Results from the Mombasa informal settlement survey indicate that 40 per cent of married/in union women aged 15-49 years are currently using any contraceptive method. The modern methods were used by 35 per cent while five per cent reported using traditional methods. The most popular method is injections, which is used by 23 per cent followed by pills (7 per cent). All other methods were used by less than two per cent of the married/in-union women aged 15-49 years in Mombasa informal settlements. As expected, the contraceptive use increases with increasing educational levels and household wealth index. For example, only 12 per cent of women with no education reported using any contraceptive method vis-a-vis 51 per cent among those educated up to secondary or higher.

8.4 Unmet Need

Unmet need[9] for contraception refers to fecund women who are not using any method of contraception, but who wish to postpone the next birth or who wish to stop childbearing altogether. Unmet need is identified in MICS by using a set of questions eliciting current behaviours and preferences pertaining to contraceptive use, fecundity, and fertility preferences.

Women with an unmet need for spacing includes 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(another) child, but want to have the child at least two years later, or after marriage.

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

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

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

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

Table 8.4: Use of contraception (RH.1)

Percentage of women aged 15-49 years currently married or in union who are using (or whose partner is using) a contraceptive method, Mombasa Informal Settlement Survey, Kenya, 2009

	Percent of women (currently married or in union) who are using:														
	Not using any method	Female sterilization	Pill	IUD	Injections	Implants	Condom	LAM	Periodic abstinence	Withdrawal	Total	Any modern method	Any traditional method	Any method[1]	Number of women
Age															
15-24	65.3	0.0	3.5	0.0	25.2	0.6	0.6	1.8	3.0	0.0	100.0	29.9	4.8	34.7	158
25-34	55.9	0.5	9.9	0.9	24.6	1.8	0.8	1.8	3.3	0.4	100.0	38.6	5.5	44.1	221
35-49	63.2	4.0	6.0	2.0	16.0	2.2	2.8	1.0	2.9	0.0	100.0	33.0	3.8	36.8	103
Number of living children															
0	89.9	0.0	3.3	0.0	3.6	0.0	1.7	0.0	1.5	0.0	100.0	8.7	1.5	10.1	60
1	61.7	0.0	6.3	0.7	22.6	1.4	0.6	2.0	4.7	0.0	100.0	31.6	6.7	38.3	141
2	49.4	0.0	8.7	0.9	35.0	2.0	0.0	1.0	3.0	0.0	100.0	46.6	4.0	50.6	97
3	57.0	1.4	9.0	0.0	26.5	1.3	1.2	1.3	2.3	0.0	100.0	39.3	3.6	43.0	77
4+	55.2	3.9	6.9	1.9	20.9	2.1	2.7	2.7	2.8	0.9	100.0	38.4	6.3	44.8	107
Education															
None	(88.1)	(2.6)	(2.4)	(0.0)	(6.9)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(100.0)	(11.9)	(0.0)	(11.9)	42
Primary	62.6	1.2	5.8	0.3	23.5	1.1	0.3	2.4	2.4	0.3	100.0	32.2	5.2	37.4	279
Secondary +	49.2	0.6	10.3	1.9	26.5	2.6	3.0	0.6	5.2	0.0	100.0	44.9	5.8	50.8	160
Wealth index															
Low	75.4	0.8	2.0	0.6	15.9	.7	1.3	1.4	2.0	0.0	100.0	21.2	3.4	24.6	142
Medium	56.1	0.6	4.3	0.0	28.9	1.8	1.8	3.0	3.5	0.0	100.0	37.4	6.5	43.9	161
High	52.8	1.8	13.3	1.7	23.3	1.8	0.5	0.6	3.6	0.5	100.0	42.4	4.7	47.2	179
Religion of household head															
Catholic	61.7	2.5	7.6	0.0	17.1	3.6	1.3	1.2	5.0	0.0	100.0	32.1	6.2	38.3	80
Other Christian	53.8	0.5	6.8	1.2	29.4	1.4	1.2	2.0	3.8	0.0	100.0	40.4	5.8	46.2	240
Muslim	72.2	1.4	6.1	0.6	14.4	0.7	1.2	1.4	1.3	0.6	100.0	24.5	3.3	27.8	151
Total	60.5	1.1	7.0	0.8	23.0	1.5	1.2	1.6	3.1	0.2	100.0	34.5	4.9	39.5	482

[1] MICS indicator 5.3 and MDG indicator 5.3

( ) Based on 25-49 un-weighted cases.

Note: 2 women with information on education missing and 11 women belong to other religion are not shown separately.

Table 8.5 shows the results of the unmet need and the demand for contraception satisfied among currently married or in union women aged 15-49 years in Mombasa informal settlements. The total unmet need for contraception is 24 per cent, of which 14 per cent is for spacing and the remaining 10 per cent is for limiting. As expected, unmet need for contraception decreases with increase in age of women.

Overall, among those wanting to use contraception in Mombasa informal settlements, 62 per cent are currently using them or their demands are met. The proportion with demand for contraception satisfied increases with increasing educational level and household wealth index. As seen in case of unmet need, the proportion with contraceptive demand satisfied (47 per cent) is lower among Muslims compared with other religions (around 68 per cent).

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

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, Mombasa Informal Settlement Survey, Kenya, 2009

	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[1]			
Age							
15-24	34.7	24.2	5.6	29.8	158	53.8	102
25-34	44.1	10.5	10.9	21.5	221	67.3	145
35-49	36.8	3.9	16.0	19.9	103	65.0	58
Education							
Primary	37.4	13.8	9.9	23.7	279	61.2	170
Secondary +	50.8	10.8	8.7	19.6	160	72.2	112
Wealth index							
Low	24.6	18.2	13.9	32.2	142	43.4	80
Medium	43.9	12.1	5.7	17.9	161	71.1	100
High	47.2	11.2	11.4	22.6	179	67.6	125
Religion of household head							
Catholic	38.3	7.1	11.5	18.5	80	(67.4)	45
Other Christian	46.2	14.5	7.2	21.7	240	68.0	163
Muslim	27.8	15.8	15.1	31.0	151	47.3	89
Total	39.5	13.6	10.2	23.8	482	62.3	305

[1] MICS indicator 5.4 and MDG indicator 5.6

@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.

*Not shown, based on less than 25 un-weighted cases. ( ) Based on 25-49 un-weighted cases.

Note: 23 women belong to no education or missing information on education and 8 women belong to other religion are not shown separately.

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 unborn child. 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 provide 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 specific on the content of antenatal care visits, which include:

- Blood pressure measurement
- Urine testing for bacteriuria 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 preceding years by selected characteristics is presented in Table 8.6. Coverage of antenatal care by any skilled personnel (a doctor, nurse, or midwife) is relatively high in Mombasa informal settlements with 94 per cent of women receiving antenatal care at least once during the pregnancy. No substantial differences were noticed between age, education levels, wealth index and religion with respect to receiving any antenatal care from any skilled personnel. However, in line with other indicators, the proportion of women receiving antenatal care from a medical doctor was higher among women from wealthier households (40 per cent) than those from low wealth index (26 per cent).

Table 8.6: Antenatal care provider (RH.3)

Percent distribution of women aged 15-49 who gave birth in the two years preceding the survey by type of personnel providing antenatal care, Mombasa Informal Settlement Survey, Kenya, 2009

	Person providing antenatal care#							
	Medical doctor	Nurse/ midwife	Clinical Officer	Relative/ friend	No antenatal care	Total	Antenatal care by any skilled personnel@	Number of women who gave birth in the preceding two years
Age								
15-24	32.9	53.7	7.7	1.0	4.7	100.0	94.3	104
25-34	38.4	50.9	3.3	0.0	7.4	100.0	92.6	83
Education								
Primary	35.6	52.9	4.1	0.9	6.5	100.0	92.6	122
Secondary +	39.1	52.0	5.9	0.0	3.0	100.0	97.0	66
Wealth index								
Low	25.9	59.8	7.0	0.0	7.4	100.0	92.6	68
Medium	39.2	49.2	4.4	1.5	5.7	100.0	92.8	69
High	40.4	50.0	5.4	0.0	4.2	100.0	95.8	73
Religion of household head								
Catholic	(25.0)	(65.4)	(3.3)	(0.0)	(6.4)	(100.0)	(93.6)	31
Other Christian	36.8	49.9	7.9	1.0	4.5	100.0	94.5	111
Muslim	36.8	55.4	1.6	0.0	6.2	100.0	93.8	65
Total	35.3	52.9	5.6	0.5	5.7	100.0	93.8	211

[1] MICS indicator 5.5a and MDG indicator 5.5 - includes doctors, nurses, midwives, and auxiliary midwives.
#If the respondent mentioned more than one provider, only the most qualified provider is considered.
( ) Based on 25-49 un-weighted cases.
Note: 24 women age 35-49 years, 23 women with no education and 4 women belong to other religion are not shown separately.

The types of ANC services provided to pregnant women by selected characteristics are shown in Table 8.7. Among those women who have given birth to a child during the two years preceding the survey, 89 per cent reported that a blood sample was taken during antenatal care visits, 90 per cent reported that their blood pressure was checked, 87 per cent reported that urine specimen was taken and in 92 per cent of cases weights were measured. The differentials by selected characteristics are not very substantial.

Table 8.7: Antenatal care (RH.4)

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, Mombasa Informal Settlement Survey, Kenya, 2009

	Percent of pregnant women receiving ANC one or more times during pregnancy	Percent 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						
15-24	95.3	88.1	89.4	86.6	92.4	104
25-34	92.6	89.3	87.8	84.4	90.2	83
Education						
Primary	93.5	85.9	88.4	84.5	92.6	122
Secondary +	97.0	94.2	94.0	92.4	92.4	66
Wealth index						
Low	92.6	85.8	86.9	82.7	92.6	68
Medium	94.3	91.1	91.1	86.9	89.9	69
High	95.8	90.1	90.4	90.4	93.2	73
Religion of household head						
Catholic	(93.6)	(93.6)	(90.5)	(87.3)	(90.5)	31
Other Christian	95.5	88.4	90.1	86.7	92.7	111
Muslim	93.8	90.5	92.0	90.5	92.3	65
Total	94.3	89.0	89.5	86.8	91.9	211

@Proportions are calculated separately: Total number of women weighed, blood pressure measured, gave urine sample, gave blood sample.
( ) Based on 25-49 un-weighted cases.
Note: 24 women age 35-49 years, 23 women with no education and 4 women belong to other religion are not shown separately.

UNICEF and WHO recommend a minimum of at least four antenatal care visits during pregnancy. Table 8.8 shows number of antenatal care visits during the last pregnancy in the two years preceding the survey, regardless of provider by selected characteristics. Almost nine in ten mothers (87 per cent) receive antenatal care more than once and over half of mothers received antenatal care at least four times (57 per cent). Mothers from the poorest households and those with primary education are less likely to receive ANC four or more times than wealthier and highly educated mothers. For example, 44 per cent of the women belonging to low wealth index reported four or more antenatal care visits compared with 64 per cent for those from high wealth index category.

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 is to ensure that women have ready and affordable access to skilled attendance at delivery. The indicators are the proportion of births with a skilled attendant and proportion of institutional deliveries. The indicator for skilled attendant at delivery is also used to track progress toward the Millennium Development target of reducing the maternal mortality ratio by three quarters between 1990

Table 8.8: Number of antenatal care visits (RH.7)

Percent distribution of women who had a live birth during the two years preceding the survey by number of antenatal care visits by any provider, Mombasa Informal Settlement Survey, Kenya, 2009

	Percent distribution of women who had:							Number of women who had a live birth in the preceding two years
	No antenetal care visits	One visit	Two visits	Three visits	4 or more visits[1]	DK/ missing	Total	
Mother's age at birth								
Less than 20	(11.4)	(12.0)	(4.1)	(12.6)	(59.9)	(0.0)	(100.0)	25
20-29	3.8	6.1	11.3	20.7	58.2	0.0	100.0	133
30-49	7.7	3.9	9.5	24.5	50.5	3.9	100.0	53
Education								
Primary	6.5	7.4	12.4	21.6	52.1	0.0	100.0	122
Secondary	3.0	4.7	4.7	17.0	69.1	1.5	100.0	66
Wealth index								
Low	7.4	7.2	14.2	27.8	43.5	0.0	100.0	68
Medium	5.7	6.1	10.7	14.5	61.4	1.6	100.0	69
High	4.2	5.4	5.3	20.0	63.8	1.3	100.0	73
Religion of household head								
Catholic	(6.4)	(12.9)	(15.2)	(18.5)	(47.0)	(0.0)	(100.0)	31
Other Christian	4.5	4.5	9.6	20.6	60.0	0.9	100.0	111
Muslim	6.2	6.4	7.2	20.0	58.4	1.7	100.0	65
Total	**5.7**	**6.2**	**10.0**	**20.7**	**56.5**	**1.0**	**100.0**	**211**

[1] MICS indicator 5.5b; MDG indicator 5.5

( ) Based on 25-49 un-weighted cases.

Note: 23 cases with no education and 4 cases from other religion are not shown separately.

and 2015.

The Mombasa Informal Settlement Survey (MICS4) 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 8.9 shows the type of personnel available at delivery by selected characteristics. Sixty seven per cent of births that occurred during the two years preceding the survey were delivered by skilled personnel. Educated women are more likely to deliver the baby with the assistance of a skilled attendant and a similar trend is observed with the level of household wealth index. For example, 42 per cent of women from low wealth index households were assisted by a skilled health personnel during delivery compared with 89 per cent among those from the high wealth index. The proportion delivering their baby in a health facility shows a similar pattern. A significant proportion (18 per cent) of deliveries to women who live in Mombasa informal settlements were assisted by traditional birth attendants and nine per cent were assisted by either a relative or friend. The differentials by religion of household head show that Muslim women are less likely to deliver their babies with the assistance of any skilled health personnel or deliver their babies in a health facility compared with Catholic or other Christian women who live in Mombasa informal settlements.

Table 8.9: Assistance during delivery (RH.5)

Percent distribution of women aged 15-49 with a birth in two years preceding the survey by type of personnel assisting at delivery, Mombasa Informal Settlement Survey, Kenya, 2009

	Person assisting at delivery											
	Medical doctor	Clinical officer	Nurse/ midwife	Traditional birth attendant	Community health worker	Relative / friend	Other/ missing	No attendant	Total	Any skilled personnel[1]	Delivered in health facility[2]	Number of women who gave birth in preceding two years
Age												
15-24	30.6	6.6	31.8	14.0	0.9	11.3	4.0	0.9	100.0	68.9	66.9	104
25-34	31.5	4.8	31.3	19.7	0.0	5.7	1.1	5.9	100.0	67.6	66.4	83
Education												
Primary	28.0	6.3	28.0	21.7	0.0	10.4	2.4	3.2	100.0	62.3	59.8	122
Secondary +	41.0	4.7	41.0	6.1	1.5	2.7	1.5	1.5	100.0	86.7	86.7	66
Wealth index												
Low	19.7	3.0	18.9	32.8	0.0	18.1	4.6	2.9	100.0	41.6	38.6	68
Medium	34.1	4.2	29.6	16.3	1.4	7.7	4.1	2.7	100.0	67.9	67.9	69
High	36.7	9.4	43.2	5.5	1.2	1.2	0.0	2.8	100.0	89.3	87.9	73
Religion of household head												
Catholic	(34.3)	(3.6)	(34.2)	(9.4)	(3.1)	(12.5)	(0.0)	(3.0)	(100.0)	(72.1)	(68.9)	31
Other Christian	31.2	8.0	34.6	12.2	0.0	8.8	3.5	1.8	100.0	73.8	73.8	111
Muslim	28.9	3.0	23.3	29.6	1.4	6.1	3.2	4.5	100.0	55.2	53.5	65
Total	30.4	5.6	30.9	17.9	0.9	8.8	2.8	2.8	100.0	66.9	65.4	211

[1] MICS indicator 5.7 and MDG indicator 5.2 - doctors, clinical officer, nurses, midwives and community health worker.
[2] MICS indicator 5.8
( ) Based on 25-49 un-weighted cases.
Note: 24 women age 35-49, 23 women with no education and 4 women belong to other religion are not shown separately.

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 a major determinant of the child's development during this period. In this context, adult activities with children, presence of books at home, for the child, and the conditions of care are important indicators of quality of child care. A World Fit for Children goal is that "children should be physically healthy, mentally alert, emotionally secure, socially competent and ready to learn."

Information on a number of activities that support early learning and development was collected in the Mombasa Informal Settlement 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.

9.1 Adult Participation in Childhood Development

Table 9.1 shows the family support for learning disaggregated by selected characteristics. In slightly more than one in four (26 percent) children under-five, an adult is engaged in four or more activities that promote learning and school readiness during the 3 days preceding the survey. The average number of activities that household members engaged with children was only 2.3. Father's involvement with one or more activities was in 39 percent cases, with an average of less than one activity during the three days preceding the survey. The differentials by selected characteristics show that, the involvement of parents in childhood development activities is positively associated with parent's educational level and household wealth index.

9.2 Availability of Learning Materials

The mother/caretaker of all children under five years were asked about 'number of children's books or picture books you have for the child', 'household objects or outside objects', 'home made toys' or 'toys that came from a shop' that are available for the child to play with at home, and the results are presented in Table 9.2. Less than seven per cent of the children under five reported to have three or more children's book. The availability of learning materials at home increased with increasing educational levels of parents. Overall, 33 per cent of the children reported to have three or more types of playing things at home. Seventy three per cent have household objects or outside objects, 46 percent have homemade toys and 72 per cent have toys that came from a shop. The availability of playing things at home increased with parent's educational level and household wealth index. For example, 33 per cent of the children to mothers with no education reported to have three or more playing things compared with 38 per cent among those with mothers educated up to secondary or higher.

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

Percentage of children aged 0-59 months for whom household members are engaged in activities that promote learning and school readiness, Mombasa Informal Settlement Survey, Kenya, 2009

	Percent of children under 5		Mean number of activities			
	With whom adult household members engaged in four or more activities[1]	For whom the father engaged in one or more activities[2]	An adult household member engage in with the child	The father engaged in with the child	Living in a household without their natural father	Number of children aged 0-59 months
Sex						
Male	24.6	38.1	2.3	0.7	23.1	246
Female	26.8	39.5	2.4	0.7	17.6	208
Age						
0-23 months	10.9	35.8	1.8	0.6	16.3	194
24-59 months	36.6	40.9	2.7	0.9	23.7	260
Mother's education						
None	23.4	30.8	2.3	0.4	20.4	53
Primary	21.4	43.6	2.2	0.8	19.4	268
Secondary +	35.1	32.1	2.6	0.7	23.0	133
Father's education						
Primary	21.5	47.4	2.2	0.8	NA	174
Secondary +	30.3	50.6	2.5	1.1	NA	171
Father not in HH	23.6	4.1	2.3	0.1	100.0	93
Wealth index						
Low	20.8	30.4	2.1	0.5	26.6	150
Medium	24.1	40.2	2.3	0.8	17.6	146
High	31.6	45.4	2.6	0.9	17.6	157
Religion of household head						
Catholic	22.9	33.5	2.3	0.7	26.9	64
Other Christian	25.3	42.0	2.3	0.8	19.5	222
Muslim	28.2	36.8	2.4	0.7	19.8	162
Total	25.6	38.7	2.3	0.7	20.6	454

[1] MICS indicator 6.1 – engaged in activities to promote learning and school readiness during past 3 days.
[2] MICS indicator 6.2 – Father engaged in activities that promote learning and school readiness.
Note: 15 children with father's education none or other and 7 children belong to other religion are not shown separately.

9.3 Child Care

Presence of an adult member is an important factor in a child's growth and development. In Mombasa Informal Settlement Survey, questions were addressed to mother/caretaker of all children below five years of age to understand the extent to which young children are left alone at home, and the results are presented in Table 9.3. The specific questions asked were 'On how many days in the past week the child was - left alone?' and 'left in the care of another child (below 10 years old)?' In Mombasa informal settlements, about one in five children were left with inadequate care during the one week preceding the survey. Ten per cent reported that the child was left in the care of another child and 13 per cent reported that the child was left alone at home. The differentials by selected characteristics show that, the proportion of children left in inadequate care decreases with household wealth. The sex differentials show that a higher proportion of male children were left in inadequate care compared with female children during the week preceding the survey.

Table 9.2: Learning materials for children (CD.2)

Percentage of children aged 0-59 months living in households containing learning materials, Mombasa Informal Settlement Survey, Kenya, 2009

Characteristic	Percent of children having 3 or more books[1]	Child play with				Percent of children having 3 or more types of playing things	Number of children aged 0-59 months
		Household objects or outside objects	Home-made toys	Toys that came from shop	No playthings mentioned		
Sex							
Male	7.8	69.9	45.1	70.2	13.2	33.8	246
Female	5.4	76.4	46.9	73.4	9.6	32.2	208
Age							
0-23 months	1.6	58.6	39.0	63.9	22.8	28.0	194
24-59 months	10.5	83.5	51.0	77.5	3.1	36.8	260
Mother's education							
None	4.0	81.8	59.6	53.2	14.7	33.4	53
Primary	5.6	72.0	41.2	69.2	12.9	30.5	268
Secondary +	10.0	71.0	49.8	84.0	7.5	38.1	133
Father's education							
Primary	3.7	75.8	44.9	67.5	14.5	32.9	174
Secondary +	11.7	71.1	49.4	78.8	9.3	37.3	171
Father not in HH	4.4	71.6	39.2	72.5	7.5	26.5	93
Wealth index							
Low	2.1	75.8	43.3	55.4	14.2	22.8	150
Medium	9.5	72.5	47.4	75.3	10.7	39.2	146
High	8.6	70.4	46.9	83.8	9.8	37.1	157
Religion of household head							
Catholic	7.6	69.9	41.5	71.5	9.7	27.6	64
Other Christian	6.4	69.5	41.7	73.9	12.3	31.1	222
Muslim	6.4	79.3	54.7	71.6	10.5	39.3	162
Total	6.7	72.9	45.9	71.7	11.5	33.1	454

[1] MICS indicator 6.3.

Note: 15 children with father's education none or other and 7 children belong to other religion are not shown separately.

Table 9.3: Children left alone or with other children (CD.3)

Percentage of children age 0-59 months left in the care of other children under the age of 10 years or left alone in the past week, Mombasa Informal Settlement Survey, Kenya, 2009

Characteristic	Percentage of children age 0-59 months			Number of children aged 0-59 months
	Left in the care children under the age of 10 years in past week	Left alone in the past week	Left with inadequate care in past week[1]	
Sex				
Male	12.5	13.4	21.5	246
Female	7.7	12.5	16.5	208
Age				
0-23 months	8.2	10.3	13.9	194
24-59 months	11.9	15.0	23.1	260
Mother's education				
None	7.4	17.9	21.6	53
Primary	9.6	13.7	17.8	268
Secondary +	12.9	9.7	21.1	133
Father's education				
Primary	13.1	16.0	23.4	174
Secondary +	10.0	7.6	14.7	171
Father not in HH	7.5	17.3	20.6	93
Wealth index				
Low	12.6	18.5	26.5	150
Medium	11.1	11.6	17.9	146
High	7.4	9.0	13.4	157
Religion of household head				
Catholic	22.0	15.5	31.3	64
Other Christian	9.4	11.2	17.5	222
Muslim	7.4	15.1	17.6	162
Total	10.3	13.0	19.2	454

[1] MICS indicator 6.5 - inadequate care is defined as children left in the care of other children under the age of 10 years or left alone in the past week.
Note: 15 children with father's education none or other and 7 children belong to other religion are not shown separately.

9.4 Child Development Index

Early child development is defined as an orderly, predictable process along a continuous path, in which a child learns to handle more complicated levels of moving, thinking, speaking, feeling and relating to others. Physical growth, literacy and numeracy skills, socio-emotional development and readiness to learn are vital domains of a child's overall development, which is a basis for overall human development.

In Mombasa Informal Settlement Survey a 10-item questionnaire was developed and used to calculate the Early Child Development Index (ECDI). The question specifies some benchmarks that children would be expected to have if they are developing as the majority of children in that age group. The primary purpose of the ECDI is to inform public policy regarding the developmental status of surveyed Mombasa children. The results are presented in Table 9.4. In Mombasa informal settlements, 40 per cent of children aged 36-59 months are developmentally on track. ECDI is higher among boys (43 per cent) than girls (37 per cent). As expected, ECDI is much higher in older age group (49 per cent among 48-59 months old compared to 33 per cent among 36-47 months old), since children gain more skills with increase in age. Higher ECDI is seen in children attending pre-school (55 per cent compared to 17 per cent for those who are not attending

preschool) – a somewhat expected pattern, but not of this magnitude. Children living in low wealth index households have lower ECDI (34 per cent) compared to children living in high wealth index households (47 per cent of children developmentally on track). The analysis of four domains of child development shows that 76 per cent of Mombasa children living in informal settlements are on track in the learning domain, but much less on track (53 per cent) in physical, literacy-numeracy (46 per cent) and social-emotional (43 per cent) domain. The pattern is similar as the one presented above – in each individual domain the higher score is associated with high wealth index households, with children attending preschool, older children, and among boys.

Table 9.4: Child development outcomes (CD5 – MICS4)

Percentage of children age 36-59 months who are developmentally on target in language-cognitive, physical, social-emotional, and approaches to learning domains, and the child development index score, Mombasa Informal Settlement Survey, Kenya, 2009

	Percentage of children age 36-59 months who are developmentally on target for indicated domains				Child development index score[1]	Number of children age 36-59 months
	Language-Cognitive	Physical	Social-Emotional	Approaches to learning		
Sex						
Male	48.8	60.7	45.7	81.4	43.3	99
Female	44.0	44.7	40.2	69.3	36.8	88
Age						
36-47 months	33.0	57.7	45.0	69.6	33.3	106
48-59 months	64.4	47.3	40.6	83.8	49.4	80
Preschool attendance						
Attending	62.9	55.9	49.9	79.3	54.6	116
Not attending	20.2	53.3	36.1	77.2	17.0	62
Mother's education						
Primary	44.3	56.9	43.3	78.2	41.1	108
Secondary +	59.3	48.2	44.8	75.7	41.1	56
Wealth index						
Low	30.9	56.5	38.4	69.9	34.1	63
Medium	44.0	49.0	44.6	77.2	39.2	60
High	64.4	53.8	46.6	80.1	47.3	63
Religion of household head						
Catholic	(48.0)	(42.3)	(41.0)	(76.1)	(33.9)	29
Other Christian	49.0	50.7	38.9	79.9	40.7	87
Muslim	44.7	61.9	48.4	70.5	44.0	68
Total	46.5	53.2	43.1	75.7	40.2	186

[1] MICS indicator 6.6 - child development index is calculated as the percentage of children who are developmentally on target in at least three of the four component domains (language-cognitive, physical, social-emotional, and approaches to learning).
( ) Based on 25-49 un-weighted cases.
Note: 8 children with missing information on pre-school attendance, 23 children with illiterate mother/caretaker and 3 children belong to other religion are not shown separately.

10.1 Pre-School Attendance and School Readiness

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

Details on Early Childhood Education (ECD) by background characteristics such as sex and age of child in months, mother's education, wealth index and religion of household head are presented in Table 10.1. Sixty two per cent of children aged 36-59 months are currently attending an early childhood education centre (or pre-school). The proportion of children attending an ECD centre increases with mother's education and wealth index. For example, 51 per cent of children of mothers with no education currently attend an ECD centre while attendance is 74 per cent among children with mothers educated up to secondary and above. Similarly, 45 per cent of children living in low wealth index households attend pre-school compared with 80 per cent among those who live in high wealth index households. As expected, children of young age group 36-47 months are less likely (54 per cent) to attend pre-school in comparison to 48-59 months old (73 per cent).

Table 10.1: Early childhood education (ED.1)

Percentage of children aged 36-59 months who are attending some form of organized early childhood education programme, Mombasa Informal Settlement Survey, Kenya, 2009

	Percentage of children currently attending early childhood education[1]	Number of children aged 36-59 months
Sex		
Male	63.2	99
Female	61.6	88
Age of child		
36-47 months	54.1	106
48-59 months	73.4	80
Mother's education		
Primary	58.8	108
Secondary +	73.9	56
Wealth index		
Low	44.5	63
Medium	62.3	60
High	80.4	63
Religion of household head		
Catholic	(57.8)	29
Other Christian	67.6	87
Muslim	60.4	68
Total	62.4	186

[1] MICS indicator 6.7
( ) Based on 25-49 un-weighted cases.
Note: 23 children with no education on mother and 2 children belong to other religion are not shown separately.

10.2 Primary and Secondary School Participation

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

The indicators for primary and secondary school attendance include:

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

The indicators of school progression include:

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

Information on Primary school entry by sex of the child is presented in Table 10.2. Among children who are of primary school entry age (6 years) in Mombasa informal settlements, 57 per cent are attending the first grade of primary school. More male children of primary school entry age are attending the first grade (62 per cent) compared with female children (52 per cent).

Table 10.2: Primary school entry (ED.2)

Percentage of children of primary school entry age (6 years old) attending grade 1, Mombasa Informal Settlement Survey, Kenya, 2009

	Percentage of children currently attending grade 1[1]	Number of children of primary school entry age
Male	(62.2)	35
Female	(52.0)	32
Total	57.4	67

[1] MICS indicator 7.3
( ) Based on 25-49 un-weighted cases.

Table 10.3 provides the percentage of children of primary school age attending primary school by selected characteristics. Ninety-one per cent of children of primary school age are attending school. Primary school attendance among female children is slightly higher than that of male children, 92 per cent against 90 per cent. As expected, primary school attendance increases with increasing education of the mother and household wealth index. For example, 86 per cent of the primary school age children from low wealth index are currently attending primary school compared with 97 per cent from high wealth index households.

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

Percentage of children of primary school age (6 – 13 years) attending primary or secondary school (NAR), Mombasa Informal Settlement Survey, Kenya, 2009

	Net attendance ratio[1]			Number of children		
	Male	Female	Total	Male	Female	Total
Age						
6	(67.5)	(80.8)	73.8	35	32	67
7	(85.1)	(83.7)	84.5	40	25	65
8	(100.0)	(95.3)	97.2	27	40	67
9	(100.0)	*	(100.0)	26	22	48
10	*	(97.2)	98.2	21	35	56
11	(100.0)	(100.0)	100.0	27	30	57
12	*	(87.6)	88.6	21	33	53
13	*	*	(87.3)	23	17	40
Mother's education						
None	(85.0)	(88.3)	86.8	33	42	75
Primary	89.4	90.4	89.9	119	126	245
Secondary +	93.8	96.9	95.3	65	64	129
Wealth index						
Low	85.7	87.1	86.4	77	86	162
Medium	88.5	88.2	88.4	65	60	125
High	94.8	98.9	97.0	78	88	166
Religion of household head						
Christian	93.8	92.8	93.3	112	110	222
Muslim	85.6	91.7	88.9	102	121	223
Total	89.8	91.8	90.8	220	234	453

[1] MICS indicator 7.4
Note: All children of primary school age are included in the denominator.
*Not shown, based on less than 25 un-weighted cases.
( ) Based on 25-49 un-weighted cases.
Note: 4 children with missing/other category on education of mother and 8 children belong to other religion are not shown separately.

Table 10.4 presents the secondary school net attendance ratio by selected characteristics. In Mombasa informal settlements, 27 per cent of the children of secondary school age (14 - 17 years) are attending secondary school. Of the remaining 73 per cent, some of them are either out of school or attending primary school (also see Table 10.5). Overall, there is no evidence of gender disparity in secondary school attendance. As in the case of primary school attendance, the secondary school attendance also increases with increasing mother's educational level and household wealth index.

The percentage distribution of children of secondary school age (14–17 years) attending primary school by selected characteristics in Mombasa informal settlements is presented in Table 10.5. Little more than one in four (27 per cent) children of secondary school age are attending primary school when they should be attending secondary school. The proportion of secondary school age children attending primary school declines with increase in child's age. Similarly, the proportion declines with increase in the mother's education. The differentials by sex of the child show that, a much higher proportion of male children in the secondary school age are attending primary school compared with female children, 39 per cent compared to 16 per cent.

Table 10.4: Secondary school net attendance ratio (ED.4)

Percentage of children of secondary school age (14 – 17 years) attending secondary school or higher (NAR), Mombasa Informal Settlement Survey, Kenya, 2009

	Net attendance ratio[1]			Number of children		
	Male	Female	Total	Male	Female	Total
Age						
14	(24.3)	*	23.1	29	24	52
15	(21.6)	(43.6)	32.9	28	30	57
16	(30.2)	(29.3)	29.7	26	28	54
17	*	(14.2)	22.0	24	35	59
Mother's education						
Primary	*	*	(23.5)	16	18	34
Secondary +	*	*	(80.0)	12	13	25
Mother not in HH	(19.3)	(11.5)	50.0	36	42	78
Wealth index						
Low	(17.4)	(14.2)	15.9	46	41	86
Medium	(37.4)	(24.1)	31.0	32	30	62
High	(30.6)	(40.2)	36.4	29	45	74
Religion of household head						
Christian	(47.7)	28.1	36.3	48	66	114
Muslim	10.3	(24.4)	16.5	59	46	105
Total	27.0	26.9	26.9	107	116	222

[1] MICS indicator 7.5
Note: All children of secondary school age are included in the denominator.
*Not shown, based on less than 25 un-weighted cases.
( ) Based on 25-49 un-weighted cases.
Note: 24 children with no education, 2 children with missing/other category on education of mother and 3 children belong to other religion are not shown separately.

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

Percentage of children of secondary school age (14 – 17 years) attending primary school, Mombasa Informal Settlement Survey, Kenya, 2009

	Percent attending primary school			Number of children		
	Male	Female	Total	Male	Female	Total
Age						
14	(61.8)	*	55.1	29	24	52
15	(42.8)	(16.6)	29.3	28	30	57
16	(27.3)	(3.6)	15.1	26	28	54
17	*	(5.7)	11.6	24	35	59
Mother's education						
Primary	*	*	(43.8)	16	18	34
Secondary +	*	*	(15.9)	12	13	25
Mother not in HH	(35.9)	(20.9)	27.7	36	42	78
Wealth index						
Low	(43.1)	(16.7)	30.6	46	41	86
Medium	(40.4)	(33.6)	37.1	32	30	62
High	(30.9)	(4.6)	14.9	29	45	74
Religion of household head						
Christian	(26.4)	13.2	18.8	48	66	114
Muslim	49.2	(19.7)	36.2	59	46	105
Total	39.0	16.4	27.2	107	116	222

*Not shown, based on less than 25 un-weighted cases.
( ) Based on 25-49 un-weighted cases.
Note: 24 children with no education, 2 children with missing/other category on education of mother and 3 children belong to other religion are not shown separately.

10.3 Adult Literacy

One of the World Fit for Children goals is to achieve adult literacy. Adult literacy is also an MDG indicator, relating to both men and women. In this report, the results are based only on females aged 15-24 since only a women's questionnaire was administered. Literacy was assessed on the ability of women to read a short simple statement or on school attendance. Information on adult literacy by selected characteristics is presented in Table 10.6. Overall, 84 per cent of women aged 15-24 years in Mombasa informal settlement are literate. The level of literacy increases with increasing household wealth index. In one per cent of cases, the literacy status could not be calculated due to missing information.

Table 10.6: Adult literacy (ED.8)

Percentage of women aged 15-24 years that are literate#, Mombasa Informal Settlement Survey, Kenya, 2009

	Percentage literate[1]	Percentage not known	Number of women aged 15-24 years
Age			
15-19	83.2	1.7	118
20-24	84.9	0.9	242
Wealth index			
Low	75.3	2.5	118
Medium	89.5	0.0	121
High	87.9	0.9	121
Religion of household head			
Catholic	88.1	1.4	67
Other Christian	88.0	0.6	188
Muslim	75.4	2.1	97
Total	84.3	1.1	360

[1] MICS indicator 7.1 and MDG indicator 2.3
#women aged 15-24 years who are able to read a short simple statement about everyday life or who attended secondary or higher education.
Note: 7 children belong to other religion is not shown separately.

11.1 Birth Registration

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

Details on birth registration by selected characteristics are presented in Table 11.1. In Mombasa informal settlements, births of 69 per cent children under-five years of age are reportedly registered. A higher proportion of females (72 per cent) are registered compared to males (67 per cent). Mother's education and wealth index of the household significantly influence the level of birth registration. For example, 57 per cent of the births were registered among children who live in low wealth index households compared with 78 per cent among those who live in high wealth index households. Among those whose births are not registered, travel distance and lack of knowledge that a child should be registered and where to register appear to be the main reasons for not registering the birth. Thirty nine per cent reported that they 'don't know the place to register the birth', 27 per cent 'don't know child should be registered', followed by 'need to travel long distance' (11 per cent). Other reasons for not registering the birth were reported by 16 per cent.

Table 11.1: Birth registration (CP.1)

Percent distribution of children aged 0-59 months by whether birth is registered and reasons for non-registration, Mombasa Informal Settlement Survey, Kenya, 2009

			Birth is not registered because:									
	Birth is registered[1]	Number of children aged 0-59 months	Costs too much	Must travel too far	Didn't know child should be registered	Did not want to pay fine	Doesn't know where to register	Other	Don't know	Miss-ing	Total	Number of children without birth regist-ration
Sex												
Male	66.6	246	2.6	10.9	22.6	1.3	40.4	19.8	1.2	1.2	100.0	79
Female	72.0	208	3.4	10.0	33.2	0.0	37.9	10.3	3.3	2.0	100.0	57
Age in months												
0-11	69.1	94	(0.0)	(7.6)	(20.3)	(0.0)	(42.2)	(29.9)	(0.0)	(0.0)	(100.0)	29
12-23	67.6	100	(2.9)	(6.1)	(26.8)	(0.0)	(45.1)	(16.1)	(0.0)	(3.0)	(100.0)	32
24-35	63.7	74	(8.0)	(13.6)	(27.5)	(0.0)	(27.5)	(15.3)	(3.7)	(4.5)	(100.0)	25
36-47	68.5	106	(3.5)	(12.5)	(30.3)	(0.0)	(44.8)	(3.1)	(5.9)	(0.0)	(100.0)	31
48-59	76.8	80	*	*	*	*	*	*	*	*	*	19
Mother's education												
None	63.9	53	*	*	*	*	*	*	*	*	*	18
Primary	64.8	268	2.2	8.2	28.4	0.0	45.0	14.1	1.0	1.1	100.0	91
Secondary +	79.9	133	(3.5)	(21.6)	(23.5)	(0.0)	(18.4)	(29.0)	(0.0)	(4.2)	(100.0)	27
Wealth index												
Low	57.1	150	3.1	11.0	35.4	1.6	35.4	9.1	2.9	1.5	100.0	64
Medium	71.9	146	2.8	11.2	21.1	0.0	45.1	17.4	2.4	0.0	100.0	39
High	78.0	157	(2.8)	(8.8)	(18.3)	(0.0)	(40.2)	(26.7)	(0.0)	(3.3)	(100.0)	34
Religion of household head												
Christian	72.9	286	2.5	8.8	25.2	0.0	39.9	19.6	1.2	2.8	100.0	75
Muslim	64.6	162	3.8	13.8	27.3	1.8	37.6	12.3	3.4	0.0	100.0	55
Total	69.1	454	2.9	10.5	27.1	0.7	39.4	15.8	2.0	1.5	100.0	136

[1] MICS indicator 8.1

*Not shown, based on less than 25 un-weighted cases. ( ) Based on 25-49 un-weighted cases.

Note: 6 children belong to other religion is not shown separately.

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 addressed the issue of child labour, that is, children aged 5-14 years involved in labour activities. A child is considered to be involved in child labour activities at the time of the survey if during the week preceding the survey:

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

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

This definition allows differentiation between child labour and child work to identify the type of work that should be eliminated. As such, the estimate provided here is a minimum of the prevalence of child labour since some children may be involved in hazardous labour activities for a number of hours that could be less than the numbers specified in the criteria explained above. Table 11.2 presents the results of child labour by the type of work and selected characteristics. Percentages do not add up to the total child labour as children may be involved in more than one type of work. In Mombasa informal settlements, more than six per cent of the children aged 5-14 years are engaged in child labour. The incidence is much higher where mothers have no education (12 per cent) compared with mothers educated up to secondary or above (5 per cent). A similar negative association is observed between prevalence of child labour and household wealth index.

Table 11.2: Child labour (CP.2)

Percentage of children aged 5-14 years who are involved in child labour activities by type of work, Mombasa Informal Settlement Survey, Kenya, 2009

	Working outside household				
	Paid work	Unpaid work	Working for family business	Total child labour[1]	Number of children aged 5-14 years
Sex					
Male	3.1	2.5	1.7	7.3	291
Female	1.0	3.1	1.9	5.6	309
Age					
5-11 years	2.0	3.8	2.4	7.9	449
12-14 years	2.0	0.0	0.0	2.0	150
Mother's education					
None	3.4	2.4	6.2	12.0	91
Primary	1.8	3.5	0.6	5.8	338
Secondary +	1.8	1.8	1.8	4.8	164
Wealth index					
Low	3.3	2.5	4.1	9.5	209
Medium	3.0	4.4	0.0	7.4	167
High	0.0	1.9	0.9	2.8	224
Religion of household head					
Christian	2.0	1.7	1.0	4.7	302
Muslim	1.4	3.4	2.6	7.1	287
Total	2.0	2.8	1.8	6.4	600

[1] MICS indicator 8.2

Note: 7 children with missing information on mother's education and 11 children belong to other religion are not shown separately.

Table 11.3 presents the percentage of children classified as student labourers or as labourer students by selected characteristics in Mombasa informal settlements. Student labourers are children attending school but at the same time also involved in child labour activities at the time of the surveys. More specifically, of the 95 per cent of the children aged 5-14 years attending school, six per cent are also involved in child labour activities. On the other hand, out of the 20 per cent of the children classified as child labourers, all of them are reportedly attending school (100 per cent). Surprisingly, no substantial differentials were noticed between the boys and girls.

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

Percentage of children aged 5-14 years who are labourer students and student labourers, Mombasa Informal Settlement Survey, Kenya, 2009

	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[1]	Number of child labourers aged 5-14	Percentage of students who are also involved in child labour[2]	Number of students aged 5-14
Sex							
Male	7.3	95.8	291	*	21	7.6	279
Female	5.6	94.4	309	*	17	5.9	291
Age							
5-11 years	7.9	95.4	449	(100.0)	36	8.3	429
12-14 years	2.0	93.9	150	*	3	2.1	141
Mother's education							
None	12.0	90.3	91	*	11	13.3	82
Primary	5.8	94.8	338	*	20	6.2	320
Secondary +	4.8	98.1	164	*	8	4.9	161
Wealth index							
Low	9.5	91.3	209	*	20	10.4	191
Medium	7.4	94.4	167	*	12	7.9	157
High	2.8	99.1	224	*	6	2.8	222
Religion of household head							
Christian	4.7	96.3	302	*	14	4.9	290
Muslim	7.1	93.9	287	*	20	7.5	270
Total	6.4	95.1	600	(100.0)	39	6.8	570

[1] MICS indicator 8.3, [2] MICS indicator 8.4
*Not shown, based on less than 25 un-weighted cases.
( ) Based on 25-49 un-weighted cases.
Note: 7 children with missing information on mother's education and 11 children belong to other religion are not shown separately.

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 Mombasa informal settlement survey, mothers/caretakers of children aged 2-14 years were asked a series of questions on the ways parents tend to use to discipline their children when they misbehave. Note that for the child discipline module, one child aged 2-14 per household was selected randomly during fieldwork. Out of these questions, the two indicators used to describe aspects of child discipline are: 1) the number of children 2-14 years that experience psychological aggression as punishment or minor physical punishment or severe physical punishment; and 2) the number of parents/caretakers of children 2-14 years of age that believe that in order to raise their children properly, they need to physically punish them.

Information on child discipline by selected characteristics is presented in Table 11.4. In Mombasa informal settlements, 78 per cent of children aged 2-14 years were subjected to at least one form of psychological or physical punishment by their mothers/caretakers or other household members during the one month preceding the survey. The preferred modes of punishing children in these informal settlements include minor physical punishment (68 per cent) and to a lesser extent, psychological punishment (51 per cent). The differentials by selected characteristics did not reflect any consistent pattern. Two out of five (40 per cent) mothers/caretaker believe that a child needs to be physically punished to bring them up properly. This proportion is slightly higher in case of male children (44 per cent) compared with female children (37 per cent).

Table 11.4: Child discipline (CP.4)

Percentage of children aged 2-14 years according to method of disciplining the child, Mombasa Informal Settlement Survey, Kenya, 2009

	Percentage of children 2-14 years of age who experience:								
		Type of punishment							
	Only non-violent discipline	Psycho-logical	Minor physical	Severe physical	Any psychological or physical[1]	No discipline or punish-ment	Miss-ing	Mother/ caretaker believes that the child needs to be physically punished	Number of children aged 2-14 years#
Sex									
Male	13.8	51.9	71.5	19.5	79.6	6.1	0.5	43.8	199
Female	13.6	50.2	64.4	18.6	75.8	10.6	0.0	37.1	200
Age									
2-4 years	11.5	55.4	75.8	21.4	82.9	5.7	0.0	40.2	140
5-9 years	12.6	52.0	74.2	19.1	81.4	6.0	0.0	47.2	152
10-14 years	18.2	44.0	48.6	15.9	65.5	15.3	1.0	31.1	106
Mother's education									
None	(13.4)	(51.7)	(66.7)	(24.4)	(69.1)	(17.5)	(0.0)	(49.1)	45
Primary	14.4	49.1	72.1	17.7	79.4	6.2	0.0	36.6	216
Secondary +	12.2	53.6	61.8	19.8	78.1	9.0	0.8	43.1	135
Wealth index									
Low	18.0	52.6	65.2	18.1	74.9	7.1	0.0	36.7	123
Medium	9.8	52.8	73.8	24.4	80.2	10.0	0.0	40.8	123
High	13.4	48.3	65.4	15.6	77.9	8.0	0.7	43.2	152
Religion of household head									
Christian	12.8	48.7	69.6	18.3	78.5	8.3	0.4	40.5	244
Muslim	15.4	54.0	63.9	19.6	75.6	9.0	0.0	39.4	146
Total	13.7	51.0	67.9	19.1	77.7	8.4	0.3	40.4	399

[1] MICS indicator 8.5

Note: 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.

*Not shown, based on less than 25 un-weighted cases. ( ) Based on 25-49 un-weighted cases.

Note: 3 children with missing information on mother's education and 9 children belong to other religion are not shown separately.

11.4 Early Marriage and Polygyny

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

In many parts of the world parents encourage the marriage of their daughters while they are still children in hopes that the marriage will benefit them both financially and socially, while also relieving financial burdens on the family. In actual fact, child marriage is a violation of human rights, compromising the health and development of girls and often resulting in early pregnancy and social isolation, reinforcing the gendered nature of poverty. The right to 'free and full' consent to a marriage is recognized in the Universal Declaration of Human Rights - with the recognition that consent cannot be 'free and full' when one of the parties involved is not sufficiently mature to make an informed decision about a life partner. The Convention on the Elimination of all Forms of Discrimination against Women mentions the right to protection from child marriage in article 16, which states: "The betrothal and the marriage of a child shall have no legal effect, and all necessary action, including legislation, shall be taken to specify a minimum age for marriage..." While marriage is not considered directly in the Convention on the Rights of the Child, child marriage is linked to other rights - such as the right to express their views freely, the right to protection from all forms of abuse, and the right to be protected from harmful traditional practices - and is frequently addressed by the Committee on the Rights of the Child. Other international agreements related to child marriage are the Convention on Consent to Marriage, Minimum Age for Marriage and Registration of Marriages and the African Charter on the Rights and Welfare of the Child and the Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa. Child marriage was also identified by the Pan-African Forum against the Sexual Exploitation of Children as a type of commercial sexual exploitation of children.

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

Research suggests that many factors interact to place a child at risk of marriage. Poverty, protection of girls, family honour and the provision of stability during unstable social periods are considered as significant factors in determining a girl's risk of becoming married while still a child. Women who are married at younger ages were more likely to believe that it is sometimes acceptable for a husband to beat his wife and were more likely to experience domestic violence themselves. The age gap between partners is thought to contribute to these abusive power dynamics and to increase the risk of untimely widowhood.

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

Details of early marriage by selected characteristics are presented in Table 11.5. In Mombasa informal settlements, nine per cent of women aged 15-49 years were married before reaching age 15. Twenty seven per cent of women aged 20-49 years old are married before reaching age 18. One out of five adolescent girls aged 15-19 years in Mombasa informal settlements are currently married or in union. The differentials

in the proportion married before exact ages by current age show a declining trend in early marriages. For instance, only four per cent of women aged 15-19 years are reportedly married before age 15 compared to 14 per cent among 45-49 years old. A similar declining trend is observed in case of proportion married before age 18 years as well. Further, striking differentials in the proportion marrying at early ages by educational levels were observed. For example, 30 per cent of the women aged 15-49 years with no education were married before the age of 15 compared with only three per cent among those educated up to secondary or above. A similar pattern is observed with respect to level of household wealth index. Table 11.5 also presents the proportion of currently married/in union women aged 15-49 years in polygynous marriage/union. Of those currently married/in-union women in Mombasa informal settlements, 12 per cent are reportedly in polygynous marriage/in union.

Table 11.5: Early marriage (CP.5)

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, Mombasa Informal Settlement Survey, Kenya, 2009

	Percentage married before age 15[1]	Number of women aged 15-49 years	Percentage married before age 18[2]	Number of women aged 20-49 years	Percentage of women 15-19 married/ in union[3]	Number of women aged 15-19 years	Percentage of women aged 15-49 years in polygynous marriage/ union[4]	Number of women aged 15-49 currently married/in union
Age								
15-19	4.2	118	NA	NA	20.1	118	*	24
20-24	9.7	242	22.0	242	NA	NA	4.2	135
25-29	7.7	186	24.7	186	NA	NA	12.1	127
30-34	7.7	121	27.4	121	NA	NA	19.7	94
35-39	12.4	74	34.6	74	NA	NA	18.9	52
40-45	(14.2)	44	(39.2)	44	NA	NA	(18.1)	28
45-49	(14.3)	36	(43.0)	36	NA	NA	*	23
Education								
None	30.4	65	59.5	60	*	5	(23.9)	42
Primary	9.5	457	32.6	380	20.6	77	13.1	279
Secondary +	2.8	295	11.1	260	(11.1)	36	8.1	160
Wealth index								
Low	11.9	248	35.2	205	(28.7)	43	14.2	142
Medium	9.3	275	26.5	241	(21.5)	34	12.6	161
High	5.9	298	21.3	258	(9.7)	40	10.7	179
Religion of household head								
Christian	5.2	559	21.3	487	14.9	72	8.6	320
Muslim	16.4	248	40.1	205	(28.3)	43	19.8	151
Total	8.9	821	27.1	703	20.1	118	12.3	482

[1] MICS indicator 8.6, [2] MICS indicator 8.7, [3] MICS indicator 8.8, [4] MICS indicator 8.9
*Not shown, based on less than 25 un-weighted cases. ( ) Based on 25-49 un-weighted cases.
Note: 3 women with missing information on education and 15 women belong to other religion are not shown separately.

11.5 Spousal Age Difference

Spousal age difference is considered as an indicator reflecting the women's status in the community; the indicator is computed as the percentage of married/in union women with a difference of 10 or more years younger than their current spouse. Table 11.6 presents the results of the age difference between husbands and wives by age of wife and selected characteristics. In Mombasa informal settlements, 40 per cent of the currently married/in union women have husbands who are 0-4 years older, in another 38 per cent cases husbands are 5-9 years older and in 20 per cent cases their husband's are 10 or more years older. Differentials by selected characteristics show a mixed pattern.

Table 11.6: Spousal age difference (CP.6)

Percent distribution of currently married/in union women aged 15-24 years according to the age difference with their husband or partner, Mombasa Informal Settlement Survey, Kenya, 2009

	Percentage of currently married/in union women whose husband or partner is:						Number of women currently married/ in union
	Younger	0-4 years older	5-9 years older	10+ years older[1]	Husband' s age unknown	Total	
Education							
Primary	0.9	38.9	40.8	19.3	0.0	100.0	103
Secondary +	(0.0)	(41.5)	(42.8)	(13.7)	(2.1)	(100.0)	42
Wealth index							
Low	0.0	47.2	34.2	16.8	1.8	100.0	51
Medium	0.0	41.0	40.3	18.7	0.0	100.0	65
High	(2.2)	(28.6)	(39.9)	(27.1)	(2.1)	(100.0)	42
Religion of household head							
Christian	0.8	39.9	40.1	19.2	0.0	100.0	111
Muslim	(0.0)	(39.8)	(31.5)	(24.7)	(4.1)	(100.0)	44
Total	0.6	39.7	38.2	20.3	1.1	100.0	158

[1] MICS indicator 8.10
( ) Based on 25-49 un-weighted cases.
Note: 14 women with no education and 3 women belong to other religion are not shown separately.

11.6 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 and barbers, without anaesthesia, using scissors, razor blades or broken glass.

FGM/C is a fundamental violation of human rights. 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 years) cannot be said to give informed consent to such a potentially damaging practice as FGM/C.

In the Mombasa informal settlement survey, a series of questions were asked to determine knowledge of FGM/C, prevalence of FGM/C, and details of the type of FGM/C performed. Table 11.7 presents information on Female genital mutilation/cutting (FGM/C) among women aged 15-49 years by selected characteristics. Ninety-two per cent of women aged 15-49 years in Mombasa informal settlements have heard about FGM/C and 12 per cent reported to have some form of FGM/C. Of those women who had FGM/C, 56 per cent reported that the flesh was removed, 15 per cent were sewn closed and five per cent were nicked. Overall, 13 per cent of the reported FGM/C cases were of an extreme form. In 25 per cent cases the form of FGM/C could not be determined. As expected, the differentials in the FGM/C prevalence and level of education show an inverse relationship. However, surprisingly FGM/C prevalence among women in Mombasa informal settlements by wealth index was in the unexpected direction. For example, 10 per cent of women from the low wealth index households reportedly had FGM/C compared with 15 per cent among high wealth index group.

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

Percentage of women aged 15-49 years who have heard about female genital mutilation/cutting (FGM/C), had any form of FGM/C, type of FGM/C among those who have had FGM/C, the percentage who have had the extreme form of FGM/C (infibulations), Mombasa Informal Settlement Survey, Kenya, 2009

	Heard about FGM/C	Had any form of FGM/C[1]	Number of women aged 15-49 years	Percentage of women with FGM/C who: Had flesh removed	Were nicked	Were sewn closed	Form of FGM/C not determined	Total	Had an extreme form of FGM/C	Number of women with FGM/C
Age										
15-19	86.7	4.2	118	*	*	*	*	*	*	5
20-24	90.2	11.3	242	(68.2)	(0.0)	(18.3)	(13.4)	(100.0)	(14.7)	27
25-29	95.4	12.8	186	*	*	*	*	*	*	24
30-34	94.5	13.7	121	*	*	*	*	*	*	17
35-39	94.4	12.3	74	*	*	*	*	*	*	9
40-44	(97.6)	(18.3)	44	*	*	*	*	*	*	8
45-49	(91.7)	(33.1)	36	*	*	*	*	*	*	12
Education										
None	82.2	14.2	65	*	*	*	*	*	*	9
Primary	91.0	13.8	457	55.9	5.0	11.2	27.9	100.0	9.6	63
Secondary +	97.0	10.0	295	(58.6)	(3.5)	(16.6)	(21.3)	(100.0)	(13.2)	30
Wealth index										
Low	86.9	9.7	248	*	*	*	*	*	*	24
Medium	92.9	12.6	275	(64.9)	(2.9)	(11.6)	(20.7)	(100.0)	(11.6)	35
High	96.3	14.6	298	(45.7)	(9.6)	(20.9)	(23.8)	(100.0)	(16.3)	43
Religion of household head										
Christian	93.1	12.7	559	62.4	3.0	9.7	24.9	100.0	8.3	71
Muslim	91.0	12.1	248	(37.9)	(10.2)	(27.4)	(24.4)	(100.0)	(24.1)	30
Total	92.3	12.4	821	55.6	5.1	14.8	24.5	100.0	12.9	102

[1] MICS indicator 8.12

*Not shown, based on less than 25 un-weighted cases. ( ) Based on 25-49 un-weighted cases.

Note: 3 women with missing information on education and 15 women belong to other religion are not shown separately.

All those who have heard about FGM/C were asked about their attitude towards whether the practice should be continued or not by selected characteristics and the results are presented in Table 11.8. Ninety one per cent of the women aged 15-49 years who have heard about FGM/C in Mombasa informal settlements did not support the continuation of the practice. No substantial differences were noticed by age, education of the woman, wealth of the household and religion of the household head. Among women who have had an experience of FGM/C, 79 per cent support the discontinuation of the FGM/C practice, and the support for discontinuation is much higher among women who are aware of the practice but have not had an experience of FGM/C (93 per cent). Overall, only four per cent of women in Mombasa informal settlements expressed support for the continuation of the FGM/C practice.

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

Percent 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, Mombasa Informal Settlement Survey, Kenya, 2009

	Percent 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[1]	Be discontinued	Depends on situation	Don't know	Total	
Age						
15-19	4.9	92.2	0.0	3.0	100.0	102
20-24	6.2	87.9	1.9	4.1	100.0	218
25-29	3.8	91.3	0.6	4.3	100.0	178
30-34	1.6	92.3	3.6	2.5	100.0	114
35-39	1.4	97.3	0.0	1.4	100.0	70
40-44	(0.0)	(90.7)	(4.5)	(4.8)	(100.0)	43
45-49	(2.7)	(94.6)	(0.0)	(2.8)	(100.0)	33
Education						
None	3.6	94.8	0.0	1.6	100.0	54
Primary	4.1	89.2	2.2	4.5	100.0	416
Secondary +	3.5	93.4	0.7	2.4	100.0	286
Had FGM/C experience						
No	2.4	93.1	1.1	3.4	100.0	656
Yes	13.2	78.9	4.0	3.8	100.0	102
Wealth index						
Low	4.4	90.7	0.9	4.0	100.0	216
Medium	2.5	92.0	1.7	3.8	100.0	255
High	4.6	90.9	1.7	2.8	100.0	287
Religion of household head						
Christian	3.9	91.1	1.6	3.4	100.0	520
Muslim	3.4	91.8	0.9	3.9	100.0	225
Total	3.8	91.2	1.5	3.5	100.0	758

[1] MICS indicator 8.11

( ) Based on 25-49 un-weighted cases.

Note: 2 women with missing information on education and 13 women belong to other religion are not shown separately.

All interviewed women aged 15-49 years with at least one daughter were asked whether their daughter had undergone FGM/C or not. Table 11.9 presents the prevalence and extent of FGM/C performed on daughters of the respondents. Only two per cent reported that their daughter(s) have undergone the practice. As expected, the prevalence of FGM/C practice among daughters of interviewed mothers declined with increasing mother's education. For example, five per cent of the mothers with no education reported that their daughter had FGM/C compared with two per cent for mothers with primary level education. It is of interest to note that, not all mothers who reported that their daughters have had FGM/C had themselves undergone this practice.

Table 11. 9: Female genital mutilation/cutting (FGM/C) among daughters (CP.8)

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, Mombasa Informal Settlement Survey, Kenya, 2009

	Daughter had any form of FGM/C[1]	Number of women aged 15-49 years with at least one daughter
Age of mother		
15-24	0.9	99
25-29	1.1	90
30-34	0.0	81
35-39	0.0	60
40-44	(5.8)	36
45-49	(12.6)	32
Education		
None	(4.9)	44
Primary	2.4	237
Secondary +	0.0	114
Mother's FGM/C experience		
Had any FGM/C	12.6	63
No FGM/C	0.0	334
Wealth index		
Low	0.7	136
Medium	4.8	124
High	0.8	137
Religion of household head		
Christian	1.1	255
Muslim	3.9	134
Total	2.0	398

[1] MICS indicator 8.13.
( ) Based on 25-49 un-weighted cases.
Note: 2 women with missing information on education and 9 women belong to other religion are not shown separately.

11.7 Domestic Violence

A number of questions were asked to women age 15-49 years to assess their attitudes on whether husbands are justified to hit or beat their wives/partners for a variety of reasons. These questions were asked to have an indication of cultural beliefs that tend to be associated with the prevalence of violence against women by their husbands/partners. The main assumption here is that women who agree with the statements indicating that husbands/partners are justified to beat their wives/partners under the situations described in reality tend to be abused by their own husbands/partners. Information on attitudes towards domestic violence by selected characteristics is presented in Table 11.10.

In Mombasa informal settlements, 47 per cent of women aged 15-49 years agree that a husband is justified in beating his wife/partner when she goes out without telling him or she neglects children or she argues with him or she refuses sex with him or she burns food. The most common reason reported for justifying the wife beating is 'if a woman neglects the children' (34 per cent). Little more than one in five women (21 per cent) justify that a wife can be beaten 'if she goes out without telling her husband', one in four women (24 per cent) justify beating wife 'for arguing with husband' and more or less the same proportion 'for refusing to have sex with the husband' (23 per cent). Across the wealth index, the proportion of women indicating

that they would justify wife beating for any of the reasons mentioned above declines with increasing levels of the household wealth index. The same pattern is observed with educational level, where a much lower proportion of educated women justify beating wife compared to women with no education. For example, 62 per cent of the women with no education justified wife beating compared with 33 per cent among those educated up to secondary or higher. There is no explicit differential pattern observed by age of women.

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

Percentage of women aged 15-49 years who believe a husband is justified in beating his wife/partner in various circumstances, Mombasa Informal Settlement Survey, Kenya, 2009

	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[1]	Number of women aged 15-49 years
Age							
15-19	29.1	38.8	27.9	18.5	6.5	51.0	118
20-24	23.3	39.6	28.3	24.7	8.1	51.1	242
25-29	18.7	30.2	20.8	24.3	6.1	44.8	186
30-34	15.7	30.3	21.5	18.2	5.7	41.2	121
35-39	15.9	25.4	21.3	19.9	6.4	40.0	74
40-44	(21.1)	(29.9)	(21.0)	(28.0)	(6.9)	(34.7)	44
45-49	(24.8)	(37.9)	(23.3)	(36.3)	(3.0)	(55.5)	36
Marital/Union status							
Currently married/in union	24.0	37.7	28.2	24.9	8.6	50.3	482
Formerly married/in union	20.6	30.9	21.0	29.4	4.1	45.4	94
Never married/in union	16.1	28.3	17.9	16.9	3.7	39.5	245
Education							
None	42.6	47.8	32.7	51.8	19.6	61.7	65
Primary	25.1	38.6	30.7	24.6	7.8	52.8	457
Secondary +	10.8	24.2	12.8	14.0	1.9	33.2	295
Wealth index							
Low	28.2	39.8	28.0	30.4	8.4	52.8	248
Medium	21.9	35.2	28.2	21.3	6.5	47.5	275
High	14.8	28.4	17.5	18.5	5.2	40.5	298
Religion of household head							
Christian	18.6	32.4	23.5	20.3	5.4	44.1	559
Muslim	26.5	36.8	25.2	28.6	9.3	50.6	248
Total	21.2	34.1	24.3	23.0	6.6	46.5	821

[1] MICS indicator 8.14.
*Not shown, based on less than 25 un-weighted cases. ( ) Based on 25-49 un-weighted cases.
Note: 3 women with missing information on education and 15 women belong to other religion are not shown separately.

11.8 Child Disability

One of the World Fit for Children goals is to protect children against abuse, exploitation, and violence, including the elimination of discrimination against children with disabilities. For children aged 2 through 9 years, a series of questions were asked to assess a number of disabilities/impairments, such as sight impairment, deafness, and difficulties with speech. This approach rests in the concept of functional disability developed by WHO and aims to identify the implications of any impairment or disability for the development of the child (e.g. health, nutrition, education etc.). The information on disability was collected from the respondent to the household questionnaire and no medical examination or verification was carried out, and hence the results on disability among children reported in Table 11.11 are to be treated with caution.

Twenty nine per cent of children aged 2-9 years in Mombasa informal settlements reported to have some sort of disability, such as 'delay in sitting, standing or walking', 'difficulty in seeing', 'difficulty in hearing', 'no understanding of instructions', etc. Thirteen per cent of children reported to have 'delay in sitting/standing/walking' and seven per cent 'can't speak or understood in words'. Of those children aged two years, 18 per cent reportedly 'can't name any object'. The differentials in the disability by wealth index and educational level of the mother are less clear. However, the proportion who can not speak or are not able to understand any words and difficulty in walking/moving arms declines with increasing ages of the child.

Table 11.11: Reported child disability (CP.10)

Percentage of children aged 2-9 years with disability reported by their mother or caretaker according to the type of disability, Mombasa Informal Settlement Survey, Kenya, 2009

	Percentage of children aged 2-9 years with reported disability by type of disability									Percentage of children aged 2-9 years with at least one reported disability	Number of children aged 2-9 years	Children age 3-9 years		Children age 2 years	
	Delay in sitting, standing or walking	Difficulty seeing, either in the daytime or at night	Appears to have difficulty hearing	No under-standing of instr-uctions	Difficulty in walking, moving arms, weakness or stiffness	Have fits, become rigid, lose conciousness	Not learning to do things like other children his/her age	No speaking / cannot be under-stood in words	Appears mentally backward, dull, or slow			Percent with speech not normal	Number of children	Percent cannot name at least one object	Number of children
Age of child															
2-4 years	15.6	3.8	2.6	5.7	4.8	2.6	2.7	10.1	0.4	30.9	265	11.1	187	17.6	78
5-6 years	14.3	1.4	5.3	2.0	3.3	0.7	1.4	8.3	0.0	32.2	146	6.2	146	NA	NA
7-9 years	10.0	6.0	3.0	3.1	2.4	2.0	1.0	2.1	0.5	24.6	199	4.5	199	NA	NA
Mother's education															
None	13.1	2.8	0.0	2.7	2.6	0.0	5.3	2.8	1.2	24.9	77	1.3	70	*	7
Primary	13.9	4.3	5.1	4.1	3.4	1.1	1.4	7.6	0.0	29.7	365	7.6	315	11.8	51
Secondary +	13.0	3.7	1.2	4.4	4.7	4.8	1.2	7.4	0.6	30.2	162	9.7	142	*	21
Wealth index															
Low	11.4	2.9	2.3	3.4	2.3	1.4	3.0	6.2	0.4	24.2	211	4.4	182	(15.9)	30
Medium	17.6	5.0	6.6	4.6	3.4	1.7	1.7	9.0	0.0	35.2	176	7.4	150	(15.4)	26
High	12.1	4.1	1.8	4.0	5.1	2.6	0.8	6.2	0.4	29.0	222	9.8	200	*	23
Religion of household head															
Christian	17.0	4.5	4.0	4.8	4.5	2.7	1.8	7.4	0.3	34.8	335	6.4	290	(12.8)	45
Muslim	9.2	3.0	2.7	2.7	2.3	1.2	1.9	5.4	0.4	20.8	261	7.9	230	(25.8)	31
Total	13.4	3.9	3.4	4.0	3.6	1.9	1.8	7.0	0.3	29.1	610	7.3	532	17.6	78

*Not shown, based on less than 25 un-weighted cases. ( ) Based on 25-49 un-weighted cases.
Note: 5 children with missing information on mothers education and 14 children belong to other religion are not shown separately.

HIV/AIDS, Sexual Behaviour, Orphaned and Vulnerable Children 12

12.1 Knowledge of HIV Transmission and Condom Use

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

One indicator which is both an MDG and UNGASS indicator is the percentage of young women who have comprehensive and correct knowledge of HIV prevention and transmission. Women were asked whether they knew of the three main ways of preventing HIV transmission – having only one faithful uninfected partner, using a condom every time one had sex, or abstaining from sex. Information on knowledge of preventing HIV transmission by selected characteristics is presented in Table 12.1. In Mombasa informal settlements, almost all of the interviewed women (99 per cent) have heard of HIV/AIDS. However, the percentage of women who know of all three main ways of preventing HIV transmission is only 60 per cent. Ninety two per cent of women know of having one faithful uninfected sex partner, 74 per cent know of using a condom every time one had sex, and 82 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 is near universal in Mombasa informal settlements (98 per cent). As expected, the level of knowledge about preventing transmission of HIV increases with the level of education and household wealth index.

Table 12.2 presents the percentage of women who can correctly identify misconceptions concerning HIV/AIDS. The indicator is based on the two most common and relevant misconceptions, that HIV can be transmitted by supernatural means and mosquito bites. The table also provides information on whether women know that HIV cannot be transmitted by sharing food, and that HIV can be transmitted by sharing needles. Of the interviewed women in Mombasa informal settlements, 61 per cent reject the two most common misconceptions and know that a healthy-looking person can be infected. Seventy three per cent of women know that HIV cannot be transmitted through mosquito bite, 84 per cent know that it cannot be transmitted by supernatural means, 85 per cent know that it cannot be transmitted by sharing food and 95 per cent know that HIV can be transmitted by sharing needles and 90 per cent reported that a healthy-looking person can be infected. From the table it is evident that a higher proportion of educated women have correct knowledge about HIV/AIDS. For example, 35 per cent of women with no education rejected the two most common misconceptions and know that a healthy-looking persons can be infected compared with 74 per cent among those educated up to secondary or higher.

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

Percentage of women aged 15-49 years who know the main ways of preventing HIV transmission, Mombasa Informal Settlement Survey, Kenya, 2009

		Percentage who know transmission can be prevented by:						
	Heard of AIDS	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	99.2	87.1	67.4	77.6	50.9	96.0	4.0	118
20-24	98.4	90.1	76.1	79.2	58.6	98.0	2.0	242
25-29	99.5	96.0	76.8	84.9	65.3	99.5	0.5	186
30-34	99.2	96.0	74.2	81.0	63.3	98.4	1.6	121
35-39	100.0	91.9	74.3	86.0	63.2	97.3	2.7	74
40-44	(100.0)	(95.2)	(64.9)	(85.7)	(60.3)	(97.6)	(2.4)	44
45-49	(97.0)	(88.8)	(72.0)	(85.7)	(60.6)	(94.5)	(5.5)	36
Education								
None	96.9	87.7	64.0	77.4	52.2	90.8	9.2	65
Primary	98.7	90.8	72.0	79.4	57.3	97.7	2.3	457
Secondary +	100.0	95.5	78.4	86.6	66.6	99.7	0.3	295
Wealth index								
Low	98.0	88.2	70.5	81.1	59.6	94.8	5.2	248
Medium	99.3	92.7	76.2	84.3	63.2	98.7	1.3	275
High	99.7	95.2	74.2	80.0	58.1	99.7	0.3	298
Religion of household head								
Catholic	99.3	91.9	79.4	77.8	59.7	97.8	2.2	140
Other Christian	99.1	93.0	74.2	84.2	62.3	98.2	1.8	418
Muslim	98.8	91.1	70.6	79.6	57.6	97.1	2.9	248
Total	99.0	92.3	73.8	81.8	60.3	97.9	2.1	821

( ) Based on 25-49 un-weighted cases.
Note: 3 women with missing information on education and 15 women belong to other religion are not shown separately.

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

Percentage of women aged 15-49 years who correctly identify misconceptions about HIV/AIDS, Mombasa Informal Settlement Survey, Kenya, 2009

	Percent who know that:			Reject two most common misconceptions and know a healthy-looking person can be infected	Percent who know that:		Number of women
	Option 1: HIV cannot be transmitted by mosquito bites	***Option 2:*** HIV cannot be transmitted by supernatural means	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	
Age							
15-19	73.6	83.0	81.5	57.6	88.0	91.4	118
20-24	74.2	84.8	88.2	60.9	83.5	93.3	242
25-29	75.3	86.7	91.4	63.4	87.6	97.4	186
30-34	78.8	86.0	94.4	69.7	83.7	98.4	121
35-39	66.4	83.5	93.0	57.0	87.7	92.8	74
40-44	(54.3)	(76.4)	(97.8)	(47.3)	(74.4)	(97.5)	44
45-49	(63.8)	(64.3)	(91.5)	(46.9)	(80.4)	(94.3)	36
Education							
None	59.0	52.9	80.4	34.6	76.1	91.2	65
Primary	68.4	83.7	88.7	56.1	83.2	93.3	457
Secondary +	83.1	91.0	93.9	73.6	89.9	98.2	295
Wealth index							
Low	61.1	76.7	83.8	46.2	82.1	89.5	248
Medium	77.6	86.3	92.5	64.4	88.1	97.4	275
High	78.2	87.1	92.9	69.1	84.2	97.2	298
Religion of household head							
Catholic	70.8	86.8	92.9	60.9	85.3	94.3	140
Other Christian	77.1	87.4	89.9	63.9	87.0	97.7	418
Muslim	68.0	76.6	88.2	56.1	81.3	90.8	248
Total	72.8	83.7	90.0	60.6	84.9	94.9	821

( ) Based on 25-49 un-weighted cases.
Note: 3 women with missing information on education and 15 women belong to other religion are not shown separately.

Table 12.3 presents the percentage of women having knowledge of two ways of preventing HIV transmission and rejecting three common misconceptions by selected characteristics. Comprehensive knowledge of HIV prevention methods and transmission is still low, only 43 per cent of women aged 15-49 years in Mombasa informal settlements have comprehensive knowledge about HIV/AIDS, i.e., correctly identifying two prevention methods and three misconceptions (i.e., 'Can people get the AIDS virus from mosquito bites?', 'Can people get the AIDS virus by sharing food with a person who has AIDS?' and 'Is it possible for a healthy-looking person to have the AIDS virus?'). The percentage of women with comprehensive knowledge about HIV increases with the level of education. For example, 22 per cent of the women with no education have comprehensive knowledge compared with 56 per cent among those educated up to secondary or higher (see Figure 12.1).

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

Percentage of women aged 15-49 years who have comprehensive knowledge of HIV/AIDS transmission, Mombasa Informal Settlement Survey, Kenya, 2009

	Know 2 ways to prevent HIV transmission	Correctly identify 3 misconceptions about HIV transmission	Have comprehensive knowledge (identify 2 prevention methods and 3 misconceptions)[1]	Number of women
Age				
15-19	61.4	57.4	38.6	118
20-24	71.2	59.5	43.7	242
15-24	*68.0*	*58.8*	*42.1*	*360*
25-29	73.7	62.3	46.7	186
30-34	73.3	66.6	47.0	121
35-39	68.9	55.7	42.1	74
40-44	(64.9)	(47.5)	(26.3)	44
45-49	(66.3)	(50.3)	(36.2)	36
Education				
None	60.9	39.3	22.4	65
Primary	66.9	54.4	37.5	457
Secondary +	76.3	72.4	55.9	295
Wealth index				
Low	66.3	47.1	37.2	248
Medium	72.0	64.4	44.5	275
High	71.1	65.2	45.8	298
Religion of household head				
Catholic	74.9	59.5	48.0	140
Other Christian	70.6	63.3	45.5	418
Muslim	66.5	54.2	36.0	248
Total	69.9	59.5	42.8	821

[1] MICS indicator 9.1, MICS indicator 9.2 and MDG indicator 6.3.
( ) Based on 25-49 un-weighted cases.
Note: 3 women with missing information on education and 15 women belong to other religion are not shown separately.

Details on knowledge of mother-to-child HIV transmission by selected characteristics are presented in Table 12.4. Knowledge of mother-to-child transmission of HIV is an important first step for women to seek HIV testing when they are pregnant to avoid infection of the baby. Women should know that HIV can be transmitted during pregnancy, delivery, and through breastfeeding. Overall, 97 per cent of women know that HIV can be transmitted from mother to child. The percentage of women who know all three ways of mother-to-child transmission is 53 per cent. Sixty four per cent know that HIV can be transmitted during pregnancy, 76 per cent know about transmission at delivery and 93 per cent know of transmission through breast milk. Two per cent of women did not know of any specific way. Contrary to expectations, differentials in the correct knowledge regarding mother-to-child transmission of HIV by level of education and wealth index are not apparent.

Figure 12.1 Percent of women who have comprehensive knowledge of HIV/AIDS transmission by level of education, Mombasa Informal Settlement Survey, Kenya, 2009

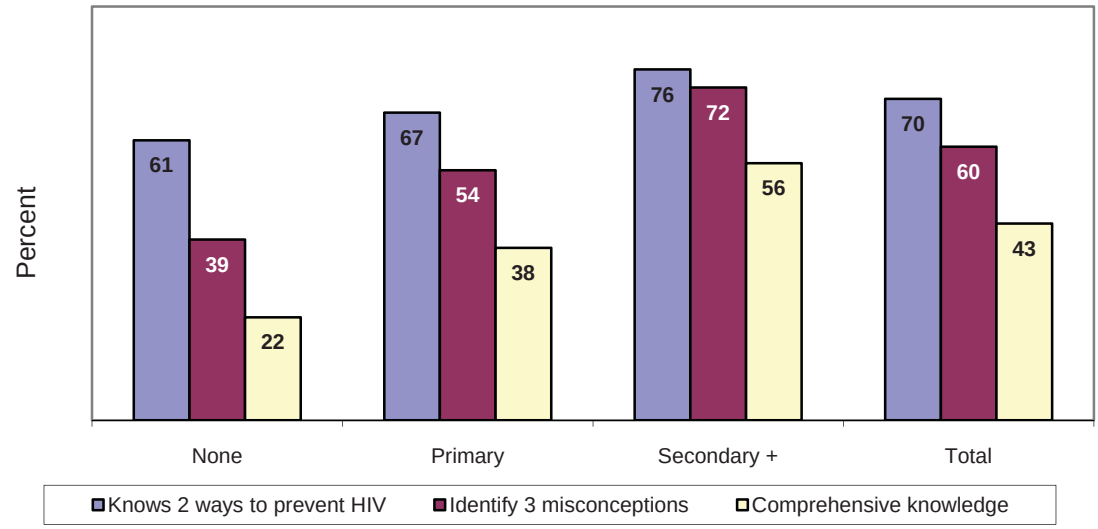


Table 12.4: Knowledge of mother-to-child HIV transmission (HA.4)
Percentage of women aged 15-49 years who correctly identify means of HIV transmission from mother to child, Mombasa Informal Settlement Survey, Kenya, 2009

	Know AIDS can be transmitted from mother to child	Percent who know AIDS can be transmitted:				Did not know any specific way	Number of women
		During pregnancy	At delivery	Through breast milk	All three ways[1]		
Age							
15-19	96.5	66.3	79.5	90.7	55.6	2.7	118
20-24	96.1	61.2	70.2	93.0	47.4	2.3	242
25-29	98.2	62.4	77.8	96.1	52.3	1.3	186
30-34	96.8	67.4	75.8	91.8	57.5	2.4	121
35-39	98.8	75.7	85.4	93.2	64.8	1.2	74
40-44	(95.7)	(66.2)	(65.2)	(95.7)	(47.5)	(4.3)	44
45-49	(94.0)	(48.3)	(77.2)	(86.2)	(45.6)	(3.0)	36
Education							
None	90.7	65.9	67.7	86.2	50.7	6.2	65
Primary	96.2	66.2	73.6	92.3	54.2	2.6	457
Secondary +	99.3	60.6	80.2	95.7	50.6	0.7	295
Wealth index							
Low	95.1	62.6	71.8	90.9	50.2	2.8	248
Medium	98.1	63.4	78.5	94.3	53.5	1.2	275
High	97.2	66.1	75.8	93.7	54.0	2.5	298
Religion of household head							
Catholic	97.8	62.3	79.4	93.5	52.8	1.5	140
Other Christian	98.0	62.3	77.2	94.2	51.4	1.1	418
Muslim	94.2	67.4	69.9	90.5	53.6	4.5	248
Total	96.9	64.2	75.5	93.1	52.7	2.2	821

[1] MICS indicator 9.3.
( ) Based on 25-49 un-weighted cases.
Note: 3 women with missing information on education and 15 women belong to other religion are not shown separately.

The indicators on attitudes toward people living with HIV measure stigma and discrimination in the community – and gauge the care, support and protective environment available to the population living with HIV/AIDS. Stigma and discrimination are low if respondents report an accepting attitude on the following four questions: 1) Would care for family member sick with AIDS; 2) Would buy fresh vegetables from a vendor who is 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. Information on attitudes towards people living with HIV/AIDS by selected characteristics is presented in Table 12.5. Among women who have heard about HIV/AIDS, only four per cent reported that they would not care for a family member who is sick with HIV/AIDS, 42 per cent reported that if a family member is sick with HIV/AIDS they would want to keep it a secret, 18 per cent believe that a teacher should not be allowed to work if he/she has HIV/AIDS, and 30 per cent would not buy food from a person who has HIV/AIDS. Overall, 61 per cent agree with at least one of the discriminatory statements mentioned above and 39 per cent agree with none of the discriminatory statements. The proportion of women agreeing to discriminatory statements declines with increase in educational level. For example, a much lower proportion (50 per cent) of women educated up to secondary or higher level were agreed to any discriminatory statements compared with a higher proportion among women with no education (71 per cent).

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

Percentage of women aged 15-49 years who have heard of AIDS who express a discriminatory attitude towards people living with HIV/AIDS, Mombasa Informal Settlement Survey, Kenya, 2009

	Percent of women who:						
	Would not care for a family member who was sick with AIDS	If a family member had HIV would want to keep it a secret	Believe that a teacher with HIV should not be allowed to work	Would not buy food from a person with HIV/AIDS	Agree with at least one discriminatory statement	Agree with none of the discriminatory statements[1]	Number of women who have heard of AIDS
Age							
15-19	10.6	49.6	21.9	40.2	70.2	29.8	117
20-24	3.4	41.5	18.2	29.4	61.4	38.6	238
25-29	3.6	40.2	19.2	29.4	61.7	38.3	185
30-34	2.6	36.1	15.9	24.2	55.7	44.3	120
35-39	2.8	38.5	15.2	27.9	49.5	50.5	74
40-44	(0.0)	(49.4)	(11.7)	(25.5)	(61.4)	(38.6)	44
45-49	(2.6)	(47.0)	(11.2)	(30.2)	(65.6)	(34.4)	35
Education							
None	5.9	37.9	30.2	46.2	70.5	29.5	63
Primary	5.4	45.8	22.1	35.9	66.9	33.1	451
Secondary +	1.7	36.7	8.6	17.4	49.8	50.2	295
Wealth index							
Low	5.1	43.7	23.9	38.7	68.1	31.9	243
Medium	3.9	40.8	17.1	31.7	59.7	40.3	273
High	3.4	41.7	13.3	20.9	56.4	43.6	297
Religion of household head							
Catholic	6.4	46.8	15.9	22.7	66.0	34.0	139
Other Christian	3.3	37.8	17.1	27.2	56.4	43.6	414
Muslim	3.6	46.4	19.3	37.6	65.3	34.7	244
Total	4.1	42.0	17.7	29.9	61.0	39.0	813

[1] MICS indicator 9.4.
( ) Based on 25-49 un-weighted cases.
Note: 3 women with missing information on education and 15 women belong to other religion are not shown separately.

Another important indicator is the knowledge of where to be tested for HIV and use of such services. Information on knowledge of a facility for HIV testing and whether they have ever been tested by selected characteristics is presented in Table 12.6. Ninety three per cent of women in Mombasa informal settlements know a place to get HIV tested and 69 per cent reportedly have been tested. Of those tested, 98 per cent received results of the HIV test. The proportion of women tested for HIV increases with level of education and wealth index. For example, 59 per cent of women with no education reportedly tested for HIV compared to 79 per cent among those with secondary and above level of education.

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

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, Mombasa Informal Settlement Survey, Kenya, 2009

	Know a place to get tested[1]	Have been tested	Number of women	If tested, have been told result[2]	Number of women who have been tested for HIV
Age					
15-19	83.4	42.7	118	92.5	50
20-24	94.4	74.7	242	98.5	181
15-24	*90.8*	*64.2*	*360*	*97.2*	*231*
25-29	95.0	77.2	186	99.4	144
30-34	94.5	81.4	121	98.0	98
35-39	94.4	69.9	74	98.0	52
40-49	93.8	53.8	80	(97.7)	43
Education					
None	83.7	58.7	65	(100.0)	38
Primary	91.2	64.6	457	97.1	295
Secondary +	97.6	78.6	295	98.8	232
Wealth index					
Low	90.1	64.7	248	96.6	161
Medium	92.1	66.2	275	98.8	182
High	96.1	75.6	298	98.3	225
Religion of household head					
Catholic	94.4	71.7	140	98.2	101
Other Christian	93.7	70.3	418	98.4	294
Muslim	92.3	67.3	248	97.1	167
Total	92.9	69.2	821	98.0	568

[1] MICS indicator 9.5. [2] MICS indicator 9.6.
( ) Based on 25-49 un-weighted cases.
Note: 3 women with missing information on education and 15 women belong to other religion are not shown separately.

Details of HIV testing and counselling coverage during antenatal care are presented in Table 12.7. Ninety four per cent of mothers who delivered a baby during the two years preceding the survey in Mombasa informal settlements received antenatal care from a health professional, 79 per cent were provided information about HIV prevention and 85 per cent were tested for HIV during antenatal care visits. Eighty three per cent reported that they received the result of the HIV test during an ANC visit. Differentials by level of education and wealth index indicated a positive relationship. For example, 77 per cent of the women aged 15-49 years belonging to low wealth index households were tested for HIV during an ANC visit compared to 90 per cent of those from high wealth index households.

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

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, Mombasa Informal Settlement Survey, Kenya, 2009

	Percent of women who:				
	Received antenatal care from a health care professional for last pregnancy	Were provided information about HIV prevention during ANC visit[1]	Were tested for HIV at ANC visit	Received results of HIV test at ANC visit[2]	Number of women who gave birth in the 2 years preceding the survey
Age					
15-24	94.3	78.5	83.8	81.0	104
25-29	(93.4)	(74.4)	(87.3)	(85.4)	46
30-49	93.3	81.9	84.0	84.0	61
Education					
Primary	92.6	74.5	81.7	79.3	122
Secondary +	97.0	85.0	92.7	91.4	66
Wealth index					
Low	92.6	75.3	76.5	73.8	68
Medium	92.8	74.1	87.1	85.5	69
High	95.8	85.9	89.9	88.7	73
Religion of household head					
Catholic	(93.6)	(84.6)	(77.9)	(77.9)	31
Other Christian	94.5	77.6	86.4	85.6	111
Muslim	93.8	80.7	88.6	84.0	65
Total	93.8	78.6	84.6	82.8	211

[1] MICS indicator 9.8.
[2] MICS indicator 9.9.
( ) Based on 25-49 un-weighted cases.
Note: 23 women with no education and 4 women belong to other religion are not shown separately.

12.2 Sexual Behaviour Related to HIV Transmission

Promoting safer sexual behaviour is critical for reducing HIV prevalence. The use of condoms during sex, especially with non-regular partners, is particularly important for reducing the spread of HIV. In most countries over half of new HIV infections are among young people 15-24 years old thus a change in behaviour among this age group is important to reduce new infections. A module of questions was administered to women 15-24 years of age to assess their risk of HIV infection. Risk factors for HIV include sex at an early age, sex with older men, sex with a non-marital non-cohabitating partner, and failure to use a condom.

The frequency of sexual behaviours that increase the risk of HIV infection among women is presented in Table 12.8 and Figure 12.2. In Mombasa informal settlements, nine per cent of women aged 15-19 years reportedly had sex before reaching the age of 15 years and of those aged 20-24 years, 41 per cent had sex before reaching age 18 years. Among those who had sex during the past 12 months, 19 per cent reportedly had sex with a man who is 10 or more years older to them. The proportion having sex before age 15 years decreases with increase in household wealth index and educational level. For example, 15 per cent of women aged 15-19 years from low wealth index households had sex before age 15 compared with only three per cent among those from high wealth index households. The differentials by religion of the household head show that more Muslim women are reportedly having sex before age 15 compared with their Christian counterparts in Mombasa informal settlements.

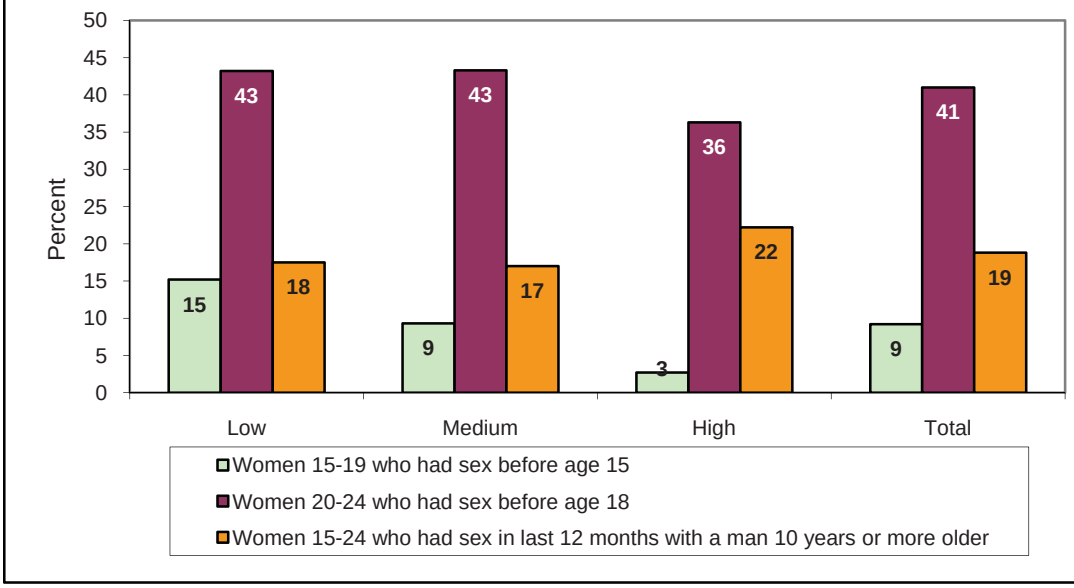
Table 12.8: Sexual behaviour that increases risk of HIV infection (HA.8)

Percentage of young women aged 15-19 years who had sex before age 15, percentage of young women aged 20-24 who had sex before age 18 and percentage of young women aged 15-24 who had sex with a man 10 or more years older, Mombasa Informal Settlements, Kenya, 2009

	Women aged 15-19 years		Women aged 20-24 years		Women aged 15-24 years who had sex in the 12 months preceding the survey	
	Percentage who had sex before age 15[1]	Number of women	Percentage who had sex before age 18	Number of women	Percentage who had sex with a man 10 or more years older[2]	Number of women
Age						
15-19	9.2	118	NA	NA	(17.0)	44
20-24	NA	NA	41.0	242	19.2	185
Education						
Primary	10.3	77	51.2	132	17.5	141
Secondary +	(2.7)	36	21.1	95	15.8	74
Wealth index						
Low	(15.2)	43	43.2	74	17.5	75
Medium	(9.3)	34	43.3	87	17.0	83
High	(2.7)	40	36.3	81	22.2	70
Religion of household head						
Catholic	*	15	38.3	52	23.9	52
Other Christian	6.7	56	37.8	132	16.4	119
Muslim	(14.3)	43	48.5	54	18.9	52
Total	9.2	118	41.0	242	18.8	229

[1] MICS indicator 9.11, [2] MICS indicator 9.12.
* Not shown, based on less than 25 un-weighted cases
( ) Based on 25-49 un-weighted cases.Note: 14 women with no education and 5 women belong to other religion are not shown separately.

Figure 12.2: Sexual behaviour that increases risk of HIV infection by wealth index, Mombasa Informal Settlement Survey, Kenya, 2009



Condom use during sex with men other than husbands or co-habiting partners was assessed in women aged 15-24 years who had sex with such a partner in the previous year (Table 12.9). About two in three (64 per cent) women aged 15-24 years reported having sex during the 12 months prior to the survey. Of those women who had sex during the past 12 months, 33 per cent had sex with a non-marital/non-cohabiting partner. More than half (54 per cent) of those women who had sex with a non-marital/non-cohabiting partner report using a condom when they had sex with a high risk partner. Fifty three per cent of women with primary education used a condom during higher risk sex in the year before the survey, while 59 per cent of women with secondary or higher education used a condom with such a partner.

Table 12.9: Condom use at last high-risk sex (HA.9)

Percentage of young women aged 15-24 years who had high risk sex in the previous year and who used a condom at last high risk sex, Mombasa Informal Settlement Survey, Kenya, 2009

	Ever had sex[1]	Had sex in the last 12 months	Had sex with more than one partner in last 12 months[2]	Number of women aged 15-24 years	Percent who had sex with non-marital, non-cohabiting partner[3]	Number of women aged 15-24 years who had sex in last 12 months	Percent who used a condom at last sex with a non-marital, non-cohabiting partner[4]	Number of women aged 15-24 years who had sex in last 12 months with a non-marital, non-cohabiting partner
Age								
15-19	45.0	37.4	2.9	118	(54.1)	44	*	24
20-24	87.2	76.3	3.1	242	28.4	185	46.8	52
Education								
Primary	74.0	67.2	2.0	209	28.5	141	(52.8)	40
Secondary +	68.1	56.6	4.3	130	43.5	74	59.0	32
Wealth index								
Low	77.0	63.7	4.8	118	38.2	75	(50.7)	29
Medium	72.7	68.9	1.9	121	23.4	83	*	19
High	70.5	58.1	2.4	121	39.9	70	51.5	28
Religion of household head								
Catholic	82.5	78.3	5.6	67	45.4	52	*	24
Other Christian	76.1	63.3	2.8	188	31.9	119	(53.0)	38
Muslim	62.0	53.5	1.9	97	24.0	52	*	12
Total	73.4	63.6	3.0	360	33.3	229	54.1	76

[1] MICS indicator 9.10, [2] MICS indicator 9.13, [3] MICS indicator 9.15, [4] MICS indicator 9.16 and MDG indicator 6.2.
*Not shown, based on less than 25 un-weighted cases. ( ) Based on 25-49 un-weighted cases.
Note: 20 women with no education and 7 women belong to other religion are not shown separately.

12.3 Orphans and Vulnerable Children

As the HIV epidemic progresses, more and more children are becoming orphaned and vulnerable because of AIDS. Children who are orphaned or in vulnerable households may be at increased risk of neglect or exploitation if the parents are not available to assist them. Monitoring the variations in different outcomes for orphans and vulnerable children and comparing them to their peers gives a measure of how well communities and governments are responding to their needs. To monitor these variations, a measurable definition of orphaned and vulnerable children needed to be created. The UNAIDS Monitoring and Evaluation Reference Group developed proxy definition of children who have been affected by adult morbidity and mortality. This should capture many of the children affected by AIDS in countries where a significant proportion of the adults are HIV infected. This definition classifies children as orphaned and vulnerable if they have experienced the death of either parent, if either parent is chronically ill, or if an adult (aged 18-59) in the household either died (after being chronically ill) or was chronically ill in the year prior to the survey.

Table 12.10 presents information on children's living arrangements by selected characteristics. Sixty four per cent of children aged 0-17 years in Mombasa informal settlements live with both parents. One in nine children (11 per cent) is living with neither parent's. Thirteen per cent of the children live with only mother although the father is alive, and another five per cent live with the mother as their father is not alive. Children living with the father only account for five per cent (3 per cent mother is alive and 2 per cent mother dead). As expected, the proportion of children living with both parents declines with age of the child. A higher proportion of children from high wealth index households live with both parents (71 per cent) compared with children from low wealth index households (54 per cent). There is no significant difference between males and females across the living arrangements.

Table 12.10: Children's living arrangements and orphanhood (HA.10)

Percent 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, Mombasa Informal Settlement Survey, Kenya, 2009

	Living with both parents	Living with neither parent				Living with mother only		Living with father only		Impossible to determine	Total	Not living with a biological parent[1]	One or both parents dead[2]	Number of children
		Only father alive	Only mother alive	Both are alive	Both are dead	Father alive	Father dead	Mother alive	Mother dead					
Sex														
Male	63.3	1.6	1.5	5.3	2.2	13.4	5.8	4.2	1.4	1.3	100.0	10.6	12.7	621
Female	64.1	0.8	1.8	7.6	1.9	13.1	3.8	1.9	2.4	2.5	100.0	12.1	11.3	605
Age														
0-4 years	78.4	0.4	0.0	3.8	0.2	13.3	1.1	1.1	0.4	1.3	100.0	4.5	2.1	462
5-9 years	66.2	1.2	0.3	4.1	0.9	14.4	5.7	4.4	2.0	0.9	100.0	6.4	10.0	345
10-14 years	53.2	1.6	2.0	8.2	3.6	14.2	8.0	4.2	2.7	2.4	100.0	15.4	18.2	255
15-17 years	33.1	3.0	8.6	15.8	7.3	9.4	8.7	4.2	4.8	5.0	100.0	34.7	34.3	163
Wealth index														
Low	54.0	1.2	1.4	8.1	2.3	15.7	9.3	3.2	2.3	2.7	100.0	12.9	16.8	424
Medium	66.4	1.3	0.8	6.1	2.3	11.3	2.8	3.7	3.0	2.2	100.0	10.6	10.6	363
High	70.8	1.1	2.6	5.0	1.6	12.6	2.3	2.4	0.6	1.0	100.0	10.3	8.5	439
Religion of household head														
Catholic	60.7	0.6	0.0	8.3	4.5	18.4	3.5	2.6	0.7	0.7	100.0	13.5	10.0	152
Other Christian	68.2	0.9	2.1	4.1	0.8	11.7	5.4	2.2	1.8	2.7	100.0	8.0	11.6	521
Muslim	59.2	1.7	1.7	8.4	2.7	13.7	4.9	3.8	2.4	1.6	100.0	14.4	13.4	531
Total	63.7	1.2	1.6	6.4	2.1	13.3	4.9	3.1	1.9	1.9	100.0	11.3	12.0	1226

[1] MICS indicator 9.17.
[2] MICS indicator 9.18.
Note: 22 children belong to other religion is not shown separately.

Table 12.11 shows the prevalence of orphanhood and vulnerability among children aged 0-17 years by selected characteristics. The proportion of orphans and vulnerable children in Mombasa informal settlements stands at 18 per cent. Eight per cent of the children are vulnerable. Twelve per cent of the children have one or both parents dead. Six per cent of the children have a chronically ill adult in the household. The prevalence of child orphanhood and vulnerability increases with increasing age of the child and decreases with increasing levels of the wealth index. The results also show that the proportion of child orphanhood and vulnerability is slightly higher among boys compared with girls who live in these informal settlements.

Table 12.11: Prevalence of orphanhood and vulnerability among children (HA.11)

Percentage of children aged 0-17 years who are orphaned or vulnerable due to AIDS, Mombasa Informal Settlement Survey, Kenya, 2009

	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	1.0	1.4	6.3	8.8	12.7	19.7	621
Female	0.3	1.0	6.5	7.7	11.3	16.2	605
Age							
0-4 years	0.0	0.2	3.6	3.8	2.1	5.5	462
5-9 years	1.2	2.0	6.3	9.6	10.0	16.4	345
10-14 years	0.4	2.8	8.9	12.1	18.2	26.8	255
15-17 years	1.8	0.0	10.8	12.0	34.3	42.8	163
Wealth index							
Low	1.2	2.8	9.2	12.9	16.8	24.0	424
Medium	0.6	0.9	4.0	5.5	10.6	15.1	363
High	0.2	0.0	5.8	6.0	8.5	14.5	439
Religion of household head							
Catholic	0.6	0.0	10.2	10.8	10.0	19.6	152
Other Christian	0.0	0.0	5.3	5.3	11.6	15.5	521
Muslim	1.3	2.8	6.7	10.7	13.4	20.7	531
Total	0.7	1.2	6.4	8.2	12.0	18.0	1226

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
Note: 22 children belong to other religion is not shown separately.

Information on school attendance of orphaned and vulnerable children in Mombasa informal settlements by selected characteristics is depicted in Table 12.12. Ninety seven per cent of children who had both parents alive and children living with at least one parent were attending school. Children who are orphaned or vulnerable recorded a school attendance rate of 96 per cent whereas the school attendance rate among children who are not orphaned or vulnerable was 97 per cent. OVC vs non-OVC school attendance ratio is 0.99.

Table 12.12: School attendance of orphaned and vulnerable children (HA.12)

School attendance of children aged 10-14 years by orphanhood and vulnerability due to AIDS, Mombasa Informal Settlement Survey, Kenya, 2009

	Percent of children whose mother and father have died	Percent 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	Percent of children who are orphaned or vulnerable	School attendance of children who are orphaned or vulnerable	Percent 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	2.5	76.2	97.7	26.1	93.5	73.9	98.8	0.95	118
Female	4.6	67.5	95.7	27.4	97.1	72.6	95.0	1.02	137
Wealth index									
Low	2.2	64.9	96.6	27.4	95.9	72.6	97.0	0.99	92
Medium	1.5	68.6	96.0	30.3	*	69.7	96.1	*	73
High	6.8	80.7	97.2	23.4	*	76.6	97.1	*	90
Religion of household head									
Catholic	(9.8)	(70.7)	*	(32.6)	*	(67.4)	*	*	31
Other Christian	1.1	73.2	97.1	25.8	*	74.2	95.7	*	92
Muslim	4.1	69.7	96.6	26.9	91.0	73.1	97.8	0.93	128
Total	3.6	71.6	96.7	26.8	95.5	73.2	96.8	0.99	255

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.
*Not shown, based on less than 25 un-weighted cases. ( ) Based on 25-49 un-weighted cases.
Note: 4 children belong to other religion is not shown separately.

In many countries few services are available to families that have taken in children who are orphaned or vulnerable. Community-based organizations and governments need to be sure that families are supported to care for these children. The level and types of support provided to households caring for children orphaned and vulnerable due to AIDS is presented in Table 12.13. Sixty nine per cent of the orphaned or vulnerable children aged 0-17 years had reportedly not received any support, two per cent received medical support during the year preceding the survey. More than one in four (26 per cent) orphaned or vulnerable children received educational support and four per cent received emotional and psychological support. Overall, 31 per cent of orphaned and vulnerable children received any kind of support.

Table 12.13: Support for children orphaned and vulnerable due to AIDS (HA.13)

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, Mombasa Informal Settlement Survey, Kenya, 2009

	Percent of orphans and vulnerable children whose households received:						
	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	No support	Number of children orphaned or vulnerable aged 0-17 years
Sex							
Male	2.6	3.2	2.5	19.7	24.7	75.3	122
Female	2.1	5.0	3.1	34.0	38.1	61.9	98
Age							
0-9 years	3.8	2.4	1.2	18.2	23.2	76.8	82
10-14 years	3.2	4.3	4.6	31.3	37.3	62.7	68
15-17 years	0.0	5.6	2.7	30.2	33.0	67.0	70
Wealth index							
Low	0.0	2.9	3.8	23.6	26.5	73.5	102
Medium	3.9	0.0	0.0	22.9	26.9	73.1	55
High	4.9	9.3	3.4	32.7	40.7	59.3	64
Religion of household head							
Christian	0.9	8.0	3.5	22.2	27.5	72.5	110
Muslim	3.9	0.0	2.0	29.9	33.8	66.2	110
Total	2.4	4.0	2.7	26.1	30.7	69.3	220

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.

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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 Mombasa Informal Settlement Survey, Kenya (MICS4[10]) was to produce statistically reliable estimates of development indicators related to children and women living in the informal settlements of Mombasa. A two-stage cluster sampling approach was used for the selection of the survey sample.

Sample Size and Sample Allocation

The target sample size for the Mombasa Informal Settlement Survey was calculated as 1,080 households. For the calculation of the sample size, the key indicator used was proportion of institutional deliveries. The following formula was used to estimate the required sample size for these indicators:

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

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 institutional delivery) was assumed to be 60 per cent. The value of *deff* (design effect) was taken as 1.2, p (per centage of women giving birth in the total population – two year period) was taken as 6.5 per cent, and nh (average household size) was taken as 3.5 households.

The resulting number of households from this exercise was 1,074 households which is the sample size needed, however, it was decided to cover 1,080 households. The average cluster size was determined as 24 households, 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 45 clusters for the Mombasa informal settlement survey.

Sampling Frame and Selection of Clusters

The 1999 Census list of Enumeration Areas (EAs) from urban areas of Mombasa classified as informal settlements[11] were used as the sampling frame. Census enumeration areas (EAs) were defined as

10 The Mombasa Informal Settlement Survey was conducted along with the Global Pilot exercise of the fourth round of Multiple Indicator Cluster Surveys.
11 The list of 1999 Census Enumeration Areas in Urban Mombasa classified as informal and other type of settlements by KNBS in 2003-04 was used.

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 listing and mapping teams were oriented in a 2 day training program in Mombasa, which include class room sessions and field practice. The training was facilitated by experts from KNBS and UNICEF. The listing and mapping team consists of 3 teams; each team has a lister and a mapper. The teams were led by a Supervisor, overseen 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[12] and segmentation was allowed for larger EAs with more than 200 households. The whole exercise of listing and mapping was also monitored by an independent UNICEF consultant.

Selection of Households

Lists of households were prepared by the listing teams in the field for each enumeration area. The households were then sequentially numbered from 1 to n, where n is the total number of households (i.e., the total number of households in each enumeration area after listing) at the District Statistical Office, where selection of 24 households were carried out using circular systematic selection procedures using a random start.

Calculation of Sample Weights

The Mombasa Informal Settlement Survey sample is self-weighted. However, weights were calculated for adjusting the non-response rates and applied separately to the household, women and child data sets.

12 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. At the time of household listing and mapping two of the EAs were found to be wrongly classified as informal settlements and they were replaced by randomly selected informal EAs from the same sub-location.

Appendix B: List of Personnel Involved in the Survey

Management Team

Mr. Anthony K. M. Kilele, Principal Coordinator, KNBS
Mr. James Gatungu, Coordinator, KNBS
Mr. Christopher Omolo, Coordinator, KNBS
Mr. McDonald Obudho, Coordinator, KNBS
Mr. Konde, Field Coordinator, KNBS

Data Collection

Team-1

Mr. Alex Mungah, Supervisor
Ms. Beatrice Wanjiru, Editor
Mr. Charles Ogindo, Measurer
Ms. Khadija Khatib, Research Assistant
Ms. Flavia Monica Nzikwa, Research Assistant
Ms. Sophia Njambi Thuo, Research Assistant

Team-2

Mr. Humphrey Kariuki, Supervisor
Mr. Kevin Bundi, Editor
Ms. Juliet Munala, Measurer
Ms. Margaret K. Madzungu, Research Assistant
Ms. Aisha Said, Research Assistant
Ms. Jane Muthoni, Research Assistant

Team-3

Mr. Wesley Bore, Supervisor
Mr. Patrick M. Wangui, Editor
Mr. Henry Mchapo, Measurer
Ms. Asha Mbwana Mattusy, Research Assistant
Ms. Mwaka Noela Mohammed, Research Assistant
Ms. Joyce Wairimu Irungu, Research Assistant

Household Listing and Mapping

Mr. James Nga nga, Coordinator, KNBS
Mr. John Bore, Coordinaotor, KNBS
Mr. Kenneth Jefwa Mwatate, Supervisor

Team-1

Ms. Barbra M Mugwero, Research Assistants
Mr. Mejumaa Babu, Research Assistant

Team-2

Mr. James Mbole, Research Assistant
Ms. Janepher Akanga, Research Assistants

Team-3

Mr. Nueville Amugada Keiza, Research Assistant
Ms. Josphine Wali, Research Assistant

Team-4

Mr. Solomon Maghanga, Research Assistant
Mr. Johnson Mutua Mutunga, Research Assistant

Data Entry and Analysis

Mr. Samuel Kipruto, Co-ordinator, Data Processing, KNBS
Mr. Obasi, Supervisor, Data Processing, KNBS
Ms. Chiku Salim Shaffi, Data entry operator
Ms. Habibbah Luyeshe Abdi, Data entry operator
Mr. Maxious M. Nthuli, Data entry operator
Ms. Mercy Mshai Ludindi, Data entry operator

Appendix C: Estimates of Sampling Errors

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

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

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

For the calculation of sampling errors from the survey data, SPSS Version 17 Complex Samples module has been used. The results are shown in the tables that follow. In addition to the sampling error measures described above, the tables also include weighted and un-weighted counts of denominators for each indicator.

Sampling errors are calculated for indicators of primary interest. Three of the selected indicators are based on households, 10 are based on household members, 14 are based on women, and 14 are based on children under 5. 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.

Table SE.1: Indicators selected for sampling error calculations

List of indicators selected for sampling error calculations, and base populations (denominators) for each indicator, Mombasa Informal Settlement Survey, Kenya, 2009

MICS Indicator	Base Population
HOUSEHOLDS	
Household availability of any mosquito net	All households
Household availability ever treated net	All households
Household availability of ITNs	All households
Iodized salt consumption	All households
Child discipline	Children aged 2-14 years selected
HOUSEHOLD MEMBERS	
Use of improved drinking water sources	All household members
Use of improved sanitation facilities	All household members
Net primary school attendance rate	Children of primary school age
Net secondary school attendance rate	Children of secondary school age
Child labour	Children aged 5-14 years
Prevalence of orphans	Children aged under 18
Prevalence of vulnerable children	Children aged under 18
WOMEN	
Skilled attendant at delivery	Women aged 15-49 years with a live birth in the last 2 years
Institutional deliveries	Women aged 15-49 years with a live birth in the last 2 years
Antenatal care	Women aged 15-49 years with a live birth in the last 2 years
Contraceptive prevalence	Women aged 15-49 currently married/in union
Female adult literacy	Women aged 15-24 years
Prevalence of female genital mutilation/cutting (FGM/C)	Women aged 15-49 years
Marriage before age 18	Women aged 20-49 years
Polygyny	Women aged 15-49 years currently married or in union
Comprehensive knowledge about HIV prevention among young people	Women aged 15-24 years
Condom use with non-regular partners	Women aged 15-24 years that had a non-marital, non-cohabiting partner in the last 12 months
Age at first sex among young people	Women aged 15-24 years
Attitude towards people with HIV/AIDS	Women aged 15-49 years
Women who have been tested for HIV	Women aged 15-49 years
Knowledge of mother- to-child transmission of HIV	Women aged 15-49 years
UNDER-5s	
Underweight prevalence	Children under age 5
Tuberculosis immunization coverage	Children aged 12-23 months
Polio immunization coverage	Children aged 12-23 months
Immunization coverage for DPT	Children aged 12-23 months
Measles immunization coverage	Children aged 12-23 months
Fully immunized children	Children aged 12-23 months
Acute respiratory infection in last two weeks	Children under age 5
Diarrhoea in last two weeks	Children under age 5
Received ORT or increased fluids and continued feeding	Children under age 5 with diarrhoea in the last 2 weeks
Under-fives sleeping under insecticide treated nets	Children under age 5
Fever in last two weeks	Children under age 5
Antimalarial treatment	Children under age 5 with fever in the last 2 weeks
Child development index	Children aged 36-59 months
Birth registration	Children under age 5

Table SE.2: Sampling errors

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Mombasa Informal Settlement Survey, Kenya, 2009

	Table	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se*/*r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2*se*	*r* + 2*se*
HOUSEHOLDS										
Household availability of any mosquito net	6.9	0.725	0.022	0.031	2.538	1.593	1016	1016	0.681	0.770
Household availability ever treated net	6.9	0.715	0.022	0.031	2.403	1.550	1016	1016	0.671	0.759
Household availability of ITNs	6.9	0.644	0.020	0.032	1.832	1.353	1016	1016	0.604	0.685
Iodized salt consumption	5.5	0.898	0.011	0.012	1.329	1.153	980	980	0.876	0.921
Child discipline	11.4	0.777	0.027	0.035	1.686	1.298	399	399	0.722	0.831
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	7.1	0.868	0.033	0.039	9.902	3.147	3219	1016	0.801	0.935
Use of improved sanitation facilities	7.5	0.674	0.048	0.071	10.495	3.240	3219	1016	0.579	0.769
Net primary school attendance rate	10.3	0.908	0.015	0.017	1.255	1.120	453	452	0.878	0.939
Net secondary school attendance rate	10.4	0.269	0.037	0.137	1.517	1.232	222	221	0.196	0.343
Child labour	11.2	0.064	0.016	0.250	2.562	1.601	600	598	0.032	0.096
Prevalence of orphans	12.10	0.120	0.016	0.135	3.048	1.746	1226	1225	0.087	0.152
Prevalence of vulnerable children	12.11	0.082	0.017	0.207	4.702	2.168	1226	1225	0.048	0.116
WOMEN										
Skilled attendant at delivery	8.9	0.669	0.037	0.055	1.309	1.144	211	212	0.595	0.743
Institutional deliveries	8.9	0.654	0.038	0.058	1.365	1.168	211	212	0.578	0.731
Antenatal care	8.6	0.938	0.021	0.023	1.651	1.285	211	212	0.895	0.981
Contraceptive prevalence	8.4	0.395	0.027	0.067	1.430	1.196	482	483	0.341	0.448
Adult literacy	10.6	0.843	0.024	0.028	1.516	1.231	360	360	0.796	0.891
Prevalence of female genital mutilation/cutting (FGM/C)	11.7	0.124	0.012	0.098	1.117	1.057	821	821	0.100	0.148
Marriage before age 18	11.5	0.271	0.019	0.071	1.324	1.151	703	705	0.233	0.310
Polygyny	11.5	0.123	0.017	0.134	1.214	1.102	482	483	0.090	0.156
Comprehensive knowledge about HIV prevention among women aged 15-49	12.3	0.428	0.018	0.041	1.029	1.014	821	821	0.393	0.463
Condom use with non-regular partners	12.9	0.541	0.062	0.115	1.173	1.083	76	76	0.417	0.666
Age at first sex among young people	12.8	0.092	0.028	0.300	1.056	1.027	118	116	0.037	0.148
Attitude towards people with HIV/AIDS	12.5	0.390	0.019	0.048	1.177	1.085	813	813	0.353	0.427
Women who have been tested for HIV	12.6	0.692	0.019	0.028	1.433	1.197	821	821	0.653	0.731
Knowledge of mother- to-child transmission of HIV	12.4	0.527	0.021	0.040	1.435	1.198	821	821	0.485	0.569
UNDER-5s										
Underweight prevalence	5.1	0.144	0.017	0.121	1.094	1.046	445	445	0.109	0.179
Tuberculosis immunization coverage	6.2	0.938	0.023	0.024	0.854	0.924	100	99	0.892	0.983
Polio immunization coverage	6.2	0.682	0.058	0.085	1.513	1.230	100	98	0.566	0.798
Immunization coverage for DPT	6.2	0.821	0.046	0.056	1.388	1.178	100	99	0.730	0.912
Measles immunization coverage	6.2	0.896	0.028	0.031	0.832	0.912	100	99	0.840	0.952
Fully immunized children	6.2	0.557	0.059	0.107	1.398	1.182	100	99	0.438	0.676
Acute respiratory infection in last two weeks	6.6	0.099	0.018	0.186	1.730	1.315	454	454	0.062	0.136
Diarrhoea in last two weeks	6.4	0.193	0.022	0.113	1.387	1.178	454	454	0.150	0.237
Received ORT or increased fluids and continued feeding	6.5	0.208	0.042	0.201	0.930	0.964	88	89	0.125	0.291
Under-fives sleeping under insecticide treated nets	6.10	0.575	0.035	0.062	2.332	1.527	454	454	0.504	0.646
Fever in last two weeks	6.12	0.266	0.022	0.084	1.159	1.076	454	454	0.222	0.311
Antimalarial treatment	6.12	0.202	0.042	0.206	1.310	1.144	121	123	0.119	0.285
Child development index	9.4	0.403	0.043	0.106	1.389	1.179	186	185	0.318	0.488
Birth registration	11.1	0.691	0.032	0.047	2.234	1.495	454	454	0.626	0.756

Appendix D: Data Quality Tables

Table DQ.1: Age distribution of household population

Single-year age distribution of household population by sex (weighted), Mombasa Informal Settlement Survey, Kenya, 2009

	Males		Females			Males		Females	
	Number	Percent	Number	Percent		Number	Percent	Number	Percent
0	54	3.1	46	3.1	41	7	0.4	9	0.6
1	51	2.9	46	3.1	42	17	1.0	13	0.9
2	43	2.5	35	2.4	43	12	0.7	4	0.3
3	59	3.4	46	3.1	44	9	0.5	4	0.3
4	39	2.2	43	2.9	45	24	1.4	12	0.8
5	40	2.3	35	2.4	46	16	0.9	8	0.5
6	31	1.8	40	2.7	47	12	0.7	5	0.3
7	35	2.0	32	2.2	48	8	0.5	8	0.5
8	40	2.3	25	1.7	49	10	0.6	5	0.4
9	27	1.5	40	2.7	50	10	0.6	11	0.8
10	26	1.5	22	1.5	51	6	0.3	3	0.2
11	21	1.2	35	2.4	52	7	0.4	10	0.7
12	27	1.6	30	2.0	53	8	0.5	2	0.1
13	21	1.2	33	2.2	54	11	0.6	5	0.3
14	23	1.3	17	1.1	55	17	1.0	4	0.3
15	29	1.6	24	1.6	56	3	0.2	2	0.1
16	28	1.6	30	2.0	57	2	0.1	2	0.1
17	26	1.5	28	1.9	58	2	0.1	4	0.3
18	24	1.4	35	2.4	59	3	0.2	0	0.0
19	29	1.6	22	1.5	60	12	0.7	10	0.7
20	37	2.1	50	3.4	61	2	0.1	0	0.0
21	33	1.9	40	2.7	62	3	0.2	0	0.0
22	56	3.2	55	3.7	63	1	0.1	1	0.1
23	52	3.0	56	3.8	64	0	0.0	4	0.3
24	44	2.5	51	3.4	65	2	0.1	1	0.1
25	61	3.5	56	3.8	66	1	0.1	0	0.0
26	46	2.6	37	2.5	67	1	0.1	1	0.1
27	41	2.3	43	2.9	68	2	0.1	1	0.1
28	58	3.3	39	2.7	69	0	0.0	1	0.1
29	40	2.3	36	2.4	70	1	0.1	3	0.2
30	78	4.5	37	2.5	71	0	0.0	0	0.0
31	25	1.4	19	1.3	72	1	0.1	0	0.0
32	49	2.8	24	1.6	73	1	0.1	1	0.1
33	18	1.0	18	1.2	74	0	0.0	0	0.0
34	31	1.8	18	1.2	75	0	0.0	0	0.0
35	48	2.8	24	1.6	76	1	0.1	2	0.1
36	32	1.8	20	1.4	77	1	0.1	1	0.1
37	24	1.4	15	1.0	78	0	0.0	0	0.0
38	26	1.5	11	0.7	79	0	0.0	0	0.0
39	19	1.1	11	0.8	80+	3	0.2	4	0.3
40	34	2.0	14	0.9	DK/Missing	2	0.1	0	0.0
					Total	1742	100.0	1476	100.0

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

Household population of women age 10-54, interviewed women age 15-49, and percentage of eligible women who were interviewed (weighted), by five-year age group, Mombasa Informal Settlement Survey, Kenya, 2009

Age	Household population of women age 10-54	Interviewed women age 15-49		Percentage of eligible women interviewed
	Number	Number	Percent	
10-14	137	na	na	na
15-19	137	118	14.4	86.0
20-24	252	238	29.0	94.7
25-29	211	198	24.2	94.2
30-34	116	112	13.6	96.5
35-39	81	78	9.5	96.3
40-44	44	42	5.1	95.6
45-49	38	34	4.2	89.3
50-54	31	na	na	na
15-49	879	821	100.0	93.4

na: not applicable
Note: Weights for both household population of women and interviewed women are household weights. Age is based on the household schedule.

Table DQ.3: Age distribution of eligible and interviewed under-5s

Household population of children age 0-4, children whose mothers/caretakers were interviewed, and percentage of under-5 children whose mothers/caretakers were interviewed (weighted), by five-year age group, Mombasa Informal Settlement Survey, Kenya, 2009

Age	Household population of children age 0-7	Interviewed children age 0-4		Percentage of eligible children interviewed
	Number	Number	Percent	
0	101	99	21.8	98.0
1	97	95	20.9	97.9
2	79	77	17.0	97.5
3	105	104	22.9	99.0
4	82	79	17.4	96.3
5	75	NA	NA	NA
6	71	NA	NA	NA
7	66	NA	NA	NA
0-4	464	454	100.0	97.8

NA: not applicable
Note: Weights for both household population of children and interviewed children are household weights. Age is based on the household schedule.

Table DQ.4: Age distribution of under-5 children

Age distribution of under-5 children by 3-month groups (weighted), Mombasa Informal Settlement Survey, Kenya, 2009

Age in months	Males		Females		Total	
	Number	Percent	Number	Percent	Number	Percent
0-2	6	2.4	6	2.9	12	2.6
3-5	17	6.7	12	5.7	28	6.2
6-8	14	5.7	11	5.2	25	5.4
9-11	15	6.0	14	6.9	29	6.4
12-14	16	6.5	11	5.5	27	6.0
15-17	15	6.0	9	4.4	24	5.2
18-20	5	2.1	11	5.3	16	3.5
21-23	18	7.5	14	6.7	32	7.1
24-26	10	3.9	5	2.4	15	3.2
27-29	12	4.8	2	1.0	14	3.1
30-32	9	3.6	13	6.1	22	4.8
33-35	12	4.8	12	5.8	24	5.2
36-38	12	5.0	12	5.7	24	5.3
39-41	14	5.7	8	3.9	22	4.9
42-44	14	5.8	16	7.8	30	6.7
45-47	17	7.1	12	5.9	30	6.5
48-50	7	2.9	6	2.8	13	2.8
51-53	5	2.0	5	2.3	10	2.1
54-56	15	6.1	14	6.8	29	6.4
57-59	14	5.6	15	7.2	29	6.3
Total	246	100.0	208	100.0	454	100.0

Table DQ.5: Heaping on ages and periods
Age and period ratios at boundaries of eligibility by type of information collected (weighted), Mombasa Informal Settlement Survey, Kenya, 2009

Age in household questionnaire	Age and period ratios*			Eligibility boundary (lower-upper)	Module or questionnaire
	Males	Females	Total		
1	1.03	1.09	1.06		
2	0.85	0.82	0.84	Lower	Child discipline and child disability
3	1.26	1.12	1.19		
4	0.84	1.03	0.93	Upper	Under-5 questionnaire
5	1.09	0.90	0.99	Lower	Child labour and education
6	0.88	1.12	1.00		
8	1.17	0.78	0.98		
9	0.86	1.38	1.11	Upper	Child disability
10	1.07	0.68	0.85		
13	0.88	1.23	1.07		
14	0.95	0.69	0.82	Upper	Child labour and child discipline
15	1.08	1.01	1.05	Lower	Women's questionnaire
16	1.01	1.10	1.05		
17	1.01	0.90	0.95	Upper	Orphaned and vulnerable children
18	1.00	0.99	0.99		
23	1.03	1.03	1.03		
24	0.84	0.94	0.89	Upper	Education
25	1.21	1.17	1.19		
48	0.81	1.31	1.00		
49	1.05	0.65	0.86	Upper	Women's questionnaire
50	1.17	1.71	1.41		
Age in women's questionnaire					
23	NA		NA		
24	NA		NA	Upper	Sexual behaviour
25	NA		NA		
Months since last birth in women's questionnaire					
6-11	NA		NA		
12-17	NA		NA		
18-23	NA		NA	Upper	Tetanus toxoid and maternal and child health
24-29	NA		NA		
30-35	NA		NA		

* Age or period ratios are calculated as $x / ((x_{n-1} + x_n + x_{n+1}) / 3)$, where x is age or period.
NA: not applicable

Table DQ.6: Completeness of reporting

Percentage of observations missing information for selected questions and indicators (weighted), Mombasa Informal Settlement Survey, Kenya, 2009

Questionnaire and Subject	Reference group	Percent with missing information*	Number of cases
Household			
Salt testing	All households surveyed	0.6	1016
Women			
Date of Birth	All women age 15-49		
Month only		10.5	821
Month and year missing		0.0	821
Date of first birth	All women age 15-49 with at least one live birth		
Month only		0.8	574
Month and year missing		0.5	574
Completed years since first birth	All women age 15-49 with at least one live birth		
Date of last birth	All women age 15-49 with at least one live birth		
Month only		0.2	574
Month and year missing		0.0	574
Date of first marriage/union	All ever married women age 15-49		
Month only		6.2	576
Month and year missing		6.8	576
Age at first marriage/union	All ever married women age 15-49	1.0	576
Age at first intercourse	All women age 15-24 who have ever had sex	0.5	821
Time since last intercourse	All women age 15-24 who have ever had sex	0.1	713
Under-5			
Date of Birth	All under five children surveyed		
Month only		0.6	454
Month and year missing		0.0	454
Anthropometry	All under five children surveyed		
Height		0.0	454
Weight		0.2	454
Height or Weight		0.2	454

* Includes "Don't know" responses

Table DQ.7: Presence of mother in the household and the person interviewed for the under-5 questionnaire

Distribution of children under five by whether the mother lives in the same household, and the person interviewed for the under-5 questionnaire (weighted), Mombasa Informal Settlement Survey, Kenya, 2009

	Mother in the household				Mother not in the household				
Age	Mother interviewed	Father interviewed	Other adult female interviewed	Other adult male interviewed	Father interviewed	Other adult female interviewed	Other adult male interviewed	Total	Number of children aged 0-4 years
0	99.0	0.0	0.0	0.0	0.0	1.0	0.0	100.0	100
1	93.0	2.0	1.0	0.0	0.0	4.0	0.0	100.0	97
2	94.8	0.0	0.0	0.0	0.0	5.2	0.0	100.0	78
3	90.7	0.0	0.0	0.0	1.0	8.3	0.0	100.0	105
4	85.2	1.3	0.0	0.0	1.3	12.3	0.0	100.0	81
Total	92.7	0.6	0.2	0.0	0.4	6.0	0.0	100.0	462

Table DQ.8: School attendance by single age

Distribution of household population age 5-24 by educational level and grade attended in the current year (weighted), Mombasa Informal Settlement Survey, Kenya 2009

		Primary school								Secondary school										
Age	Pre-school	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Higher	Non-standard curriculum	Don't know	Not attending school	Total	Number
5	83.2	6.0	3.2	1.5	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0	3.1	1.4	100.0	75
6	49.1	36.2	10.1	3.1	0.0	0.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0	0.0	1.5	100.0	71
7	17.1	29.2	29.1	12.0	4.8	0.0	0.0	NA	NA	NA	NA	NA	NA	NA	NA	0.0	1.6	6.2	100.0	67
8	12.7	7.7	35.2	21.9	16.0	4.8	0.0	0.0	1.8	NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	100.0	65
9	1.4	4.5	16.6	27.0	30.3	14.1	6.1	0.0	0.0	NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	100.0	67
10	0.0	8.3	0.0	18.4	25.4	29.2	16.7	2.1	0.0	NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	100.0	48
11	1.8	1.9	0.0	5.4	25.0	33.8	23.2	9.0	0.0	NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	100.0	56
12	0.0	1.8	1.7	5.0	15.9	17.2	26.9	24.4	7.1	NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	100.0	57
13	1.9	0.0	0.0	1.8	7.6	13.2	11.6	29.0	24.9	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	7.9	100.0	53
14	0.0	0.0	0.0	2.5	5.3	12.9	17.6	15.8	17.7	7.3	10.3	0.0	0.0	7.3	0.0	2.7	0.0	7.8	100.0	40
15	0.0	0.0	0.0	3.7	0.0	1.8	11.7	21.3	17.8	7.9	7.7	7.9	0.0	7.9	0.0	0.0	0.0	20.2	100.0	52
16	0.0	1.7	0.0	0.0	0.0	1.8	3.8	10.8	12.8	7.5	14.5	10.8	1.9	7.5	0.0	0.0	0.0	34.4	100.0	57
17	0.0	0.0	0.0	0.0	1.9	0.0	1.9	4.0	7.6	5.6	9.9	7.4	7.4	5.6	0.0	0.0	0.0	54.4	100.0	54
18	1.8	0.0	1.9	0.0	0.0	1.8	1.8	1.8	5.5	1.8	3.7	9.5	7.1	1.8	2.0	2.1	0.0	59.3	100.0	59
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	12.1	2.2	0.0	6.0	2.0	0.0	74.0	100.0	50
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	0.0	0.0	2.7	1.2	7.5	1.2	0.0	85.1	100.0	87
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	11.9	2.8	1.4	82.4	100.0	74
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.9	1.9	1.8	5.5	0.9	0.0	88.9	100.0	111
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.9	6.1	3.0	0.0	90.0	100.0	108
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.2	0.0	95.6	100.0	95

Table DQ.9: Sex ratio at birth among children ever born and living

Sex ratio at birth among children ever born, children living, and deceased children, by age of women (weighted), Mombasa Informal Settlement Survey, Kenya, 2009

	Children Ever Born			Children Living			Children deceased			
Age	Number of sons ever born	Number of daughters ever born	Sex ratio	Number of sons living	Number of daughters living	Sex ratio	Number of deceased sons	Number of deceased daughters	Sex ratio	Number of women
15-19	15	10	1.52	13	10	1.31	2	0	NA	118
20-24	132	123	1.07	115	112	1.03	16	11	1.50	242
25-29	168	142	1.19	156	129	1.21	12	13	0.96	186
30-34	182	178	1.02	165	162	1.02	17	17	1.04	121
35-39	137	146	0.94	124	129	0.96	13	17	0.79	74
40-44	95	87	1.09	81	83	0.98	14	4	3.54	44
45-49	94	88	1.07	77	79	0.97	18	9	1.85	36
Total	822	773	1.06	730	704	1.04	92	70	1.32	821

Note: Sex ratios are calculated as number of males/ number of females

Table DQ.10: Distribution of women by time since last birth

Distribution of women aged 15-49 with at least one live birth, by months since last birth (weighted), Mombasa Informal Settlement Survey, Kenya, 2009

	Months since last birth				
	Number	Percent		Number	Percent
0	3	1.0	18	6	2.2
1	5	1.9	19	6	2.1
2	4	1.4	20	6	2.2
3	9	3.3	21	9	3.2
4	8	2.8	22	16	5.7
5	11	3.9	23	8	2.8
6	14	5.0	24	3	1.1
7	7	2.4	25	6	2.1
8	10	3.5	26	6	2.1
9	11	3.8	27	5	1.8
10	14	5.2	28	2	.7
11	8	3.0	29	3	1.2
12	11	3.9	30	4	1.5
13	10	3.6	31	7	2.6
14	9	3.3	32	7	2.5
15	10	3.6	33	11	4.0
16	6	2.2	34	5	1.7
17	9	3.3	35	9	3.3
			Total	275	100.0

Appendix E: Additional Tables

Table E.1: Child malnourishment (NU.1) – NCHS Standard

Percentage of children aged 0-59 months who are severely or moderately malnourished, Mombasa Informal Settlement Survey, Kenya, 2009

	Weight-for-age *(Under-weight)*		Height-for-age *(Stunting)*		Weight-for-height *Wasting*			
Characteristics	% below - 2 SD	% below - 3 SD	% below - 2 SD	% below - 3 SD	% below - 2 SD	% below - 3 SD	% above + 2 SD	Number of children
Sex								
Male	19.3	3.4	19.4	3.9	6.3	0.8	1.7	240
Female	15.8	2.1	15.9	4.0	3.5	0.5	2.0	199
Age								
< 6 months	(5.7)	(0.0)	(5.7)	(0.0)	(0.0)	(0.0)	(10.2)	38
6-11 months	13.9	1.8	8.9	1.8	5.4	0.0	0.0	53
12-23 months	25.2	4.2	19.5	4.0	10.4	2.0	3.1	98
24-35 months	23.6	4.2	23.1	5.4	5.6	0.0	1.3	72
36-47 months	11.6	2.0	19.7	4.0	1.9	0.9	0.0	103
48-59 months	19.7	2.7	20.4	6.1	3.9	0.0	0.0	75
Mother's education								
None	22.3	2.3	24.1	6.3	2.0	0.0	0.0	50
Primary	20.5	3.5	20.2	5.2	5.9	0.4	2.3	257
Secondary +	10.6	1.5	10.7	0.7	4.4	1.5	1.4	131
Wealth index								
Low	21.5	5.7	25.0	8.4	4.1	0.6	1.4	143
Medium	17.1	1.4	16.4	2.4	5.0	0.0	0.7	142
High	14.8	1.3	12.4	1.3	5.8	1.3	3.2	154
Religion of household head								
Catholic	16.2	1.6	16.5	3.3	1.6	0.0	3.2	62
Other Christian	15.4	3.7	15.9	2.7	4.2	0.9	2.7	216
Muslim	22.3	2.1	21.0	6.1	7.7	0.6	0.0	155
Total	17.7	2.8	17.8	4.0	5.0	0.7	1.8	439

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

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

Children whose height or weight is missing are excluded from the calculations. If height and weight data are missing for more than 10 percent 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.

( ) Based on 25-49 un-weighted cases.

Note: Six children belong to other religion are not shown separately.

Table E.2: Primary school completion and transition to secondary education (ED.6)
Primary school completion rate and transition rate to secondary education, Mombasa Informal Settlements, Kenya, 2009

	Net primary school completion rate[1]	Number of children of primary school completion age	Transition rate to secondary education[2]	Number of children who were in the last grade of primary school the previous year
Sex				
Male	*	21	(0.0)	39
Female	35.3	33	(0.0)	27
Total	42.0	53	0.0	66

[1]MICS Indicator 7.7; [2]MICS Indicator 7.8
*Not shown, based on less than 25 un-weighted cases. ( ) Based on 25-49 un-weighted cases.

Table E.3: Education gender parity (ED.7)
Ratio of girls to boys attending primary education and ratio of girls to boys attending secondary education, Mombasa Informal Settlements, Kenya, 2009

	Primary school net attendance ratio (NAR), girls	Primary school net attendance ratio (NAR), boys	Gender parity index (GPI) for primary school NAR[1]	Secondary school net attendance ratio (NAR), girls	Secondary school net attendance ratio (NAR), boys	Gender parity index (GPI) for secondary school NAR[2]
Mother's education						
None	49.1	72.1	0.68	27.5	13.7	2.00
Primary	64.4	68.2	0.94	27.2	19.5	1.39
Secondary +	77.7	61.1	1.27	67.5	51.8	1.30
Wealth index						
Low	55.8	62.2	0.90	13.6	16.3	0.83
Medium	63.1	66.6	0.95	24.1	31.9	0.75
High	74.9	71.9	1.04	37.0	32.0	1.16
Total	65.1	66.7	0.98	24.9	26.1	0.95

[1]MICS Indicator 7.9; [2]MICS Indicator 7.10

Appendix F: MICS4 Indicators - Numerators and Denominators

MICS4 INDICATOR		Module[13]	Numerator	Denominator	MDG[14]
1. MORTALITY					
1.1	Under-five mortality rate	CM	Probability of dying by exact age 5 years		MDG 4.1
1.2	Infant mortality rate	CM	Probability of dying by exact age 1 year		MDG 4.2

13 Some indicators are constructed by using questions in several modules. In such cases, only the module(s) which contains most of the necessary information is indicated.
14 MDG indicators as of February 2010

MICS4 INDICATOR		Module[13]	Numerator	Denominator	MDG[14]
2. NUTRITION					
2.1a 2.1b	Underweight prevalence	AN	Number of children under age 5 who (a) fall below minus two standard deviations (moderate and severe) (b) fall below minus three standard deviations (severe) from the median weight for age of the WHO standard	Total number of children under age 5	MDG 1.8
2.2a 2.2b	Stunting prevalence	AN	Number of children under age 5 who (a) fall below minus two standard deviations (moderate and severe) (b) fall below minus three standard deviations (severe) from the median height for age of the WHO standard	Total number of children under age 5	
2.3a 2.3b	Wasting prevalence	AN	Number of children under age 5 who (a) fall below minus two standard deviations (moderate and severe) (b) fall below minus three standard deviations (severe) from the median weight for height of the WHO standard	Total number of children under age 5	
2.5	Early initiation of breastfeeding	MN	Number of women with a live birth in the 2 years preceding the survey who 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	
2.6	Exclusive breastfeeding under 6 months	BF	Number of infants under 6 months of age who are exclusively breastfed[15]	Total number of infants under 6 months of age	
2.7	Continued breastfeeding at 1 year	BF	Number of children age 12-15 months who are currently breastfeeding	Total number of children age 12-15 months	
2.8	Continued breastfeeding at 2 years	BF	Number of children age 20-23 months who are currently breastfeeding	Total number of children age 20-23 months	
2.13	Minimum meal frequency	BF	Number of children age 6-23 months receiving solid, semi-solid and soft foods (plus milk feeds for non-breastfed children) the minimum times[16] or more, according to breastfeeding status, during the previous day	Total number of children age 6-23 months	
2.15	Milk feeding frequency for non-breastfed children	BF	Number of non-breastfed children age 6-23 months who received at least 2 milk feedings during the previous day	Total number of non-breastfed children age 6-23 months	
2.16	Iodized salt consumption	SI	Number of households with salt testing 15 parts per million or more of iodide/iodate	Total number of households in which salt was tested or with no salt	

15 Infants receiving breast milk, and not receiving any other fluids or foods, with the exception of oral rehydration solution, vitamins, mineral supplements and medicines

16 Breastfeeding children: Solid, semi-solid, or soft foods, two times for infants age 6-8 months, 3 times for children 9-23 months; Non-breastfeeding children: Solid, semi-solid, or soft foods, or milk feeds, four times for children age 6-23 months

MICS4 INDICATOR		Module[13]	Numerator	Denominator	MDG[14]
2.17	Vitamin A supplementation (children under age 5)	IM	Number of children age 6-59 months who received at least one high-dose vitamin A supplement in the 6 months preceding the survey	Total number of children age 6-59 months	
2.18	Low-birthweight infants	MN	Number of last live births in the 2 years preceding the survey weighing below 2,500 grams at birth	Total number of last live births in the 2 years preceding the survey	
2.19	Infants weighed at birth	MN	Number of last live births in the 2 years preceding the survey who were weighed at birth	Total number of last live births in the 2 years preceding the survey	

MICS4 INDICATOR		Module[13]	Numerator	Denominator	MDG[14]
3. CHILD HEALTH					
3.1	Tuberculosis immunization coverage[17]	IM	Number of children age 12-23 months who received BCG vaccine before their first birthday	Total number of children age 12-23 months	
3.2	Polio immunization coverage	IM	Number of children age 12-23 months who received OPV3 vaccine before their first birthday	Total number of children age 12-23 months	
3.3	Immunization coverage for diphtheria, pertussis and tetanus (DPT)	IM	Number of children age 12-23 months who received DPT3 vaccine before their first birthday	Total number of children age 12-23 months	
3.4	Measles immunization coverage	IM	Number of children age 12-23 months who received measles vaccine before their first birthday	Total number of children age 12-23 months	MDG 4.3
3.6	Yellow fever immunization coverage	IM	Number of children age 12-23 months who received yellow fever vaccine before their first birthday	Total number of children age 12-23 months	
3.7	Neonatal tetanus protection	MN	Number of women age 15-49 years with a live birth in the 2 years preceding the survey who were given at least two doses of tetanus toxoid vaccine within the appropriate interval[18] prior to giving birth	Total number of women age 15-49 years with a live birth in the 2 years preceding the survey	
3.8	Oral rehydration therapy with continued feeding	CA	Number of children under age 5 with diarrhoea in the previous 2 weeks who received ORT (ORS packet or recommended homemade fluid or increased fluids) and continued feeding during the episode of diarrhoea	Total number of children under age 5 with diarrhoea in the previous 2 weeks	
3.9	Care-seeking for suspected pneumonia	CA	Number of children under age 5 with suspected pneumonia in the previous 2 weeks who were taken to an appropriate health provider	Total number of children under age 5 with suspected pneumonia in the previous 2 weeks	
3.10	Antibiotic treatment of suspected pneumonia	CA	Number of children under age 5 with suspected pneumonia in the previous 2 weeks who received antibiotics	Total number of children under age 5 with suspected pneumonia in the previous 2 weeks	
3.11	Solid fuels	HC	Number of household members in households that use solid fuels as the primary source of domestic energy to cook	Total number of household members	
3.12	Household availability of insecticide-treated nets (ITNs)[19]	TN	Number of households with at least one insecticide treated net (ITN)	Total number of households	
3.14	Children under age 5 sleeping under	TN	Number of children under age 5 who slept under any type	Total number of children under age 5	

17 Age groups used in indicators 3.1 to 3.6 are applicable when basic immunization schedules are used (with measles administered at 9 months). For the calculation of indicators when different schedules are used, see MICS4 manual for detailed descriptions

18 See MICS4 manual for a detailed description

19 An ITN is (a) a factory treated net which does not require any treatment, (b) a pretreated net obtained within the past 12 months, or (c) a net that has been soaked with insecticide within the past 12 months

MICS4 INDICATOR		Module[13]	Numerator	Denominator	MDG[14]
	any type of mosquito net		of mosquito net the previous night		
3.15	Children under age 5 sleeping under insecticide-treated nets (ITNs)	TN	Number of children under age 5 who slept under an insecticide-treated mosquito net (ITN) the previous night	Total number of children under age 5	MDG 6.7
3.18	Anti-malarial treatment of children under age 5	ML	Number of children under age 5 reported to have had fever in the previous 2 weeks who received any antimalarial treatment	Total number of children under age 5 reported to have had fever in the previous 2 weeks	MDG 6.8
3.19	Pregnant women sleeping under insecticide-treated nets (ITNs)	TN	Number of pregnant women who slept under an insecticide-treated net (ITN) the previous night	Total number of pregnant women	
3.20	Intermittent preventive treatment for malaria	MN	Number of women age 15-49 years who received at least 2 doses of SP/Fansidar to prevent malaria during antenatal care visits for their last pregnancy leading to a live birth in the 2 years preceding the survey	Total number of women age 15-49 years who have had a live birth in the 2 years preceding the survey	
3.21	Place for handwashing	HW	Number of households with a designated place for hand washing where water and soap are present	Total number of households	
3.22	Availability of soap	HW	Number of households with soap anywhere in the dwelling	Total number of households	

MICS4 INDICATOR		Module[13]	Numerator	Denominator	MDG[14]
4. WATER AND SANITATION					
4.1	Use of improved drinking water sources	WS	Number of household members using improved sources of drinking water	Total number of household members	MDG 7.8
4.2	Water treatment	WS	Number of household members using unimproved drinking water who use an appropriate treatment method	Total number of household members in households using unimproved drinking water sources	
4.3	Use of improved sanitation facilities	WS	Number of household members using improved sanitation facilities	Total number of household members	MDG 7.9
4.4	Safe disposal of child's faeces	CA	Number of children age 0-2 years whose (last) stools were disposed of safely	Total number of children age 0-2 years	

MICS4 INDICATOR		Module[13]	Numerator	Denominator	MDG[14]
5. REPRODUCTIVE HEALTH					
5.1	Adolescent birth rate	CM	Age-specific fertility rate for women age 15-19 years		MDG 5.4
5.3	Contraceptive prevalence rate	CP	Number of women age 15-49 years currently married or in union who are using (or whose partner is using) a (modern or traditional) contraceptive method	Total number of women age 15-49 years who are currently married or in union	MDG 5.3
5.4	Unmet need[20]	UN	Number of women age 15-49 years who are currently married or in union who are fecund and want to space their births or limit the number of children they have and who are not currently using contraception	Total number of women age 15-49 years who are currently married or in union	MDG 5.6
5.5a 5.5b	Antenatal care coverage	MN	Number of women age 15-49 years who were attended during pregnancy in the 2 years preceding the survey (a) at least once by skilled personnel (b) at least four times by any provider	Total number of women age 15-49 years with a live birth in the 2 years preceding the survey	MDG 5.5
5.7	Skilled attendant at delivery	MN	Number of women age 15-49 years with a live birth in the 2 years preceding the survey who were attended during childbirth by skilled health personnel	Total number of women age 15-49 years with a live birth in the 2 years preceding the survey	MDG 5.2
5.8	Institutional deliveries	MN	Number of women age 15-49 years with a live birth in the 2 years preceding the survey who delivered in a health facility	Total number of women age 15-49 years with a live birth in the 2 years preceding the survey	

20 See MICS4 manual for a detailed description

MICS4 INDICATOR		Module[13]	Numerator	Denominator	MDG[14]
6. CHILD DEVELOPMENT					
6.1	Support for learning	CE	Number of children age 36-59 months with whom an adult has engaged in four or more activities to promote learning and school readiness in the past 3 days	Total number of children age 36-59 months	
6.2	Father's support for learning	CE	Number of children age 36-59 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 age 36-59 months	
6.3	Learning materials: children's books	CE	Number of children under age 5 who have three or more children's books	Total number of children under age 5	
6.5	Inadequate care	CE	Number of children under age 5 left alone or in the care of another child younger than 10 years of age for more than one hour at least once in the past week	Total number of children under age 5	
6.6	Early child development Index	CE	Number of children age 36-59 months who are developmentally on track in literacy-numeracy, physical, social-emotional, and learning domains	Total number of children age 36-59 months	
6.7	Attendance to early childhood education	CE	Number of children age 36-59 months who are attending an early childhood education programme	Total number of children age 36-59 months	

MICS4 INDICATOR		Module[13]	Numerator	Denominator	MDG[14]
7. LITERACY AND EDUCATION					
7.1	Literacy rate among young women	WB	Number of women age 15-24 years who are able to read a short simple statement about everyday life or who attended secondary or higher education	Total number of women age 15-24 years	MDG 2.3
7.3	Net intake rate in primary education	ED	Number of children of school-entry age who enter the first grade of primary school	Total number of children of school-entry age	
7.4	Primary school net attendance ratio (adjusted)	ED	Number of children of primary school age currently attending primary or secondary school	Total number of children of primary school age	MDG 2.1
7.5	Secondary school net attendance ratio (adjusted)	ED	Number of children of secondary school age currently attending secondary school or higher	Total number of children of secondary-school age	
7.7	Primary completion rate	ED	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)	
7.9	Gender parity index (primary school)	ED	Primary school net attendance ratio (adjusted) for girls	Primary school net attendance ratio (adjusted) for boys	MDG 3.1
7.10	Gender parity index (secondary school)	ED	Secondary school net attendance ratio (adjusted) for girls	Secondary school net attendance ratio (adjusted) for boys	MDG 3.1

MICS4 INDICATOR		Module[13]	Numerator	Denominator	MDG[14]
8. CHILD PROTECTION					
8.1	Birth registration	BR	Number of children under age 5 whose births are reported registered	Total number of children under age 5	
8.2	Child labour	CL	Number of children age 5-14 years who are involved in child labour	Total number of children age 5-14 years	
8.3	School attendance among child labourers	ED - CL	Number of children age 5-14 years who are involved in child labour and are currently attending school	Total number of children age 5-14 years involved in child labour	
8.4	Child labour among students	ED - CL	Number of children age 5-14 years who are involved in child labour and are currently attending school	Total number of children age 5-14 years attending school	
8.5	Violent discipline	CD	Number of children age 2-14 years who experienced psychological aggression or physical punishment during the past month	Total number of children age 2-14 years	
8.6	Marriage before age 15	MA	Number of women age 15-49 years who were first married or in union by the exact age of 15	Total number of women age 15-49 years	
8.7	Marriage before age 18	MA	Number of women age 20-49 years who were first married or in union by the exact age of 18	Total number of women age 20-49 years	
8.8	Young women age 15-19 years currently married or in union	MA	Number of women age 15-19 years who are currently married or in union	Total number of women age 15-19 years	
8.9	Polygyny	MA	Number of women age 15-49 years who are in a polygynous union	Total number of women age 15-49 years who are currently married or in union	
8.10a 8.10b	Spousal age difference	MA	Number of women currently married or in union whose spouse is 10 or more years older, (a) for women age 15-19 years, (b) for women age 20-24 years	Total number of women currently married or in union (a) age 15-19 years, (b) age 20-24 years	
8.11	Approval for female genital mutilation/cutting (FGM/C)	FG	Number of women age 15-49 years favouring the continuation of female genital mutilation/cutting (FGM/C)	Total number of women age 15-49 years who have heard of FGM/C	
8.12	Prevalence of female genital mutilation/cutting (FGM/C) among women	FG	Number of women age 15-49 years who report to have undergone any form of female genital mutilation/cutting (FGM/C)	Total number of women age 15-49 years	
8.13	Prevalence of female genital mutilation/cutting (FGM/C) among girls	FG	Number of girls age 0-14 years who have undergone any form of female genital mutilation/cutting (FGM/C), as reported by mothers	Total number of girls age 0-14 years	
8.14	Attitudes towards domestic violence	DV	Number of women who state 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 age 15-49 years	

MICS4 INDICATOR		Module[13]	Numerator	Denominator	MDG[14]
9. HIV/AIDS, SEXUAL BEHAVIOUR AND ORPHANS					
9.1	Comprehensive knowledge about HIV prevention	HA	Number of women age 15-49 years who correctly identify two ways of preventing HIV infection[21], know that a healthy looking person can have HIV, and reject the two most common misconceptions about HIV transmission	Total number of women age 15-49 years	
9.2	Comprehensive knowledge about HIV prevention among young people	HA	Number of women age 15-24 years who correctly identify two ways of preventing HIV infection[12], know that a healthy looking person can have HIV, and reject the two most common misconceptions about HIV transmission	Total number of women age 15-24 years	MDG 6.3
9.3	Knowledge of mother-to-child transmission of HIV	HA	Number of women age 15-49 years who correctly identify all three means[22] of mother-to-child transmission of HIV	Total number of women age 15-49 years	
9.4	Accepting attitudes towards people living with HIV	HA	Number of women age 15-49 years expressing accepting attitudes on all four questions[23] toward people living with HIV	Total number of women age 15-49 years who have heard of HIV	
9.5	Women who know where to be tested for HIV	HA	Number of women age 15-49 years who state knowledge of a place to be tested for HIV	Total number of women age 15-49 years	
9.6	Women who have been tested for HIV and know the results	HA	Number of women age 15-49 years who have been tested for HIV in the 12 months preceding the survey and who know their results	Total number of women age 15-49 years	
9.8	HIV counselling during antenatal care	HA	Number of women age 15-49 years who gave birth in the 2 years preceding the survey and received antenatal care, reporting that they received counselling on HIV during antenatal care	Total number of women age 15-49 years who gave birth in the 2 years preceding the survey	
9.9	HIV testing during antenatal care	HA	Number of women age 15-49 years who gave birth in the 2 years preceding the survey and received antenatal care, reporting that they were offered and accepted an HIV test during antenatal care and received their results	Total number of women age 15-49 years who gave birth in the 2 years preceding the survey	

21 Using condoms and limiting sex to one faithful, uninfected partner

22 Transmission during pregnancy, during delivery, and by breastfeeding

23 Women (1) who think that a female teacher with the AIDS virus should be allowed to teach in school, (2) who would buy fresh vegetables from a shopkeeper or vendor who has the AIDS virus, (3) who would not want to keep it as a secret if a family member became infected with the AIDS virus, and (4) who would be willing to care for a family member who became sick with the AIDS virus

MICS4 INDICATOR		Module[13]	Numerator	Denominator	MDG[14]
9.10	Young women who have never had sex	SB	Number of never married women age 15-24 years who have never had sex	Total number of never married women age 15-24 years	
9.11	Sex before age 15 among young women	SB	Number of women age 15-24 years who have had sexual intercourse before age 15	Total number of women age 15-24 years	
9.12	Age-mixing among sexual partners	SB	Number of women age 15-24 years who had sex in the 12 months preceding the survey with a partner who was 10 or more years older than they were	Total number of women age 15-24 years who have had sex in the 12 months preceding the survey	
9.13	Sex with multiple partners	SB	Number of women age 15-49 years who have had sexual intercourse with more than one partner in the 12 months preceding the survey	Total number of women age 15-49 years	
9.15	Sex with non-regular partners	SB	Number of sexually active women age 15-24 years who have had sex with a non-marital, non-cohabitating partner in the 12 months preceding the survey	Total number of women age 15-24 years who have had sex in the 12 months preceding the survey	
9.16	Condom use with non-regular partners	SB	Number of women age 15-24 years reporting the use of a condom during sexual intercourse with their last non-marital, non-cohabiting sex partner in the 12 months preceding the survey	Total number of women age 15-24 years who had a non-marital, non-cohabiting partner in the 12 months preceding the survey	MDG 6.2
9.17	Children's living arrangements	HL	Number of children age 0-17 years not living with a biological parent	Total number of children age 0-17 years	
9.18	Prevalence of children with at least one parent dead	HL	Number of children age 0-17 years with at least one dead parent	Total number of children age 0-17 years	

Appendix G: Questionnaires

a) Household Questionnaire
b) individual Women's Questionnaire
c) Children under 5 years Questionnaire

HOUSEHOLD QUESTIONNAIRE

HOUSEHOLD INFORMATION PANEL	HH
HH1. Cluster number: ___ ___ ___	HH2. Household number: ___ ___ ___
HH3. Interviewer name and number: Name_____ ___ ___	HH4. Field edited by (name and number): Name_____ ___ ___
HH5. Day/Month/Year of interview: ___ ___ / ___ ___ / ___ ___ ___ ___	
HH6. Area: Urban .....1 Rural .....2 Slum (informal settlement).....3	HH7. Region: Coast province ..... 3 HH7A. District: District code ..... __ __
HH8. Name of head of household: _____	

After all questionnaires for the household have been completed, fill in the following information:

HH9. Result of household interview: Completed .....1 Not at home .....2 Refused .....3 Household not found/destroyed.....4 Other (*specify*) _____ 6	HH10. Respondent to household questionnaire: Name:_____ Line No: ___ ___ HH11. Total number of household members: ___ ___
HH12. No of women age 15-49 years: ___ ___	HH13. No of women age 15-49 years completed: ___ ___
HH14. No of children under age 5: ___ ___	HH15. No of under-5 questionnaires completed: ___ ___
Interviewer/editor/supervisor notes: *Use this space to record notes about the interview with this household, such as call-back times, incomplete individual interview forms, number of attempts to re-visit, etc.*	
HH15A. Supervisor: Name_____ ___ ___	HH16. Data entry clerk: Name_____ ___ ___

INTRODUCTION

WE ARE FROM KENYA NATIONAL BUREAU OF STATISTICS (KNBS). WE ARE WORKING ON A PROJECT CONCERNED WITH FAMILY HEALTH AND EDUCATION. I WOULD LIKE TO TALK TO YOU ABOUT THIS. ALL THE INFORMATION WE OBTAIN WILL REMAIN STRICTLY CONFIDENTIAL AND YOUR ANSWERS WILL NEVER BE IDENTIFIED. MAY I START NOW?

IF PERMISSION IS GIVEN, BEGIN THE INTERVIEW.

HOUSEHOLD LISTING FORM **HL**

HL0. *Record the time*

Hour .....__ __

Minutes ...__ __

FIRST, PLEASE TELL ME THE NAME OF EACH PERSON WHO USUALLY LIVES HERE, STARTING WITH THE HEAD OF THE HOUSEHOLD.
List the head of the household in line 01. List all household members (HL2), their relationship to the household 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 not enough room on this page. Tick here if continuation sheet used* ☐

					ELIGIBILITY FOR WOMEN'S INTERVIEW	MOTHER OR CARETAKER OF CHILD 5-14	ELIGIBILITY FOR UNDER-5 INTERVIEW	*Ask if* ***age 18-59 years***	*Ask if* ***age 0-17 years***					
HL1. *Line no.*	HL2. *Name*	HL3. WHAT IS THE RELATIONSHIP OF (*name*) TO THE HEAD OF THE HOUSEHOLD?	HL4. IS (*name*) MALE OR FEMALE? 1 Male 2 Fem.	HL5. HOW OLD IS (*name*)? *Probe:* HOW OLD WAS (*name*) ON HIS/HER LAST BIRTHDAY? *Record age in completed years*	HL6. *Circle Line no. if woman is age 15-49*	HL7. *For each child* ***age 5-14:*** WHO IS THE MOTHER OR PRIMARY CARETAKER OF THIS CHILD? *Record line no. of mother/ caretaker*	HL8. *For each child* ***under 5:*** WHO IS THE MOTHER OR PRIMARY CARETAKER OF THIS CHILD? *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 HOUSEHOLD? *Record line no. of mother or 00 for 'no'*	HL10A. *If mother* ***does not*** *live in household:* 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 HOUSEHOLD? *Record line no. of father or 00 for 'no'*	HL12A. *If father* ***does not*** *live in household:* 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	Mother	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
10		__ __	1 2	__ __	10	__ __	__ __	1 2 8	1 2 8	__ __	1 2 8	1 2 8	__ __	1 2 8

HL1. *Line no.*	HL2. *Name*	HL3. WHAT IS THE RELATION-SHIP OF (*name*) TO THE HEAD OF THE HOUSE-HOLD?	HL4. IS (*name*) MALE OR FEMALE ? 1 Male 2 Fem.	HL5. HOW OLD IS (*name*)? *Probe:* HOW OLD WAS (*name*) ON HIS/HER LAST BIRTHDAY? *Record age in completed years*	HL6. *Circle Line no. if woman is age 15-49*	HL7. *For each child **age 5-14**:* WHO IS THE MOTHER OR PRIMARY CARETAKER OF THIS CHILD? *Record line no. of mother/ caretaker*	HL8. *For each child **under 5**:* WHO IS THE MOTHER OR PRIMARY CARETAKER OF THIS CHILD? *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 HOUSE-HOLD? *Record line no. of mother or 00 for 'no'*	HL10A. *If mother <u>does not</u> live in household:* 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 HOUSE-HOLD? *Record line no. of father or 00 for 'no'*	HL12A. *If father **<u>does not</u>** live in household:* 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	Mother	Y N DK	Y N DK	Mother	Y N DK	Y N DK	Father	Y N DK
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 HOUSEHOLD? INCLUDING CHILDREN AT WORK OR AT SCHOOL? *If yes, insert name and complete form.*

Now for each woman age 15-49 years, write her name and line number and other identifying information in the information panel of the Women's Questionnaire.
For each child under age 5, write his/her name and line number AND the line number of his/her mother or caretaker in the information panel of the Under 5 Questionnaire.
You should now have a separate questionnaire for each eligible woman and each child under five in the household.

* *Codes for HL3: Relationship to head of household:*

01 = Head
02 = Wife or Husband
03 = Son or Daughter
04 = Son or Daughter In-Law
05 = Grandchild
06 = Parent
07 = Parent-In-Law
08 = Brother or Sister
09 = Brother or Sister-In-Law
10 = Uncle/Aunt
11 = Niece/Nephew
12 = Other Relative
14 = Adopted/Foster/Stepchild
15 = Not Related
98 = Don't Know

EDUCATION **ED**

For household members age 5 and above					*For household members age 5-24 years*							
ED1. *Line no.*	ED1A. *Name and age*	ED2. HAS (*name*) EVER ATTENDED SCHOOL, PRESCHOOL OR ANY NON-FORMAL EDUCATION? 1 Yes ⇨ ED3 2 No ⇩ Next Line	ED3. WHAT IS THE HIGHEST LEVEL OF SCHOOL (*name*) ATTENDED? WHAT IS THE HIGHEST GRADE (STANDARD/FORM/CLASS) (*name*) COMPLETED AT THIS LEVEL? Level: 0 Preschool 1 Primary 2 Secondary 3 Higher 6 Non-formal education 8 DK Grade/Standard/Form/Class: 98 DK *If less than 1 grade, enter 00 If Level=0 or 6, leave Grade blank*		ED4. DURING THE CURRENT (2009) SCHOOL YEAR, DID (*name*) ATTEND SCHOOL, PRESCHOOL OR NON-FORMAL EDUCATION AT ANY TIME? 1 Yes 2 No ⇨ ED7	ED5. SINCE LAST *(day of the week)*, HOW MANY DAYS DID (*name*) ATTEND SCHOOL? *Insert number of days. Exclude the day of interview.* 8 DK 9 School closed	ED6. DURING THIS SCHOOL YEAR, WHICH LEVEL AND GRADE (STANDARD/FORM/CLASS) IS (*name*) ATTENDING? Level: 0 Preschool 1 Primary 2 Secondary 3 Higher 6 Non-formal education 8 DK Grade/Standard/Form/Class: 98 DK *If Level=0 or 6, leave Grade blank*		ED7. DID (*name*) ATTEND SCHOOL, PRESCHOOL OR NON-FORMAL EDUCATION AT ANY TIME DURING THE PREVIOUS SCHOOL YEAR, THAT IS 2008? 1 Yes 2 No ⇩ Next Line 8 DK ⇩ Next Line		ED8. DURING THE PREVIOUS SCHOOL YEAR, WHICH LEVEL AND GRADE (STANDARD/FORM/CLASS) DID (*name*) ATTEND? Level: 0 Preschool 1 Primary 2 Secondary 3 Higher 6 Non-formal education 8 DK Grade/Standard/Form/Class: 98 DK *If Level=0 or 6, leave Grade blank*	
LINE	NAME	AGE	YES NO	LEVEL	GRADE	YES NO	DAYS	LEVEL	GRADE	Y N DK	LEVEL	GRADE
01		__	1 2⇨Next Line	0 1 2 3 6 8	__ __	1 2	__	0 1 2 3 6 8	__ __	1 2 8	0 1 2 3 6 8	__ __
02		__	1 2⇨Next Line	0 1 2 3 6 8	__ __	1 2	__	0 1 2 3 6 8	__ __	1 2 8	0 1 2 3 6 8	__ __
03		__	1 2⇨Next Line	0 1 2 3 6 8	__ __	1 2	__	0 1 2 3 6 8	__ __	1 2 8	0 1 2 3 6 8	__ __
04		__	1 2⇨Next Line	0 1 2 3 6 8	__ __	1 2	__	0 1 2 3 6 8	__ __	1 2 8	0 1 2 3 6 8	__ __
05		__	1 2⇨Next Line	0 1 2 3 6 8	__ __	1 2	__	0 1 2 3 6 8	__ __	1 2 8	0 1 2 3 6 8	__ __
06		__	1 2⇨Next Line	0 1 2 3 6 8	__ __	1 2	__	0 1 2 3 6 8	__ __	1 2 8	0 1 2 3 6 8	__ __
07		__	1 2⇨Next Line	0 1 2 3 6 8	__ __	1 2	__	0 1 2 3 6 8	__ __	1 2 8	0 1 2 3 6 8	__ __
08		__	1 2⇨Next Line	0 1 2 3 6 8	__ __	1 2	__	0 1 2 3 6 8	__ __	1 2 8	0 1 2 3 6 8	__ __
09		__	1 2⇨Next Line	0 1 2 3 6 8	__ __	1 2	__	0 1 2 3 6 8	__ __	1 2 8	0 1 2 3 6 8	__ __
10		__	1 2⇨Next Line	0 1 2 3 6 8	__ __	1 2	__	0 1 2 3 6 8	__ __	1 2 8	0 1 2 3 6 8	__ __
11		__	1 2⇨Next Line	0 1 2 3 6 8	__ __	1 2	__	0 1 2 3 6 8	__ __	1 2 8	0 1 2 3 6 8	__ __
12		__	1 2⇨Next Line	0 1 2 3 6 8	__ __	1 2	__	0 1 2 3 6 8	__ __	1 2 8	0 1 2 3 6 8	__ __
13		__	1 2⇨Next Line	0 1 2 3 6 8	__ __	1 2	__	0 1 2 3 6 8	__ __	1 2 8	0 1 2 3 6 8	__ __
14		__	1 2⇨Next Line	0 1 2 3 6 8	__ __	1 2	__	0 1 2 3 6 8	__ __	1 2 8	0 1 2 3 6 8	__ __
15		__	1 2⇨Next Line	0 1 2 3 6 8	__ __	1 2	__	0 1 2 3 6 8	__ __	1 2 8	0 1 2 3 6 8	__ __

WATER AND SANITATION		WS
WS1. WHAT IS THE **MAIN** SOURCE OF DRINKING WATER FOR MEMBERS OF YOUR HOUSEHOLD?	Piped water Piped into dwelling ..... 11 Piped into compound, yard or plot ..... 12 Piped to neighbor ..... 13 Piped to water kiosk ..... 14 Public tap/standpipe ..... 15 Tubewell/Borehole ..... 21 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⇨WS5 ⇨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 Piped to neighbor ..... 13 Piped to water kiosk ..... 14 Public tap/standpipe ..... 15 Tubewell/Borehole ..... 21 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 13⇨WS5
WS3. HOW LONG DOES IT TAKE TO GO THERE, GET WATER, AND COME BACK?	No. of minutes ..... __ __ __ Water on premises ..... 995 DK 998	995⇨WS5
WS4. WHO USUALLY GOES TO THIS SOURCE TO COLLECT THE WATER FOR YOUR HOUSEHOLD? *Probe:* IS THIS PERSON UNDER AGE 15? WHAT SEX?	Adult woman (15+ years) ..... 1 Adult man (15+ years) ..... 2 Female child (under 15) ..... 3 Male child (under 15) ..... 4 DK 8	

WS5. DO YOU TREAT YOUR WATER IN ANY WAY TO MAKE IT SAFER TO DRINK?	Yes ..... 1 No ..... 2 DK 8	 2⇨WS7 8⇨WS7
WS6. WHAT DO YOU USUALLY DO TO THE WATER TO MAKE IT SAFER TO DRINK? *Probe:* 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 disinfection ..... E Let it stand and settle ..... F Other (*specify*) _____ X DK ..... Z	
WS7. WHAT KIND OF TOILET FACILITY DO MEMBERS OF YOUR HOUSEHOLD USUALLY USE? *If "flush" or "pour flush", probe:* WHERE DOES IT FLUSH TO? *If necessary, ask permission to observe the facility.*	Flush/pour flush 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 ..... 15 Ventilated Improved Pit latrine (VIP) ..... 21 Pit latrine with slab ..... 22 Pit latrine without slab/open pit ..... 23 Composting toilet ..... 31 Bucket ..... 41 Hanging toilet/hanging latrine ..... 51 No facilities or bush or field or ocean ..... 95 Other (*specify*) _____ 96	 95⇨ NEXT MODULE
WS8. DO YOU SHARE THIS FACILITY WITH OTHERS WHO ARE NOT MEMBERS OF YOUR HOUSEHOLD?	Yes ..... 1 No 2	 2⇨ NEXT MODULE
WS8A. DO YOU SHARE THIS FACILITY ONLY WITH OTHER HOUSEHOLDS THAT YOU KNOW, OR IS THE FACILITY OPEN TO THE USE OF THE GENERAL PUBLIC?	Other households only (not public) ..... 1 Public facility 2	 2⇨ NEXT MODULE
WS9. HOW MANY HOUSEHOLDS IN TOTAL USE THIS TOILET FACILITY?	No. of households (if less than 10) ..... 0 __ Ten or more households ..... 10 DK 98	

HOUSEHOLD CHARACTERISTICS		HC
HC1A. WHAT IS THE RELIGION OF THE HEAD OF THIS HOUSEHOLD?	Catholic ..... 1 Other Christian ..... 2 Muslim ..... 3 No Religion ..... 4 Others *(specify)*_____ 6	
HC2. HOW MANY ROOMS IN THIS HOUSEHOLD ARE USED FOR SLEEPING?	No. of rooms ..... __ __	
HC3. Main material of the dwelling floor: *Record observation.*	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. Main material of the roof. *Record observation.*	Natural roofing No Roof ..... 11 Grass/Thatch/Makuti ..... 12 Sod ..... 13 Dung/Mud ..... 14 Rudimentary Roofing Corrugated iron (Mabati) ..... 21 Tin cans ..... 22 Finished roofing Asbestos sheet ..... 31 Concrete ..... 32 Tiles ..... 33 Other (*specify*) _____ 96	

HC5. Main material of the walls. *Record observation.*	Natural walls No walls ... 11 Cane/palm/trunks ... 12 Dirt ... 13 Rudimentary walls Bamboo with mud ... 21 Stone with mud ... 22 Uncovered adobe ... 23 Plywood ... 24 Cardboard ... 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 HOUSEHOLD **MAINLY** USE FOR COOKING?	Electricity ... 01 Liquefied Petroleum 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 No food cooked in household ... 97	01⇨HC9 02⇨HC9 03⇨HC9 04⇨HC9 05⇨HC9 97⇨HC9
HC8. IS THE COOKING USUALLY DONE IN THE INDOOR LIVING SPACE, IN A SEPARATE KITCHEN/BUILDING, OR OUTDOORS?	In a room used for living/sleeping ... 1 In a separate room used as kitchen ... 2 In a separate building used as kitchen ... 3 Outdoors ... 4 Other (*specify*) _____ 6	
HC9. DOES YOUR HOUSEHOLD HAVE:	Yes No	
A. ELECTRICITY?	Electricity ... 1 2	
B. RADIO?	Radio ... 1 2	
C. COLOR TELEVISION?	Color Television ... 1 2	
D. B&W TELEVISION?	B&W Television ... 1 2	
E. MOBILE TELEPHONE?	Mobile Telephone ... 1 2	
F. NON-MOBILE TELEPHONE?	Non-Mobile Telephone ... 1 2	
G. REFRIGERATOR?	Refrigerator ... 1 2	
H. BLENDER OR MIXER?	Blender or Mixer ... 1 2	
I. WATER HEATER?	Water Heater ... 1 2	
J. WASHING MACHINE?	Washing Machine ... 1 2	
K. COMPUTER?	Computer ... 1 2	
L. INTERNET CONNECTION?	Internet connection ... 1 2	
M. VCR, VCD OR DVD?	VCR, VCD or DVD ... 1 2	
N. AIR CONDITIONER?	Air Conditioner ... 1 2	
O. SEWING MACHINE?	Sewing Machine ... 1 2	

HC10. DOES ANY MEMBER OF YOUR HOUSEHOLD OWN: A. A WATCH? B. A BICYCLE? C. A MOTORCYCLE OR SCOOTER? D. AN ANIMAL-DRAWN CART? E. A CAR OR TRUCK? F. A BOAT WITH A MOTOR?	Yes No Watch ..... 1 2 Bicycle ..... 1 2 Motorcycle/Scooter ..... 1 2 Animal drawn-cart ..... 1 2 Car/Truck ..... 1 2 Boat with motor 1 2	
HC10A. DO YOU OR SOMEONE LIVING IN THIS HOUSEHOLD OWN THIS DWELLING, OR DO YOU RENT THIS DWELLING?	Own ..... 1 Rent ..... 2 Rent free/squatter/other 3	
HC11. DOES ANY MEMBER OF THIS HOUSEHOLD OWN ANY LAND THAT CAN BE USED FOR AGRICULTURE?	Yes ..... 1 No 2	2⇨HC13
HC12. HOW MANY ACRES OF AGRICULTURAL LAND DO MEMBERS OF THIS HOUSEHOLD OWN? *If less than 1, record "00". If more than 97, record '97'. If unknown, record '98'.*	Acres ..... ___ ___	
HC13. DOES THIS HOUSEHOLD OWN ANY LIVESTOCK, HERDS, OR FARM ANIMALS?	Yes ..... 1 No 2	2⇨NEXT MODULE
HC14. HOW MANY OF THE FOLLOWING ANIMALS DOES THIS HOUSEHOLD HAVE? A. CATTLE? B. MILK COWS OR BULLS? C. HORSES, DONKEYS, OR MULES? D. GOATS? E. SHEEP? F. CHICKENS? *If none, record '00'.* *If more than 97, record '97'.* *If unknown, record '98'.*	 Cattle ..... ___ ___ Milk cows or bulls ..... ___ ___ Horses, donkeys, or mules ..... ___ ___ Goats ..... ___ ___ Sheep ..... ___ ___ Chickens ..... ___ ___	

INDOOR RESIDUAL SPRAYING		**IR**
IR1. AT ANY TIME IN THE PAST 12 MONTHS, HAS ANYONE SPRAYED THE INTERIOR WALLS OF YOUR DWELLING AGAINST MOSQUITOES?	Yes ..... 1 No 2	2⇨NEXT MODULE
IR2. HOW MANY MONTHS AGO WAS THE HOUSE SPRAYED? *If less than one month, record "00".*	Months ago ..... __ __	
IR3. WHO SPRAYED THE HOUSE?	Government worker/program ..... 1 Private company ..... 2 Household member ..... 3 Other (*specify*) _____ 6 DK 8	

ITN			TN
TN1. DOES YOUR HOUSEHOLD HAVE ANY MOSQUITO NETS THAT CAN BE USED WHILE SLEEPING?	Yes ... 1 No ... 2		2⇨NEXT MODULE
TN2. HOW MANY MOSQUITO NETS DOES YOUR HOUSEHOLD HAVE?	Number of nets ... ___ ___		
TN2A. *Ask the respondent to show you the nets in the household. If unable to observe the net(s), ask the respondent to determine the brand/type of net.* *If more than 3 nets, use additional questionnaire(s).*		*Tick here if additional questionnaire is used* ☐	

	1ST NET	2ND NET	3RD NET
TN3. *Mosquito net observed?*	Observed ... 1 Not observed ... 2	Observed ... 1 Not observed ... 2	Observed ... 1 Not observed ... 2
TN4. HOW MANY MONTHS AGO DID YOUR HOUSEHOLD OBTAIN THE MOSQUITO NET? *If less than one month, record "00"*	Months ago ... ___ ___ 37+ months ago ... 95 Not sure ... 98	Months ago ... ___ ___ 37+ months ago ... 95 Not sure ... 98	Months ago ... ___ ___ 37+ months ago ... 95 Not sure ... 98
TN5. *Observe or ask the brand/type of mosquito net*	Long-lasting treated nets Perma Net ... 11 Olyset ... 12 Supernet ... 13 Other (*specify*) ... 16 DK brand ... 18 Pre-treated nets Supanet ... 21 Other (*specify*) ... 26 DK brand ... 28 Other net (*specify*) ___ 31 DK brand/type ... 98	Long-lasting treated nets Perma Net ... 11 Olyset ... 12 Supernet ... 13 Other (*specify*) ... 16 DK brand ... 18 Pre-treated nets Supanet ... 21 Other (*specify*) ... 26 DK brand ... 28 Other net (*specify*) ___ 31 DK brand/type ... 98	Long-lasting treated nets Perma Net ... 11 Olyset ... 12 Supernet ... 13 Other (*specify*) ... 16 DK brand ... 18 Pre-treated nets Supanet ... 21 Other (*specify*) ... 26 DK brand ... 28 Other net (*specify*) ___ 31 DK brand/type ... 98
TN5A. WHERE DID YOU GET THE MOSQUITO NET? ___ *(Name of place)*	Public sector Govt. hospital ... 11 Govt. health centre ... 12 Govt. health post/ Dispensary. ... 13 Village hlth worker ... 14 Mobile/outreach clinic. 15 Other public (*specify*) ___ 16 Private medical sector Private hospital/clinic.. 21 Private physician ... 22 Private pharmacy ... 23 Mobile clinic ... 24 Other private medical (*specify*) ___ 26 Other source Relative or friend ... 31 Shop ... 32 Trad. practitioner ... 33 Other (*specify*) ___ 96 DK ... 98	Public sector Govt. hospital ... 11 Govt. health centre ... 12 Govt. health post/ Dispensary. ... 13 Village hlth worker ... 14 Mobile/outreach clinic. 15 Other public (*specify*) ___ 16 Private medical sector Private hospital/clinic.. 21 Private physician ... 22 Private pharmacy ... 23 Mobile clinic ... 24 Other private medical (*specify*) ___ 26 Other source Relative or friend ... 31 Shop ... 32 Trad. practitioner ... 33 Other (*specify*) ___ .96 DK ... 98	Public sector Govt. hospital ... 11 Govt. health centre ... 12 Govt. health post/ Dispensary. ... 13 Village hlth worker ... 14 Mobile/outreach clinic 15 Other public (*specify*) ___ 16 Private medical sector Private hospital/clinic . 21 Private physician ... 22 Private pharmacy ... 23 Mobile clinic ... 24 Other private medical (*specify*) ___ 26 Other source Relative or friend ... 31 Shop ... 32 Trad. practitioner ... 33 Other (*specify*) ___ 96 DK ... 98

TN5B. HOW MUCH DID YOU PAY FOR THE MOSQUITO NET?	Shillings..... __ __ __ __ Free..... 9995 DK..... 9998	Shillings..... __ __ __ __ Free..... 9995 DK..... 9998	Shillings ..... __ __ __ __ Free ..... 9995 DK..... 9998
TN6. *Check TN5 for type of net*	☐ *Long-lasting⇨ TN10* ☐ *Pretreated⇨ TN8* ☐ *Else⇨ Continue*	☐ *Long-lasting⇨ TN10* ☐ *Pretreated⇨ TN8* ☐ *Else⇨ Continue*	☐ *Long-lasting⇨ TN10* ☐ *Pretreated⇨ TN8* ☐ *Else⇨ Continue*
TN7. WHEN YOU GOT THE NET, WAS IT TREATED WITH AN INSECTICIDE TO KILL OR REPEL MOSQUITOS?	Yes..... 1 No ..... 2 DK/Not sure 8	Yes..... 1 No..... 2 DK/Not sure..... 8	Yes ..... 1 No ..... 2 DK/Not sure 8
TN8. SINCE YOU GOT THE MOSQUITO NET, WAS IT EVER SOAKED OR DIPPED IN A LIQUID TO KILL OR REPEL MOSQUITOS?	Yes..... 1 No ..... 2 ⇨ TN10 DK/Not sure ..... 8 ⇨ TN10	Yes..... 1 No..... 2 ⇨ TN10 DK/Not sure..... 8 ⇨ TN10	Yes ..... 1 No ..... 2 ⇨ TN10 DK/Not sure ..... 8 ⇨ TN10
TN9. HOW MANY MONTHS AGO WAS THE NET LAST SOAKED OR DIPPED? *If less than one month, record "00"*	Months ago ..... ___ ___ More than 24 mo. ago ... 95 Not sure 98	Months ago..... ___ ___ More than 24 mo. ago ... 95 Not sure..... 98	Months ago..... ___ ___ More than 24 mo. ago... 95 Not sure 98
TN10. DID ANYONE SLEEP UNDER THIS MOSQUITO NET LAST NIGHT?	Yes..... 1 No ..... 2 ⇨ TN12 DK/Not sure ..... 8 ⇨ TN12	Yes..... 1 No..... 2 ⇨ TN12 DK/Not sure..... 8 ⇨ TN12	Yes ..... 1 No ..... 2 ⇨ TN12 DK/Not sure ..... 8 ⇨ TN12
TN11. WHO SLEPT UNDER THIS MOSQUITO NET LAST NIGHT? *Record the person's line number from the household listing form* *If someone not in the household list slept under the mosquito net, record "00"*	Name _____ Line no ..... ___ ___ Name _____ Line no ..... ___ ___ Name _____ Line no ..... ___ ___ Name _____ Line no ..... ___ ___	Name _____ Line no ..... ___ ___ Name _____ Line no ..... ___ ___ Name _____ Line no ..... ___ ___ Name _____ Line no ..... ___ ___	Name _____ Line no ..... ___ ___ Name _____ Line no ..... ___ ___ Name _____ Line no ..... ___ ___ Name _____ Line no ..... ___ ___
TN12.	*Go back to TN3 for next net. If no more nets, go to next module*	*Go back to TN3 for next net. If no more nets, go to next module*	*Go back to TN3 for next net. If no more nets, go to next module*

CHILDREN ORPHANED & MADE VULNERABLE BY HIV/AIDS — OV

OV1. *Check HL5: any children 0-17?*

☐ *Yes ⇨ Continue to OV2*

☐ *No ⇨ Child Labour Module*

OV2. I WOULD LIKE YOU TO THINK BACK OVER THE PAST 12 MONTHS. HAS ANY USUAL MEMBER OF YOUR HOUSEHOLD 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?	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) WERE ANY OF THESE PEOPLE VERY SICK FOR 3 OF THE 12 MONTHS BEFORE HE/SHE DIED?	Yes ..... 1 No 2	1⇨OV8

OV5. *Return to the Household Listing and check the following:*

OV5A. Check HL9 and HL11.

☐ *At least one mother or father dead. ⇨ Go to OV8*

☐ *No mother or father dead*

OV5B. Check HL8A.

☐ *At least one adult aged 18-59 very sick 3 of last 12 months ⇨ Go to OV8*

☐ *No adult aged 18-59 very sick 3 of last 12 months*

OV5C. Check HL10A and HL12A.

☐ *At least one mother or father very sick 3 of last 12 months ⇨ Go to OV8*

☐ *No mother or father very sick 3 of last 12 months ⇨ Go to Child Labour Module*

OV8. *List all children aged 0-17 below. Record names, line numbers and ages of all children, beginning with the first child and continue in order in which listed in the household listing module. Use an additional questionnaire if there are more than 4 children age 0-17 in the household. Ask all questions for one child before moving to the next child.*

Tick here if additional questionnaire is used ☐

	1ST CHILD	2ND CHILD	3RD CHILD	4TH CHILD
Name (from HL2)	_____	_____	_____	_____
Line number (from HL1)	___ ___	___ ___	___ ___	___ ___
Age (from HL5)	___ ___	___ ___	___ ___	___ ___

I WOULD LIKE TO ASK YOU ABOUT ANY FORMAL, ORGANIZED HELP OR SUPPORT THAT YOUR HOUSEHOLD 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 HOUSEHOLD RECEIVED FOR (*name*). IN THE LAST 12 MONTHS, HAS YOUR HOUSEHOLD 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 HOUSEHOLD RECEIVED ANY EMOTIONAL OR PSYCHOLOGICAL SUPPORT FOR (*name*), SUCH AS COMPANIONSHIP, COUNSELING FROM A TRAINED COUSELOR, OR SPIRITUAL SUPPORT, WHICH YOU RECEIVED AT HOME?	Yes.....1 No .....2 ⇨ OV13 DK.....8	Yes.....1 No .....2 ⇨ OV13 DK.....8	Yes.....1 No .....2 ⇨ OV13 DK.....8	Yes.....1 No .....2 ⇨ OV13 DK.....8
OV12. DID YOUR HOUSEHOLD RECEIVE ANY OF THIS SUPPORT 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 HOUSEHOLD RECEIVED ANY MATERIAL SUPPORT FOR (*name*), SUCH AS CLOTHING, FOOD OR FINANCIAL SUPPORT?	Yes.....1 No .....2 ⇨OV15 DK.....8	Yes.....1 No .....2 ⇨OV15 DK.....8	Yes.....1 No .....2 ⇨OV15 DK.....8	Yes.....1 No .....2 ⇨OV15 DK.....8
OV14. DID YOUR HOUSEHOLD RECEIVE ANY OF THIS SUPPORT 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 HOUSEHOLD RECEIVED ANY SOCIAL SUPPORT FOR (*name*), SUCH AS HELP IN HOUSEHOLD WORK, TRAINING FOR A CAREGIVER, OR LEGAL SERVICES?	Yes.....1 No .....2 ⇨ OV17 DK.....8	Yes.....1 No .....2 ⇨ OV17 DK.....8	Yes.....1 No .....2 ⇨ OV17 DK.....8	Yes.....1 No .....2 ⇨ OV17 DK.....8
OV16. DID YOUR HOUSEHOLD RECEIVE ANY OF THIS SUPPORT 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 for age of child:*	☐ *Age 0-4* ⇨ *Next child* ☐ *Age 5-17* ⇨ *OV18*	☐ *Age 0-4* ⇨ *Next child* ☐ *Age 5-17* ⇨ *OV18*	☐ *Age 0-4* ⇨ *Next child* ☐ *Age 5-17* ⇨ *OV18*	☐ *Age 0-4* ⇨ *Next child* ☐ *Age 5-17* ⇨ *OV18*
OV18. IN THE LAST 12 MONTHS, HAS YOUR HOUSEHOLD 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

CHILD LABOUR **CL**

To be administered for children in the household age 5 through 14 years. For household members below age 5 or above age 14, leave rows blank.

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

CL1. *Line no.*	CL2. *Name and age*	CL3. DURING THE PAST WEEK, DID (*name*) DO ANY KIND OF WORK FOR SOMEONE WHO IS NOT A MEMBER OF THIS HOUSEHOLD? *If yes*: FOR PAY IN CASH OR KIND? 1 Yes, for pay (cash or kind) 2 Yes, unpaid 3 No ⇨CL5	CL4. *If yes:* SINCE LAST (*day of the week*), ABOUT HOW MANY HOURS DID HE/SHE DO THIS WORK FOR SOMEONE WHO IS NOT A MEMBER OF THIS HOUSEHOLD? *If more than one job, include all hours at all jobs.*	CL5. DURING THE PAST WEEK, DID (*name*) FETCH WATER OR COLLECT FIREWOOD FOR HOUSEHOLD USE? 1 YES 2 NO ⇨ TO CL7	CL6. *If yes:* SINCE LAST (*day of the week*), ABOUT HOW MANY HOURS DID HE/SHE FETCH WATER OR COLLECT FIREWOOD FOR HOUSEHOLD USE?	CL7. DURING THE PAST WEEK, DID (*name*) DO ANY PAID OR UNPAID WORK ON A FAMILY FARM OR IN A FAMILY BUSINESS OR SELLING GOODS IN THE STREET? *Include work for a business run by the child, alone or with one or more partners.* 1 Yes 2 No ⇨ CL9	CL8. *If yes*: SINCE LAST (*day of the week*), ABOUT HOW MANY HOURS DID HE/SHE DO THIS WORK FOR HIS/HER FAMILY OR HIMSELF/HERSELF?	CL9. DURING THE PAST WEEK, DID (*name*) HELP WITH HOUSEHOLD CHORES SUCH AS SHOPPING, CLEANING, WASHING CLOTHES, COOKING; OR CARING FOR CHILDREN, OLD OR SICK PEOPLE? 1 Yes 2 No ⇘ Next Line	CL10. *If yes*: SINCE LAST (*day of the week*), ABOUT HOW MANY HOURS DID HE/SHE SPEND DOING THESE CHORES?
LINE	NAME	AGE	YES: PAID / YES: UNPAID / NO	NO. HOURS	YES	NO	NO. HOURS	YES	NO	NO. HOURS	YES	NO	NO. HOURS
01		__	1 2 3	___ ___	1	2	___ ___	1	2	___ ___	1	2	___ ___
02		__	1 2 3	___ ___	1	2	___ ___	1	2	___ ___	1	2	___ ___
03		__	1 2 3	___ ___	1	2	___ ___	1	2	___ ___	1	2	___ ___
04		__	1 2 3	___ ___	1	2	___ ___	1	2	___ ___	1	2	___ ___
05		__	1 2 3	___ ___	1	2	___ ___	1	2	___ ___	1	2	___ ___
06		__	1 2 3	___ ___	1	2	___ ___	1	2	___ ___	1	2	___ ___
07		__	1 2 3	___ ___	1	2	___ ___	1	2	___ ___	1	2	___ ___
08		__	1 2 3	___ ___	1	2	___ ___	1	2	___ ___	1	2	___ ___
09		__	1 2 3	___ ___	1	2	___ ___	1	2	___ ___	1	2	___ ___
10		__	1 2 3	___ ___	1	2	___ ___	1	2	___ ___	1	2	___ ___
11		__	1 2 3	___ ___	1	2	___ ___	1	2	___ ___	1	2	___ ___
12		__	1 2 3	___ ___	1	2	___ ___	1	2	___ ___	1	2	___ ___
13		__	1 2 3	___ ___	1	2	___ ___	1	2	___ ___	1	2	___ ___
14		__	1 2 3	___ ___	1	2	___ ___	1	2	___ ___	1	2	___ ___
15		__	1 2 3	___ ___	1	2	___ ___	1	2	___ ___	1	2	___ ___

CHILD DISCIPLINE

Table 1: Children aged 2-14 years ELIGIBLE for Child Discipline questions

Review the household listing and list each of the children aged 2-14 years below in order according to their line number (HL1). Do not include other household members outside of the age range 2-14 years. Record the line number, name, sex, and age for each child. Then record the total number of children aged 2-14 in the box provided (CD7).

CD1. Rank no.	CD2. Line no. from HL1.	CD3. Name from HL2.	CD4. Sex from HL4.		CD5. Age from HL5.
RANK	LINE	NAME	M	F	AGE
1	__ __		1	2	___ ___
2	__ __		1	2	___ ___
3	__ __		1	2	___ ___
4	__ __		1	2	___ ___
5	__ __		1	2	___ ___
6	__ __		1	2	___ ___
7	__ __		1	2	___ ___
8	__ __		1	2	___ ___

CD7.	TOTAL CHILDREN AGED 2-14 YEARS	___

If there is only one child age 2-14 years in the household, then skip table 2 and go to CD9; write down the rank number of the child and continue with CD11

Table 2: Selection of random child for Child Discipline questions

Use this table 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.

CD8.	**TOTAL NUMBER OF ELIGIBLE CHILDREN IN THE HOUSEHOLD**							
Last digit of the household number	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 selected child*	Rank number of child..... __

CHILD DISCIPLINE		**CD**
Identify eligible child aged 2 to 14 in the household using the tables on the preceding page, according to your instructions.		
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 number ..... __ __	
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	
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	

DISABILITY — DA

To be administered for all children 2 through 9 years old living in the household. For household members below age 2 or above age 9, leave rows blank

I WOULD LIKE TO ASK YOU IF ANY CHILDREN IN THIS HOUSEHOLD AGED 2 THROUGH 9 HAS ANY OF THE HEALTH CONDITIONS I AM GOING TO MENTION TO YOU.

DA1. *Line no.*	DA2. *Child's name and age*		DA3. COMPARED WITH OTHER CHILDREN, DOES OR DID (*name*) HAVE ANY SERIOUS DELAY IN SITTING, STANDING, OR WALKING?	DA4. COMPARED WITH OTHER CHILDREN, DOES (*name*) HAVE DIFFICULTY SEEING, EITHER IN THE DAYTIME OR AT NIGHT?	DA5. DOES (*name*) APPEAR TO HAVE DIFFICULTY HEARING? (USES HEARING AID, HEARS WITH DIFFICULTY, COMPLETELY DEAF?)	DA6. WHEN YOU TELL (*name*) TO DO SOMETHING, DOES HE/SHE SEEM TO UNDERSTAND WHAT YOU ARE SAYING?	DA7. DOES (*name*) HAVE DIFFICULTY IN WALKING OR MOVING HIS/HER ARMS OR DOES HE/SHE HAVE WEAKNESS AND/OR STIFFNESS IN THE ARMS OR LEGS?	DA8. DOES (*name*) SOMETIMES HAVE FITS, BECOME RIGID, OR LOSE CONSC-IOUSNESS?	DA9. DOES (*name*) LEARN TO DO THINGS LIKE OTHER CHILDREN HIS/HER AGE?	DA10. DOES (*name*) SPEAK AT ALL (CAN HE/SHE MAKE HIM OR HERSELF UNDERSTOOD IN WORDS; CAN SAY ANY RECOGNIZABLE WORDS)?	DA11. *(For 3-9 year olds):* IS (*name*)'S SPEECH IN ANY WAY DIFFERENT FROM NORMAL (NOT CLEAR ENOUGH TO BE UNDERSTOOD BY PEOPLE OTHER THAN THE IMMEDIATE FAMILY)?	DA12. *(For 2-year-olds):* CAN (*name*) NAME AT LEAST ONE OBJECT (FOR EXAMPLE, AN ANIMAL, A TOY, A CUP, A SPOON)?	DA13. COMPARED WITH OTHER CHILDREN OF THE SAME AGE, DOES (*name*) APPEAR IN ANY WAY MENTALLY BACKWARD, DULL OR SLOW?
LINE	NAME	AGE	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
01		_ _	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
02		_ _	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
03		_ _	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
04		_ _	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
05		_ _	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
06		_ _	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
07		_ _	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
08		_ _	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
09		_ _	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
10		_ _	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
11		_ _	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
12		_ _	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
13		_ _	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
14		_ _	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
15		_ _	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2

HANDWASHING FACILITY		HW
HW1. WE WOULD LIKE TO SEE THE PLACE WHERE MEMBERS OF YOUR HOUSEHOLD MOST OFTEN WASH THEIR HANDS? MAY I SEE THIS PLACE?	Place for hand washing observed..... 1 No specific place for hand washing ..... 2 No permission to see 3	 2 ⇨HW5 3 ⇨HW5
HW1A. Place where household members most often wash their hands? *Ask to see and observe. Record only one hand washing place. This is the hand washing place most often used by household members. Estimate the distance of "within 10 paces".*	Inside Toilet facility ..... 01 Kitchen/Cooking place ..... 02 Within 10 paces of Both toilet and kitchen..... 03 Toilet facility (but farther from kitchen).. 04 Kitchen (but farther from toilet facility) .. 05 Elsewhere Elsewhere in home or yard ..... 06 Elsewhere outside the yard..... 07 Other (*specify*) _____ 96	
HW2. Water available at the place for hand washing? *If there is a tap or pump at the specific place for hand washing, open the tap or operate the pump to see if water is coming out. If there is a bucket, basin or other type of water container, examine to see whether water is present in the container. Record observation.*	Water available ..... 1 Water not available 2	
HW3. Soap or detergent present at the specific place for hand washing? *Record observation. Circle all that apply.*	Bar soap.....A Detergent (powder/liquid/paste).....B Liquid soap.....C None.....Y	A⇨NEXT MODULE B⇨NEXT MODULE C⇨NEXT MODULE
HW5. DO YOU HAVE ANY SOAP OR DETERGENT IN YOUR HOUSEHOLD FOR WASHING HANDS?	Yes ..... 1 No..... 2	 2⇨NEXT MODULE
HW6. CAN YOU PLEASE SHOW IT TO ME? *Record observation. Circle all that apply*	Bar soap.....A Detergent (powder/liquid/paste).....B Liquid soap.....C Not able/Does not want to show .....Y	

SALT IODIZATION		SI
SI1. WE WOULD LIKE TO CHECK WHETHER THE SALT USED IN YOUR HOUSEHOLD IS IODIZED. MAY I SEE A SAMPLE OF THE SALT USED TO COOK THE MAIN MEAL EATEN BY MEMBERS OF YOUR HOUSEHOLD LAST NIGHT? *Once you have examined the salt, circle number that corresponds to test outcome.*	Not iodized 0 PPM ..... 1 Less than 15 PPM..... 2 15 PPM or more..... 3 No salt in home..... 6 Salt not tested..... 7	

SI1A. *Record the time.*	Hour and minutes..... __ __ : __ __	

SI2. *Does any eligible woman age 15-49 reside in the household?*
Check household listing, column HL6.You should have a questionnaire with the Information Panel filled in for each eligible woman.

☐ *Yes. ⇨ Go to women's Questionnaire*
to administer the questionnaire to the first eligible woman.. If this woman has a child under age 5, continue to interview her on her under-5 child(ren)

☐ *No. ⇨ Continue.*

SI3. *Does any child under the age of 5 reside in the household?*
Check household listing, column HL8. You should have a questionnaire with the Information Panel filled in for each eligible child.

☐ *Yes. ⇨ Go to Under-5 Questionnaire*
to administer the questionnaire to mother or caretaker of the first eligible child.

☐ *No. ⇨ End the interview by thanking the respondent for his/her cooperation.*
Gather together all questionnaires for this household and tally the number of interviews completed on the cover page.

REMARKS AND OBSERVATIONS
SUPERVISOR
FIELD EDITOR
FIELD MONITORS/CO-ORDINATORS
OFFICE EDITOR

WOMEN QUESTIONNAIRE

WOMEN'S INFORMATION PANEL	WM

This module is to be administered to all women age 15 through 49 (see column HL6 of HH listing).
Fill in one form for each eligible woman
Fill in the cluster and household number, and the name and line number of the woman in the space below. Fill in your name, number and the date.

WM1. Cluster number: ___ ___ ___	WM2. Household number: ___ ___ ___
WM3. Woman's Name: _____	WM4. Woman's Line Number: ___ ___
WM5.Interviewer name and number: _____ ___ ___	WM6. Day/Month/Year of interview: ___ ___ / ___ ___ / ___ ___ ___ ___

Repeat greeting ***if not already read to this woman****:*

WE ARE FROM KENYA NATIONAL BUREAU OF STATISTICS (KNBS). WE ARE WORKING ON A PROJECT CONCERNED WITH FAMILY HEALTH AND EDUCATION. I WOULD LIKE TO TALK TO YOU ABOUT THIS. THE INTERVIEW USUALLY TAKES AROUND 30-35 MINUTES. ALL THE INFORMATION WE OBTAIN WILL REMAIN STRICTLY CONFIDENTIAL AND YOUR ANSWERS WILL NEVER BE IDENTIFIED. ALSO, YOU ARE NOT OBLIGED TO ANSWER ANY QUESTION YOU DON'T WANT TO, AND YOU MAY WITHDRAW FROM THE INTERVIEW AT ANY TIME. MAY I START NOW?

If permission is given, begin the interview. If the woman does not agree to continue, thank her, complete WM7, and go to the next interview. Discuss this result with your supervisor for a future re-visit.

WM7. Result of women's interview	Completed ..... 1 Not at home ..... 2 Refused ..... 3 Partly completed ..... 4 Incapacitated ..... 5 Other (*specify*) _____ 6

Interviewer/editor/supervisor notes: *Use this space to record notes about the interview with this household, such as call-back times, incomplete individual interview forms, number of attempts to re-visit, etc.*

WM71. Supervisor: Name _____ ___ ___	WM72. Field edited by (name and number): Name _____ ___ ___

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.

WM7A. *Record the time.*	Hour and minutes..... __ __ : __ __	
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, PRESCHOOL OR ANY NON-FORMAL EDUCATION?	Yes..... 1 No..... 2	2⇨WM14
WM11. WHAT IS THE HIGHEST LEVEL OF SCHOOL YOU ATTENDED?	Preschool..... 0 Primary..... 1 Secondary..... 2 Higher..... 3 Non-formal education..... 6	0⇨WM14 6⇨WM14
WM12. WHAT IS THE HIGHEST GRADE (STANDARD/FORM/CLASS) YOU COMPLETED AT THAT LEVEL? *If less than 1 grade, enter 00*	Grade ..... __ __	
WM13. *Check WM11:* ☐ *Secondary or higher. ⇨ Go to Next Module* ☐ *Preschool, primary or non-formal education. ⇨ Continue with WM14*		
WM14. NOW I WOULD LIKE YOU TO READ THIS SENTENCE TO ME. *Show sentences to respondent.* *If respondent cannot read whole sentence, probe:* CAN YOU READ PART OF THE SENTENCE TO ME? *Example sentences for literacy test:* *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.*	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	

CHILD MORTALITY		CM
All questions refer only to LIVE births.		
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⇨ MARRIAGE /UNION MODULE
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?	Sons at home ..... __ __ 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?	Sons elsewhere ..... __ __ Daughters elsewhere ..... __ __	
CM7. HAVE YOU EVER GIVEN BIRTH TO A BOY OR GIRL WHO WAS BORN ALIVE BUT LATER DIED?	Yes ..... 1 No 2	2⇨CM9
CM8. HOW MANY BOYS HAVE DIED? HOW MANY GIRLS HAVE DIED?	Boys dead ..... __ __ Girls dead ..... __ __	
CM9. Sum answers to CM4, CM6, and CM8.	Sum ..... __ __	
CM10. JUST TO MAKE SURE THAT I HAVE THIS RIGHT, YOU HAVE HAD IN TOTAL (*number in CM9*) BIRTHS DURING YOUR LIFE. IS THIS CORRECT? ☐ *Yes. ⇨ Go to BH1* ☐ *No. ⇨ Check responses and make corrections before proceeding to BH1*		

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)*?	
		SIN	MUL	B	G	MONTH / YEAR	Y N		Y N				Y	N
01		1	2	1	2	___ ___ /___ ___ ___ ___	1 2 ⇨ BH9	___ ___	1 2	___ ___ ⇨ next line	Days.....1 Month.....2 Year 3	___ ___		
02		1	2	1	2	___ ___ /___ ___ ___ ___	1 2 ⇨ BH9	___ ___	1 2	___ ___ ⇨ BH10	Days.....1 Month.....2 Year 3	___ ___	1 *Add*	2 *Next*
03		1	2	1	2	___ ___ /___ ___ ___ ___	1 2 ⇨ BH9	___ ___	1 2	___ ___ ⇨ BH10	Days.....1 Month.....2 Year 3	___ ___	1 *Add*	2 *Next*
04		1	2	1	2	___ ___ /___ ___ ___ ___	1 2 ⇨ BH9	___ ___	1 2	___ ___ ⇨ BH10	Days.....1 Month.....2 Year 3	___ ___	1 *Add*	2 *Next*
05		1	2	1	2	___ ___ /___ ___ ___ ___	1 2 ⇨ BH9	___ ___	1 2	___ ___ ⇨ BH10	Days.....1 Month.....2 Year 3	___ ___	1 *Add*	2 *Next*
06		1	2	1	2	___ ___ /___ ___ ___ ___	1 2 ⇨ BH9	___ ___	1 2	___ ___ ⇨ BH10	Days.....1 Month.....2 Year 3	___ ___	1 *Add*	2 *Next*
07		1	2	1	2	___ ___ /___ ___ ___ ___	1 2 ⇨ BH9	___ ___	1 2	___ ___ ⇨ BH10	Days.....1 Month.....2 Year 3	___ ___	1 *Add*	2 *Next*
08		1	2	1	2	___ ___ /___ ___ ___ ___	1 2 ⇨ BH9	___ ___	1 2	___ ___ ⇨ BH10	Days.....1 Month.....2 Year 3	___ ___	1 *Add*	2 *Next*
09		1	2	1	2	___ ___ /___ ___ ___ ___	1 2 ⇨ BH9	___ ___	1 2	___ ___ ⇨ BH10	Days.....1 Month.....2 Year 3	___ ___	1 *Add*	2 *Next*

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)*?	
		SIN	MUL	B	G	MONTH / YEAR	Y N		Y N				Y	N
10		1	2	1	2	___ ___ /___ ___ ___ ___	1 2 ⇨ **BH9**	___ ___	1 2	___ ⇨ **BH10**	Days..... 1 Month..... 2 Year 3	___ ___	1 *Add*	2 *Next*
11		1	2	1	2	___ ___ /___ ___ ___ ___	1 2 ⇨ **BH9**	___ ___	1 2	___ ⇨ **BH10**	Days..... 1 Month..... 2 Year 3	___ ___	1 *Add*	2 *Next*
12		1	2	1	2	___ ___ /___ ___ ___ ___	1 2 ⇨ **BH9**	___ ___	1 2	___ ⇨ **BH10**	Days..... 1 Month..... 2 Year 3	___ ___	1 *Add*	2 *Next*
13		1	2	1	2	___ ___ /___ ___ ___ ___	1 2 ⇨ **BH9**	___ ___	1 2	___ ⇨ **BH10**	Days..... 1 Month..... 2 Year 3	___ ___	1 *Add*	2 *Next*
14		1	2	1	2	___ ___ /___ ___ ___ ___	1 2 ⇨ **BH9**	___ ___	1 2	___ ⇨ **BH10**	Days..... 1 Month..... 2 Year 3	___ ___	1 *Add*	2 *Next*
15		1	2	1	2	___ ___ /___ ___ ___ ___	1 2 ⇨ **BH9**	___ ___	1 2	___ ⇨ **BH10**	Days..... 1 Month..... 2 Year 3	___ ___	1 *Add*	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 births:*** *Year of birth is recorded*.....☐ ***For each living child:*** *Current age is recorded*.....☐ ***For each dead child:*** *Age at death is recorded*.....☐ ***For age at death 12 months or 1 year:*** *Probe to determine exact number of months*.....☐	

BIRTH HISTORY — BH

BH13. *Check BH4: Did the woman's last birth occur within the last 2 years, that is, since (day and month of interview) in 2007?*

If child has died, take special care when referring to this child by name in the following modules.

☐ *No live birth in last 2 years. ⇨ Go to MARRIAGE/UNION module.*

☐ *Yes, live birth in last 2 years. ⇨ Record name of last born child and continue with BH14*

*Name of child*_____

BH14. 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	

TETANUS TOXOID (TT) — TT

This module is to be administered to all women with a live birth in the 2 years preceding 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 (*name*), DID YOU RECEIVE ANY INJECTION TO PREVENT HIM OR HER FROM GETTING TETANUS, THAT IS CONVULSIONS AFTER BIRTH? *Probe*: AN ANTI-TETANUS SHOT, AN INJECTION AT THE TOP OF THE ARM OR SHOULDER?	Yes ..... 1 No..... 2 DK 8	2⇨TT5 8⇨TT5
TT3. HOW MANY TIMES DID YOU RECEIVE THIS ANTI-TETANUS INJECTION DURING YOUR PREGNANCY WITH (*name*)?	No. of times..... __ __ DK 98	 98⇨TT5
TT4. *How many TT doses during last pregnancy were reported in TT3?* ☐ *At least two TT injections during last pregnancy. ⇨ Go to Next Module* ☐ *Fewer than two TT injections during last pregnancy. ⇨ Continue with TT5*		
TT5. DID YOU RECEIVE ANY TETANUS TOXOID INJECTION AT ANY TIME BEFORE YOUR PREGNANCY WITH (*name*)?	Yes ..... 1 No..... 2 DK 8	 2⇨NEXT MODULE 8⇨NEXT MODULE
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 YOUR PREGNANCY WITH (*name*)? *Skip to next module only if year of injection is given. Otherwise, continue with TT8.*	Month ..... __ __ DK month ..... 98 Year ..... __ __ __ __ DK year 9998	 ⇨NEXT MODULE ⇩TT8
TT8. HOW MANY YEARS AGO DID YOU RECEIVE THE LAST ANTI-TETANUS INJECTION BEFORE YOUR PREGNANCY WITH (*name*)?	Years ago..... __ __	

MATERNAL AND NEWBORN HEALTH — MN

This module is to be administered to all women with a live birth in the 2 years preceding date of interview.
Check the birth history module BH13 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 THE BIRTH OF (*name)*, DID YOU RECEIVE A VITAMIN A DOSE LIKE THIS? *Show 200,000 IU capsule or dispenser.*	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 ..... A Community nurse ..... B Clinical officer ..... C Nurse/Midwife ..... D Other person Traditional birth attendant ..... E Community health worker ..... F Relative/friend ..... G Other (specify) _____ X No one ..... Y	 Y⇨MN7
MN2A. HOW MANY TIMES DID YOU RECEIVE ANTENATAL CARE DURING THIS PREGNANCY?	Number of times ..... __ __ DK 98	
MN3. AS PART OF YOUR ANTENATAL CARE, WERE ANY OF THE FOLLOWING DONE AT LEAST ONCE? A. WERE YOU WEIGHED? B. WAS YOUR BLOOD PRESSURE MEASURED? C. DID YOU GIVE A URINE SAMPLE? D. DID YOU GIVE A BLOOD SAMPLE?	Yes No Weight ..... 1 2 Blood pressure ..... 1 2 Urine sample ..... 1 2 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 DK 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 DK 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 DK 8	
MN6A. DURING ANY OF THESE ANTENATAL VISITS FOR THE PREGNANCY, DID YOU TAKE ANY MEDICINE IN ORDER TO PREVENT YOU FROM GETTING MALARIA?	Yes ..... 1 No ..... 2 DK 8	 2⇨MN7 8⇨MN7
MN6B. WHICH MEDICINES DID YOU TAKE TO PREVENT MALARIA?	SP/Fansidar ..... A Chloroquine ..... B Other (*specify*) _____ X DK ..... Z	

MN6C. *Check MN6B for medicine taken:* ☐ *SP/Fansidar taken.⇨ Continue with MN6D* ☐ *SP/Fansidar not taken.⇨ Go to MN7*		
MN6D. HOW MANY TIMES DID YOU TAKE SP/FANSIDAR?	Number of times..... __ __	
MN7. WHO ASSISTED WITH THE DELIVERY OF (*name*)? *Probe:* ANYONE ELSE? *Probe for the type of person assisting and circle all answers given.*	Health professional Doctor ..... A Community nurse ..... B Clinical officer ..... C Nurse/Midwife ..... D Other person Traditional birth attendant ..... E Community health worker ..... F Relative/friend ..... G Other (specify) _____ X No one ..... Y	
MN8. WHERE DID YOU GIVE BIRTH TO (*name*)? *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)*	Your home ..... 11 Other home ..... 12 Public Sector Government hospital ..... 21 Government health center ..... 22 Government dispensary ..... 23 Other public (*specify*) _____ 26 Private medical sector Mission hospital/clinic ..... 31 Private hospital/clinic ..... 32 Nursing/maternity home ..... 33 Other private medical (*specify*)_____ 36 Other (*specify*) _____ 96	11⇨MN8C 12⇨MN8C 96⇨MN8C
MN8A. HOW LONG AFTER *(name)* WAS DELIVERED DID YOU STAY THERE? *If less than one day, record hours.* *If less than one week, record days.*	Hours..... 1 __ __ Days ..... 2 __ __ Weeks ..... 3 __ __ Don't know/remember 998	
MN8B. WAS (*name*) DELIVERED BY CAESEREAN SECTION?	Yes ..... 1 No 2	1⇨MN8D 2⇨MN8D

MN8C. WHY DIDN'T YOU DELIVER (*name*) IN A HEALTH FACILITY? *Probe:* ANY OTHER REASON? *Record all mentioned.*	Cost too much ..... A Facility not open ..... B Too far ..... C Don't trust facility ..... D No female provider at facility ..... E Husband/family did not allow ..... F Not necessary ..... G Not customary ..... H No transportation ..... I Poor quality service ..... J Other (*specify*) _____ X	
MN8D. AFTER (*name*) WAS BORN, DID ANY HEALTH CARE PROVIDER OR A TRADITIONAL BIRTH ATTENDANT CHECK ON YOUR HEALTH?	Yes ..... 1 No 2	2⇨MN8I
MN8E. HOW LONG AFTER THE BIRTH OF (*name*) DID THIS FIRST CHECK TAKE PLACE? *If less than one day, record hours.* *If less than one week, record days.*	Hours ..... 1 __ __ Days ..... 2 __ __ Weeks ..... 3 __ __ Don't know/remember 998	
MN8F. WHO CHECKED ON YOUR HEALTH AT THAT TIME? *Probe for most qualified person*	Health professional Doctor ..... 11 Community nurse ..... 12 Clinical officer ..... 13 Nurse/Midwife ..... 14 Other person Traditional birth attendant ..... 21 Community health worker ..... 22 Other (specify) _____ 96	
MN8G. WHERE DID THIS FIRST CHECK 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 place)*	Your home ..... 11 Other home ..... 12 Public Sector Government hospital ..... 21 Government health center ..... 22 Government dispensary ..... 23 Other public (*specify*) _____ 26 Private medical sector Mission hospital/clinic ..... 31 Private hospital/clinic ..... 32 Nursing/maternity home ..... 33 Pharmacy ..... 34 Other private medical (*specify*)_____ 36 Other (*specify*) _____ 96 DK 98	
MN8H. WAS THE HEALTH OF (*name*) ALSO CHECKED AT THIS TIME?	Yes ..... 1 No 2	2⇨MN8I

MN8H2. WAS THIS ALSO THE FIRST TIME (*name's*) HEALTH WAS CHECKED?	Yes ..... 1 No 2	1⇨MN9 2⇨MN8J
MN8I. 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
MN8J. HOW LONG AFTER THE BIRTH OF (*name*) DID THIS FIRST CHECK TAKE PLACE? *If less than one day, record hours.* *If less than one week, record days.*	Hours ..... 1 __ __ Days ..... 2 __ __ Weeks ..... 3 __ __ Don't know/remember 998	
MN8K. WHO CHECKED ON (*name's*) HEALTH AT THAT TIME? *Probe for most qualified person*	Health professional Doctor ..... 11 Community nurse ..... 12 Clinical officer ..... 13 Nurse/Midwife ..... 14 Other person Traditional birth attendant ..... 21 Community health worker ..... 22 Other (specify) _____ 96	
MN8L. WHERE DID THIS FIRST CHECK 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 place)*	Your home ..... 11 Other home ..... 12 Public Sector Government hospital ..... 21 Government health center ..... 22 Government dispensary ..... 23 Other public (*specify*) _____ 26 Private medical sector Mission hospital/clinic ..... 31 Private hospital/clinic ..... 32 Nursing/maternity home ..... 33 Pharmacy ..... 34 Other private medical (*specify*)_____ 36 Other (*specify*) _____ 96 DK 98	
MN8M. WERE YOU PRESENT WHEN THIS FIRST CHECK TOOK PLACE?	Yes ..... 1 No 2	
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	 2⇨MN12

	DK 8	8⇨MN12
MN11. HOW MUCH DID (*name*) WEIGH? *Record weight from health card, if available.*	From card..... 1 (kilograms) __ . __ __ __ From recall ..... 2 (kilograms) __ . __ __ __ DK 99998	
MN12. DID YOU EVER BREASTFEED (*name*)?	Yes ..... 1 No..... 2	2⇨ NEXT MODULE
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..... 1 __ __ Days..... 2 __ __ Don't know/remember..... 998	

MARRIAGE/UNION		MA
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	
MA2A. DOES YOUR HUSBAND/PARTNER HAVE ANY OTHER WIVES?	Yes ..... 1 No 2	 2⇨MA5
MA2B. BESIDES YOURSELF, HOW MANY OTHER WIVES DOES HE HAVE?	Number ..... __ __ DK 98	⇨MA5 98⇨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	 ⇨NEXT MODULE
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:* ☐ *Both month and year of marriage/union known? ⇨ Go to Next Module* ☐ *Either month or year of marriage/union not known? ⇨ Continue with MA8*		
MA8. HOW OLD WERE YOU WHEN YOU STARTED LIVING WITH YOUR FIRST HUSBAND/PARTNER?	Age in years ..... __ __	

CONTRACEPTION		CP
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 DK 8	 2⇨CP2 8⇨CP2
CP1A. AT THE TIME YOU BECAME 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⇨CP4B 2⇨CP4B 3⇨CP4B
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⇨CP4A
CP3. WHICH METHOD ARE YOU USING? Do not prompt. If more than one method is mentioned, circle each one.	Female sterilization ..... A Male sterilization ..... B Pill ..... C IUD ..... D Injections ..... E Implants ..... F Condom ..... G Female condom ..... H Diaphragm ..... I Foam/jelly ..... J Lactational amenorrhea method (LAM) ..... K Periodic abstinence ..... L Withdrawal ..... M Other (*specify*) _____ X	
CP3B. *Check CP3:* ☐ *Currently using "Female sterilization"? ⇨ Go to Next Module* ☐ *Not currently using "Female sterilization" ⇨ Continue with CP4A*		
CP4A. 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? CP4B. *If currently pregnant:* NOW I WOULD LIKE TO ASK SOME QUESTIONS ABOUT THE FUTURE. AFTER THE CHILD YOU ARE NOW EXPECTING, WOULD YOU LIKE TO HAVE ANOTHER CHILD, OR WOULD YOU 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⇨CP4D 3⇨CP4F 8⇨CP4D

CP4C. 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⇨CP4F
CP4D. *Check CP1:* ☐ *Currently pregnant? ⇨ Go to Next Module* ☐ *Not currently pregnant or unsure? ⇨ Continue with CP4D2*		
CP4D2. *Check CP3*. ☐ *Currently using a method? ⇨ Go to Next Module* ☐ *Not using a method (CP3 Blank)? ⇨ Continue with CP4E*		
CP4E. DO YOU THINK YOU ARE PHYSICALLY ABLE TO GET PREGNANT AT THIS TIME?	Yes ..... 1 No ..... 2 DK 8	1⇨NEXT MODULE 8⇨NEXT MODULE
CP4F. WHAT IS THE REASON YOU THINK YOU CANNOT GET PREGNANT?	Infrequent sex/No sex ..... 01 Menopausal ..... 02 Hysterectomy ..... 03 Subfecund / Infecund ..... 04 Postpartum amenorrheic ..... 05 Breastfeeding ..... 06 Too old ..... 07 Fatalistic ..... 08 Other (*specify*) _____ 96 DK 98	

FEMALE GENITAL MUTILATION/CUTTING		FG
FG1. HAVE YOU EVER HEARD OF FEMALE CIRCUMCISION?	Yes ..... 1 No 2	1⇨FG3
FG2. IN A NUMBER OF COUNTRIES, 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⇨NEXT MODULE
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 DK 98	
FG8. *The following questions apply only to women who have at least one living daughter. Check CM4 and CM6, Child Mortality Module: Woman has living daughter?* ☐ *Yes. ⇨ Continue with FG9* ☐ *No. ⇨ Go to FG16*		
FG9. HAVE (ANY OF) YOUR DAUGHTER(S) BEEN CIRCUMCISED? IF YES, HOW MANY?	Number 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
FG12. WAS THE GENITAL AREA JUST NICKED WITHOUT REMOVING ANY FLESH?	Yes ..... 1 No ..... 2 DK 8	

FG13. WAS THE GENITAL AREA SEWN CLOSED? *If necessary, Probe:* WAS IT 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..... __ __ DK 98	
FG15. WHO DID THE CIRCUMCISION?	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 DK 98	
FG16. DO YOU THINK THIS PRACTICE SHOULD BE CONTINUED OR SHOULD IT BE DISCONTINUED?	Continued..... 1 Discontinued ..... 2 Depends..... 3 DK 8	

ATTITUDES TOWARD DOMESTIC VIOLENCE

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
A. IF SHE LEAVES THE HOUSE WITHOUT TELLING HIM?	Leaves without telling..... 1	2	8
B. IF SHE NEGLECTS THE CHILDREN?	Neglects children 1	2	8
C. IF SHE ARGUES WITH HIM?	Argues..... 1	2	8
D. IF SHE REFUSES SEX WITH HIM?	Refuses sex 1	2	8
E. IF SHE BURNS THE FOOD?	Burns food..... 1	2	8

SEXUAL BEHAVIOUR		SB
CHECK FOR THE PRESENCE OF OTHERS. BEFORE CONTINUING, ENSURE PRIVACY.		
SB1. NOW I NEED TO ASK YOU SOME QUESTIONS ABOUT SEXUAL ACTIVITY IN ORDER TO GAIN A BETTER UNDERSTANDING OF SOME FAMILY LIFE ISSUES. THE INFORMATION YOU SUPPLY WILL REMAIN STRICTLY CONFIDENTIAL. HOW OLD WERE YOU WHEN YOU FIRST HAD SEXUAL INTERCOURSE (IF EVER)?	Never had intercourse ..... 00 Age in years ..... __ __ First time when started living with (first) husband/partner 95	00⇨NEXT MODULE
SB2. WHEN WAS THE LAST TIME YOU HAD SEXUAL INTERCOURSE? *Record 'years ago' only if last intercourse was one or more years ago. If 12 months or more the answer must be recorded in years.*	Days ago ..... 1 __ __ Weeks ago ..... 2 __ __ Months ago ..... 3 __ __ Years ago ..... 4 __ __	4⇨NEXT MODULE
SB3. THE LAST TIME YOU HAD SEXUAL INTERCOURSE WAS A CONDOM USED?	Yes ..... 1 No 2	
SB4. WHAT IS YOUR RELATIONSHIP TO THE MAN WITH WHOM YOU LAST HAD SEXUAL INTERCOURSE? *If man is 'boyfriend' or 'fiancée', ask:* WAS YOUR BOYFRIEND/FIANCÉE LIVING WITH YOU WHEN YOU LAST HAD SEX? *If 'yes', circle 1* *.If 'no', circle 2.*	Spouse / cohabiting partner ..... 1 Man is boyfriend / fiancée ..... 2 Other friend ..... 3 Casual acquaintance ..... 4 Other (*specify*) _____ 6	1⇨SB6
SB5. HOW OLD IS THIS PERSON? *If response is DK, probe:* ABOUT HOW OLD IS THIS PERSON?	Age of sexual partner ..... __ __ DK 98	
SB6. HAVE YOU HAD SEX WITH ANY OTHER MAN IN THE LAST 12 MONTHS?	Yes ..... 1 No 2	2⇨NEXT MODULE
SB7. THE LAST TIME YOU HAD SEXUAL INTERCOURSE WITH THIS OTHER MAN, WAS A CONDOM USED?	Yes ..... 1 No 2	
SB8. WHAT IS YOUR RELATIONSHIP TO THIS MAN? *If man is 'boyfriend' or 'fiancée', ask:* WAS YOUR BOYFRIEND/FIANCÉE LIVING WITH YOU WHEN YOU LAST HAD SEX? *If 'yes', circle 1.* *If 'no', circle 2.*	Spouse / cohabiting partner ..... 1 Man is boyfriend / fiancée ..... 2 Other friend ..... 3 Casual acquaintance ..... 4 Other (*specify*) _____ 6	1⇨SB10
SB9. HOW OLD IS THIS PERSON? *If response is DK, probe:* ABOUT HOW OLD IS THIS PERSON?	Age of sexual partner ..... __ __ DK 98	
SB10. OTHER THAN THESE TWO MEN, HAVE YOU HAD SEX WITH ANY OTHER MAN IN THE LAST 12 MONTHS?	Yes ..... 1 No 2	2⇨NEXT MODULE
SB11. IN TOTAL, WITH HOW MANY DIFFERENT MEN HAVE YOU HAD SEX IN THE LAST 12 MONTHS?	No. of partners ..... __ __	

HIV/AIDS		HA
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⇨ NEXT MODULE
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 DK 8	
HA3. CAN PEOPLE GET INFECTED WITH THE AIDS VIRUS BECAUSE OF WITCHCRAFT OR OTHER SUPERNATURAL MEANS?	Yes ..... 1 No ..... 2 DK 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 DK 8	
HA5. CAN PEOPLE GET THE AIDS VIRUS FROM MOSQUITO BITES?	Yes ..... 1 No ..... 2 DK 8	
HA6. CAN PEOPLE REDUCE THEIR CHANCE OF GETTING INFECTED WITH THE AIDS VIRUS BY NOT HAVING SEX AT ALL?	Yes ..... 1 No ..... 2 DK 8	
HA7. CAN PEOPLE GET THE AIDS VIRUS BY SHARING FOOD WITH A PERSON WHO HAS AIDS?	Yes ..... 1 No ..... 2 DK 8	
HA7A. CAN PEOPLE GET THE AIDS VIRUS BY GETTING INJECTIONS WITH A NEEDLE THAT WAS ALREADY USED BY SOMEONE ELSE?	Yes ..... 1 No ..... 2 DK 8	
HA8. IS IT POSSIBLE FOR A HEALTHY-LOOKING PERSON TO HAVE THE AIDS VIRUS?	Yes ..... 1 No ..... 2 DK 8	
HA9. CAN THE AIDS VIRUS BE TRANSMITTED FROM A MOTHER TO A BABY? A. DURING PREGNANCY? B. DURING DELIVERY? C. BY BREASTFEEDING?	Yes No DK During pregnancy ..... 1 2 8 During delivery ..... 1 2 8 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 DK/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 DK/not sure/depends 8	
HA12. IF A MEMBER OF YOUR FAMILY BECAME INFECTED WITH THE AIDS VIRUS, WOULD YOU WANT IT TO REMAIN A SECRET?	Yes, keep secret ..... 1 No ..... 2 DK/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 HOUSEHOLD?	Yes ..... 1 No ..... 2 DK/not sure/depends 8	

HA14. *Check MN5: Tested for HIV during antenatal care?* ☐ *Yes.* ⇨ *Go to HA18A* ☐ *No.* ⇨ *Continue with 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	1⇨NEXT MODULE 2⇨NEXT MODULE 3⇨NEXT MODULE
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? HA18A. *If tested for HIV during antenatal care:* 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	

WT2. *Record the time.*	Hour and minutes ..... __ __ : __ __	

REMARKS AND OBSERVATIONS
SUPERVISOR
FIELD EDITOR
FIELD MONITORS/CO-ORDINATORS
OFFICE EDITOR

QUESTIONNAIRE FOR CHILDREN UNDER FIVE

UNDER-FIVE CHILD INFORMATION PANEL	UF

This questionnaire is to be administered to all mothers or caretakers (see household listing, column HL8) who care for a child that lives with them and is under the age of 5 years (see household listing, column HL5).
A separate questionnaire should be used for each eligible child.
Fill in the cluster and household number, and names and line numbers of the child and the mother/caretaker in the space below. Insert your own name and number, and the date.

UF1. Cluster number: ___ ___ ___	UF2. Household number: ___ ___ ___
UF3. Child's Name: _____	UF4. Child's Line Number: ___ ___
UF5. Mother's/Caretaker's Name: _____	UF6. Mother's/Caretaker's Line Number: ___ ___
UF7. Interviewer name and number: _____ ___ ___	UF8. Day/Month/Year of interview: ___ ___ / ___ ___ / ___ ___ ___ ___

Repeat greeting if not already read to this respondent:

WE ARE FROM KENYA NATIONAL BUREAU OF STATISTICS (KNBS). WE ARE WORKING ON A PROJECT CONCERNED WITH FAMILY HEALTH AND EDUCATION. I WOULD LIKE TO TALK TO YOU ABOUT THIS. THE INTERVIEW USUALLY TAKES AROUND 20-25 MINUTES. ALL THE INFORMATION WE OBTAIN WILL REMAIN STRICTLY CONFIDENTIAL AND YOUR ANSWERS WILL NEVER BE IDENTIFIED. ALSO, YOU ARE NOT OBLIGED TO ANSWER ANY QUESTION YOU DON'T WANT TO, AND YOU MAY WITHDRAW FROM THE INTERVIEW AT ANY TIME. MAY I START NOW?

If permission is given, begin the interview. If the respondent does not agree to continue, thank him/her and go to the next interview. Discuss this result with your supervisor for a future revisit.

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

Interviewer/editor/supervisor notes: *Use this space to record notes about the interview with this household, such as call-back times, incomplete individual interview forms, number of attempts to re-visit, etc.*

UF91. Supervisor: Name _____ ___ ___	UF92. Field edited by (name and number): Name _____ ___ ___

UF9A. *Record the time.*	Hour and minutes.....__ __ : __ __	
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 NOW. NOW I WANT TO ASK YOU ABOUT (*name*). IN WHAT MONTH AND YEAR WAS (*name*) BORN? *Probe:* WHAT IS HIS/HER BIRTHDAY? If the mother/caretaker knows the exact birth date, also enter the day; otherwise, circle 98 for day **MONTH AND YEAR MUST BE RECORDED**.	Date of birth: Day .....__ __ DK day.....98 Month.....__ __ Year .....__ __ __ __	
UF11. HOW OLD WAS (*name*) AT HIS/HER LAST BIRTHDAY? Record age in completed years.	Age in completed years.....__	

BIRTH REGISTRATION AND EARLY LEARNING		BR
BR1. DOES (*name*) HAVE A BIRTH CERTIFICATE? MAY I SEE IT?	Yes, seen ..... 1 Yes, not seen ..... 2 No ..... 3 DK 8	1⇨BR5
BR2. HAS (*name's*) BIRTH BEEN NOTIFIED OR REGISTERED WITH THE CIVIL AUTHORITIES?	Yes ..... 1 No ..... 2 DK 8	1⇨BR5 8⇨BR4
BR3. WHY IS (*name's*) BIRTH NOT REGISTERED?	Costs too much ..... 1 Must travel too far ..... 2 Did not know it should be registered ..... 3 Did not want to pay fine ..... 4 Does not know where to register ..... 5 Other (*specify*) _____ 6 DK 8	
BR4. DO YOU KNOW HOW TO REGISTER YOUR CHILD'S BIRTH?	Yes ..... 1 No 2	
BR5. *Check age of child in UF11: Child is 3 or 4 years old?* ☐ *Yes.* ⇨ *Continue with 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 DK 8	 2⇨BR8 8⇨BR8
BR7. SINCE (*day of the week*), EXCLUDING TODAY, ABOUT HOW MANY HOURS DID (*name*) ATTEND?	No. of hours ..... __ __	
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*): *For each item:* *If yes, ask:* WHO ENGAGED IN THIS ACTIVITY WITH (*name*) - THE MOTHER, THE CHILD'S FATHER OR ANOTHER ADULT MEMBER OF THE HOUSEHOLD (INCLUDING THE CARETAKER/RESPONDENT)? *Circle all that apply.*		

	Mother	Father	Other	No one
BR8A. READ BOOKS, LOOK AT PICTURE BOOKS, OR TELL STORIES TO/WITH (*name*)? Books/Stories	A	B	X	Y
BR8D. TAKE (*name*) OUTSIDE THE HOME, COMPOUND, YARD OR ENCLOSURE? Take outside	A	B	X	Y
BR8E. PLAY WITH (*name*)? Play with	A	B	X	Y
BR8F. NAME, COUNT, OR DRAW THINGS TO/WITH (*name*)? Name/count	A	B	X	Y

CHILD DEVELOPMENT		CE
CE2. HOW MANY CHILDREN'S BOOKS OR PICTURE BOOKS DO YOU HAVE FOR (*name*)? If 'none' enter 0	Number of children's books ..... 0 __ Ten or more books 10	
CE3. I AM INTERESTED IN LEARNING ABOUT THE THINGS THAT (*name*) PLAYS WITH WHEN HE/SHE IS AT HOME. WHAT DOES (*name*) PLAY WITH? DOES HE/SHE PLAY WITH? HOUSEHOLD OBJECTS OR OBJECTS FOUND OUTSIDE (SUCH AS BOWLS OR POTS, STICKS, ROCKS, ANIMAL SHELLS OR LEAVES)? HOMEMADE TOYS (SUCH AS DOLLS, CARS, OR OTHER TOYS MADE AT HOME)? TOYS THAT CAME FROM A SHOP? If the respondent says "YES" to the categories above, then probe to learn specifically what the child plays with to ascertain the response .	Y N DK Household objects or outside objects ..... 1 2 8 Homemade toys ..... 1 2 8 Toys that came from a shop 1 2 8	
CE4. SOMETIMES ADULTS TAKING CARE OF CHILDREN HAVE TO LEAVE THE HOUSE TO GO SHOPPING, WASH CLOTHES, OR FOR OTHER REASONS AND HAVE TO LEAVE YOUNG CHILDREN. ON HOW MANY DAYS IN THE PAST WEEK WAS (*name*): LEFT ALONE? LEFT IN THE CARE OF ANOTHER CHILD (THAT IS, SOMEONE LESS THAN 10 YEARS OLD)? If 'none' enter 0	Number of days left alone ..... __ Number of days left with other child..... __	
CE5. *Check UF11: Age of child 3 or 4?* ☐ *Age 0, 1 or 2 ⇨ Go to Next Module* ☐ *Age 3 or 4 ⇨ Continue with CE6*		
CE6. I WOULD LIKE TO ASK YOU SOME QUESTIONS ABOUT THE HEALTH AND DEVELOPMENT OF YOUR CHILD. CHILDREN DO NOT ALL DEVELOP AND LEARN AT THE SAME RATE. FOR EXAMPLE, SOME WALK EARLIER THAN OTHERS. THESE QUESTIONS ARE RELATED TO SEVERAL ASPECTS OF YOUR CHILD'S DEVELOPMENT. CAN (*name*) IDENTIFY/NAME AT LEAST TEN LETTERS OF THE ALPHABET?	Yes ..... 1 No ..... 2 DK 8	

CE7. CAN (*name*) ATTACH SOUNDS TO MOST OR MORE THAN HALF OF THE LETTERS?	Yes ..... 1 No ..... 2 DK 8	
CE8. CAN (*name*) READ AT LEAST FOUR SIMPLE, ONE-SYLLABLE, POPULAR WORDS?	Yes ..... 1 No ..... 2 DK 8	
CE9. IS (*name*) INTERESTED IN NUMBERS, COUNTING, SORTING OR ADDING?	Yes ..... 1 No ..... 2 DK 8	
CE10. DOES (*name*) KNOW THE NAME AND RECOGNIZE THE SYMBOL OF ALL NUMBERS FROM 1 TO 10 MOST OF THE TIME?	Yes ..... 1 No ..... 2 DK 8	
CE11. WHEN YOU COMPARE TWO NUMBERS UP TO 10, DOES (*name*) KNOW WHICH ONE IS BIGGER MOST OF THE TIME?	Yes ..... 1 No ..... 2 DK 8	
CE12. IS (*name*) ABLE TO USE AND MANIPULATE SMALL OBJECTS AND TOYS?	Yes ..... 1 No ..... 2 DK 8	
CE13. IS (*name*) SOMETIMES TOO TIRED, SLEEPY OR SICK TO PLAY?	Yes ..... 1 No ..... 2 DK 8	
CE14. IS (*name*) SOMETIMES TOO HUNGRY TO PLAY?	Yes ..... 1 No ..... 2 DK 8	
CE15. DOES (*name*) DO EVERYDAY ROUTINE ACTIVITIES WITHOUT BEING REMINDED? ACTIVITIES SUCH AS BRUSHING TEETH, TIDYING UP AFTER PLAY OR A MEAL, OR HELPING WITH CHORES? If yes: *WOULD YOU SAY OFTEN OR SOMETIMES?*	Often/Most of the time ..... 1 Sometimes ..... 2 Rarely or never ..... 3 DK 8	
CE16. DOES (*name*) FOLLOW SIMPLE DIRECTIONS ON HOW TO DO SOMETHING CORRECTLY? If yes: *WOULD YOU SAY OFTEN OR SOMETIMES?*	Often/Most of the time ..... 1 Sometimes ..... 2 Rarely or never ..... 3 DK 8	
CE17. IS (*name*) ABLE TO WORK ON A TASK, INCLUDING PLAY TASKS, BY HIMSELF/HERSELF? If yes: *WOULD YOU SAY OFTEN OR SOMETIMES?*	Often/Most of the time ..... 1 Sometimes ..... 2 Rarely or never ..... 3 DK 8	
CE18. DOES (*name*) PLAY WITH SIBLINGS OR OTHER CHILDREN FOR A CONSIDERABLE TIME WITHOUT GETTING INTO TROUBLE? If yes: *WOULD YOU SAY OFTEN OR*	Often/Most of the time ..... 1 Sometimes ..... 2 Rarely or never ..... 3 DK 8	

SOMETIMES?		
CE19. DOES (*name*) SHOW RESPECT FOR OTHER CHILDREN? Probe: DOES (*name*) LISTEN TO WHAT ANOTHER CHILD HAS TO SAY AND RECOGNIZE THAT HE OR SHE MAY BE DIFFERENT OR WANT DIFFERENT THINGS? If yes: *WOULD YOU SAY OFTEN OR SOMETIMES?*	Often/Most of the time..... 1 Sometimes..... 2 Rarely or never..... 3 DK..... 8	
CE20. WHAT IS *(name)*'S ABILITY TO GET ALONG WITH OTHER CHILDREN? WOULD YOU SAY IT IS VERY GOOD, AVERAGE, OR POOR/BAD?	Very good..... 1 Average..... 2 Poor/Bad..... 3 DK..... 8	
CE21. HOW OFTEN DOES (*name*) BULLY OTHER CHILDREN OR IS MEAN TO OTHER CHILDREN? Probe: DOES (*name*) OFTEN MAKE OTHER CHILDREN AFRAID OF HIM/HER, OR SAY MEAN/BAD WORDS TO OTHER CHILDREN? IF YES: WOULD YOU SAY OFTEN OR SOMETIMES?	Often/Most of the time..... 1 Sometimes..... 2 Rarely or never..... 3 DK..... 8	
CE22. HOW OFTEN DOES (*name*) KICK, BITE, OR HIT OTHER CHILDREN OR ADULTS? IF YES: WOULD YOU SAY OFTEN OR SOMETIMES?	Often/Most of the time..... 1 Sometimes..... 2 Rarely or never..... 3 DK..... 8	
CE23. DOES (*name*) OFTEN GET VERY EASILY/QUICKLY DISTRACTED? If yes: *WOULD YOU SAY OFTEN OR SOMETIMES?*	Often/Most of the time..... 1 Sometimes..... 2 Rarely or never..... 3 DK..... 8	

VITAMIN A		VA
VA1. HAS (*name*) EVER RECEIVED A VITAMIN A CAPSULE (SUPPLEMENT) LIKE THIS ONE?	Yes ..... 1 No 2	2⇨NEXT MODULE
Show capsule or dispenser for different doses – 100,000 IU for those 6-11 months old (Blue), 200,000 IU for those 12-59 months old.(Red)	DK 8	8⇨NEXT MODULE
VA2. HOW MANY MONTHS AGO DID (*name*) TAKE THE LAST DOSE?	Months ago ..... __ __ DK 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 Day campaign ..... 3 Other (*specify*) _____ 6 DK 8	

BREASTFEEDING		BF
BF1. HAS (*name*) EVER BEEN BREASTFED?	Yes ..... 1 No ..... 2 DK 8	 2⇨BF3 8⇨BF3
BF2. IS HE/SHE STILL BEING BREASTFED?	Yes ..... 1 No ..... 2 DK 8	
BF3. I WOULD LIKE TO ASK YOU ABOUT LIQUIDS THAT (*name*) MAY HAVE HAD YESTERDAY DURING THE DAY OR THE NIGHT. I AM INTERESTED IN WHETHER (*name*) HAD THE ITEM EVEN IF IT WAS COMBINED WITH OTHER FOODS. DID (*name*) DRINK OR EAT ANY (***item from list***):YESTERDAY, DURING THE DAY OR NIGHT? Read each item aloud and record response before proceeding to the next item. Ask the number of times the child had infant formula, milk, yogurt and solid,, semi-solid foods.	Y N DK	
BF3A. VITAMIN OR MINERAL SUPPLEMENTS?	Vitamin supplements 1 2 8	
BF3B. ORS (ORAL REHYDRATION SOLUTION)?	ORS 1 2 8	
BF3C. PLAIN WATER?	Plain water 1 2 8	
BF3D. INFANT FORMULA?	Infant formula 1 2 8	2 OR 8 ⇨BF3E
BF3D1. HOW MANY TIMES DID (*name*) HAVE INFANT FORMULA?	Number of times ..... __ __	
BF3E. MILK SUCH AS TINNED, POWDERED, OR FRESH ANIMAL MILK?	Milk 1 2 8	2 OR 8 ⇨BF3F
BF3E1. HOW MANY TIMES DID (*name*) DRINK TINNED, POWDERED OR FRESH ANIMAL MILK?	Number of times ..... __ __	
BF3F. JUICE OR JUICE DRINKS?	Juice 1 2 8	
BF3G. SOUP?	Soup 1 2 8	
BF3H. ANY OTHER LIQUIDS?	Any other liquid 1 2 8	
BF3I. YOGURT?	Yogurt 1 2 8	2 OR 8 ⇨BF3J
BF3I1. HOW MANY TIMES DID (*name*) HAVE YOGURT?	Number of times ..... __ __	
BF3J. THIN PORRIDGE?	Porridge 1 2 8	
BF3K. SOLID OR SEMI-SOLID (MUSHY) FOOD?	Solid or semi-solid food 1 2 8	2 OR 8 ⇨BF3L
BF3K1. HOW MANY TIMES DID (*name*) EAT SOLID, SEMI-SOLID (MUSHY) FOODS?	Number of times ..... __ __	
BF3L. DID (*name*) DRINK ANYTHING FROM A BOTTLE WITH A NIPPLE YESTERDAY DURING THE DAY OR NIGHT?	Yes ..... 1 No ..... 2 DK 8	

CARE OF ILLNESS		CA
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 DK 8	 2⇨CA5 8⇨CA5
CA1A. WAS THERE BLOOD IN THE STOOLS?	Yes ..... 1 No ..... 2 DK 8	
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. CA2A. A FLUID MADE FROM A SPECIAL PACKET CALLED ORS? CA2B. HOMEMADE SUGAR AND SALT SOLUTION? CA2C. A PRE-PACKAGED ORS FLUID FOR DIARRHOEA?	Yes No DK A. Fluid from ORS packet ..... 1 2 8 B. Sugar and salt solution ..... 1 2 8 C. Pre-packaged ORS fluid 1 2 8	
CA2D. WAS ANYTHING (ELSE) GIVEN TO TREAT THE DIARRHOEA?	Yes ..... 1 No ..... 2 DK 8	 2⇨CA3 8⇨CA3
CA2E. WHAT (ELSE) WAS GIVEN TO TREAT THE DIARRHOEA? Probe: ANYTHING ELSE? Record all treatments given	Pill or Syrup Antibiotic ..... A Antimotility ..... B Zinc ..... C Other (Not antibiotic, antimotility or zinc) ..... D Unknown pill or syrup ..... E Injection Antibiotic ..... F Non-antibiotic ..... G Unknown injection ..... H Intravenous ..... I Home remedy/herbal medicine ..... J Other (*specify*) _____ X	
CA2F. Check CA2E: Zinc given? ☐ Yes.⇨ Continue with CA2G ☐ *No.⇨ Go to CA3*		
CA2G. HOW MANY TIME WAS (name) *GIVEN ZINC?*	Number of times ..... __ __	

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 DK 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 DK 8	
CA4A. Check CA2A: ORS packet used? ☐ Yes.⇨ Continue with CA4B ☐ No.⇨ Go to CA5		
CA4B. WHERE DID YOU GET THE ORS PACKET FROM*?* _____ (*Name of place*)	Public Sector Government hospital ..... 21 Government health center ..... 22 Government dispensary ..... 23 Other public (*specify*) _____ 26 Private medical sector Mission hospital/clinic ..... 31 Private hospital/clinic ..... 32 Nursing/maternity home ..... 33 Pharmacy ..... 34 Other private medical (*specify*)_____ 36 Mobile clinic ..... 41 Community health worker ..... 42 Other source Shop ..... 51 Traditional practitioner ..... 52 Relative/friend ..... 53 Other (*specify*) _____ 96 DK 98	
CA4C. HOW MUCH DID YOU PAY FOR THE *(local name for ORS packet from CA2A)?*	Shillings ..... __ __ __ __ Free ..... 9995 DK 9998	
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 DK 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 DK 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	 2⇨CA12 6⇨CA12

	DK 8	
CA8. DID YOU SEEK ADVICE OR TREATMENT FOR THE ILLNESS OUTSIDE THE HOME?	Yes ..... 1 No ..... 2 DK 8	 2⇨CA10 8⇨CA10
CA9. FROM WHERE DID YOU SEEK CARE? *Probe:* 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 Government hospital ..... C Government health center ..... D Government dispensary ..... E Other public (*specify*) _____ F Private medical sector Mission hospital/clinic ..... G Private hospital/clinic ..... H Nursing/maternity home ..... I Pharmacy ..... J Other private medical (*specify*)_____ K Mobile clinic ..... L Community health worker ..... M Other source Shop ..... O Traditional practitioner ..... P Relative/friend ..... Q Other (*specify*) _____ X	
CA10. WAS (*name*) GIVEN MEDICINE TO TREAT THIS ILLNESS?	Yes ..... 1 No ..... 2 DK 8	 2⇨CA12 8⇨CA12
CA11. WHAT MEDICINE WAS (*name*) GIVEN? Probe: ANYTHING ELSE? Circle all medicines given.	Antibiotic ..... A Paracetamol/Panadol/Acetaminophen ..... P Aspirin ..... Q Ibupropfen ..... R Other (*specify*) _____ X DK ..... Z	
CA11A. Check CA11: Antibiotic given? ☐ Yes.⇨ Continue with CA11B ☐ No.⇨ Go to CA12		

CA11B. WHERE DID YOU GET THE ANTIBIOTIC? _____ (*Name of place*)	Public Sector Government hospital ..... 21 Government health center..... 22 Government dispensary ..... 23 Other public (*specify*) _____ 26 Private medical sector Mission hospital/clinic..... 31 Private hospital/clinic..... 32 Nursing/maternity home ..... 33 Pharmacy ..... 34 Other private medical (*specify*)_____ 36 Mobile clinic ..... 41 Community health worker ..... 42 Other source Shop ..... 51 Traditional practitioner..... 52 Relative/friend..... 53 Other (*specify*) _____ 96 DK 98	
CA11C. HOW MUCH DID YOU PAY FOR THE ANTIBIOTIC?	Shillings..... __ __ __ __ Free..... 9995 DK 9998	
CA12. Check UF11: Child aged under 3? ☐ Yes. ⇨ Continue with CA13 ☐ *No. ⇨ Go to Next Module*		
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 DK 98	

MALARIA		ML
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 DK 8	 2⇨NEXT MODULE 8⇨NEXT MODULE
ML2. WAS (*name*) SEEN AT A HEALTH FACILITY DURING THIS ILLNESS?	Yes ..... 1 No ..... 2 DK 8	 2⇨ML6 8⇨ML6
ML3. DID (*name*) TAKE MEDICINE FOR FEVER OR MALARIA THAT WAS PROVIDED OR PRESCRIBED AT THE HEALTH FACILITY?	Yes ..... 1 No ..... 2 DK 8	 2⇨ML5 8⇨ML5
ML4. WHAT MEDICINE DID (*name*) TAKE THAT WAS PROVIDED OR PRESCRIBED AT THE HEALTH FACILITY? Probe: ANYTHING ELSE? *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 DK ..... Z	
ML5. WAS (*name*) GIVEN MEDICINE FOR THE FEVER OR MALARIA BEFORE BEING TAKEN TO THE HEALTH FACILITY?	Yes ..... 1 No ..... 2 DK 8	1⇨ML7 2⇨ML8 8⇨ML8
ML6. WAS (*name*) GIVEN MEDICINE FOR FEVER OR MALARIA DURING THIS ILLNESS?	Yes ..... 1 No ..... 2 DK 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 DK ..... Z	
ML8. *Check ML4 and ML7: Anti-malarial mentioned (codes A - H)?* ☐ *Yes. ⇨ Continue with ML9* ☐ *No. ⇨ Go to Next Module*		
ML9. HOW LONG AFTER THE FEVER STARTED DID	Same day 0	

(*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.*	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	
ML9A. WHERE DID YOU GET THE (*name of anti-malarial from ML4 or ML7*)? If more than one anti-malarial is mentioned in ML4 or ML7, refer to the first anti-malarial given for the fever (the anti-malarial given on the day recorded in ML9). _____ (Name of place)	Public Sector Government hospital ..... 21 Government health center..... 22 Government dispensary ..... 23 Other public (*specify*) _____ 26 Private medical sector Mission hospital/clinic..... 31 Private hospital/clinic..... 32 Nursing/maternity home ..... 33 Pharmacy ..... 34 Other private medical (*specify*)_____ 36 Mobile clinic ..... 41 Community health worker ..... 42 Other source Shop ..... 51 Traditional practitioner..... 52 Relative/friend..... 53 Other (*specify*) _____ 96 DK 98	
ML9B. HOW MUCH DID YOU PAY FOR THE (*name of anti-malarial from ML4 or ML7*)? Refer to the same anti-malarial as in ML9A above	Shillings..... __ __ __ __ Free..... 9996 DK 9998	

IMMUNIZATION			**IM**
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. IM10-IM18 will only be asked when a card is not available or not shown.			
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 AT BIRTH	OPV0		
IM3B. POLIO 1	OPV1		
IM3C. POLIO 2	OPV2		
IM3D. POLIO 3	OPV3		
IM4A. DPT1–HepB + Hib: 1 (Pentavalent-1)	DPT1		
IM4B. DPT1–HepB + Hib: 2 (Pentavalent-2)	DPT2		
IM4C. DPT1–HepB + Hib: 3 (Pentavalent-3)	DPT3		
IM6. MEASLES	MEASLES		
IM7. YELLOW FEVER	YF		
IM8A. VITAMIN A (1) *(Last but one)*	VITA1		
IM8B. VITAMIN A (2) *(Most recent)*	VITA2		
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, Hepatitis B 1-3, Measles, Yellow Fever vaccine(s), or Vitamin A supplements.		Yes .....1 (Probe for vaccinations **and write '66' in the corresponding day column** on IM2 to IM8B.) No .....2 DK 8	1⇨IM19 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 DK 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 DK 8	
IM12. HAS (*name*) EVER BEEN GIVEN ANY POLIO VACCINATION, THAT IS, VACCINATION DROPS IN THE MOUTH TO PROTECT HIM/HER FROM GETTING DISEASES?		Yes .....1 No .....2 DK 8	 2⇨IM15 8⇨IM15

IM13. HOW OLD WAS HE/SHE WHEN THE FIRST DOSE WAS GIVEN – WITHIN THE TWO WEEKS AFTER BIRTH OR LATER?	Just after birth (within two weeks) ..... 1 Later 2	
IM14. HOW MANY TIMES HAS HE/SHE BEEN GIVEN THESE DROPS?	No. of times ..... __ __	
IM15. HAS (*name*) EVER BEEN GIVEN "DPT VACCINATION INJECTIONS" – THAT IS, AN INJECTION IN THE THIGH OR BUTTOCKS – TO PREVENT HIM/HER FROM GETTING TETANUS, WHOOPING COUGH, DIPHTHERIA? (SOMETIMES GIVEN AT THE SAME TIME AS POLIO)	Yes ..... 1 No ..... 2 DK 8	 2⇨IM17 8⇨IM17
IM16. HOW MANY TIMES?	No. of times ..... __ __	
IM17. HAS (*name*) EVER BEEN GIVEN "MEASLES VACCINATION INJECTIONS" – 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 DK 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 DK 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:	Y N DK	
IM19A. National Immunization Day in 2006?	*National Imm Day 2006* 1 2 8	
IM19B. Malezibora, in May 2008?	*Malezibora May 2008* 1 2 8	
IM19C. Malezibora, in November 2008?	*Malezibora Nov 2008* 1 2 8	

UT2. *Record the time.*	Hour and minutes..... __ __ : __ __	

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

☐ *Yes. ⇨ End the current questionnaire and then*
Go to Under-5 Questionnaire to administer the questionnaire for the next eligible child.

☐ *No. ⇨ End the interview with this respondent by thanking him/her for his/her cooperation.*

If this is the last eligible child in the household, go on to ANTHROPOMETRY MODULE.

ANTHROPOMETRY MODULE		AN
After questionnaires for all children are complete, the measurer weighs and measures each child. Record weight and length/height below, taking care to record the measurements on the correct questionnaire for each child. Check the child's name and line number on the household listing before recording measurements.		
AN0A. Measurer's identification code.	Measurer code ..... __ __	
AN0B. Result of measurement.	Measured ..... 1 Not present ..... 2 Refused ..... 3 Other (*specify*) _____ 6	 2⇨AN5 3⇨AN5 6⇨AN5
AN1. Child's weight.	Kilograms (kg) ..... ☐☐ . ☐	
AN2. Child's length or height. Check age of child in UF11: ☐ Child under 2 years old. ⇨ Measure length (lying down). ☐ Child age 2 or more years. ⇨ Measure height (standing up).	Length (cm) Lying down ..... 1 ☐☐☐ . ☐ Height (cm) Standing up ..... 2 ☐☐☐ . ☐	
AN3. WHETHER THE CHILD IS HAVING OEDEMA? (OBSERVE AND RECORD)	Yes, child is having oedema ..... 1 No, child is not having oedema 2	

AN5. Is there another child in the household 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 questionnaires for this household and check that all identification numbers are inserted on each page. Tally on the Household Information Panel the number of interviews completed.

REMARKS AND OBSERVATIONS
SUPERVISOR
FIELD EDITOR
FIELD MONITORS/CO-ORDINATORS
OFFICE EDITOR

Kenya - Coast Province, Mombasa

Multiple Indicator Cluster Survey

2009

Table 9.4: Child development outcomes (CD.5 – MICS4) (CORRECTED)

Percentage of children under age 36-59 months who are developmentally on target in language-cognitive, physical, social-emotional, and approaches to learning domains, and the child development index score, Mombasa Informal Settlement Survey, Kenya, 2009

	Percentage of children age 36-59 months who are developmentally on target for indicated domains				Child development index score[1]	Number of children age 36-59 months
	Language-Cognitive	Physical	Social-Emotional	Approaches to learning		
Sex						
Male	55.2	83.8	35.3	52.1	43.1	99
Female	47.2	77.3	23.9	41.2	30.5	88
Age						
36-47 months	36.1	69.9	33.4	42.1	24.6	106
48-59 months	71.7	95.1	25.5	53.5	53.8	80
Preschool attendance						
Attending	72.6	87.3	32.6	46.6	46.9	116
Not attending	16.8	77.4	28.8	52.3	22.3	62
Mother's education						
Primary	46.4	81.0	31.9	47.8	39.2	108
Secondary +	66.5	79.8	26.0	43.3	34.6	56
Wealth index						
Low	33.7	77.7	33.1	51.9	37.1	63
Medium	52.2	77.2	25.1	39.3	27.7	60
High	68.4	87.2	31.4	49.4	46.2	63
Religion of household head						
Catholic	(41.0)	(71.6)	(14.0)	(41.4)	(20.2)	29
Other Christian	56.0	80.7	32.0	53.9	44.8	87
Muslim	52.3	84.0	34.1	41.2	35.0	68
Total	51.4	80.8	30.0	47.0	37.2	186

[1] MICS indicator 6.6 - child development index is calculated as the percentage of children who are developmentally on target in at least three of the four component domains (language-cognitive, physical, social-emotional, and approaches to learning).

( ) Based on 25-49 un-weighted cases.

Note: 8 children with missing information on pre-school attendance, 23 children with illiterate mother/caretaker and 3 children belong to other religion are not shown separately.