MICS

Kakamega County, Kenya

Multiple Indicator Cluster Survey 2013/14

Final Report

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The Kakamega County Multiple Indicator Cluster Survey (MICS) was carried out in 2013/14 by by the Population Studies and Research Institute, University of Nairobi, in collaboration with Kenya National Bureau of Statistics, as part of the global MICS programme. Technical support was provided by the United Nations Children's Fund (UNICEF). UNICEF provided financial support. UNICEF also provided financial support.

The global MICS programme was developed by UNICEF in the 1990s as an international household survey programme to support countries in the collection of internationally comparable data on a wide range of indicators on the situation of children and women. MICS surveys measure key indicators that allow countries to generate data for use in policies and programmes, and to monitor progress towards the Millennium Development Goals (MDGs) and other internationally agreed upon commitments.

Summary Table of Survey Implementation and the Survey Population, Kakamega County MICS, 2013/14

Survey implementation			
Sample frame	National Sample Survey and Evaluation	**Questionnaires**	Household
Updated	Programme V (NASSEP V) November 2013		Women (age 15-49) Children under-five
Interviewer training	October 2013	**Fieldwork**	November 2013 to January 2014
Survey sample			
Households			
Sampled	1,500		
Occupied	1,335	Children under-five	
Interviewed	1,221	Eligible	828
Response rate (Percent)	91.5	Mothers/caretakers interviewed	806
		Response rate (Percent)	97.3
Women			
Eligible for interviews	1,225		
Interviewed	998		
Response rate (Percent)	81.5		

Survey population			
Average household size	4.6		
Percentage of population under:		**Percentage of population living in**	
Age 5	14.9	Urban areas	46.8
Age 18	53.8	Rural areas	53.2
Percentage of women age 15-49 years with at least one live birth in the last 2 years	30.6		

Housing characteristics		Household or personal assets	
Percentage of households with		**Percentage of households that own**	
Electricity	17.6	A television	27.6
Finished floor	32.2	A refrigerator	3.9
Finished roofing	91.4	Agricultural land	79.7
Finished walls	28.6	Farm animals/livestock	72.4
Mean number of persons per room used for sleeping	2.73	**Percentage of households where at least a member has or owns a**	
		Mobile phone	87.2
		Car or truck	3.9

Summary Table of Findings[1]

Multiple Indicator Cluster Surveys (MICS) and Millennium Development Goals (MDG) Indicators, Kakamega County, 2013/14

NUTRITION			
Breastfeeding and infant feeding			
MICS Indicator	**Indicator**	**Description**	**Value**
2.5	Children ever breastfed	Percentage of women with a live birth in the last 2 years who breastfed their last live-born child at any time	97.5
2.6	Early initiation of breastfeeding	Percentage of women with a live birth in the last 2 years who put their last newborn to the breast within one hour of birth	30.1
2.7	Exclusive breastfeeding under 6 months	Percentage of infants under 6 months of age who are exclusively breastfed	34.7
2.8	Predominant breastfeeding under 6 months	Percentage of infants under 6 months of age who received breast milk as the predominant source of nourishment during the previous day	61.0
2.9	Continued breastfeeding at 1 year	Percentage of children age 12-15 months who received breast milk during the previous day	(74.7)
2.10	Continued breastfeeding at 2 years	Percentage of children age 20-23 months who received breast milk during the previous day	35.5
2.11	Median duration of breastfeeding	The age in months when 50 percent of children age 0-35 months did not receive breast milk during the previous day	19.8
2.12	Age-appropriate breastfeeding	Percentage of children age 0-23 months appropriately fed during the previous day	59.5
2.13	Introduction of solid, semi-solid or soft foods	Percentage of infants age 6-8 months who received solid, semi-solid or soft foods during the previous day	(91.8)
2.14	Milk feeding frequency for non-breastfed children	Percentage of non-breastfed children age 6-23 months who received at least 2 milk feedings during the previous day	27.0
2.15	Minimum meal frequency	Percentage of children age 6-23 months who received solid, semi-solid and soft foods (plus milk feeds for non-breastfed children) the minimum number of times or more during the previous day	68.9
2.16	Minimum dietary diversity	Percentage of children age 6–23 months who received foods from 4 or more food groups during the previous day	38.6
2.17a 2.17b	Minimum acceptable diet	(a) Percentage of breastfed children age 6–23 months who had at least the minimum dietary diversity and the minimum meal frequency during the previous day	22.9
		(b) Percentage of non-breastfed children age 6–23 months who received at least 2 milk feedings and had at least the minimum dietary diversity not including milk feeds and the minimum meal frequency during the previous day	12.6
2.18	Bottle feeding	Percentage of children age 0-23 months who were fed with a bottle during the previous day	7.2
Salt iodization			
2.19	Iodized salt consumption	Percentage of households with salt testing 15 parts per million or more of iodate	94.9
Low-birthweight			
2.20	Low-birthweight infants	Percentage of most recent live births in the last 2 years weighing below 2,500 grams at birth	6.7
2.21	Infants weighed at birth	Percentage of most recent live births in the last 2 years who were weighed at birth	55.5

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[1] See Appendix G for a detailed description of MICS indicators

CHILD HEALTH

Vaccinations

MICS Indicator		Indicator	Description	Value
3.1		Tuberculosis immunization coverage	Percentage of children age 12-23 months who received BCG vaccine by their first birthday	98.2
3.2		Polio immunization coverage	Percentage of children age 12-23 months who received the third dose of OPV vaccine (OPV3) by their first birthday	92.4
3.3		Diphtheria, pertussis and tetanus (DPT) immunization coverage	Percentage of children age 12-23 months who received the third dose of DPT vaccine (DPT3) by their first birthday	93.3
3.4	**MDG 4.3**	Measles immunization coverage	Percentage of children age 12-23 months who received measles vaccine by their first birthday	86.3
3.5		Hepatitis B immunization coverage	Percentage of children age 12-23 months who received the third dose of Hepatitis B vaccine (HepB3) by their first birthday	93.7
3.6		Haemophilus influenzae type B (Hib) immunization coverage	Percentage of children age 12-23 months who received the third dose of Hib vaccine (Hib3) by their first birthday	91.9
3.8		Full immunization coverage	Percentage of children age 12-23 months who received all vaccinations recommended in the national immunization schedule by their first birthday	78.2

Tetanus toxoid

MICS Indicator		Indicator	Description	Value
3.9		Neonatal tetanus protection	Percentage of women age 15-49 years with a live birth in the last 2 years who were given at least two doses of tetanus toxoid vaccine within the appropriate interval prior to the most recent birth	72.2

Diarrhoea

MICS Indicator		Indicator	Description	Value
-		Children with diarrhoea	Percentage of children under age 5 with diarrhoea in the last 2 weeks	17.8
3.10		Care-seeking for diarrhoea	Percentage of children under age 5 with diarrhoea in the last 2 weeks for whom advice or treatment was sought from a health facility or provider	39.9
3.11		Diarrhoea treatment with oral rehydration salts (ORS) and zinc	Percentage of children under age 5 with diarrhoea in the last 2 weeks who received ORS and zinc	16.4
3.12		Diarrhoea treatment with oral rehydration therapy (ORT) and continued feeding	Percentage of children under age 5 with diarrhoea in the last 2 weeks who received ORT (ORS packet, pre-packaged ORS fluid, recommended homemade fluid or increased fluids) and continued feeding during the episode of diarrhoea	56.5

Acute Respiratory Infection (ARI) symptoms

MICS Indicator		Indicator	Description	Value
-		Children with ARI symptoms	Percentage of children under age 5 with ARI symptoms in the last 2 weeks	5.0
3.13		Care-seeking for children with ARI symptoms	Percentage of children under age 5 with ARI symptoms in the last 2 weeks for whom advice or treatment was sought from a health facility or provider	(59.2)
3.14		Antibiotic treatment for children with ARI symptoms	Percentage of children under age 5 with ARI symptoms in the last 2 weeks who received antibiotics	(67.8)

Solid fuel use

MICS Indicator		Indicator	Description	Value
3.15		Use of solid fuels for cooking	Percentage of household members in households that use solid fuels as the primary source of domestic energy to cook	95.0

Malaria / Fever

MICS Indicator		Indicator	Description	Value
-		Children with fever	Percentage of children under age 5 with fever in the last 2 weeks	27.4
3.16a 3.16b		Household availability of insecticide-treated nets (ITNs)	Percentage of households with (a) at least one ITN (b) at least one ITN for every two people	77.3 44.6
3.17a 3.17b		Household vector control	Percentage of households (a) with at least one ITN or that have been sprayed by IRS in the last 12 months (b) with at least one ITN for every two people or that have been sprayed by IRS in the last 12 months	78.3 46.6
3.18	**MDG 6.7**	Children under age 5 who slept under an ITN	Percentage of children under age 5 who slept under an ITN the previous night	70.5
3.19		Population that slept under an ITN	Percentage of household members who slept under an ITN the previous night	61.6
3.20		Care-seeking for fever	Percentage of children under age 5 with fever in the last 2 weeks for whom advice or treatment was sought from a health facility or provider	49.7
3.21		Malaria diagnostics usage	Percentage of children under age 5 with fever in the last 2 weeks who had a finger or heel stick for malaria testing	23.9
3.22	**MDG 6.8**	Anti-malarial treatment of children under age 5	Percentage of children under age 5 with fever in the last 2 weeks who received any antimalarial treatment	45.0
3.23		Treatment with Artemisinin-based Combination Therapy (ACT) among children who received anti-malarial treatment	Percentage of children under age 5 with fever in the last 2 weeks who received ACT (or other first-line treatment according to national policy)	27.5
3.24		Pregnant women who slept under an ITN	Percentage of pregnant women who slept under an ITN the previous night	79.5
3.25		Intermittent preventive treatment for malaria during pregnancy	Percentage of women age 15-49 years who received three or more doses of SP/Fansidar, at least one of which was received during an ANC visit, to prevent malaria during their last pregnancy that led to a live birth in the last 2 years	24.9

WATER AND SANITATION

MICS Indicator		Indicator	Description	Value
4.1	**MDG 7.8**	Use of improved drinking water sources	Percentage of household members using improved sources of drinking water	79.4
4.2		Water treatment	Percentage of household members in households using unimproved drinking water who use an appropriate treatment method	56.0
4.3	**MDG 7.9**	Use of improved sanitation	Percentage of household members using improved sanitation facilities which are not shared	42.3
4.4		Safe disposal of child's faeces	Percentage of children age 0-2 years whose last stools were disposed of safely	85.6
4.5		Place for handwashing	Percentage of households with a specific place for hand washing where water and soap or other cleansing agent are present	5.0
4.6		Availability of soap or other cleansing agent	Percentage of households with soap or other cleansing agent	75.5

REPRODUCTIVE HEALTH

Contraception and unmet need

MICS Indicator		Indicator	Description	Value
-		Total fertility rate	Total fertility rate for women age 15-49 years	4.7
5.1	**MDG 5.4**	Adolescent birth rate	Age-specific fertility rate for women age 15-19 years	93
5.2		Early childbearing	Percentage of women age 20-24 years who had at least one live birth before age 18	28.2
5.3	**MDG 5.3**	Contraceptive prevalence rate	Percentage 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	61.5
5.4	**MDG 5.6**	Unmet need	Percentage 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	22.2

Maternal and newborn health

MICS Indicator		Indicator	Description	Value
5.5a 5.5b	**MDG 5.5** **MDG 5.5**	Antenatal care coverage	Percentage of women age 15-49 years with a live birth in the last 2 years who were attended during their last pregnancy that led to a live birth (a) at least once by skilled health personnel (b) at least four times by any provider	 95.3 38.6
5.6		Content of antenatal care	Percentage of women age 15-49 years with a live birth in the last 2 years who had their blood pressure measured and gave urine and blood samples during the last pregnancy that led to a live birth	70.2
5.7	**MDG 5.2**	Skilled attendant at delivery	Percentage of women age 15-49 years with a live birth in the last 2 years who were attended by skilled health personnel during their most recent live birth	53.4
5.8		Institutional deliveries	Percentage of women age 15-49 years with a live birth in the last 2 years whose most recent live birth was delivered in a health facility	51.6
5.9		Caesarean section	Percentage of women age 15-49 years whose most recent live birth in the last 2 years was delivered by caesarean section	5.8

Post-natal health checks

MICS Indicator		Indicator	Description	Value
5.10		Post-partum stay in health facility	Percentage of women age 15-49 years who stayed in the health facility for 12 hours or more after the delivery of their most recent live birth in the last 2 years	66.9
5.11		Post-natal health check for the newborn	Percentage of last live births in the last 2 years who received a health check while in facility or at home following delivery, or a post-natal care visit within 2 days after delivery	67.5
5.12		Post-natal health check for the mother	Percentage of women age 15-49 years who received a health check while in facility or at home following delivery, or a post-natal care visit within 2 days after delivery of their most recent live birth in the last 2 years	60.4

CHILD DEVELOPMENT

MICS Indicator	Indicator	Description	Value
6.1	Attendance to early childhood education	Percentage of children age 36-59 months who are attending an early childhood education programme	40.0
6.2	Support for learning	Percentage 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 last 3 days	63.3

CHILD DEVELOPMENT

MICS Indicator	Indicator	Description	Value
6.3	Father's support for learning	Percentage of children age 36-59 months whose biological father has engaged in four or more activities to promote learning and school readiness in the last 3 days	2.6
6.4	Mother's support for learning	Percentage of children age 36-59 months whose biological mother has engaged in four or more activities to promote learning and school readiness in the last 3 days	16.1
6.5	Availability of children's books	Percentage of children under age 5 who have three or more children's books	3.7
6.6	Availability of playthings	Percentage of children under age 5 who play with two or more types of playthings	69.3
6.7	Inadequate care	Percentage 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 last week	40.1
6.8	Early child development index	Percentage of children age 36-59 months who are developmentally on track in at least three of the following four domains: literacy-numeracy, physical, social-emotional, and learning	72.0

LITERACY AND EDUCATION

MICS Indicator		Indicator	Description	Value
7.1	MDG 2.3	Literacy rate among young women	Percentage of young women age 15-24 years who are able to read a short simple statement about everyday life or who attended secondary or higher education	86.3
7.2		School readiness	Percentage of children in first grade of primary school who attended pre-school during the previous school year	60.3
7.3		Net intake rate in primary education	Percentage of children of school-entry age who enter the first grade of primary school	60.6
7.4	MDG 2.1	Primary school net attendance ratio (adjusted)	Percentage of children of primary school age currently attending primary or secondary school	89.4
7.S1		Primary school net attendance ratio (adjusted)	Percentage of children of primary school age currently attending primary (primary 1-8; national) or secondary school	91.2
7.5		Secondary school net attendance ratio (adjusted)	Percentage of children of secondary school age currently attending secondary school or higher	55.6
7.S2		Secondary school net attendance ratio (adjusted)	Percentage of children of secondary school age currently attending secondary school (national) or higher	33.5
7.6	MDG 2.2	Children reaching last grade of primary	Percentage of children entering the first grade of primary school who eventually reach last grade	99.1
7.S3		Children reaching last grade of primary	Percentage of children entering the first grade of primary school who eventually reach last grade (primary 8; national)	90.0
7.7		Primary completion rate	Percentage of children attending the last grade of primary school (excluding repeaters)	128.1
7.S4		Primary completion rate	Percentage of children attending the last grade of primary school (excluding repeaters) (national)	80.0
7.8		Transition rate to secondary school	Percentage of children attending the last grade of primary school during the previous school year who are in the first grade of secondary school during the current school year	92.7

7.S5		Transition rate to secondary school	Percentage of children attending the last grade of primary school during the previous school year who are in the first grade of secondary school during the current school year (national)	35.6
7.9	**MDG 3.1**	Gender parity index (primary school)	Primary school net attendance ratio (adjusted) for girls divided by primary school net attendance ratio (adjusted) for boys	1.10
7.S6		Gender parity index (primary school)	Primary school net attendance ratio (adjusted) for girls divided by primary school net attendance ratio (adjusted) for boys (national)	1.07
7.10	**MDG 3.1**	Gender parity index (secondary school)	Secondary school net attendance ratio (adjusted) for girls divided by secondary school net attendance ratio (adjusted) for boys	1.28
7.S7		Gender parity index (secondary school)	Secondary school net attendance ratio (adjusted) for girls divided by secondary school net attendance ratio (adjusted) for boys (national)	1.23

CHILD PROTECTION

Birth registration

MICS Indicator	Indicator	Description	Value
8.1	Birth registration	Percentage of children under age 5 whose births are reported registered	49.6

Child labour

8.2	Child labour	Percentage of children age 5-17 years who are involved in child labour	44.9

Child discipline

8.3	Violent discipline	Percentage of children age 1-14 years who experienced psychological aggression or physical punishment during the last one month	81.7

Early marriage and polygyny

8.4	Marriage before age 15	Percentage of women age 15-49 years who were first married or in union before age 15	5.6
8.5	Marriage before age 18	Percentage of women age 20-49 years who were first married or in union before age 18	29.8
8.6	Young women age 15-19 years currently married or in union	Percentage of young women age 15-19 years who are married or in union	13.8
8.7	Polygyny	Percentage of women age 15-49 years who are in a polygynous union	16.3
8.8a 8.8b	Spousal age difference	Percentage of young women who are married or in union and whose spouse is 10 or more years older, (a) among women age 15-19 years, (b) among women age 20-24 years	(*) 16.4

Female genital mutilation/cutting

8.9	Approval for female genital mutilation/cutting (FGM/C)	Percentage of women age 15-49 years who state that FGM/C should be continued	2.8
8.10	Prevalence of FGM/C among women	Percentage of women age 15-49 years who report to have undergone any form of FGM/C	1.2
8.11	Prevalence of FGM/C among girls	Percentage of daughters age 0-14 years who have undergone any form of FGM/C, as reported by mothers age 15-49 years	0.1

Attitudes towards domestic violence

8.12	Attitudes towards domestic violence	Percentage of women age 15-49 years who state that a husband 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	57.4

Children's living arrangements

8.13	Children's living arrangements	Percentage of children age 0-17 years living with neither biological parent	18.2
8.14	Prevalence of children with one or both parents dead	Percentage of children age 0-17 years with one or both biological parents dead	9.9
8.15	Children with at least one parent living abroad	Percentage of children 0-17 years with at least one biological parent living abroad	0.1

HIV/AIDS AND SEXUAL BEHAVIOUR

HIV/AIDS knowledge and attitudes

MICS Indicator		Indicator	Description	Value
-		Have heard of AIDS	Percentage of women age 15-49 years who have heard of AIDS	99.9
9.1	**MDG 6.3**	Knowledge about HIV prevention among young people	Percentage of young women age 15-24 years who correctly identify ways of preventing the sexual transmission of HIV, and who reject major misconceptions about HIV transmission	45.5
9.2		Knowledge of mother-to-child transmission of HIV	Percentage of women age 15-49 years who correctly identify all three means of mother-to-child transmission of HIV	46.5
9.3		Accepting attitudes towards people living with HIV	Percentage of women age 15-49 years expressing accepting attitudes on all four questions toward people living with HIV	33.6

HIV testing

9.4	People who know where to be tested for HIV	Percentage of women age 15-49 years who state knowledge of a place to be tested for HIV	95.3
9.5	People who have been tested for HIV and know the results	Percentage of women age 15-49 years who have been tested for HIV in the last 12 months and who know their results	45.4
9.6	Sexually active young people who have been tested for HIV and know the results	Percentage of young women age 15-24 years who have had sex in the last 12 months, who have been tested for HIV in the last 12 months and who know their results	58.0
9.7	HIV counselling during antenatal care	Percentage of women age 15-49 years who had a live birth in the last 2 years and received antenatal care during the pregnancy of their most recent birth, reporting that they received counselling on HIV during antenatal care	65.1
9.8	HIV testing during antenatal care	Percentage of women age 15-49 years who had a live birth in the last 2 years and received antenatal care during the pregnancy of their most recent birth, reporting that they were offered and accepted an HIV test during antenatal care and received their results	81.1

Sexual behaviour

9.9	Young people who have never had sex	Percentage of never married young women age 15-24 years who have never had sex	61.9
9.10	Sex before age 15 among young people	Percentage of young women age 15-24 years who had sexual intercourse before age 15	5.6

9.11		Age-mixing among sexual partners	Percentage of women age 15-24 years who had sex in the last 12 months with a partner who was 10 or more years older	12.9
9.12		Multiple sexual partnerships	Percentage of women age 15-49 years who had sexual intercourse with more than one partner in the last 12 months	1.7
9.13		Condom use at last sex among people with multiple sexual partnerships	Percentage of women age 15-49 years who report having had more than one sexual partner in the last 12 months who also reported that a condom was used the last time they had sex	(*)
9.14		Sex with non-regular partners	Percentage of sexually active young women age 15-24 years who had sex with a non-marital, non-cohabitating partner in the last 12 months	15.9
9.15	**MDG 6.2**	Condom use with non-regular partners	Percentage of young women age 15-24 years reporting the use of a condom during the last sexual intercourse with a non-marital, non-cohabiting sex partner in the last 12 months	65.2
Orphans				
9.16	**MDG 6.4**	Ratio of school attendance of orphans to school attendance of non-orphans	Proportion attending school among children age 10-14 years who have lost both parents divided by proportion attending school among children age 10-14 years whose parents are alive and who are living with one or both parents	(0.90)

ACCESS TO MASS MEDIA AND ICT

Access to mass media

MICS Indicator	Indicator	Description	Value
10.1	Exposure to mass media	Percentage of women age 15-49 years who, at least once a week, read a newspaper or magazine, listen to the radio, and watch television	7.1
Use of information/communication technology			
10.2	Use of computers	Percentage of young women age 15-24 years who used a computer during the last 12 months	15.1
10.3	Use of internet	Percentage of young women age 15-24 years who used the internet during the last 12 months	15.2

SUBJECTIVE WELL-BEING

MICS Indicator	Indicator	Description	Value
11.1	Life satisfaction	Percentage of young women age 15-24 years who are very or somewhat satisfied with their life, overall	81.7
11.2	Happiness	Percentage of young women age 15-24 years who are very or somewhat happy	79.9
11.3	Perception of a better life	Percentage of young women age 15-24 years whose life improved during the last one year, and who expect that their life will be better after one year	56.2

TOBACCO AND ALCOHOL USE

Tobacco use

MICS Indicator	Indicator	Description	Value
12.1	Tobacco use	Percentage of women age 15-49 years who smoked cigarettes, or used smoked or smokeless tobacco products at any time during the last one month	0.3

12.2	Smoking before age 15	Percentage of women age 15-49 years who smoked a whole cigarette before age 15	0.1
Alcohol use			
12.3	Use of alcohol	Percentage of women age 15-49 years who had at least one alcoholic drink at any time during the last one month	4.9
12.4	Use of alcohol before age 15	Percentage of women age 15-49 years who had at least one alcoholic drink before age 15	2.8

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List of Abbreviations

ACRWC	African Charter on the Rights and Welfare of the Child
ACT	Artemisinin-based Combination therapy
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
ARI	Acute Respiratory Infection
ART	Anti-retroviral Therapy
ASFRs	Age-specific Fertility Rates
BCC	Behaviour Change Communication
BCG	Bacillus Calmette-Guérin (Tuberculosis)
CARMMA	Campaign on Accelerated Reduction of Maternal Mortality in Africa
CBR	Crude Birth Rate
CEDAW	Convention on the Elimination of all forms of Discrimination Against Women
CRC	Convention on the rights of the Child
CSP	Country Strategy Paper
CSPro	Census and Survey Processing System
DOMC	Division of Malaria Control
DPT	Diphtheria Pertussis Tetanus
DVI	Division of Vaccine and Immunisation
EA	Enumeration area
ECD	Early Childhood Development
ECDE	Early Childhood Development and Education
ECDI	Early Child Development Index
EFA	Education for All
EHP	Essential Health Package
EMTCT	Elimination of Mother-to-Child Transmission of HIV
EPI	Expanded Programme on Immunization
FCTC	Framework Convention on Tobacco Control
FGM/C	Female genital mutilation/cutting
FNSP	Food and Nutrition Security Policy
GAPPD	Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea
GARPR	Global AIDS Response Progress Reporting
GFR	General Fertility Rate
GIPA	Greater Involvement of People Living with HIV and AIDS
GMAP	Global Malaria Action Plan
GPI	Gender Parity Index
GVAP	Global Vaccine Action Plan
HIV	Human Immunodeficiency Virus
ICPD	International Conference on Population and Development
ICT	Information and Communications Technology
IDD	Iodine Deficiency Disorders
ILO	International Labour Organization
IPT	Intermittent Preventive Treatment
IPTp	Intermittent Preventive Treatment of Pregnant women
IRS	Indoor Residual Spraying
ITN	Insecticide Treated Net
IUD	Intrauterine Device
JMP	Joint Monitoring Programme
KASF	Kenya AIDS Strategic Framework

KCPE	Kenya Certificate of Primary Education
KCSE	Kenya Certificate of Secondary Education
KDHS	Kenya Demographic and Health Survey
KEBS	Kenya Bureau of Standards
KEPI	Kenya Expanded Programme on Immunization
KHPF	Kenya Health Policy Framework
KNASP	Kenya National AIDS Strategic Plan
KNBS	Kenya National Bureau of Statistics
LAM	Lactational Amenorrhea Method
MDG	Millennium Development Goals
MICS	Multiple Indicator Cluster Survey
MICS5	Fifth global round of Multiple Indicator Clusters Surveys programme
MoH	Ministry of Health
MTP	Medium Term Plans
NAR	Net Attendance Rate
NASSEP V	National Sample Survey and Evaluation Programme V
NHSSP II	National Health Sector Strategic Plan II
NNAP	National Nutrition Action Plan
NTFIC	National Tobacco Free Initiative Committee
ORS	Oral Rehydration Salts
ORT	Oral rehydration treatment
PMI	Presidents Malaria Initiative
PMTC	Prevention of Mother to Child Transmission
PNC	Post-natal Care
PNHC	Post-natal Health Checks
PPM	Parts Per Million
PSRI	Population Studies and Research Institute, University of Nairobi
RHF	Recommended Home Fluid
SP	Sulfadoxine-Pyrimethamine
SPSS	Statistical Package for Social Sciences
STIs	Sexually Transmitted Infections
SUN	Scaling Up Nutrition
TFR	Total Fertility 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
WFFC	World Fit for Children
WHO	World Health Organization

Foreword

The 2013/14 Multiple Indicator Cluster Survey (MICS5) covering Bungoma, Kakamega and Turkana Counties are part of the fifth global round of Multiple Indicator Cluster Survey series conducted worldwide to provide up-to-date information on the situation of children and women. This survey was conducted in collaboration with the Population Studies and Research Institute (PSRI) of the University of Nairobi, the Kenya National Bureau of Statistics (KNBS) and United Nations Children's Fund (UNICEF).

The results of this survey provide requisite baseline information that can be used to facilitate evidence-based planning, budgeting and programming by policymakers and stakeholders at the county levels. The reports will go a long way in encouraging increased demand for use of statistics by policy makers at devolved levels; ensure that resources at both county and national levels are used most effectively through well-planned projects/programmes that will benefit especially the women and children of the three counties.

MICS5 was conducted at county level to provide comprehensive and disaggregated data to partly fill the existing data gaps at this level. This survey is the second of its kind to be conducted at the devolved level after MICS4 was conducted in the six counties of the Nyanza region in 2011. MICS3 was conducted in all the 13 districts of the then Eastern Province in 2008.

The MICS5 results are critical in gauging milestones achieved in the field of education, nutrition, child development, and health for women and children in the three counties and in evaluating the various health based policies that the Government has formulated over the years towards achieving the national welfare objectives.

More specifically, the 2013/14 MICS5 data is critical in informing the future planning for the three counties, especially in view of the new constitutional dispensation and Vision 2030. It is anticipated that MICS5 will supplement the data collected during 2014 Kenya Demographic and Health Survey (KDHS). In addition, the information collected will inform strategic communication for social and behaviour change interventions by Government and partners including UNICEF. Furthermore, the data will contribute to the improvement of data and monitoring systems in the three counties.

The survey laid emphasis on quality in every step of the process, right from the design of the tools, training of interviewers, monitoring of data collection, and the whole process of data processing. The MICS5 has much to offer to the health and family planning professionals, government planners, NGOs, researchers, and gender specialists. The potential users are numerous. It is, therefore, our appeal that the findings of MICS5 be put into good use so as to improve the well-being of people in the counties; to prepare reasonable and realistic objectives for county projects; to draw attention to critical problems and inequities; and to determine budgetary priorities.

This report is a culmination of concerted efforts of various organizations and individuals. I have the greatest pleasure to give credit to the technical and financial assistance from UNICEF. I wish to appreciate the organizations, especially Population Studies and Research Institute of the University of Nairobi, that have contributed so much time, energy, and expertise to providing these findings and results. In addition I commend the hard work and dedication of Kenya National Bureau of Statistics (KNBS) staff in assisting to plan and implement this Survey. I thank the interviewers, editors, supervisors, who traversed the three counties, knocking on doors and spending hours talking to household respondents to generate the data. They faced a variety of challenges from occasional vehicle breakdowns, bad terrains, changing weather to basic accommodation. I wish to thank the

respondents who generously and voluntarily provided the information. Without them, there would have been no report to talk about. Much gratitude goes to the data processing specialists and data editors for dedicating their time and expertise to put together quality data. All of them did a tremendous job.

Zachary Mwangi
Director General, Kenya National Bureau of Statistics

Acknowledgements

Executive Summary

The Kakamega County Multiple Indicator Survey (MICS) is a representative sample survey designed to provide estimates for a large number of indicators on the situation of children and women at the county level, for urban and rural areas. The survey used two-stage stratified cluster sampling where the first stage selected 50 clusters from the KNBS fifth National Sample Survey and Evaluation Program (NASSEP V) household-based master sampling frame using equal probability selection method (EPSEM). The second stage randomly selected a uniform sample of 30 households in each cluster from a list of households in the cluster using systematic random sampling method. The survey was implemented by the University of Nairobi through Population studies and Research Institute in collaboration with Kenya National Bureau of Statistics (KNBS) with support from UNICEF Kenya.

Information was collected from a total of 1,221 households representing 92 percent response rate. The composition of these households was 5,666 household members comprising 2,752 males and 2,914 females. The mean household size was 4.6 persons. About 46 percent of the sampled households' population is below 15 years, 50 percent are age 15-64 years, and four percent are age 65 years and above.

Due to data quality issues, data relating to mortality and anthropometric measures were not analyzed and reported. Anthropometric data suffered from digit preference for both weight and height, while for mortality, deaths especially among under-5 years old were under reported. KDHS 2014 had similar shortcomings.

Nutrition

Weight at birth is a good indicator not only of a mother's health and nutritional status but also the new-born's chances for survival, growth, long-term health and psychosocial development. The survey findings show that 56 percent of births were weighed at birth and approximately seven percent of infants weighed less than 2,500 grams at birth. Ninety-eight percent of the children were ever breastfed and only 30 percent of babies were breastfed for the first time within one hour of birth. Approximately 35 percent of children age less than six months were exclusively breastfed. By age 12-15 months (75 percent) and 20-23 months (36 percent) were still being breastfed. Among children under age 3 years, the median duration of any breastfeeding was 20 months. Percentage of children age who were age appropriately breastfed during the previous day of the survey was 60 percent for 0-23 months. The overall assessment using the indicator of minimum acceptable diet revealed that only 20 percent of children age 6-23 months were benefitting from a diet sufficient in both diversity and frequency. Seven percent of children under 6 months were fed using a bottle with a nipple during the previous day of the survey. In 95 percent of households, salt was found to contain at least 15 parts per million (ppm) or more of iodine.

Child Health

Immunization plays a key part in reducing preventable child diseases and mortality. The percentage of children who were fully vaccinated by their first birthday is 67 percent. Overall, 77 percent of children age12-23 months were fully vaccinated against vaccine preventable childhood diseases while 96 percent were vaccinated against measles. About 18 percent of children under-5 years were reported to have had diarrhoea in the two weeks preceding the survey, five percent symptoms of ARI, and 27 percent an episode of fever. Overall, a health facility or provider was seen in 40 percent of cases among children with diarrhoea. Eighty-nine percent of the children with diarrhoea received one

or more of the recommended home treatments (i.e. were treated with ORS or any recommended homemade fluid), while 22 percent received zinc. In addition, 16 percent received ORS and zinc. Seventy-seven percent of households had at least one insecticide treated net and 71 percent slept children under-five years slept under an ITN the night preceding the survey. Advice was sought from a health facility or a qualified health care provider for half (50 percent) of the children with fever and was higher among males (54 percent) compared with females (46 percent). Overall, 24 percent of children with a fever in the previous two weeks had blood taken from a finger or heel for testing. Thirty-two percent of males and 17 percent of females had their blood taken for testing. Eighty percent slept under an Insecticide Treated Net, the night prior to the survey.

Water and Sanitation

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

In Kakamega, 79 percent of the population use an improved source of drinking water. Fifty-six percent of household members in households using unimproved drinking water sources are using an appropriate water treatment method. For a quarter of the household population, it takes the household member 30 minutes or more to get to the water source and bring water from an improved water source. In the majority of households (78 percent), an adult female usually collects drinking water when the source was not on the premises. Twenty-three percent of households use an improved toilet facility that is public or shared with other households. In Kakamega County, the percentage of households where a place for hand washing was observed is 10 percent. Ninety percent of the households had no specific place for hand washing in the dwelling, yard, or plot.

Reproductive Health

Empowering women and adolescent girls to exercise their sexual and reproductive health rights is a necessary condition for sustainable development. The findings show that age specific fertility rate and birth rate for the three years preceding the survey fertility is 93 births per 1,000 women among adolescents age 15-19 years. Sixteen percent of women age 15-19 years had already had a birth, three percent were pregnant with their first child. Four percent of women age 15-49 years have had a live birth before age 15. The proportion of women with a live birth before age 15 is four percent in urban areas and five percent in rural areas.

Contraception by women currently married or in union is 62 percent and one in three married women use injectables. Total unmet need for family planning is 22 percent. Ninety-five percent of the women received ANC from a skilled health provider. Among those women who had a live birth during the last two years preceding the survey, 70 percent had blood pressure checked, urine and blood samples taken. More than half of births occurring in the two years preceding the MICS were delivered by skilled personnel. About 52 percent of births were delivered in a health facility. Overall, 67 percent of women who gave birth in a health facility stayed 12 hours or more in the facility after delivery. Sixty-five percent of newborns received a health check following birth while in a health facility or at home and 59 percent of mothers received a health check following birth while in a health facility or at home.

Early Childhood Development

In Kakamega County, about 40 percent of children age 36-59 months are attending an organised early childhood education programme. Sixty-three percent of children age 36-59 months have an adult household member engaged in four or more activities that promote learning and school readiness. The father's involvement in such activities was low, with only three percent of children age 36-59 months with fathers involved in four or more activities. Mother's engagement in four or more activities that promote learning during the three days preceding the survey was higher at 16 percent. Availability of children's books for those age 0-59 months was low, with only four percent of children living in households where at least 3 children's books were present. Sixty-nine percent of children age 0-59 months had two or more types of playthings to play with in their homes.

A total of 40 percent of children were left with inadequate care, either by being left alone or in the care of another child. Child development index is calculated as the percentage 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. In Kakamega County, 72 percent of children age 36-59 months are developmentally on track.

Literacy and Education

Youth Literacy Rate as a measure of the effectiveness of the primary education system is often seen as a proxy measure of social progress and economic achievement. Sixty percent of children who were attending the first grade of primary school at the time of the survey were attending pre-primary school the previous year. About 86 percent of young women age 15-24 years were literate. Among those with primary school as their highest level of education, 76 percent were able to read the statement shown to them. Nine percent of children age 6-13 years were out of school, with a low attendance rate of 65 percent for children age 6, who appeared to be starting late in school. Twenty percent of the children of secondary school age were out of school. The majority of all children starting grade 1 were expected to reach grade 8 (90 percent). The gender parity index (GPI) for primary school was 1.07, suggesting boys and girls of primary school age attended primary education at the same rate. The GPI for secondary education was 1.23, indicating a higher secondary school attendance rate among girls of secondary age than among boys of the same age.

Child Protection

A name and nationality is every child's right, enshrined in the Convention on the Rights of the Child (CRC) and other international treaties. The findings show that the births of 50 percent of children under-five years are registered. Male children (54 percent) are more likely to have their births registered than female children (46 percent). The percentage of children age 12-14 years involved in economic activities for 14 hours or more is 19 percent, while two percent of children age 15-17 years were involved in economic activities for 43 hours or more. About 82 percent of children age 1-14 years were subjected to at least one form of psychological aggression or physical punishment by household members during the past month.

Among women age 15-49 years, 6 percent were married before age 15 and, among women age 20-49 years, 11 percent were married before age 15 while 32 percent were married before age 18. Among currently married/in union women age 20-24 years, about 16 percent are married/in union to a man who is older by ten years or more.

About one percent of women in Kakamega County have some form of female genital mutilation. Three percent of women believe FGM should be continued while 92 percent believe it should be discontinued. Overall, 57 percent of women feel that a husband/partner is justified in hitting or beating his wife in at least one of the five situations (if she goes out without telling her husband, neglects children, argues with husband, if the wife refuses to have sex with the husband if she burns the food). Nearly 18 percent of children live with neither of their biological parents and the proportion is higher in rural areas (21 percent) than urban areas (15 percent).

HIV/AIDS and Sexual Behaviour

Almost all women age 15-49 years (99.9 percent) in Kakamega County have knowledge of AIDS. Seventy-two percent know of the two main ways of preventing HIV transmission, with 84 percent knowing having only one faithful uninfected partner and 85 percent know using a condom every time as main ways of preventing HIV transmission. Overall, 47 percent of women have comprehensive knowledge of HIV prevention methods and transmission which is higher in urban (50 percent) than rural areas (44 percent) and also varies with education and wealth status. In total, 61 percent of women rejected the two most common misconceptions that HIV can be transmitted through mosquito bites (78 percent) and by sharing food with someone with HIV (90 percent) and know that a healthy-looking person (84 percent) can be HIV-positive. About 91 percent and 78 percent of women know that supernatural means and mosquito bites cannot transmit HIV, respectively. Ninety-seven percent of women age 15-49 years know that HIV can be transmitted from mother to child by at least one of the three means; during pregnancy, delivery and breastfeeding while 47 percent of women know all three ways of mother-to-child transmission.

Ninety-nine percent of women age 15-49 years who have heard of AIDS agreed with at least one accepting statement. The most common accepting attitude is willingness to care for a family member with AIDS in own home (96 percent). More educated women tend to have a more accepting attitude than those with no education. Ninety-five percent of women age 15-49 years know of a place where to be tested, while 83 percent have been tested. Fifty-two percent of women know the result of their most recent test. The proportion of women age 15-49 years that had been tested within the last 12 months preceding the survey is 52 percent, while those who had been tested within the last 12 months and know the result is 45 percent. Sixty-five percent of women age 15-49 years with a live birth in the last two years preceding the survey received HIV counselling during ANC, 83 percent were offered an HIV test and were tested for HIV; and 81 percent received HIV counselling, were offered an HIV test, accepted and received the results.

Two percent of women 15-49 years of age reported that they had sex with more than one partner in the last 12 months with a mean number of lifetime sexual partners as 2.1. Forty-six percent of young women have comprehensive knowledge. Young women who know of three means of HIV transmission from mother-to-child are 43 percent and 92percent have knowledge of a place to get tested. About 58 percent of young women age 15-24 years, who were sexually active, had been tested for HIV in the last 12 months and know the result. The proportion is high among young women with secondary/higher education (62 percent) compared with those with primary education (54 percent). Overall, 6percent of young women age 15-24 years reported ever having sex before age 15. Further, one percent of young women had sex with more than one partner in the last 12 months preceding the survey. Only 65 percent of women used a condom the last time they had sex. About 13 percent of

women age 15-24 years who had sex in the last 12 months before the survey, had sex with a man 10 or more years older.

Access to Mass Media and Use of Information/Communication Technology

About 16 percent of women in Kakamega County read a newspaper or magazine, 75 percent listen to the radio, and 29 percent watch television at least once a week. Overall, 19 percent do not have regular exposure to any of the three media, while 80 percent are exposed to at least one and seven percent to all the three types of media on a weekly basis. Women with higher education are more likely to have been exposed to all three types of media (16 percent) than women with primary education (2 percent). Similarly, women from the richest households are more likely to have been exposed to all three types of media (21 percent) than women from the poorest households (1 percent).

Overall, 18 percent of young women age 15-24 years ever used the internet, while 15 percent used the internet during the last 12 months. The proportion of young women who used the internet more frequently, at least once a week during the last month, was 11 percent. Both computer and internet use during the last 12 months were more widespread among the 20-24 year old women. Use of a computer and the internet is also strongly associated with area and education. Only about 3 percent of women with primary education reported using a computer during the last 12 months, while about a third of the women with higher education used a computer. Similarly, higher utilisation of the internet is observed among young women in urban areas (20 percent) compared with 10 percent in rural areas.

Subjective Well-being

Young women are the most satisfied with the way they look 93 percent, their health (87 percent), and their family life (83 percent). The percentage of women age 15-24 years who are very or somewhat satisfied; with school is 95 percent, with their job is 78 percent, and with their income is 64 percent. In Kakamega County, 82 percent of women age 15-24 years are satisfied with their life. The proportion of women who are satisfied with life is somewhat higher in rural areas (88 percent) than in urban areas (75 percent). About 80 percent of women age 15-24 years are very or somewhat happy.

The proportion of women age 15-24 years who think that their lives improved during the last one year and who expect that their lives would get better after one year, is 56 percent. Differences in the perception of a better life can be observed by wealth quintiles: 39 percent of young women who live in households in the poorest wealth quintile think that their lives improved during the last one year and expect that it would get better after one year, while the corresponding proportion for young women who live in households in the richest wealth quintile is 63 percent.

Tobacco and Alcohol Use

In Kakamega County MICS, ever use of any tobacco products among women is two percent, while less than one percent smoke cigarettes, or used smoked or smokeless tobacco products on one or more days during the last one month prior to the survey. Only about one woman age 15-49 years in a thousand smoked a cigarette for the first time before age 15.

About five percent of women age 15-49 years had at least one drink of alcohol on one or more days during the last one month preceding the survey while three percent have had at least one alcoholic drink before the age of 15 years. The proportion who had an alcoholic drink in the last month preceding the survey ranged between two percent and nine percent by age while for women who had at least one alcoholic drink before age 15 was between one percent and five percent, with no clear pattern from one age group to the other. Women age 15-49 years in urban areas in Kakamega county are twice (4 percent) as likely to have had at least one alcoholic drink before age 15 than their rural counterparts (2 percent). The results further indicate that women age 15-49 years in Kakamega county who reside in urban areas are twice (7 percent) more likely to have had at least one alcoholic drink at any time during the last one month than those in the rural areas (3 percent).

1. Introduction

Kakamega County is one of the 47 counties in Kenya. Kakamega County is located in the Western part of Kenya and constitutes 12 constituencies (Malava, Lugari, Mumias West, Mumias East, Matungu, Lurambi, Shinyalu, Ikolomani, Butere, Navakholo, Likuyani, and Khwisero). The county has an estimated population of 1,660,651 people.[2]

1.1 Background

This report is based on the Kakamega County Multiple Indicator Cluster Survey (MICS), conducted in 2013/14 by the Population Studies and Research Institute, University of Nairobi, in collaboration with Kenya National Bureau of Statistics, as part of the global MICS programme. The survey provides statistically sound and internationally comparable data essential for developing evidence-based policies and programmes, and for monitoring progress toward national goals and global commitments. Among these global commitments are those emanating from the World Fit for Children Declaration and Plan of Action (2002)[3], the goals of the United Nations General Assembly Special Session on HIV/AIDS (2001)[4], the Education for All Declaration (2000)[5] and the Millennium Development Goals (MDGs) 2000.[5]

A Commitment to Action: National and International Reporting Responsibilities

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

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

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

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

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

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[2]Kenya National Bureau of Statistics, 2013. Statistical Abstract 2013
[3]A World Fit for Children. Resolution adopted by the United Nations General Assembly 10 May 2002.
[4]United Nations General AssemblySpecial Session on HIV/AIDS 2001. Summary of the Declaration of Commitment on HIV/AIDS25-27 June 2001, New York
[5]**http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-all/**

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

Kenya's GDP has grown by an annual average of 4 percent in the past five years. In 2013, Kenya adopted its second five-year Medium Term Plan (MTP II 2013-17) to implement its 'Vision 2030', which represents a solid strategic framework to transform Kenya into a newly industrializing, middle-income country by 2030.[6] The African Development Bank's Country Strategy Paper (CSP) 2014-18 for Kenya supports the country's ambitions and addresses its main developmental challenges by promoting job creation as the overarching objective.

The Kakamega County MICS results are expected to form part of the baseline data for the post-2015 era. The survey findings are also expected to contribute to the evidence base of several other important initiatives, including Committing to Child Survival: **A Promise Renewed**[6], a global movement to end child deaths from preventable causes, and the accountability framework proposed by the **Commission on Information and Accountability for the Global Strategy for Women's and Children's Health**.[7]

This final report presents the results of the indicators and topics covered in the survey. There are 14 chapters presented as follows:

Chapter 1: An introductory note to the Kakamega County MICS Report
Chapter 2: Sample and survey methodology
Chapter 3: Sample coverage and characteristics of households and respondents
Chapter 4: Child nutrition
Chapter 5: Child health
Chapter 6: Water and sanitation
Chapter 7: Reproductive health
Chapter 8: Early childhood development
Chapter 9: Literacy and education
Chapter 10: Child protection
Chapter 11: HIV, AIDS and sexual behaviour
Chapter 12: Mass Media, Information, and Communication Technology (ICT)
Chapter 13: Subjective well-being
Chapter 14: Tobacco and alcohol use

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[6]United Nations Children's Fund (UNICEF), September 2014. Committing to Child Survival: A Promise Renewed - Progress Report 2014.

[7]WHO. 2014. Implementing the Commission on Information and Accountability Recommendations2014: Progress Report Accountability for Women's and Children's Health.

1.2 Survey Objectives

The 2013/14 Kakamega County MICS has as its primary objectives to:

- Provide up-to-date information for assessing the situation of children and women in Kakamega County;

- Generate data for the critical assessment of the progress made in various areas, and to put additional efforts in those areas that require more attention;

- Furnish data needed for monitoring progress toward goals established in the Millennium Declaration, and other internationally agreed upon goals, as a basis for future action;

- Collect disaggregated data for the identification of disparities, to allow for evidence based policy-making aimed at social inclusion of the most vulnerable;

- Contribute to the generation of baseline data for the post-2015 agenda;

- Validate data from other sources and the results of focused interventions; and

- Contribute to the improvement of data and monitoring systems in Kenya and to strengthen technical expertise in the design, implementation, and analysis of such systems.

2. Sample and Survey Methodology

Chapter Two presents the survey sample design and methodology, content for the three questionnaires used in the survey, the interviewer training process, fieldwork, and data management and processing.

2.1 Sample Design

The sample for the Kakamega County MICS, 2013/14 was designed to provide estimates for a large number of indicators on the situation of children and women at the county level. The urban and rural areas within the county were the main sampling strata. The sample was selected in two stages: cluster and household. The survey utilized the fifth National Sample Survey and Evaluation Program (NASSEP V) household-based master sampling frame which is created and maintained by the Kenya National Bureau of Statistics (KNBS). The primary sampling unit for the frame is a cluster, which constitutes one or more EAs, with an average of 100 households.

For the NASSEP V master sample the EAs were selected within each stratum using systematic sampling with probabilities proportion to size (PPS). For the MICS, within each stratum a specified number of census enumeration areas was selected from the master sample using an equal probability selection method (EPSEM). After a household listing was carried out in the selected clusters, a systematic sample of 30 households was drawn in each sampled cluster. In total, 50 clusters were selected for the survey in Kakamega County. The sample was stratified by urban and rural areas, and was not self-weighting. All selected clusters were visited during fieldwork. For reporting county level results, sample weights are used. A more detailed description of the sample design is provided in Appendix C.

2.2 Questionnaires

A set of three questionnaires was used in the survey: 1) a household questionnaire which was administered to the household head or any other responsible member of the household; 2) a questionnaire for individual women administered in each household to all women age 15-49 years; 3) an under-5 questionnaire, administered to mothers (or caretakers) for all children under-5 years living in the household.

The questionnaires included the following modules:

The Household Questionnaire included the following modules:
- o List of Household Members
- o Education
- o Child Labour
- o Child Discipline
- o Household Characteristics
- o Insecticide Treated Nets
- o Indoor Residual Spraying
- o Water and Sanitation
- o Handwashing

o   Salt Iodization

The Questionnaire for Individual Women age 15-49 years included the following modules:
o   Woman's Background
o   Access to Mass Media and Use of Information/Communication Technology
o   Fertility/Birth History
o   Desire for Last Birth
o   Maternal and Newborn Health
o   Post-natal Health Checks
o   Illness Symptoms
o   Contraception
o   Unmet Need
o   Female Genital Mutilation/Cutting
o   Attitudes Toward Domestic Violence
o   Marriage/Union
o   Sexual Behaviour
o   HIV/AIDS
o   Tobacco and Alcohol Use
o   Life Satisfaction

The Questionnaire for Children Under5 was administered to mothers (or caretakers) of children under 5 years of age[8] living in the households. Normally, the questionnaire was administered to mothers of under-5 children; in cases when 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:
o   Age
o   Birth Registration
o   Early Childhood Development
o   Immunization
o   Breastfeeding and Dietary Intake
o   Care of Illness
o   Anthropometry

Due to data quality issues, data relating to mortality and anthropometric measures were not analyzed and reported. Anthropometric data suffered digit preference for both weight and height, while for mortality, deaths especially among children under-five years were under reported. The recommendation to remove the Mortality Chapter and the anthropometric measures section from the Nutrition Chapter was adopted at the final reports validation workshop organized by KNBS, PSRI and UNICEF.   KDHS 2014 had similar shortcomings. The DQ tables are included in the report for reference. The MICS data set can be accessed and evaluated by researchers for further analysis. The survey team, KNBS and the Population Studies and Research Institute will review the data in detail to identify challenges encountered and to address them before the next round of surveys.

The questionnaires are based on the MICS5 model questionnaire.[9] From the MICS5 model English version, the questionnaires were customised and translated into Kiswahili and Luhya sub dialect and

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[8] The terms "children under 5", "children age 0-4 years", and "children age 0-59 months" are used interchangeably in this report.
[9] The model MICS5 questionnaires can be found at http://www.childinfo.org/mics5_questionnaire.html

were pre-tested in four clusters (rural and urban) in Trans Nzoia County. Based on the results of the pre-test, modifications were made to the wording and translation of the questionnaires. A copy of the Kakamega County MICS questionnaires is provided in Appendix F.

In addition to administering of questionnaires, fieldwork teams tested the salt used for cooking in the households for iodine, observed the place for handwashing, and measured the weights and heights of children under-5 years of age. Details and findings of these observations and measurements are provided in the respective sections of the report.

2.3 Training and Fieldwork

Training for the fieldwork was conducted in Kitale town for 14 days from 24th October to 6th November, 2013. Training included lectures on interviewing techniques and the contents of the questionnaires, and mock interviews between trainees to gain practice in asking questions. Facilitators used a variety of methods which included PowerPoint presentations, illustrations on flip charts, question and answer, case studies, group work and group discussions. Towards the end of the training period, trainees spent two days practising the research tools by interviewing respondents in selected urban and rural clusters in Trans Nzoia County.

Fieldwork began in November 2013 and concluded in February 2014. The survey team was divided into two groups. Each group comprised of 5 interviewers, one driver, one editor, one measurer and a supervisor.

2.4 Data Processing

CSPro software, Version 5.0 running on desktop computers was used for data entry. Data entry was done by a trained team of 14 data entry operators, one Archivist/System administrator and one data entry supervisor. For quality assurance purposes, all questionnaires were double-entered and internal consistency checks performed. Procedures and standard programs developed under the global MICS programme and adapted to the Kakamega County MICS questionnaire were used throughout. Data processing began simultaneously with data collection in November 2013 and was completed in February 2014. Data were analysed using the Statistical Package for Social Sciences (SPSS) software, Version 21. Model syntax and tabulation plans developed by UNICEF were customized and used for this purpose.

3.   Sample Coverage and the Characteristics of Households and Respondents

Chapter Three presents results on sample coverage and the characteristics of households, female respondents age 15-49 years and children under-five years of age. The chapter also discusses housing characteristics, asset ownership and household wealth quintiles.

3.1 Sample Coverage

Table HH.1 presents results of household, women's and under-5 interviews for Kakamega County. A total of 1,500 households were selected for the sample out of which 1,335 were occupied. Of these, 1,221 were successfully interviewed giving a response rate of 92 percent. In the interviewed households, 1,225 eligible women age 15-49 years were identified. Of these, 998 women were successfully interviewed, yielding a response rate of 82 percent.

The survey listed 828 eligible children under-five years. Questionnaires were completed by mothers/caretakers for 806 of these children, which corresponds to a response rate of 97 percent. The response rate at the household level; and for women age 15-49 years and children under-five years of age was higher in rural areas than urban areas.

Overall response rates of 75 percent and 89 percent were calculated for the individual interviews of women, and under-5s, respectively (Table HH.1). Low overall response rates of women are observed, more particularly in urban areas (66 percent) compared to rural areas (80 percent). Data quality Table DQ.2 indicates that a large proportion of unsuccessful interviews was with respect to younger women age 15-24 years.

Table HH.1: Results of household, women's, men's and under-5 interviews			
Number of households, women, men, and children under 5 by interview results, and household, women's, men's and under-5's response rates, Kakamega County MICS, 2013/14			
		Area	
	Total	Urban	Rural
Households			
Sampled	1,500	570	930
Occupied	1,335	510	825
Interviewed	1,221	430	791
Household response rate	91.5	84.3	95.9
Women			
Eligible	1,225	433	792
Interviewed	998	341	657
Women's response rate	81.5	78.8	83.0
Women's overall response rate	74.5	66.4	79.5
Children under 5			
Eligible	828	281	547
Mothers/caretakers interviewed	806	273	533
Under-5's response rate	97.3	97.2	97.4
Under-5's overall response rate	89.0	81.9	93.4

3.2 Characteristics of Households

The weighted age and sex distribution of the survey population are provided in Table HH.2. The distribution is also used to produce the population pyramid in Figure HH.1. Data by single year age distribution of the population is presented in Appendix F, Table DQ.1. In the 1,221 households successfully interviewed in the survey, a total of 5,666 household members were listed. Of these, 2,752 (49 percent) are males, and 2,914 (51 percent) are females.

Table HH.2: Age distribution of household population by sex						
Percent and frequency distribution of the household population by five-year age groups, dependency age groups, and by child (age 0-17 years) and adult populations (age 18 or more), by sex, Kakamega County MICS, 2013/14						
	Total		Males		Females	
	Number	Percent	Number	Percent	Number	Percent
Total	**5,666**	**100.0**	**2,752**	**100.0**	**2,914**	**100.0**
Age						
0-4	842	14.9	407	14.8	435	14.9
5-9	969	17.1	500	18.2	468	16.1
10-14	801	14.1	394	14.3	407	14.0
15-19	672	11.9	348	12.6	325	11.1
20-24	413	7.3	195	7.1	218	7.5
25-29	386	6.8	169	6.1	217	7.4
30-34	267	4.7	130	4.7	137	4.7
35-39	285	5.0	121	4.4	164	5.6
40-44	196	3.5	95	3.4	101	3.5
45-49	170	3.0	94	3.4	76	2.6
50-54	192	3.4	78	2.8	114	3.9
55-59	170	3.0	78	2.8	91	3.1
60-64	96	1.7	48	1.7	48	1.7
65-69	77	1.4	31	1.1	46	1.6
70-74	65	1.1	35	1.3	30	1.0
75-79	28	0.5	12	0.4	16	0.6
80-84	20	0.4	8	0.3	12	0.4
85+	13	0.2	6	0.2	7	0.2
Missing/DK	4	0.1	3	0.1	2	0.1
Dependency age groups						
0-14	2,612	46.1	1,301	47.3	1,311	45.0
15-64	2,846	50.2	1,356	49.3	1,490	51.1
65+	204	3.6	92	3.4	111	3.8
Missing/DK	4	0.1	3	0.1	2	0.1
Child and adult populations						
Children age 0-17 years	3,047	53.8	1,519	55.2	1,528	52.5
Adults age 18+ years	2,614	46.1	1,230	44.7	1,384	47.5
Missing/DK	4	0.1	3	0.1	2	0.1

The population pyramid (Figure HH.1) is broad based, similar in many respects to the national population pyramid but with some notable differences. The pyramid indicates that a high proportion of the population (46 percent) is below 15 years of age (Table HH.2). Half of the population is in the age group 15 to 64 years (population that is depended on). Similarly, the dependency population is 50 percent (4 percent are 65 years and above while 46 percent are below age 15 years). About 54 percent

of the population is under the age of 18. The percentage of males under the age of 18 years is 55 percent while that of females is 53 percent. The population pyramid shows that children age 0-5 year are lower than those in the age group 5-9 years. The national population pyramid from the 2009 census is smooth and shows a higher percentage of the population in the 0-4 year age group than in the 5-9 year age group, which is what is expected. The MICS pyramid picture for the 0-4 and 5-9 age groups could be attributed to interviewers' bias (out transference) in order to reduce the number of under-five questionnaires to administer. There is also a noticeable drop in the age group 20-24 years, which may be an indication of out-migration of the population from the county to other areas either for further education, employment opportunities or other reasons.

Figure HH.1: Age and sex distribution of household population, Kakamega County MICS, 2013/14
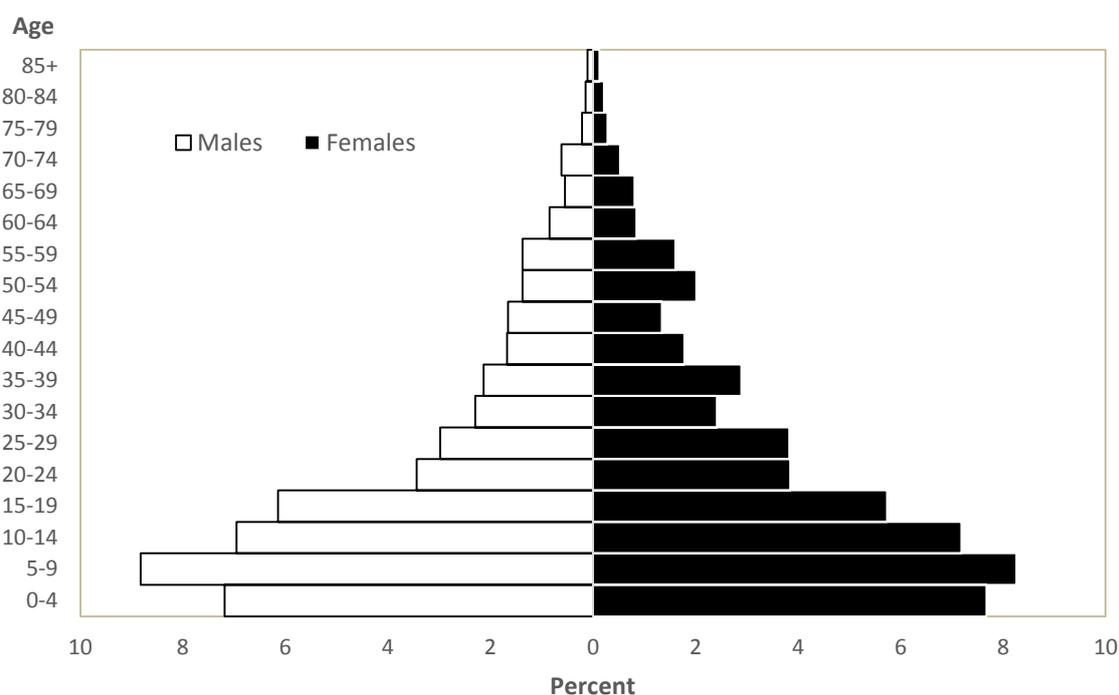
Note: 5 household members with missing age and/or sex are excluded

Tables HH.3, HH.4 and HH.5 provide basic information on the households, female respondents age 15-49, and children under-5 years. Both unweighted and weighted numbers are presented. Such information is essential for the interpretation of findings presented later in the report and provide background information on the representativeness of the survey sample. The remaining tables in this report are presented only with weighted numbers.[10]

Table HH.3 provides percent and frequency distribution by selected characteristics such as sex of the household head, area, number of household members, education of household head, and ethnicity of the household head. These background characteristics are used in subsequent tables in this report.

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[10] See Appendix C: Sample Design, for more details on sample weights.

The figures in the table are also intended to show the numbers of observations by major categories of analysis in the report.

The weighted and unweighted total number of households are equal, since sample weights were normalized.[10] The table also shows the weighted mean estimated household size of 4.6 persons. The data indicates that 65 percent of the households are male headed while 35 percent are headed by women. The households were equally distributed between urban and rural areas. About 29 percent of the households have household sizes of 4-5 persons, 22 percent have 2-3 persons, and another 22 percent have 6-7 persons, 14 percent have one person, nine percent have 8-9 persons and four percent have 10 or more persons. Most heads of households have either primary education (53 percent) or secondary/higher education (34 percent). Only 12 percent of households are headed by people who have no education. Most of the heads of households (90 percent) are of the Luhya ethnic group.

Table HH.3: Household composition			
Percent and frequency distribution of households by selected characteristics, Kakamega County MICS, 2013/14			
	Weighted percent	**Number of households**	
		Weighted	Unweighted
Total	**100.0**	**1,221**	**1,221**
Sex of household head			
Male	65.3	798	770
Female	34.7	423	451
Area			
Urban	50.3	614	430
Rural	49.7	607	791
Number of household members			
1	13.8	168	155
2	9.5	116	116
3	12.6	154	158
4	15.6	191	190
5	13.2	161	157
6	13.3	163	167
7	8.8	107	117
8	6.1	75	72
9	3.1	38	39
10+	4.1	50	50
Education of household head			
None	12.3	150	159
Primary	52.7	644	662
Secondary+	34.1	416	391
Missing/DK	0.9	11	9
Ethnicity of household head			
Luhya	90.1	1,101	1,107
Other ethnic group	9.9	120	114
Mean household size	4.6	1,221	1,221

3.3 Characteristics of Female Respondents 15-49 Years of Age and Children Under-5 Years

Tables HH.4 and HH.5 provide information on the background characteristics of female respondents age 15-49 years and children under age 5 years. In all these tables, the total numbers of weighted and unweighted observations are equal, since sample weights have been normalized (standardized).[10] In addition to providing useful information on the background characteristics of women, and children under age five, the tables also show the numbers of observations in each background category. These categories are used in the subsequent tabulations of this report.

Table HH.4 provides background characteristics of female respondents, age 15-49 years. The table includes information on the distribution of women according to area, age, marital/union status, motherhood status, births in last two years, education[11], wealth index quintiles[12, 13], and ethnicity of the household head. The results show that women age 15-49 years were equally distributed between urban and rural areas. Disaggregation of the data by the age of the woman shows that 21 percent of the women are age 15-19 years, 17 percent are 20-24 years, and 19 percent are in the 25-29 years category. Sixty-six percent of the women interviewed are currently married/in union, while 27 percent have never married.

Of all women age 15-49 years in Kakamega County, three quarters have ever gave birth, including 31 percent who gave birth in the two years preceding the survey and 44 percent who never gave birth in the last two years. The majority (96 percent) of women have either primary education (60 percent)

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[11] Throughout this report, unless otherwise stated, "education" refers to highest educational level ever attended by the respondent when it is used as a background variable.

[12] The wealth index is a composite indicator of wealth. To construct the wealth index, principal components analysis is performed by using information on the ownership of consumer goods, dwelling characteristics, water and sanitation, and other characteristics that are related to the household's wealth, to generate weights (factor scores) for each of the items used. First, initial factor scores are calculated for the total sample. Then, separate factor scores are calculated for households in urban and rural areas. Finally, the urban and rural factor scores are regressed on the initial factor scores to obtain the combined, final factor scores for the total sample. This is carried out to minimize the urban bias in the wealth index values.

Each household in the total sample is then assigned a wealth score based on the assets owned by that household and on the final factor scores obtained as described above. The survey household population is then ranked according to the wealth score of the household they are living in, and is finally divided into 5 equal parts (quintiles) from lowest (poorest) to highest (richest).

In Kakamega County MICS, the following assets were used in these calculations: radio, television, non-mobile telephone, refrigerator, agricultural land, farm animals/livestock, watch, mobile telephone, bicycle, motorcycle or scooter, animal-drawn cart, car or truck, boat with a motor, and ownership of dwelling.

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. 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 Filmer, D and Pritchett, L. 2001. *Estimating wealth effects without expenditure data – or tears: An application to educational enrolments in states of India*. Demography 38(1): 115-132; Rutstein, SO and Johnson, K. 2004. *The DHS Wealth Index*. DHS Comparative Reports No. 6; and Rutstein, SO. 2008. *The DHS Wealth Index: Approaches for Rural and Urban Areas*. DHS Working Papers No. 60.

[13] When describing survey results by wealth quintiles, appropriate terminology is used when referring to individual household members, such as for instance "women in the richest population quintile", which is used interchangeably with "women in the wealthiest survey population", "women living in households in the richest population wealth quintile", and similar.

while 36 percent have secondary/higher education.

Table HH.4: Women's background characteristics

Percent and frequency distribution of women age 15-49 years by selected background characteristics, Kakamega County MICS, 2013/14

	Weighted percent	Number of women	
		Weighted	Unweighted
Total	**100.0**	**998**	**998**
Area			
Urban	50.3	502	341
Rural	49.7	496	657
Age			
15-19	21.1	210	213
20-24	17.1	170	169
25-29	19.2	192	188
30-34	11.9	119	119
35-39	15.2	152	146
40-44	8.7	87	93
45-49	6.9	69	70
Marital/Union status			
Currently married/in union	66.0	659	648
Widowed	3.1	31	35
Divorced	0.6	6	7
Separated	3.2	32	33
Never married/in union	27.1	270	275
Motherhood and recent births			
Never gave birth	25.0	249	255
Ever gave birth	75.0	749	743
Gave birth in last two years	30.6	306	295
No birth in last two years	44.4	443	448
Education			
None	4.2	42	42
Primary	59.7	595	615
Secondary+	36.1	360	341
Wealth index quintile			
Poorest	18.2	181	197
Second	20.3	203	214
Middle	19.7	196	194
Fourth	20.3	203	209
Richest	21.5	215	184
Ethnicity of household head			
Luhya	91.9	918	920
Other ethnic group	8.1	80	78

Background characteristics of children under-5 years are presented in Table HH.5. These include the distribution of children by several attributes: sex, area, age in months, respondent type (mother's or caretaker's), mother's education, wealth indices, and ethnicity of household head.

The proportion of male children under-5 years is 48 percent while females are 52 percent. About a quarter (25 percent) of the children are age 36-47 months. Majority of the women who responded to the questions about the child under-5 years are mothers of the children (85 percent) compared to 15 percent of caretakers. Most mothers (65 percent) have primary level of education while 28 percent have secondary and above level of education. A quarter (26 percent) of the children are in the poorest wealth quintile while 22 percent are in the second poorest quintile.

Table HH.5: Under-5's background characteristics			
Percent and frequency distribution of children under five years of age by selected characteristics, Kakamega County MICS, 2013/14			
	Weighted percent	Number of under-5 children	
		Weighted	Unweighted
Total	**100.0**	**806**	**806**
Sex			
Male	48.1	388	384
Female	51.9	418	422
Area			
Urban	50.2	405	273
Rural	49.8	401	533
Age			
0-5 months	8.7	70	68
6-11 months	10.0	81	82
12-23 months	19.9	161	159
24-35 months	18.6	150	152
36-47 months	25.4	205	197
48-59 months	17.3	140	148
Respondent to the under-5 questionnaire			
Mother	85.1	686	685
Other primary caretaker	14.9	120	121
Mother's education[a]			
None	7.7	62	59
Primary	64.8	522	535
Secondary+	27.5	222	212
Wealth index quintile			
Poorest	25.7	207	218
Second	21.9	176	176
Middle	19.1	154	163
Fourth	19.6	158	151
Richest	13.7	111	98
Ethnicity of household head			
Luhya	94.8	764	764
Other ethnic group	5.2	42	42
[a] In this table and throughout the report, mother's education refers to educational attainment of mothers as well as caretakers of children under 5, who are the respondents to the under-5 questionnaire if the mother is deceased or is living elsewhere.			

3.4 Housing characteristics, asset ownership, and wealth quintiles

Tables HH.6, HH.7 and HH.8 provide results on household characteristics and assets in connection to household wealth. Table HH.6 presents characteristics of housing, disaggregated by area, distributed by connection of electricity in the dwelling; and the main materials of the flooring, roof, and exterior walls, as well as the number of rooms used for sleeping.

About 18 percent of the households have electricity (29 percent urban and 6 percent rural areas). Most of the houses have natural flooring[14] (68 percent) while 32 percent have finished floors[15], with 91 percent of the houses having finished roofing. For walls to their houses, 59 percent have rudimentary exterior walls, 29 percent have finished walls[16] and 11 percent have natural walls.[17] Data was also collected on the number of sleeping rooms and number of persons sleeping in one room. The mean number of persons per sleeping room is 2.7 persons.

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[14] Natural flooring – earth/sand or dung

[15] Finished floor - Parquet or polished wood, vinyl or asphalt strips, ceramic tiles, cement or carpet

[16] Finished walls – Cement, stone with lime / cement, bricks, cement blocks, covered adobe or wood planks / shingles

[17] Natural walls - No walls, cane /palm / trunks or dirt. Additional definitions for housing characteristics (Table HH.6) are in Appendix G

Table HH.6: Housing characteristics

Percent distribution of households by selected housing characteristics, according to area of residence and regions, Kakamega County MICS, 2013/14

	Total	Area	
		Urban	Rural
Electricity			
Yes	17.6	29.2	5.8
No	82.4	70.8	94.2
Flooring			
Natural floor	67.7	53.6	81.9
Rudimentary floor	0.0	0.0	0.0
Finished floor	32.2	46.2	18.1
Other	0.1	0.2	0.0
Roof			
Natural roofing	8.5	4.6	12.3
Rudimentary roofing	0.0	0.0	0.0
Finished roofing	91.4	95.1	87.7
Other	0.1	0.2	0.0
Exterior walls			
Natural walls	10.8	10.0	11.6
Rudimentary walls	58.6	46.0	71.4
Finished walls	28.6	41.5	15.5
Other	1.9	2.3	1.5
Missing/DK	0.1	0.2	0.0
Rooms used for sleeping			
1	40.0	44.9	35.0
2	37.7	35.7	39.7
3 or more	21.2	18.5	23.8
Missing/DK	1.1	0.8	1.4
Total	100.0	100.0	100.0
Number of households	1,221	614	607
Mean number of persons per room used for sleeping	2.73	2.62	2.84

In Table HH.7, households are distributed according to ownership of assets, including dwelling units, by households and by individual household members. The results show that 73 percent of the households own a radio (73 percent in both urban and rural areas) while 28 percent own a television set. About 80 percent of households own agricultural land while 72 percent own farm animals/livestock.

The data further indicate that 87 percent of household members own a mobile phone, 39 percent a bicycle, 38 percent a bank account, while 21 percent own a watch. More than three quarters of the dwelling units are owned by a household member. Ownership of dwelling unit is higher in rural areas (96 percent) than urban areas (61 percent). About 35 percent of the rented dwelling units are situated in urban areas compared to only three percent in rural areas.

Table HH.7: Household and personal assets

Percentage of households by ownership of selected household and personal assets, and percent distribution by ownership of dwelling, according to area of residence and regions, Kakamega County MICS, 2013/14

		Area	
	Total	Urban	Rural
Percentage of households that own a			
Radio	73.0	73.3	72.7
Television	27.6	35.7	19.4
Non-mobile telephone	1.6	1.4	1.8
Refrigerator	3.9	6.8	0.9
Solar Panel	1.9	1.9	1.9
Chair	1.1	1.1	1.1
Sofa Set	1.6	1.5	1.6
Table	1.0	1.1	1.0
Cupboard	1.5	1.5	1.5
Bed	1.1	1.1	1.0
Clock	1.8	1.8	1.8
Camera	2.0	2.0	2.0
Computer	2.0	1.9	2.0
Percentage of households that own			
Agricultural land	79.7	70.4	89.1
Farm animals/Livestock	72.4	62.2	82.6
Percentage of households where at least one member owns or has a			
Watch	21.2	23.6	18.9
Mobile telephone	87.2	89.4	85.0
Bicycle	39.3	33.4	45.3
Motorcycle or scooter	9.2	9.0	9.4
Animal-drawn cart	0.5	0.3	0.8
Car or truck	3.9	5.9	1.9
Boat with a motor	0.0	0.0	0.0
Bank account	37.9	46.8	28.9
Ownership of dwelling			
Owned by a household member	78.3	61.2	95.5
Not owned	21.7	38.8	4.3
Rented	18.8	34.5	2.9
Other	2.9	4.3	1.5
Missing/DK	0.1	0.0	0.1
Total	100.0	100.0	100.0
Number of households	1,221	614	607

Table HH.8 shows how the household populations in urban and rural areas are distributed according to household wealth quintiles. Forty-nine percent of the households in urban areas are in the poorest to middle wealth quintiles compared to those in rural areas (69 percent).

Table HH.8: Wealth quintiles

Percent distribution of the household population by wealth index quintile, according to area of residence and regions, Kakamega County MICS, 2013/14

	Wealth index quintile					Total	Number of household members
	Poorest	Second	Middle	Fourth	Richest		
Total	**20.0**	**20.0**	**20.0**	**20.0**	**20.0**	**100.0**	**5,666**
Area							
Urban	15.5	16.4	17.4	18.5	32.2	100.0	2,653
Rural	23.9	23.1	22.2	21.4	9.3	100.0	3,013

4.   Nutrition

About half of Kenya's estimated 38.5 million people are poor, and some 7.5 million people live in extreme poverty, while over 10 million people suffer from chronic food insecurity and poor nutrition. Children are undernourished and micronutrient deficiencies are widespread.[18, 19]

The Government of Kenya is strongly committed to reducing hunger and malnutrition. Policies and strategies were developed to guide the nutrition interventions and activities in the country. These include the Food and Nutrition Security Policy (FNSP) 2011, National Nutrition Action Plan (NNAP) 2012-2017 and Kenya Health Strategic Plan 2008-2012. Most of these interventions were part of Scaling Up Nutrition (SUN) actions that were implemented globally to accelerate efforts towards achieving MDG 4 and 5. The NNAP is aligned to the government's Medium Term Plans (MTPs) to enable mainstreaming of the nutrition budgeting process into national development plans, and facilitate allocation of resources to nutrition programmes.

Chapter Four presents the results on birth weight; breastfeeding, and infant and young child feeding practices; and use of iodized salt at household.[20]

4.1 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 (defined as less than 2,500 grams) carries a range of grave health risks for children. Babies who were undernourished in the womb face a greatly increased risk of dying during their early days, months and years. Those who survive may 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 with low birth weight also risk a lower IQ and cognitive disabilities, affecting their performance in school and their job opportunities as adults.

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

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

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[18] Government of Kenya, 2011. National Food and Nutrition Security Policy.
[19] The Partnership for Maternal, Newborn and Child Health, 2012. Maternal and Child Health: Kenya
[20] A section on anthropometric indicators was excluded from the report due to data quality issues.

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

Since many infants are not weighed at birth and those who are weighed may be a biased sample of all births, the reported birth weights usually cannot be used to estimate the prevalence of low birth weight among all children. Therefore, the percentage of births weighing below 2,500 grams is estimated from two items in the questionnaire: the mother's assessment of the child's size at birth (i.e., very small, smaller than average, average, larger than average, very large) and the mother's recall of the child's weight or the weight as recorded on a health card if the child was weighed at birth.[21]

In Kakamega County, 56 percent of births were weighed at birth and approximately seven percent of infants weighed less than 2,500 grams at birth (Table NU.1). A larger proportion of babies in urban areas were weighed (60 percent) compared to only half of the babies in rural areas. Babies from households in the richest wealth quintile were more likely to be weighed at birth than babies in the poorest wealth quintile.

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[21] For a detailed description of the methodology, see Boerma, JT et al. 1996. *Data on Birth Weight in Developing Countries: Can Surveys Help?* Bulletin of the World Health Organization 74(2): 209-16.

Table NU.1: Low birth weight infants

Percentage of last live-born children in the last two years that are estimated to have weighed below 2,500 grams at birth and percentage of live births weighed at birth, Kakamega County MICS, 2013/14

	Percent distribution of births by mother's assessment of size at birth						Percentage of live births:		Number of last live-born children in the last two years
	Very small	Smaller than average	Average	Larger than average or very large	DK	Total	Below 2,500 grams[1]	Weighed at birth[2]	
Total	**1.8**	**10.4**	**63.5**	**22.6**	**1.6**	**100.0**	**6.7**	**55.5**	**306**
Mother's age at birth									
Less than 20 years	(4.3)	(9.9)	(55.6)	(28.3)	(1.9)	100.0	(8.2)	(59.4)	45
20-34 years	1.2	11.2	66.5	19.3	1.8	100.0	6.5	55.7	223
35-49 years	(2.7)	(6.6)	(55.1)	(35.6)	(0.0)	100.0	(5.9)	(49.7)	39
Birth order									
1	5.5	4.0	68.2	21.1	1.2	100.0	7.9	74.5	71
2-3	0.0	14.9	66.0	19.1	0.0	100.0	6.5	53.9	111
4-5	1.0	9.6	63.7	23.9	1.9	100.0	5.8	58.9	68
6+	1.9	10.9	52.1	30.3	4.8	100.0	6.8	29.8	55
Area									
Urban	3.0	10.9	64.1	20.8	1.2	100.0	7.8	60.4	168
Rural	0.5	9.8	62.8	24.9	2.0	100.0	5.4	49.5	138
Mother's education									
None	(*)	(*)	(*)	(*)	(*)	100.0	(*)	(*)	12
Primary	1.9	12.8	57.4	25.9	2.0	100.0	7.3	46.1	195
Secondary+	2.0	6.3	75.9	14.9	0.9	100.0	5.9	73.7	99
Wealth index quintile									
Poorest	4.6	13.1	64.7	17.0	0.6	100.0	9.7	33.2	79
Second	0.0	14.7	60.5	20.7	4.2	100.0	6.6	49.2	69
Middle	3.5	15.3	54.1	24.5	2.6	100.0	9.3	56.8	58
Fourth	0.0	4.6	64.2	31.1	0.0	100.0	3.4	71.3	57
Richest	(0.0)	(0.0)	(77.5)	(22.5)	(0.0)	100.0	(2.4)	(83.8)	43
[1] MICS indicator 2.20 - Low-birthweight infants									
[2] MICS indicator 2.21 - Infants weighed at birth									

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

4.2 Breastfeeding and Infant and Young Child Feeding

Proper feeding of infants and young children can increase their chances of survival; it can also promote optimal growth and development, especially in the critical window from birth to two years of age. Breastfeeding for the first two years of life protects children from infection, provides an ideal source of nutrients, and is economical and safe. However, many mothers don't start to breastfeed early enough, do not breastfeed exclusively for the recommended 6 months or stop breastfeeding too soon. There are often pressures to switch to infant formula, which can contribute to growth faltering and micronutrient deficiency. In addition, it can be unsafe if hygienic conditions, including safe drinking water are not readily available. Studies have shown that, in addition to continued breastfeeding, consumption of appropriate, adequate and safe solid, semi-solid and soft foods from the age of 6

months onwards leads to better health and growth outcomes, with potential to reduce stunting during the first two years of life.[22]

UNICEF and WHO recommend that infants be initiated to breastfeeding within one hour of birth, breastfed exclusively for the first six months of life and continue to be breastfed up to 2 years of age and beyond.[23] Starting at 6 months, breastfeeding should be combined with safe, age-appropriate feeding of solid, semi-solid and soft foods.[24] A summary of key guiding principles[25, 26] for feeding 6-23 month olds is provided in the Table NU.2 below along with proximate measures for these guidelines collected in this survey.

The guiding principles for which proximate measures and indicators exist are:
  (i)   continued breastfeeding;
  (ii)   appropriate frequency of meals (but not energy density); and
  (iii)   appropriate nutrient content of food.

Feeding frequency is used as proxy for energy intake, requiring children to receive a minimum number of meals/snacks (and milk feeds for non-breastfed children) for their age. Dietary diversity is used to ascertain the adequacy of the nutrient content of the food (not including iron) consumed. For dietary diversity, seven food groups were created for which a child consuming at least four of these is considered to have a better quality diet. In most populations, consumption of at least four food groups means that the child has a high likelihood of consuming at least one animal-source food and at least one fruit or vegetable, in addition to a staple food (grain, root or tuber).[27]

These three dimensions of child feeding are combined into an assessment of the children who received appropriate feeding, using the indicator of "minimum acceptable diet". To have a minimum acceptable diet in the previous day, a child must have received:
  (i)   the appropriate number of meals/snacks/milk feeds;
  (ii)   food items from at least 4 food groups; and
  (iii)   breastmilk or at least 2 milk feeds (for non-breastfed children).

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[22] Bhuta, Z. et al. 2013. *Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost?* The Lancet June 6, 2013.

[23] WHO. 2003. *Implementing the Global Strategy for Infant and Young Child Feeding*. Meeting Report Geneva, 3-5 February, 2003.

[24] WHO. 2003. *Global Strategy for Infant and Young Child Feeding*.

[25] PAHO. 2003. *Guiding principles for complementary feeding of the breastfed child*.

[26] WHO. 2005. *Guiding principles for feeding non-breastfed children 6-24 months of age*.

[27] WHO. 2008. *Indicators for assessing infant and young child feeding practices. Part 1: Definitions*.

Table NU.2: Guiding Principles for Feeding children age 6 – 23 months

Guiding Principle (age 6-23 months)	Proximate measures	Table
Continue frequent, on-demand breastfeeding for two years and beyond	Breastfed in the last 24 hours	NU.4
Appropriate frequency and energy density of meals	**Breastfed children** Depending on age, two or three meals/snacks provided in the last 24 hours **Non-breastfed children** Four meals/snacks <u>and/or milk feeds</u> provided in the last 24 hours	NU.6
Appropriate nutrient content of food	Four food groups[28] eaten in the last 24 hours	NU.6
Appropriate amount of food	No standard indicator exists	na
Appropriate consistency of food	No standard indicator exists	na
Use of vitamin-mineral supplements or fortified products for infant and mother	No standard indicator exists	na
Practice good hygiene and proper food handling	While it was not possible to develop indicators to fully capture programme guidance, one standard indicator does cover part of the principle: Not feeding with a bottle with a nipple	NU.9
Practice responsive feeding, applying the principles of psycho-social care	No standard indicator exists	na

Table NU.3 and Figure NU. 1 are based on mothers' reports of what their last-born child, born in the last two years, was fed in the first few days of life. It indicates the proportion who were ever breastfed, those who were first breastfed within one hour and one day of birth, and those who received a prelacteal feed.[29]

Ninety-eight percent of the children were ever breastfed (Table NU.3). However, although a very important step in management of lactation and establishment of a physical and emotional relationship between the baby and the mother, only 30 percent of babies were breastfed for the first time within one hour of birth and 82 percent of newborns in Kakamega County started breastfeeding within one day of birth. Babies delivered in a health facility were more likely to be breastfed within one hour of delivery or within one day of birth compared to those delivered at home, (36 percent and 25 percent, respectively. About one in five babies received prelacteal feed. Babies were more likely to receive prelacteal feed when delivered in a rural area, delivered by a traditional birth attendant, or delivered at home. The findings are presented in Figure NU.1 by urban/rural areas.

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[28] Food groups used for assessment of this indicator are 1) Grains, roots and tubers, 2) legumes and nuts, 3) dairy products (milk, yogurt, cheese), 4) flesh foods (meat, fish, poultry and liver/organ meats), 5) eggs, 6) vitamin-A rich fruits and vegetables, and 7) other fruits and vegetables.

[29] Prelacteal feed refers to the provision of any liquid or food, other than breastmilk, to a newborn during the period when breastmilk flow is generally being established (estimated here as the first 3 days of life).

Table NU.3: Initial breastfeeding

Percentage of last live-born children in the last two years who were ever breastfed, breastfed within one hour of birth, and within one day of birth, and percentage who received a prelacteal feed, Kakamega County MICS, 2013/14

	Percentage who were ever breastfed[1]	Percentage who were first breastfed:		Percentage who received a prelacteal feed	Number of last live-born children in the last two years
		Within one hour of birth[2]	Within one day of birth		
Total	**97.5**	**30.1**	**81.7**	**19.3**	**306**
Area					
Urban	98.0	29.7	85.1	13.9	168
Rural	96.9	30.6	77.4	25.9	138
Months since last birth					
0-11 months	98.6	30.6	80.9	22.2	152
12-23 months	96.4	29.6	82.4	16.4	154
Assistance at delivery					
Skilled attendant	98.2	35.4	84.2	14.1	159
Traditional birth attendant	100.0	27.1	82.7	25.1	90
Other	(97.4)	(15.1)	(75.5)	(29.7)	32
Place of delivery					
Home	100.0	25.4	80.9	26.3	140
Health facility	98.2	35.8	84.5	14.0	158
Public	99.3	39.3	87.5	15.5	121
Private	(94.7)	(24.1)	(74.2)	(9.1)	36
Mother's education					
None	(*)	(*)	(*)	(*)	12
Primary	97.6	28.2	81.1	21.7	195
Secondary+	97.0	33.8	80.5	13.3	99
Wealth index quintile					
Poorest	98.6	29.6	82.3	27.8	79
Second	94.6	37.5	83.3	15.5	69
Middle	95.2	22.2	70.5	20.2	58
Fourth	100.0	22.0	85.6	17.1	57
Richest	(100.0)	(40.7)	(87.6)	(11.5)	43
[1] MICS indicator 2.5 - Children ever breastfed					
[2] MICS indicator 2.6 - Early initiation of breastfeeding					

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

Figure NU.1: Initiation of breastfeeding, Kakamega County MICS, 2013/14
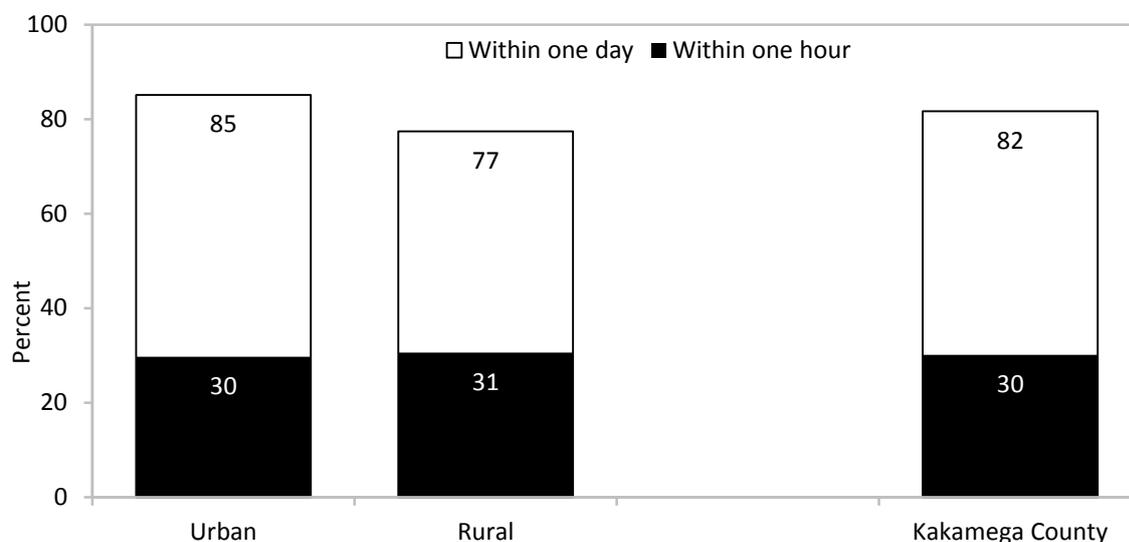
The set of Infant and Young Child Feeding indicators reported in Tables NU.4 through NU.8 are based on the mother's report of consumption of food and fluids during the day or night prior to being interviewed. Data are subject to a number of limitations, some related to the mother's ability to provide a full report on the child's liquid and food intake due to recall errors as well as lack of knowledge in cases where the child was fed by other individuals.

In Table NU.4, breastfeeding status is presented for both *Exclusively breastfed* and *Predominantly breastfed;* referring to infants age less than 6 months who are breastfed, distinguished by *the former* only allowing vitamins, mineral supplements, and medicine and *the latter* allowing also plain water and non-milk liquids. The table also shows continued breastfeeding of children at 12-15 and 20-23 months of age.

Approximately 35 percent of children age less than six months were exclusively breastfed (Table NU.4).[30] With 61 percent predominantly breastfed, it is evident that water-based liquids are displacing feeding of breastmilk to the greatest degree. By age 12-15 months, 75 percent of children were breastfed and by age 20-23 months, 36 percent were breastfed.

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[30] Background characteristics variables are not included in Table NU.4 due to insufficient sample size.

Table NU.4: Breastfeeding

Percentage of living children according to breastfeeding status at selected age groups, Kakamega County MICS, 2013/14

	Children age 0-5 months			Children age 12-15 months		Children age 20-23 months	
	Percent exclusively breastfed[1]	Percent predominantly breastfed[2]	Number of children	Percent breastfed (Continued breastfeeding at 1 year)[3]	Number of children	Percent breastfed (Continued breastfeeding at 2 years)[4]	Number of children
Total	**34.7**	**61.0**	**70**	**(74.7)**	**49**	**35.5**	**62**

[1] MICS indicator 2.7 - Exclusive breastfeeding under 6 months

[2] MICS indicator 2.8 - Predominant breastfeeding under 6 months

[3] MICS indicator 2.9 - Continued breastfeeding at 1 year

[4] MICS indicator 2.10 - Continued breastfeeding at 2 years

( ) Figures that are based on 25-49 unweighted cases

Table NU.5 shows the median duration of breastfeeding by selected background characteristics. Among children under age 3 years, the median duration is 20 months for ever breastfeeding, about one month for exclusive breastfeeding, and three months for predominant breastfeeding. There are minimal variations according to background characteristics.

Table NU.5: Duration of breastfeeding

Median duration of any breastfeeding, exclusive breastfeeding, and predominant breastfeeding among children age 0-35 months, Kakamega County MICS, 2013/14

	Median duration (in months) of:			Number of children age 0-35 months
	Any breastfeeding[1]	Exclusive breastfeeding	Predominant breastfeeding	
Median	**19.8**	**0.7**	**3.3**	**462**
Sex				
Male	20.7	0.6	2.4	216
Female	19.3	1.9	4.0	246
Area				
Urban	20.2	1.1	2.8	224
Rural	19.7	0.6	3.8	238
Mother's education				
None	(16.1)	(2.5)	(2.5)	29
Primary	20.0	0.6	2.7	302
Secondary+	21.0	1.4	4.5	131
Wealth index quintile				
Poorest	21.5	1.2	3.0	123
Second	16.2	0.5	2.3	102
Middle	21.0	1.6	3.6	86
Fourth	15.5	2.2	4.3	85
Richest	17.6	3.1	3.8	66
Mean	19.2	1.9	3.7	462

[1] MICS indicator 2.11 - Duration of breastfeeding

( ) Figures that are based on 25-49 unweighted cases

The age-appropriateness of breastfeeding of children under age 24 months is provided in Table NU.6. Different criteria of feeding are used depending on the age of the child. For infants age 0-5 months, exclusive breastfeeding is considered as age-appropriate feeding, while children age 6-23 months are considered to be appropriately fed if they are receiving breastmilk and solid, semi-solid or soft food. The results in Table NU 6 show that 67 percent of children age 6-23 months are being appropriately breastfed and age-appropriate breastfeeding among all children age 0-23 months drops to 60 percent.

Table NU.6: Age-appropriate breastfeeding					
Percentage of children age 0-23 months who were appropriately breastfed during the previous day, Kakamega County MICS, 2013/14					
	Children age 0-5 months		**Children age 6-23 months**		**Children age 0-23 months**	
	Percent exclusively breastfed[1]	Number of children	Percent currently breastfeeding and receiving solid, semi-solid or soft foods	Number of children	Percent appropriately breastfed[2]	Number of children
Total	**34.7**	**70**	**66.6**	**242**	**59.5**	**312**
Sex						
Male	(21.1)	31	64.3	118	55.4	148
Female	(45.4)	39	68.8	124	63.2	163
Area						
Urban	(30.5)	38	68.8	126	59.9	163
Rural	(39.5)	32	64.3	116	59.0	148
Mother's education						
None	(*)	3	(*)	12	(*)	15
Primary	(28.1)	44	67.7	153	58.9	197
Secondary+	(*)	23	67.2	77	62.2	100
Wealth index quintile						
Poorest	(*)	21	83.3	61	66.8	82
Second	(*)	23	(63.9)	42	50.0	65
Middle	(*)	13	(75.5)	41	68.6	54
Fourth	(*)	10	53.5	53	55.5	63
Richest	(*)	4	(53.9)	45	(*)	48
[1] MICS indicator 2.7 - Exclusive breastfeeding under 6 months					
[2] MICS indicator 2.12 - Age-appropriate breastfeeding					
( ) Figures that are based on 25-49 unweighted cases (*) Figures that are based on fewer than 25 unweighted cases					

Overall, (92)[31] percent of infants age 6-8 months received solid, semi-solid, or soft foods at least once during the previous day (data not shown). The same percentage received solid, semi-solid, or soft foods among currently breastfeeding infants.

About two-thirds of the children age 6-23 months (69 percent) were receiving solid, semi-solid and soft foods the minimum number of times (Table NU.7). The proportion of children receiving the minimum dietary diversity, or foods from at least four food groups, was much lower than that for the minimum meal frequency, indicating the need to focus on improving diet quality and nutrient intake among this vulnerable group. The overall assessment using the indicator of minimum acceptable diet

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[31] Note that the percentage above is in parentheses because the finding is based on less than 50 cases.

revealed that only 20 percent of children age 6-23 months were benefitting from a diet sufficient in both diversity and frequency.

Table NU.7: Infant and young child feeding (IYCF) practices

Percentage of children age 6-23 months who received appropriate liquids and solid, semi-solid, or soft foods the minimum number of times or more during the previous day, by breastfeeding status, Kakamega County MICS, 2013/14

| | Currently breastfeeding | | | | Currently not breastfeeding | | | | | All | | | |
| | Percent of children who received: | | | Number of children age 6-23 months | Percent of children who received: | | | | Number of children age 6-23 months | Percent of children who received: | | | Number of children age 6-23 months |
	Minimum dietary diversity[a]	Minimum meal frequency[b]	Minimum acceptable diet[1, c]		Minimum dietary diversity[a]	Minimum meal frequency[b]	Minimum acceptable diet[2, c]	At least 2 milk feeds[3]		Minimum dietary diversity[4, a]	Minimum meal frequency[5, b]	Minimum acceptable diet[c]	
Total	**34.3**	**68.6**	**22.9**	**167**	**47.4**	**69.8**	**12.6**	**27.0**	**70**	**38.6**	**68.9**	**19.9**	**242**
Sex													
Male	34.9	70.8	23.9	79	(38.3)	(70.1)	(10.2)	(22.8)	34	36.3	70.6	19.8	118
Female	33.8	66.6	22.0	87	(56.0)	(69.4)	(14.9)	(31.0)	36	40.7	67.4	19.9	124
Age													
6-8 months	(17.5)	(80.4)	(17.5)	44	-	-	-	-	0	(16.7)	(80.4)	(17.5)	46
9-11 months	(25.4)	(64.3)	(17.9)	33	(*)	(*)	(*)	(*)	1	(25.6)	(63.1)	(18.4)	35
12-17 months	(46.2)	(69.6)	(32.2)	49	(63.1)	(88.9)	(20.5)	(38.5)	24	51.8	76.0	28.3	73
18-23 months	(45.5)	(57.9)	(21.6)	40	(39.3)	(60.4)	(7.8)	(20.6)	44	44.2	59.2	14.4	88
Area													
Urban	37.9	63.5	25.3	89	(*)	(*)	(*)	(*)	35	39.1	66.2	21.2	126
Rural	30.1	74.4	20.1	77	(51.3)	(66.6)	(14.3)	(29.3)	35	38.0	72.0	18.3	116
Mother's education													
None	(*)	(*)	(*)	6	(*)	(*)	(*)	(*)	6	(*)	(*)	(*)	12
Primary	25.8	70.1	18.9	107	(50.3)	(67.0)	(8.0)	(22.7)	42	33.1	69.2	15.8	153
Secondary+	(50.9)	(63.7)	(29.4)	54	(*)	(*)	(*)	(*)	22	51.8	68.2	28.1	77

[1] **MICS indicator 2.17a - Minimum acceptable diet (breastfed)**

[2] **MICS indicator 2.17b - Minimum acceptable diet (non-breastfed)**

[3] **MICS indicator 2.14 - Milk feeding frequency for non-breastfed children**

[4] **MICS indicator 2.16 - Minimum dietary diversity**

[5] **MICS indicator 2.15 - Minimum meal frequency**

[a] Minimum dietary diversity is defined as receiving foods from at least 4 of 7 food groups: 1) Grains, roots and tubers, 2) legumes and nuts, 3) dairy products (milk, yogurt, cheese), 4) flesh foods (meat, fish, poultry and liver/organ meats), 5) eggs, 6) vitamin-A rich fruits and vegetables, and 7) other fruits and vegetables.

[b] Minimum meal frequency among currently breastfeeding children is defined as children who also received solid, semi-solid, or soft foods 2 times or more daily for children age 6-8 months and 3 times or more daily for children age 9-23 months. For non-breastfeeding children age 6-23 months it is defined as receiving solid, semi-solid or soft foods, or milk feeds, at least 4 times.

[c] The minimum acceptable diet for breastfed children age 6-23 months is defined as receiving the minimum dietary diversity and the minimum meal frequency, while it for non-breastfed children further requires at least 2 milk feedings and that the minimum dietary diversity is achieved without counting milk feeds.

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

The continued practice of bottle-feeding is a concern because of the possible contamination due to unsafe water and lack of hygiene in preparation. Table NU.8 shows that bottle-feeding is practiced in Kakamega County. The findings indicate that seven percent of children under 6 months were fed using a bottle with a nipple.

Table NU.8: Bottle feeding		
Percentage of children age 0-23 months who were fed with a bottle with a nipple during the previous day, Kakamega County MICS, 2013/14		
	Percentage of children age 0-23 months fed with a bottle with a nipple[1]	Number of children age 0-23 months
Total	**7.2**	**312**
Sex		
Male	5.4	148
Female	8.8	163
Age		
0-5 months	6.7	70
6-11 months	8.7	81
12-23 months	6.7	161
Area		
Urban	6.1	163
Rural	8.4	148
Mother's education		
None	(*)	15
Primary	4.9	197
Secondary+	12.8	100
Wealth index quintile		
Poorest	1.0	82
Second	8.3	65
Middle	8.6	54
Fourth	8.7	63
Richest	(12.6)	48
[1] **MICS indicator 2.18 - Bottle feeding**		
( ) Figures that are based on 25-49 unweighted cases (*) Figures that are based on fewer than 25 unweighted cases		

4.3 Salt Iodization

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

The IDD legislation, (Kenya Public Health Act [*Chapter 242*] of 1986 (revised in 2012)), covers all salt produced for human consumption. Specifications for edible salt are reviewed regularly (latest revision was in September 2000) by the Kenya Bureau of Standards. Iodization of salt is mandatory. The mandated level of iodization is 168.5 mg/kg of salt, or 100ppm.[32] The Ministry of Health monitors IDD in the country.

In 96 percent of households in Kakamega, salt used for cooking was tested for iodine content by using salt test kits and testing for the presence of potassium iodate content. Table NU.9 shows that in two percent of households, there was no salt available. These households were included in the denominator of the indicator. In 95 percent of households, salt was found to contain at least 15 parts per million (ppm) or more of iodine. Use of adequately iodized salt is over ninety percent in both urban and rural areas (97 percent and 93 percent, respectively). There are no meaningful variations between the richest and poorest households in terms of iodized salt consumption.

Table NU.9: Iodized salt consumption

Percent distribution of households by consumption of iodized salt, Kakamega County MICS, 2013/14

	Percentage of households in which salt was tested	Number of households	No salt	>0 and <15 PPM	15+ PPM[1]	Total	Number of households in which salt was tested or with no salt
Total	95.5	1,221	2.3	2.8	94.9	100.0	1,193
Area							
Urban	95.5	614	1.8	0.9	97.2	100.0	597
Rural	95.5	607	2.8	4.7	92.5	100.0	596
Wealth index quintile							
Poorest	94.5	246	4.2	2.2	93.5	100.0	243
Second	98.6	218	0.6	4.1	95.2	100.0	216
Middle	94.4	232	2.8	3.6	93.7	100.0	225
Fourth	95.4	234	2.2	2.3	95.5	100.0	228
Richest	94.9	292	1.6	2.2	96.2	100.0	282
[1] **MICS indicator 2.19 - Iodized salt consumption**							

[32] http://www.tulane.edu/~internut/Countries/Kenya/kenyaiodine.html

5.   Child Health

Kenya has acceded and ratified a number of major international and regional conventions some of which aim at ensuring child survival, growth and development. In 1990, Kenya ratified the United Nations Convention on the rights of the Child (CRC).[33, 34] Article 6 of the CRC refers to the right to life, survival and development. The term 'development' in this context refers to physical, mental, emotional, cognitive, social and cultural development. Further, Article 24 states that 'children have the right to good quality health care – the best health care possible – to safe drinking water, nutritious food, a clean and safe environment, and information to help them stay healthy'.[35] The United Nations Millennium Declaration, signed in September 2000, commits world leaders to combat poverty, hunger, disease, illiteracy, environmental degradation, and discrimination against women. The objective of one of the Millennium Development Goals (MDGs) – MDG 4 - is to reduce child mortality by two thirds between 1990 and 2015. The Constitution of Kenya (2010) states that every person has the right to the highest attainable standard of health, which includes the right to health care services, including reproductive health care.

The Child Development Chapter presents the results on the following subtopics: vaccinations; neonatal tetanus protection; and care of illnesses (diarrhoea, acute respiratory infections, malaria/fever); and use of solid fuels.

5.1 Vaccinations

Immunization plays a key part in reducing preventable childhood diseases and mortality. The Global Vaccine Action Plan (GVAP) was endorsed by the 194 Member States of the World Health Assembly in May 2012 to achieve the Decade of Vaccines vision by delivering universal access to immunization. Immunization has saved the lives of millions of children in the four decades since the launch of the Expanded Programme on Immunization (EPI) in 1974. Worldwide there are still millions of children not reached by routine immunization and as a result, vaccine-preventable diseases cause more than 2 million deaths every year.

The WHO Recommended Routine Immunizations for Children[36] states that all children to be vaccinated against tuberculosis, diphtheria, pertussis, tetanus, polio, measles, hepatitis B, haemophilus influenzae type b, pneumonia/meningitis, rotavirus, and rubella.

All doses in the primary series are recommended to be completed before the child's first birthday, although depending on the epidemiology of disease in a country, the first doses of measles and rubella containing vaccines may be recommended at 12 months or later. The recommended number and timing of most other doses also vary slightly with local epidemiology and may include booster doses later in childhood.

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[33]Kenya Human Rights Commission. 2010. Towards Equality and Anti-Discrimination: An Overview of International and Domestic Law an Anti-discrimination in Kenya.
[34]The Kenyan Section of the International Commission of Jurists. 2004. International Human Rights Standards: Reporting Obligations – The Convention of the Rights of the Child.
[35]The United Nations General Assembly. 1989. The Convention on the Rights of the Child.
[36]http://www.who.int/immunization/diseases/en. Table 2 includes recommendations for all children and additional antigens recommended only for children residing in certain regions of the world or living in certain high-risk population groups.

The Kenya Expanded Programme on Immunization (KEPI) was established in 1980 and is integrated within the Department of Preventive and Promotive Health Services of the Ministry of Health as part of the Essential Health Package (EHP). KEPI is now known as the Division of Vaccine and Immunisation (DVI). The Kenya National Immunization Programme immunization schedule is shown below. All vaccines should be received during the first year of life except the second dose of measles given at 18 months. Yellow fever is given at 9 months to children in selected sub-counties in the former Rift Valley province.[37]

Child Immunization Schedule in Kenya[38, 39]

Vaccine	Age	Remarks
BCG Vaccine: at birth		Intra-dermal left forearm; BCG Scar checked
Dose: (0.05mls)	Below 1 year	
Dose: (0.1mls)	Above 1 year	
Oral Polio Vaccine (OPV)		2 drops (orally)
Birth dose: OPV 0	At birth or within 2 weeks	
1st dose: OPV 1	At 6 weeks	
2nd dose: OPV 2	At 10 weeks	
3rd dose: OPV 3	At 14 weeks	
Diphtheria/Pertussis/Tetanus/Hepatitis B/haemophilus influenzae Type b		0.5mls (intra-muscular left outer thigh)
1st dose	6 weeks	
2nd dose	10 weeks	
3rd dose	14 weeks	
Pneumococcal Vaccine		0.5mls (intra-muscular right outer thigh)
1st dose	6 weeks	
2nd dose	10 weeks	
3rd dose	14 weeks	
Rota Virus (Rotarix)		1.5mls (orally)
1st dose	6 weeks	
2nd dose	10 weeks	
Measles Vaccine at 6 months: in the event of measles outbreak or HIV exposed children (HEI)	6 months	0.5mls (Subcutaneously right upper arm)
Measles Vaccine	9 months	
Measles Vaccine	18 months	
Yellow Fever	9 months	0.5mls (Intra-muscular left upper deltoid)
Other Vaccines		Other vaccines refer to those not in the usual KEPI schedule and may include MMR, Typhoid, etc.

[37] MICS 2013/14 collected data on Yellow Fever but further analysis is required before the findings can be shared.
[38] Ministry of Health, 2013. Mother and Child Heath Booklet. Republic of Kenya
[39]Kenya is planning to carryout out a Measles-Rubella (MR) and IPV Campaign in 2016, and subsequently include MR in the child immunization schedule in 2017.

In Kakamega County, the MICS collected data on immunization coverage for all children under three years of age. All mothers or caretakers were asked to provide vaccination cards. If the immunization card for a child was available, interviewers copied vaccination information from the cards onto the MICS questionnaire. If no immunization card was available for the child, the interviewer proceeded to ask the mother to recall whether or not the child had received each of the vaccines as per the schedule. The final immunization coverage estimates are based on information obtained from the immunization card and/or the mother's report.

The percentage of children age 12-23 months and 24-35 months who had received each of the specific vaccines by source of information (immunization card and mother's recall) is shown in Table CH.1 and Figure CH.1. The denominators for the table are comprised of children age 12-23 months and 24-35 months and only children in these age groups are counted. In the first three columns in each panel of the table, the numerator includes all children who were vaccinated at any time before the survey according to the immunization card or the mother's report. In the last column in each panel, only those children who were fully immunized before their first birthday, as recommended, were included. The proportion of children immunized before the first birthday but without immunization card/record was assumed to be the same as for those with vaccination cards/records.

Most children age 12-23 months had been vaccinated against BCG and measles by the age of 12 months (98 and 86 percent, respectively), and had received the first dose of DPT, HepB, and Hib vaccines (97 percent, 96 percent and 96 percent, respectively). The percentages decline for the second and third doses of DPT, HepB, and Hib. Similarly, 97 percent of children age 12-23 months had received Polio 1 by age 12 months and this declines to 83 percent by the third dose. As a result, the percentage of children 12-23 months of age who had been fully vaccinated by their first birthday is 67 percent. The proportion of children fully vaccinated by 12 months of age is lower for children age 24-35 months (57 percent). The individual coverage figures for children age 24-35 months are generally lower to those age 12-23 months suggesting that immunization coverage has been on average improving in Kakamega County between 2011 and 2013.

Table CH.1: Vaccinations in the first years of life

Percentage of children age 12-23 months and 24-35 months vaccinated against vaccine preventable childhood diseases at any time before the survey and by their first birthday, Kakamega County MICS, 2013/14

	Children age 12-23 months:				Children age 24-35 months:			
	Vaccinated at any time before the survey according to:			Vaccinated by 12 months of age[a]	Vaccinated at any time before the survey according to:			Vaccinated by 12 months of age
	Vaccination card	Mother's report	Either		Vaccination card	Mother's report	Either	
Antigen								
BCG[1]	71.7	27.9	99.6	98.2	53.4	42.7	96.0	92.0
Polio								
At birth	71.9	23.2	95.1	93.1	53.6	29.8	83.4	80.8
1	71.9	26.4	98.3	97.1	53.6	41.2	94.8	92.6
2	71.9	24.6	96.5	95.3	53.6	39.4	93.0	92.4
3[2]	70.7	12.7	83.4	82.5	53.6	22.9	76.5	74.3
DPT								
1	71.9	26.5	98.4	97.2	54.7	41.3	95.9	93.7
2	71.9	24.8	96.7	95.6	54.7	39.5	94.2	93.6
3[3]	71.9	22.4	94.3	93.3	54.7	37.4	92.0	89.4
HepB								
At birth	71.9	16.7	88.6	85.1	55.4	16.2	71.6	66.8
1	71.9	25.4	97.3	96.2	55.4	39.3	94.7	92.5
2	71.9	24.5	96.4	95.3	55.4	38.6	94.0	93.5
3[4]	71.9	11.2	83.2	82.3	55.4	22.0	77.4	75.2
Hib								
1	72.6	25.4	98.0	96.3	57.1	38.2	95.3	93.1
2	72.6	23.7	96.3	94.6	57.1	37.0	94.1	93.5
3[5]	72.6	21.9	94.5	91.9	57.1	34.6	91.6	89.0
Measles (MCV1)[7]	71.4	24.5	95.9	86.3	53.8	40.9	94.7	83.4
Fully vaccinated[8, b]	71.9	5.3	77.2	66.9	53.8	14.0	67.8	56.6
No vaccinations	0.0	0.4	0.4	0.4	0.0	4.0	4.0	4.0
Number of children	161	161	161	161	150	150	150	150

[1] **MICS indicator 3.1 - Tuberculosis immunization coverage**

[2] **MICS indicator 3.2 - Polio immunization coverage**

[3] **MICS indicator 3.3 - Diphtheria, pertussis and tetanus (DPT) immunization coverage**

[4] **MICS indicator 3.5 - Hepatitis B immunization coverage**

[5] **MICS indicator 3.6 - Haemophilus influenzae type B (Hib) immunization coverage**

[6] **MICS indicator 3.7 - Yellow fever immunization coverage[40]**

[7] **MICS indicator 3.4; MDG indicator 4.3 - Measles immunization coverage**

[8] **MICS indicator 3.8 - Full immunization coverage**

[a] All MICS indicators refer to results in this column

[b] Includes: *BCG, Polio3, DPT3, HepB3, Hib3, and Measles (MCV1)* as per the vaccination schedule in Kenya

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[40] Yellow fever immunization coverage not included in analysis

Figure CH.1: Vaccinations by age 12 months (measles by 24 months), Kakamega County MICS, 2013/14

Children Age 12-23 months

BCG	98
Polio at birth	93
Polio1	97
Polio2	95
Polio3	83
DPT1	97
DPT2	96
DPT3	93
Measles	86
HepB at birth	85
HepB1	96
HepB2	95
HepB3	82
Hib1	96
Hib2	95
Hib3	92
Fully vaccinated	67
No vaccinations	0

Children Age 24-35 months

BCG	92
Polio at birth	81
Polio1	93
Polio2	92
Polio3	74
DPT1	94
DPT2	94
DPT3	89
Measles	83
HepB at birth	67
HepB1	93
HepB2	93
HepB3	75
Hib1	93
Hib2	94
Hib3	89
Fully vaccinated	57
No vaccinations	4

Percent

Table CH.2 presents vaccination coverage estimates among children age 12-23 months by background characteristics. The figures indicate children receiving the vaccinations at any time up to the date of the survey, and are based on information from both the vaccination cards and mothers'/caretakers' reports. Vaccination cards seen by the interviewer were for 71 percent of children age 12-23 months. Overall, 77 percent of children age 12-23 months are fully vaccinated against vaccine preventable childhood diseases while 96 percent are vaccinated against measles.

Table CH.2: Vaccinations by background characteristics

Percentage of children age 12-23 months currently vaccinated against vaccine preventable childhood diseases, Kakamega County MICS, 2013/14

		Polio				DPT			HepB				Hib							
	BCG	At birth	1	2	3	1	2	3	At birth	1	2	3	1	2	3	Measles (MCV1)	Full[a]	None	Percentage with vaccination card seen	Number of children age 12-23 months
Total	**99.6**	**95.1**	**98.3**	**96.5**	**83.4**	**98.4**	**96.7**	**94.3**	**88.6**	**97.3**	**96.4**	**83.2**	**98.0**	**96.3**	**94.5**	**95.9**	**77.2**	**0.4**	**71.4**	**161**
Sex																				
Male	100.0	93.8	100.0	97.8	81.8	97.5	96.4	92.6	85.6	96.4	95.8	80.7	97.5	96.4	92.5	93.9	74.8	0.0	71.5	76
Female	99.2	96.2	96.8	95.3	84.8	99.2	97.0	95.8	91.3	98.2	97.0	85.3	98.5	96.3	96.3	97.7	79.4	0.8	71.3	85
Area																				
Urban	100.0	96.4	100.0	98.6	85.4	97.8	97.8	95.7	90.1	97.8	97.8	82.0	97.8	97.8	95.7	94.2	78.0	0.0	71.6	86
Rural	99.1	93.6	96.3	94.0	81.1	99.0	95.4	92.6	86.9	96.8	94.8	84.4	98.2	94.5	93.1	97.9	76.3	0.9	71.2	75
Mother's education																				
None	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	9
Primary	99.3	95.6	98.1	95.9	81.5	97.3	96.2	95.1	82.5	97.3	97.3	85.6	96.6	96.6	95.4	95.0	76.5	0.7	71.0	94
Secondary+	100.0	98.3	98.3	98.3	91.3	100.0	100.0	98.3	100.0	100.0	97.4	83.8	100.0	98.3	98.3	100.0	82.1	0.0	74.8	57

[a] Includes: BCG, Polio3, DPT3, HepB3, Hib3, and Measles (MCV1) as per the vaccination schedule in Kenya

(*) Figures that are based on fewer than 25 unweighted cases

5.2 Neonatal Tetanus Protection

The goal of MDG 5 is to reduce by three quarters the maternal mortality ratio, with one strategy to eliminate maternal tetanus. Following on the 42nd and 44th World Health Assembly calls for elimination of neonatal tetanus, the global community continues to work to reduce the incidence of neonatal tetanus to less than one case per 1,000 live births in every sub-county by 2015.

The strategy for preventing maternal and neonatal tetanus is to ensure that all pregnant women receive at least two doses of tetanus toxoid vaccine. If a woman has not received at least two doses during a particular pregnancy, the mother and child are also considered to be protected against tetanus if the woman:

- Received at least two doses of tetanus toxoid vaccine, the last within the previous 3 years;
- Received at least 3 doses, the last within the previous 5 years;
- Received at least 4 doses, the last within the previous 10 years;
- Received 5 or more doses anytime during her life.

To assess the status of tetanus vaccination coverage in Kakamega County, women who had a live birth during the two years before the survey were asked if they had received tetanus toxoid injections during the pregnancy for their most recent birth, and if so, how many. Women who did not receive two or more tetanus toxoid vaccinations during this recent pregnancy were then asked about tetanus toxoid vaccinations they may have previously received. Interviewers also asked women to present their vaccination card on which dates of tetanus toxoid are recorded and referred to information from the cards when available.

Table CH.3 shows the protection status from tetanus of women age 15-49 years who have had a live birth within the last two years preceding the survey. In Kakamega County, 72 percent of these women were protected against neonatal tetanus

Table CH.3: Neonatal tetanus protection

Percentage of women age 15-49 years with a live birth in the last 2 years protected against neonatal tetanus, Kakamega County MICS, 2013/14

| | Percentage of women who received at least 2 doses during last pregnancy | Percentage of women who did not receive two or more doses during last pregnancy but received: | | | | Protected against tetanus[1] | Number of women with a live birth in the last 2 years |
		2 doses, the last within prior 3 years	3 doses, the last within prior 5 years	4 doses, the last within prior 10 years	5 or more doses during lifetime		
Total	**30.8**	**36.9**	**1.2**	**2.6**	**0.6**	**72.2**	**306**
Area							
Urban	29.3	41.7	0.0	2.0	1.1	74.1	168
Rural	32.7	31.0	2.8	3.4	0.0	69.8	138
Education							
None	(*)	(*)	(*)	(*)	(*)	(*)	12
Primary	33.6	34.3	1.9	1.6	0.0	71.4	195
Secondary+	27.9	41.9	0.0	3.2	0.0	73.0	99
Wealth index quintile							
Poorest	27.1	40.8	3.7	5.7	0.0	77.3	79
Second	26.9	36.4	1.3	.6	2.8	67.9	69
Middle	30.7	33.6	0.0	1.0	0.0	65.3	58
Fourth	25.6	42.0	0.0	4.4	0.0	72.0	57
Richest	(51.0)	(28.2)	(0.0)	(0.0)	(0.0)	(79.1)	43
Ethnicity of household head							
Luhya	29.8	38.2	1.3	2.7	.7	72.8	289
Other ethnic group	(*)	(*)	(*)	(*)	(*)	(*)	17
[1] **MICS indicator 3.9 - Neonatal tetanus protection**							

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

5.3 Care of Illness

A key strategy for accelerating progress toward MDG 4 is to tackle the diseases that are the leading causes of morbidity and mortality of children under-5 years. Diarrhoea and pneumonia are two such diseases. The Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea (GAPPD) aims to end preventable pneumonia and diarrhoea death by reducing mortality from pneumonia to 3 deaths per 1,000 live births and mortality from diarrhoea to 1 death per 1,000 live births by 2025. Malaria is also a major cause of mortality of children under-5 years, leading to about 1,200 deaths children every day, especially in sub-Saharan Africa.[41]

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[41]UNICEF Fact sheet http://www.unicef.org/media/media_81674.html

Table CH.4 presents the percentage of children under-5 years of age who were reported to have had an episode of diarrhoea, symptoms of acute respiratory infection (ARI), or fever during the 2 weeks preceding the survey. These results measure period-prevalence of those illnesses over a two-week time window.

The definition of a case of diarrhoea or fever, in this survey, was the mother's or caretaker's report that the child had such symptoms over the specified period; no other evidence were sought beside the opinion of the mother. A child was considered to have had an episode of ARI if the mother or caretaker reported that the child had, over the specified period, an illness with a cough with rapid or difficult breathing, and whose symptoms were perceived to be due to a problem in the chest or both a problem in the chest and a blocked nose. While this approach is reasonable in the context of a MICS, these basically simple case definitions must be kept in mind when interpreting the results, as well as the potential for reporting and recall biases. Further, diarrhoea, fever and ARI are not only seasonal but are also characterized by the often rapid spread of localized outbreaks from one area to another at different points in time.

In Kakamega County, 18 percent of children under-5 years are reported to have had diarrhoea in the two weeks preceding the survey, five percent symptoms of ARI, and 27 percent an episode of fever (Table CH.4). Children age 0-11 months (31 percent) and those age 12-23 months (26 percent) had experienced an episode of diarrhoea in larger proportions than those in the 24-59 months age group. There are no differentials in episodes of diarrhoea by sex of child and by urban/rural areas.

Table CH.4: Reported disease episodes

Percentage of children age 0-59 months for whom the mother/caretaker reported an episode of diarrhoea, symptoms of acute respiratory infection (ARI), and/or fever in the last two weeks, Kakamega County MICS, 2013/14

	Percentage of children who in the last two weeks had:			
	An episode of diarrhoea	Symptoms of ARI	An episode of fever	Number of children age 0-59 months
Total	**17.8**	**5.0**	**27.4**	**806**
Sex				
Male	17.6	2.2	26.8	388
Female	18.0	7.6	28.1	418
Area				
Urban	18.5	2.9	26.2	405
Rural	17.0	7.1	28.7	401
Age				
0-11 months	30.5	5.5	32.4	151
12-23 months	25.8	2.9	26.6	161
24-35 months	14.7	6.6	24.5	150
36-47 months	9.8	3.4	26.1	205
48-59 months	10.0	7.7	28.2	140
Mother's education				
None	16.1	8.9	30.2	62
Primary	17.3	4.3	27.4	522
Secondary+	19.4	5.6	26.8	222
Wealth index quintile				
Poorest	22.3	7.1	34.0	207
Second	15.6	3.9	24.9	176
Middle	19.3	6.2	26.1	154
Fourth	13.2	3.7	25.8	158
Richest	17.4	3.0	23.3	111
Ethnicity of household head				
Luhya	17.4	5.1	27.2	764
Other ethnic group	(25.0)	(2.3)	(32.1)	42
( ) Figures that are based on 25-49 unweighted cases				

5.3.1 Diarrhoea

Diarrhoea is one of the leading causes of death among children under five worldwide[42]. 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. In addition, provision of zinc supplements has been shown to reduce the duration and severity of the illness as well as the risk of future

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[42]WHO, 2013. Fact Sheet number 330.

episodes within the next two or three months. Preventing dehydration and malnutrition by increasing fluid intake and continuing to feed the child are also important strategies for managing diarrhoea.

During the survey, mothers or caretakers were asked whether their child under-5 years had an episode of diarrhoea in the two weeks prior to the survey. In cases where mothers reported that the child had diarrhoea, a series of questions were asked about the treatment of the illness, including what the child had been given to drink and eat during the episode and whether this was more or less than what was usually given to the child.

The overall period-prevalence of diarrhoea in children under-5 years of age was 18 percent (Table CH.4). The period-prevalence was noticeably high among children age 0-11 months (31 percent) which corresponds to the period where children are introduced to complementary feeds, and among children 12-23 months.

Table CH.5 shows the percentage of children with diarrhoea in the two weeks preceding the survey for whom advice or treatment was sought and where. Overall, a health facility or provider was seen in 40 percent of cases, predominantly in the public health facilities (36 percent). The pattern was similar by urban/rural areas.

Table CH.5: Care-seeking during diarrhoea

Percentage of children age 0-59 months with diarrhoea in the last two weeks for whom advice or treatment was sought, by source of advice or treatment, Kakamega County MICS, 2013/14

	Percentage of children with diarrhoea for whom:						
	Advice or treatment was sought from:						
	Health facilities or providers						
	Public	Private	Community health provider[a]	Other source	A health facility or provider[1, b]	No advice or treatment sought	Number of children age 0-59 months with diarrhoea in the last two weeks
Total	**36.3**	**14.1**	**2.6**	**14.4**	**39.9**	**36.5**	**143**
Sex							
Male	32.9	13.2	4.2	12.0	34.5	43.3	68
Female	39.3	15.0	1.2	16.6	44.8	30.4	75
Area							
Urban	29.5	11.8	2.5	15.3	32.0	43.4	75
Rural	43.6	16.8	2.8	13.3	48.6	29.0	68
Mother's education							
None	(*)	(*)	(*)	(*)	(*)	(*)	10
Primary	31.9	15.8	2.1	14.7	36.4	39.6	90
Secondary+	(39.2)	(12.4)	(4.3)	(9.9)	(42.1)	(38.5)	43
Ethnicity of household head							
Luhya	35.3	15.3	2.8	15.5	39.2	35.3	133
Other ethnic group	(*)	(*)	(*)	(*)	(*)	(*)	11
[1] **MICS indicator 3.10 - Care-seeking for diarrhoea**							

[a] Community health providers includes both public (*Community health worker and Mobile/Outreach clinic*) and private (*Mobile clinic*) health facilities

[b] Includes all public and private health facilities and providers, but excludes private pharmacy

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

Table CH.6 provides information on drinking and feeding practices during diarrhoea. Overall, about one in five (20 percent) of under five children who experienced an episode of diarrhoea in the last two weeks preceding the survey were given more than usual to drink while 29 percent were given about the same. Twenty-nine percent were given somewhat less, but 19 percent were given much less than usual.

Only one percent of children under-5 years of age who had an episode of diarrhoea in the last two weeks preceding the survey were given more to eat than usual while 25 percent were given about the same quantity of food. Thirty-four percent were given somewhat less to eat and 24 percent were given much less during this period.

Table CH.6: Feeding practices during diarrhoea

Percent distribution of children age 0-59 months with diarrhoea in the last two weeks by amount of liquids and food given during episode of diarrhoea, Kakamega County MICS, 2013/14

| | Drinking practices during diarrhoea | | | | | | | Eating practices during diarrhoea | | | | | | Number of children age 0-59 months with diarrhoea in the last two weeks |
| | Child was given to drink: | | | | | | | Child was given to eat: | | | | | | |
	Much less	Somewhat less	About the same	More	Nothing	Missing/DK	Total	Much less	Somewhat less	About the same	More	Nothing	Total	
Total	**18.5**	**29.4**	**28.8**	**19.7**	**2.2**	**1.4**	**100.0**	**23.7**	**34.0**	**24.8**	**1.3**	**16.3**	**100.0**	**143**
Sex														
Male	19.7	32.1	29.7	13.8	1.8	2.9	100.0	30.5	28.0	29.7	0.0	11.9	100.0	68
Female	17.5	27.0	28.0	24.9	2.6	0.0	100.0	17.6	39.4	20.3	2.5	20.2	100.0	75
Area														
Urban	12.3	21.6	38.7	23.2	1.6	2.6	100.0	21.3	27.6	29.4	2.5	19.1	100.0	75
Rural	25.4	38.0	18.0	15.8	2.8	0.0	100.0	26.3	40.9	19.7	0.0	13.1	100.0	68
Mother's education														
None	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	(*)	(*)	(*)	(*)	100.0	10
Primary	16.9	33.8	28.8	17.6	0.8	2.2	100.0	21.5	36.5	26.2	0.0	15.7	100.0	90
Secondary+	(24.4)	(22.9)	(31.3)	(20.1)	(1.3)	(0.0)	100.0	(27.9)	(28.7)	(17.9)	(4.3)	(21.2)	100.0	44
Ethnicity of household head														
Luhya	20.0	27.8	27.7	20.6	2.4	1.5	100.0	24.0	34.3	24.3	1.4	16.0	100.0	133
Other ethnic group	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	(*)	(*)	(*)	(*)	(*)	11

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

Table CH.7 shows the percentage of children age 0-59 months with diarrhoea in the last two weeks preceding the survey, who received oral rehydration salts (ORS), recommended homemade fluids, and zinc during an episode of diarrhoea. Since children may have been given more than one type of liquid, the percentages do not necessarily add to 100. Forty-six percent of children received fluids from ORS packets or pre-packaged ORS fluids and 80 percent received recommended homemade fluids (cereal gruel – uji; fresh fruit juice; soups; fresh or fermented milk). Eighty-nine percent of the children with diarrhoea received one or more of the recommended home treatments (i.e., were treated with ORS or any recommended homemade fluid), while 22 percent received zinc. In addition, 16 percent received ORS and zinc.

Table CH.7: Oral rehydration solutions, recommended homemade fluids, and zinc

Percentage of children age 0-59 months with diarrhoea in the last two weeks, and treatment with oral rehydration salts (ORS), recommended homemade fluids, and zinc, Kakamega County MICS, 2013/14

	Percentage of children with diarrhoea who received:													Number of children age 0-59 months with diarrhoea in the last two weeks
	Oral rehydration salts (ORS)			Recommended homemade fluids					ORS or any recommended homemade fluid	Zinc				
	Fluid from packet	Pre-packaged fluid	Any ORS	Cereal Gruel(Uji)	Fresh or Fermented Milk	Fresh fruit juices	Soups	Any recommended homemade fluid		Tablet	Syrup	Any zinc	ORS and zinc[1]	
Total	**35.8**	**12.0**	**46.0**	**68.6**	**18.1**	**8.0**	**39.4**	**80.1**	**89.0**	**10.5**	**13.2**	**22.3**	**16.4**	**143**
Sex														
Male	30.4	9.3	39.7	67.5	18.9	10.8	42.5	78.0	85.2	9.7	15.8	22.6	16.4	68
Female	40.8	14.5	51.7	69.6	17.4	5.6	36.5	82.0	92.5	11.2	10.9	22.1	16.4	75
Area														
Urban	35.2	5.3	40.4	67.2	17.3	2.5	33.4	73.3	85.1	11.2	10.7	19.9	16.3	75
Rural	36.6	19.4	52.1	70.1	19.0	14.2	45.9	87.6	93.3	9.7	16.0	25.0	16.5	68
Ethnicity of household head														
Luhya	36.9	10.7	46.9	70.5	18.6	8.7	40.6	80.7	90.3	10.3	11.9	20.7	16.3	133
Other ethnic group	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	11

[1] **MICS indicator 3.11 - Diarrhoea treatment with oral rehydration salts (ORS) and zinc**

(*) Figures that are based on fewer than 25 unweighted cases

Table CH.8 provide the proportion of children age 0-59 months with diarrhoea in the last two weeks preceding the survey who received oral rehydration therapy with continued feeding, and the percentage of children with diarrhoea who received other treatments. Overall, 55 percent of children with diarrhoea received ORS or increased fluids, 92 percent received ORT (ORS or recommended homemade fluids or increased fluids). Combining the information in Table CH.6 with that of Table CH.7 on oral rehydration therapy, it is evident that 57 percent of children received ORT and, at the same time, feeding was continued, as is recommended. Table CH.8 also shows that all children having had diarrhoea in the two weeks preceding the survey were given various forms of treatment or drug.

Table CH.8: Oral rehydration therapy with continued feeding and other treatments

Percentage of children age 0-59 months with diarrhoea in the last two weeks who were given oral rehydration therapy with continued feeding and percentage who were given other treatments, Kakamega County MICS, 2013/14

					Children with diarrhoea who were given:											Number of children age 0-59 months with diarrhoea in the last two weeks
									Other treatments							
					Pill or syrup				Injection							
	Zinc	ORS or increased fluids	ORT (ORS or recommended homemade fluids or increased fluids)	ORT with continued feeding[1]	Anti-biotic	Anti-motility	Other	Unknown	Anti-biotic	Non-antibiotic	Unknown	Intra-venous	Home remedy, herbal medicine	Other	Not given any treatment or drug	
Total	**22.3**	**54.9**	**91.6**	**56.5**	**12.0**	**1.0**	**2.1**	**2.2**	**1.1**	**0.0**	**1.4**	**0.5**	**2.2**	**7.0**	**4.4**	**143**
Sex																
Male	22.6	46.6	87.0	54.0	6.2	0.0	3.5	4.6	0.0	0.0	1.7	0.0	3.2	8.7	7.3	68
Female	22.1	62.4	95.8	58.8	17.2	2.0	0.9	0.0	2.2	0.0	1.2	0.9	1.2	5.4	1.8	75
Area																
Urban	19.9	51.3	89.3	54.6	17.6	0.0	1.9	1.9	2.2	0.0	0.0	0.0	0.0	8.3	4.4	75
Rural	25.0	58.8	94.2	58.7	5.9	2.2	2.3	2.5	0.0	0.0	3.0	1.0	4.5	5.5	4.4	68
Ethnicity of household head																
Luhya	20.7	55.9	93.1	56.3	11.9	1.1	1.8	2.4	1.2	0.0	1.5	0.0	2.3	7.5	3.7	133
Other ethnic group	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	11
[1] **MICS indicator 3.12 - Diarrhoea treatment with oral rehydration therapy (ORT) and continued feeding**																
(*) Figures that are based on fewer than 25 unweighted cases																

Table CH.9 provides information on the source of ORS and zinc for children who benefitted from these treatments. The main source of ORS was a health facility or provider (81 percent), mainly from a public health facility (65 percent).[43]

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[43]More variables could not be analysed due to small number of cases reported.

Table CH.9: Source of ORS and zinc

Percentage of children age 0-59 months with diarrhoea in the last two weeks who were given ORS, and percentage given zinc, by the source of ORS and zinc, Kakamega County MICS, 2013/14

	Percentage of children who were given as treatment for diarrhoea:		Number of children age 0-59 months with diarrhoea in the last two weeks	Percentage of children for whom the source of ORS was:						Number of children age 0-59 months who were given ORS as treatment for diarrhoea in the last two weeks	Percentage of children for whom the source of zinc was:					Number of children age 0-59 months who were given zinc as treatment for diarrhoea in the last two weeks
				Health facilities or providers							Health facilities or providers					
	ORS	zinc		Public	Private	Community health provider[a]	Other source	DK/Missing	A health facility or provider[b]		Public	Private	Community health provider[a]	Other source	A health facility or provider[b]	
Total	46.0	22.3	143	64.6	16.2	4.2	12.8	6.4	80.8	66	(70.0)	(22.6)	(5.8)	(7.4)	(92.6)	32

[a] Community health provider includes both public (*Community health worker and Mobile/Outreach clinic*) and private (*Mobile clinic*) health facilities

[b] Includes all public and private health facilities and providers

5.3.2 Acute Respiratory Infections

Symptoms of ARI were collected during the Kakamega County MICS to capture pneumonia disease, which is a leading cause of death in children under-5 years. Once diagnosed, pneumonia is treated effectively with antibiotics. Studies have shown a limitation in the survey approach of measuring pneumonia because many of the suspected cases identified through surveys are in fact, not true pneumonia.[44] While this limitation does not affect the level and patterns of care-seeking for suspected pneumonia, it limits the validity of the level of treatment of pneumonia with antibiotics, as reported through household surveys. The treatment indicator described in this report must therefore be taken with caution, keeping in mind that the accurate level is likely higher.

Mothers' knowledge of danger signs is an important determinant of care-seeking behaviour. In the MICS, mothers or caretakers were asked to report symptoms that would cause them to take a child under-5 years for care immediately at a health facility. Issues related to knowledge of danger signs of pneumonia are presented in Table CH.10. Overall, 29 percent of women knew at least one of the two danger signs of pneumonia – fast and/or difficult breathing. The most commonly identified symptom for taking a child to a health facility is when the child develops a fever (88 percent): fast breathing (17 percent), and difficult breathing (23 percent).

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[44]Campbell, H. et al. 2013.*Measuring Coverage in MNCH: Challenges in Monitoring the Proportion of Young Children with Pneumonia Who Receive Antibiotic Treatment*. PLoS Med 10(5): e1001421. doi:10.1371/journal.pmed.1001421

Table CH.10: Knowledge of the two danger signs of pneumonia

Percentage of women age 15-49 years who are mothers or caretakers of children under age 5 by symptoms that would cause them to take a child under age 5 immediately to a health facility, and percentage of mothers who recognize fast or difficult breathing as signs for seeking care immediately, Kakamega County MICS, 2013/14

	Percentage of mothers/caretakers of children age 0-59 months who think that a child should be taken immediately to a health facility if the child:								Mothers/caretakers who recognize at least one of the two danger signs of pneumonia (fast and/or difficult breathing)	Number of women age 15-49 years who are mothers/caretakers of children under age 5
	Is not able to drink or breastfeed	Becomes sicker	Develops a fever	Has fast breathing	Has difficult breathing	Has blood in stool	Is drinking poorly	Has other symptoms		
Total	**34.2**	**35.7**	**87.7**	**16.6**	**22.6**	**10.8**	**21.6**	**73.1**	**29.1**	**501**
Area										
Urban	31.0	34.8	87.8	16.0	21.1	8.1	19.4	76.5	28.8	264
Rural	37.7	36.8	87.6	17.3	24.2	13.8	24.1	69.3	29.4	237
Education										
None	(11.5)	(28.0)	(73.7)	(6.2)	(11.8)	(3.9)	(16.1)	(70.0)	(18.0)	25
Primary	31.3	38.6	86.3	17.3	22.7	10.8	21.0	72.0	28.8	318
Secondary+	43.6	31.2	92.7	16.8	24.1	12.1	23.8	75.9	31.5	158
Wealth index quintile										
Poorest	29.3	27.6	81.5	9.5	20.6	5.6	23.5	73.1	27.0	117
Second	27.5	30.0	84.4	11.7	23.9	8.2	15.8	71.0	28.5	107
Middle	38.2	37.7	93.7	22.1	17.5	12.0	25.0	70.8	27.4	101
Fourth	39.3	47.8	91.6	26.1	28.1	19.3	23.1	77.2	36.0	93
Richest	39.1	38.8	89.1	15.7	23.9	10.7	20.6	74.2	27.1	84
Ethnicity of household head										
Luhya	33.4	34.3	87.3	16.6	22.2	9.9	21.8	73.6	29.1	470
Other ethnic group	(45.6)	(57.2)	(93.9)	(16.2)	(28.5)	(24.4)	(18.2)	(65.9)	(28.5)	31

( ) Figures that are based on 25-49 unweighted cases

5.3.3 Solid Fuel Use

More than 3 billion people around the world rely on solid fuels for their basic energy needs, including cooking and heating. Solid fuels include biomass fuels, such as wood, charcoal, crops or other agricultural waste, dung, shrubs and straw, and coal. Cooking and heating with solid fuels leads to high levels of indoor smoke which contains a complex mix of health-damaging pollutants. The main problem with the use of solid fuels is their incomplete combustion, which produces toxic elements such as carbon monoxide, polyaromatic hydrocarbons, and sulphur dioxide (SO_2), among others. Use of solid fuels increases the risks of incurring acute respiratory illness, pneumonia, chronic obstructive lung disease, cancer, and possibly tuberculosis, asthma, or cataracts, and may contribute to low birth weight of babies born to pregnant women exposed to smoke. The primary indicator for monitoring use of solid fuels is the proportion of the population using solid fuels as the primary source of domestic energy for cooking, shown in Table CH.11.

Overall, 95 percent of the household population in Kakamega County use solid fuels for cooking, consisting mainly of wood (79 percent). Use of solid fuels in urban areas (91 percent) is equally high as in rural areas (99 percent). Differentials with respect to household wealth and the educational level of the household

head are also important. Use of solid fuels varies by the educational level of the household head (none, 100 percent; primary education, 98 percent; secondary or higher, 88 percent). The use of solid fuel is 99 percent for poorest households and 79 percent for those in the richest households.

Table CH.11: Solid fuel use

Percent distribution of household members according to type of cooking fuel mainly used by the household, and percentage of household members living in households using solid fuels for cooking, Kakamega County MICS, 2013/14

| | | | | | | **Percentage of household members in households mainly using:** | | | | | | | | | |
| | | | | | | | | Solid fuels | | | | | | | |
	Electricity	Liquefied Petroleum Gas (LPG)	Natural Gas	Biogas	Kerosene	Coal/ Lignite	Char-coal	Wood	Straw/ Shrubs/ Grass	Agricultural crop residue	Other fuel	No food cooked in the household	Total	Solid fuels for cooking[1]	Number of household members
Total	**1.8**	**1.1**	**0.2**	**0.6**	**0.9**	**0.6**	**13.8**	**79.2**	**1.2**	**0.3**	**0.2**	**0.2**	**100.0**	**95.0**	**5,666**
Area															
Urban	3.9	2.0	0.5	0.9	1.6	0.0	22.3	68.3	0.3	0.0	0.2	0.0	100.0	90.9	2,653
Rural	0.0	0.2	0.0	0.3	0.3	1.1	6.3	88.8	2.0	0.5	0.2	0.4	100.0	98.6	3,013
Education of household head															
None	0.0	0.0	0.0	0.0	0.0	1.1	6.2	89.3	1.9	0.9	0.5	0.0	100.0	99.5	630
Primary	0.1	0.4	0.0	0.6	0.4	0.6	10.1	85.8	1.4	0.2	0.0	0.3	100.0	98.2	3,216
Secondary+	5.5	2.6	0.7	0.8	2.2	0.3	23.2	63.5	0.7	0.1	0.3	0.0	100.0	87.8	1,781
Wealth index quintile															
Poorest	0.0	0.0	0.0	0.0	0.0	0.3	2.2	95.9	0.7	0.0	0.4	0.6	100.0	99.0	1,131
Second	0.0	0.0	0.0	0.0	0.0	0.6	2.4	96.4	0.2	0.0	0.0	0.4	100.0	99.6	1,132
Middle	0.0	0.0	0.0	0.0	0.7	1.1	10.2	85.2	2.1	0.7	0.0	0.0	100.0	99.3	1,133
Fourth	0.0	0.1	0.0	0.0	1.4	0.5	16.6	79.4	1.4	0.6	0.1	0.0	100.0	98.5	1,135
Richest	9.1	5.3	1.2	2.9	2.6	0.4	37.3	39.2	1.7	0.0	0.4	0.0	100.0	78.7	1,135
Ethnicity of household head															
Luhya	1.3	0.9	0.2	0.6	0.8	0.6	11.8	81.8	1.3	0.3	0.1	0.2	100.0	95.8	5,243
Other ethnic group	7.8	3.4	0.2	0.5	2.3	0.0	38.2	46.6	0.6	0.0	0.4	0.0	100.0	85.4	422

[1] **MICS indicator 3.15 - Use of solid fuels for cooking**

( ) Figures that are based on 25-49 unweighted cases

Solid fuel use by place of cooking is depicted in Table CH.12. The presence and extent of indoor pollution are dependent on cooking practices, places used for cooking, as well as types of fuel used. According to the Kakamega County MICS, 23 percent of the population living in households using solid fuels for cooking, cook food in a separate room that is used as a kitchen. The percentage that had food cooked in separate room used as a kitchen is 25 percent in urban areas and 22 percent in rural areas. The proportion is higher for households with a head of household with secondary/higher education and for those in the richest 20 percent of the households than their counterparts.

Table CH.12: Solid fuel use by place of cooking

Percent distribution of household members in households using solid fuels by place of cooking, Kakamega County MICS, 2013/14

| | Place of cooking: | | | | | | | Number of household members in households using solid fuels for cooking |
| | In the house | | | | | | | |
	In a separate room used as kitchen	Elsewhere in the house	In a separate building	Outdoors	Other place	Missing	Total	
Total	**23.1**	**17.5**	**52.4**	**6.8**	**0.1**	**0.0**	**100.0**	**5,383**
Area								
Urban	24.5	18.5	47.2	9.7	0.0	0.0	100.0	2,411
Rural	21.9	16.7	56.6	4.5	0.2	0.0	100.0	2,972
Education of household head								
None	21.4	18.1	55.3	5.3	0.0	0.0	100.0	626
Primary	20.1	18.0	55.0	6.7	0.2	0.0	100.0	3,157
Secondary+	30.0	16.2	46.3	7.5	0.0	0.0	100.0	1,564
Wealth index quintile								
Poorest	19.8	37.1	38.8	4.3	0.0	0.0	100.0	1,120
Second	19.9	13.8	60.4	5.4	0.5	0.0	100.0	1,128
Middle	23.3	10.4	57.6	8.6	0.0	0.1	100.0	1,125
Fourth	16.9	10.5	65.2	7.4	0.0	0.0	100.0	1,117
Richest	38.7	15.5	36.7	9.0	0.0	0.0	100.0	893
Ethnicity of household head								
Luhya	22.8	17.0	53.5	6.6	0.1	0.0	100.0	5,022
Other ethnic group	26.8	25.0	37.8	10.4	0.0	0.0	100.0	361

5.3.4 Malaria/Fever

Malaria is a major cause of death of children under five years worldwide. In Kenya, malaria accounts for about 31 percent of outpatient consultations and five percent of hospital admissions.[45] The results of the Kenya Malaria Indicator Survey 2010 showed that children age 5–14 years had the highest prevalence of malaria (13 percent). The prevalence in children below five years increased from four percent in 2007 to eight percent in 2010. Malaria prevalence was also nearly three times as high in rural areas (12 percent)

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[45] President's Malaria Initiative – *Kenya Malaria Operational Plan FY 2014*

as in urban areas (5 percent).[46] Malaria transmission and infection risk in Kenya is determined largely by altitude, rainfall patterns and temperature. Preventive measures and treatment with an effective antimalarial can dramatically reduce malaria mortality rates among children.

In areas where malaria is common, WHO recommends indoor residual spraying (IRS), use of insecticide treated bednets (ITNs) and prompt treatment of cases with recommended anti-malarial drugs.

In 2010 the WHO issued a recommendation for universal use of diagnostic testing to confirm malaria infection and apply appropriate treatment based on the results. According to the guidelines, treatment solely on the basis of clinical suspicion should only be considered when a parasitological diagnosis is not accessible. This recommendation was based on studies that showed substantial reduction in the proportion of fever that are associated with malaria to a low level.[47] This recommendation implies that the indicator on proportion of children with fever that received antimalarial treatment is no longer an acceptable indicator of the level of treatment of malaria in the population of children under age five. However, as it remains the MDG indicator and for purposes of comparisons, as well as assessment of patterns across socio-demographic characteristics, the indicator remains a standard MICS indicator.

Children with severe malaria symptoms, such as fever and/or convulsions, should be taken to a health facility. Further, children recovering from malaria should be given extra liquids and food, and younger children should continue breastfeeding.

In Kenya, the Division of Malaria Control (DOMC) and Presidents Malaria Initiative (PMI), have put in place the following interventions for malaria control and case management: indoor residual spraying (IRS); distribution of insecticide-treated nets; intermittent preventive treatment of pregnant women (IPTp): provision of prompt diagnosis and effective treatment at all levels of the health care system; advocacy, communication and social mobilisation through Behaviour Change Communication (BCC); monitoring and evaluation; and health systems strengthening and integration. The Malaria Control Programme is guided by the National Malaria Communication Strategy 2010 – 2013; Kenya National Malaria Strategy 2009 – 2017 - Towards a Malaria-free Kenya; and the National Guidelines for the Diagnosis, Treatment and Prevention of Malaria in Kenya 2010.

Insecticide-treated mosquito nets, or ITNs, if used properly, are very effective in offering protection against mosquitos and other insects. The use of ITNs is one of the main health interventions implemented to reduce malaria transmission in Kenya. The questionnaire incorporated questions on the availability and use of bed nets, both at household level and among children under-5 years of age and pregnant women. In addition, all households in Kakamega County MICS were asked whether the interior dwelling walls were sprayed with an insecticide to kill or repel mosquitoes that spread malaria during the 12 months preceding the survey.

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[46]Division of Malaria Control [Ministry of Public Health and Sanitation], Kenya National Bureau of Statistics, and ICF Macro. 2011. *2010 Kenya Malaria Indicator Survey*. Nairobi, Kenya: DOMC, KNBS and ICF Macro.

[47]D'Acremont, V et al. 2010. *Reduction in the proportion of fevers associated with Plasmodium falciparum parasitaemia in Africa: a systematic review*. Malaria Journal 9(240).

In Kakamega County, the survey results indicate that 77 percent of households had at least one insecticide treated net (Table CH.13), and 45 percent at least one ITN for every two household members. Further, five percent of households received indoor residual spraying during the last 12 months, and 47 percent had at least one ITN for every two household members and/or received IRS during the last 12 months.

Table CH.13: Household availability of insecticide treated nets and protection by a vector control method

Percentage of households with at least one mosquito net, one insecticide treated net (ITN), and one long-lasting treated net, percentage of households with at least one mosquito net, one insecticide treated net (ITN) per two people, and one long-lasting treated net, percentage of households with at least one ITN and/or indoor residual spraying (IRS) in the last 12 months, and percentage of households with at least one ITN per two people and/or with indoor residual spraying (IRS) in the last 12 months, Kakamega County MICS, 2013/14

	Percentage of households with at least one mosquito net:			Percentage of households with at least one net for every two persons[a]:			Percentage of households with IRS in the past 12 months	Percentage of households with at least one ITN and/or IRS during the last 12 months[3]	Percentage of households with at least one ITN for every 2 persons and/or received IRS during the last 12 months[4]	Number of households
	Any mosquito net	Insecticide treated mosquito net (ITN)[1]	Long-lasting insecticidal treated net (LLIN)	Any mosquito net	Insecticide treated mosquito net (ITN)[2]	Long-lasting insecticidal treated net (LLIN)				
Total	**85.6**	**77.3**	**73.7**	**51.0**	**44.6**	**41.6**	**4.9**	**78.3**	**46.6**	**1,221**
Area										
Urban	85.5	76.7	74.7	53.3	47.1	44.2	6.6	77.8	49.9	614
Rural	85.8	78.0	72.8	48.8	42.0	38.9	3.1	78.8	43.3	607
Education of household head										
None	77.2	68.8	63.0	38.4	34.7	30.9	1.4	69.8	35.7	150
Primary	86.5	78.5	75.1	46.3	39.3	36.5	2.5	78.8	40.3	644
Secondary+	87.6	79.1	76.0	63.6	56.8	53.8	9.7	80.9	60.5	416
Wealth index quintile										
Poorest	81.6	73.4	68.2	36.5	30.9	28.9	2.3	73.6	32.3	246
Second	85.1	78.7	75.6	41.5	38.2	35.1	0.3	79.0	38.4	218
Middle	88.3	77.9	74.6	50.5	44.2	40.4	3.8	78.8	45.9	232
Fourth	89.2	77.4	73.9	58.8	47.9	44.3	2.7	78.8	49.5	234
Richest	84.4	79.0	76.1	64.7	58.6	55.9	13.2	81.1	63.1	292
Ethnicity of household head										
Luhya	85.9	77.8	73.9	50.0	43.4	40.3	4.4	78.6	45.1	1,101
Other ethnic group	82.6	73.3	72.4	60.6	55.4	53.7	9.6	76.4	60.9	120

[1] **MICS indicator 3.16a - Household availability of insecticide-treated nets (ITNs) - One+**

[2] **MICS indicator 3.16b - Household availability of insecticide-treated nets (ITNs) - One+ per 2 people**

[3] **MICS indicator 3.17a - Households covered by vector control - One+ ITNs**

[4] **MICS indicator 3.17b - Households covered by vector control - One+ ITNs per 2 people**

^a The numerators are based on number of usual (de jure) household members and does not take into account whether household members stayed in the household last night. MICS does not collect information on visitors to the household

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Tables CH.14 and CH.15 provide further insight on access to ITNs. Overall, 26 percent of individuals are estimated to have access to ITNs, i.e. they could sleep under an ITN if each ITN in the household was used by two people. Access is slightly higher in urban (28 percent) than in rural (25 percent) areas. Access to an ITN ranges from 13 percent in the poorest households to 42 percent in the richest households.

Table CH.14: Access to an insecticide treated net (ITN) - number of household members											
Percentage of household population with access to an ITN in the household, Kakamega County MICS, 2013/14											
	Number of ITNs owned by household:									Percentage with access to an ITN[a]	Number of household members[b]
	0	1	2	3	4	5	6	7	8 or more	Total	
Total	**22.7**	**22.2**	**24.1**	**19.7**	**6.0**	**2.9**	**2.1**	**0.2**	**0.2**	**100.0**	**26.0**	**5,666**
Number of household members											
1	43.0	42.8	12.3	1.1	0.7	0.0	0.0	0.0	0.0	100.0	57.0	168
2	33.6	35.4	22.1	6.5	2.4	0.0	0.0	0.0	0.0	100.0	31.0	232
3	22.8	29.9	25.0	18.8	2.2	0.9	0.4	0.0	0.0	100.0	47.3	461
4	18.8	22.8	28.8	22.6	4.7	1.2	1.0	0.0	0.0	100.0	29.6	764
5	13.0	7.9	37.9	30.8	6.9	2.0	1.5	0.0	0.0	100.0	41.2	803
6	19.7	12.1	34.2	22.1	5.2	3.6	3.1	0.0	0.0	100.0	11.9	975
7	15.4	11.0	15.7	28.6	16.4	8.3	4.6	0.0	0.0	100.0	29.3	748
8 or more	15.5	14.9	13.3	26.5	12.5	8.2	6.4	1.2	1.6	100.0	12.8	1,514

[a] Percentage of household population who could sleep under an ITN if each ITN in the household were used by up to two people

[b] The denominator is number of usual (de jure) household members and does not take into account whether household members stayed in the household last night. MICS does not collect information on visitors to the household

Table CH.15: Access to an insecticide treated net (ITN) - background characteristics

Percentage of household population with access to an ITN in the household, Kakamega County MICS, 2013/14

	Percentage with access to an ITN[a]	Number of household members[b]
Total	26.0	5,666
Area		
Urban	27.5	2,653
Rural	24.6	3,013
Wealth index quintile		
Poorest	12.9	1,131
Second	21.9	1,132
Middle	24.4	1,133
Fourth	28.7	1,135
Richest	42.0	1,135
Ethnicity of household head		
Luhya	25.2	5,243
Other ethnic group	36.1	422

[a] Percentage of household population who could sleep under an ITN if each ITN in the household were used by up to two people

[b] The denominator is number of usual (de jure) household members and does not take into account whether household members stayed in the household last night. MICS does not collect information on visitors to the household

Overall, 79 percent of ITNs were used during the night preceding the survey (Table CH.16). Eighty-one percent of household members in urban areas used ITNs during the night preceding the survey while 76 percent in rural areas.

Table CH.16: Use of ITNs

Percentage of insecticide treated nets (ITNs) that were used by anyone last night, Kakamega County MICS, 2013/14

	Percentage of ITNs used last night	Number of ITNs
Total	78.7	2,238
Area		
Urban	81.2	1,079
Rural	76.4	1,159
Wealth index quintile		
Poorest	81.7	352
Second	81.2	403
Middle	81.3	429
Fourth	79.9	468
Richest	72.4	587
Ethnicity of household head		
Luhya	79.6	2,041
Other ethnic group	69.6	197

As for children under the age of five years, who constitute an important vulnerable group, 71 percent slept under an ITN the night preceding the survey (Table CH.17). This figure rises to 83 percent considering only children living in a household with at least one ITN. The proportion of boys under-5 years who slept under an ITN the night preceding the survey is 68 percent while it is 73 percent for girls. Variations are evident by type of place of residence; 75 percent in urban areas and 66 in rural areas.

Table CH.17: Children sleeping under mosquito nets

Percentage of children age 0-59 months who slept under a mosquito net last night, by type of net, Kakamega County MICS, 2013/14

	Percentage of children age 0-59 who spent last night in the interviewed households	Number of children age 0-59 months	Percentage of children under age five who the previous night slept under:				Number of children age 0-59 months who spent last night in the interviewed households	Percentage of children 0-59 months who slept under an ITN last night in households with at least one ITN	Number of children age 0-59 living in households with at least one ITN
			Any mosquito net	An insecticide treated net (ITN)[1]	A Long-lasting insecticidal treated net (LLIN)	An ITN or in a dwelling sprayed with IRS in the past 12 months			
Total	**97.2**	**806**	**77.9**	**70.5**	**67.5**	**70.7**	**784**	**82.7**	**668**
Sex									
Male	97.3	388	75.5	67.6	64.8	67.7	377	80.5	317
Female	97.1	418	80.2	73.2	69.9	73.5	406	84.7	351
Area									
Urban	96.5	405	84.6	75.4	73.0	75.4	390	90.4	326
Rural	97.9	401	71.3	65.7	62.0	66.1	393	75.4	342
Age									
0-11 months	98.0	151	84.3	78.3	75.4	78.6	148	89.0	130
12-23 months	98.7	161	78.8	72.6	69.2	72.6	159	85.7	134
24-35 months	97.1	150	72.6	63.7	60.9	64.1	146	76.3	122
36-47 months	95.9	205	76.2	66.9	63.3	66.9	196	81.7	161
48-59 months	96.6	140	78.3	71.9	70.0	72.3	135	80.4	121
Mother's education									
None	99.4	62	75.2	60.6	54.0	60.6	62	(73.7)	51
Primary	97.7	522	75.9	68.8	66.3	69.1	510	79.6	441
Secondary+	95.3	222	83.6	77.5	74.3	77.5	211	93.1	176
Wealth index quintile									
Poorest	97.6	207	76.5	66.4	62.0	66.9	202	78.9	170
Second	98.1	176	79.3	71.2	68.6	71.2	173	81.6	151
Middle	98.3	154	76.4	69.2	68.9	69.2	151	84.9	123
Fourth	97.7	158	77.0	70.0	65.8	70.3	155	82.6	131
Richest	92.9	111	82.1	80.1	76.8	80.1	103	88.9	93

Ethnicity of household head

Luhya	97.1	764	77.4	69.7	66.7	69.9	741	82.0	630
Other ethnic group	(100.0)	42	(86.8)	(84.4)	(81.9)	(84.4)	42	(95.0)	37

[1] MICS indicator 3.18; MDG indicator 6.7 - Children under age 5 sleeping under insecticide-treated nets (ITNs)

( ) Figures that are based on 25-49 unweighted cases

Table CH.18 gives further insight into the use of mosquito nets by household members of any age, 62 percent who slept under an ITN the night prior to the survey. This figure increases to 75 percent considering only household members living in a household with at least one ITN. Overall, 63 percent of household members slept under an ITN the previous night or in a dwelling which had IRS in the past 12 months. In urban areas, 66 percent of household members slept under an ITN the night preceding the survey while the figure is 58 percent in rural areas. Women were more likely to sleep under an ITN than men as 65 percent slept under an ITN compared with 59 percent for men. Variations were also noted by education of head of household and by household wealth.

Table CH.18: Use of mosquito nets by the household population

Percentage of household members who slept under a mosquito net last night, by type of net, Kakamega County MICS, 2013/14

	Percentage of household members who the previous night slept under:				Number of household members who spent the previous night in the interviewed households	Percentage of household members who slept under an ITN last night in households with at least one ITN	Number of household members in households with at least one ITN
	Any mosquito net	An insecticide treated net (ITN)[1]	A Long-lasting insecticidal treated net (LLIN)	An ITN or in a dwelling sprayed with IRS in the past 12 months			
Total	**69.4**	**61.6**	**58.2**	**62.5**	**5,265**	**75.2**	**4,316**
Sex							
Male	66.1	58.6	55.1	59.6	2,563	71.9	2,088
Female	72.6	64.5	61.2	65.3	2,702	78.3	2,228
Area							
Urban	75.0	65.7	63.4	66.8	2,436	81.5	1,964
Rural	64.6	58.1	53.8	58.9	2,829	69.9	2,352
Age							
0-4[a]	78.2	70.3	67.4	70.5	806	82.8	684
5-14	62.6	54.7	51.7	55.4	1,655	66.6	1359
15-34	64.6	57.7	54.8	59.0	1,551	70.4	1,272
35-49	79.3	72.8	67.2	73.9	616	88.5	507
50+	78.3	67.3	63.3	68.7	634	87.0	490
Education of household head							
None	61.1	53.7	46.8	54.0	598	69.1	464
Primary	68.1	60.7	58.1	61.2	3,046	74.0	2,500
Secondary+	75.1	66.6	63.0	68.2	1,585	79.5	1,328
Missing/DK	(68.7)	(54.5)	(48.8)	(62.2)	36	(*)	23
Wealth index quintile							
Poorest	64.8	57.1	53.7	57.6	1,073	72.3	848
Second	63.4	56.6	53.3	56.8	1,071	70.3	862
Middle	70.9	62.1	58.5	62.8	1,069	75.1	885
Fourth	73.7	63.3	60.3	64.5	1,070	77.6	872
Richest	74.7	69.6	65.9	71.7	982	80.7	848
Ethnicity of household head							
Luhya	69.5	61.8	58.3	62.5	4,896	75.0	4,033
Other ethnic group	68.6	59.7	57.7	62.3	370	78.1	283
[1] MICS indicator 3.19 - Population that slept under an ITN							

[a] The results of the age group 0-4 years do not match those in Table CH.18, which is based on completed under-5 interviews only. The two tables are computed with different sample weights.	
( ) Figures that are based on 25-49 unweighted cases	

Table CH.19 provides information on care-seeking behaviour during an episode of fever in the past two weeks. As shown in Table CH.19, advice was sought from a health facility or a qualified health care provider for half of the children with fever; these services were provided mainly by the public sector (40 percent). Advice was sought from a health facility or provider for 54 percent of male cases while the percentage is 46 percent for females. However, no advice or treatment was sought in 25 percent of the cases.

Table CH.19: Care-seeking during fever

Percentage of children age 0-59 months with fever in the last two weeks for whom advice or treatment was sought, by source of advice or treatment, Kakamega County MICS, 2013/14

	Public	Private	Community health provider[a]	Other source	A health facility or provider[1, b]	No advice or treatment sought	Number of children with fever in last two weeks
Total	39.8	25.8	1.6	9.8	49.7	25.0	221
Sex							
Male	43.1	24.7	0.8	7.6	54.2	25.4	104
Female	36.9	26.8	2.2	11.7	45.8	24.6	117
Area							
Urban	39.3	33.5	0.0	11.8	51.3	15.3	106
Rural	40.2	18.8	3.0	7.9	48.3	33.9	115
Ethnicity of household head							
Luhya	39.3	25.2	1.7	10.4	48.6	25.5	208
Other ethnic group	(*)	(*)	(*)	(*)	(*)	(*)	14

[1] **MICS indicator 3.20 - Care-seeking for fever**

[a] Community health providers include both public (*Community health worker* and *Mobile/Outreach clinic*) and private (*Mobile clinic*) health facilities

[b] Includes all public and private health facilities and providers as well as shops

(*) Figures that are based on fewer than 25 unweighted cases

Mothers were asked to report all of the medicines given to a child to treat the fever, including both medicines given at home and medicines given or prescribed at a health facility. Artemisinin-based Combination therapy (ACT) is the first line antimalarial recommended by the WHO and used in the country. In addition, confirmation of malaria is done on all fever cases through a malaria test.

Twelve percent of children with fever in the last two weeks preceding the survey were treated with an artemisinin-based combination therapy (ACT) while 26 percent received another antimalarial (Table CH.20).

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Table CH.20: Treatment of children with fever

Percentage of children age 0-59 months who had a fever in the last two weeks, by type of medicine given for the illness, Kakamega County MICS, 2013/14

	Children with a fever in the last two weeks who were given:													Number of children with fever in last two weeks
	Anti-malarials						Other medications							
	SP/ Fansidar	Chloroquine	Amodia-quine	Quinine	Artemisinin-based Combination Therapy (ACT)	Other anti-malarial	Antibiotic pill or syrup	Antibiotic injection	Paracetamol/ Panadol/ Acetaminophen	Aspirin	Ibuprofen	Other	Missing/DK	
Total	**2.1**	**0.0**	**2.5**	**2.6**	**12.4**	**26.0**	**48.6**	**2.5**	**54.4**	**1.0**	**1.5**	**12.4**	**0.5**	**221**
Sex														
Male	3.9	0.0	1.5	1.6	11.3	24.3	51.5	3.6	51.4	0.5	1.5	10.0	0.6	104
Female	0.6	0.0	3.4	3.5	13.4	27.6	46.1	1.6	57.1	1.5	1.5	14.6	0.4	117
Area														
Urban	1.2	0.0	2.1	2.8	15.6	35.1	47.8	1.6	60.5	1.6	2.4	14.2	0.0	106
Rural	3.0	0.0	2.9	2.4	9.4	17.7	49.4	3.4	48.8	0.4	0.6	10.8	0.9	115
Ethnicity of household head														
Luhya	2.3	0.0	2.4	2.3	11.4	26.1	47.5	2.7	54.8	1.1	1.1	11.0	0.5	208
Other ethnic group	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	14

(*) Figures that are based on fewer than 25 unweighted cases

Overall, 24 percent of children with a fever in the previous two weeks had blood taken from a finger or heel for testing (table CH.21). Thirty-two percent of males and 17 percent of females had their blood taken for testing. In urban areas, the proportion is 29 percent of the children while it is 19 percent in rural areas. In total, 28 percent of children with fever who received antimalarial treatment, were treated with an ACT.

Table CH.21: Diagnostics and anti-malarial treatment of children

Percentage of children age 0-59 months who had a fever in the last two weeks who had a finger or heel stick for malaria testing, who were given Artemisinin-combination Treatment (ACT) and any anti-malarial drugs, and percentage who were given ACT among those who were given anti-malarial drugs, Kakamega County MICS, 2013/14

	Percentage of children who:					Number of children age 0-59 months with fever in the last two weeks	Treatment with Artemisinin-based Combination Therapy (ACT) among children who received anti-malarial treatment[3]	Number of children age 0-59 months with fever in the last two weeks who were given any antimalarial drugs
	Had blood taken from a finger or heel for testing[1]	Were given:						
		Artemisinin-combination Treatment (ACT)	ACT the same or next day	Any antimalarial drugs[2]	Any antimalarial drugs same or next day			
Total	**23.9**	**12.4**	**7.2**	**45.0**	**23.5**	**221**	**27.5**	**100**
Sex								
Male	32.2	11.3	5.3	41.7	19.7	104	(27.1)	43
Female	16.6	13.4	8.8	47.9	26.9	117	27.9	56
Area								
Urban	28.9	15.6	9.9	56.7	31.0	106	(27.5)	60
Rural	19.3	9.4	4.6	34.2	16.6	115	27.5	39
Mother's education								
None	(*)	(*)	(*)	(*)	(*)	19	(*)	6
Primary	25.0	8.7	5.3	48.8	25.6	143	17.9	70
Secondary+	26.9	22.0	13.8	39.6	19.7	59	(*)	24
Ethnicity of household head								
Luhya	21.2	11.4	7.0	43.7	22.3	208	26.1	91
Other ethnic group	(*)	(*)	(*)	(*)	(*)	14	(*)	9

[1] **MICS indicator 3.21 - Malaria diagnostics usage**

[2] **MICS indicator 3.22; MDG indicator 6.8 - Anti-malarial treatment of children under age 5**

[3] **MICS indicator 3.23 - Treatment with Artemisinin-based Combination Therapy (ACT) among children who received anti-malarial treatment**

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

Table CH.22 presents the source of antimalarial for children under five years who were treated with an antimalarial. Forty-five percent of children with a fever in the last two weeks preceding the survey were treated with an antimalarial. Treatment was obtained from a health facility or provider in 92 percent of the cases treated with antimalarials, mostly from public health facilities (52 percent).

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Table CH.22: Source of anti-malarial

Percentage of children age 0-59 months with fever in the last two weeks who were given anti-malarial by the source of anti-malarial, Kakamega County MICS, 2013/14

| | Percentage of children who were given anti-malarial | Number of children age 0-59 months with fever in the last two weeks | Health facilities or providers | | | | A health facility or provider[b] | Number of children age 0-59 months who were given anti-malarial as treatment for fever in the last two weeks |
			Public	Private	Community health provider[a]	Other source		
Total	**45.0**	**221**	**52.4**	**31.0**	**2.6**	**16.1**	**91.5**	**100**
Sex								
Male	41.7	104	(61.4)	(29.3)	(1.9)	(9.3)	(98.6)	43
Female	47.9	117	45.6	32.2	3.1	21.3	85.9	56
Area								
Urban	56.7	106	47.3	31.2	0.0	21.5	87.6	60
Rural	34.2	115	60.3	30.6	6.5	7.9	97.3	39

[a] Community health providers include both public (*Community health worker and Mobile/Outreach clinic*) and private (*Mobile clinic*) health facilities

[b] Includes all public and private health facilities and providers as well as shops

( ) Figures that are based on 25-49 unweighted cases

Pregnant women living in places where malaria is highly prevalent are highly vulnerable to malaria. Once infected, pregnant women risk anaemia, premature delivery and stillbirth. Their babies are at increased risk of low birth weight, which carries an increased risk of dying in infancy.[48] For this reason, steps are taken to protect pregnant women by distributing insecticide-treated mosquito nets and mobilizing for their consistent use; and treatment during antenatal check-ups with drugs that prevent malaria infection (Intermittent preventive treatment/IPT). WHO recommends that in areas of moderate-to-high malaria transmission, all pregnant women be provided an intermittent preventive treatment with Sulfadoxine-Pyrimethamine (SP) at every scheduled antenatal care visit. In the Kakamega County MICS, women were asked of the medicines they had received to prevent malaria in their last pregnancy during the 2 years preceding the survey. Women are considered to have received intermittent preventive therapy if they have received at least 3 doses of SP/Fansidar during the pregnancy, at least one of which was taken during antenatal care.

Table CH.23 presents the proportion of pregnant women who slept under a mosquito net during the previous night before the survey. Eighty-two percent of pregnant women slept under any mosquito net the night prior to the survey and 80 percent slept under an insecticide-treated net. This figure rises to 94 percent if we only consider those living in a household with at least one ITN.

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[48]Shulman, CE and Dorman, EK. 2003. *Importance and prevention of malaria in pregnancy*. Trans R Soc Trop Med Hyg 97(1): 30–55.

Table CH.23: Pregnant women sleeping under mosquito nets

Percentage of pregnant women age 15-49 years who slept under a mosquito net last night, by type of net, Kakamega County MICS, 2013/14

	Percentage of pregnant women who spent last night in the interviewed households	Number of pregnant women age 15-49 years	Percentage of pregnant women age 15-49 years who the previous night slept under:				Number of pregnant women who spent last night in the interviewed households	Percentage of pregnant women who slept under an ITN last night in households with at least one ITN	Number of pregnant women age 15-49 years living in households with at least one ITN
			Any mosquito net	An insecticide treated net (ITN)[1]	A Long-lasting insecticidal treated net (LLIN)	An ITN or in a dwelling sprayed with IRS in the past 12 months			
Total	**100.0**	**56**	**82.0**	**79.5**	**74.4**	**79.5**	**56.2**	**93.7**	**48**

[1] **MICS indicator 3.24 - Pregnant women who slept under an insecticide treated net (ITN)**

Intermittent preventive treatment for malaria in pregnant women who gave birth in the two years preceding the survey is presented in Table CH.24. Overall, 85 percent of women age 15-49 years who had a live birth during the two years preceding the survey took any medicine to prevent malaria at any ANC visit during pregnancy. About a quarter of the women received SP/Fansidar at least three or more times during an ANC visit. The proportion in urban areas that received SP/Fansidar three or more times during ANC was 26 percent compared to 24 percent in rural areas.

Table CH.24: Intermittent preventive treatment for malaria

Percentage of women age 15-49 years who had a live birth during the two years preceding the survey and who received intermittent preventive treatment (IPT) for malaria during pregnancy at any antenatal care visit, Kakamega County MICS, 2013/14

| | | | | Percentage of pregnant women: | | | | |
| | | | Who took any medicine to prevent malaria at any ANC visit during pregnancy | who took SP/Fansidar at least once during an ANC visit and in total took: | | | | Number of women with a live birth in the last two years and who received antenatal care |
	Percentage of women who received antenatal care (ANC)	Number of women with a live birth in the last two years		At least once	Two or more times	Three or more times[1]	Four or more times	
Total	**84.7**	**306**	**84.9**	**50.4**	**33.7**	**24.9**	**9.8**	**259**
Area								
Urban	82.5	168	85.5	50.4	37.0	26.1	10.6	139
Rural	87.4	138	84.3	50.4	29.9	23.6	8.9	120
Education								
None	(*)	13	(*)	(*)	(*)	(*)	(*)	10
Primary	82.0	195	82.0	47.1	27.6	21.2	6.9	160
Secondary+	90.8	99	90.9	55.9	45.6	33.5	15.9	90
Wealth index quintile								
Poorest	87.1	79	87.4	52.1	28.7	16.9	2.2	69
Second	84.5	69	85.4	46.9	29.9	24.4	5.4	58
Middle	77.1	58	(86.8)	(49.3)	(35.3)	(28.2)	(17.1)	45
Fourth	82.0	57	(84.8)	(62.9)	(42.8)	(31.6)	(15.0)	47
Richest	(94.3)	43	(78.0)	(39.3)	(35.6)	(28.2)	(15.1)	41
Ethnicity of household head								
Luhya	84.2	289	84.6	49.4	33.6	24.8	9.6	243
Other ethnic group	(*)	17	(*)	(*)	(*)	(*)	(*)	16

[1] **MICS indicator 3.25 - Intermittent preventive treatment for malaria**

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

6. Water and Sanitation

Safe drinking water is a basic necessity for good health. Unsafe drinking water can be a significant determinant of diseases such as cholera, typhoid, and schistosomiasis. Drinking water can also be contaminated with chemical and physical contaminants with harmful effects on human health. In addition to preventing disease, improved access to drinking water may be particularly important for women and children, especially in rural areas, who bear the primary responsibility for carrying water, often for long distances.[49]

Inadequate disposal of human excreta and personal hygiene is associated with a range of diseases including diarrhoeal diseases and polio and is an important determinant for stunting. Improved sanitation can reduce diarrheal disease by more than a third,[50] and can significantly lessen the adverse health impacts of other disorders responsible for death and disease among millions of children in developing countries.

The goal of MDG 7 is to reduce by half, between 1990 and 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.

For more details on water and sanitation, and to access some reference documents, please visit data.unicef.org[51] or the website of the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation.[52]

The Kenya National Water Policy of 2012 was developed in response to the mandate, vision and mission of the ministry responsible for water affairs in the country. The policy takes into account requirements of the Constitution of Kenya 2010;[53] the Kenya Vision 2030; the Millennium Development Goals (MDGs), and other national policies and strategies.[54]

6.1 Use of Improved Water Sources

The distribution of the population by main source of drinking water is shown in Table WS.1. The population using improved sources of drinking water are those using any of the following types of supply: piped water (into dwelling, compound, yard or plot, to neighbour, public tap/standpipe), tubewell/borehole, protected well, protected spring, and rainwater collection. Bottled water is considered as an improved water source only if the household is using an improved water source for handwashing and cooking.

In Kakamega County, 79 percent of the population use an improved source of drinking water – 87 percent in urban areas and 73 percent in rural areas (Table WS.1). There is a positive correlation between the proportion of the population using an improved source of drinking water with wealth

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[49]WHO/UNICEF. 2012. *Progress on Drinking water and Sanitation: 2012 update*.
[50]Cairncross, S et al. 2010. *Water, sanitation and hygiene for the prevention of diarrhoea*. International Journal of Epidemiology 39: i193-i205
[51]http://data.unicef.org/water-sanitation
[52]http:// www.wssinfo.org
[53] Constitution of Kenya of 2010 [Promulgated on 25Th August 2010]
[54] Ministry of Water and Irrigation. 2012. The National Water Policy 2012

and education of the head of household. The proportion is 76 percent for heads of households with no education, 78 percent for those with primary education, and 84 percent for those with secondary and higher education. The improved drinking water sources for the population varied strongly by urban/rural area and by type of water source. In urban areas, 58 percent of the population use drinking water that is from a public tap/standpipe, 16 percent use piped water into their dwelling or into their yard or plot and seven percent use water from a tube-well/borehole. In rural areas the improved drinking water sources mainly used are protected well/spring (61 percent), and tube well/borehole (6 percent).

Table WS.1: Use of improved water sources

Percent distribution of household population according to main source of drinking water and percentage of household population using improved drinking water sources, Kakamega County MICS, 2013/14

	Main source of drinking water															Percentage using improved sources of drinking water[1]	Number of household members
	Improved sources									Unimproved sources							
	Piped water																
	Into dwelling	Into yard/plot	To neighbour	Public tap/ stand-pipe	Tube-well/ bore-hole	Protected well	Protected spring	Rain-water collection	Bottled water[a]	Unprotected well	Unprotected spring	Tanker truck	Surface water	Total			
Total	**4.4**	**3.9**	**1.3**	**2.8**	**6.0**	**16.3**	**43.3**	**1.3**	**0.0**	**4.1**	**5.5**	**0.2**	**10.8**	**100.0**	**79.4**	**5,666**
Area																
Urban	9.5	6.4	1.5	3.4	6.5	21.4	36.6	1.6	0.1	3.5	2.0	0.0	7.5	100.0	87.0	2,653
Rural	0.0	1.7	1.0	2.4	5.5	11.9	49.3	1.0	0.0	4.6	8.7	0.4	13.8	100.0	72.6	3,013
Education of household head																
None	0.0	1.1	1.4	4.2	7.0	18.4	43.6	0.0	0.0	2.0	9.8	0.0	12.4	100.0	75.8	630
Primary	1.0	2.3	1.1	2.8	5.8	14.6	49.3	0.7	0.0	4.1	5.9	0.0	12.4	100.0	77.6	3,216
Secondary+	12.3	7.9	1.5	2.4	6.0	18.6	32.1	2.8	0.1	4.7	3.6	0.3	7.6	100.0	83.8	1,781
Wealth index quintile																
Poorest	0.0	0.0	0.0	2.3	2.7	5.9	67.2	0.0	0.0	2.7	7.0	0.5	11.6	100.0	78.2	1,131
Second	0.0	0.0	0.5	2.9	3.0	12.3	51.2	0.0	0.0	4.7	10.2	0.0	15.2	100.0	69.9	1,132
Middle	0.0	0.6	1.5	2.0	7.7	20.0	41.0	0.0	0.0	6.0	6.2	0.0	15.1	100.0	72.7	1,133
Fourth	0.0	2.9	1.5	5.2	8.0	28.2	36.6	2.4	0.0	4.1	2.8	0.0	8.3	100.0	84.8	1,135
Richest	22.2	16.0	2.7	1.7	8.5	15.2	20.7	3.9	0.2	2.8	1.6	0.5	3.9	100.0	91.2	1,135
Ethnicity of household head																
Luhya	3.3	3.5	1.2	2.6	6.0	16.4	44.4	1.2	0.0	4.1	5.9	0.2	11.2	100.0	78.6	5,243
Other ethnic group	19.2	9.1	2.0	5.6	5.1	15.6	29.5	2.3	0.6	3.8	1.0	0.0	6.2	100.0	89.1	422

[1] MICS indicator 4.1; MDG indicator 7.8 - Use of improved drinking water sources

[a]Households using bottled water as the main source of drinking water are classified into improved or unimproved drinking water users according to the water source used for other purposes such as cooking and handwashing. There were no cases for bottled water as a source under 'unimproved sources'.

( ) Figures that are based on 25-49 unweighted cases

The sources of drinking water used in Kakamega County are depicted in Figure WS.1. The majority of the population (60 percent) used protected wells or springs, followed by piped water from a public tap/stand-pipe or neighbour (12 percent) and tanker truck/surface water (11 percent).

Figure WS.1: Percent distribution of household members by source of drinking water, Kakamega County MICS, 2013/14
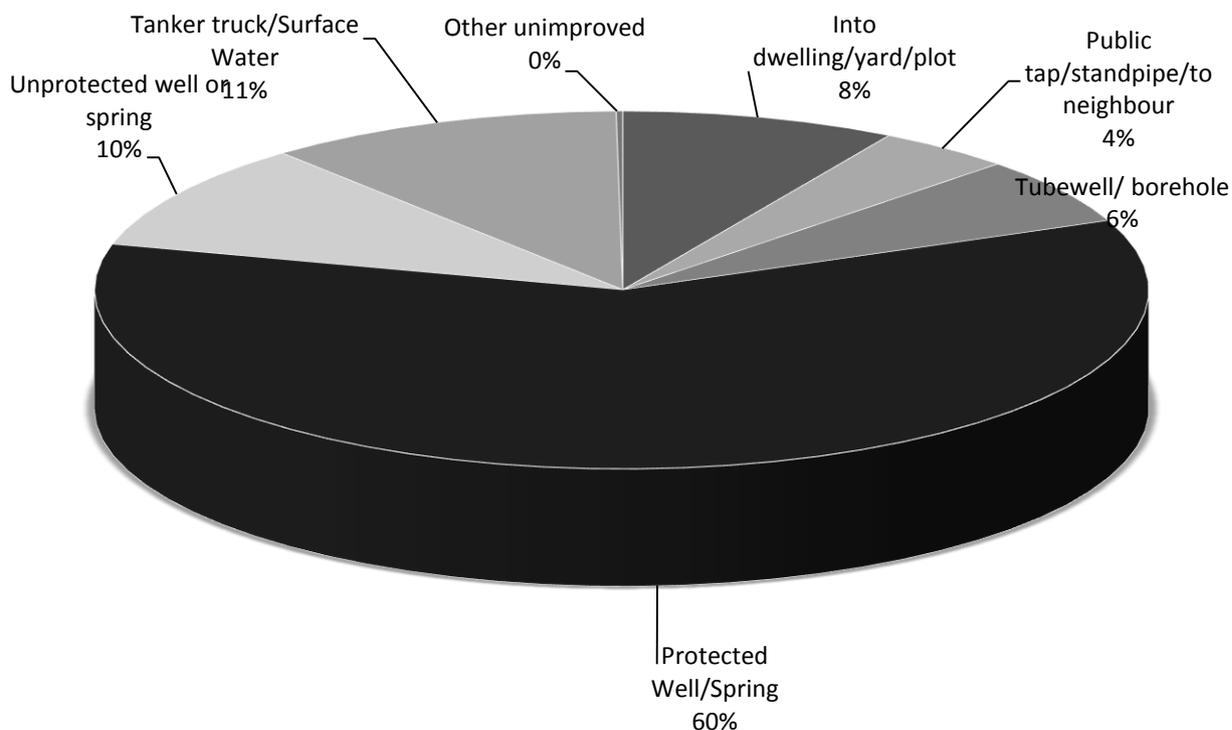
Use of household water treatment is presented in Table WS.2. Households were asked about ways they may be treating water at home to make it safer to drink. Boiling water, adding bleach or chlorine, using a water filter, and using solar disinfection are considered as effective treatment of drinking water. The table shows water treatment by all household members and the percentage of those living in households using unimproved water sources but using appropriate water treatment methods. Fifty-six percent of household members in households using unimproved drinking water sources are using an appropriate water treatment method. The main method of water treatment is the addition of bleach/chlorine to the drinking water.

Table WS.2: Household water treatment

Percentage of household population by drinking water treatment method used in the household, and for household members living in households where an unimproved drinking water source is used, the percentage who are using an appropriate treatment method, Kakamega County MICS, 2013/14

	Water treatment method used in the household							Number of household members	Percentage of household members in households using unimproved drinking water sources and using an appropriate water treatment method[1]	Number of household members in households using unimproved drinking water sources
	None	Boil	Add bleach/ chlorine	Strain through a cloth	Use water filter	Let it stand and settle	Other			
Total	29.4	10.5	39.3	4.6	14.3	2.6	17.4	5,666	56.0	1,168
Area										
Urban	30.0	11.3	40.2	4.0	10.9	1.4	16.5	2,653	59.8	344
Rural	28.8	9.9	38.5	5.0	17.3	3.7	18.3	3,013	54.5	825
Main source of drinking water										
Improved	28.5	10.5	41.9	4.1	12.7	2.9	17.6	4,497	na	na
Unimproved	32.8	10.9	29.2	6.2	20.6	1.5	16.9	1,168	56.0	1,168
Education of household head										
None	31.2	9.6	33.9	1.7	18.0	4.3	18.5	630	50.5	152
Primary	32.2	8.2	37.0	4.3	14.4	3.2	18.8	3,216	53.8	721
Secondary+	23.4	15.3	45.2	6.2	12.9	1.1	15.1	1,781	63.6	289
Wealth index quintile										
Poorest	35.7	8.1	30.2	3.4	12.8	2.5	19.1	1,131	48.7	247
Second	36.2	8.5	31.1	4.3	15.9	2.3	17.5	1,132	53.4	341
Middle	26.2	6.7	40.7	4.5	16.4	2.8	19.3	1,133	51.0	309
Fourth	21.5	11.1	49.9	7.5	19.4	4.8	18.0	1,135	75.0	172
Richest	27.5	18.2	44.4	3.1	7.1	0.6	13.2	1,135	66.0	99
Ethnicity of household head										
Luhya	28.9	9.9	39.7	4.7	15.0	2.4	17.7	5,243	56.4	1,122
Other ethnic group	36.1	18.8	33.9	2.4	6.2	4.6	14.4	422	(47.5)	46
[1] MICS indicator 4.2 - Water treatment										

na: not applicable

The amount of time it takes to obtain water is presented in Table WS.3 and the person who usually collects the water in Table WS.4. Note that for Table WS.3, household members using water on premises are also shown in this table and for others, the results refer to one roundtrip from home to drinking water source. Information on the number of trips made in one day was not collected.

Table WS.3 shows that for 22 percent of the household population, the drinking water source is on premises. The availability of water on premises is associated with greater use, better family hygiene and better health outcomes. For a water collection round trip of 30 minutes or more it has been observed that households carry progressively less water and are likely to compromise on the minimal basic drinking water needs of the household.[55] For a quarter of the household population, it takes the household member 30 minutes or more to go to the water source, get water, and return home from improved or unimproved water sources. About 21 percent of those using an improved drinking water source spend 30 minutes or more per round trip. In rural areas a higher percentage of household members live in households that spend more time in collecting water compared to those in urban areas. Similarly, members who live in poor households spent more time collecting water from a water source than those in rich households.

Table WS.3: Time to source of drinking water

Percent distribution of household population according to time to go to source of drinking water, get water and return, for users of improved and unimproved drinking water sources, Kakamega County MICS, 2013/14

| | Time to source of drinking water | | | | | | | | | |
| | Users of improved drinking water sources | | | | Users of unimproved drinking water sources | | | | | Number of household members |
	Water on premises	Less than 30 minutes	30 minutes or more	Missing/DK	Water on premises	Less than 30 minutes	30 minutes or more	Missing/DK	Total	
Total	**21.8**	**35.5**	**20.9**	**1.1**	**2.7**	**12.2**	**5.4**	**0.3**	**100.0**	**5,666**
Area										
Urban	34.6	30.2	20.9	1.4	2.3	8.1	2.2	0.4	100.0	2,653
Rural	10.6	40.2	20.9	0.9	3.0	15.9	8.2	0.3	100.0	3,013
Education of household head										
None	9.8	39.2	21.9	4.9	0.3	13.8	10.1	0.0	100.0	630
Primary	14.2	39.0	23.7	0.7	2.9	13.1	5.9	0.6	100.0	3,216
Secondary+	39.8	28.1	15.6	0.2	3.2	10.1	2.9	0.0	100.0	1,781
Wealth index quintile										
Poorest	1.6	45.1	30.8	0.7	0.5	13.9	7.0	0.5	100.0	1,131
Second	4.4	38.5	24.3	2.7	4.4	13.6	11.0	1.1	100.0	1,132
Middle	11.2	43.7	16.6	1.2	2.5	20.6	4.2	0.0	100.0	1,133
Fourth	25.2	37.7	21.4	0.6	2.8	8.4	4.0	0.0	100.0	1,135
Richest	66.5	12.7	11.6	0.5	3.2	4.8	0.8	0.0	100.0	1,135
Ethnicity of household head										
Luhya	19.7	36.1	21.7	1.2	2.7	12.7	5.6	0.3	100.0	5,243
Other ethnic group	48.7	27.9	11.7	0.7	2.3	6.5	2.1	0.0	100.0	422

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[55]Cairncross, S and Cliff, JL. 1987. *Water use and Health in Mueda, Mozambique*. Transactions of the Royal Society of Tropical Medicine and Hygiene 81: 51-4.

Table WS.4 shows that for the majority of households (78 percent), an adult female usually collects drinking water when the source was not on the premises. Adult men collect water in only 12 percent of cases, while for the rest of the households, female (7 percent) or male (3 percent) children under 15 years collected water.

Table WS.4: Person collecting water								
Percentage of households without drinking water on premises, and percent distribution of households without drinking water on premises according to the person usually collecting drinking water used in the household, Kakamega County MICS, 2013/14								
	Percentage of households without drinking water on premises	Number of households	Person usually collecting drinking water					Number of households without drinking water on premises
			Adult woman	Adult man	Female child under age 15	Male child under age 15	Missing/ DK	Total	
Total	**71.3**	**1,221**	**77.5**	**12.3**	**6.7**	**2.9**	**0.6**	**100.0**	**870**
Area									
Urban	56.6	614	81.4	11.7	4.4	1.5	1.0	100.0	348
Rural	86.1	607	74.9	12.7	8.3	3.9	0.3	100.0	523
Education of household head									
None	87.6	150	67.6	15.0	10.6	5.5	1.3	100.0	132
Primary	80.6	644	81.2	10.0	5.7	2.4	0.7	100.0	519
Secondary+	51.0	416	75.1	15.7	6.6	2.6	0.0	100.0	212
Wealth index quintile									
Poorest	98.0	246	77.6	12.8	6.6	3.0	0.0	100.0	241
Second	90.5	218	82.7	7.1	7.5	2.7	0.0	100.0	197
Middle	84.0	232	80.2	9.6	6.3	2.6	1.2	100.0	195
Fourth	69.4	234	73.7	16.3	5.8	3.2	1.0	100.0	162
Richest	25.8	292	63.8	22.7	8.4	3.6	1.4	100.0	75
Ethnicity of household head									
Luhya	74.1	1,101	78.7	11.2	6.6	3.0	0.5	100.0	816
Other ethnic group	45.1	120	59.1	28.1	9.2	1.6	1.9	100.0	54

6.2 Use of Improved Sanitation

Inadequate disposal of human excreta and personal hygiene are associated with a range of diseases including diarrhoeal diseases and polio and are important determinants of stunting. Improved sanitation can reduce diarrhoeal disease by more than a third[56], and can substantially lessen the adverse health impacts of other disorders among millions of children in many countries.

An improved sanitation facility is defined as one that hygienically separates human excreta from human contact. Improved sanitation facilities for excreta disposal include flush or pour flush to a piped sewer system, septic tank, or pit latrine; ventilated improved pit latrine, pit latrine with slab, and use of a composting toilet. The data on the use of improved sanitation facilities in Kakamega County is provided in Table WS.5.

Sixty-five percent of the population are living in households using improved sanitation facilities (Table WS.5). This percentage is 68 percent in urban areas and 63 percent in rural areas. In rural areas, the population primarily uses pit latrines: 55 percent use pit latrines with slabs while 37 percent use

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[56]Cairncross, S. 2010. *Water, sanitation and hygiene for the prevention of diarrhoea*. Int. J. Epidemiology 39: i193-i205.

unimproved pit latrines without slab/open pit. The pattern is similar in urban areas where 46 percent use improved pit latrines with slabs and 31 percent use pit latrines without slab/open pit. Other improved sanitation facilities such flush/pour flush facilities (12 percent) and ventilated improved pit latrine (9 percent) are less commonly used. The results indicate that about 1 percent of households had no toilet facilities and practice open defecation. Only the richest quintile uses facilities connected to a piped sewer system.

Table WS.5: Types of sanitation facilities

Percent distribution of household population according to type of toilet facility used by the household, Kakamega County MICS, 2014/15

	Type of toilet facility used by household										
	Improved sanitation facility						Unimproved sanitation facility				
	Flush/Pour flush to:										
	Piped sewer system	Septic tank	Pit latrine	Unknown place/not sure/DK where	Ventilated improved pit latrine	Pit latrine with slab	Pit latrine without slab/ open pit	Missing /DK	Open defecation (no facility, bush, field)	Total	Number of household members
Total	**4.0**	**1.9**	**0.2**	**0.0**	**7.9**	**51.1**	**34.0**	**0.3**	**0.5**	**100.0**	**5,666**
Area											
Urban	8.5	3.5	0.2	0.1	9.1	46.3	31.2	0.2	0.9	100.0	2,653
Rural	0.0	0.5	0.3	0.0	6.8	55.4	36.5	0.4	0.1	100.0	3,013
Education of household head											
None	0.0	0.0	0.2	0.0	8.0	56.9	33.0	1.9	0.0	100.0	630
Primary	0.7	0.8	0.2	0.0	4.5	51.5	41.3	0.2	0.7	100.0	3,216
Secondary+	11.4	4.6	0.2	0.0	14.1	48.1	21.4	0.0	0.2	100.0	1,781
Wealth index quintile											
Poorest	0.0	0.0	0.1	0.0	1.5	45.9	51.1	0.0	1.3	100.0	1,131
Second	0.0	0.0	0.6	0.0	1.9	55.8	41.7	0.0	0.0	100.0	1,132
Middle	0.0	0.0	0.0	0.0	4.7	56.4	37.3	1.6	0.0	100.0	1,133
Fourth	0.0	0.0	0.0	0.0	12.2	56.8	29.9	0.0	1.0	100.0	1,135
Richest	20.0	9.5	0.4	0.2	19.2	40.7	9.9	0.0	0.0	100.0	1,135
Ethnicity of household head											
Luhya	2.9	1.4	0.2	0.1	8.2	50.7	35.7	0.3	0.5	100.0	5,243
Other ethnic group	17.9	8.7	0.0	0.0	3.7	56.8	12.9	0.0	0.0	100.0	422

The MDGs and the WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation classify otherwise acceptable sanitation facilities which are public or shared between two or more households as unimproved. Therefore, "use of improved sanitation" is used both in the context of this report and as an MDG indicator to refer to improved sanitation facilities, which are not public or shared. Data on the use of improved sanitation are presented in Tables WS.6 and WS.7.

As shown in Table WS.6, 65 percent of the household population is using an improved sanitation facility, with 42 percent using improved sanitation facilities not shared. Twenty-three percent of households use an improved toilet facility that is public or shared with other households. Urban households are slightly more likely than rural households to use a shared toilet facility of an improved type (26 percent and 20 percent, respectively). Use of improved facilities not shared increases with household wealth. Figure WS.2 presents the distribution of the survey population by use and sharing of sanitation facilities.

Table WS.6: Use and sharing of sanitation facilities

Percent distribution of household population by use of private and public sanitation facilities and use of shared facilities, by users of improved and unimproved sanitation facilities, Kakamega County MICS, 2013/14

| | Users of improved sanitation facilities | | | | | Users of unimproved sanitation facilities | | | | Open defecation (no facility, bush, field) | Total | Number of household members |
| | | | Shared by | | | | | Shared by | | | | |
	Not shared[1]	Public facility	5 households or less	More than 5 households	Missing/DK	Not shared	Public facility	5 households or less	More than 5 households			
Total	**42.3**	**0.6**	**18.0**	**4.2**	**0.1**	**21.6**	**0.1**	**12.1**	**0.4**	**0.5**	**100.0**	**5,666**
Area												
Urban	41.3	0.9	18.0	7.5	0.0	16.3	0.0	14.3	0.8	0.9	100.0	2,653
Rural	43.2	0.4	17.9	1.2	0.3	26.4	0.2	10.2	0.1	0.1	100.0	3,013
Education of household head												
None	39.5	0.3	22.1	3.0	0.1	24.6	0.0	9.4	0.8	0.0	100.0	630
Primary	36.7	0.5	17.4	3.0	0.1	25.3	0.1	15.5	0.6	0.7	100.0	3,216
Secondary+	53.6	1.0	17.1	6.5	0.2	14.2	0.1	7.0	0.0	0.2	100.0	1,781
Wealth index quintile												
Poorest	21.6	0.0	23.7	2.0	0.2	21.9	0.0	28.8	0.5	1.3	100.0	1,131
Second	39.9	0.4	15.4	2.1	0.5	31.7	0.2	9.0	0.8	0.0	100.0	1,132
Middle	42.1	0.2	16.0	2.8	0.0	26.7	0.0	11.7	0.5	0.0	100.0	1,133
Fourth	44.9	1.9	17.7	4.4	0.0	21.9	0.4	7.5	0.1	1.0	100.0	1,135
Richest	63.0	0.7	16.9	9.5	0.0	6.1	0.0	3.5	0.3	0.0	100.0	1,135
Ethnicity of household head												
Luhya	41.2	0.6	17.5	4.1	0.1	22.8	0.1	12.8	0.3	0.5	100.0	5,243
Other ethnic group	56.5	0.9	23.8	5.3	0.7	7.5	0.0	3.6	1.7	0.0	100.0	422

[1] **MICS indicator 4.3; MDG indicator 7.9 - Use of improved sanitation**

Figure WS.2: Percent distribution of household members by use and sharing of sanitation facilities, Kakamega County MICS, 2013/14
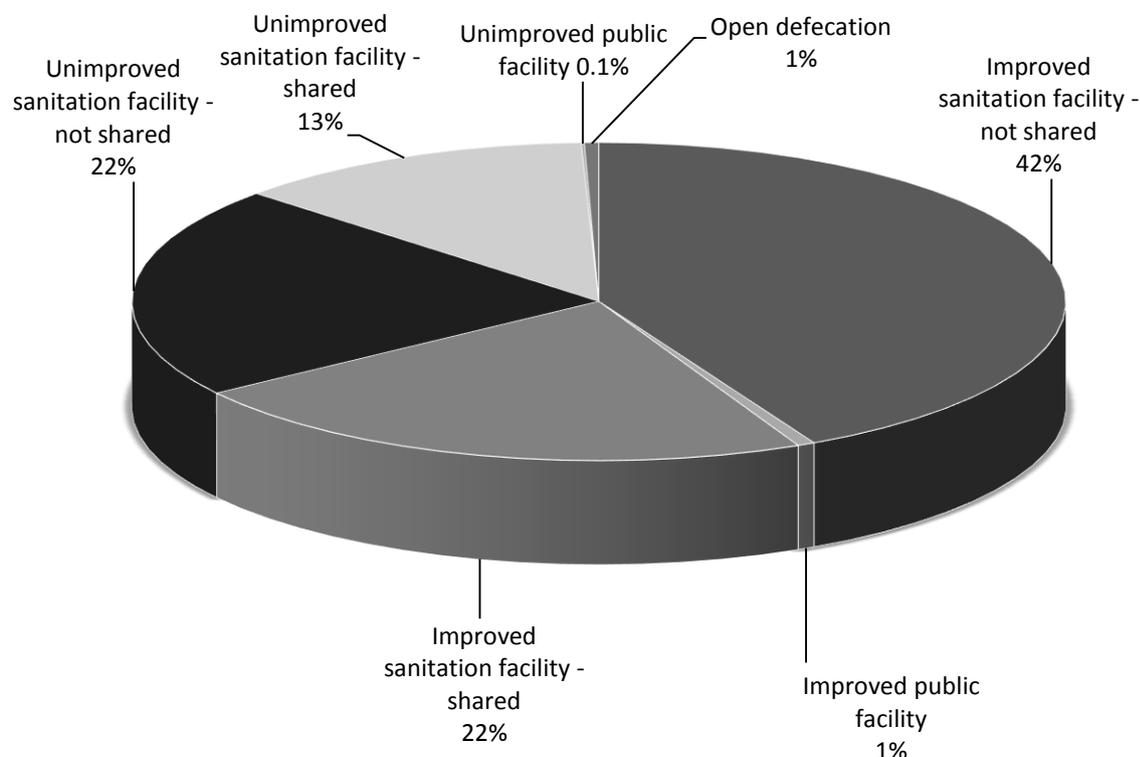
Having access to both an improved drinking water source and an improved sanitation facility brings the largest public health benefits to a household.[57] In its 2008 report,[58] the JMP developed a new way of presenting the access figures, by disaggregating and refining the data on drinking-water and sanitation and reflecting them in "ladder" format. This ladder allows a disaggregated analysis of trends in a three rung ladder for drinking-water and a four-rung ladder for sanitation. For sanitation, this gives an understanding of the proportion of population with no sanitation facilities at all – who revert to open defecation, of those reliant on technologies defined by JMP as "unimproved," of those sharing sanitation facilities of otherwise acceptable type, and those using "improved" sanitation facilities.

Table WS.7 presents the percentages of household population by these drinking water and sanitation ladders. The table also shows the percentage of household members using both improved sources of drinking water[59] and an improved sanitary means of excreta disposal. Thirty-four percent of the households use both improved drinking water sources and improved sanitation (38 percent and 31

[57]Wolf, J et al. 2014. *Systematic review: Assessing the impact of drinking water and sanitation on diarrhoeal disease in low- and middle-income settings: systematic review and meta-regression*. Tropical Medicine and International Health 2014. DfID. 2013. *Water, Sanitation and Hygiene: Evidence Paper*. DfID: http://r4d.dfid.gov.uk/pdf/outputs/sanitation/WASH-evidence-paper-april2013.pdf

[58]WHO/UNICEF JMP. 2008. *MDG assessment report*.http://www.wssinfo.org/fileadmin/user_upload/resources/1251794333-JMP_08_en.pdf

[59]Those indicating bottled water as the main source of drinking water are distributed according to the water source used for other purposes such as cooking and handwashing.

percent in urban and rural areas, respectively). Use of the two improved sources is higher for households in the richest quintile than the others. These results are presented by wealth quintiles in Figure WS.3.

Table WS.7: Drinking water and sanitation ladders

Percentage of household population by drinking water and sanitation ladders, Kakamega County MICS, 2013/14

	Percentage of household population using:										
	Improved drinking water[1, a]					**Unimproved sanitation**				Improved drinking water sources and improved sanitation	Number of household members
	Piped into dwelling, plot or yard	Other improved	Unimproved drinking water	Total	Improved sanitation[2]	Shared improved facilities	Unimproved facilities	Open defecation	Total		
Total	**8.4**	**71.0**	**20.6**	**100.0**	**42.3**	**22.9**	**34.3**	**0.5**	**100.0**	**34.0**	**5,666**
Area											
Urban	16.0	71.0	13.0	100.0	41.3	26.4	31.4	0.9	100.0	37.8	2,653
Rural	1.7	70.9	27.4	100.0	43.2	19.8	36.9	0.1	100.0	30.7	3,013
Education of household head											
None	1.1	74.6	24.2	100.0	39.5	25.6	34.9	0.0	100.0	29.4	630
Primary	3.2	74.4	22.4	100.0	36.7	21.1	41.5	0.7	100.0	27.9	3,216
Secondary+	20.3	63.5	16.2	100.0	53.6	24.8	21.4	0.2	100.0	47.0	1,781
Wealth index quintile											
Poorest	0.0	78.2	21.8	100.0	21.6	25.9	51.1	1.3	100.0	15.3	1,131
Second	0.0	69.9	30.1	100.0	39.9	18.4	41.7	0.0	100.0	25.9	1,132
Middle	0.6	72.1	27.3	100.0	42.1	19.0	38.9	0.0	100.0	30.1	1,133
Fourth	2.9	82.0	15.2	100.0	44.9	24.1	29.9	1.0	100.0	38.8	1,135
Richest	38.4	52.8	8.8	100.0	63.0	27.0	9.9	0.0	100.0	60.0	1,135
Ethnicity of household head											
Luhya	6.7	71.9	21.4	100.0	41.2	22.3	36.0	0.5	100.0	32.7	5,243
Other ethnic group	28.9	60.2	10.9	100.0	56.5	30.6	12.9	0.0	100.0	51.0	422

[1] **MICS indicator 4.1; MDG indicator 7.8 - Use of improved drinking water sources**

[2] **MICS indicator 4.3; MDG indicator 7.9 - Use of improved sanitation**

[a] Those indicating bottled water as the main source of drinking water are distributed according to the water source used for other purposes such as cooking and handwashing.

Figure WS.3: Use of Improved drinking water sources and Improved sanitation facilities by household members, Kakamega County MICS, 2013/14
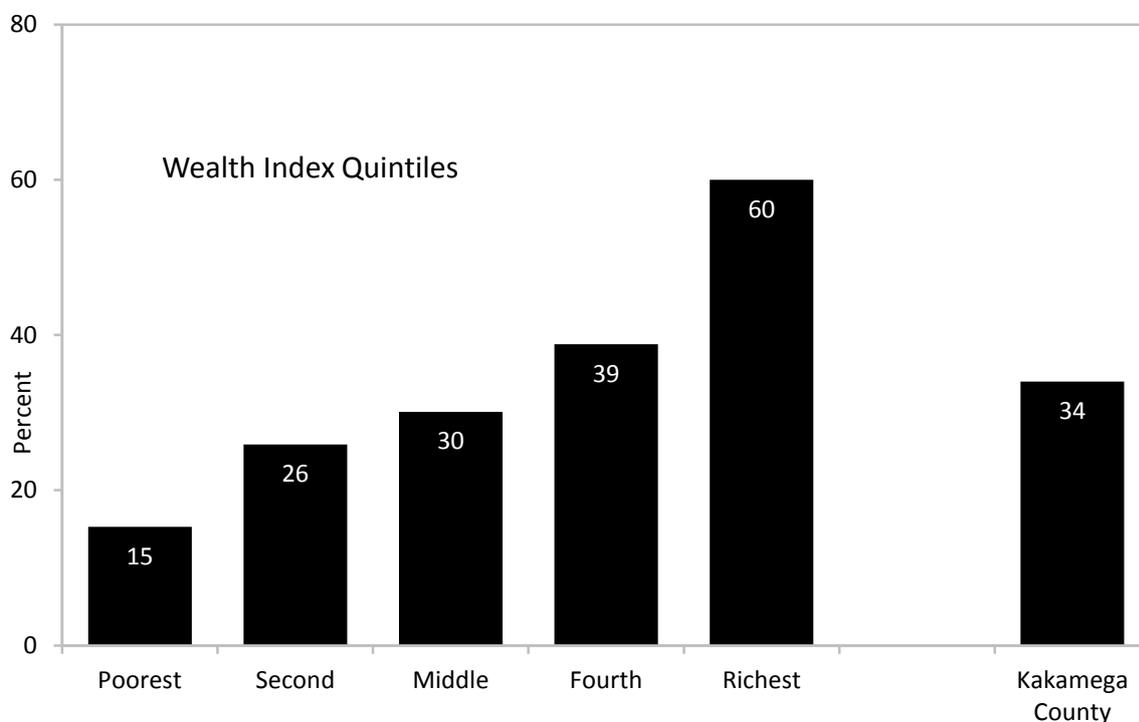
Safe disposal of a child's faeces is disposing of the stool, by the child using a toilet or by rinsing the stool into a toilet or latrine. Putting disposable diapers with solid waste, a very common practice throughout the world has thus far been classified as an inadequate means of disposal of child faeces for concerns about poor disposal of solid waste itself. This classification is currently under review. Disposal of faeces of children 0-2 years of age is presented in Table WS.8. In 86 percent of the cases, children stool were disposed of safely (84 percent in urban areas and 87 percent in rural areas).

Figure 4: Use of Improved water and sanitation in urban and rural areas, Kakamega County, 2013/14

Percentage of household members using an improved water source

Percentage of household members using an improved sanitation facility which is not shared
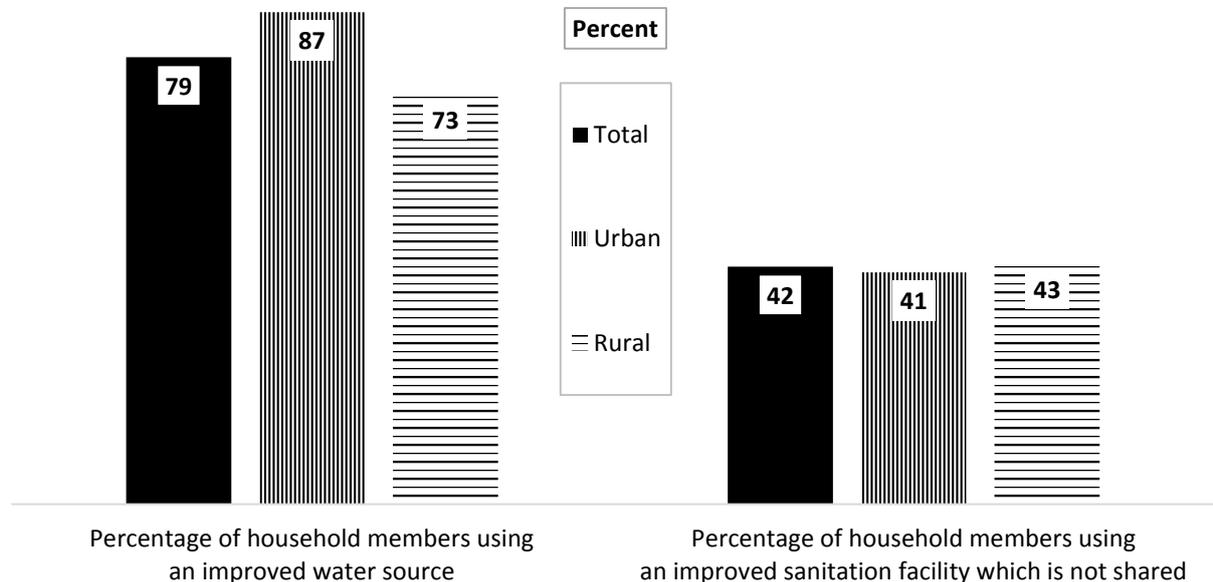
Table WS.8: Disposal of child's faeces

Percent distribution of children age 0-2 years according to place of disposal of child's faeces, and the percentage of children age 0-2 years whose stools were disposed of safely the last time the child passed stools, Kakamega County MICS, 2013/14

	Place of disposal of child's faeces									Percentage of children whose last stools were disposed of safely[1]	Number of children age 0-2 years
	Child used toilet/latrine	Put/rinsed into toilet or latrine	Put/rinsed into drain or ditch	Thrown into garbage	Buried	Left in the open	Other	Missing/DK	Total		
Total	**5.4**	**80.2**	**7.1**	**1.5**	**2.3**	**1.0**	**1.3**	**1.1**	**100.0**	**85.6**	**467**
Type of sanitation facility used by household members											
Improved	5.3	83.2	4.1	1.3	1.3	1.0	2.2	1.6	100.0	88.5	283
Unimproved	5.6	75.7	12.0	1.9	3.9	1.0	0.0	0.0	100.0	81.3	181
Open defecation	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	3
Area											
Urban	4.9	79.1	9.7	2.1	1.3	0.8	0.9	1.3	100.0	84.0	227
Rural	5.9	81.2	4.7	1.0	3.2	1.2	1.8	1.0	100.0	87.0	240
Mother's education											
None	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	29
Primary	11.0	65.0	9.4	2.2	9.5	0.0	2.9	0.6	100.0	86.0	306
Secondary+	5.3	80.7	7.5	1.2	2.4	1.3	1.0	2.6	100.0	86.6	132
Wealth index quintile											
Poorest	5.1	67.7	11.8	1.5	6.2	2.6	2.8	2.3	100.0	72.8	126
Second	8.3	78.3	6.9	2.3	0.0	1.5	1.7	1.0	100.0	86.7	103
Middle	5.7	83.3	7.4	0.0	2.5	0.0	0.0	1.0	100.0	89.0	86
Fourth	3.0	93.9	1.2	0.0	0.8	0.0	1.1	0.0	100.0	96.9	85
Richest	3.9	85.1	5.7	4.4	0.0	0.0	0.0	0.9	100.0	89.0	67
Ethnicity of household head											
Luhya	5.5	80.1	6.8	1.4	2.4	1.1	1.4	1.2	100.0	85.6	443
Other ethnic group	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	24
[1] MICS indicator 4.4 - Safe disposal of child's faeces											
(*) Figures that are based on fewer than 25 unweighted cases											

6.3 Handwashing

Handwashing with water and soap is the most cost effective health intervention to reduce the incidence of both diarrhoea and pneumonia in children under five.[60] 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 handwashing behaviour at these critical times is challenging. A reliable alternative to observations or self-reported behaviour is assessing the likelihood that correct handwashing behaviour takes place by asking if a household has a specific place where people wash their hands and, if yes, observing whether water and soap (or other local cleansing materials) are available at this place.[61]

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[60]Cairncross, S and Valdmanis, V. 2006. *Water supply, sanitation and hygiene promotion* Chapter 41 in *Disease Control Priorities in Developing Countries*. 2nd Edition, Edt. Jameson et al. The World Bank.

[61]Ram, P et al. editors. 2008. *Use of a novel method to detect reactivity to structured observation for measurement of handwashing behavior*. American Society of Tropical Medicine and Hygiene.

In Kakamega County, the percentage of households where a place for handwashing was observed is 10 percent. Ninety percent of the households had no specific place for handwashing in the dwelling, yard, or plot (Table WS.9). The percentage of households where a place for handwashing was observed, and where both water and soap (or another cleansing agent) were present at the place for handwashing, was only five percent. The percentage of households with a specific handwashing place and water (but no soap) present at the place for handwashing, is three percent, while the percentage of households with a handwashing place and soap (but no water), is one percent. Finally, the percentage of households with a place for handwashing, but without neither water nor soap available at the specific place for handwashing, is two percent. Differentials were observed by urban/rural areas and by education of head of household and wealth category.

About 16 percent of the households were not able or refused to show any soap present in the household, whereas another seven percent did not have any soap in the households, leaving the remaining 76 percent of households, in which either the soap was observed or shown to the interviewer (Table WS.10). Urban areas have slightly higher percentage of households with soap or other cleansing agent anywhere in the house (79 percent) compared to rural areas (73 percent).

Table WS.9: Water and soap at place for handwashing

Percentage of households where place for handwashing was observed, percentage with no specific place for handwashing, and percent distribution of households by availability of water and soap at specific place for handwashing, Kakamega County MICS, 2013/14

	Percentage of households:			Place for handwashing observed								Percentage of households with a specific place for handwashing where water and soap or other cleansing agent are present[1]	Number of households where place for handwashing was observed or with no specific place for handwashing in the dwelling, yard, or plot
				Water is available and:			Water is not available and:						
					No soap:			No soap:					
	Where place for handwashing was observed	With no specific place for handwashing in the dwelling, yard, or plot	Number of households	Soap present	Ash, mud, or sand present	No other cleansing agent present	Soap present	No other cleansing agent present	No specific place for handwashing in the dwelling, yard, or plot	Total		
Total	**9.8**	**89.4**	**1,221**	**4.9**	**0.1**	**2.5**	**0.7**	**1.6**	**90.1**	**100.0**	**5.0**	**1,212**
Area												
Urban	13.8	85.6	614	8.7	0.0	2.2	1.2	1.8	86.1	100.0	8.7	610
Rural	5.9	93.3	607	1.1	0.2	2.9	0.3	1.4	94.1	100.0	1.3	602
Education of household head												
None	4.3	95.4	151	0.0	0.0	3.9	0.0	0.4	95.7	100.0	0.0	150
Primary	6.2	93.4	644	2.6	0.2	1.8	0.4	1.2	93.8	100.0	2.8	641
Secondary+	17.7	80.9	416	10.4	0.0	3.2	1.6	2.7	82.0	100.0	10.4	410
Wealth index quintile												
Poorest	3.1	96.3	246	1.0	0.2	1.8	0.0	0.0	96.9	100.0	1.3	245
Second	3.4	95.8	218	0.0	0.3	1.1	0.0	2.0	96.6	100.0	0.3	216
Middle	5.2	94.4	232	1.6	0.0	2.6	0.0	1.0	94.8	100.0	1.6	231
Fourth	9.0	90.7	234	3.3	0.0	1.6	0.4	3.8	91.0	100.0	3.3	233
Richest	24.7	74.0	292	15.9	0.0	5.0	2.8	1.3	74.9	100.0	15.9	288
Ethnicity of household head												
Luhya	8.7	91	1,101	4.0	0.1	2.4	0.7	1.6	91.3	100.0	4.1	1,093
Other ethnic group	20.5	79	120	13.6	0.0	4.3	0.9	1.9	79.3	100.0	13.6	119
[1] **MICS indicator 4.5 - Place for handwashing**												

Table WS.10: Availability of soap or other cleansing agent

Percent distribution of households by availability of soap or other cleansing agent in the dwelling, Kakamega County MICS, 2013/14

	Place for handwashing observed				Place for handwashing not observed						
		Soap or other cleansing agent not observed at place for handwashing					Not able/Does not want to show soap or other cleansing agent			Percentage of households with soap or other cleansing agent anywhere in the dwelling[1]	Number of households
	Soap or other cleansing agent observed	Soap or other cleansing agent shown	No soap or other cleansing agent in household	Not able/Does not want to show soap or other cleansing agent	Soap or other cleansing agent shown	No soap or other cleansing agent in household		Missing	Total		
Total	**5.7**	**3.0**	**0.4**	**0.7**	**66.8**	**6.9**	**16.2**	**0.2**	**100.0**	**75.5**	**1,221**
Area											
Urban	9.8	2.7	0.2	1.0	66.0	5.5	14.5	0.3	100.0	78.5	614
Rural	1.6	3.3	0.5	0.4	67.6	8.4	18.0	0.1	100.0	72.5	607
Education of household head											
None	0.0	3.5	0.4	0.4	64.9	10.9	19.9	0.0	100.0	68.4	150
Primary	3.2	2.0	0.6	0.4	67.4	7.9	18.2	0.3	100.0	72.6	644
Secondary+	11.9	4.5	0.1	1.3	65.7	4.1	12.3	0.2	100.0	82.0	416
Wealth index quintile											
Poorest	1.3	1.4	0.0	0.4	69.5	10.2	17.2	0.0	100.0	72.2	246
Second	0.3	2.2	0.5	0.3	72.2	6.4	17.1	0.9	100.0	74.7	218
Middle	1.6	2.8	0.8	0.0	68.1	5.7	21.0	0.0	100.0	72.5	232
Fourth	3.6	4.9	0.2	0.3	68.1	7.1	15.8	0.0	100.0	76.6	234
Richest	18.5	3.7	0.4	2.2	58.2	5.4	11.4	0.3	100.0	80.4	292
Ethnicity of household head											
Luhya	4.8	2.9	0.4	0.6	67.0	7.3	16.9	0.2	100.0	74.8	1,101
Other ethnic group	14.3	3.9	0.5	1.8	64.3	4.0	10.5	0.7	100.0	82.5	120
[1] **MICS indicator 4.6 - Availability of soap or other cleansing agent**											

7. Reproductive Health

The 1994 International Conference on Population and Development (ICPD) affirmed that respect, protection, promotion and fulfilment of human rights are necessary preconditions for improving the dignity and well-being of women and adolescent girls and for empowering them to exercise their reproductive rights; and that sexual and reproductive health and rights and understanding the implications of population dynamics are foundational to sustainable development.[62] Kenya is signatory to a number of international and regional conventions that aim to address sexual and reproductive rights of men, women, boys and girls including the ICPD 1994 and Campaign on Accelerated Reduction of Maternal Mortality in Africa (CARMMA) (2009).

Notable policies and strategies developed since the 1994 Cairo meeting include the Contraceptive Policy and Strategy (2002-2006); the Adolescent Reproductive Health and Development Policy, 2003; the Contraceptive Commodities Procurement Plan (2003-2006); National Reproductive Health Policy, 2007; the Contraceptive Commodities Security Strategy (2007-2012); the National Reproductive Health Policy Enhancing Reproductive Health Status for all Kenyans, 2007; the National Reproductive Health and HIV and AIDS integration Strategy-August 2009; the HIV and AIDS Strategic Plan (2009/10-2012/13); the National Condom Policy and Strategy (2009-2014; the National Road Map for Accelerating the Attainment of the MDGs Related to Maternal and Newborn Health in Kenya, August 2010; the National Reproductive Health Strategy 2009-2015; the Constitution of Kenya 2010 that for the first time guarantees the right to health care including reproductive health; the School Health Policy 2009[63]; and the Kenya National Population Policy 2012.[64]

This chapter covers the following topics: fertility; contraception; unmet need for contraception; antenatal care (ANC); assistance at and place of delivery; and post-natal checks (PNC).

7.1 Fertility

Measures of current fertility are presented in Table RH.1 for the three-year period preceding the survey. The Kakamega MICS used birth history to derive current fertility rates. The main shortcomings associated with birth histories besides possible sampling errors, are response errors (e.g. age misstatements, misdating of events and omissions of births and deaths).[65] A three-year period was chosen for calculating these rates to provide the most current information while also allowing the rates to be calculated for a sufficient number of cases so as not to compromise the statistical precision of the estimates. Age-specific fertility rates (ASFRs), expressed as the number of live births per 1,000 women in a specified age group, show the age pattern of fertility. Numerators for ASFRs are calculated by identifying live births that occurred in the three-year period preceding the survey classified

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[62] Framework of Actions for the follow - up to the Programme of Action of the International Conference on Population and Development Beyond 2014

[63] Government of Kenya. National School Health Policy. Ministry of Public Health and Sanitation and Ministry of Education. Nairobi: Republic of Kenya; 2009.

[64] Kenya National Commission for Human Rights. 2012. Realising Sexual and Reproductive Health Rights in Kenya: A myth or reality? A Report of the Public Inquiry into Violations of
Sexual and Reproductive Health Rights in Kenya April 2012.

[65] Samuel Gaisie. Fertility Trend in Ghana. African Population Studies Vol. 20 N°2/Etude de la population africaine vol. 20 n° 2

according to the age of the mother (in five-year age groups) at the time of the child's birth. The denominators of the rates represent the number of woman-years lived by the survey respondents in each of the five-year age groups during the specified period.

The total fertility rate (TFR) is a measure that denotes the number of live births a woman would have if she were subject to the current age-specific fertility rates throughout her reproductive years (15-49 years).

The general fertility rate (GFR) is the number of live births occurring during the specified period per 1,000 women age 15-49 years.

The crude birth rate (CBR) is the number of live births per 1,000 population during the specified period.

Table RH.1 shows current fertility in Kakamega County at the county level and according to type of place of residence. The TFR for the three years preceding the survey was 4.7 births per woman. Both urban and rural women have the same level of fertility of 4.7 births per woman.

Table RH.1: Fertility rates			
Adolescent birth rate, age-specific and total fertility rates, the general fertility rate, and the crude birth rate for the three-year period preceding the survey, by area, Kakamega County MICS, 2013/14			
	Urban	**Rural**	**Total**
Age			
15-19[1]	(105)	82	93
20-24	(286)	260	274
25-29	(216)	(228)	221
30-34	(160)	162	161
35-39	(*)	(137)	129
40-44	(*)	(57)	(50)
45-49	(*)	(*)	(*)
TFR[a]	(*)	(*)	(4.7)
GFR[b]	163.1	148.8	156.1
CBR[c]	37.3	29.0	32.9
[1] **MICS indicator 5.1; MDG indicator 5.4 - Adolescent birth rate**			
[a] TFR: Total fertility rate expressed per woman age 15-49 years			
[b] GFR: General fertility rate expressed per 1,000 women age 15-49 years			
[c] CBR: Crude birth rate expressed per 1,000 population			
( ) Figures that are based on 125 to 249 unweighted cases (*) Figures that are based on less than 125 unweighted cases			

The overall age pattern of fertility, as reflected by the ASFRs, indicates that childbearing began early. Fertility rates among adolescents start at 93 births per 1,000 women, increase to a peak of 274 births per 1,000 among women age 20-24 years, and declines thereafter.

Table RH.2 shows adolescent birth rates and total fertility rates. The adolescent birth rate (age-specific fertility rate for women age 15-19 years) is defined as the number of births to women age 15-19 years during the three-year period preceding the survey, divided by the average number of women age 15-19 (number of women-years lived between ages 15 through 19 years, inclusive) during the same period, expressed per 1,000 women.

Table RH.2: Adolescent birth rate and total fertility rate		
Adolescent birth rates and total fertility rates for the three-year period preceding the survey, Kakamega County MICS, 2013/14		
	Adolescent birth rate[1] (Age-specific fertility rate for women age 15-19 years)	Total fertility rate
Total	**93**	**(4.7)**
Education		
None	(*)	(*)
Primary	126	5.2
Secondary+	62	3.8
[1] **MICS indicator 5.1; MDG indicator 5.4 - Adolescent birth rate**		
( ) Figures that are based on 125 to 249 unweighted cases		
(*) Figures that are based on less than 125 unweighted cases		

Table RH.3 presents some early childbearing[66] indicators for women age 15-19 and 20-24 while Table RH.4 presents the trends for early childbearing. As shown in Table RH.3, 16 percent of women age 15-19 years had already had a birth, and 3 percent were pregnant with their first child.

The table also presents that 28 percent of women age 20-24 years have had a live birth before age 18. The proportion of women age 20-24 years who have had a live birth before age 18 was higher for those with primary education (42 percent) compared to those with secondary or higher education (13 percent).

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[66] Childbearing is the process of giving birth to children. While early childbearing is defined as having had live births before specific young ages, for the purposes of Table RH.3, women age 15-19 years who have begun childbearing includes those who have had a live birth as well as those who have not had a live birth but are pregnant with their first child.

Table RH.3: Early childbearing

Percentage of women age 15-19 years who have had a live birth, are pregnant with the first child, have begun childbearing, and who have had a live birth before age 15, and percentage of women age 20-24 years who have had a live birth before age 18, Kakamega County MICS, 2013/14

	Percentage of women age 15-19 years who:				Number of women age 15-19 years	Percentage of women age 20-24 years who have had a live birth before age 18[1]	Number of women age 20-24 years
	Have had a live birth	Are pregnant with first child	Have begun childbearing	Have had a live birth before age 15			
Total	**15.6**	**3.1**	**18.7**	**0.0**	**210**	**28.2**	**170**
Area							
Urban	20.3	3.9	24.2	0.0	93	27.0	90
Rural	11.9	2.5	14.4	0.0	117	29.6	80
Education							
None	-	-	-	-	0	(*)	2
Primary	18.8	3.1	21.9	0.0	127	41.8	84
Secondary+	10.6	3.2	13.9	0.0	83	13.0	84
Ethnicity of household head							
Luhya	15.0	3.2	18.3	0.0	191	29.7	155
Other ethnic group	(*)	(*)	(*)	(*)	19	(*)	15
[1] MICS indicator 5.2 - Early childbearing							

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

In Kakamega County, four percent of women age 15-49 years have had a live birth before age 15 (Table RH.4). The proportion of women with a live birth before age 15 is four percent in urban areas and five percent in rural areas.

■■■MICS

Table RH.4: Trends in early childbearing

Percentage of women who have had a live birth, by age 15 and 18, by area and age group, Kakamega County MICS, 2013/14

	Urban				Rural				All			
	Percentage of women with a live birth before age 15	Number of women age 15-49 years	Percentage of women with a live birth before age 18	Number of women age 20-49 years	Percentage of women with a live birth before age 15	Number of women age 15-49 years	Percentage of women with a live birth before age 18	Number of women age 20-49 years	Percentage of women with a live birth before age 15	Number of women age 15-49 years	Percentage of women with a live birth before age 18	Number of women age 20-49 years
Total	**3.7**	**502**	**26.8**	**409**	**4.5**	**496**	**30.8**	**379**	**4.1**	**998**	**28.7**	**788**
Age												
15-19	0.0	93	na	na	0.0	117	na	na	0.0	210	na	na
20-24	5.4	90	27.0	90	4.3	80	29.6	80	4.9	170	28.2	170
25-29	7.5	111	31.3	111	8.3	80	35.4	80	7.8	192	33.0	192
30-34	(3.1)	61	(25.4)	61	3.0	57	29.9	57	3.1	119	27.5	119
35-39	2.4	79	24.2	79	7.5	73	27.8	73	4.8	152	26.0	152
40-44	(3.8)	37	(32.7)	37	5.1	50	28.5	50	4.6	87	30.3	87
45-49	(*)	39	(*)	30	6.2	39	33.3	39	3.5	69	24.0	69

na: not applicable

7.2 Contraception

Appropriate family planning is important to the health of women and children by: 1) preventing pregnancies that are too early or too late; 2) extending the period between births; and 3) limiting the total number of children. Access by all couples to information and services to prevent pregnancies that are too early, too closely spaced, too late or too many is critical.

Contraception by women currently married or in union[67] is 62 percent (Table RH.5). The most popular method were injectables which were used by one in three married women in the county (33 percent). The next most popular method is implants, which accounted for 12 percent of married women, the pill is used by six percent while another six percent use female sterilization. Three percent use IUDs, male condom, diaphragm/foam/gel, or the lactational amenorrhea method (LAM). About 39 percent of women do not use contraception.

About 65 percent of married women in urban and 58 percent in rural areas use a method of contraception. The use of contraception according to the type of place of residence and level of education are depicted in Figure RH.1. The percentage of married women using any method of contraception is 44 percent among women in the 45-49 age group and 72 percent in the 30-34 age group. However, the pattern of use by specific methods did not vary much with the level of education.

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[67] All references to "married women" in this chapter include women in marital union as well.

■■|MICS

Table RH.5: Use of contraception

Percentage of women age 15-49 years currently married or in union who are using (or whose partner is using) a contraceptive method, Kakamega County MICS, 2013/14

	Percent of women currently married or in union who are using (or whose partner is using):																	Number of women age 15-49 years currently married or in union
	No method	Female sterili-zation	Male sterili-zation	IUD	Injectables	Implants	Pill	Male condom	Female condom	Diaphragm/ Foam/Jelly	LAM	Periodic abstinence	Withdrawal	Other	Any modern method	Any tradi-tional method	Any method[1]	
Total	**38.5**	**5.5**	**0.0**	**2.0**	**32.5**	**12.1**	**5.8**	**1.0**	**0.0**	**0.1**	**0.2**	**1.3**	**0.1**	**0.7**	**59.3**	**2.2**	**61.5**	**659**
Area																		
Urban	35.1	4.5	0.0	2.8	35.2	13.9	5.9	0.4	0.0	0.0	0.4	1.4	0.0	0.4	63.0	1.8	64.9	346
Rural	42.3	6.6	0.0	1.1	29.6	10.2	5.7	1.7	0.0	0.3	0.0	1.3	0.3	1.1	55.1	2.6	57.7	313
Age																		
15-19	(58.5)	(2.3)	(0.0)	(0.0)	(21.2)	(14.6)	(0.0)	(3.4)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(41.5)	(0.0)	(41.5)	25
20-24	41.7	1.6	0.0	0.0	36.9	15.9	2.4	0.0	0.0	0.0	0.0	1.5	0.0	0.0	56.8	1.5	58.3	99
25-29	41.1	0.3	0.0	1.9	35.3	9.6	7.5	0.5	0.0	0.5	0.8	2.3	0.0	0.0	56.6	2.3	58.9	168
30-34	27.8	5.9	0.0	1.9	46.7	11.1	5.4	0.0	0.0	0.0	0.0	1.2	0.0	0.0	71.0	1.2	72.2	107
35-39	29.3	10.1	0.0	3.5	27.3	17.1	8.0	2.1	0.0	0.0	0.0	1.0	0.0	1.4	68.3	2.5	70.7	130
40-44	40.7	9.1	0.0	3.1	24.2	11.6	7.4	1.8	0.0	0.0	0.0	0.0	1.2	0.9	57.3	2.0	59.3	74
45-49	55.8	12.8	0.0	1.7	17.2	2.9	2.7	1.5	0.0	0.0	0.0	1.1	0.0	4.2	38.9	5.3	44.2	56
Number of living children																		
0	(92.8)	(0.0)	(0.0)	(0.0)	(3.3)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(3.9)	(0.0)	(0.0)	(3.3)	(3.9)	(7.2)	25
1	45.4	0.7	0.0	3.9	32.8	13.7	1.2	1.0	0.0	0.0	0.0	1.2	0.0	0.0	53.4	1.2	54.6	85
2	44.9	1.2	0.0	1.0	32.1	13.5	5.2	0.8	0.0	0.0	1.4	0.0	0.0	0.0	55.1	0.0	55.1	100
3	31.9	3.4	0.0	2.9	41.2	8.6	6.5	2.0	0.0	0.0	0.0	2.8	0.7	0.0	64.6	3.5	68.1	121
4+	33.1	9.2	0.0	1.6	31.6	13.5	7.4	0.8	0.0	0.3	0.0	1.0	0.0	1.5	64.4	2.5	66.9	328
Education																		
None	(46.5)	(6.1)	(0.0)	(0.0)	(37.0)	(6.2)	(1.6)	(2.6)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(53.5)	(0.0)	(53.5)	38
Primary	39.7	5.5	0.0	0.5	34.1	10.8	6.5	0.6	0.0	0.2	0.0	1.0	0.2	1.0	58.1	2.1	60.3	408
Secondary+	34.9	5.4	0.0	5.3	28.7	15.7	5.2	1.5	0.0	0.0	0.7	2.2	0.0	0.4	62.5	2.6	65.1	213
Wealth index quintile																		

Poorest	40.2	6.3	0.0	0.0	31.6	11.3	6.4	2.0	0.0	0.0	0.0	1.5	0.0	0.8	57.6	2.3	59.8	129
Second	49.0	4.1	0.0	0.0	32.7	8.3	2.3	0.6	0.0	0.7	1.1	1.3	0.0	0.0	49.7	1.3	51.0	132
Middle	35.8	8.9	0.0	2.7	32.3	14.4	4.3	0.6	0.0	0.0	0.0	0.9	0.0	0.0	63.3	0.9	64.2	131
Fourth	34.2	2.1	0.0	0.0	38.2	10.7	10.1	0.0	0.0	0.0	0.0	1.1	0.6	2.9	61.2	4.7	65.8	133
Richest	33.7	6.0	0.0	7.1	27.8	15.9	5.9	1.8	0.0	0.0	0.0	1.8	0.0	0.0	64.5	1.8	66.3	133
Ethnicity of household head																		
Luhya	38.2	5.4	0.0	1.9	32.7	12.7	5.6	0.8	0.0	0.1	0.2	1.3	0.1	0.8	59.6	2.3	61.8	609
Other ethnic group	(43.2)	(6.0)	(0.0)	(2.6)	(29.7)	(5.0)	(8.2)	(4.1)	(0.0)	(0.0)	(0.0)	(1.2)	(0.0)	(0.0)	(55.7)	(1.2)	(56.8)	49

[1] **MICS indicator 5.3; MDG indicator 5.3 - Contraceptive prevalence rate**

( ) Figures that are based on 25-49 unweighted cases

Figure RH.1: Differentials in contraceptive use, Kakamega County MICS, 2013/14
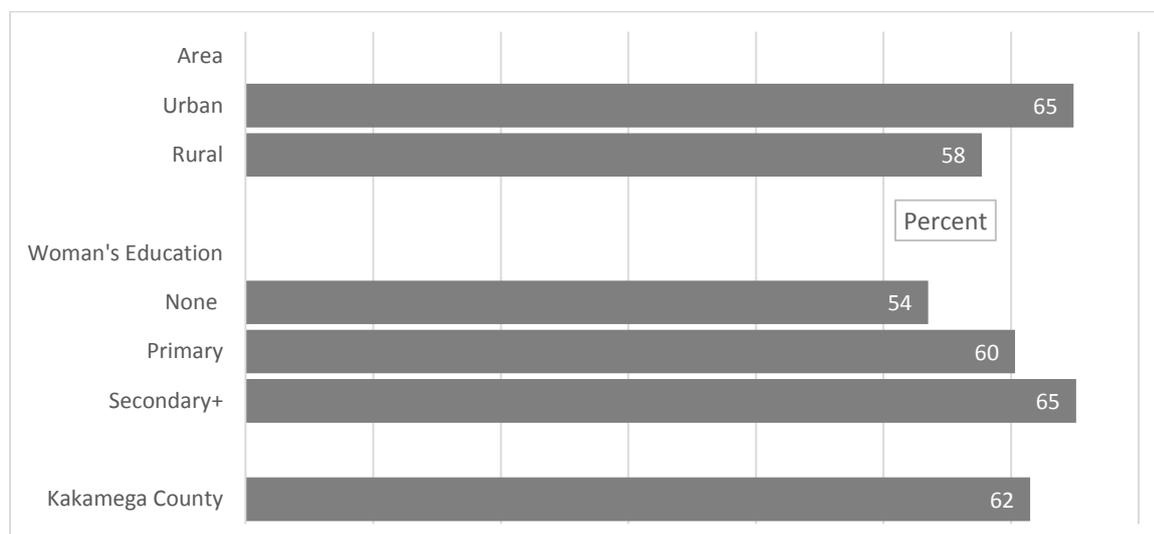
7.3 Unmet Need

Unmet need for contraception refers to fecund women who are married or in union and are not using any method of contraception, but who wish to postpone the next birth (spacing) or who wish to stop childbearing altogether (limiting). Unmet need is identified by using a set of questions about contraceptive use, fecundity and fertility preferences.

Table RH.6 shows the levels of met need for contraception, unmet need, and the demand for contraception satisfied.

Unmet need for spacing is defined as the percentage of women who are married or in union and are not using a method of contraception AND
- are not pregnant, and not postpartum amenorrheic[68], and are fecund[69], and say they want to wait two or more years for their next birth OR
- are not pregnant, and not postpartum amenorrheic, and are fecund, and unsure whether they want another child OR
- are pregnant, and say that pregnancy was mistimed: would have wanted to wait OR

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[68] A woman is postpartum amenorrheic if she had a birth in last two years and is not currently pregnant, and her menstrual period has not returned since the birth of the last child

[69] A woman is considered infecund if she is neither pregnant nor postpartum amenorrheic, and

(1a) has not had menstruation for at least six months, or (1b) never menstruated, or (1c) her last menstruation occurred before her last birth, or (1d) in menopause/has had hysterectomy OR

(2) She declares that she has had hysterectomy, or that she has never menstruated, or that she is menopausal, or that she has been trying to get pregnant for 2 or more years without result in response to questions on why she thinks she is not physically able to get pregnant at the time of survey OR

(3) She declares she cannot get pregnant when asked about desire for future birth OR

(4) She has not had a birth in the preceding 5 years, is currently not using contraception and is currently married and was continuously married during the last 5 years preceding the survey.

- are postpartum amenorrheic, and say that the birth was mistimed: would have wanted to wait.

Unmet need for limiting is defined as percentage of women who are married or in union and are not using a method of contraception AND

- are not pregnant, and not postpartum amenorrheic, and are fecund, and say they do <u>not</u> want any more children OR
- are pregnant, and say they did <u>not</u> want to have a child OR
- are postpartum amenorrheic, and say that they did <u>not</u> want the birth

Total unmet need for contraception is the sum of unmet need for spacing and unmet need for limiting. This indicator is also known as unmet need for family planning and is one of the indicators used to track progress toward the Millennium Development Goal 5 of improving maternal health.

Met need for limiting includes women married or in union who are using (or whose partner is using) a contraceptive method,[70] and who want no more children, are using male or female sterilization, or declare themselves as infecund. Met need for spacing includes women who are using (or whose partner is using) a contraceptive method, and who want to have another child, or are undecided whether to have another child. The total of met need for spacing and limiting adds up to the total met need for contraception.

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

Table RH.6 shows the levels of met need for contraception, unmet need, and the demand for contraception satisfied. The results show that the total met need was 62 percent, while total unmet need for family planning is 22 percent. Unmet need is associated with wealth, with the least wealthy women having the highest level of unmet need while the richest women have the lowest. The table further highlights that the total demand for family planning satisfied is 74 percent.

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[70] In this chapter, whenever reference is made to the use of a contraceptive by a woman, this may refer to her partner using a contraceptive method (such as male condom).

Table RH.6: Unmet need for contraception

Percentage of women age 15-49 years currently married or in union with an unmet need for family planning and percentage of demand for contraception satisfied, Kakamega County MICS, 2013/14

	Met need for 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	For spacing	For limiting	Total[1]			
Total	**25.3**	**36.2**	**61.5**	**11.6**	**10.6**	**22.2**	**659**	**73.5**	**551**
Area									
Urban	27.4	37.4	64.9	11.2	9.3	20.5	346	76.0	295
Rural	23.0	34.7	57.7	12.0	12.0	24.0	313	70.6	256
Age									
15-19	(*)	(*)	(*)	(*)	(*)	(*)	26	(*)	19
20-24	44.6	13.7	58.3	15.5	4.6	20.1	99	74.4	78
25-29	36.2	22.8	58.9	19.2	6.2	25.5	168	69.8	142
30-34	25.6	46.6	72.2	10.7	6.6	17.3	107	80.7	96
35-39	13.2	57.5	70.7	4.1	12.8	16.8	130	80.8	114
40-44	11.8	47.6	59.3	3.0	21.5	24.6	74	70.7	62
45-49	1.5	42.7	44.2	1.6	26.9	28.5	56	(60.8)	41
Education									
None	(18.6)	(34.9)	(53.5)	(13.9)	(8.1)	(22.1)	38	(70.8)	28
Primary	23.8	36.5	60.3	11.9	12.1	24.0	408	71.5	344
Secondary+	29.3	35.8	65.1	10.5	8.1	18.6	213	77.8	178
Wealth index quintile									
Poorest	19.2	40.6	59.8	14.5	12.1	26.6	129	69.2	112
Second	16.5	34.6	51.0	16.5	12.4	28.9	132	63.9	106
Middle	32.5	31.7	64.2	11.6	6.7	18.3	131	77.8	108
Fourth	25.0	40.9	65.8	5.9	12.7	18.7	133	77.9	112
Richest	33.2	33.1	66.3	9.5	8.9	18.5	133	78.2	113
Ethnicity of household head									
Luhya	25.1	36.8	61.8	11.8	10.5	22.3	609	73.5	512
Other ethnic group	(28.3)	(28.5)	(56.8)	(9.1)	(11.9)	(21.0)	49	(73.0)	38

[1] **MICS indicator 5.4; MDG indicator 5.6 - Unmet need**

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

7.4 Antenatal Care (ANC)

The antenatal period presents important opportunities for reaching pregnant women with a number of interventions that are vital to the health and well-being of both mother and that of their unborn baby. 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, antenatal care (ANC) visits can be used to inform women and families about risks and symptoms in pregnancy. In addition, it can inform about the risks of labour and delivery, and therefore it may provide the route for ensuring that pregnant women do in practice, deliver with the assistance of a skilled health care provider. Antenatal visits also provide an opportunity to supply information on birth spacing, which is recognized as an important factor in improving unborn baby survival. Tetanus immunization during pregnancy can be life-saving for both the mother and the unborn baby.

The prevention and treatment of malaria among pregnant women, management of anaemia during pregnancy and treatment of sexually transmitted infections (STIs) can significantly improve foetal outcomes and improve maternal health. Adverse outcomes such as low birth weight can be reduced through a combination of interventions to improve women's nutritional status and prevent infections (e.g., malaria and STIs) during pregnancy. More recently, the potential of the antenatal care 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 on antenatal care visits, which include:
- Blood pressure measurement
- Urine testing for bacteriuria and proteinuria
- Blood testing to detect syphilis and severe anaemia
- Weight/height measurement (optional).

It is of crucial importance for pregnant women to start attending ANC visits as early in pregnancy as possible in order to prevent and detect pregnancy conditions that could affect both the woman and her unborn baby. ANC should therefore, continue throughout the entire pregnancy.

Antenatal care coverage indicators (at least one visit with a skilled provider and four or more visits with any providers) are used to track progress toward the Millennium Development Goal 5 of improving maternal health.

The type of personnel providing antenatal care to women age 15-49 years who gave birth in the two years preceding the survey is presented in Table RH.7. Ninety-five percent of the women received ANC from a skilled health provider. The results show that a relatively small percentage of women (4 percent) did not receive antenatal care. In the county ANC services were mainly provided by a nurse/midwife (62 percent), followed by medical doctors (23 percent). The remainder received ANC services from either a clinical/auxiliary officer, community health worker or others.

Table RH.7: Antenatal care coverage

Percent distribution of women age 15-49 years with a live birth in the last two years by antenatal care provider during the pregnancy for the last birth, Kakamega County MICS, 2013/14

	Provider of antenatal care[a]								Number of women with a live birth in the last two years
	Medical doctor	Nurse/ Midwife	Auxiliary midwife/Clinical Officer	Community health worker	Other	No antenatal care	Total	Any skilled provider[1,b]	
Total	**22.5**	**62.2**	**4.8**	**5.8**	**1.0**	**3.6**	**100.0**	**95.3**	**306**
Area									
Urban	18.2	64.3	5.0	7.5	1.9	3.1	100.0	95.0	168
Rural	27.7	59.7	4.6	3.6	0.0	4.3	100.0	95.7	138
Education									
None	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	12
Primary	23.7	58.3	6.5	6.6	.9	3.9	100.0	95.2	195
Secondary+	19.4	71.4	2.1	4.8	1.4	0.8	100.0	97.7	99
Wealth index quintile									
Poorest	21.3	65.9	5.9	4.1	0.0	2.8	100.0	97.2	79
Second	25.5	59.0	3.8	2.6	0.0	9.1	100.0	90.9	69
Middle	20.8	56.4	7.0	12.5	0.0	3.3	100.0	96.7	58
Fourth	27.1	54.9	6.1	7.6	3.0	1.2	100.0	95.8	57
Richest	(16.2)	(78.2)	(0.0)	(2.4)	(3.3)	(0.0)	100.0	(96.7)	43
Ethnicity of household head									
Luhya	22.8	61.4	5.1	5.8	1.1	3.9	100.0	95.1	289
Other ethnic group	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	17
[1] **MICS indicator 5.5a; MDG indicator 5.5 - Antenatal care coverage**									
[a] Only the most qualified provider is considered in cases where more than one provider was reported.									
[b] Skilled providers include *Medical doctor* and *Nurse/Midwife*.									
( ) Figures that are based on 25-49 unweighted cases									
(*) Figures that are based on fewer than 25 unweighted cases									

Table RH.8 shows the number of ANC visits during the latest pregnancy that took place within the two years preceding the survey, regardless of provider, by selected characteristics. Nine in ten mothers received ANC more than once and over a third of mothers received antenatal care at least four times or more (39 percent). Mothers from the poorest households and those with primary education were less likely than more advantaged mothers to receive antenatal care four or more times. For example, 25 percent of the women living in poorest households reported four or more ANC visits compared with (53) percent among those living in richest households.

The table also provides information about the timing of the first ANC visit. Overall, 19 percent of women with a live birth in the last two years preceding the survey had their first ANC visit during the first trimester of their last pregnancy, with a median of five months of pregnancy at the first visit among those who received antenatal care. Twenty-five percent of women in rural areas registered their first ANC visit within the first trimester while the proportion was 14 percent in urban areas.

Table RH.8: Number of antenatal care visits and timing of first visit

Percent distribution of women age 15-49 years with a live birth in the last two years by number of antenatal care visits by any provider and by the timing of first antenatal care visits, Kakamega County MICS, 2013/14

	Percent distribution of women who had:							Percent distribution of women by number of months pregnant at the time of first antenatal care visit							Number of women with a live birth in the last two years	Median months pregnant at first ANC visit	Number of women with a live birth in the last two years who had at least one ANC visit
	No antenatal care visits	One visit	Two visits	Three visits	4 or more visits[1]	Missing/DK	Total	No antenatal care visits	First trimester	4-5 months	6-7 months	8+ months	DK/Missing	Total			
Total	**3.6**	**10.2**	**11.0**	**36.0**	**38.6**	**0.5**	**100.0**	**3.6**	**18.7**	**35.5**	**34.2**	**7.3**	**0.7**	**100.0**	**306**	**5**	**292**
Area																	
Urban	3.1	11.7	12.5	39.1	32.7	0.9	100.0	3.1	13.5	37.3	35.1	10.1	0.9	100.0	168	5	161
Rural	4.3	8.4	9.2	32.2	45.9	0.0	100.0	4.3	24.9	33.4	33.1	3.8	0.5	100.0	138	5	131
Education																	
None	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	(*)	(*)	(*)	(*)	(*)	100.0	13	(*)	10
Primary	3.9	13.2	13.6	37.4	31.0	0.8	100.0	3.9	18.2	32.5	34.4	10.6	0.4	100.0	195	5	186
Secondary+	0.8	5.0	7.2	35.5	51.5	0.0	100.0	0.8	20.5	44.6	30.8	1.6	1.6	100.0	99	4	96
Wealth index quintile																	
Poorest	2.8	11.8	20.3	39.7	23.4	2.0	100.0	2.8	10.1	27.3	51.6	8.3	0.0	100.0	79	6	77
Second	9.1	16.8	5.4	37.0	31.7	0.0	100.0	9.1	17.0	34.9	26.0	12.0	1.0	100.0	69	5	62
Middle	3.3	9.6	12.2	32.8	42.0	0.0	100.0	3.3	27.3	27.6	38.6	3.1	0.0	100.0	58	5	56
Fourth	1.2	8.5	5.1	31.5	53.6	0.0	100.0	1.2	21.3	50.0	20.2	7.3	0.0	100.0	57	5	56
Richest	(0.0)	(0.0)	(8.9)	(37.9)	(53.3)	(0.0)	100.0	(0.0)	(21.9)	(43.2)	(27.9)	(3.3)	(3.7)	100.0	45	(5)	44
Ethnicity of household head																	
Luhya	3.9	10.1	11.4	35.0	39.1	0.5	100.0	3.9	17.8	36.5	34.1	7.0	0.8	100.0	289	5	276
Other ethnic group	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	(*)	(*)	(*)	(*)	(*)	100.0	17	(*)	17

[1] **MICS indicator 5.5b; MDG indicator 5.5 - Antenatal care coverage**

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

The coverage of key services that pregnant women are expected to receive during antenatal care is shown in Table RH.9. Among those women who had a live birth during the two years preceding the survey, 89 percent had a blood sample taken during ANC visits, 89 percent had blood pressure checked, and 74 percent had a urine specimen taken. Overall, 70 percent of women had blood pressure measured, and urine and blood sample taken (73 percent urban and 67 percent rural areas).

Table RH.9: Content of antenatal care				
Percentage of women age 15-49 years with a live birth in the last two years who, at least once, had their blood pressure measured, urine sample taken, and blood sample taken as part of antenatal care, during the pregnancy for the last birth, Kakamega County MICS, 2013/14				
	Percentage of women who, during the pregnancy of their last birth, had:			
	Blood pressure measured	Urine sample taken	Blood sample taken	Blood pressure measured, urine and blood sample taken[1]	Number of women with a live birth in the last two years
Total	**88.8**	**73.7**	**89.3**	**70.2**	**306**
Area					
Urban	93.4	72.6	89.5	72.6	168
Rural	83.2	75.0	89.2	67.3	138
Education					
None	(*)	(*)	(*)	(*)	12
Primary	88.9	71.8	86.7	68.8	195
Secondary+	90.0	79.0	95.8	74.2	99
Wealth index quintile					
Poorest	86.9	67.6	93.8	64.9	79
Second	85.6	74.2	80.9	70.5	69
Middle	86.1	66.8	88.5	62.1	58
Fourth	89.8	77.5	90.8	71.9	57
Richest	(100.0)	(88.1)	(93.8)	(88.1)	43
Ethnicity of household head					
Luhya	88.2	72.7	88.7	69.0	289
Other ethnic group	(*)	(*)	(*)	(*)	17
[1] **MICS indicator 5.6 - Content of antenatal care**					
( ) Figures that are based on 25-49 unweighted cases					
(*) Figures that are based on fewer than 25 unweighted cases					

7.5 Assistance at Delivery

About three quarters of all maternal deaths occur due to direct obstetric causes.[71] The single most critical intervention for safe motherhood is to ensure that a competent health worker with midwifery skills is present at every delivery, and in case of emergency that transport is available to a referral facility for obstetric care. The skilled attendant at delivery is an indicator used to track progress toward the Millennium Development Goal 5 of improving maternal health.

The MICS included a number of questions to assess the proportion of births attended by a skilled attendant. *A skilled attendant* includes a doctor, nurse, or midwife. In the county more than half of

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[71] Say, L et al. 2014. *Global causes of maternal death: a WHO systematic analysis*. The Lancet Global Health 2(6): e323-33. DOI: 10.1016/S2214-109X(14)70227-X

births occurring in the two years preceding the MICS were delivered by skilled personnel (Table RH.10 and Figure RH.2). In urban areas, 58 percent of women were delivered by any skilled attendant while 47 percent in rural areas were delivered by any skilled personnel. More than one in three of the births (32 percent) in the two years preceding the MICS survey were delivered with assistance of a nurse/midwife. Doctors assisted with the delivery of 16 percent of births.

Table RH.10 also shows information on women who delivered by caesarean section (C-section) and provides additional information on the timing of the decision to conduct a C-section (before labour pains began or after) in order to better assess if such decisions were mostly driven by medical or non–medical reasons. Overall, six percent of women who delivered in the last two years preceding the survey had a C-section with the decision taken mostly after the onset of labour pains.

Table RH.10: Assistance during delivery and caesarean section

Percent distribution of women age 15-49 years with a live birth in the last two years by person providing assistance at delivery, and percentage of births delivered by C-section, Kakamega County MICS, 2013/14

| | Person assisting at delivery | | | | | | | | | | Delivery assisted by any skilled attendant[1,a] | Percent delivered by C-section | | | Number of women who had a live birth in the last two years |
	Medical doctor	Nurse/ Midwife	Auxiliary midwife/Clinical Officer	Community nurse	Traditional birth attendant	Community health worker	Relative/Friend	Other	No attendant	Total		Decided before onset of labour pains	Decided after onset of labour pains	Total[2]	
Total	**16.2**	**32.1**	**3.6**	**1.5**	**29.6**	**0.6**	**9.6**	**1.6**	**5.2**	**100.0**	**53.4**	**0.4**	**5.4**	**5.8**	**306**
Area															
Urban	16.5	35.2	4.6	2.1	30.3	0.0	8.1	1.2	2.0	100.0	58.4	0.0	7.0	7.0	168
Rural	15.8	28.4	2.3	0.7	28.7	1.4	11.4	2.0	9.1	100.0	47.3	1.0	3.4	4.4	138
Place of delivery															
Home	0.0	4.5	1.4	0.0	62.5	1.4	18.9	0.6	10.7	100.0	5.9	0.0	0.0	0.0	140
Health facility	31.4	58.4	5.6	2.9	1.1	0.0	0.0	0.0	0.5	100.0	98.3	0.8	10.4	11.3	158
Public	26.6	60.1	7.3	3.8	1.5	0.0	0.0	0.0	0.7	100.0	97.8	0.6	9.6	10.2	121
Private	(47.5)	(52.5)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	100.0	(100.0)	(1.8)	(13.2)	(15.0)	36
Education															
None	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	(*)	(*)	(*)	1
Primary	9.8	28.6	3.8	1.8	32.8	0.6	12.6	2.5	7.5	100.0	44.0	0.7	2.7	3.4	195
Secondary+	30.1	38.1	3.5	1.0	21.0	0.8	4.2	0.0	1.3	100.0	72.7	0.0	11.3	11.3	99
Wealth index quintile															
Poorest	6.5	22.8	3.1	0.0	39.2	0.0	13.8	0.6	13.9	100.0	32.5	0.8	2.0	2.8	79
Second	9.7	33.1	0.8	2.6	34.5	0.0	10.3	5.4	3.6	100.0	46.2	0.0	2.2	2.2	69
Middle	16.2	30.1	5.4	3.1	32.7	1.4	8.8	1.1	1.1	100.0	54.8	0.0	12.0	12.0	58
Fourth	23.5	35.7	6.1	0.0	23.7	2.0	5.8	0.0	3.2	100.0	65.4	1.2	0.0	1.2	57
Richest	(34.6)	(45.6)	(3.0)	(2.4)	(7.7)	(0.0)	(6.7)	(0.0)	(0.0)	100.0	(85.6)	(0.0)	(15.0)	(15.0)	43
Ethnicity of household head															
Luhya	16.4	30.5	3.8	1.2	31.1	0.4	9.4	1.7	5.5	100.0	51.9	0.5	5.5	5.9	289
Other ethnic group	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	(*)	(*)	(*)	17

[1] **MICS indicator 5.7; MDG indicator 5.2 - Skilled attendant at delivery**

[2] **MICS indicator 5.9 - Caesarean section**

[a] Skilled attendants include *Medical doctor* and *Nurse/Midwife*.
( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

Figure RH.2: Person assisting at delivery, Kakamega County MICS, 2013/14
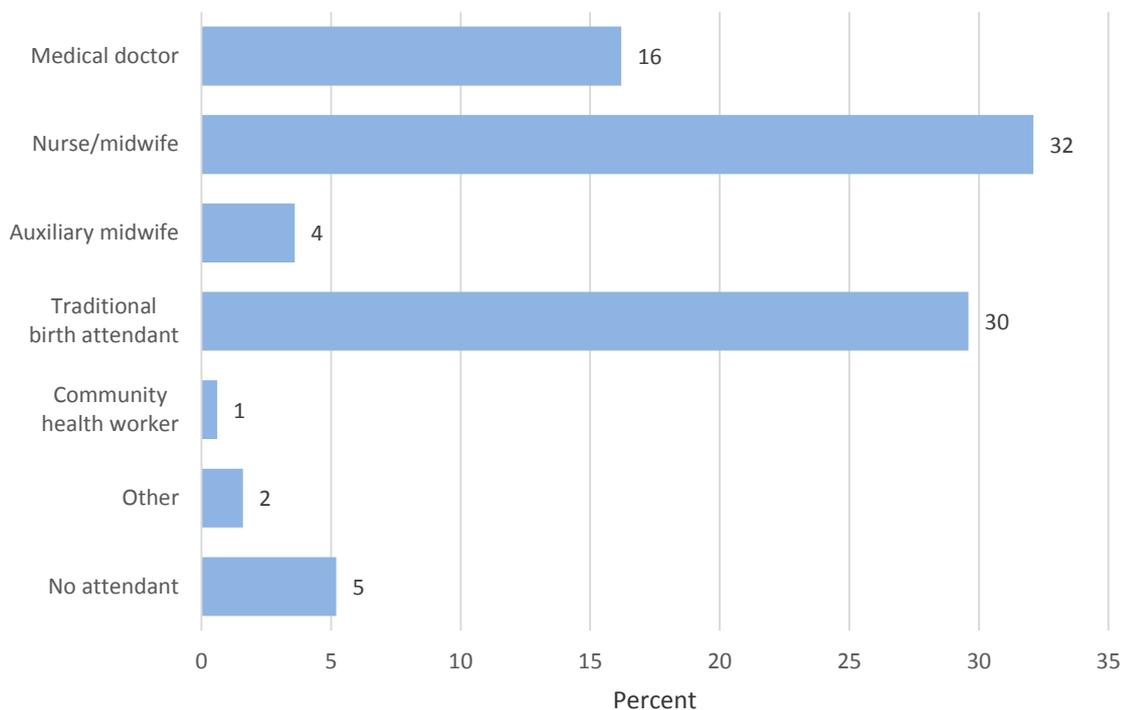
7.6 Place of Delivery

Increasing the proportion of births that are delivered in health facilities is an important factor in reducing the health risks to both the mother and the baby. Proper medical attention and hygienic conditions during delivery can reduce the risks of complications and infection that can cause morbidity and mortality to either the mother or the baby. Table RH.11 presents the percent distribution of women age 15-49 years who had a live birth in the two years preceding the survey by place of delivery, and the percentage of births delivered in a health facility, according to background characteristics.

About 52 percent of births in Kakamega County were delivered in a health facility; 40 percent of deliveries occurred in public health facilities and 12 percent in private health facilities. Forty-six percent of births took place at home. The proportion of births occurring in a health facility increased steadily with wealth, from 32 percent in the lowest wealth quintile to 82 percent in the highest.

Table RH.11: Place of delivery

Percent distribution of women age 15-49 years with a live birth in the last two years by place of delivery of their last birth, Kakamega County MICS, 2013/14

	Place of delivery						Delivered in health facility[1]	Number of women with a live birth in the last two years
	Health facility							
	Public sector	Private sector	Home	Other	Missing/DK	Total		
Total	**39.7**	**11.8**	**45.9**	**1.2**	**1.3**	**100.0**	**51.6**	**306**
Area								
Urban	41.9	13.5	42.2	1.1	1.2	100.0	55.4	168
Rural	37.0	9.8	50.5	1.3	1.4	100.0	46.8	138
Number of antenatal care visits								
None	(*)	(*)	(*)	(*)	(*)	100.0	(*)	11
1-3 visits	37.2	10.0	51.2	1.7	0.0	100.0	47.1	175
4+ visits	47.4	14.5	38.1	0.0	0.0	100.0	61.9	118
Education								
None	(*)	(*)	(*)	(*)	(*)	100.0	(*)	12
Primary	35.9	6.1	55.9	0.0	2.0	100.0	42.0	195
Secondary+	46.5	24.5	25.3	3.8	0.0	100.0	70.9	99
Wealth index quintile								
Poorest	28.2	3.9	64.9	2.4	0.6	100.0	32.1	79
Second	40.9	5.9	47.9	1.2	4.2	100.0	46.8	69
Middle	41.3	10.1	47.5	0.0	1.1	100.0	51.4	58
Fourth	44.4	17.4	36.4	1.7	0.0	100.0	61.8	57
Richest	(50.9)	(30.7)	(18.4)	(0.0)	(0.0)	100.0	(81.6)	43
Ethnicity of household head								
Luhya	38.9	11.0	47.4	1.3	1.4	100.0	49.9	289
Other ethnic group	(*)	(*)	(*)	(*)	(*)	100.0	(*)	17
[1] **MICS indicator 5.8 - Institutional deliveries**								

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

7.7 Post-natal Health Checks

The time of birth and immediately after is a critical window of opportunity to deliver lifesaving interventions for both the mother and newborn. Across the world, approximately 3 million newborns die annually in the first month of life[72] and the majority of these deaths occur within a day or two of birth,[73] which is also the time when the majority of maternal deaths occur.[74]

Despite the importance of the first few days following birth, large-scale, nationally representative household survey programmes have not systematically included questions on the post-natal period and care for the mother and newborn. In 2008, the Countdown to 2015 initiative, which monitors progress on maternal, newborn and child health interventions, highlighted this data gap. This not only called for post-natal care (PNC) programmes to be strengthened, but also for better data availability

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[72] UN Interagency Group for Child Mortality Estimation. 2013. *Levels and Trends in Child Mortality: Report 2013*
[73] Lawn, JE et al. 2005. *4 million neonatal deaths: When? Where? Why?* Lancet 2005; 365:891–900.
[74] WHO, UNICEF, UNFPA, The World Bank. 2012. *Trends in Maternal Mortality: 1990-2010*. World Health Organization.

and quality.[75]

Following the establishment and discussions of an Inter-Agency Group on PNC and drawing on lessons learned from earlier attempts of collecting PNC data, a new questionnaire module for MICS was developed and validated. The Post-natal Health Checks (PNHC) module collected information on newborns' and mothers' contact with a provider, but not content of care. The rationale for this is that as PNC programmes scale up, it is important to measure the coverage of that scale up and ensure that the platform for providing essential services is in place. Content is considered more difficult to measure, particularly because the respondent is asked to recall services delivered up to two years preceding the interview.

Table RH.12 presents the percent distribution of women age 15-49 years who gave birth in a health facility in the two years preceding the survey by duration of stay in the facility following the delivery, according to background characteristics. Overall, 67 percent of women who gave birth in a health facility stayed 12 hours or more in the facility after delivery.

Table RH.12: Post-partum stay in health facility									
Percent distribution of women age 15-49 years with a live birth in the last two years who had their last birth delivered in a health facility by duration of stay in health facility, Kakamega County MICS, 2013/14									
	Duration of stay in health facility							12 hours or more[1]	Number of women who had their last birth delivered in a health facility in the last 2 years
	Less than 6 hours	6-11 hours	12-23 hours	1-2 days	3 days or more	DK/ Missing	Total		
Total	**15.1**	**16.9**	**5.0**	**40.9**	**21.0**	**1.1**	**100.0**	**66.9**	**158**
Area									
Urban	13.4	16.6	7.7	35.0	25.4	1.8	100.0	68.1	93
Rural	17.6	17.2	1.0	49.4	14.7	0.0	100.0	65.2	64
Type of health facility									
Public	15.8	19.4	6.5	38.4	18.5	1.4	100.0	63.4	121
Private	(12.8)	(8.3)	(0.0)	(49.4)	(29.5)	(0.0)	100.0	(78.9)	36
Education									
None	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	6
Primary	18.5	20.4	1.6	42.7	14.7	2.1	100.0	59.0	82
Secondary+	9.2	14.2	6.3	40.2	30.2	0.0	100.0	76.7	70
Ethnicity of household head									
Luhya	15.8	16.0	5.4	40.0	21.5	1.2	100.0	67.0	144
Other ethnic group	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	13
[1] **MICS indicator 5.10 - Post-partum stay in health facility**									
( ) Figures that are based on 25-49 unweighted cases									
(*) Figures that are based on fewer than 25 unweighted cases									

Safe motherhood programmes have recently increased emphasis on the importance of post-natal care, recommending that all women and newborns receive a health check within two days of delivery. *Health checks following birth* while in facility or at home refer to checks provided by any health provider regardless of timing (column 1). *Post-natal care (PNC) visits* on the other hand, refer to a

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[75]HMN, UNICEF, WHO. 2008. *Countdown to 2015: Tracking Progress in Maternal, Newborn & Child Survival, The 2008 Report*. UNICEF.

<u>separate visit</u> to check on the health of the newborn and provide preventive care services. These, therefore, <u>do not</u> include *health checks following birth* while in facility or at home. The indicator *Post-natal health checks* includes any health check after birth received while in the health facility and at home (column 1), regardless of timing, as well as PNC visits within two days of delivery (columns 2, 3, and 4). To assess the extent of post-natal care utilization, women were asked whether they and their newborn received a health check after the delivery, the timing of the first check, and the type of health provider for the woman's last birth in the two years preceding the survey.

Table RH.13 shows the percentage of newborns born in the last two years who received health checks and post-natal care visits from any health provider after birth. Overall, 65 percent of newborns received a health check following birth while in a health facility or at home. With regards to PNC visits, these predominantly occurred either on the same day as the delivery or after the first week after the delivery (8 percent and 6 percent, respectively). As a result, a total of 68 percent of all newborns received a post-natal health check. There was a very clear correlation to both education and household wealth, with the percentage of post-natal health checks of newborns increasing with education and wealth. Among births that took place in a health facility, 82 percent had a health check following birth, and 48 percent for those that took place at home.[76]

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[76] Information on newborns who received the first PNC visit within one week of birth and type of provider of service is not included due to the small number of cases reported.

Table RH.13: Post-natal health checks for newborns

Percentage of women age 15-49 years with a live birth in the last two years whose last live birth received health checks while in facility or at home following birth, percent distribution whose last live birth received post-natal care (PNC) visits from any health provider after birth, by timing of visit, and percentage who received post-natal health checks, Kakamega County MICS, 2013/14

	Health check following birth while in facility or at home[a]	PNC visit for newborns[b]							Post-natal health check for the newborn[1, c]	Number of last live births in the last two years
		Same day	1 day following birth	2 days following birth	3-6 days following birth	After the first week following birth	No post-natal care visit	Total		
Total	**64.9**	**7.9**	**3.0**	**1.9**	**0.5**	**6.1**	**80.5**	**100.0**	**67.5**	**306**
Area										
Urban	68.7	7.9	3.1	2.4	0.5	6.6	79.5	100.0	70.4	168
Rural	60.2	8.0	2.9	1.2	0.5	5.6	81.8	100.0	64.0	138
Place of delivery										
Home	48.2	6.5	3.4	0.9	0.5	6.9	81.9	100.0	52.4	140
Health facility	82.3	9.7	2.8	2.9	0.5	5.8	78.4	100.0	83.7	158
Education										
None	(*)	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	12
Primary	55.4	7.6	2.5	1.4	0.4	5.9	82.3	100.0	58.2	195
Secondary+	82.3	9.7	4.3	2.3	0.8	7.4	75.4	100.0	84.9	99
Wealth index quintile										
Poorest	48.0	6.4	2.4	0.9	0.0	1.7	88.7	100.0	50.9	79
Second	63.9	14.8	2.9	0.0	0.0	7.7	74.6	100.0	68.0	69
Middle	72.2	4.0	1.5	7.0	0.0	9.1	78.3	100.0	72.2	58
Fourth	74.6	2.3	0.0	0.0	1.2	5.2	91.3	100.0	75.8	57
Richest	(74.8)	(12.5)	(10.1)	(2.4)	(1.9)	(9.1)	(64.0)	100.0	(80.1)	43
Ethnicity of household head										
Luhya	64.6	7.7	2.9	2.0	0.2	5.5	81.7	100.0	66.9	289
Other ethnic group	(*)	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	17

[1] MICS indicator 5.11 - Post-natal health check for the newborn

[a] Health checks by any health provider following facility births (before discharge from facility) or following home births (before departure of provider from home).

[b] Post-natal care visits (PNC) refer to a separate visit by any health provider to check on the health of the newborn and provide preventive care services. PNC visits do not include health checks following birth while in facility or at home (see note [a] above).

[c] Post-natal health checks include any health check performed while in the health facility or at home following birth (see note [a] above), as well as PNC visits (see note [b] above) within two days of delivery.

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

Table RH.14 presents information collected on post-natal health checks and visits of the mother. Overall, 59 percent of mothers received a health check following birth while in a health facility or at home. With regards to PNC visits, most took place on the first day or after the first week after the delivery. As a result, a total of 60 percent of all mothers received a post-natal health check. There was a correlation to both education and household wealth, with the percentage of post-natal health checks of mothers increasing with education and wealth.[77]

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[77] Information on PNC visits for mothers by location and type of provider is not included due to the small number of cases reported.

Table RH.14: Post-natal health checks for mothers

Percentage of women age 15-49 years with a live birth in the last two years who received health checks while in facility or at home following birth, percent distribution who received post-natal care (PNC) visits from any health provider after birth at the time of last birth, by timing of visit, and percentage who received post-natal health checks, Kakamega County MICS, 2013/14

	Health check following birth while in facility or at home[a]	PNC visit for mothers[b]							Post-natal health check for the mother[1, c]	Number of women with a live birth in the last two years
		Same day	1 day following birth	2 days following birth	3-6 days following birth	After the first week following birth	No post-natal care visit	Total		
Total	**58.5**	**3.4**	**2.6**	**0.9**	**0.5**	**3.0**	**89.6**	**100.0**	**60.4**	**306**
Area										
Urban	60.1	3.6	2.6	1.1	0.5	3.7	88.6	100.0	62.2	60.1
Rural	56.5	3.1	2.5	0.7	0.5	2.2	90.9	100.0	58.2	56.5
Place of delivery										
Home	37.9	4.9	2.0	0.0	0.5	0.4	92.3	100.0	42.1	140
Health facility	79.0	2.2	3.2	1.8	0.5	4.3	88.0	100.0	79.0	158
Public	75.5	2.8	1.9	2.3	0.0	3.1	89.9	100.0	75.5	121
Private	(90.8)	(0.0)	(7.4)	(0.0)	(2.3)	(8.4)	(81.8)	100.0	(90.8)	36
Education										
None	(*)	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	12
Primary	48.7	4.2	1.2	1.4	0.4	1.3	91.5	100.0	50.9	195
Secondary+	76.3	2.1	5.6	0.0	0.8	6.8	84.7	100.0	78.0	99
Wealth index quintile										
Poorest	41.7	6.3	1.6	0.0	0.0	2.4	89.6	100.0	45.6	79
Second	60.3	1.8	0.0	0.0	0.0	3.8	94.4	100.0	60.3	69
Middle	64.5	2.2	3.7	4.8	0.0	4.6	84.6	100.0	64.5	58
Fourth	64.9	2.3	0.0	0.0	1.2	1.1	95.3	100.0	66.1	57
Richest	(69.5)	(3.5)	(10.1)	(0.0)	(1.9)	(3.3)	(81.2)	100.0	(74.8)	43
Ethnicity of household head										
Luhya	58.5	3.6	2.5	1.0	0.2	3.2	89.5	100.0	60.5	289
Other ethnic group	(*)	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	17

[1] MICS indicator 5.12 - Post-natal health check for the mother

[a] Health checks by any health provider following facility births (before discharge from facility) or following home births (before departure of provider from home).

[b] Post-natal care visits (PNC) refer to a separate visit by any health provider to check on the health of the mother and provide preventive care services. PNC visits do not include health checks following birth while in facility or at home (see note [a] above).

[c] Post-natal health checks include any health check performed while in the health facility or at home following birth (see note [a] above), as well as PNC visits (see note [b] above) within two days of delivery.

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

Table RH.15 and Figure RH.3 present the distribution of women with a live birth in the two years preceding the survey by receipt of post-natal health checks within two days of birth for the mother and the newborn, thus combining the indicators presented in Tables RH.13 and RH.14.

The results showed that for 59 percent of live births, both the mothers and their newborns received either a health check following birth or a timely PNC visit, whereas for 31 percent of births neither received health checks or timely visits. There were clear correlations to household wealth and the education of the woman, where increasing wealth and education tended to lead to better access and utilisation to health care.

Table RH.15: Post-natal health checks for mothers and newborns

Percent distribution of women age 15-49 years with a live birth in the last two years by post-natal health checks for the mother and newborn, within two days of the most recent birth, Kakamega County MICS, 2013/14

| | Post-natal health checks within two days of birth for: | | | | | Number of women with a live birth in the last two years |
	Both mothers and newborns	Mothers only	Newborns only	Neither mother nor newborn	Total	
Total	**59.1**	**1.3**	**8.5**	**31.1**	**100.0**	**306**
Area						
Urban	61.1	1.1	9.3	28.4	100.0	168
Rural	56.6	1.6	7.4	34.4	100.0	138
Place of delivery						
Home	39.8	2.3	12.6	45.3	100.0	140
Health facility	78.5	0.5	5.2	15.8	100.0	158
Public	74.9	0.7	5.9	18.6	100.0	121
Private	(90.8)	(0.0)	(2.8)	(6.4)	100.0	36
Education						
None	(*)	(*)	(*)	(*)	100.0	12
Primary	48.8	2.1	9.4	39.7	100.0	195
Secondary+	78.0	0.0	6.9	15.1	100.0	99
Wealth index quintile						
Poorest	43.1	2.4	7.7	46.7	100.0	79
Second	59.3	1.0	8.7	31.0	100.0	69
Middle	63.4	1.1	8.8	26.7	100.0	58
Fourth	64.6	1.5	11.2	22.8	100.0	57
Richest	(74.8)	(0.0)	(5.3)	(19.9)	100.0	43
Ethnicity of household head						
Luhya	59.1	1.4	7.8	31.6	100.0	289
Other ethnic group	(*)	(*)	(*)	(*)	100.0	17

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

Figure RH.3: Place of delivery and post-natal health checks, Kakamega, 2013/14
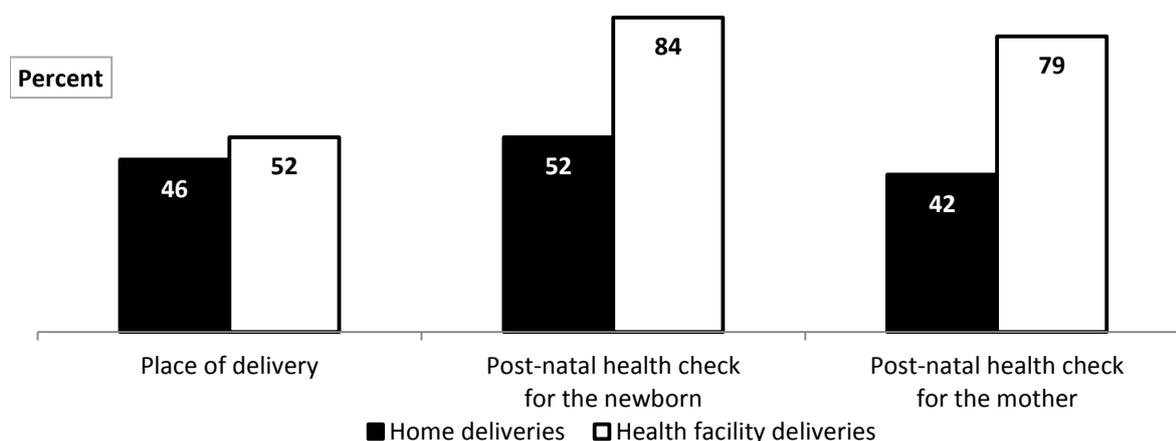
Note: Home and Facility deliveries do not add to 100% as 1% were reported as "Other" and 1% of responses were "Missing"

8.   Early Childhood Development

This chapter discusses early childhood care and development, quality of care, child support for learning in the home, learning materials available for child use such as reading books and toys, and the developmental status of children under five years of age.

8.1 Early Childhood Care and Education

Readiness of children for primary school can be improved through attendance to early childhood education programmes. Early childhood education programmes include programmes for children that have organised learning components as opposed to baby-sitting and day-care which do not typically have organised education and learning.

The Government of Kenya recognizes the importance of early childhood development (ECD) for attainment of Education for All (EFA) and the Millennium Development Goals (MDGs). The first goal of EFA obligates governments to expand early childhood care. In particular, the Government has demonstrated concern for improving the well-being of young children by enacting the Children's Act, 2001, which has managed to amalgamate all the laws of children into one document. The Act is now a legal instrument that not only protects children, but also advocates for them. Furthermore, the Government of Kenya developed Early Childhood Development Service Standard Guidelines and a National Early Childhood Development Policy Framework in 2006 which provide ECD standards, a co-ordination mechanism and explicitly define the roles of parents, communities, various Government ministries and departments, development partners and other stakeholders in the provision of ECD services in the country.[78, 79]

Table CD.1 presents the results on children age 36-59 months who are attending an organized early childhood education programme in Kakamega County. Forty percent of children age 36-59 months were attending an organised early childhood education programme. Attendance of an organized early childhood education varies with the wealth status of the households and age of children. Fifty-two percent of children living in the fourth richest households attend organized early childhood programmes compared with 27 percent in the poorest households. Among children age 36-59 months attending organized early childhood programmes, 55 percent of those age 48-59 months and 30 percent of those age 36-47 months are attending pre-school.

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[78] Government of Kenya. 2006. National Early Childhood Development Policy Framework 2006
[79] Government of Kenya. 2006. Early Childhood Development Service Standard Guidelines for Kenya 2006.

Table CD.1: Early childhood education		
Percentage of children age 36-59 months who are attending an organized early childhood education programme, Kakamega County MICS, 2013/14		
	Percentage of children age 36-59 months attending early childhood education[1]	Number of children age 36-59 months
Total	**40.0**	**344**
Sex		
Male	43.8	172
Female	36.3	173
Area		
Urban	42.7	181
Rural	37.0	163
Age of child		
36-47 months	29.8	205
48-59 months	54.9	140
Mother's education		
None	(28.8)	33
Primary	34.5	220
Secondary+	57.4	91
Wealth index quintile		
Poorest	26.5	84
Second	26.5	75
Middle	39.1	68
Fourth	52.4	73
Richest	(69.3)	44
[1] **MICS indicator 6.1 - Attendance to early childhood education**		
( ) Figures that are based on 25-49 unweighted cases		

8.2 Quality of Care

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. [80] In this context, engagement of adults in activities with children, presence of books in the home for the child, and the conditions of care are important indicators of quality of home care. As set out in *A World Fit for Children*, "children should be physically healthy, mentally alert, emotionally secure, socially competent and ready to learn."[81]

Information on a number of activities that support early learning was collected in the survey. These included the involvement of adults with children in the following activities: reading books or looking

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[80] Grantham-McGregor, S et al. 2007. *Developmental Potential in the First 5 Years for Children in Developing Countries*. The Lancet 369: 60–70

Belsky, J et al. 2006. *Socioeconomic Risk, Parenting During the Pre-school Years and Child Health Age 6 Years*. European Journal of Public Health 17(5): 511–2.

[81] UNICEF. 2002. *A World Fit For Children* adopted by the UN General Assembly at the 27th Special Session, 10 May 2002: 2.

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.

Table CD.2 shows that 63 percent of children age 36-59 months were engaged by an adult household member engaged in four or more activities that promote learning and school readiness during the three days preceding the survey. The mean number of activities that adults engaged with children is 4. The father's involvement in such activities was very limited compared to that of mothers. Three percent of children age 36-59 months had fathers who were involved in four or more activities, with the mean number of activities they were involved in at less than one. Mother's engagement in four or more activities that promote learning is 16 percent, with a mean number of activities performed at 1.3.

Adults engaged in learning and school readiness activities with children is more pronounced in urban areas at 67 percent than in rural areas at 59 percent. Generally, mother's engagement is higher across all socio-economic variables compared to father's involvement.

Table CD.2: Support for learning

Percentage of children age 36-59 months with whom adult household members engaged in activities that promote learning and school readiness during the last three days, and engagement in such activities by biological fathers and mothers, Kakamega County MICS, 2013/14

	Percentage of children with whom adult household members have engaged in four or more activities[1]	Mean number of activities with adult household members	Percentage of children living with their:		Number of children age 36-59 months	Percentage of children with whom biological fathers have engaged in four or more activities[2]	Mean number of activities with biological fathers	Number of children age 36-59 months living with their biological fathers	Percentage of children with whom biological mothers have engaged in four or more activities[3]	Mean number of activities with biological mothers	Number of children age 36-59 months living with their biological mothers
			Biological father	Biological mother							
Total	**63.3**	**3.9**	**63.7**	**81.3**	**344**	**2.6**	**0.3**	**219**	**16.1**	**1.3**	**280**
Sex											
Male	60.7	3.8	65.9	80.0	172	2.4	0.3	113	12.7	1.2	137
Female	65.8	3.9	61.5	82.6	173	2.7	0.3	106	19.5	1.4	143
Area											
Urban	66.9	4.0	66.2	84.7	181	2.2	0.3	120	16.4	1.4	153
Rural	59.3	3.7	61.0	77.6	163	2.9	0.3	100	15.8	1.2	127
Age											
36-47 months	57.9	3.7	64.4	82.1	205	1.6	0.3	132	14.8	1.2	168
48-59 months	71.2	4.1	62.7	80.3	140	3.9	0.4	88	18.0	1.4	112
Mother's education[a]											
None	(47.0)	(3.1)	(48.1)	(51.9)	33	(*)	(*)	16	(*)	(*)	17
Primary	60.7	3.8	68.1	85.2	220	2.0	0.3	150	14.2	1.3	188
Secondary+	75.4	4.4	58.6	82.7	91	(3.4)	(0.3)	53	25.6	1.8	75
Father's education											
None	(*)	(*)	(*)	(*)	8	(*)	(*)	8	(*)	(*)	8
Primary	58.4	3.7	100.0	97.7	149	3.9	0.4	149	13.4	1.2	145
Secondary+	67.8	4.2	100.0	100.0	61	5.0	0.6	61	19.8	1.7	61
Father not in the household	67.6	4.0	0.0	51.3	125	na	na	na	16.7	1.2	64
Wealth index quintile											
Poorest	60.7	3.7	70.4	84.9	84	2.5	0.2	59	11.0	1.0	71
Second	59.4	3.7	68.9	80.3	75	(0.0)	(0.3)	51	15.8	1.3	60

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Middle	64.7	4.0	68.6	83.6	68	2.1	0.5	47	21.1	1.4	57
Fourth	66.0	4.0	57.2	74.6	73	(4.5)	(0.3)	42	11.2	1.2	55
Richest	(68.1)	(4.1)	(45.4)	(83.9)	44	(*)	(*)	20	(26.6)	(1.9)	37
Ethnicity of household head											
Luhya	63.5	3.9	63.8	81.1	327	2.3	0.3	208	16.4	1.3	265
Other ethnic group	(*)	(*)	(*)	(*)	18	(*)	(*)	11	(*)	(*)	15

[1] **MICS indicator 6.2 - Support for learning**

[2] **MICS Indicator 6.3 - Father's support for learning**

[3] **MICS Indicator 6.4 - Mother's support for learning**

na: not applicable

[a] The background characteristic "Mother's education" refers to the education level of the respondent to the Questionnaire for Children Under Five, and covers both mothers and primary caretakers, who are interviewed when the mother is not listed in the same household. Since indicator 6.4 reports on the biological mother's support for learning, this background characteristic refers to only the educational levels of biological mothers when calculated for the indicator in question.

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

Exposure to books in early years not only provides the child with greater understanding of the nature of print, but may also give the child opportunities to see others reading, such as older siblings doing school work. Presence of books is important for later school performance. Mothers/caretakers of all children under-5 were asked about the number of children's books or picture books they have for the child, and the types of playthings that are available at home.

Table CD.3 shows that four percent of children age 0-59 months live in households where at least thee children's books are present for the child). The proportion of children with 10 or more books is one percent. Eleven percent of children who had three or more children's books are from the richest households compared with one percent in the poorest households.

The types of playthings included in the survey contribute to the development of a child. Such playthings included in the questionnaire were homemade toys (dolls and cars, or other toys made at home), toys that came from a store, and household objects (pots and bowls) or objects and materials found outside the home (sticks, rocks, animal shells, or leaves). Sixty-nine percent of children age 0-59 months have two or more types of playthings to play with in their homes. Eighty-one percent play with household objects or objects found outside, 67 percent play with homemade toys, and 32 percent of children play with toys that came from a store.

Gender disparity exists in the proportion of children who had two or more types of playthings. Seventy-one percent of male children have two or more types of playthings to play with compared with 68 percent of their female counterparts. The proportion of children who have two or more types of playthings to play with increases with the child's age. Eighty-three percent of children age 24-59 months have two or more playthings compared with 48 percent of children age 0-23 months.

Table CD.3: Learning materials

Percentage of children under age 5 by numbers of children's books present in the household, and by playthings that child plays with, Kakamega County MICS, 2013/14

	Percentage of children living in households that have for the child:		Percentage of children who play with:				Number of children under age 5
	3 or more children's books[1]	10 or more children's books	Homemade toys	Toys from a shop/manufactured toys	Household objects/objects found outside	Two or more types of playthings[2]	
Total	**3.7**	**0.7**	**67.4**	**32.3**	**81.2**	**69.3**	**806**
Sex							
Male	4.1	0.7	70.6	28.9	81.7	70.6	388
Female	3.4	0.8	64.5	35.5	80.6	68.1	418
Area							
Urban	3.6	0.4	68.6	34.0	81.0	69.9	405
Rural	3.8	1.0	66.2	30.6	81.4	68.7	401
Age							
0-23 months	1.8	0.5	45.6	25.3	61.6	48.4	312
24-59 months	5.0	0.9	81.2	36.7	93.4	82.5	494
Mother's education							
None	0.0	0.0	72.8	33.9	83.1	74.5	62
Primary	2.0	0.6	67.6	25.6	83.2	68.9	522
Secondary+	8.9	1.1	65.4	47.6	75.7	68.9	222
Wealth index quintile							
Poorest	1.0	0.0	59.9	25.5	82.3	64.0	207
Second	1.4	0.9	65.3	26.3	74.2	63.3	176
Middle	2.3	0.0	70.5	27.2	85.0	72.2	154
Fourth	5.9	1.1	78.8	29.4	85.4	76.8	158
Richest	11.4	2.3	64.3	65.8	78.6	74.1	111
Ethnicity of household head							
Luhya	3.4	0.5	67.4	31.2	81.1	68.9	764
Other ethnic group	(8.7)	(4.3)	(67.3)	(53.0)	(82.0)	(77.1)	42
[1] MICS indicator 6.5 - Availability of children's books							
[2] MICS indicator 6.6 - Availability of playthings							
( ) Figures that are based on 25-49 unweighted cases							

Leaving children alone or in the presence of other young children is known to increase the risk of injuries.[82] In Kakamega County MICS, two questions were asked to find out whether children age 0-59 months were left alone during the week preceding the interview, and whether children were left in the care of other children under 10 years of age.

Table CD.4 shows that 36 percent of children age 0-59 months are left in the care of other children, while 17 percent are left alone. Combining the two care indicators, it shows that 40 percent of children are left with inadequate care, either by being left alone or in the care of another child. Forty-four percent of children in rural areas are left with inadequate care compared with 37 percent of their urban counterparts. On the other hand, inadequate care is less prevalent among children whose mothers had at least secondary education (35 percent), as opposed to children whose mothers had no education (48 percent). More children age 24-59 months (44 percent) are left with inadequate care than those age 0-23 months (34 percent).

Table CD.4: Inadequate care

Percentage of children under age 5 left alone or left in the care of another child younger than 10 years of age for more than one hour at least once during the past week, Kakamega County MICS, 2013/14

	Percentage of children under age 5:			
	Left alone in the past week	Left in the care of another child younger than 10 years of age in the past week	Left with inadequate care in the past week[1]	Number of children under age 5
Total	**16.7**	**36.0**	**40.1**	**806**
Sex				
Male	17.0	37.9	41.5	388
Female	16.4	34.3	38.9	418
Area				
Urban	15.0	32.4	36.6	405
Rural	18.3	39.7	43.7	401
Age				
0-23 months	12.3	31.6	34.0	312
24-59 months	19.4	38.8	44.0	494
Mother's education				
None	27.3	38.9	47.6	62
Primary	16.9	37.8	41.6	522
Secondary+	13.2	31.0	34.5	222
Wealth index quintile				
Poorest	21.5	51.5	54.3	207
Second	21.6	31.7	39.6	176
Middle	16.9	31.4	35.7	154
Fourth	9.8	33.6	36.5	158
Richest	9.1	23.7	25.8	111
Ethnicity of household head				
Luhya	17.2	36.4	40.5	764
Other ethnic group	(6.6)	(28.1)	(32.8)	42
[1] **MICS indicator 6.7 - Inadequate care**				
( ) Figures that are based on 25-49 unweighted cases				

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[82] Grossman, DC. 2000. The History of Injury Control and the Epidemiology of Child and Adolescent Injuries. The Future of Children, 10(1): 23-52.

8.3 Developmental Status of Children

Early childhood 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. [83]

A 10-item module was used to calculate the Early Childhood Development Index (ECDI). The primary purpose of the ECDI is to inform public policy regarding the developmental status of children in Kakamega County. The index is based on selected milestones that children are expected to achieve by ages 3 and 4. The 10 items used to determine if children are developmentally on track are in four domains:

Literacy-numeracy: Children are identified as being developmentally on track based on whether they can identify/name at least ten letters of the alphabet, whether they can read at least four simple, popular words, and whether they know the name and recognize the symbols of all numbers from 1 to 10. If at least two of these are true, then the child is considered developmentally on track.

Physical: If the child can pick up a small object with two fingers, like a stick or a rock from the ground and/or the mother/caretaker does not indicate that the child is sometimes too sick to play, then the child is regarded as being developmentally on track in the physical domain.

Social-emotional: Children are considered to be developmentally on track if two of the following are true: If the child gets along well with other children, if the child does not kick, bite, or hit other children and if the child does not get distracted easily.

Learning: If the child follows simple directions on how to do something correctly and/or when given something to do, is able to do it independently, then the child is considered to be developmentally on track in this domain.

ECDI is then calculated as the percentage of children who are developmentally on track in at least three of these four domains. The results are presented in Table CD.5. In Kakamega County, 72 percent of children age 36-59 months are developmentally on track. ECDI is higher among girls (78 percent) than among boys (66 percent). The ECDI is 79 percent among children age 48-59 months and 67 percent among those age 36-47 months, since children develop more skills with increasing age. A higher ECDI is observed in children attending an early childhood education programme at 87 percent compared with 62 percent of those who are not attending.

The analysis of four domains of child development shows that literacy-numeracy is much less than the other three domains: 92 percent in the learning domain; 88 percent in the physical domain; 75 percent for social-emotional domain; and 32 percent in the literacy-numeracy domain.

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[83] Shonkoff, J and Phillips, D (eds). 2000. *From neurons to neighborhoods: the science of early childhood development*. Committee on Integrating the Science of Early Childhood Development, National Research Council, 2000.

Table CD.5: Early child development index

Percentage of children age 36-59 months who are developmentally on track in literacy-numeracy, physical, social-emotional, and learning domains, and the early child development index score, Kakamega County MICS, 2013/14

	Percentage of children age 36-59 months who are developmentally on track for indicated domains				Early child development index score[1]	Number of children age 36-59 months
	Literacy-numeracy	Physical	Social-Emotional	Learning		
Total	**31.6**	**87.5**	**75.1**	**92.4**	**72.0**	**344**
Sex						
Male	24.9	87.0	71.2	92.6	66.3	172
Female	38.3	88.0	79.0	92.2	77.6	173
Area						
Urban	27.3	88.2	78.4	92.8	74.3	181
Rural	36.4	86.7	71.4	92.0	69.4	163
Age						
36-47 months	16.9	87.7	75.0	90.6	67.0	205
48-59 months	53.2	87.3	75.3	95.1	79.2	140
Attendance to early childhood education						
Attending	58.3	92.0	81.6	98.6	86.9	138
Not attending	13.9	84.5	70.8	88.3	62.0	207
Mother's education						
None	(21.2)	(95.8)	(65.6)	(87.4)	(60.3)	33
Primary	28.1	88.8	74.6	92.2	74.2	220
Secondary+	43.9	81.4	79.8	94.7	70.7	91
Wealth index quintile						
Poorest	25.5	89.8	72.1	90.0	71.7	84
Second	25.0	88.9	67.7	92.1	68.4	75
Middle	23.9	86.4	81.9	90.5	68.3	68
Fourth	46.3	84.3	71.1	93.4	70.7	73
Richest	(42.2)	(88.0)	(89.5)	(98.9)	(86.2)	44
Ethnicity of household head						
Luhya	31.4	88.3	75.6	92.3	72.9	327
Other ethnic group	(*)	(*)	(*)	(*)	(*)	18
[1] **MICS indicator 6.8 - Early child development index**						
( ) Figures that are based on 25-49 unweighted cases (*) Figures that are based on fewer than 25 unweighted cases						

9.   Literacy and Education

Kenya is a signatory to several critical instruments for the enhancement of the rights to quality education for its citizens. These include the Universal Declaration on Human Rights (1948); the minimum Age Convention (1973); the convention on the Elimination of all forms of Discrimination Against Women (CEDAW) of 1979; the Convention on the rights of the Child (CRC) of 1989; the International Convention on the Protection of the rights of All Migrant workers and members of their families (1990); the Dakar Framework of Action on EFA (2000); the Millennium Development Goals (MDGs) 2000; and the convention on the Rights of Persons with Disabilities (2006). According to the Constitution of Kenya, Section 43, 1f, every child has the right to education.[84]

This chapter focuses on literacy among young women, school readiness, primary and secondary school participation and gender parity.

9.1 Literacy among Young Women

The Youth Literacy Rate reflects the outcomes of primary education over the previous 10 years or so. As a measure of the effectiveness of the primary education system, it is often seen as a proxy measure of social progress and economic achievement. Since a men's questionnaire was not administered as part of the Kakamega County MICS, the results are based only on female age 15-24 years. Literacy is assessed on the ability of the respondent to read a short simple statement or based on school attendance.

The proportion of young women literate is presented in Table ED.1. The results indicate that 86 percent of young women age 15-24 years are literate. Women in urban areas (89 percent) are more likely to be literate than those in rural areas (84 percent). The results show that among the young women who stated that primary school is their highest level of education, 76 percent are able to read the statement shown to them. Further, the data indicate that women age 15-19 years (88 percent) are more likely to be literate than those in age group 20-24 years (84 percent). Literacy status tends to increase in tandem with an increase in household wealth status.

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[84] The Constitution of Kenya 2010

Table ED.1: Literacy (young women)

Percentage of women age 15-24 years who are literate, Kakamega County MICS, 2013/14

	Percentage literate[1]	Percentage not known	Number of women age 15-24 years
Total	**86.3**	**0.6**	**381**
Area			
Urban	89.3	0.0	183
Rural	83.5	1.2	198
Education			
None	(*)	(*)	2
Primary	76.2	1.1	211
Secondary+	100.0	0.0	167
Age			
15-19	88.0	0.5	210
20-24	84.1	0.8	170
Wealth index quintile			
Poorest	81.0	0.0	58
Second	81.4	1.0	80
Middle	88.1	0.0	78
Fourth	86.6	1.9	83
Richest	92.7	0.0	82
Ethnicity of household head			
Luhya	86.0	0.7	346
Other ethnic group	(88.6)	(0.0)	35

[1] **MICS indicator 7.1; MDG indicator 2.3 - Literacy rate among young women**

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

9.2 School Readiness

Pre-primary school attendance is important for the readiness of children to education. Table ED.2 shows the proportion of children in the first grade of primary school (regardless of age) who attended pre-primary school the previous year.[85] Overall, 60 percent of children who are currently attending the first grade of primary school had attended pre-primary school the previous year. The results show that attendance of first grade of primary school is independent of sex or place of residence.

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[85] The computation of the indicator does not exclude repeaters, and therefore is inclusive of both children who are attending primary school for the first time, as well as those who were in the first grade of primary school the previous school year and are repeating. Children repeating may have attended Pre-primary prior to the school year during which they attended the first grade of primary school for the first time; these children are not captured in the numerator of the indicator

Table ED.2: School readiness		
Percentage of children attending first grade of primary school who attended Pre-primary school the previous year, Kakamega County MICS, 2013/14		
	Percentage of children attending first grade who attended preschool in previous year[1]	Number of children attending first grade of primary school
Total	**60.3**	**204**
Sex		
Male	60.9	114
Female	59.5	90
Area		
Urban	60.4	89
Rural	60.2	115
[1] MICS indicator 7.2 - School readiness		

9.3 Primary and Secondary School Participation

Achievement of universal primary education and by the world's children was one of the Millennium Development Goals. 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.

In Kenya, the structure of Early Childhood Development and Education (ECDE) provision is divided into two parts: 0-2 year-old and 3-5 year-old children. Children are expected to enter primary school at age 6 and secondary school at age 14. Primary school has 8 grades (1-8) and secondary school comprises 4 grades (1-4). In primary school level of education, grades are referred to as Standard 1 to Standard 8 after which a Kenya Certificate of Primary Education (KCPE) is attained after sitting for examination. For secondary school level, grades are referred to as Form 1 to Form 4, and a Kenya Certificate of Secondary Education (KCSE) is attained after successful completion of the full cycle and sitting for examination. The school year typically runs from January to November.[86]

Sixty-one percent of children who are of primary school entry age are attending the first grade of primary school (Table ED.3). There are notable variations by sex of the child with fewer male children (53 percent) than female (71 percent) attending grade 1. Children's participation in primary school is 66 percent in urban areas compared with 56 percent in rural areas.

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[86] Ministry of Education Science and Technology, 2005. Kenya Education Sector Support Programme 2005-2010.

Table ED.3: Primary school entry		
Percentage of children of primary school entry age entering grade 1 (net intake rate), Kakamega County MICS, 2013/14		
	Percentage of children of primary school entry age entering grade 1[1]	Number of children of primary school entry age
Total	**60.6**	**177**
Sex		
Male	52.5	97
Female	70.5	80
Area		
Urban	66.3	76
Rural	56.3	101
[1] MICS indicator 7.3 - Net intake rate in primary education		

Table ED.4 provides the percentage of children of primary school age 6 to 13 years who are attending primary or secondary school[87] and those who are out of school. The majority of children of primary school age (91 percent) are attending school while nine percent are out of school. The net attendance rate for children age 6 is low at 65 percent. The results show that net attendance is higher among the females (94 percent) compared to males (88 percent). Net attendance ratio to primary school is similar in urban and rural areas (92 and 91 percent, respectively), and varies slightly between children whose mothers have secondary or higher education (94 percent) and children whose mothers have no education (85 percent). Differentials are observed by household wealth where the net attendance rate is 88 percent for children in the poorest households and 97 percent for those in the richest households.

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[87] Ratios presented in this table are "adjusted" since they include not only primary school attendance, but also secondary school attendance in the numerator.

Table ED.4: Primary school attendance and out of school children

Percentage of children of primary school age attending primary or secondary school (adjusted net attendance ratio), percentage attending preschool, and percentage out of school, Kakamega County MICS, 2013/14

	Male					Female					Total				
	Percentage of children:					Percentage of children:					Percentage of children:				
	Net attendance ratio (adjusted)	Not attending school or pre-primary school	Attending pre-primary school	Out of school[a]	Number of children	Net attendance ratio (adjusted)	Not attending school or preschool	Attending pre-primary school	Out of school[a]	Number of children	Net attendance ratio (adjusted)[1]	Not attending school or preschool	Attending pre-primary school	Out of school[a]	Number of children
Total	**88.3**	**2.6**	**9.0**	**11.6**	**686**	**94.3**	**1.6**	**4.1**	**5.7**	**677**	**91.2**	**2.1**	**6.5**	**8.7**	**1,362**
Area															
Urban	89.2	1.6	9.1	10.8	278	95.1	2.2	2.7	4.9	295	92.2	1.9	5.8	7.8	573
Rural	87.6	3.3	8.9	12.2	408	93.6	1.2	5.1	6.2	382	90.5	2.3	7.0	9.3	790
Age at beginning of school year															
6	58.4	5.5	35.3	40.8	97	72.3	3.2	24.4	27.7	80	64.6	4.5	30.4	34.9	177
7	77.9	4.8	17.3	22.1	98	91.0	2.1	6.4	8.4	91	84.2	3.5	12.0	15.5	189
8	91.3	0.9	7.8	8.7	96	99.3	0.0	0.7	0.7	98	95.3	0.4	4.2	4.7	194
9	96.7	1.1	2.2	3.3	79	98.9	0.0	1.1	1.1	75	97.7	0.6	1.7	2.3	154
10	96.9	3.1	0.0	3.1	88	100.0	0.0	0.0	0.0	72	98.3	1.7	0.0	1.7	160
11	98.9	0.0	1.1	1.1	66	99.3	0.0	0.7	0.7	86	99.1	0.0	0.9	0.9	152
12	99.5	0.0	0.5	0.5	85	96.1	3.9	0.0	3.9	90	97.8	2.0	0.2	2.2	175
13	95.6	4.4	0.0	4.4	77	96.5	3.5	0.0	3.5	84	96.1	3.9	0.0	3.9	161
Mother's education															
None	82.6	7.3	10.2	17.4	96	88.2	5.4	5.9	11.3	87	85.3	6.4	8.1	14.5	183
Primary	88.4	2.5	8.9	11.4	403	94.2	1.1	4.7	5.8	392	91.3	1.8	6.8	8.6	795
Secondary+	91.0	.4	8.6	9.0	183	97.4	1.0	1.5	2.6	193	94.3	0.7	5.0	5.7	376
Cannot be determined[b]	(*)	(*)	(*)	(*)	2	(*)	(*)	(*)	(*)	-	(*)	(*)	(*)	(*)	3
Wealth index quintile															
Poorest	85.9	3.2	10.9	14.1	160	89.4	3.5	7.2	10.6	138	87.5	3.3	9.2	12.5	298
Second	85.7	5.2	9.1	14.3	145	93.3	1.4	5.3	6.7	128	89.3	3.4	7.3	10.7	273
Middle	90.0	0.0	9.3	9.3	132	94.7	0.4	4.6	4.9	136	92.4	0.2	6.9	7.1	268
Fourth	88.0	2.5	9.6	12.0	144	94.8	2.6	2.6	5.2	152	91.5	2.5	6.0	8.5	297

■▪▌MICS

Richest	93.7	1.6	4.6	6.3	104	99.5	0.0	0.5	0.5	123	96.9	0.7	2.4	3.1	227
Ethnicity of household head														
Luhya	88.3	2.8	8.8	11.6	652	94.1	1.6	4.2	5.8	630	91.2	2.2	6.5	8.7	1,282
Other ethnic group	(87.5)	(0.0)	(12.5)	(12.5)	34	(96.6)	(1.3)	(2.2)	(3.4)	46	92.7	0.7	6.5	7.3	80

[1] **7.S1 - Primary school net attendance ratio (adjusted)**

[a] The percentage of children of primary school age out of school are those not attending school and those attending pre-primary school
[b] Children age 15 or higher at the time of the interview whose mothers were not living in the household

(*) Figures that are based on fewer than 25 unweighted cases

The secondary school net attendance ratio is presented in Table ED.5.[88] About a third (34 percent) of the children of secondary school age are attending school, 47 percent are attending primary school and 20 percent are out of school. The secondary net attendance ratio is 37 percent for females and 30 percent for males. In urban areas, 35 percent of children of secondary school age are attending secondary school while in rural areas net attendance ratio is 32 percent. The proportion of secondary school age children out of school is very similar in urban and rural areas. Secondary net attendance ratio increases with the age of the child at beginning of school year and with household wealth.

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[88] Ratios presented in this table are "adjusted" since they include not only secondary school attendance, but also attendance to higher levels in the numerator.

Table ED.5: Secondary school attendance and out of school children

Percentage of children of secondary school age attending secondary school or higher (adjusted net attendance ratio), percentage attending primary school, and percentage out of school, Kakamega County MICS, 2013/14

	Male				Female				Total			
		Percentage of children:				Percentage of children:				Percentage of children:		
	Net attendance ratio (adjusted)	Attending primary school	Out of school[a]	Number of children	Net attendance ratio (adjusted)	Attending primary school	Out of school[a]	Number of children	Net attendance ratio (adjusted)[1]	Attending primary school	Out of school[a]	Number of children
Total	**30.1**	**49.5**	**20.3**	**295**	**37.1**	**44.4**	**18.5**	**269**	**33.5**	**47.1**	**19.5**	**564**
Area												
Urban	34.4	39.3	26.4	119	35.3	41.3	23.4	129	34.8	40.3	24.8	248
Rural	27.2	56.5	16.2	175	38.8	47.2	14.0	140	32.4	52.4	15.3	315
Age at beginning of school year												
14	14.1	75.9	10.0	89	23.1	71.4	5.4	70	18.0	73.9	8.0	159
15	25.6	47.4	27.0	63	25.2	54.3	20.5	77	25.4	51.2	23.4	140
16	29.5	49.9	20.5	68	48.5	28.3	23.2	74	39.4	38.7	21.9	142
17	53.9	19.2	26.9	74	58.8	14.2	27.0	49	55.8	17.2	27.0	123
Mother's education												
None	(5.5)	(77.2)	(17.4)	27	(*)	(*)	(*)	21	(9.3)	(73.6)	(17.1)	48
Primary	17.6	65.7	16.7	87	26.7	65.1	8.3	100	22.4	65.4	12.2	187
Secondary+	(32.7)	(54.2)	(13.1)	42	(59.5)	(20.7)	(19.8)	48	47.0	36.4	16.7	90
Cannot be determined[b]	42.1	32.5	25.4	139	41.6	29.9	28.5	100	41.9	31.4	26.7	239
Wealth index quintile												
Poorest	19.2	48.7	32.1	45	(26.4)	(46.7)	(26.9)	44	22.8	47.7	29.5	89
Second	15.5	67.4	17.1	56	30.1	58.7	11.2	55	22.7	63.1	14.2	111
Middle	21.7	57.4	20.9	69	33.4	51.5	15.1	54	26.9	54.8	18.3	123
Fourth	33.0	58.6	8.3	47	39.0	51.0	10.0	56	36.3	54.4	9.3	103
Richest	52.8	24.6	22.6	77	53.1	16.7	30.2	60	52.9	21.2	25.9	137
Ethnicity of household head												
Luhya	28.3	51.2	20.4	274	37.3	47.3	15.4	246	32.6	49.4	18.0	520
Other ethnic group	(*)	(*)	(*)	21	(*)	(*)	(*)	23	(44.1)	(19.4)	(36.4)	44

[1] 7.S2 - Secondary school net attendance ratio (adjusted)
[a] The percentage of children of secondary school age out of school are those who are not attending primary, secondary, or higher education
[b] Children age 15 or higher at the time of the interview whose mothers were not living in the household
( ) Figures that are based on 25-49 unweighted cases (*) Figures that are based on fewer than 25 unweighted cases

The MICS included only questions on school attendance in the current and previous year. Thus, the indicator is calculated synthetically by computing the cumulative probability of survival from the first to the last grade of primary school, as opposed to calculating the indicator for a real cohort which would need to be followed from the time a cohort of children entered primary school, up to the time they reached the last grade of primary school. Repeaters are excluded from the calculation of the indicator, because it is not known whether they will eventually graduate. As an example, the probability that a child will move from the first grade to the second grade is computed by dividing the number of children who moved from the first grade to the second grade (during the two consecutive school years covered by the survey) by the number of children who have moved from the first to the second grade plus the number of children who had been in the first grade the previous school year, but dropped out. Both the numerator and denominator excludes children who repeated during the two school years under consideration.

The percentage of children entering first grade who eventually reach the last grade of primary school is presented in Table ED.6. The majority of children starting grade 1 reach grade 8 (90 percent). Ninety-five percent of female children and 85 percent of males reach grade 8.

Table ED.6: Children reaching last grade of primary school

Percentage of children entering first grade of primary school who eventually reach the last grade of primary school (Survival rate to last grade of primary school), Kakamega County MICS, 2013/14

	Percent attending grade 1 last school year who are in grade 2 this school year	Percent attending grade 2 last school year who are attending grade 3 this school year	Percent attending grade 3 last school year who are attending grade 4 this school year	Percent attending grade 4 last school year who are attending grade 5 this school year	Percent attending grade 5 last school year who are attending grade 6 this school year	Percent attending grade 6 last school year who are attending grade 7 this school year	Percent attending grade 7 last school year who are attending grade 8 this school year	Percent who reach grade 8 of those who enter grade 1[1]
Total	**100.0**	**99.1**	**100.0**	**100.0**	**100.0**	**98.3**	**92.4**	**90.0**
Sex								
Male	100.0	98.0	100.0	100.0	100.0	96.7	89.5	84.9
Female	100.0	100.0	100.0	100.0	100.0	99.5	95.2	94.7
Area								
Urban	100.0	(97.6)	100.0	100.0	100.0	100.0	(92.0)	89.9
Rural	100.0	100.0	100.0	100.0	100.0	97.0	92.8	89.9
[1] **7.S3 - Children reaching last grade of primary**								
( ) Figures that are based on 25-49 unweighted cases								

The primary school completion rate and transition rate to secondary education are presented in Table ED.7. The primary completion rate is the ratio of the total number of pupils, regardless of age, entering the last grade of primary school for the first time, to the number of children of the primary graduation age at the beginning of the current (or most recent) school year.

Table ED.7 shows that the primary school completion rate is 80 percent. Thirty-six percent of the children who were attending the last grade of primary school in the previous school year were attending the first grade of secondary school in the school year of the survey. The results show that 39 percent of the children in the last grade of primary school are expected to move on to secondary school. The primary school completion rate is 80 percent and the transition rate to secondary school is 36 percent.

Table ED.7: Primary school completion and transition to secondary school					
Primary school completion rates and transition and effective transition rates to secondary school, Kakamega County 2013/14					
	Primary school completion rate[1]	Number of children of primary school completion age	Transition rate to secondary school[2]	Number of children who were in the last grade of primary school the previous year	Effective transition rate to secondary school	Number of children who were in the last grade of primary school the previous year and are not repeating that grade in the current school year
Total	**80.0**	**161**	**35.6**	**70**	**39.4**	**63**
Sex						
Male	79.6	77	(39.5)	36	(42.4)	33
Female	80.3	84	(31.4)	34	(36.0)	29
Area						
Urban	(84.0)	70	(*)	28	(*)	25
Rural	76.8	90	47.7	42	52.0	38
Mother's education						
None	(23.3)	32	(*)	2	(*)	2
Primary	52.1	83	(*)	24	(*)	20
Secondary	(86.5)	44	(*)	14	(*)	13
Cannot be determined[a]	(*)	2	(37.7)	29	(40.0)	28
Ethnicity of household head						
Luhya	77.6	153	34.7	62	38.9	55
Other ethnic group	(*)	8	(*)	8	(*)	8
[1] **7.S4 - Primary completion rate**						
[2] **7.S5 - Transition rate to secondary school**						
[a] Children age 15 or higher at the time of the interview whose mothers were not living in the household						
( ) Figures that are based on 25-49 unweighted cases						
(*) Figures that are based on fewer than 25 unweighted cases						

The ratio of girls to boys attending primary and secondary education is provided in Table ED.8. These ratios are better known as the Gender Parity Index (GPI).[89] Notice that the ratios included here are

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[89] UNESCO, 2015. EFA Monitoring Report 2015 -Education for All 2000-2015: Achievements and Challenges. Gender parity index (GPI) - Ratio of female to male values of a given indicator. A GPI between 0.97 and 1.03 indicates parity between the genders. A GPI below 0.97 indicates a disparity in favour of males. A GPI above 1.03 indicates a disparity in favour of females.

obtained from net attendance ratios rather than gross attendance ratios. The latter provide an erroneous description of the GPI mainly because, in most cases, the majority of over-age children attending primary education tend to be boys.

The gender parity index for primary school is 1.07, suggesting a slight difference between boys and girls of primary school age attending primary school in favour of girls. The GPI for secondary education is 1.23, indicating a higher secondary school attendance rate among girls of secondary age than among boys of the same age.

Table ED.8: Education gender parity						
Ratio of adjusted net attendance ratios of girls to boys, in primary and secondary school, Kakamega County MICS, 2013/14						
	Primary school			Secondary school		
	Primary school adjusted net attendance ratio (NAR), girls	Primary school adjusted net attendance ratio (NAR), boys	Gender parity index (GPI) for primary school adjusted NAR[1]	Secondary school adjusted net attendance ratio (NAR), girls	Secondary school adjusted net attendance ratio (NAR), boys	Gender parity index (GPI) for secondary school adjusted NAR[2]
Total	**94.3**	**88.3**	**1.07**	**37.1**	**30.1**	**1.23**
Area						
Urban	95.1	89.2	1.07	35.3	34.4	1.03
Rural	93.6	87.6	1.07	38.8	27.2	1.42
Mother's education						
None	88.2	82.6	1.07	(*)	(5.5)	2.65
Primary	94.2	88.4	1.07	26.7	17.6	1.52
Secondary	97.4	91.0	1.07	(59.5)	(32.7)	1.82
Cannot be determined[a]	(*)	(*)	(*)	41.6	42.1	0.99
Wealth index quintile						
Poorest	89.4	85.9	1.04	(26.4)	19.2	1.37
Second	93.3	85.7	1.09	30.1	15.5	1.94
Middle	94.7	90.0	1.05	33.4	21.7	1.54
Fourth	94.8	88.0	1.08	39.0	33.0	1.18
Richest	99.5	93.7	1.06	53.1	52.8	1.00
Ethnicity of household head						
Luhya	94.1	88.3	1.07	37.3	28.3	1.32
Other ethnic group	(96.6)	(87.5)	1.10	(*)	(*)	0.66
[1] 7.S6 - Gender parity index (primary school)						
[2] 7.S7 - Gender parity index (secondary school)						
[a] Children age 15 or higher at the time of the interview whose mothers were not living in the household						
na: not applicable						
( ) Figures that are based on 25-49 unweighted cases (*) Figures that are based on fewer than 25 unweighted cases						

The percentages of girls in the total out of school population, in both primary and secondary school, are provided in Table ED.9. The results show that nine and 20 percent of children who are supposed to be in primary and secondary schools are out of school, respectively. The table shows that at the primary level, girls accounted for one third (33 percent) of the out-of-school population, and 45 percent at the secondary level.

Table ED.9: Out of school gender parity

Percentage of girls in the total out of school population, in primary and secondary school, Kakamega County MICS, 2013/14

	Primary school				Secondary school			
	Percentage of out of school children	Number of children of primary school age	Percentage of girls in the total out of school population of primary school age	Number of children of primary school age out of school	Percentage of out of school children	Number of children of secondary school age	Percentage of girls in the total out of school population of secondary school age	Number of children of secondary school age out of school
Total	8.7	1,362	32.5	118	19.5	564	45.4	110
Area								
Urban	7.8	573	(32.6)	44	24.8	248	(48.9)	62
Rural	9.3	790	32.4	73	15.3	315	40.9	48
Mother's education								
None	14.5	183	(37.2)	26	(17.1)	48	(*)	8
Primary	8.6	795	33.1	69	12.2	187	(*)	23
Secondary+	5.7	376	(*)	21	16.7	90	(*)	15
Cannot be determined[a]	(*)	3	-	0	26.7	239	44.8	64
Wealth index quintile								
Poorest	12.5	298	(39.2)	37	29.5	89	(44.6)	26
Second	10.7	273	(29.1)	29	14.2	111	(*)	16
Middle	7.1	268	(*)	19	18.3	123	(*)	23
Fourth	8.5	297	31.1	25	9.3	103	(*)	10
Richest	3.1	227	(*)	7	25.9	137	(50.7)	36
Ethnicity of household head								
Luhya	8.7	1,282	32.8	112	18.0	520	40.4	94
Other ethnic group	7.3	80	(*)	6	(36.4)	44	(*)	16

[a] Children age 15 or higher at the time of the interview whose mothers were not living in the household
na: not applicable

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

Figure ED.1 brings together all of the attendance and progression related education indicators covered in this chapter, by sex. Information on attendance to early childhood education is also included, which was covered in Chapter 8, in Table CD.1.

Figure ED.1: Education indicators by sex (National System), Kakamega County MICS, 2013/14

School readiness		
61	60	

Net intake rate in primary		
53	70	

Primary school completion rate		
80	80	

Transition rate to secondary school		
(42)	(36)	

Attendance to early childhood education		
44	36	

Primary school attendance   **88**   94

Secondary school attendance   **30**   37

Children reaching last grade of primary   **85**   95

Boys   Girls
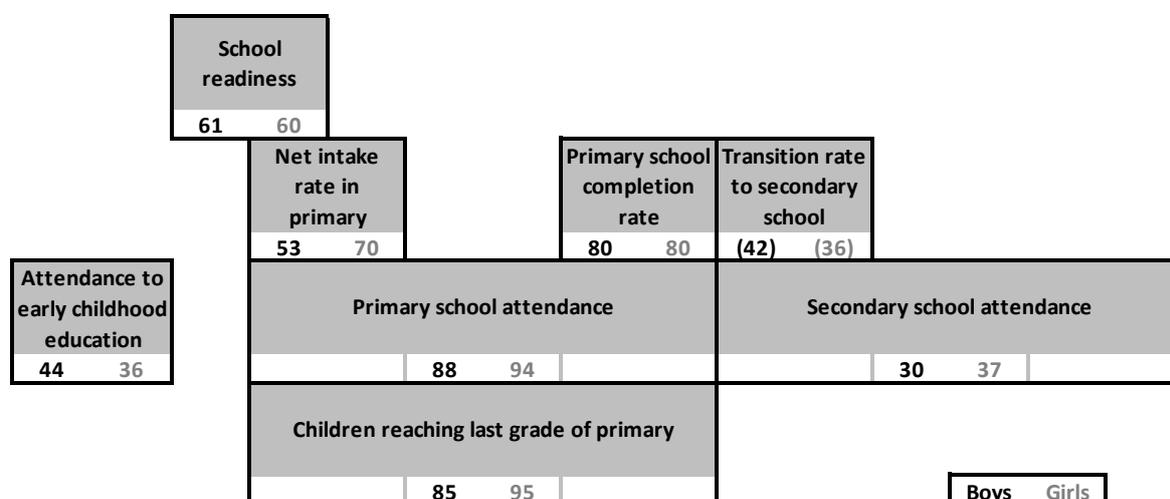
All indicator values are in per cent and are calculated based on the national education system
() Figures that are based on 25-49 unweighted cases

UNESCO developed the International Standard Classification of Education (ISCED) to facilitate comparisons of education statistics and indicators across countries on the basis of uniform and internationally agreed definitions[90], [91]. The mapping of the Kenyan education system to the ISCED classification is as follows:

(i)   ISCED Level 1 is Primary Education and corresponds to Primary grades Standard 1 to 6 in the Kenyan education system.

(ii)   ISCED Level 2 is Lower Secondary Education and corresponds to Primary grades Standard 7 and 8, and Secondary grades Form 1 and 2, in the Kenyan education system.

(iii)   ISCED Level 3 is Upper Secondary Education and corresponds to Secondary grades Form 3 and 4 in the Kenyan education system.

Table ED.10 ISCED shows key education indicators in Kakamega County according to the mapping of the Kenya education system to the ISCED 2011 education classification. These indicators therefore are not based on the Kenya education system but rather provide international comparison of same indicators as used in different countries education systems.

About 67 percent of children of primary school entry age enter grade 1. About 89 percent of children age 6-11 years are attending primary school according to the ISCED classification (i.e. Standard 1 to 6), and 56 percent of children age 12-17 are attending secondary school (ISCED levels 2 and 3). Ninety-nine percent of the children entering primary grade 1 are expected to reach grade 6 (the last grade of the ISCED 1 level), and 93 percent transition from primary (ISCED 1 level) to secondary (ISCED 2 level).

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[90] http://www.uis.unesco.org/Education/Pages/international-standard-classification-of-education.aspx

[91] http://www.uis.unesco.org/Education/ISCEDMappings/Pages/default.aspx

Table ED.10: Summary of education indicators (ISCED[a])

Summary of education indicators classified according to the International Standard Classification of Education (ISCED), Kakamega County MICS, 2013/14

	Primary school (ISCED 1)				Transition (ISCED 1 to 2)	Secondary school (ISCED 2+3)
	Percentage of children of primary school entry age entering grade 1[1]	Net attendance ratio (adjusted)[2]	Percent who reach grade 6 of those who enter grade 1[3]	Primary school completion rate[4]	Transition rate to secondary school[5]	Net attendance ratio (adjusted)[6]
Total	**66.6**	**89.4**	**99.1**	**128.1**	**92.7**	**55.6**
Sex						
Male	52.5	85.4	98.0	157.5	92.9	48.8
Female	70.5	93.6	100.0	105.4	92.6	62.6
Gender parity index (GPI)[7, 8]	na	1.10	na	na	na	1.28

[1] **MICS indicator 7.3 - Net intake rate in primary education**

[2] **MICS indicator 7.4; MDG indicator 2.1 - Primary school net attendance ratio (adjusted)**

[3] **MICS indicator 7.6; MDG indicator 2.2 - Children reaching last grade of primary**

[4] **MICS indicator 7.7 - Primary completion rate**

[5] **MICS indicator 7.8 - Transition rate to secondary school**

[6] **MICS indicator 7.5 - Secondary school net attendance ratio (adjusted)**

[7] **MICS indicator 7.9; MDG indicator 3.1 - Gender parity index (primary school)**

[8] **MICS indicator 7.10; MDG indicator 3.1 - Gender parity index (secondary school)**

[a] ISCED 1 are Standards 1-6, ISCED 2 are Standards 7-8 and Forms 1-2, and ISCED 3 are Forms 3-4.

na: not applicable

10.   Child Protection

Kenya is committed to the survival, development and protection of children as demonstrated by its ratification of international treaties and conventions that include the 1989 United Nations Convention on the Rights of the Child (CRC), the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW), the International Labour Organization (ILO) conventions on Prohibition of Child Labour and Worst Forms of Child Labour [*Chapter 182*] 1999, Palermo Protocol on Trafficking in Persons, 2000 and the Millennium Development Goals 2000 (MDGs). At regional level, Kenya ratified the 1990 African Charter on the Rights and Welfare of the Child (ACRWC).

The majority of these conventions and treaties have been domesticated into the Constitution and other enacted laws and policies that include: the Registration of Births and Deaths Act [*Chapter 149*], Rev 1990; the Children's Act, 2001; the Sexual Offences Act, 2003; the Female Genital Mutilation/Cutting Policy, 2009; the Counter Trafficking in Persons Act, 2010; the Kenya Citizenship and Immigration Act, 2011; the Labour Migration Policy, 2011; and Prohibition of Female Genital Mutilation Act, 2011; among others.

This chapter discusses birth registration, child labour, child discipline, early marriage and polygyny, female genital mutilation/cutting (FGM/C), and women's attitudes towards domestic violence.

10.1 Birth Registration

A name and nationality is every child's right, enshrined in the Convention on the Rights of the Child (CRC) and other international treaties. Yet the births of around one in four children under the age of five worldwide have never been recorded.[92] This lack of formal recognition by the State usually means that a child is unable to obtain a birth certificate. As a result, he or she may be denied health care or education. Later in life, the lack of official identification documents can mean that a child may enter into marriage or the labour market, or be conscripted into the armed forces, before the legal age. In adulthood, birth certificates may be required to: obtain social assistance; acquire a job in the formal sector; prove the right to inherit property; vote; obtain a passport; etc. Registering children at birth is the first step in securing their recognition before the law, safeguarding their rights, and ensuring that any violation of these rights does not go unnoticed.[93]

Birth registration requirements

The Births and Deaths Registration Act, which makes registration of all births and deaths occurring in Kenya compulsory has the following legal provisions:
   o   The occurrence of a birth must be registered within six months
   o   A registrar shall not register a birth after the expiry of six months without specific authority and payment of a late registration fee
   o   Registration of a birth within six months is called **current registration** and is done free of charge

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[92] UNICEF. 2014.*The State of the World's Children 2015*. UNICEF.
[93] UNICEF. 2013.*Every Child's Birth Right: Inequities and trends in birth registration*. UNICEF.

    o   Registration of a birth after six months is called ***late registration*** and attracts a penalty of Ksh 100. Besides, such registration is only done by the respective county registrar at their own discretion

Births take place either within health facilities or at home. For births occurring in health facilities, the person-in charge of each facility is responsible for reporting occurrence of such births. While the primary responsibility of reporting occurrence of a birth at home is on the parents.

The midwife is responsible for completing a register of birth for every birth immediately after delivery. For every birth occurring at home, the area assistant chief is expected to complete a register of birth after receiving reports, within six months, of its occurrence within their respective areas of jurisdiction.

All completed registers of birth, from all health facilities and sub-locations are transmitted to respective county civil registries once every month. Upon receipt, they are checked for completeness and accuracy after which respective sub-county civil registrars append their signatures, thereby certifying them as legal documents. These legal documents are supposed to be maintained under safe custody within respective sub-county civil registries for purposes of issuance of certificates and other related documents.

While registration of births is compulsory, acquisition of a birth certificate is not. When in need, one makes an application for such a certificate in the county in which the event occurred. Sub-county civil registrars authorise issuance of certificates of birth from registers of birth under their custody upon application, production of supportive documentation and payment of subscribed fees. An applicant is required to pay Ksh 50 in order to acquire a birth certificate. In case of any amendment on the register of birth, before a birth certificate is issued, an extra Ksh 50 is levied.

The Births and Deaths Registration Act has provision for registering births outside the mandatory six months. Respective sub-county civil registrars have the sole discretion in approving applications for late registration of births. However, applications for late registration of births within border counties have to be vetted through the ranks of the local administration before they reach respective sub-county civil registrars. All applications for late registration must be supported by documents in relation to key characteristics pertaining to the occurrence of the birth such as date and place of occurrence, parentage, etc.

Birth Registration Status

The Kakamega County MICS sought to provide an estimate of the extent of birth registration of children under-5 years of age. Mothers/caretakers of these children were asked whether children in their household had birth certificates. If they responded that a child did not have a birth certificate, additional questions were asked on whether the child's birth was registered and whether they knew how to register a birth. A child may not have been issued a birth certificate but the birth may have been registered.

Birth registration in this context includes:
- children whose birth certificates were seen by the interviewer;
- children reported to have a birth certificate that was not seen by the interviewer; and
- children who did not have a birth certificate but were reported to have been registered.

Half of the births of children under-5 years in Kakamega County are registered (Table CP.1). Registration of birth becomes more likely as a child grows older. Male children (54 percent) are more likely to have their births registered than female children (46 percent). Birth registration increases with mother's education and with household wealth. Only 12 percent showed a birth certificate to the interviewer. These findings are summarized in Figure CP.1.

Table CP.1: Birth registration

Percentage of children under age 5 by whether birth is registered and percentage of children not registered whose mothers/caretakers know how to register birth, Kakamega County MICS, 2013/14

| | Children under age 5 whose birth is registered with civil authorities | | | | | Children under age 5 whose birth is not registered | |
| | Has birth certificate | | | | Number of children under age 5 | Percent of children whose mother/caretaker knows how to register birth | Number of children under age 5 without birth registration |
	Seen	Not seen	No birth certificate	Total registered[1]			
Total	**12.0**	**14.5**	**23.2**	**49.6**	**806**	**65.1**	**406**
Sex							
Male	12.6	17.2	23.9	53.8	388	69.7	179
Female	11.4	12.0	22.4	45.8	418	61.5	227
Area							
Urban	13.7	14.6	21.4	49.7	405	63.1	203
Rural	10.3	14.4	24.9	49.6	401	67.2	202
Age							
0-11 months	3.9	10.0	23.4	37.2	151	53.3	95
12-23 months	12.1	14.8	23.9	50.8	161	78.9	79
24-35 months	14.4	16.2	22.4	53.1	150	67.4	70
36-47 months	14.4	16.1	18.8	49.3	205	61.7	104
48-59 months	14.5	14.8	29.2	58.6	140	69.0	58
Mother's education							
None	7.6	12.4	7.4	27.4	62	(67.4)	45
Primary	10.2	11.8	24.4	46.4	522	65.0	280
Secondary+	17.5	21.4	24.6	63.5	222	64.4	81
Wealth index quintile							
Poorest	6.6	7.6	21.9	36.1	207	54.1	132
Second	8.9	11.4	24.3	44.6	176	74.6	98
Middle	8.8	12.3	24.2	45.3	154	75.3	84
Fourth	12.9	19.6	27.1	59.6	158	55.4	64
Richest	30.1	28.3	16.5	74.9	111	(76.0)	28
Ethnicity of household head							
Luhya	11.3	14.0	22.8	48.1	764	65.4	396
Other ethnic group	(24.1)	(22.8)	(29.9)	(76.7)	42	(*)	10
[1] **MICS indicator 8.1 - Birth registration**							
( ) Figures that are based on 25-49 unweighted cases							
(*) Figures that are based on fewer than 25 unweighted cases							

The lack of adequate knowledge of how to register a birth can present another major obstacle to the fulfilment of a child's right to identity. Data shows that 65 percent of the mothers/caretakers of the children under five years of age whose births are not registered know how to register a child's birth.

Figure CP.1: Children under-5 years whose births were registered, Kakamega County MICS, 2013/14
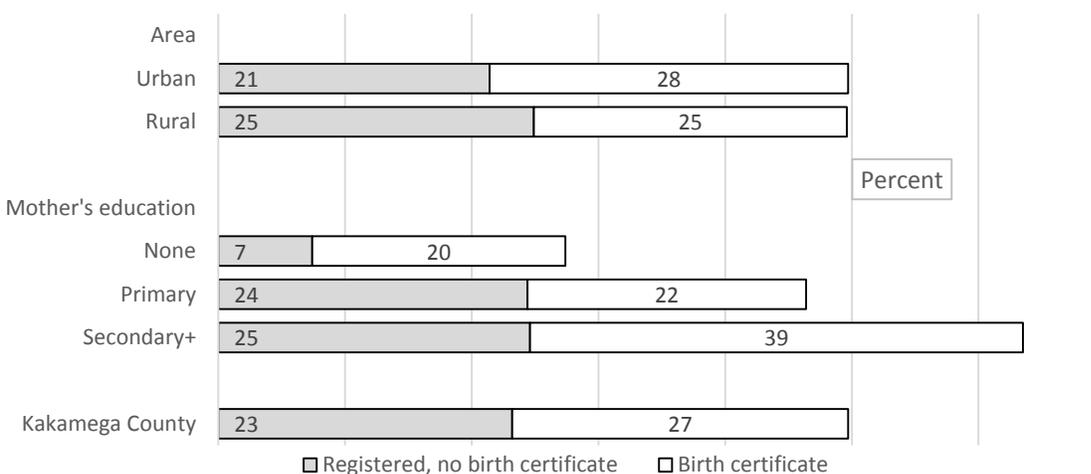
10.2 Child Labour

Children around the world are routinely engaged in paid and unpaid forms of work that are not harmful to them. However, they are classified as child labourers when they are either too young to work or are involved in hazardous activities that may compromise their physical, mental, social or educational development. Article 32 (1) 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 Employment Act [*Chapter 226*] 2007, and the Children Act [*Chapter 141*] 2007, define a child in Kenya as a person below the age of 18 years. The Employment Act, Part VII provides for protection of children including protection from the worst forms of child labour. Section 56 of the Employment Act prohibits employment of a child below age 13 years in any form of undertaking. However, it allows employment of children from age 13 to16 years for light work, and defines those of age 16 to 18 as employable.[94, 95]

In Kakamega County, the child labour module was administered for children age 5-17 and includes questions on the type of work a child does and the number of hours he or she is engaged in it. Data were are collected on both economic activities (paid or unpaid work for someone who is not a member of the

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[94] Employment Act [Chapter 226] 2007, 2012; Children Act [141] 2007, 2010.
[95] http://www.kenyalaw.org/kl/fileadmin/pdfdownloads/Acts/EmploymentAct_Cap226-No11of2007_01.pdf

household, work for a family farm or business) and domestic work (household chores such as cooking, cleaning or caring for children, as well as collecting firewood or fetching water). The module also collected information on hazardous working conditions.[96, 97]

Table CP.2 presents children's involvement in economic activities during the last week preceding the survey. The methodology of the MICS on Child Labour uses three age-specific thresholds for the number of hours a child can perform an economic activity without it being classified as in child labour. A child that performed economic activities during the last week for more than the age-specific number of hours is classified as in child labour:

    i.   age 5-11: 1 hour or more
    ii.   age 12-14: 14 hours or more
    iii.   age 15-17: 43 hours or more

Thirty-five percent of the 5-11 year olds were involved in economic activities for at least one hour (Table CP.2). About 43 percent of children age 12-14 years are involved in economic activity less than 14 hours and 19 percent for more than 14 hours. The percentage of the 15-17 year olds who are involved in economic activities for less than 43 hours is 62 percent while those involved in economic activity for 43 hours or more is two percent. The involvement in economic activities beyond the stipulated hours is higher for male (25 percent) children than females (13 percent). Variations were noted by school attendance of the child, and mother's education for children in the 15-17 years age group who were engaged in economic activities.

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[96] UNICEF. 2012. *How Sensitive Are Estimates of Child Labour to Definitions?* MICS Methodological Paper No. 1. UNICEF.
[97] The Child Labour module and the Child Discipline module were administered using random selection of a single child in all households with one or more children age 1-17 (See Appendix H: Questionnaires). The Child Labour module was administered if the selected child was age 5-17 and the Child Discipline module if the child was age 1-14 years old. To account for the random selection, the household sample weight is multiplied by the total number of children age 1-17 in each household.

	Percentage of children age 5-11 years involved in economic activity for at least one hour	Number of children age 5-11 years	Percentage of children age 12-14 years involved in:		Number of children age 12-14 years	Percentage of children age 15-17 years involved in:		Number of children age 15-17 years
			Economic activity less than 14 hours	Economic activity for 14 hours or more		Economic activity less than 43 hours	Economic activity for 43 hours or more	
Total	**35.0**	**1,311**	**43.4**	**18.8**	**488**	**62.4**	**1.8**	**468**
Sex								
Male	42.1	691	43.7	24.6	251	77.3	1.4	249
Female	27.1	620	43.0	12.6	237	45.5	2.1	219
Area								
Urban	28.2	541	37.1	14.9	201	51.1	3.1	218
Rural	39.9	770	47.7	21.5	287	72.3	0.6	250
School attendance								
Yes	35.8	1,245	43.7	19.4	472	63.0	0.4	382
No	21.7	66	(*)	(*)	16	59.8	7.8	87
Mother's education								
None	39.9	169	48.0	14.8	84	(83.6)	(0.0)	32
Primary	32.1	772	45.3	22.4	276	76.4	3.5	175
Secondary+	39.3	366	36.1	14.1	123	46.9	0.0	87
Cannot be determined[a]	(*)	-	(*)	(*)	3	52.2	1.2	174
Wealth index quintile								
Poorest	27.1	278	55.0	19.9	100	62.8	2.1	69
Second	49.0	274	33.3	30.0	97	59.6	0.0	122
Middle	35.5	229	59.4	14.8	105	80.9	7.1	96
Fourth	35.8	307	34.8	24.6	102	75.2	0.0	102
Richest	26.2	223	31.4	2.1	83	27.5	0.0	79
Ethnicity of household head								
Luhya	35.6	1,246	45.3	18.9	452	65.0	0.3	426
Other ethnic group	23.7	65	(19.4)	(16.3)	36	(36.3)	(16.0)	42

[a] Children age 15 or higher at the time of the interview whose mothers were not living in the household

na: not applicable

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

Table CP.3 presents children's involvement in household chores. Like for economic activity above, the methodology also uses age-specific thresholds for the number of hours a child can perform household chores without it being classified as child labour. A child who performed household chores during the last week for more than the age-specific number of hours is classified as in child labour:

i. age 5-11 and age 12-14: 28 hours or more
ii. age 15-17: 43 hours or more

Overall, 10 percent of children age 5-11 years and six percent of children age 12-14 years are involved in household chores for 28 hours or more while nine percent of children age 15-17 years are involved in household chores for 43 hours or more (Table CP.3). Girls age 15-17 years were more likely to perform household chores than boys in the same age groups. The opposite was true for age group 12-14 years.

Table CP.3: Children's involvement in household chores

Percentage of children by involvement in household chores during the last week, according to age groups, Kakamega County MICS, 2013/14

	Percentage of children age 5-11 years involved in:		Number of children age 5-11 years	Percentage of children age 12-14 years involved in:		Number of children age 12-14 years	Percentage of children age 15-17 years involved in:		Number of children age 15-17 years
	Household chores less than 28 hours	Household chores for 28 hours or more		Household chores less than 28 hours	Household chores for 28 hours or more		Household chores less than 43 hours	Household chores for 43 hours or more	
Total	**77.2**	**10.0**	**1,311**	**85.4**	**6.1**	**488**	**70.7**	**8.8**	**468**
Sex									
Male	76.1	9.1	691	86.5	7.8	251	76.9	5.9	249
Female	78.4	11.1	620	84.3	4.4	237	63.7	12.2	219
Area									
Urban	69.0	9.6	541	86.8	2.5	201	57.3	10.2	218
Rural	82.9	10.3	770	84.5	8.7	287	82.5	7.7	250
School attendance									
Yes	77.2	10.5	1,245	86.7	6.4	472	71.9	7.3	382
No	76.1	1.3	66	(*)	(*)	16	65.6	15.5	87
Mother's education									
None	83.9	6.9	169	88.5	7.5	84	(75.9)	(7.6)	32
Primary	78.3	9.6	772	85.9	6.1	276	84.3	8.4	175
Secondary+	72.5	12.5	366	81.8	5.5	123	45.0	6.1	87
Cannot be determined[a]	(*)	(*)	0	(*)	(*)	3	68.9	10.9	174
Wealth index quintile									
Poorest	76.5	12.5	278	87.6	8.8	100	60.4	24.6	69
Second	83.1	9.9	274	87.6	6.8	97	71.9	6.0	122
Middle	76.0	12.8	229	88.7	8.7	105	80.4	2.7	96
Fourth	76.9	8.6	307	81.1	5.3	102	80.6	9.8	102
Richest	72.4	6.2	223	81.4	0.0	83	53.5	5.8	79
Ethnicity of household head									
Luhya	76.8	10.1	1,246	86.7	5.7	452	69.9	9.7	426
Other ethnic group	83.5	9.4	65	(69.1)	(11.4)	36	(78.7)	(0.0)	42

[a] Children age 15 or higher at the time of the interview whose mothers were not living in the household

na: not applicable

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

Table CP.4 combines the children working and performing household chores at or above and below the age-specific thresholds as detailed in the previous tables, as well as those children reported working under hazardous conditions, into the total child labour indicator. Total child labour for Kakamega County is 45 percent (52 percent for boys and 37 percent for girls). Child labour is higher in rural areas (50 percent) compared with urban areas (38 percent).

Table CP.4: Child labour

Percentage of children age 5-17 years by involvement in economic activities or household chores during the last week, percentage working under hazardous conditions during the last week, and percentage engaged in child labour during the last week, Kakamega County MICS, 2013/14

	Children involved in economic activities for a total number of hours during last week:		Children involved in household chores for a total number of hours during last week:		Children working under hazardous conditions	Total child labour[1]	Number of children age 5-17 years
	Below the age specific threshold	At or above the age specific threshold	Below the age specific threshold	At or above the age specific threshold			
Total	**26.3**	**24.7**	**77.6**	**9.0**	**34.0**	**44.9**	**2,267**
Sex							
Male	29.6	29.9	78.5	8.2	39.7	52.2	1,191
Female	22.6	18.8	76.7	9.8	27.6	36.8	1,076
Area							
Urban	21.0	19.7	70.0	8.3	27.6	37.6	961
Rural	30.2	28.3	83.2	9.5	38.6	50.3	1,306
Age							
5-11	7.0	35.0	77.2	10.0	25.4	41.1	1,311
12-14	43.4	18.8	85.4	6.1	42.3	45.6	488
15-17	62.4	1.8	70.7	8.8	49.2	54.8	468
School attendance							
Yes	25.5	25.6	78.4	9.0	34.2	45.3	2,098
No	35.5	12.5	68.1	8.5	30.9	40.6	169
Mother's education							
None	27.1	28.0	84.3	7.2	41.0	47.9	285
Primary	26.6	25.8	80.9	8.7	36.3	44.9	1,223
Secondary+	17.5	28.0	70.3	10.0	27.7	46.0	575
Cannot be determined[a]	51.2	1.4	69.5	10.7	27.7	38.4	178
Wealth index quintile							
Poorest	29.2	21.6	76.5	13.5	27.0	40.3	447
Second	24.6	33.2	81.2	8.3	40.2	51.5	494
Middle	35.2	24.1	80.1	9.6	44.0	55.7	430
Fourth	26.5	26.4	78.5	8.2	36.8	44.7	510
Richest	14.9	15.6	70.4	4.8	19.0	30.1	386
Ethnicity of household head							
Luhya	26.7	25.0	77.6	9.1	33.9	45.4	2,124
Other ethnic group	20.7	19.6	78.5	7.1	34.6	38.2	143
[1] MICS indicator 8.2 - Child labour							
[a] Children age 15 or higher at the time of the interview whose mothers were not living in the household							

10.3 Child Discipline

Teaching children self-control and acceptable behaviour is an integral part of child discipline in all cultures. Positive parenting practices involve providing guidance on how to handle emotions or conflicts in manners that encourage judgment and responsibility and preserve children's self-esteem, physical and psychological integrity and dignity. Too often, however, children are raised through the use of punitive methods that rely on the use of physical force or verbal intimidation to obtain desired behaviours. Studies[98] have found that exposing children to violent discipline have harmful consequences, which range from immediate impacts to long-term harm that children carry forward into adult life. Violence hampers children's development, learning abilities and school performance; it inhibits positive relationships, provokes low self-esteem, emotional distress and depression; and, at times, it leads to risk taking and self-harm.

In Kakamega County, the MICS, respondents to the household questionnaire were asked a series of questions on the methods adults in the household used to discipline a selected child during the past month.[97] The disciplinary methods assessed ranged from non-violent approaches to psychological aggression, and moderate to severe forms of physical punishment.

Non-violent discipline: Took away privileges; explained wrong behaviour; gave the child something else to do.

Psychological aggression: Shouted, yelled, screamed; called the child 'dumb, lazy or any other name'.

Physical punishment: Shook the child; spanked, hit, slapped on bottom with bare hand; hit with belt, hairbrush, stick or other hard object; hit/slapped on the face, head or ears; hit/slapped on hand, arm or leg; beat up, hit over and over as hard as one could.

Severe punishment: hit/slapped on the face, head or ears; hit/slapped on hand, arm or leg; beat up, hit over and over as hard as one could.

Any violent discipline method: Shook the child; shouted, yelled, screamed; spanked, hit, slapped on bottom with bare hand; hit with belt, hairbrush, stick or other hard object; called the child 'dumb, lazy or any other name'; hit/slapped hit/slapped on the face, head or ears; hit/slapped on hand, arm or leg; beat up, hit over and over as hard as one could.

In Kakamega County MICS, 82 percent of children age 1-14 years are subjected to at least one form of psychological aggression or physical punishment by household members during the past month. For the

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[98] Straus, MA and Paschall MJ. 2009. *Corporal Punishment by Mothers and Development of Children's Cognitive Ability: A longitudinal study of two nationally representative age cohorts*. Journal of Aggression, Maltreatment & Trauma 18(5): 459-83.
Erickson, MF and Egeland, B. 1987. *A Developmental View of the Psychological Consequences of Maltreatment*. School Psychology Review 16: 156-68.
Schneider, MW et al. 2005. *Do Allegations of Emotional Maltreatment Predict Developmental Outcomes Beyond that of Other Forms of Maltreatment?*. Child Abuse & Neglect 29(5): 513–32.

most part, households employ a combination of violent disciplinary practices, reflecting caregivers' motivation to control children's behaviour by any means possible. While 69 percent of children experienced psychological aggression, about 61 percent experienced some form of physical punishment. The most severe forms of physical punishment (hitting the child on the head, ears or face or hitting the child hard and repeatedly) are overall less common: 12 percent of children were subjected to severe punishment.

In rural areas, 86 percent of children age 1-14 years are subjected to at least one form of psychological or physical punishment by household members during the past month and 76 percent in urban areas. The proportion of children disciplined decrease with an increase in mother's education and with household wealth. Figure CP.2 presents a summary of the main methods of child discipline.

Figure CP.2: Child disciplining methods, children age 1-14 years, Kakamega County MICS, 2013/14
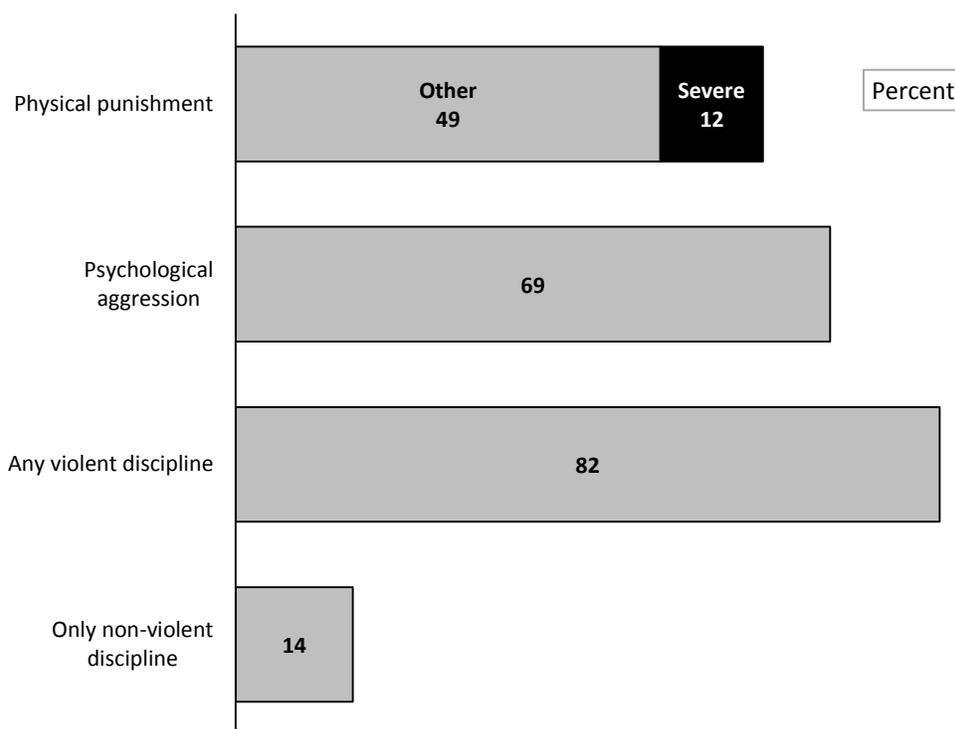
Table CP.5: Child discipline

Percentage of children age 1-14 years by child disciplining methods experienced during the last one month, Kakamega County MICS, 2013/14

| | Percentage of children age 1-14 years who experienced: | | | | | |
| | Only non-violent discipline | Psychological aggression | Physical punishment | | Any violent discipline method[1] | Number of children age 1-14 years |
			Any	Severe		
Total	**13.6**	**69.0**	**61.2**	**11.9**	**81.7**	**2,476**
Sex						
Male	13.1	70.6	64.1	11.0	82.4	1,290
Female	14.1	67.2	58.0	12.9	81.0	1,186
Area						
Urban	18.0	64.1	58.0	10.6	76.1	1,103
Rural	10.1	73.0	63.7	12.9	86.2	1,373
Age						
1-2	7.7	51.9	49.1	5.1	71.8	311
3-4	10.7	69.8	76.1	18.8	88.2	366
5-9	10.9	75.6	70.3	13.0	87.0	1,017
10-14	20.8	66.9	47.2	9.9	75.7	782
Education of household head						
None	9.7	71.6	64.2	17.0	85.8	255
Primary	11.0	73.2	65.2	13.7	85.0	1,465
Secondary	19.5	60.5	52.8	6.7	74.2	742
Wealth index quintile						
Poorest	6.8	78.9	64.6	12.2	88.1	567
Second	12.9	67.9	64.3	10.2	83.9	481
Middle	13.7	66.2	62.5	17.6	80.0	482
Fourth	14.9	75.1	57.4	7.8	83.8	525
Richest	21.8	52.6	56.3	11.9	69.8	420
Ethnicity of household head						
Luhya	13.6	69.1	61.4	12.3	81.4	2,343
Other ethnic group	12.8	67.8	58.4	4.5	86.2	133
[1] MICS indicator 8.3 - Violent discipline						
(*) Figures that are based on fewer than 25 unweighted cases						

Table CP.6 reveals that only 39 percent of respondents to the household questionnaire believed that physical punishment was a necessary part of child-rearing. Overall, respondents from poorer households are more likely to find physical punishment as necessary in disciplining children.

Table CP.6: Attitudes toward physical punishment

Percentage of respondents to the child discipline module who believe that physical punishment is needed to bring up, raise, or educate a child properly, Kakamega County MICS, 2013/14

	Respondent believes that a child needs to be physically punished	Number of respondents to the child discipline module
Total	**38.5**	**781**
Sex		
Male	35.1	191
Female	39.5	590
Area		
Urban	36.5	375
Rural	40.3	406
Age		
<25	28.8	101
25-39	36.4	351
40-59	44.4	249
60+	41.3	80
Respondent's relationship to selected child		
Mother	37.8	415
Father	34.0	138
Other	42.3	228
Respondent's education		
None	42.3	90
Primary	41.7	451
Secondary+	30.6	240
Wealth index quintile		
Poorest	40.4	173
Second	44.6	152
Middle	41.1	152
Fourth	40.4	145
Richest	26.1	158
Ethnicity of household head		
Luhya	39.0	723
Other ethnic group	31.2	58

10.4 Early Marriage and Polygyny

Marriage[99] before the age of 18 is a reality for many young girls. 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

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[99] All references to marriage in this chapter include marital union as well.

fact, child marriage is a violation of human rights, compromising the development of girls and often resulting in early pregnancy and social isolation, with little education and poor vocational training reinforcing the gendered nature of poverty.[100] 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. 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 years, 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. The demand for such a young wife to reproduce and the power imbalance resulting from the age differential lead to very low condom use among such couples.[101]

In Kakamega County MICS, the percentages of women married before ages 15 and 18 years are provided in Table CP.7. Among women age 15-49 years, 6 percent were married before age 15 and, among women age 20-49 years, seven percent were married before age 15 while 30 percent were married before age 18.

About 14 percent of young women age 15-19 years are currently married. The percentage of women in a polygynous union is also provided in Table CP.7. Among all women age 15-49 years who are in union, 16 percent are in polygynous unions.

Table CP.8 presents the proportion of women who were first married or entered into a marital union before age 15 and 18 years by area and age group. Examining the percentages married before age 15 and 18 years by different age groups allow for trends to be observed in early marriage over time. While the results of Table CP.8 are compatible with a declining trend in early marriages, a firm conclusion cannot be reached in this respect due to the small number of cases reported.

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[100] Bajracharya, A ND Amin, S. 2010. *Poverty, marriage timing, and transitions to adulthood in Nepal: A longitudinal analysis using the Nepal living standards survey.* Poverty, Gender, and Youth Working Paper No. 19. Population Council.
Godha, D et al. 2011. *The influence of child marriage on fertility, fertility-control, and maternal health care utilization.* MEASURE/Evaluation PRH Project Working paper 11-124.
[101] Clark, S et al. 2006. *Protecting young women from HIV/AIDS: the case against child and adolescent marriage. International Family Planning Perspectives* 32(2): 79-88.
Raj, A et al. 2009. *Prevalence of child marriage and its effect on fertility and fertility-control outcomes of young women in India: a cross-sectional, observational study*. The Lancet 373(9678): 1883–9.

Table CP.7: Early marriage and polygyny (women)

Percentage of women age 15-49 years who first married or entered a marital union before their 15th birthday, percentages of women age 20-49 years who first married or entered a marital union before their 15th and 18th birthdays, percentage of women age 15-19 years currently married or in union, and the percentage of women who are in a polygynous marriage or union, Kakamega County MICS, 2013/14

	Women age 15-49 years		Women age 20-49 years			Women age 15-19 years		Women age 15-49 years	
	Percentage married before age 15[1]	Number of women age 15-49 years	Percentage married before age 15	Percentage married before age 18[2]	Number of women age 20-49 years	Percentage currently married/in union[3]	Number of women age 15-19 years	Percentage in polygynous marriage/ union[4]	Number of women age 15-49 years currently married/in union
Total	**5.6**	**998**	**7.0**	**29.8**	**788**	**13.8**	**210**	**16.3**	**692**
Area									
Urban	5.8	502	7.1	28.3	409	18.3	93	15.7	363
Rural	5.3	496	6.8	31.4	379	10.2	117	17.0	329
Age									
15-19	0.3	210	na	na	na	13.8	210	(0.0)	26
20-24	4.4	170	4.4	27.0	170	na	na	2.9	104
25-29	8.7	192	8.7	29.1	192	na	na	13.0	176
30-34	6.4	119	6.4	32.4	119	na	na	18.7	112
35-39	7.8	152	7.8	33.4	152	na	na	23.6	136
40-44	10.5	87	10.5	27.4	87	na	na	18.6	78
45-49	3.5	69	3.5	29.6	69	na	na	32.5	59
Education									
None	(30.7)	42	(30.7)	(53.8)	42	na	0.0	(16.7)	39
Primary	6.0	595	7.4	37.0	468	16.4	127	18.9	429
Secondary+	2.0	360	2.6	14.1	277	9.9	83	11.2	223
Wealth index quintile									
Poorest	6.0	181	7.4	43.0	147	(21.2)	34	12.9	135
Second	10.8	203	13.5	35.0	158	(14.9)	45	22.4	140
Middle	4.3	196	5.7	22.8	150	(17.6)	46	16.3	137
Fourth	4.0	203	5.1	30.9	160	(7.1)	43	14.9	139
Richest	2.9	215	3.6	18.9	173	(9.2)	42	15.0	140
Ethnicity of household head									
Luhya	5.5	918	6.8	29.8	726	13.1	191	16.0	640
Other ethnic group	6.9	80	9.0	29.3	61	(*)	19	18.1	50

[1] **MICS indicator 8.4 - Marriage before age 15**

[2] **MICS indicator 8.5 - Marriage before age 18**

[3] **MICS indicator 8.6 - Young women age 15-19 years currently married or in union**

[4] **MICS indicator 8.7 - Polygyny**

na: not applicable

( ) Figures that are based on 25-49 unweighted cases

Table CP.8: Trends in early marriage (women)

Percentage of women who were first married or entered into a marital union before age 15 and 18, by area and age groups, Kakamega County MICS, 2013/14

	Urban				Rural				All			
	Percentage of women married before age 15	Number of women age 15-49 years	Percentage of women married before age 18	Number of women age 20-49 years	Percentage of women married before age 15	Number of women age 15-49 years	Percentage of women married before age 18	Number of women age 20-49 years	Percentage of women married before age 15	Number of women age 15-49 years	Percentage of women married before age 18	Number of women age 20-49 years
Total	**5.8**	**502**	**28.3**	**409**	**5.3**	**496**	**31.4**	**379**	**5.6**	**998**	**29.8**	**788**
Age												
15-19	0.0	98	na	na	0.6	117	na	na	0.3	210	na	na
20-24	5.1	90	28.1	90	3.6	80	25.7	80	4.4	170	27.0	170
25-29	6.3	111	25.9	111	12.0	80	33.4	80	8.7	192	29.1	192
30-34	9.4	61	36.0	61	3.1	57	28.6	57	6.4	119	32.4	119
35-39	8.8	79	30.2	79	6.6	73	36.8	73	7.8	152	33.4	152
40-44	(13.1)	37	(27.1)	37	8.6	50	27.6	50	10.5	87	27.4	87
45-49	(*)	30	(*)	30	6.2	39	37.7	39	3.5	69	29.6	69

na: not applicable

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

Figure CP.3: Early marriage among women, Kakamega County MICS, 2013/14
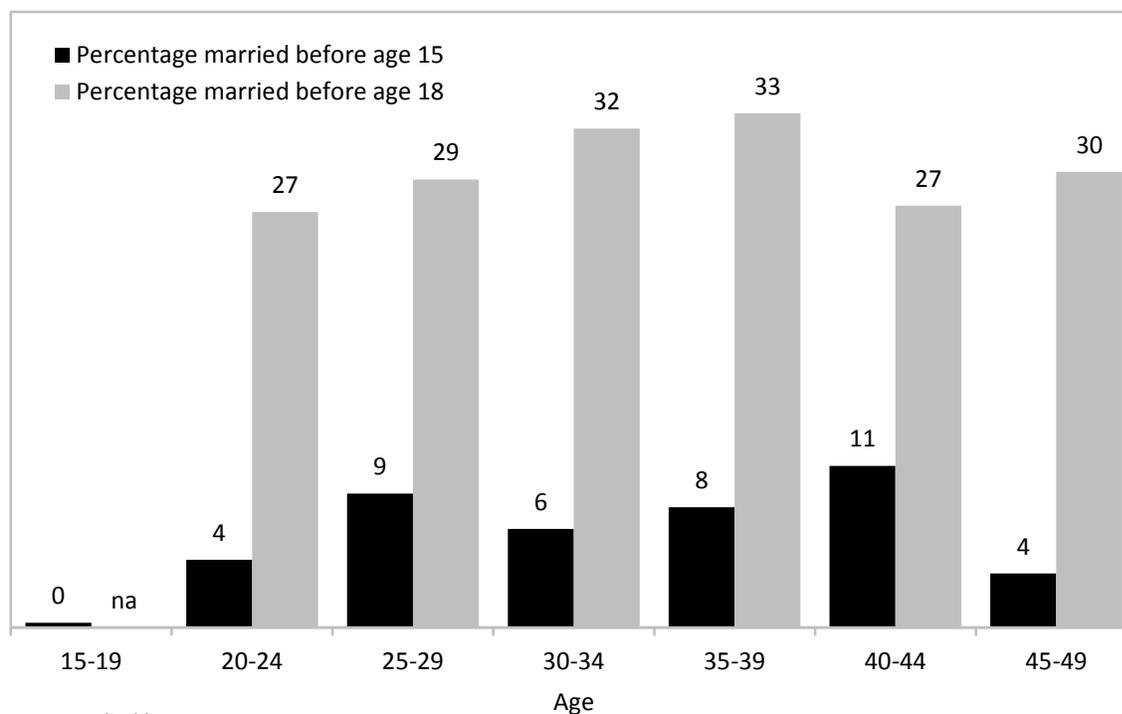
na: not applicable

Another important component of child marriage is the spousal age difference since the age difference between husband and wife is likely to have implications for power dynamics within the household. Table CP.9 shows that the proportion of women age 20-24 years currently married or in union with a husband or partner 10 or more years older than them is 16 percent.[102]

Table CP.9: Spousal age difference					
Percent distribution of women currently married/in union age 20-24 years according to the age difference with their husband or partner, Kakamega County MICS, 2013/14					
Percentage of currently married/in union women age 20-24 years whose husband or partner is:					
Younger	0-4 years older	5-9 years older	10+ years older[2]	Total	Number of women age 20-24 years currently married/ in union
Total **3.1**	**37.3**	**43.2**	**16.4**	**100.0**	**103**

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[102] The cases for women age 15-19 years currently married/in union were too few to be analysed.

10.5 Female Genital Mutilation/Cutting

Female genital mutilation/cutting (FGM/C) is the partial or total removal of the female external genitalia or other injury to the female genital organs. FGM/C is always traumatic with immediate complications including excruciating pain, shock, urine retention, ulceration of the genitals and injury to adjacent tissue. Other complications include septicaemia, infertility, obstructed labour, and even death. The procedure is generally carried out on girls between the ages of four and 14; it is also done to infants, women who are 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 which subjects girls and women to health risks and has life-threatening consequences. Although no international human rights instruments specifically address the practice, Article 25 of the Universal Declaration of Human Rights states that "everyone has the right to a standard of living adequate for health and well-being" and has been used to argue that FGM/C violates the right to health and bodily integrity. Furthermore, it could be argued that girls, i.e. children, cannot be said to give informed consent to such a potentially damaging practice as FGM/C.

Table CP.10 presents the prevalence of FGM/C among women age 15-49 years and the type of procedure from the Kakamega County MICS survey. One percent of women have some form of female genital mutilation.

Table CP.10: Female genital mutilation/cutting (FGM/C) among women

Percentage of women age 15-49 years by FGM/C status and percent distribution of women who had FGM/C by type of FGM/C, Kakamega County MICS, 2013/14

	Percentage of women who had any form of FGM/C[1]	Number of women age 15-49 years
Total	**1.2**	**998**
Area		
Urban	1.4	502
Rural	0.9	496
Age		
15-19	0.7	210
20-24	0.2	170
25-29	1.2	192
30-34	1.5	119
35-39	1.3	152
40-44	1.3	87
45-49	3.7	69
Education		
None	(4.0)	42
Primary	1.3	595
Secondary+	0.6	360
Wealth index quintile		
Poorest	0.0	181
Second	0.8	203
Middle	0.8	196
Fourth	2.1	203
Richest	2.0	215
Ethnicity of household head		
Luhya	0.7	918
Other ethnic group	6.8	80
[1] **MICS indicator 8.10 - Prevalence of FGM/C among women**		
( ) Figures that are based on 25-49 unweighted cases		

Table CP.11 presents the prevalence and extent of FGM/C performed on all daughters, age 0-14 years, of the respondents. It is important to remember that prevalence data for girls age 0-14 years reflect their current – not final – FGM/C status, since many of them may not have reached the customary age for cutting at the time of the survey. Those reported as being uncut but are still at risk of undergoing the procedure. Overall, less than 1 percent of girls age 0-14 years had undergone FGM/C.

Table CP.11: Female genital mutilation/cutting (FGM/C) among girls

Percentage of daughters age 0-14 years by FGM/C status and percent distribution of daughters who had FGM/C by type of FGM/C, Kakamega County MICS, 2013/14

	Percentage of daughters who had any form of FGM/C[1]	Number of daughters age 0-14 years
Total	**0.1**	**869**
Area		
Urban	0.2	433
Rural	0.0	436
Age		
0-4	0.0	328
5-9	0.0	310
10-14	0.4	231
Mother's Education		
None	(2.1)	49
Primary	0.0	578
Secondary+	0.0	242
Mother's FGM/C experience		
No FGM/C	0.0	857
Had FGM/C	(*)	12
Wealth index quintile		
Poorest	0.0	197
Second	0.0	169
Middle	0.0	188
Fourth	0.6	184
Richest	0.0	131
Ethnicity of household head		
Luhya	0.1	815
Other ethnic group	0.0	53
[1] MICS indicator 8.11 - Prevalence of FGM/C among girls		

Table CP.12 presents the women's attitudes towards FGM/C. As to whether the practice should be continued or discontinued, three percent of women thought it should be continued while 92 percent believed it should be discontinued.

Table CP.12: Approval of female genital mutilation/cutting (FGM/C)

Percentage of women age 15-49 years who have heard of FGM/C, and percent distribution of women according to attitudes towards whether the practice of FGM/C should be continued, Kakamega County MICS, 2013/14

	Percentage of women who have heard of FGM/C	Number of women age 15-49 years	Percent distribution of women who believe the practice of FGM/C should be:					Number of women age 15-49 years who have heard of FGM/C
			Continued[1]	Discontinued	Depends	DK/Missing	Total	
Total	**86.9**	**998**	**2.8**	**91.7**	**2.4**	**3.0**	**100.0**	**867**
Area								
Urban	87.6	502	3.0	91.7	2.5	2.8	100.0	439
Rural	86.1	496	2.7	91.7	2.4	3.2	100.0	427
Age								
15-19	78.9	210	3.3	93.5	0.6	2.7	100.0	166
20-24	88.5	170	2.9	96.7	0.0	0.4	100.0	151
25-29	90.8	192	2.5	89.1	4.0	4.4	100.0	174
30-34	88.3	119	2.9	90.9	3.8	2.3	100.0	105
35-39	90.8	152	2.3	90.7	0.7	6.2	100.0	138
40-44	86.6	87	4.1	88.9	6.1	0.9	100.0	75
45-49	85.4	69	1.8	88.8	6.3	3.2	100.0	59
Education								
None	(90.2)	42	(6.0)	(90.0)	(3.9)	(0.0)	100.0	38
Primary	83.3	595	3.5	89.1	3.4	4.0	100.0	496
Secondary+	92.3	360	1.4	95.8	0.9	1.9	100.0	332
FGM/C experience								
No FGM/C	86.7	986	2.5	92.0	2.4	3.1	100.0	855
Had FGM/C	(*)	12	(*)	(*)	(*)	(*)	100.0	12
Wealth index quintile								
Poorest	82.7	181	3.2	86.9	2.8	7.2	100.0	150
Second	83.0	203	4.0	91.3	2.4	2.3	100.0	168
Middle	88.5	196	2.5	93.5	2.1	1.9	100.0	174
Fourth	87.4	203	2.1	94.0	1.5	2.4	100.0	177
Richest	92.0	215	2.4	92.1	3.4	2.0	100.0	197
Ethnicity of household head								
Luhya	86.2	918	2.9	91.3	2.6	3.2	100.0	791
Other ethnic group	94.8	80	2.4	95.4	1.1	1.1	100.0	76
[1] **MICS indicator 8.9 - Approval for FGM/C**								

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

10.6 Attitudes toward Domestic Violence

MICS assessed the attitudes of women age 15-49 years towards wife/partner beating by asking the respondents whether husbands/partners were justified to hit or beat their wives/partners in a variety of situations. The purpose of these questions was to capture the social justification of violence (in contexts

where women have a lower status in society) as a disciplinary action when a woman does not comply with certain expected gender roles.

Table CP.13: Attitudes toward domestic violence (women)

Percentage of women age 15-49 years who believe a husband is justified in beating his wife in various circumstances, Kakamega County MICS, 2013/14

	Percentage of women age 15-49 years who believe a husband is justified in beating his wife:						Number of women age 15-49 years
	If she goes out without telling him	If she neglects the children	If she argues with him	If she refuses sex with him	If she burns the food	For any of these five reasons[1]	
Total	**30.6**	**42.7**	**29.5**	**24.9**	**17.4**	**57.4**	**998**
Area							
Urban	30.0	38.1	28.1	23.6	17.4	53.9	502
Rural	31.3	47.4	30.9	26.2	17.3	60.9	496
Age							
15-19	22.3	41.4	23.6	15.1	15.8	49.5	210
20-24	29.8	44.6	33.4	24.5	14.3	61.8	170
25-29	30.3	42.4	28.4	24.5	16.7	58.3	192
30-34	28.5	34.3	27.1	28.2	21.3	54.5	119
35-39	32.4	45.0	29.9	30.6	17.2	58.2	152
40-44	45.8	49.5	36.7	30.6	17.5	63.2	87
45-49	39.7	44.0	35.0	31.4	24.7	63.5	69
Marital/Union status							
Currently married/in union	34.3	43.7	31.2	28.4	18.5	60.0	659
Formerly married/in union	36.4	47.4	36.8	41.0	21.4	69.2	69
Never married/in union	20.2	39.1	23.4	12.2	13.5	48.1	270
Education							
None	(54.1)	(40.9)	(44.2)	(46.6)	(30.3)	(72.2)	42
Primary	34.5	48.2	34.2	30.1	19.4	63.2	595
Secondary+	21.5	34.0	19.9	13.7	12.5	46.0	360
Wealth index quintile							
Poorest	44.9	51.3	41.8	33.8	29.1	70.6	181
Second	31.0	45.2	30.0	27.3	20.0	57.7	203
Middle	28.4	43.7	31.4	25.3	14.0	58.4	196
Fourth	31.2	44.6	28.3	21.9	14.9	59.4	203
Richest	19.8	30.5	18.0	17.5	10.2	43.1	215
Ethnicity of household head							
Luhya	31.3	43.2	29.1	24.9	17.9	57.6	918
Other ethnic group	23.3	37.0	34.2	24.5	11.7	54.9	80
[1] **MICS indicator 8.12 - Attitudes towards domestic violence**							
( ) Figures that are based on 25-49 unweighted cases							

In Kakamega County MICS, the responses to these questions can be found in Table CP.13. Overall, 57 percent of women in Kakamega County MICS feel that a husband/partner is justified in hitting or beating

his wife in at least one of the five situations. Women who justify a husband's violence, in most cases, agree and justify violence in instances when a wife neglects the children (43 percent), or if she demonstrates her autonomy, exemplified by going out without telling her husband (31 percent) or arguing with him (30 percent). Around one in four of women (25 percent) believe that wife-beating is justified if the wife refuses to have sex with the husband or if she burns the food (17 percent). Justification in any of the five situations is more present among those living rural areas, less educated, currently or formerly married women and those from poor households.

10.7 Children's Living Arrangements

The CRC recognizes that "the child, for the full and harmonious development of his or her personality, should grow up in a family environment, in an atmosphere of happiness, love and understanding". Millions of children around the world grow up with without the care of their parents for several reasons, including due to the premature death of the parents or their migration for work. In most cases, these children are cared for by members of their extended families, while in others, children may be living in households other than their own, as live-in domestic workers for instance. Understanding the children's living arrangements, including the composition of the households where they live and the relationships with their primary caregivers, is key to design targeted interventions aimed at promoting child's care and wellbeing.

Information on the living arrangements and orphanhood status of children under age 18 is presented in Table CP.14. Fifty-five percent of children age 0-17 years in Kakamega County live with both their parents, 16 percent live with mothers only and four percent live with fathers only. Eighteen percent of children live with neither of their biological parents. The proportion is higher in rural areas (21 percent) than urban areas (15 percent). Older children are more likely than younger children to live with neither biological parent.

Table CP.14: Children's living arrangements and orphanhood

Percent distribution of children age 0-17 years according to living arrangements, percentage of children age 0-17 years not living with a biological parent and percentage of children who have one or both parents dead, Kakamega County MICS, 2013/14

| | Living with both parents | Living with neither biological parent | | | | Living with mother only | | Living with father only | | Missing information on father/ mother | Total | Living with neither biological parent[1] | One or both parents dead [2] | Number of children age 0-17 years |
		Only father alive	Only mother alive	Both alive	Both dead	Father alive	Father dead	Mother alive	Mother dead					
Total	**55.4**	**0.0**	**0.0**	**13.6**	**0.0**	**15.6**	**0.0**	**3.6**	**0.0**	**11.7**	**100.0**	**18.2**	**9.9**	**3,047**
Sex														
Male	54.2	0.0	0.0	13.9	0.0	15.9	0.0	4.4	0.0	11.5	100.0	18.7	9.6	1,519
Female	56.6	0.0	0.0	13.3	0.0	15.3	0.0	2.8	0.0	11.9	100.0	17.7	10.2	1,528
Area														
Urban	59.9	0.0	0.0	11.8	0.0	15.1	0.0	4.0	0.0	9.1	100.0	15.3	7.8	1,377
Rural	51.7	0.0	0.0	15.1	0.0	16.1	0.0	3.3	0.0	13.9	100.0	20.5	11.6	1,670
Age														
0-4	63.0	0.0	0.0	11.6	0.0	19.2	0.0	1.6	0.0	4.6	100.0	12.6	3.2	842
5-9	57.0	0.0	0.0	15.7	0.0	14.7	0.0	3.9	0.0	8.7	100.0	19.1	7.1	969
10-14	50.0	0.0	0.0	13.0	0.0	13.6	0.0	5.6	0.0	17.8	100.0	21.0	15.9	801
15-17	47.0	0.0	0.0	14.1	0.0	14.6	0.0	3.3	0.0	21.0	100.0	21.7	18.2	435
Wealth index quintile														
Poorest	58.0	0.0	0.0	12.4	0.0	15.4	0.0	2.0	0.0	12.2	100.0	15.3	10.3	674
Second	55.3	0.0	0.0	10.4	0.0	13.7	0.0	6.7	0.0	13.9	100.0	16.3	13.0	636
Middle	57.1	0.0	0.0	14.4	0.0	16.6	0.0	1.7	0.0	10.2	100.0	19.6	8.4	591
Fourth	55.8	0.0	0.0	15.9	0.0	16.2	0.0	3.3	0.0	8.7	100.0	20.5	7.1	641
Richest	49.6	0.0	0.0	15.4	0.0	16.6	0.0	4.4	0.0	13.9	100.0	19.6	10.7	505
Ethnicity of household head														
Luhya	56.2	0.0	0.0	13.7	0.0	15.4	0.0	3.5	0.0	11.1	100.0	18.1	9.7	2,866
Other ethnic group	42.2	0.0	0.0	12.5	0.0	19.6	0.0	4.9	0.0	20.7	100.0	19.8	12.9	181

[1] MICS indicator 8.13 - Children's living arrangements

[2] MICS indicator 8.14 - Prevalence of children with one or both parents dead

The Kakamega County MICS included a simple measure of one particular aspect of migration related to what is termed children left behind, i.e. for whom one or both parents have moved abroad. While the amount of literature is growing, the long-term effects of the benefits of remittances versus the potential adverse psycho-social effects are not yet conclusive, as there is somewhat conflicting evidence available as to the effects on children.

The results of the Kakamega County MICS presented in Table CP.15 will greatly help fill the data gap on this topic of migration. Less than one percent of children age 0-17 have one or both parents living abroad.

Table CP.15: Children with parents living abroad						
Percent distribution of children age 0-17 years by residence of parents in another country, Kakamega County MICS, 2013/14						
	Percent distribution of children age 0-17 years:				Percentage of children age 0-17 years with at least one parent living abroad¹	Number of children age 0-17 years
	With at least one parent living abroad		With neither parent living abroad	Total		
	Only mother abroad	Only father abroad				
Total	**0.0**	**0.0**	**99.9**	**100.0**	**0.1**	**3,047**
Sex						
Male	0.1	0.1	99.9	100.0	0.1	1,519
Female	0.0	0.0	100.0	100.0	0.0	1,528
Area						
Urban	0.0	0.1	99.9	100.0	0.1	1,377
Rural	0.1	0.0	99.9	100.0	0.1	1,670
Age group						
0-4	0.0	0.0	100.0	100.0	0.0	842
5-9	0.0	0.0	100.0	100.0	0.0	969
10-14	0.0	0.1	99.9	100.0	0.1	801
15-17	0.2	0.0	99.8	100.0	0.2	435
Wealth index quintile						
Poorest	0.0	0.0	100.0	100.0	0.0	674
Second	0.0	0.0	100.0	100.0	0.0	636
Middle	0.0	0.2	99.8	100.0	0.2	591
Fourth	0.0	0.0	100.0	100.0	0.0	641
Richest	0.2	0.0	99.8	100.0	0.2	505
Ethnicity of household head						
Luhya	0.0	0.0	100.0	100.0	0.0	2,866
Other ethnic group	0.0	0.6	99.4	100.0	0.6	181
¹ **MICS indicator 8.15 - Children with at least one parent living abroad**						

11.   HIV/AIDS and Sexual Behaviour

HIV prevalence in Kenya has declined and stabilised over the years. A trend analysis starting from 1990 shows that prevalence in the general population reached a peak of 10.5 percent in 1995-96, after which it declined by about 40 percent to reach approximately 6.0 percent in 2013.[103] The decline can partly be attributed to high AIDS related mortality. The prevalence has remained relatively stable since 2003 and is attributed to the rapid scale up of anti-retroviral therapy (ART) and reduction in the number of new infections that occurred during this period.

HIV and AIDS programmes in the country are guided by policies and strategies that include the Kenya National HIV/AIDS Strategic Plan; Condom Policy and Strategy, 2001; HIV and AIDS Prevention and Control ACT, 2006; HIV and AIDS policy at the workplace, 2007; Greater Involvement of People Living with HIV and AIDS (GIPA) Guidelines, 2007; Male Circumcision Policy, 2008; Reproductive Health Communication Strategy Implementation Guide for Family Planning, Adolescent and Youth Sexuality and Reproductive Health Rights, and Maternal, Neonatal, and Child Health 2010-2012; Education Sector Policy on HIV and AIDS, 2013 and many more. The current Kenya AIDS Strategic Framework - KASF 2014/15-2018/19 addresses the drivers of the HIV epidemic and builds on achievements of the previous country strategic plans to achieve its goals of contributing to the country's Vision 2030 through universal access to comprehensive HIV prevention, treatment and care.[104]

11.1 Knowledge about HIV Transmission and Misconceptions about HIV

One of the most important pre- requisites 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 towards raising awareness. Misconceptions about HIV are common and can confuse adolescents and young people and hinder prevention efforts.

The UN General Assembly Special Session on HIV/AIDS (UNGASS) called on governments to improve the knowledge and skills of young people to protect themselves from HIV. The indicators to measure this goal as well as the Millennium Development Goal (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. HIV module(s) were administered to women and men 15-49 years of age. Please note that the questions in this module often refer to "the AIDS virus". This terminology is used strictly as a method of data collection to aid respondents, preferred over the correct terminology of "HIV" that is used here in reporting the results, where appropriate.

One indicator which is both an MDG and the Global AIDS Response Progress Reporting (GARPR; formerly UNGASS) indicator is the percentage of young people who have comprehensive and correct knowledge of HIV prevention and transmission. This is defined as 1) knowing that consistent use of a condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting HIV, 2) knowing that a healthy-looking person can have HIV, and 3) rejecting the two most common local misconceptions about transmission/prevention of HIV. In the Kakamega County MICS all women who have heard of AIDS were asked questions on all three components and the results are detailed in Tables HA.1.

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[103]Government of Kenya 2014. Kenya AIDS Response Progress Report 2014 – Progress Towards Zero
[104] http://www.nacc.or.ke/index.php?option=com_content&view=article&id=189&Itemid=130

Almost all women age 15-49 years (99.9 percent) have heard of AIDS. However, the percentage of those who know the two main ways of preventing HIV transmission – having only one faithful uninfected partner and using a condom every time- is 72 percent, with about 84 percent knowing of having one faithful uninfected sex partner and 85 percent knowing of using a condom every time.

People who have comprehensive knowledge about HIV prevention include those who know of the two main ways of HIV prevention (having only one faithful uninfected partner and using a condom every time), who know that a healthy looking person can be HIV-positive, and who those reject the two most common misconceptions. Comprehensive knowledge of HIV prevention methods and transmission is fairly low although there are differences by age and by woman's education. Overall, nearly half of the women have comprehensive knowledge, 50 percent in urban areas and 44 percent in rural areas. Comprehensive knowledge is higher among women age 15-49 years with secondary or higher education (58 percent) compared to those with only primary education (40 percent), and for those living in the wealthiest households (57 percent) compared to those in the poorest (48 percent) (Table HA.1).

Table HA.1: Knowledge about HIV transmission, misconceptions about HIV, and comprehensive knowledge about HIV transmission (women)

Percentage of women age 15-49 years who know the main ways of preventing HIV transmission, percentage who know that a healthy looking person can be HIV-positive, percentage who reject common misconceptions, and percentage who have comprehensive knowledge about HIV transmission, Kakamega County MICS, 2013/14

| | Percentage who have heard of AIDS | Percentage who know transmission can be prevented by: | | | Percentage who know that a healthy looking person can be HIV-positive | Percentage who know that HIV cannot be transmitted by: | | | Percentage who reject the two most common misconceptions and know that a healthy looking person can be HIV-positive | Percentage with comprehensive knowledge[1] | Number of women age 15-49 years |
		Having only one faithful uninfected sex partner	Using a condom every time	Both		Mosquito bites	Supernatural means	Sharing food with someone with HIV			
Total	**99.9**	**83.9**	**84.5**	**72.4**	**83.8**	**77.7**	**91.4**	**89.5**	**60.5**	**46.9**	**998**
Area											
Urban	100.0	84.6	86.0	73.1	83.3	81.9	92.1	89.5	62.8	49.9	502
Rural	99.8	83.3	82.9	71.7	84.2	73.4	90.7	89.6	58.2	43.8	496
Age											
15-24[1]	99.9	82.1	81.7	69.3	80.5	84.2	92.4	87.7	61.5	45.5	381
15-19	99.7	82.0	79.7	67.9	78.7	84.3	92.4	85.9	59.7	43.1	210
20-24	100.0	82.3	84.2	71.0	82.7	84.1	92.4	90.0	63.7	48.6	170
25-29	100.0	85.1	86.7	77.0	87.5	71.5	91.0	94.1	62.6	52.1	192
30-39	100.0	86.5	87.5	76.0	85.8	79.4	90.6	89.5	62.5	50.2	270
40-49	99.6	82.6	83.4	68.1	83.8	66.4	90.9	88.4	52.2	37.8	155
Marital status											
Ever married/in union	99.9	85.2	85.3	73.6	84.0	74.5	91.0	89.7	58.6	46.0	728
Never married/in union	99.8	80.5	82.4	69.1	83.1	86.1	92.5	89.1	65.7	49.1	270
Education											
None	(98.5)	(91.4)	(73.5)	(69.4)	(83.8)	(65.1)	(89.8)	(84.6)	(53.5)	(44.9)	42
Primary	99.9	82.0	84.0	70.6	81.7	71.8	89.1	87.9	53.5	40.1	595
Secondary+	100.0	86.3	86.5	75.8	87.2	88.9	95.3	92.8	73.0	58.2	360
Wealth index quintile											
Poorest	99.3	87.2	87.2	78.7	90.4	71.3	91.3	89.5	61.4	48.4	181
Second	100.0	80.5	80.8	66.3	80.3	72.1	89.2	87.1	55.1	42.3	203
Middle	100.0	82.2	87.3	71.9	82.5	79.7	92.3	85.4	56.9	41.4	196
Fourth	100.0	82.7	78.7	67.2	79.3	79.5	91.5	91.0	58.0	44.9	203

Richest	100.0	87.2	88.5	78.2	86.9	84.7	92.6	94.3	70.6	56.8	215
Ethnicity of household head										
Luhya	99.9	83.8	84.3	72.2	83.2	77.4	91.5	89.0	59.5	46.2	918
Other ethnic group	100.0	86.2	86.8	74.8	90.6	81.3	90.5	95.5	71.6	55.0	80

[1]**MICS indicator 9.1; MDG indicator 6.3 - Knowledge about HIV prevention among young women**

( ) Figures that are based on 25-49 unweighted cases

Table HA.1 also presents the percentage of women who correctly identified misconceptions concerning HIV. The indicator is based on the two most common and relevant misconceptions in Kakamega County.

Overall, 61 percent of women age 15-49 years reject the two most common misconceptions and know that a healthy-looking person can be HIV-positive. The proportion of women who know that HIV cannot be transmitted by mosquito bites, supernatural means or by sharing food with someone with HIV are 78 percent, 91 percent and 90 percent, respectively. Eighty-four percent of women know that a healthy-looking person can be HIV-positive. Some of these indicators are also presented graphically in Figure HA.1.

Figure HA.1: Women with comprehensive knowledge of HIV transmission, Kakamega County MICS, 2013/14
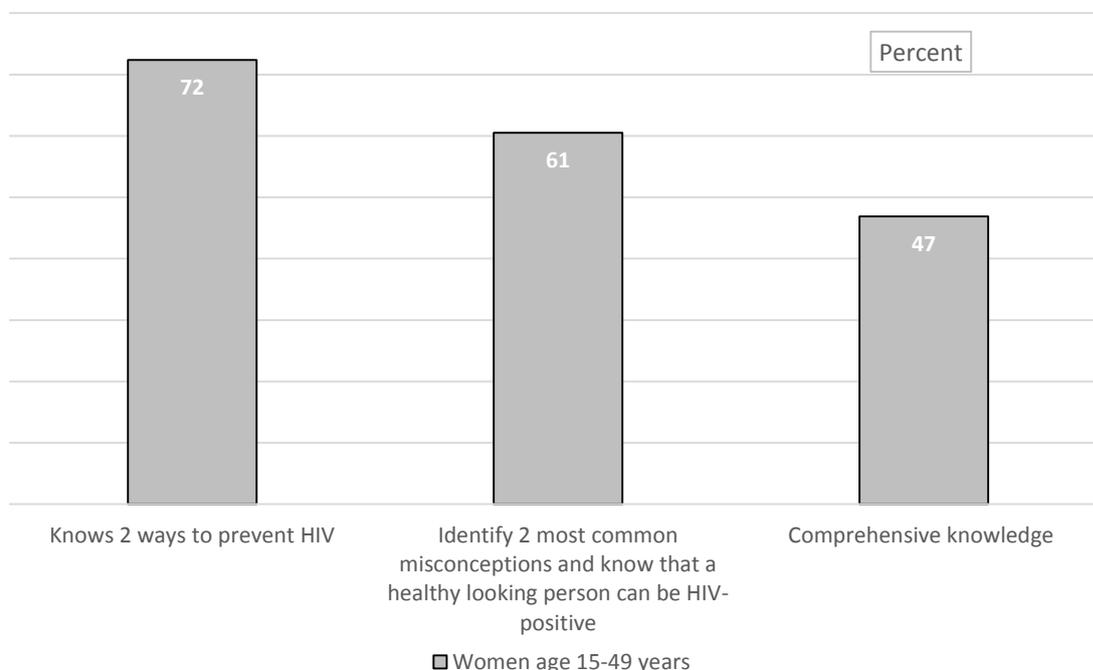
11.2 Knowledge of mother-to-child HIV transmission (MTCT)

In Kenya, infants infected with HIV annually due to mother-to-child transmission declined from 44,000 in 2000 to 12,940 in 2013.[105] To guide interventions on mother to child transmission of HIV, Kenya developed Guidelines for Prevention of Mother to Child Transmission (PMTCT) of HIV and AIDS, 2012 and the Kenya Strategic Framework for EMTCT, 2012. The Guidelines complement Kenya's National Health Sector Strategic Plan II (NHSSP II) and the Kenya National AIDS Strategic Plan (KNASP III) 2009-2013 which focuses on the priority areas of prevention of new infections, improving the quality of life of people infected and affected by HIV and AIDS, and mitigation of the social and economic impact of the infection (ibid). The strategies and guidelines are in line with the WHO PMTCT Strategic Vision

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[105] Ministry of Health. 2014. Kenya HIV Estimates

2010-2015 and the 2010 WHO Guidelines on Prevention of Mother-to-Child Transmission (PMTCT) programmes.

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 and men should know that HIV can be transmitted during pregnancy, during delivery, and through breastfeeding. The level of knowledge among women age 15-49 years concerning mother-to-child transmission is presented in Tables HA.2. Overall, 97 percent of women know that HIV can be transmitted from mother to child by at least one of the three means. The percentage of women who know all three ways of mother-to-child transmission is 47 percent, while three percent of women do not know of any specific way.

Table HA.2: Knowledge of mother-to-child HIV transmission (women)

Percentage of women age 15-49 years who correctly identify means of HIV transmission from mother to child, Kakamega County MICS, 2013/14

	Percentage of women age 15-49 who have heard of AIDS and:					Do not know any of the specific means of HIV transmission from mother to child	Number of women age 15-49 years
	Know HIV can be transmitted from mother to child:						
	During pregnancy	During delivery	By breastfeeding	By at least one of the three means	By all three means[1]		
Total	**55.1**	**87.2**	**90.0**	**97.2**	**46.5**	**2.7**	**998**
Area							
Urban	54.8	90.2	92.3	97.7	48.7	2.3	502
Rural	55.4	84.3	87.8	96.7	44.2	3.0	496
Age group							
15-24	51.7	87.8	91.9	97.0	42.5	2.8	381
15-19	51.1	83.4	92.4	95.8	41.7	4.0	210
20-24	52.4	93.1	91.3	98.5	43.4	1.5	170
25-29	60.4	82.7	88.2	97.7	50.3	2.3	192
30-39	55.0	88.8	89.7	97.3	47.7	2.7	270
40-49	57.0	89.0	88.2	96.9	49.4	2.7	155
Marital status							
Ever married/in union	57.1	88.0	89.5	97.5	49.1	2.4	728
Never married/in union	49.8	85.1	91.5	96.5	39.3	3.3	270
Education							
None	(66.2)	(87.2)	(87.8)	(96.5)	(58.0)	(2.0)	42
Primary	57.8	82.8	88.2	95.9	47.1	4.0	595
Secondary+	49.4	94.5	93.3	99.5	44.0	0.5	360
Wealth index quintile							
Poorest	55.7	79.6	87.2	95.9	42.8	3.4	181
Second	55.6	83.0	88.3	96.2	46.3	3.8	203
Middle	56.2	92.9	92.4	98.4	50.0	1.6	196
Fourth	58.5	86.1	87.1	97.1	46.5	2.9	203
Richest	50.0	93.5	94.6	98.3	46.4	1.7	215
Ethnicity of household head							
Luhya	55.7	87.1	90.2	97.3	46.7	2.5	918
Other ethnic group	48.8	88.9	87.6	95.8	43.6	4.2	80
[1] **MICS indicator 9.2 - Knowledge of mother-to-child transmission of HIV**							
( ) Figures that are based on 25-49 unweighted cases							

11.3 Accepting Attitudes toward People Living with HIV

The indicators on attitudes toward people living with HIV measure stigma and discrimination in the community. Stigma and discrimination are considered low if respondents report an accepting attitude on the following four questions: 1) would care for a family member with AIDS in own home; 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 it a secret if a family member is HIV-positive.

Table HA.3: Accepting attitudes toward people living with HIV (women)							
Percentage of women age 15-49 years who have heard of AIDS who express an accepting attitude towards people living with HIV, Kakamega County MICS, 2013/14							
	Percentage of women who:						Number of women age 15-49 years who have heard of AIDS
	Are willing to care for a family member with AIDS in own home	Would buy fresh vegetables from a shopkeeper or vendor who is HIV-positive	Believe that a female teacher who is HIV-positive and is not sick should be allowed to continue teaching	Would not want to keep secret that a family member is HIV-positive	Agree with at least one accepting attitude	Express accepting attitudes on all four indicators[1]	
Total	**95.8**	**86.0**	**83.3**	**46.2**	**99.2**	**33.6**	**997**
Area							
Urban	97.4	87.5	86.9	48.0	99.2	36.2	502
Rural	94.1	84.5	79.7	44.5	99.2	30.9	495
Age							
15-24	94.4	87.5	84.6	42.5	98.8	31.3	380
15-19	93.9	89.2	89.4	39.0	98.9	30.3	210
20-24	95.1	85.5	78.7	46.7	98.8	32.4	170
25-29	95.0	82.3	81.3	44.8	98.6	32.4	192
30-39	96.8	87.0	84.8	51.5	99.7	37.8	270
40-49	98.4	85.3	80.2	48.2	100.0	33.3	155
Marital status							
Ever married/in union	95.9	84.9	81.7	48.4	99.3	34.4	727
Never married/in union	95.5	89.1	87.6	40.3	99.0	31.3	270
Education							
None	(98.0)	(72.9)	(75.7)	(31.2)	(98.0)	(15.0)	44
Primary	94.5	82.6	79.4	45.3	99.0	29.9	595
Secondary+	97.7	93.1	90.6	49.6	99.6	41.8	360
Wealth index quintile							
Poorest	94.8	84.2	80.5	46.2	99.0	35.1	180
Second	94.4	82.7	78.8	45.7	98.7	29.3	203
Middle	97.3	85.6	87.2	48.4	99.5	32.4	196
Fourth	93.3	84.7	80.8	43.8	98.7	30.1	203
Richest	98.9	92.2	88.8	47.2	100.0	40.7	215
Ethnicity of household head							
Luhya	95.7	86.1	82.6	47.8	99.3	34.8	916
Other ethnic group	97.2	85.5	91.1	29.1	98.2	19.6	80
[1] MICS indicator 9.3 - Accepting attitudes towards people living with HIV							
( ) Figures that are based on 25-49 unweighted cases							

Table HA.3 and Figure HA.2 present the attitudes of women age 15-49 years towards people living with HIV. Nine-nine percent of women who have heard of AIDS agree with at least one accepting statement. The most common accepting attitude is willingness to care for a family member with AIDS in own home (96 percent). The proportion of women who expresses accepting attitudes towards all four indicators declines to only 34 percent. Women with secondary or higher education are more likely to express accepting attitudes towards all four indicators than their less educated counterparts.

Figure HA.2: Accepting attitudes toward people living with HIV/AIDS, Kakamega County MICS, 2013/14
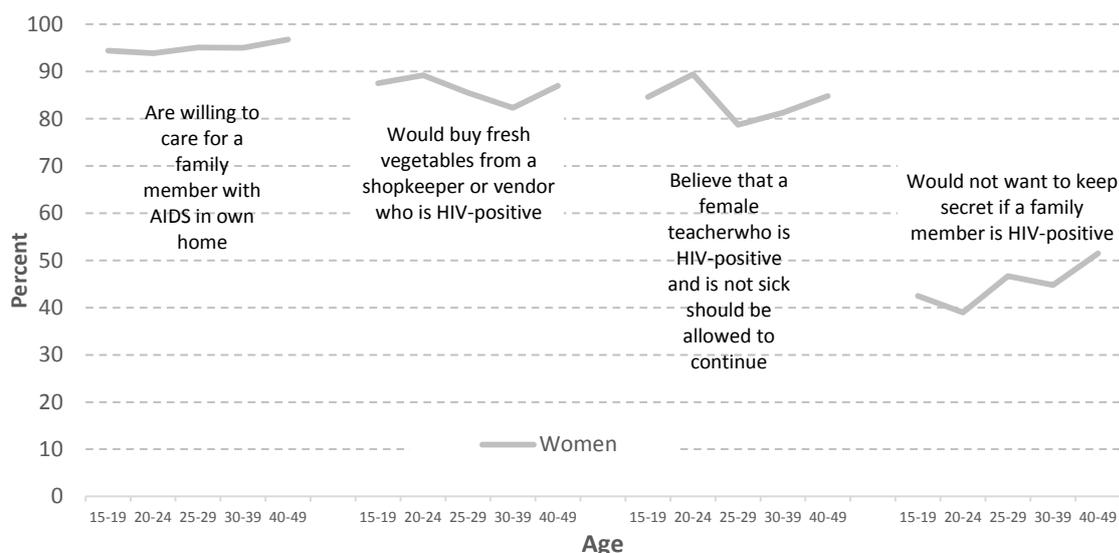
11.4 Knowledge of a Place for HIV Counselling and Testing during Antenatal Care

Another important indicator is the knowledge of where to be tested for HIV and use of such services. In order to protect themselves and to prevent infecting others, it is important for individuals to know their HIV status. Knowledge of own status is also a critical factor in the decision to seek treatment.

Results related to knowledge of a facility for HIV testing and whether a person had ever been tested is presented in Tables HA.4. Ninety-five percent of women age 15-49 know of a place where to be tested, while 83 percent had been tested. Fifty-two percent of women know the result of their most recent test. The proportion of women age 15-49 years who had been tested within the last 12 months preceding the survey is 52 percent, while 45 percent had been tested within the last 12 months and know the result.

Table HA.4: Knowledge of a place for HIV testing (women)

Percentage of women age 15-49 years who know where to get an HIV test, percentage who have ever been tested, percentage who have ever been tested and know the result of the most recent test, percentage who have been tested in the last 12 months, and percentage who have been tested in the last 12 months and know the result, Kakamega County MICS, 2013/14

	Percentage of women who:					Number of women age 15-49 years
	Know a place to get tested[1]	Have ever been tested	Have ever been tested and know the result of the most recent test	Have been tested in the last 12 months	Have been tested in the last 12 months and know the result[2, 3]	
Total	**95.3**	**82.5**	**51.6**	**52.2**	**45.4**	**998**
Area						
Urban	96.5	84.5	51.3	51.7	44.6	502
Rural	94.0	80.5	51.9	52.7	46.1	496
Age						
15-24	92.0	70.6	49.9	50.9	42.8	381
15-19	88.0	51.2	34.1	35.1	29.9	210
20-24	96.9	94.5	69.4	70.6	58.9	170
25-29	96.1	91.8	59.7	59.7	48.6	192
30-39	97.3	91.6	49.7	50.0	45.8	270
40-49	98.8	84.5	49.2	49.8	46.8	155
Age and sexual activity in the last 12 months						
Sexually active	97.1	90.8	57.3	57.9	50.0	747
15-24[3]	96.9	92.1	69.2	70.9	58.0	188
15-19	95.1	79.2	63.3	67.0	51.1	52
20-24	97.6	96.9	71.5	72.4	60.6	136
25-49	97.2	90.4	53.3	53.6	47.3	559
Sexually inactive	89.8	57.9	34.8	35.1	31.7	251
Marital status						
Ever married/in union	97.2	91.0	55.3	56.0	47.9	728
Never married/in union	90.1	59.7	41.7	42.0	38.5	270
Education						
None	(97.0)	(88.4)	(52.9)	(52.9)	(49.3)	42
Primary	93.3	81.3	51.7	52.7	44.9	595
Secondary+	98.2	83.9	51.3	51.3	45.6	360
Wealth index quintile						
Poorest	91.9	82.7	50.5	52.0	42.7	181
Second	94.6	78.4	48.9	49.2	39.1	203
Middle	94.4	82.1	52.7	53.1	45.3	196
Fourth	96.1	81.3	50.9	51.7	45.7	203
Richest	98.7	87.8	54.9	54.9	53.3	215
Ethnicity of household head						
Luhya	95.0	82.3	51.2	51.8	45.0	918
Other ethnic group	98.1	84.9	56.0	56.8	49.3	80

[1] **MICS indicator 9.4 - Women who know where to be tested for HIV**

[2] **MICS indicator 9.5 - Women who have been tested for HIV and know the results**

[3] **MICS indicator 9.6 - Sexually active young women who have been tested for HIV and know the results**

( ) Figures that are based on 25-49 unweighted cases

Among women who had given birth within the two years preceding the survey, the percentage who received counselling and HIV testing during antenatal care is presented in Table HA.5. Sixty-five percent of women age 15-49 years with a live birth in the last two years preceding the survey received HIV counselling during ANC, 83 percent were offered an HIV test and were tested for HIV; 81 percent were offered an HIV test and were tested for HIV during ANC and received the results; and 62 percent received HIV counselling, were offered an HIV test, accepted and received the results. The proportion of women age 15-49 years with a live birth in the last two years preceding the survey received HIV counselling during ANC is 76 percent for those with secondary or higher education and 59 percent for those with primary education. Ninety-one percent of women with secondary or higher education were offered an HIV test and were tested for HIV during ANC and received the results, while it is 77 percent for women in primary education.

Table HA.5: HIV counselling and testing during antenatal care

Percentage of women age 15-49 with a live birth in the last 2 years who received antenatal care from a health professional during the last pregnancy, percentage who received HIV counselling, percentage who were offered and tested for HIV, percentage who were offered, tested and received the results of the HIV test, and percentage who received counselling and were offered, accepted and received the results of the HIV test, Kakamega County MICS, 2013/14

	Percentage of women who:					
	Received antenatal care from a health care professional for last pregnancy	Received HIV counselling during antenatal care[1]	Were offered an HIV test and were tested for HIV during antenatal care	Were offered an HIV test and were tested for HIV during antenatal care, and received the results[2]	Received HIV counselling, were offered an HIV test, accepted and received the results	Number of women age 15-49 with a live birth in the last 2 years
Total	**89.6**	**65.1**	**82.7**	**81.1**	**61.9**	**306**
Area						
Urban	87.5	67.3	81.3	79.5	63.2	168
Rural	92.1	62.3	84.4	83.1	60.3	138
Age						
15-24	91.5	60.3	83.4	80.9	56.5	122
15-19	(87.2)	(52.3)	(77.8)	(71.6)	(42.8)	31
20-24	93.0	63.1	85.2	84.0	61.2	91
25-29	89.7	65.6	83.8	82.0	63.4	96
30-39	85.3	72.3	78.1	78.1	68.3	76
40-49	(*)	(*)	(*)	(*)	(*)	13
Marital status						
Ever married/in union	90.3	66.6	83.0	81.2	64.1	277
Never married/in union	(82.7)	(50.3)	(80.0)	(80.0)	(39.9)	28
Education						
None	(*)	(*)	(*)	(*)	(*)	12
Primary	88.5	59.4	78.9	77.0	56.0	195
Secondary+	92.9	75.9	92.1	91.0	72.8	99
Wealth index quintile						
Poorest	93.1	64.8	84.9	81.6	61.0	79
Second	88.2	60.5	71.8	70.2	57.2	69
Middle	84.1	55.3	83.4	81.5	55.3	58
Fourth	88.1	69.8	89.2	89.2	67.2	57
Richest	(94.3)	(79.6)	(86.5)	(86.5)	(72.7)	43
Ethnicity of household head						
Luhya	89.3	64.6	82.7	81.0	62.2	289
Other ethnic group	(*)	(*)	(*)	(*)	(*)	17
[1] **MICS indicator 9.7 - HIV counselling during antenatal care**						
[2] **MICS indicator 9.8 - HIV testing during antenatal care**						

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

11.5 Sexual Behaviour Related to HIV Transmission

Promoting safer sexual behaviour is critical in reducing HIV prevalence. The use of condoms during sex, especially when non-regular or multiple partners are involved, is particularly important for reducing the spread of HIV. A set of questions was administered to all women age 15-49 years to assess their risk of HIV infection.

As shown in Tables HA.6, two percent of women 15-49 years of age reported having sex with more than one partner in the last 12 months. Overall, the mean number of lifetime sexual partners was 2.1.[106]

Table HA.6: Sex with multiple partners (women)

Percentage of women age 15-49 years who ever had sex, percentage who had sex in the last 12 months, percentage who had sex with more than one partner in the last 12 months, mean number of sexual partners in lifetime for women who have ever had sex, and among those who had sex with multiple partners in the last 12 months, the percentage who used a condom at last sex, Kakamega County MICS, 2013/14

	Percentage of women who:			Number of women age 15-49 years	Mean number of sexual partners in lifetime	Number of women age 15-49 years who have ever had sex
	Ever had sex	Had sex in the last 12 months	Had sex with more than one partner in last 12 months[1]			
Total	**84.2**	**74.9**	**1.7**	**998**	**2.1**	**841**
Area						
Urban	87.6	79.0	1.7	502	2.1	439
Rural	80.8	70.8	1.8	496	2.1	401
Age						
15-24	60.0	49.4	1.3	381	1.8	228
15-19	34.5	24.7	1.2	210	1.5	73
20-24	91.5	79.9	1.3	170	1.9	156
25-29	98.2	95.2	0.7	192	2.1	188
30-39	99.4	91.1	2.2	270	2.2	269
40-49	100.0	84.4	3.1	155	2.5	155
Marital status						
Ever married/in union	100.0	93.7	1.9	728	2.2	728
Never married/in union	41.8	24.4	1.1	270	1.6	113
Education						
None	(100.0)	(95.2)	(0.0)	42	(2.3)	42
Primary	84.3	75.6	2.2	595	2.2	502
Secondary+	82.3	71.4	1.2	360	2.0	296
Wealth index quintile						
Poorest	89.8	78.3	1.4	181	2.2	163
Second	81.9	72.3	2.9	203	2.2	166
Middle	81.9	73.7	2.0	196	2.1	161
Fourth	82.6	72.7	1.9	203	2.1	168
Richest	85.3	77.7	0.4	215	1.9	183
Ethnicity of household head						
Luhya	83.9	74.8	1.7	918	2.1	770
Other ethnic group	87.6	76.4	2.0	80	2.1	70
[1] **MICS indicator 9.12 - Multiple sexual partnerships**						
[2] **MICS indicator 9.13 - Condom use at last sex among people with multiple sexual partnerships (**this indicator could not be produced due to insufficient sample size)						
( ) Figures that are based on 25-49 unweighted cases						

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[106] The percentage of women who had more than one sexual partner in the last 12 months reporting that a condom was used the last time they had sex could not be included in the table due to small number of cases reported.

11.6 HIV Indicators for Young Women

In many countries, over half of new adult HIV infections are among young people of age 15-24 years thus a change in behaviour among members of this age group is especially important to reduce new infections.

Table HA.7 summarizes information on key HIV indicators for young women in Kakamega. Forty-six percent of young women have comprehensive knowledge. Young women who know of three means of HIV transmission from mother-to-child are 43 percent and 92 percent have knowledge of a place to get tested. With regard to comprehensive knowledge, young ever married/in union are more knowledgeable (40 percent) than the never married/in union (49 percent). Comprehensive knowledge increases with level of education from 41 percent among women with primary education to 51 percent for those with secondary/higher education.

Overall, 58 percent of young women in this age group, who were sexually active, had been tested for HIV in the last 12 months and know the result. There are disparities by place of residence, marital status, and education. The percentage of sexually active women who had been tested for HIV in the past 12 months and know the result is 57 percent in urban areas and 60 percent in rural areas. The proportion is high among never married/in union (65 percent) compared with ever married/in union (55 percent). The percentage of sexually active women who had been tested for HIV in the past 12 months and know the result is 54 percent among women with primary education and 62 percent for those secondary or higher education.

Table HA.7: Key HIV and AIDS indicators (young women)

Percentage of women age 15-24 years by key HIV and AIDS indicators, Kakamega County MICS, 2013/14

	Percentage of women age 15-24 years who:						Number of women age 15-24 years	Percentage of sexually active young women who have been tested for HIV in the last 12 months and know the result[2]	Number of women age 15-24 years who had sex in the last 12 months	Percentage who express accepting attitudes towards people living with HIV on all four indicators[a]	Number of women age 15-24 years who have heard of AIDS
	Have comprehensive knowledge[1]	Know all three means of HIV transmission from mother to child	Know a place to get tested for HIV	Have ever been tested and know the result of the most recent test	Have been tested for HIV in the last 12 months and know the result	Had sex in the last 12 months					
Total	**45.5**	**42.5**	**92.0**	**49.9**	**42.8**	**49.4**	**381**	**58.0**	**188**	**31.3**	**380**
Area											
Urban	46.2	43.8	93.6	54.8	45.1	56.8	183	56.7	104	34.9	183
Rural	44.9	41.2	90.5	45.4	40.7	42.5	198	59.6	84	27.9	197
Age											
15-19	43.1	41.7	88.0	34.1	29.9	24.7	210	51.1	52	30.3	210
15-17	39.7	43.5	84.6	27.2	25.0	13.4	126	(*)	17	23.4	125
18-19	48.1	39.0	92.9	44.5	37.0	41.3	85	(54.1)	35	40.6	85
20-24	48.6	43.4	96.9	69.4	58.9	79.9	170	60.6	136	32.4	170
20-22	49.8	41.7	96.1	67.2	56.7	78.2	110	59.7	86	33.8	110
23-24	46.3	46.5	98.4	73.3	62.8	83.0	60	(62.2)	50	29.9	60
Marital status											
Ever married/in union	39.6	50.8	97.1	69.5	55.0	98.8	135	55.3	133	31.6	135
Never married/in union	48.8	37.9	89.2	39.2	36.2	22.3	246	64.5	55	31.1	246
Education											
None	(*)	(*)	(*)	(*)	(*)	(*)	2	(*)	2	(*)	2
Primary	40.7	46.2	87.4	46.4	38.6	47.0	211	53.8	99	25.1	211
Secondary+	51.1	37.0	97.6	53.7	47.6	51.7	167	61.8	87	38.2	167
Wealth index quintile											
Poorest	48.1	51.2	84.4	41.2	30.5	56.7	58	(40.9)	33	26.1	58
Second	47.5	37.6	91.6	53.3	41.3	46.8	80	(51.9)	38	37.5	80
Middle	34.2	39.9	89.9	51.0	43.5	42.7	78	(60.0)	33	33.3	78
Fourth	45.2	45.5	94.9	48.2	43.7	47.9	83	(65.0)	40	26.7	83

Richest	52.9	40.4	96.7	53.4	51.7	54.4	82	(68.0)	45	31.6	82
Ethnicity of household head										
Luhya	43.3	42.0	91.4	48.5	42.0	47.8	346	57.9	165	32.9	345
Other ethnic group	(67.7)	(47.3)	(97.2)	(63.9)	(50.8)	(65.2)	35	(*)	23	(15.5)	35

[1] **MICS indicator 9.1; MDG indicator 6.3 - Knowledge about HIV prevention among young women**

[2] **MICS indicator 9.6 - Sexually active young women who have been tested for HIV and know the results**

[a] Refer to Table HA.3 for the four indicators.

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

Certain behaviour may create, increase, or perpetuate risk of exposure to HIV. For this young age group, such behaviour includes sex at an early age and women having sex with older men.

Table HA.8 shows results on sexual behaviour of young women age 15-24 years. Overall, 6 percent of young women reported ever having sex before age 15. Further, about 1 percent of young women had sex with more than one partner in the last 12 months. On the other hand, 16 percent of the young women who had sex in the last 12 months reported that it involved a non-marital, non-cohabiting partner; of those only 65 percent of women used a condom the last time. About 13 percent of women age 15-24 years who had sex in the last 12 months, had sex with a man 10 or more years older in the last 12 months.

Table HA.8: Key sexual behaviour indicators (young women)

Percentage of women age 15-24 years by key sexual behaviour indicators, Kakamega County MICS, 2-13/14

	Percentage of women age 15-24 years who:			Number of women age 15-24 years	Percentage of women who never had sex[2]	Number of never-married women age 15-24 years	Percentage of women age 15-24 years who in the last 12 months had sex with:		Number of women age 15-24 years who had sex in the last 12 months	Percentage reporting the use of a condom during the last sexual intercourse with a non-marital, non-cohabiting partner in the last 12 months[5]	Number of women age 15-24 years who had sex with a non-marital, non-cohabiting partner in last 12 months
	Had sex before age 15[1]	Ever had sex	Had sex with more than one partner in last 12 months				A man 10 or more years older[3]	A non-marital, non-cohabiting partner[4]			
Total	**5.6**	**60.0**	**1.3**	**381**	**61.9**	**246**	**12.9**	**15.9**	**188**	**65.2**	**61**
Area											
Urban	2.2	66.6	1.1	183	54.8	112	13.8	19.4	104	(69.4)	35
Rural	8.8	53.9	1.4	198	67.8	135	11.9	12.7	84	(59.2)	25
Age											
15-19	3.5	34.5	1.2	210	76.0	181	12.8	12.3	52	(64.4)	26
15-17	2.2	19.7	0.0	126	83.6	121	(*)	(*)	17	(*)	12
18-19	5.3	56.4	3.0	85	60.9	61	(19.0)	(16.4)	35	(*)	14
20-24	8.3	91.5	1.3	170	22.3	65	13.0	20.4	136	(65.8)	35
20-22	7.6	90.6	0.9	110	(20.9)	49	12.9	23.3	86	(71.8)	26
23-24	9.7	93.1	2.2	60	(*)	15	(13.0)	(15.0)	50	(*)	9
Marital status											
Ever married/in union	11.4	100.0	1.9	135	na	na	18.3	3.4	133	(*)	5
Never married/in union	2.5	38.1	0.9	246	61.9	246	0.0	22.8	55	68.6	56
Education											
None	(*)	(*)	(*)	2	-	0	(0.0)	(0.0)	2	-	0
Primary	8.3	57.0	1.7	211	71.9	126	16.1	9.0	99	(*)	19
Secondary+	1.1	63.3	0.8	167	51.3	120	9.6	24.9	87	(71.8)	42
Wealth index quintile											
Poorest	9.9	68.3	1.0	58	(56.3)	33	(14.4)	(16.4)	33	(*)	10
Second	7.4	55.9	3.6	80	71.9	49	(20.4)	(12.5)	38	(*)	10
Middle	5.9	54.8	0.0	78	(70.2)	50	(12.7)	(7.0)	33	(*)	5

Fourth	4.3	59.0	1.6	83	60.4	56	(9.8)	(15.8)	40	(*)	13
Richest	2.1	63.9	0.0	82	50.8	58	(8.6)	(27.5)	45	(*)	23
Ethnicity of household head											
Luhya	5.9	58.6	1.4	346	63.5	226	12.9	15.1	165	61.7	52
Other ethnic group	(3.0)	(74.1)	(0.0)	35	(*)	20	(*)	(*)	23	(*)	8

[1] **MICS indicator 9.10 - Sex before age 15 among young women**

[2] **MICS indicator 9.9 - Young women who have never had sex**

[3] **MICS indicator 9.11 - Age-mixing among sexual partners**

[4] **MICS indicator 9.14 - Sex with non-regular partners**

[5] **MICS indicator 9.15; MDG indicator 6.2 - Condom use with non-regular partners**

na: not applicable

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

Figure HA.3 brings together two critical behaviours that is known to increase the risk of HIV infection, sex before age 15, and sex with multiple partners, from tables HA.8 and HA.6.

Figure HA.3: Sexual behaviour that increases the risk of HIV infection, young people age 15-24, Kakamega County MICS, 2013/14
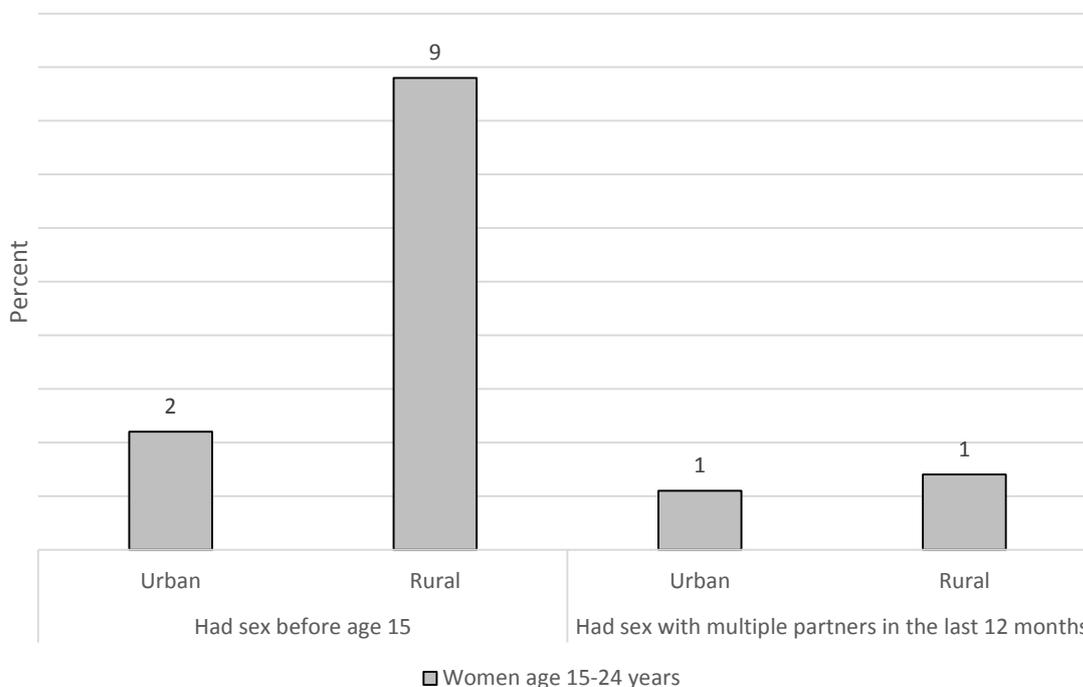
12.7 Orphans

While the number of children orphaned due to AIDS has stabilized globally since 2009, efforts to mitigate the impact of AIDS on households, communities, and children continue to be intensified by national programmes and global partners. Children who are orphaned may be at increased risk of neglect or exploitation when the parents are not available to assist them. Monitoring the variations in different outcomes for orphans and comparing them to their peers gives us a measure of how well communities and governments are responding to their needs. Please refer to Table CP.14 on page 164 for detailed information on living conditions of children and overall prevalence of orphanhood.

Overall, three percent of children age 10-14 years in Kakamega County are orphans. Eighty-nine percent of the orphans and 99 percent of non-orphan children are attending school.[107]

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[107] Table with MICS indicator 9.16; MDG indicator 6.4 - Ratio of school attendance of orphans to school attendance of non-orphans cannot be shown due to small sample size of the orphans population.

Table HA.9: School attendance of orphans and non-orphans

School attendance of children age 10-14 years by orphanhood, Kakamega County MICS, 2013/14

	Percentage of children whose mother and father have died (orphans)	Percentage of children whose parents are still alive and who are living with at least one parent (non-orphans)	Number of children age 10-14 years	Percentage of children whose mother and father have died (orphans) and are attending school	Total number of orphan children age 10-14 years	Percentage of children whose parents are still alive, who are living with at least one parent (non-orphans), and who are attending school	Total number of non-orphan children age 10-14 years	Orphans to non-orphans school attendance ratio[1]
Total	**3.4**	**69.2**	**801**	**(89.1)**	**28**	**98.8**	**555**	**(0.90)**
Sex								
Male	3.6	71.9	394	(*)	14	98.5	283	(*)
Female	3.3	66.7	407	(*)	13	99.0	272	(*)
Area								
Urban	1.5	76.6	332	(*)	5	99.3	255	(*)
Rural	4.8	64.0	469	(95.5)	22	98.4	300	(0.97)

[1] **MICS indicator 9.16; MDG indicator 6.4 - Ratio of school attendance of orphans to school attendance of non-orphans**

See Table CP.14 for further overall results related to children's living arrangements and orphanhood

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

12. Access to Mass Media and Use of Information/Communication Technology

The Government of Kenya recognizes the role of Information and Communication Technology (ICT) in the social and economic development of the nation and has developed a national ICT Policy based on the Economic Recovery Strategy for Wealth and Employment Creation (2003-2007). In the National ICT Policy (2006), the Government's vision is to make Kenya 'a prosperous ICT-driven society'.[108, 109]

The Kakamega County MICS collected information on exposure to mass media and the use of computers and the internet. Information was collected on exposure to newspapers/magazines, radio and television among women age 15-49 years, while the questions on the use of computers and the use of the internet was asked to young women age 15-24 years. This chapter, therefore, focuses on access to mass media and use of ICT.

12.1 Access to Mass Media

The proportion of women who read a newspaper or magazine, listen to the radio and watch television at least once a week is shown in Table MT.1. About 16 percent of women in Kakamega County read a newspaper or magazine, 75 percent listen to the radio, and 29 percent watch television at least once a week. Overall, 19 percent do not have regular exposure to any of the three media, while 80 percent are exposed to at least one and seven percent to all the three types of media on a weekly basis.

Differentials by education and household wealth are observed for exposure to all types of media. Women with secondary or higher education are more likely to have been exposed to all three types of media (16 percent) than women with only primary education (2 percent). Similarly, women from the richest households are more likely to have been exposed to all three types of media (21 percent) than women from the poorest households (1 percent).

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[108] http://www1.american.edu/initeb/en6343a/ICT-policy.htm
[109] Ministry of Information and Communications. 2006. National Information and Communications Technology (ICT) Policy.

Table MT.1: Exposure to mass media (women)

Percentage of women age 15-49 years who are exposed to specific mass media on a weekly basis, Kakamega County MICS, 2013/14

	Percentage of women age 15-49 years who:			All three media at least once a week[1]	Any media at least once a week	None of the media at least once a week	Number of women age 15-49 years
	Read a newspaper at least once a week	Listen to the radio at least once a week	Watch television at least once a week				
Total	**15.5**	**75.0**	**28.7**	**7.1**	**80.2**	**19.1**	**998**
Age							
15-19	30.5	79.2	36.4	10.6	87.4	12.6	210
20-24	15.3	77.5	27.1	6.1	81.2	18.3	170
25-29	8.0	66.7	29.8	5.3	73.8	25.6	192
30-34	12.7	77.1	26.3	7.2	79.8	20.2	119
35-39	14.4	75.9	26.6	8.6	81.8	16.6	152
40-44	7.1	72.6	22.5	2.4	75.9	22.1	87
45-49	8.7	76.3	22.1	6.5	76.3	22.2	69
Area							
Urban	17.4	73.5	36.1	8.6	80.5	19.1	502
Rural	13.6	76.4	21.2	5.6	79.9	19.0	496
Education							
None	(0.0)	(61.6)	(6.3)	(0.0)	(64.3)	(29.4)	42
Primary	8.8	70.3	21.1	2.4	75.2	24.3	595
Secondary+	28.4	84.4	43.8	15.8	90.5	9.2	360
Wealth index quintile							
Poorest	5.4	49.2	6.1	1.3	50.2	48.1	181
Second	11.4	71.4	11.8	4.2	75.6	22.5	203
Middle	14.9	79.6	18.7	5.0	85.4	14.6	196
Fourth	14.9	87.1	31.0	2.7	89.7	10.3	203
Richest	29.1	84.4	70.7	20.8	96.3	3.7	215
Ethnicity of household head							
Luhya	14.5	75.4	27.2	6.5	79.8	19.4	918
Other ethnic group	27.4	70.1	45.4	13.6	84.6	15.4	80
[1] **MICS indicator 10.1 - Exposure to mass media**							
( ) Figures that are based on 25-49 unweighted cases							

12.2 Use of Information/Communication Technology

The questions on computer and internet use were asked only to young women age 15-24 years. As shown in Table MT.2, 21 percent of young women age 15-24 years ever used a computer, 15 percent used a computer during the last 12 months and 8 percent used a computer at least once a week during the last month.

Overall, 18 percent of young women age 15-24 years ever used the internet, while 15 percent used the internet during the last 12 months. The proportion of young women who use the internet more frequently, at least once a week during the last month, is 11 percent.

Both computer and internet use during the last 12 months were more widespread among the 20-24 year old women. Use of a computer and the internet is also strongly associated with area and education. Only about three percent of women with primary education reported using a computer during the last 12 months, while about a third of the women with higher education used a computer. Similarly, higher utilisation of the internet is observed among young women in urban areas (20 percent) compared with 10 percent in rural areas

Both computer and internet use during the last 12 months are more widespread among the 20-24 year old women. Use of a computer and the internet is also strongly associated with place of residence and education. Only about three percent of women with primary education report using a computer during the last 12 months, while about a third of the women with higher education use a computer during the same period. Similarly, higher utilisation of the internet is observed among young women in urban areas (20 percent) compared to 10 percent in rural areas and an ever wider difference between women with primary (3 percent) compared with those with secondary or higher education (31 percent).

Table MT.2: Use of computers and internet (women)

Percentage of young women age 15-24 years who have ever used a computer and the internet, percentage who have used during the last 12 months, and percentage who have used at least once weekly during the last one month, Kakamega County MICS, 2013/14

	Percentage of women age 15-24 years who have:						
	Ever used a computer	Used a computer during the last 12 months[1]	Used a computer at least once a week during the last one month	Ever used the internet	Used the internet during the last 12 months[2]	Used the internet at least once a week during the last one month	Number of women age 15-24 years
Total	**21.2**	**15.1**	**7.6**	**18.4**	**15.2**	**10.6**	**381**
Age							
15-19	16.9	13.7	6.7	11.9	10.5	7.3	210
20-24	26.5	16.8	8.7	26.4	20.9	14.8	170
Area							
Urban	27.1	19.8	9.2	25.6	20.3	14.8	183
Rural	15.7	10.7	6.1	11.7	10.4	6.8	198
Education							
None	(*)	(*)	(*)	(*)	(*)	(*)	2
Primary	5.4	2.9	1.0	2.9	2.5	1.2	211
Secondary+	41.4	30.6	15.9	38.2	31.3	22.7	167
Wealth index quintile							
Poorest	5.8	4.5	1.7	3.9	2.5	1.7	58
Second	12.1	8.1	3.6	8.4	8.4	6.4	80
Middle	22.4	12.6	3.2	16.4	13.6	7.3	78
Fourth	17.7	11.0	4.0	14.1	13.1	9.7	83
Richest	43.4	35.9	23.3	44.7	34.2	25.2	82
Ethnicity of household head							
Luhya	20.0	14.4	7.4	16.9	14.5	9.8	346
Other ethnic group	(32.7)	(21.8)	(9.1)	(33.4)	(21.9)	(19.5)	35
[1] **MICS indicator 10.2 - Use of computers**							
[2] **MICS indicator 10.3 - Use of internet**							
( ) Figures that are based on 25-49 unweighted cases (*) Figures that are based on fewer than 25 unweighted cases							

13.　Subjective well-being

Subjective perceptions of individuals of their incomes, health, living environments and the like, play a significant role in their lives and can impact their perception of well-being, irrespective of objective conditions such as actual income and physical health status.[110] In the MICS, a set of questions were asked to women age 15-24 years to understand how satisfied this group of young people is in different areas of their lives, such as their family life, friendships, school, current job, health, where they live, how they are treated by others, how they look, and their current income.

Life satisfaction is a measure of an individual's perceived level of well-being. Understanding young women's satisfaction in different areas of their lives can help to gain a comprehensive picture of young people's life situations. A distinction can also be made between life satisfaction and happiness. Happiness is a fleeting emotion that can be affected by numerous factors, including day-to-day factors such as the weather, or a recent death in the family. It is possible for a person to be satisfied with job, income, family life, friends, and other aspects of life, but still be unhappy, or vice versa. In addition to the set of questions on life satisfaction, the survey also asked questions about happiness and the respondents' perceptions of a better life.

To assist respondents in answering the set of questions on happiness and life satisfaction, they were shown a card with smiling faces (and not so smiling faces) that corresponded to the response categories (see the Questionnaires in Appendix H) 'very satisfied', 'somewhat satisfied', 'neither satisfied nor unsatisfied', 'somewhat unsatisfied' and 'very unsatisfied'. For the question on happiness, the same scale was used, this time ranging from 'very happy' to 'very unhappy', in the same fashion.

Table SW.1 shows the proportion of young women age 15-24 years, who are very or somewhat satisfied in selected domains. Note that for three domains, satisfaction with school, job and income, the denominators are confined to those who are currently attending school, have a job, and have an income. Of the different domains, young women are the most satisfied with the way they look 93 percent, followed by their health (87 percent), and their family life (83 percent).

The percentage of women age 15-24 years who are very or somewhat satisfied; with school is 95 percent, with their job is 78 percent, and with their income is 64 percent

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[110] OECD. 2013. *OECD Guidelines on Measuring Subjective Well Being*. OECD. http://dx.doi.org/10.1787/9789264191655-en

Table SW.1: Domains of life satisfaction (women)

Percentage of women age 15-24 years who are very or somewhat satisfied in selected domains of satisfaction, Kakamega County MICS, 2013/14

	Percentage of women age 15-24 years who are very or somewhat satisfied in selected domains:						Percentage of women age 15-24 years who:			Number of women age 15-24 years	Percentage of women age 15-24 years who are very or somewhat satisfied with school	Number of women age 15-24 years attending school	Percentage of women age 15-24 years who are very or somewhat satisfied with their job	Number of women age 15-24 years who have a job	Percentage of women age 15-24 years who are very or somewhat satisfied with their income	Number of women age 15-24 years who have an income
	Family life	Friendships	Health	Living environment	Treatment by others	The way they look	Are attending school	Have a job	Have an income							
Total	**82.8**	**81.2**	**86.9**	**81.2**	**79.4**	**92.6**	**45.9**	**16.7**	**18.3**	**381**	**94.8**	**173**	**77.8**	**63**	**64.1**	**69**
Age																
15-19	84.0	83.8	87.5	84.2	77.1	94.1	68.8	7.4	8.5	210	94.5	144	(*)	16	(*)	18
20-24	81.4	78.0	86.1	77.5	82.2	90.6	17.2	28.3	30.5	170	(96.3)	29	76.8	47	63.5	51
Area																
Urban	80.4	76.0	83.5	76.8	73.1	90.9	38.3	16.0	19.6	183	(95.9)	69	(82.0)	29	(64.8)	36
Rural	85.1	86.1	90.0	85.2	85.1	94.1	52.9	17.3	17.0	198	94.0	104	(74.2)	34	(63.4)	34
Marital Status																
Ever married/in union	79.5	78.7	85.5	79.0	79.2	90.0	5.4	22.1	26.2	135	(*)	7	(78.9)	30	(72.2)	35
Never married/in union	84.6	82.5	87.6	82.4	79.4	94.0	68.0	13.7	13.9	246	94.5	166	(76.8)	34	(55.8)	34
Education																
None	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	2	-	0	-	0	-	0
Primary	81.9	81.1	84.6	82.9	82.2	90.5	41.6	16.5	15.9	211	96.8	88	(73.5)	35	(57.6)	33
Secondary+	83.8	81.0	89.6	78.9	75.4	95.1	51.8	17.1	21.6	167	92.7	85	(83.1)	28	(70.2)	36
Wealth index quintile																
Poorest	66.6	77.4	71.7	74.7	72.6	87.1	36.8	13.5	13.5	58	(*)	21	(*)	8	(*)	8
Second	83.3	83.6	90.8	80.3	82.8	97.3	49.7	14.2	15.7	80	(100.0)	39	(*)	11	(*)	12
Middle	87.6	74.8	86.8	67.2	69.0	86.7	50.2	14.2	15.0	78	(95.4)	38	(*)	11	(*)	11
Fourth	82.2	85.8	90.0	89.0	79.5	92.3	48.3	15.2	18.9	83	(91.9)	40	(*)	13	(*)	16
Richest	90.1	82.6	90.9	91.7	90.6	97.7	42.0	25.0	26.5	82	(90.4)	34	(*)	21	(*)	22
Ethnicity of household head																
Luhya	83.1	80.6	86.9	80.7	79.2	91.8	48.1	16.2	18.0	346	95.8	165	74.9	56	59.8	62

| Other ethnic group | (80.2) | (86.1) | (86.8) | (86.1) | (81.2) | (100.0) | (24.2) | (21.2) | (21.2) | 35 | (*) | 8 | (*) | 7 | (*) | 7 |

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

In Table SW.2, proportions of women age 15-24 years with overall life satisfaction are shown. "Life satisfaction" is defined as those who are very or somewhat satisfied with their life overall, and is based on a single question which was asked after the life satisfaction questions on all of the above-mentioned domains, with the exception of the question on satisfaction with income, which was asked later.

In Kakamega County, 82 percent of women age 15-24 years are satisfied with their life. The proportion of women who are satisfied with life is somewhat higher in rural areas (88 percent) than in urban areas (75 percent).

As a summary measure, the average life satisfaction score was also calculated and presented in Table SW.2. The score is simply calculated by averaging the responses to the question on overall life satisfaction, ranging from very satisfied (1) to very unsatisfied (5) (see Questionnaires in Appendix H). Therefore, the lower the average score, the higher the life satisfaction levels. The average life satisfaction score for women age 15-24 years is 1.7.

Table SW.2 also shows that 80 percent of women age 15-24 years are very or somewhat happy. The pattern for the variable very or somewhat happy by urban/rural areas, marital status and wealth quintiles is similar to that for overall life satisfaction.

Table SW.2: Overall life satisfaction and happiness (women)

Percentage of women age 15-24 years who are very or somewhat satisfied with their life overall, the average overall life satisfaction score, and percentage of women age 15-24 years who are very or somewhat happy, Kakamega County MICS, 2013/14

	Percentage of women with overall life satisfaction[1]	Average life satisfaction score	Percentage of women who are very or somewhat happy [2]	Number of women age 15-24 years
Total	**81.7**	**1.7**	**79.9**	**381**
Age				
15-19	84.6	1.6	80.3	210
20-24	78.1	1.9	79.4	170
Area				
Urban	75.3	1.8	78.5	183
Rural	87.6	1.6	81.2	198
Marital Status				
Ever married/in union	77.2	1.9	74.2	135
Never married/in union	84.2	1.7	83.0	246
Education				
None	(*)	(*)	(*)	2
Primary	83.0	1.7	79.2	211
Secondary+	79.8	1.8	80.6	167
Wealth index quintile				
Poorest	82.4	1.8	69.2	58
Second	81.0	1.8	74.7	80
Middle	77.5	1.8	71.8	78
Fourth	77.9	1.7	87.3	83
Richest	89.7	1.5	92.6	82
Ethnicity of household head				
Luhya	80.9	1.8	79.3	346
Other ethnic group	(89.3)	(1.5)	(86.4)	35
[1] MICS Indicator 11.1 - Life satisfaction				
[2] MICS indicator 11.2 - Happiness				

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

In addition to the series of questions on life satisfaction and happiness, respondents were also asked two simple questions on whether they think their life improved during the last one year, and whether they think their life will be better in one year's time. Such information may contribute to our understanding of desperation that may exist among young people, as well as hopelessness and hopes for the future. Specific combinations of the perceptions during the last one year and expectations for the next one year may be valuable information to understand the general sense of well-being among young people.

In Table SW.3, women's perceptions of a better life are shown. The proportion of women age 15-24 years who think that their lives improved during the last one year <u>and</u> who expect that their lives would get better after one year, is 56 percent. Differences in the perception of a better life can be observed by wealth quintiles: 39 percent of young women who live in households in the poorest wealth quintile think that their lives improved during the last one year <u>and</u> expect that it would get better after one year, while the corresponding proportion for young women who live in households in the richest wealth quintile is 63 percent.

Table SW.3: Perception of a better life (women)

Percentage of women age 15-24 years who think that their lives improved during the last one year and those who expect that their lives will get better after one year, Kakamega County MICS, 2013/14

	Percentage of women who think that their life			Number of women age 15-24 years
	Improved during the last one year	Will get better after one year	Both[1]	
Total	**59.7**	**91.7**	**56.2**	**381**
Age				
15-19	61.7	92.3	58.3	210
20-24	57.3	91.0	53.6	170
Area				
Urban	57.0	97.3	55.9	183
Rural	62.2	86.6	56.5	198
Marital Status				
Ever married/in union	55.2	93.0	53.7	135
Never married/in union	62.2	91.0	57.6	246
Education				
None	(*)	(*)	(*)	2
Primary	55.7	91.3	53.9	211
Secondary+	64.4	92.3	58.7	167
Wealth index quintile				
Poorest	40.4	91.2	39.3	58
Second	64.8	90.1	61.8	80
Middle	55.2	94.2	53.7	78
Fourth	62.8	93.0	58.5	83
Richest	69.7	90.0	63.0	82
Ethnicity of household head				
Luhya	59.5	91.8	56.2	346
Other ethnic group	(62.4)	(91.1)	(56.3)	35
[1] **MICS indicator 11.3 - Perception of a better life**				

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

14.   Tobacco and Alcohol Use

Tobacco products are products made entirely or partly of leaf tobacco as raw material, which are intended to be smoked, sucked, chewed, or snuffed. All contain the highly addictive psychoactive ingredient, nicotine. Tobacco use is one of the main risk factors for a number of chronic diseases, including cancer, lung diseases, and cardiovascular diseases.[111]

The consumption of alcohol carries a risk of adverse health and social consequences related to its intoxicating, toxic and dependence-producing properties. In addition to the chronic diseases that may develop in those who drink large amounts of alcohol over a number of years, alcohol use is also associated with an increased risk of acute health conditions, such as injuries, including from traffic accidents.[112] Alcohol use also causes harm far beyond the physical and psychological health of the drinker. It harms the well-being and health of people around the drinker. An intoxicated person can harm others or put them at risk of traffic accidents or violent behaviour, or negatively affect co-workers, relatives, friends or strangers. Thus, the impact of the harmful use of alcohol reaches deep into society.[113]

Tobacco control campaigns were initiated in Kenya in 1992 as part of the World No Tobacco Day celebration. In 2001, the Ministry of Health (MOH) established the National Tobacco Free Initiative Committee (NTFIC) to coordinate tobacco control activities, and a tobacco control focal point was designated.[114] The Government of Kenya participated in formulation of the 2003 WHO Framework Convention on Tobacco Control (FCTC) which contains articles aimed at reducing the supply of and demand for tobacco; protection from exposure to smoke; and a provision that addresses liability[115]. Kenya ratified the convention in 2004. Tobacco Control Act [*Chapter 245A*] was enacted in 2007 to control the production, manufacture, sale, labelling, advertising, promotion and sponsorship of tobacco products, and the National Tobacco Control Action Plan was launched in 2010. Liquor control in the country is through the Liquor Licensing Act [*Chapter 121*].

The Kakamega County MICS collected information on ever and current use of tobacco and alcohol and intensity of use among women age 15-49 years. This section presents the main results.

14.1 Tobacco Use

Table TA.1 presents the current and ever use of tobacco products by women age 15-49 years. In Kakamega County MICS, ever use of any tobacco products among women is two percent, while less than one percent smoke cigarettes, or used smoked or smokeless tobacco products on one or more days during the last one month prior to the survey.

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[111] WHO. http://www.who.int/topics/tobacco/en/
[112] WHO. http://www.who.int/topics/alcohol_drinking/en/
[113] WHO. http://www.who.int/mediacentre/factsheets/fs349/en/
[114] WHO. 2012. Joint national capacity assessment on the implementation of effective tobacco control policies in Kenya.
[115] WHO. 2005. Framework Convention on Tobacco Control

Table TA.1: Current and ever use of tobacco (women)

Percentage of women age 15-49 years by pattern of use of tobacco, Kakamega County MICS, 2013/14

	Never smoked cigarettes or used other tobacco products	Ever users				Users of tobacco products at any time during the last one month				Number of women age 15-49 years
		Only cigarettes	Cigarettes and other tobacco products	Only other tobacco products	Any tobacco product	Only cigarettes	Cigarettes and other tobacco products	Only other tobacco products	Any tobacco product[1]	
Total	**98.4**	**1.3**	**0.1**	**0.1**	**1.5**	**0.3**	**0.0**	**0.0**	**0.3**	**998**
Age										
15-19	99.4	0.0	0.0	0.6	0.6	0.0	0.0	0.0	0.0	210
20-24	98.5	1.5	0.0	0.0	1.5	0.0	0.0	0.0	0.0	170
25-29	96.6	3.1	0.0	0.0	3.1	0.8	0.0	0.0	0.8	192
30-34	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	119
35-39	98.7	1.3	0.0	0.0	1.3	0.0	0.0	0.0	0.0	152
40-44	98.2	0.8	1.0	0.0	1.8	1.0	0.0	0.0	1.0	87
45-49	96.9	3.1	0.0	0.0	3.1	1.5	0.0	0.0	1.5	69
Area										
Urban	97.6	2.2	0.0	0.3	2.4	0.5	0.0	0.0	0.5	502
Rural	99.3	0.5	0.2	0.0	0.6	0.2	0.0	0.0	0.2	496
Education										
None	(97.6)	(2.4)	(0.0)	(0.0)	(2.4)	(2.4)	(0.0)	(0.0)	(2.4)	42
Primary	98.3	1.4	0.0	0.2	1.6	0.3	0.0	0.0	0.3	595
Secondary+	98.7	1.1	0.2	0.0	1.3	0.2	0.0	0.0	0.2	360
Under-5s in the same household										
At least one	98.3	1.4	0.0	0.2	1.6	0.0	0.0	0.0	0.0	612
None	98.5	1.2	0.2	0.0	1.5	0.9	0.0	0.0	0.9	386
Wealth index quintile										
Poorest	98.9	0.3	0.5	0.0	0.8	0.5	0.0	0.0	0.5	181
Second	98.3	1.1	0.0	0.6	1.7	0.7	0.0	0.0	0.7	203
Middle	99.2	0.8	0.0	0.0	0.8	0.0	0.0	0.0	0.0	196
Fourth	98.3	1.7	0.0	0.0	1.7	0.5	0.0	0.0	0.5	203
Richest	97.5	2.5	0.0	0.0	2.5	0.0	0.0	0.0	0.0	215
Ethnicity of household head										
Luhya	98.4	1.3	0.1	0.1	1.5	0.2	0.0	0.0	0.2	918
Other ethnic group	98.1	1.9	0.0	0.0	1.9	1.9	0.0	0.0	1.9	80

[1] **MICS indicator 12.1 - Tobacco use**

( ) Figures that are based on 25-49 unweighted cases

Tables TA.2 presents results on age at first use of cigarettes, as well as frequency of use, for women age 15-49 years. The results show that only about one woman age 15-49 years in a thousand smoked a cigarette for the first time before age 15. This implies that women in Kakamega County are not likely to smoke cigarettes before age 15.

Table TA.2: Age at first use of cigarettes and frequency of use (women)		
Percentage of women age 15-49 years who smoked a whole cigarette before age 15, and percent distribution of current smokers by the number of cigarettes smoked in the last 24 hours, Kakamega County MICS, 2013/14		
	Percentage of women who smoked a whole cigarette before age 15[1]	Number of women age 15-49 years
Total	**0.1**	**998**
Age		
15-19	0.0	210
20-24	0.6	170
25-29	0.0	192
30-34	0.0	119
35-39	0.0	152
40-44	0.0	87
45-49	0.0	69
Area		
Urban	0.0	502
Rural	0.2	496
Education		
None	(0.0)	42
Primary	0.0	595
Secondary+	0.3	360
Under-5s in the same household		
At least one	0.0	612
None	0.3	386
Wealth index quintile		
Poorest	0.0	181
Second	0.0	203
Middle	0.0	196
Fourth	0.5	203
Richest	0.0	215
Ethnicity of household head		
Luhya	0.1	918
Other ethnic group	0.0	80
[1] MICS indicator 12.2 - Smoking before age 15		
( ) Figures that are based on 25-49 unweighted cases		

14.2 Alcohol Use

Table TA.3 shows the use of alcohol among women. About five percent of women age 15-49 years had at least one drink of alcohol on one or more days during the last one month preceding the survey while three percent have had at least one alcoholic drink before the age of 15 years. The proportion who had an alcoholic drink in the last month preceding the survey ranged between two percent and nine percent by age while for women who had at least one alcoholic drink before age 15 was between one percent and five percent, with no clear pattern from one age group to the other. Women age 15-49 years in urban areas in Kakamega County are twice (4 percent) as likely to have had at least one alcoholic drink before age 15 than their rural counterparts (2 percent). The results further indicate that women age 15-49 years in Kakamega County who reside in urban areas are twice (7 percent)

more likely to have had at least one alcoholic drink at any time during the last one month than those in the rural areas (3 percent).

Table TA.3: Use of alcohol (women)

Percentage of women age 15-49 years who have never had an alcoholic drink, percentage who first had an alcoholic drink before age 15, and percentage of women who have had at least one alcoholic drink at any time during the last one month, Kakamega County MICS, 2013/14

	Percentage of women who:			Number of women age 15-49 years
	Never had an alcoholic drink	Had at least one alcoholic drink before age 15[1]	Had at least one alcoholic drink at any time during the last one month[2]	
Total	**79.6**	**2.8**	**4.9**	**998**
Age				
15-19	91.8	0.6	1.9	210
20-24	81.0	3.4	5.0	170
25-29	78.7	3.7	6.8	192
30-34	76.7	2.3	7.0	119
35-39	73.4	3.1	3.7	152
40-44	70.0	4.7	3.8	87
45-49	72.0	3.8	9.0	69
Area				
Urban	76.4	1.9	6.5	502
Rural	82.9	3.8	3.3	496
Education				
None	(62.6)	(10.2)	(5.0)	42
Primary	79.7	2.9	4.4	595
Secondary+	81.4	1.9	5.8	360
Wealth index quintile				
Poorest	81.1	1.8	4.0	181
Second	81.9	4.6	2.3	203
Middle	83.6	1.8	5.5	196
Fourth	72.9	6.1	3.6	203
Richest	78.8	0.0	8.9	215
Ethnicity of household head				
Luhya	80.3	2.6	4.7	918
Other ethnic group	71.8	5.0	7.0	80
[1] **MICS indicator 12.4 - Use of alcohol before age 15**				
[2] **MICS indicator 12.3 - Use of alcohol**				
( ) Figures that are based on 25-49 unweighted cases				

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Appendix B. Education ISCED Tables

Table ED.4: Primary school attendance and out of school children (ISCED)

Percentage of children of primary school age attending primary or secondary school (adjusted net attendance ratio), percentage attending preschool, and percentage out of school, Kakamega County MICS, 2013/14

	Male					Female					Total				
	Percentage of children:						Percentage of children:					Percentage of children:			
	Net attendance ratio (adjusted)	Not attending school or preschool	Attending preschool	Out of school[a]	Number of children	Net attendance ratio (adjusted)	Not attending school or preschool	Attending preschool	Out of school[a]	Number of children	Net attendance ratio (adjusted)[1]	Not attending school or preschool	Attending preschool	Out of school[a]	Number of children
Total	**85.4**	**2.8**	**11.7**	**14.5**	**524**	**93.6**	**0.9**	**5.5**	**6.3**	**502**	**89.4**	**1.9**	**8.6**	**10.5**	**1,027**
Area															
Urban	86.9	1.3	11.8	13.1	214	94.5	1.7	3.7	5.5	217	90.7	1.5	7.8	9.3	431
Rural	84.3	3.8	11.6	15.4	310	92.8	0.2	6.8	7.0	286	88.4	2.1	9.3	11.4	595
Age at beginning of school year															
6	58.4	5.5	35.3	40.8	97	72.3	3.2	24.4	27.7	80	64.6	4.5	30.4	34.9	177
7	77.9	4.8	17.3	22.1	98	91.0	2.1	6.4	8.4	91	84.2	3.5	12.0	15.5	189
8	91.3	0.9	7.8	8.7	96	99.3	0.0	0.7	0.7	98	95.3	0.4	4.2	4.7	194
9	96.7	1.1	2.2	3.3	79	98.9	0.0	1.1	1.1	75	97.7	0.6	1.7	2.3	154
10	96.9	3.1	0.0	3.1	88	100.0	0.0	0.0	0.0	72	98.3	1.7	0.0	1.7	160
11	98.9	0.0	1.1	1.1	66	99.3	0.0	0.7	0.7	86	99.1	0.0	0.9	0.9	152
Mother's education															
None	74.7	9.1	16.2	25.3	60	87.0	4.1	8.1	12.2	63	81.0	6.5	12.1	18.6	123
Primary	85.9	2.6	11.2	13.9	318	93.0	0.6	6.3	7.0	293	89.3	1.7	8.9	10.6	611
Secondary+	88.8	0.6	10.7	11.2	143	98.0	0.0	2.0	2.0	145	93.4	0.3	6.3	6.6	288
Cannot be determined[b]	(*)	(*)	(*)	(*)	1	-	-	-	-	0	(*)	(*)	(*)	(*)	1
Wealth index quintile															
Poorest	81.6	4.2	14.2	18.4	123	87.4	3.5	9.1	12.6	108	84.3	3.9	11.8	15.7	231
Second	83.3	4.7	12.0	16.7	110	92.3	0.7	7.0	7.7	97	87.5	2.8	9.6	12.5	207

	Net att. ratio (M)	Attending (M)	Out of school (M)		Number (M)	Net att. ratio (F)	Attending (F)	Out of school (F)		Number (F)	Net att. ratio (T)	Attending (T)	Out of school (T)		Number (T)
Middle	87.1	0.0	12.0	12.0	102	93.4	0.0	6.1	6.1	102	90.3	0.0	9.1	9.1	205
Fourth	85.9	2.2	11.9	14.1	113	96.3	0.0	3.7	3.7	106	90.9	1.2	7.9	9.1	219
Richest	91.3	2.2	6.4	8.7	75	99.3	0.0	0.7	0.7	89	95.7	1.0	3.3	4.3	165
Ethnicity of household head															
Luhya	85.5	2.9	11.4	14.3	499	93.3	1.0	5.6	6.6	468	89.3	2.0	8.6	10.6	968
Other ethnic group	(83.0)	(0.0)	(17.0)	(17.0)	25	(97.0)	(0.0)	(3.0)	(3.0)	34	91.1	0.0	8.9	8.9	59

[1] **MICS indicator 7.4; MDG indicator 2.1 - Primary school net attendance ratio (adjusted)**

[a] The percentage of children of primary school age out of school are those not attending school and those attending preschool
[b] Children age 15 or higher at the time of the interview whose mothers were not living in the household
( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

Table ED.5: Secondary school attendance and out of school children (ISCED)

Percentage of children of secondary school age attending secondary school or higher (adjusted net attendance ratio), percentage attending primary school, and percentage out of school, Kakamega County MICS, 2013/14

	Male				Female				Total			
		Percentage of children:				Percentage of children:				Percentage of children:		
	Net attendance ratio (adjusted)	Attending primary school	Out of school[a]	Number of children	Net attendance ratio (adjusted)	Attending primary school	Out of school[a]	Number of children	Net attendance ratio (adjusted)[1]	Attending primary school	Out of school[a]	Number of children
Total	**48.8**	**37.2**	**14.0**	**456**	**62.6**	**23.8**	**13.6**	**443**	**55.6**	**30.6**	**13.8**	**899**
Area												
Urban	49.1	32.7	18.2	183	64.9	17.5	17.6	206	57.5	24.6	17.9	389
Rural	48.6	40.3	11.1	273	60.6	29.3	10.1	237	54.2	35.2	10.7	510
Age at beginning of school year												
12	16.3	83.3	0.5	85	40.1	56.0	3.9	90	28.6	69.2	2.2	175
13	39.6	56.0	4.4	77	62.9	28.8	8.3	84	51.7	41.8	6.4	161
14	51.3	38.7	10.0	89	74.3	20.3	5.4	70	61.4	30.6	8.0	159
15	60.9	12.1	27.0	63	66.0	13.5	20.5	77	63.7	12.9	23.4	140

16	64.7	14.7	20.5	68	71.8	5.0	23.2	74	68.4	9.7	21.9	142
17	67.6	5.4	26.9	74	67.9	5.1	27.0	49	67.7	5.3	27.0	123
Mother's education												
None	31.1	59.0	9.9	63	(51.4)	(36.2)	(12.4)	45	39.6	49.5	11.0	108
Primary	39.4	51.0	9.6	171	58.7	33.9	7.3	200	49.8	41.8	8.4	371
Secondary+	60.8	32.0	7.2	82	73.9	14.1	11.9	96	67.9	22.4	9.8	178
Cannot be determined[b]	61.3	13.6	25.1	140	64.7	7.0	28.4	101	62.7	10.8	26.5	241
Wealth index quintile												
Poorest	35.6	46.8	17.6	83	53.8	28.8	17.4	73	44.2	38.3	17.5	156
Second	36.9	49.9	13.2	91	54.0	35.2	10.8	86	45.2	42.7	12.0	177
Middle	53.1	32.3	14.6	98	64.6	25.5	9.8	88	58.5	29.1	12.3	186
Fourth	50.5	42.7	6.8	78	68.1	20.7	11.2	103	60.5	30.1	9.3	181
Richest	64.0	19.6	16.5	106	69.5	11.1	19.4	93	66.5	15.6	17.8	199
Ethnicity of household head												
Luhya	48.2	37.8	14.0	426	63.6	24.7	11.7	408	55.7	31.4	12.9	835
Other ethnic group	(57.9)	(28.7)	(13.4)	30	(51.1)	(13.3)	(35.6)	35	54.2	20.4	25.4	65

[1] **MICS indicator 7.5 - Secondary school net attendance ratio (adjusted)**

[a] The percentage of children of secondary school age out of school are those who are not attending primary, secondary, or higher education

[b] Children age 15 or higher at the time of the interview whose mothers were not living in the household

( ) Figures that are based on 25-49 unweighted cases

Table ED.7: Primary school completion and transition to secondary school (ISCED)

Primary school completion rates and transition and effective transition rates to secondary school, Kakamega County MICS, 2013/14

	Primary school completion rate[1]	Number of children of primary school completion age	Transition rate to secondary school[2]	Number of children who were in the last grade of primary school the previous year	Effective transition rate to secondary school	Number of children who were in the last grade of primary school the previous year and are not repeating that grade in the current school year
Total	**128.1**	**152**	**92.7**	**208**	**98.3**	**196**
Sex						
Male	157.5	66	92.9	87	96.7	84
Female	105.4	86	92.6	121	99.5	112
Area						
Urban	(138.8)	60	97.3	88	100.0	86
Rural	121.1	92	89.3	120	97.0	110
Mother's education						
None	(*)	22	(94.7)	29	(100.0)	28
Primary	122.6	82	92.4	105	99.4	97
Secondary+	(114.0)	49	(95.4)	44	(100.0)	42
Cannot be determined	-	0	(87.9)	30	(90.5)	29
Ethnicity of household head						
Luhya	128.6	140	93.5	196	98.2	186
Other ethnic group	(*)	13	(*)	12	(*)	10
[1] MICS indicator 7.7 - Primary completion rate						
[2] MICS indicator 7.8 - Transition rate to secondary school						

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

Table ED.8: Education gender parity (ISCED)

Ratio of adjusted net attendance ratios of girls to boys, in primary and secondary school, Kakamega County MICS, 2013/14

	Primary school			Secondary school		
	Primary school adjusted net attendance ratio (NAR), girls	Primary school adjusted net attendance ratio (NAR), boys	Gender parity index (GPI) for primary school adjusted NAR[1]	Secondary school adjusted net attendance ratio (NAR), girls	Secondary school adjusted net attendance ratio (NAR), boys	Gender parity index (GPI) for secondary school adjusted NAR[2]
Total	**93.6**	**85.4**	**1.10**	**62.6**	**48.8**	**1.28**
Area						
Urban	94.5	86.9	1.09	64.9	49.1	1.32
Rural	92.8	84.3	1.10	60.6	48.6	1.25
Mother's education						
None	87.0	74.7	1.16	(*)	(31.1)	1.65
Primary	93.0	85.9	1.08	58.7	39.4	1.49
Secondary+	98.0	88.8	1.10	73.9	(60.8)	1.22

Cannot be determined[a]	-	(*)	-	64.7	61.3	1.06
Wealth index quintile						
Poorest	87.4	81.6	1.07	(53.8)	35.6	1.51
Second	92.3	83.3	1.11	54.0	36.9	1.46
Middle	93.4	87.1	1.07	64.6	53.1	1.22
Fourth	96.3	85.9	1.12	68.1	50.5	1.35
Richest	99.3	91.3	1.09	69.5	64.0	1.09
Ethnicity of household head						
Luhya	93.3	85.5	1.09	63.6	48.2	1.32
Other ethnic group	(97.0)	(83.0)	1.17	(*)	(*)	0.88
[1] MICS indicator 7.9; MDG indicator 3.1 - Gender parity index (primary school)						
[2] MICS indicator 7.10; MDG indicator 3.1 - Gender parity index (secondary school)						
[a] Children age 15 or higher at the time of the interview whose mothers were not living in the household						
na: not applicable						
( ) Figures that are based on 25-49 unweighted cases (*) Figures that are based on fewer than 25 unweighted cases						

Table ED.9: Out of school gender parity (ISCED)

Percentage of girls in the total out of school population, in primary and secondary school, Kakamega County MICS, 2013/14

	Primary school				Secondary school			
	Percentage of out of school children	Number of children of primary school age	Percentage of girls in the total out of school population of primary school age	Number of children of primary school age out of school	Percentage of out of school children	Number of children of secondary school age	Percentage of girls in the total out of school population of secondary school age	Number of children of secondary school age out of school
Total	10.5	1,027	29.6	108	13.8	899	48.6	124
Area								
Urban	9.3	431	(29.6)	40	17.9	389	(52.0)	70
Rural	11.4	595	29.6	68	10.7	510	44.2	54
Mother's education								
None	18.6	123	(33.7)	23	11.0	108	(*)	12
Primary	10.6	611	31.6	65	8.4	371	(47.2)	31
Secondary+	6.6	288	(*)	19	9.8	178	(*)	17
Cannot be determined[a]	(*)	1	(*)	0	26.5	241	44.8	64
Wealth index quintile								
Poorest	15.7	231	(37.6)	36	17.5	156	(46.7)	27
Second	12.5	207	(28.8)	26	12.0	177	(*)	21
Middle	9.1	205	(*)	19	12.3	186	(*)	23
Fourth	9.1	219	(*)	20	9.3	181	(*)	17
Richest	4.3	165	(*)	7	17.8	199	(50.7)	36
Ethnicity of household head								
Luhya	10.6	968	30.1	102	12.9	835	44.5	108
Other ethnic group	8.9	59	(*)	5	25.4	65	(*)	16

[a] Children age 15 or higher at the time of the interview whose mothers were not living in the household

na: not applicable

( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on fewer than 25 unweighted cases

Appendix C. Sample Design

The major features of the sample design are described in this appendix. Sample design features include sample size, sample allocation, sampling frame and listing, choice of domains, sampling stages, stratification, and the calculation of sample weights.

The primary objective of the sample design for the Kakamega County MICS was to produce statistically reliable estimates of indicators, at county level. The urban and rural areas in Kakamega County were the sampling strata. A multi-stage, stratified cluster sampling approach was used for the selection of the survey sample.

Sample Size and Sample Allocation

The sample size for the Kakamega County MICS was calculated as 1,500 households. For the calculation of the sample size, the key indicator used was the basic immunization for children aged 12-23 months. The following formula was used to estimate the required sample size for this indicator:

$$n = \frac{[4(r)(1-r)(deff)]}{[(0.12r)^2(pb)(AveSize)(RR)]}$$

where
n is the required sample size, expressed as number of households
4 is a factor to achieve the 95 percent level of confidence
r is the predicted or anticipated value of the indicator, expressed in the form of a proportion
deff is the design effect for the indicator, estimated from a previous survey or using a default value of 1.5
0.12r is the margin of error to be tolerated at the 95 percent level of confidence, defined as 12 per cent of *r* (relative margin of error of *r*)
pb is the proportion of the total population upon which the indicator, *r*, is based
AveSize is the average household size (number of persons per household)
RR is the predicted response rate

For the calculation, *r* (basic immunization for children aged 12-23 months) was assumed to be 73.1 percent as per the 2008-09 KDHS. The value of *deff* (design effect) was taken as 1.5 based on estimates from previous surveys, *pb* (percentage of children aged 12-23 months in Kakamega County) was taken as 3.3 percent, *AveSize* (average household size in Kakamega County) was taken as 4.7. Both *pb* and *AveSize* were based on the results from the 2009 Kenya Population and Housing Census. The margin of error to be tolerated at the 95 percent level of confidence was fixed at 0.1r and the response rate was assumed to be 90 percent based on experience from previous surveys.

The resulting number of households from this exercise was 1,500 households which is the sample size for Kakamega County. The number of households selected per cluster was 30 households, and was based on a number of considerations, including design effect, the budget available, and the time that would be needed per team to complete one cluster. By dividing the total number of households by the number of sample households per cluster, it was determined that 50 clusters be sampled in the county.

Power allocation method was used to allocate the sample to the urban and rural strata of Kakamega County. The table below shows the distribution of sampled households and clusters in the sampling strata.

Table SD.1: Distribution of Sampled households and Clusters in Sampling Strata						
	Number of households			Number of Clusters		
	Total	Urban	Rural	Total	Urban	Rural
Total	**1,500**	**570**	**930**	**50**	**19**	**32**

Sampling Frame and Selection of Clusters

MICS5 utilized the recently created fifth National Sample Survey and Evaluation Programme (NASSEP V) frame which is a household based master sampling frame developed and maintained by KNBS. The frame was implemented using a multi-tiered structure, in which a set of 4 sub-samples (C1, C2, C3, C4) were developed. It is based on the list of enumeration areas (EAs) from the 2009 Kenya Population and Housing Census. The frame is stratified according to County and further into rural and urban. Each of the sub-samples is representative at county level and at national (i.e. Urban/rural) level and contains 1,340 clusters.

The Primary Sampling Units (PSUs) for the survey were clusters drawn from the NASSEP V sampling frame, so the first component of the probabilities and weights are based on that master sample. Within each stratum the PSUs for the MICS were selected independently from one of the subsamples of the master sample using Equal Probability Selection Method (EPSEM). A total of 50 clusters were selected from the master sample in this way.

Cluster Updating Activities

Out of the 50 clusters selected for Kakamega County, it was established that 12 had been listed more than six months prior to the start of the survey. These listing for these clusters was updated prior to selection of households. For this purpose, listing teams visited each cluster, and listed all occupied households. For the remaining 38 sample clusters a more recent listing was available, so it was used for selecting the sample households.

Selection of Households

A uniform sample of 30 households per cluster was selected using equal probability systematic sampling method. Non responding households were not replaced. Systematic sampling is a probability sample selection method in which the sample is obtained by selecting every *kth* element of the population where *k* is an integer greater than 1. The first number of the sample is selected randomly from within the first *k* elements.

Calculation of Sample Weights

The MICS5 sample was not self-weighting and thus a weighting process was required to provide estimates representative of the target population. Two main sampling weights were calculated: household weights and individual (women and children) weights. The base weights incorporated the probabilities of selection of the clusters from the census EAs database into the NASSEP V sample frame, the probabilities of selection of the MICS clusters from NASSEP V frame and the probabilities of selection of the households from each of the NASSEP V frame clusters. Base weights were then adjusted for cluster and household non-response by multiplying them by the inverse of the clusters and households response rates. The individual weight of a woman or child was calculated as the household weight multiplied by the inverse of the individual response rate. Given that the MICS5 sample was a two-stage stratified cluster sample, sampling probabilities were calculated separately for each sampling stage. We will use the following notations:

P_{0hi}:　sampling probability of the ith EA in stratum h in the selection of the master sample from the 2009 census frame

P_{1hi}:　first stage sampling probability of the ith cluster in stratum h

P_{2hi}:　second-stage sampling probability within the ith cluster (households)

P_{hi}:　overall sampling probability of any households of the ith cluster in stratum h

For the NASSEP V master sample, EAs within each stratum were selected using a systematic probability proportional to size (PPS) sampling procedure. Let a_h be the number of EAs selected in stratum h, M_{hi} the measure of size (number of households) according to the 2009 census frame in the ith EA, and $\sum M_{hi}$ the total measure of size (total number of households) in the stratum h. The probability of selecting the ith EA in the NASSEP V master sample is calculated as follows:

$$P_{0hi} = \frac{a_h\, M_{hi}}{\sum M_{hi}}$$

Let b_h be the total number of clusters in stratum h of the NASSEP V master sample for the MICS5 and s_i the total number of segments created during listing of the ith cluster. The probability of selecting the ith cluster in stratum h from the NASSEP V frame is calculated as follows:

$$P_{1hi} = \frac{a_h}{b_h} \times \frac{1}{s_h}$$

Let L_{hi} be the number of households listed in the household listing operation in cluster i in stratum h, let g_{hi} be the number of households selected in the cluster. The second stage selection probability for each household in the cluster is calculated as follows:

$$P_{2hi} = \frac{g_{hi}}{L_{hi}}$$

The overall selection probability of each household in cluster *i* of stratum *h* is the product of the selection probabilities:

$$P_{hi} = D_{hi} \times P_{1hi} \times P_{2hi}$$

The sampling weight for each household in cluster *i* of stratum *h* is the inverse of its selection probability:

$$W_{hi} = \frac{1}{P_{hi}}$$

The individual weight of children or Women (W_{Ii}) in cluster *i* is the household weight multiplied by the inverse of the individual response rate;

$$W_{Ii} = W_{hi} \times \frac{E_{hi}}{I_{hi}},$$

Where, E_{hi} is the total eligible individuals (women or children) found in the ith cluster of stratum *h* and I_{hi} is the total number of Individuals (women or children) with a successful interview.

After the completion of fieldwork, response rates were calculated for each cluster. These were used to adjust the sample weights calculated for each cluster. Response rates in the Kakamega County MICS are shown in Table HH.1 in this report.

The non-response adjustment factors for the individual women and under-5 questionnaires were applied to the adjusted household weights. Numbers of eligible women and under-5 children were obtained from the roster of household members in the Household Questionnaire for households where interviews were completed.

The design weights for the households were calculated by multiplying the inverse of the probabilities of selection by the non-response adjustment factor for each cluster. These weights were then standardized (or normalized), one purpose of which is to make the weighted sum of the interviewed sample units equal to the unweighted total number of observations at the national level. Normalization is achieved by dividing the full sample weights (adjusted for nonresponse) by the average of these weights across all households at the national level. This is performed by multiplying the sample weights by a constant factor equal to the unweighted number of households at the national level divided by the weighted total number of households (using the full sample weights adjusted for nonresponse). A similar standardization procedure was followed in obtaining standardized weights for the individual women and under-5 questionnaires.

Sample weights were appended to all data sets and analyses were performed by weighting households, women or under-5s with these sample weights.

Appendix D. Estimates of Sampling Errors

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

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

- *Standard error* (*se*): Standard error is the square root of the variance of the estimate. For survey indicators that are means, proportions or ratios, the Taylor series linearization method is used for the estimation of standard errors. For more complex statistics, such as fertility and mortality rates, the Jackknife repeated replication method is used for standard error estimation.
- *Coefficient of variation* (*se*/*r*) is the ratio of the standard error to the value (*r*) of the indicator, and is a measure of the relative sampling error.
- *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 based on the same sample size. The *square root of the design effect* (*deft*) is used to show the efficiency of the sample design in relation to the precision. A *deft* value of 1.0 indicates that the sample design of the survey is as efficient as a simple random sample for a particular indicator, while a *deft* value above 1.0 indicates an 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, with a specified level of confidence. For any given statistic calculated from the survey, the value of that statistic will fall within a range of plus or minus two times the standard error (*r* + 2.*se* or *r* – 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 MICS data, programs developed in CSPro Version 5.0, SPSS Version 21 Complex Samples module and CMRJack[116] have 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 unweighted counts of denominators for each indicator. Given the use of normalized weights, by comparing the weighted and unweighted counts it is possible to determine whether a particular domain has been under-sampled or over-sampled compared to the average sampling rate. If the weighted count is smaller than the unweighted count, this means that the particular domain had been over-sampled. As explained later in the footnote of Table SE.1, there is an exception in the case of indicators 4.1 and 4.3, for which the unweighted count represents the number of sample households, and the weighted counts reflect the total population.

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[116] CMRJack is a software developed by FAFO, an independent and multidisciplinary research foundation. CMRJack produces mortality estimates and standard errors for surveys with complete birth histories or summary birth histories. See http://www.fafo.no/ais/child_mortality/index.html

Sampling errors are calculated for indicators of primary interest, at the county level, and for urban and rural areas within Kakamega County. Three of the selected indicators are based on households members, eight are based on women, and two are based on children under 5. 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.4 show the calculated sampling errors for selected domains.

Table SE.1: Indicators selected for sampling error calculations	
List of indicators selected for sampling error calculations, and base populations (denominators) for each indicator, Kakamega County MICS, 2013/14	
MICS5 Indicator	**Base Population**
Household members	
4.1 Use of improved drinking water sources	All household members[a]
4.3 Use of improved sanitation	All household members[a]
7.4 Primary school net attendance ratio (adjusted)	Children of primary school age
Women	
5.3 Contraceptive prevalence rate	Women age 15-49 years who are currently married or in union
5.4 Unmet need	Women age 15-49 years who are currently married or in union
5.5a Antenatal care coverage (1+ times, skilled provider)	Women age 15-49 years with a live birth in the last 2 years
5.5b Antenatal care coverage (4+ times, any provider)	Women age 15-49 years with a live birth in the last 2 years
5.7 Skilled attendant at delivery	Women age 15-49 years with a live birth in the last 2 years
7.1 Literacy rate (young women)	Women age 15-24 years
9.1 Knowledge about HIV prevention (young women)	Women age 15-24 years
9.15 Condom use with non-regular partners	Women age 15-24 years who had a non-marital, non-cohabiting partner in the last 12 months
Under-5s	
3.18 Children under age 5 who slept under an ITN	Children under age 5 years who spent the previous night in the household
3.22 Anti-malarial treatment of children under age 5	Children under age 5 years with fever in the last 2 weeks
[a] To calculate the weighted results of MICS Indicators 4.1 and 4.3, the household weight is multiplied by the number of household members in each household. Therefore the unweighted base population presented in the SE tables reflect the unweighted number of households, whereas the weighted numbers reflect the household population.	

Table SE.2: Sampling errors: Total sample

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*), and confidence intervals for selected indicators, Kakamega County MICS, 2013/14

	MICS Indicator	MDG Indicator	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 Lower bound r - 2se	Confidence limits Upper bound r + 2se
Household members											
Use of improved drinking water sources	4.1	7.8	0.794	0.0234	0.029	4.081	2.020	5,666	1,221	0.747	0.841
Use of improved sanitation	4.3	7.9	0.423	0.0423	0.100	8.956	2.993	5,666	1,221	0.339	0.508
Primary school net attendance ratio (adjusted)	7.4	2.1	0.913	0.0084	0.009	1.258	1.122	1,362	1,425	0.896	0.929
Women											
Contraceptive prevalence rate	5.3	5.3	0.615	0.0200	0.032	1.088	1.043	659	648	0.575	0.654
Unmet need	5.4	5.6	0.222	0.0151	0.068	0.854	0.924	659	648	0.192	0.252
Antenatal care coverage (1+ times, skilled provider)	5.5a	5.5	0.953	0.0083	0.009	0.452	0.673	306	295	0.937	0.970
Antenatal care coverage (4+ times, any provider)	5.5b	5.5	0.386	0.0524	0.136	3.409	1.846	306	295	0.281	0.491
Skilled attendant at delivery	5.7	5.2	0.519	0.0444	0.085	2.317	1.522	306	295	0.430	0.608
Literacy rate (young women)	7.1	2.3	0.863	0.0182	0.021	1.067	1.033	381	382	0.826	0.899
Knowledge about HIV prevention (young women)	9.1	6.3	0.456	0.0243	0.053	0.910	0.954	381	382	0.407	0.504
Condom use with non-regular partners	9.15	6.2	0.652	0.0678	0.104	1.214	1.102	61	61	0.516	0.787
Under-5s											
Children under age 5 who slept under an ITN	3.18	6.7	0.705	0.0273	0.039	2.799	1.673	784	785	0.651	0.759
Anti-malarial treatment of children under age 5	3.22	6.8	0.450	0.0334	0.074	0.988	0.994	221	220	0.383	0.517
na: not applicable											

Table SE.3: Sampling errors: Urban

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*), and confidence intervals for selected indicators, Kakamega County MICS, 2013/14

	MICS Indicator	MDG Indicator	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 Lower bound r - 2se	Confidence limits Upper bound r + 2se
Household members											
Use of improved drinking water sources	4.1	7.8	0.871	0.0443	0.051	7.476	2.734	2,653	430	0.782	0.959
Use of improved sanitation	4.3	7.9	0.413	0.0710	0.172	8.915	2.986	2,653	430	0.271	0.555
Primary school net attendance ratio (adjusted)	7.4	2.1	0.922	0.0129	0.014	0.888	0.942	573	383	0.897	0.948
Women											
Contraceptive prevalence rate	5.3	5.3	0.649	0.0280	0.043	0.786	0.887	346	230	0.593	0.704
Unmet need	5.4	5.6	0.205	0.0174	0.085	0.424	0.651	346	230	0.170	0.240
Antenatal care coverage (1+ times, skilled provider)	5.5a	5.5	0.950	0.0046	0.005	0.048	0.220	168	110	0.941	0.959
Antenatal care coverage (4+ times, any provider)	5.5b	5.5	0.327	0.0794	0.243	3.124	1.768	168	110	0.168	0.486
Skilled attendant at delivery	5.7	5.2	0.563	0.0673	0.120	2.007	1.417	168	110	0.428	0.697
Literacy rate (young women)	7.1	2.3	0.893	0.0319	0.036	1.299	1.140	183	123	0.829	0.957
Knowledge about HIV prevention (young women)	9.1	6.3	0.462	0.0349	0.075	0.597	0.772	183	123	0.392	0.532
Condom use with non-regular partners	9.15	6.2	(0.694)	(0.0881)	(0.127)	(0.951)	(0.975)	35	27	(0.518)	(0.870)
Under-5s											
Children under age 5 who slept under an ITN	3.18	6.7	0.754	0.0447	0.059	2.817	1.678	390	263	0.664	0.843
Anti-malarial treatment of children under age 5	3.22	6.8	0.567	0.0290	0.051	0.244	0.494	106	72	0.509	0.625
na: not applicable											

Table SE.4: Sampling errors: Rural

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*), and confidence intervals for selected indicators, Kakamega County MICS, 2013/14

	MICS Indicator	MDG Indicator	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 Lower bound r - 2se	Confidence limits Upper bound r + 2se
Household members											
Use of improved drinking water sources	4.1	7.8	0.726	0.0201	0.028	1.610	1.269	3,013	791	0.686	0.767
Use of improved sanitation	4.3	7.9	0.432	0.0493	0.114	7.838	2.800	3,013	791	0.333	0.531
Primary school net attendance ratio (adjusted)	7.4	2.1	0.905	0.0112	0.012	1.518	1.232	790	1,042	0.883	0.928
Women											
Contraceptive prevalence rate	5.3	5.3	0.577	0.0269	0.047	1.241	1.114	313	418	0.523	0.631
Unmet need	5.4	5.6	0.240	0.0250	0.104	1.432	1.197	313	418	0.190	0.290
Antenatal care coverage (1+ times, skilled provider)	5.5a	5.5	0.957	0.0176	0.018	1.384	1.176	138	185	0.922	0.992
Antenatal care coverage (4+ times, any provider)	5.5b	5.5	0.459	0.0558	0.122	2.306	1.519	138	185	0.347	0.570
Skilled attendant at delivery	5.7	5.2	0.466	0.0564	0.121	2.350	1.533	138	185	0.353	0.578
Literacy rate (young women)	7.1	2.3	0.835	0.0197	0.024	0.724	0.851	198	259	0.795	0.874
Knowledge about HIV prevention (young women)	9.1	6.3	0.449	0.0340	0.076	1.202	1.096	198	259	0.381	0.517
Condom use with non-regular partners	9.15	6.2	(0.592)	(0.1062)	(0.180)	(1.541)	(1.241)	25	34	(0.379)	(0.804)
Under-5s											
Children under age 5 who slept under an ITN	3.18	6.7	0.657	0.0297	0.045	2.041	1.428	393	522	0.597	0.716
Anti-malarial treatment of children under age 5	3.22	6.8	0.342	0.0499	0.146	1.626	1.275	115	148	0.243	0.442
na: not applicable											

Appendix E. List of Personnel Involved in the Survey

Survey Management Team
PSRI
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Lawrence Ikamari, Director

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Zachary Mwangi, Director General
Macdonald Obudho, Director

UNICEF
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Appendix F. Data Quality Tables

Table DQ.1: Age distribution of household population

Single-year age distribution of household population by sex, Kakamega County MICS, 2013/14

	Males		Females			Males		Females	
	Number	Percent	Number	Percent		Number	Percent	Number	Percent
Age					**Age**				
0	75	2.7	86	2.9	45	31	1.1	20	0.7
1	81	3.0	89	3.1	46	16	0.6	20	0.7
2	71	2.6	83	2.9	47	18	0.6	12	0.4
3	108	3.9	104	3.6	48	17	0.6	13	0.4
4	72	2.6	73	2.5	49	12	0.4	11	0.4
5	110	4.0	88	3.0	50	14	0.5	25	0.9
6	97	3.5	108	3.7	51	20	0.7	25	0.9
7	96	3.5	84	2.9	52	14	0.5	13	0.4
8	97	3.5	87	3.0	53	18	0.7	20	0.7
9	101	3.7	101	3.5	54	12	0.4	31	1.1
10	77	2.8	80	2.7	55	19	0.7	40	1.4
11	82	3.0	64	2.2	56	16	0.6	14	0.5
12	79	2.9	90	3.1	57	11	0.4	17	0.6
13	83	3.0	92	3.1	58	14	0.5	12	0.4
14	72	2.6	82	2.8	59	18	0.6	9	0.3
15	88	3.2	64	2.2	60	17	0.6	11	0.4
16	66	2.4	82	2.8	61	6	0.2	14	0.5
17	63	2.3	72	2.5	62	10	0.4	7	0.2
18	78	2.8	48	1.7	63	6	0.2	8	0.3
19	52	1.9	59	2.0	64	8	0.3	7	0.3
20	40	1.5	48	1.6	65	8	0.3	21	0.7
21	53	1.9	60	2.1	66	6	0.2	10	0.3
22	25	0.9	37	1.3	67	3	0.1	4	0.1
23	42	1.5	38	1.3	68	5	0.2	8	0.3
24	35	1.3	34	1.2	69	8	0.3	5	0.2
25	36	1.3	57	1.9	70	11	0.4	16	0.6
26	31	1.1	39	1.3	71	6	0.2	5	0.2
27	31	1.1	40	1.4	72	7	0.2	3	0.1
28	44	1.6	36	1.3	73	4	0.1	5	0.2
29	27	1.0	45	1.5	74	8	0.3	1	0.0
30	39	1.4	29	1.0	75	2	0.1	6	0.2
31	30	1.1	25	0.9	76	3	0.1	3	0.1
32	21	0.8	21	0.7	77	4	0.1	2	0.1
33	23	0.8	34	1.2	78	3	0.1	5	0.2
34	19	0.7	27	0.9	79	0	0.0	-	0.0
35	33	1.2	41	1.4	80	1	0.0	3	0.1
36	27	1.0	23	0.8	81	1	0.0	5	0.2
37	13	0.5	40	1.4	82	4	0.1	0	0.0
38	28	1.0	28	1.0	83	2	0.1	3	0.1
39	20	0.7	32	1.1	84	1	0.0	1	0.0
40	33	1.2	21	0.7	85+	6	0.2	7	0.2
41	12	0.5	23	0.8					
42	10	0.4	12	0.4	DK/Missing	3	0.1	2	0.1
43	18	0.7	31	1.1					

| 44 | 21 | 0.8 | 15 | 0.5 | Total | | 2,752 | 100.0 | 2,914 | 100.0 |

Figure DQ.1: Household population by single ages, Kakamega County MICS, 2013/14
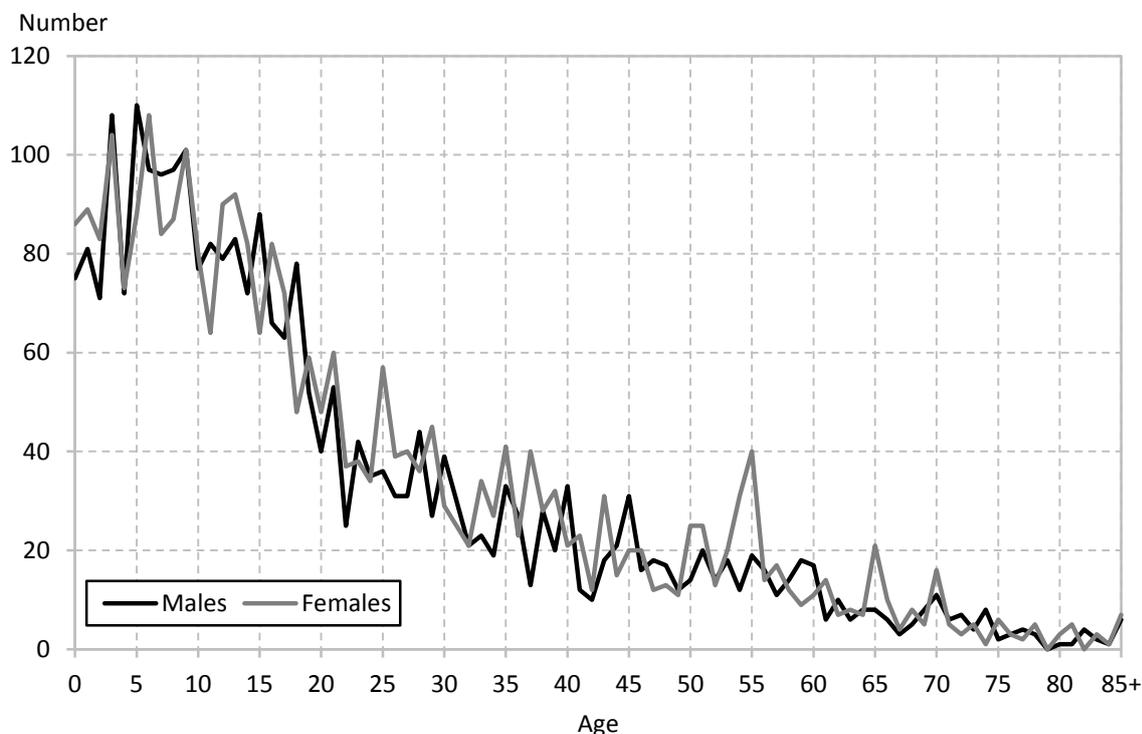
Note: The figure excludes 5 household members with unknown age and/or sex

Table DQ.2: Age distribution of eligible and interviewed women				
Household population of women age 10-54 years, interviewed women age 15-49 years, and percentage of eligible women who were interviewed, by five-year age groups, Kakamega County MICS, 2013/14				
	Household population of women age 10-54 years	**Interviewed women age 15-49 years**		Percentage of eligible women interviewed (Completion rate)
	Number	Number	Percent	
Age				
10-14	407	na	na	na
15-19	325	211	21.1	65.1
20-24	218	170	17.0	78.2
25-29	217	191	19.1	88.3
30-34	137	119	11.9	86.7
35-39	164	152	15.2	92.5
40-44	101	87	8.7	86.2
45-49	76	69	6.9	90.6
50-54	114	na	na	na
Total (15-49)	1,237	999	100.0	80.8

Ratio of 50-54 to 45-49	1.49	na	na	na

na: not applicable

Table DQ.4: Age distribution of children in household and under-5 questionnaires

Household population of children age 0-7 years, children age 0-4 years whose mothers/caretakers were interviewed, and percentage of under-5 children whose mothers/caretakers were interviewed, by single years of age, Kakamega County MICS, 2013/14

	Household population of children 0-7 years	Under-5s with completed interviews		Percentage of eligible under-5s with completed interviews (Completion rate)
	Number	Number	Percent	
Age				
0	160	157	19.2	98.2
1	170	167	20.3	97.8
2	154	151	18.4	98.0
3	212	205	25.0	96.7
4	146	139	17.0	95.5
5	197	na	na	na
6	205	na	na	na
7	180	na	na	na
Total (0-4)	842	819	100.0	97.2
Ratio of 5 to 4	1.4	na	na	na

na: not applicable

Table DQ.5: Birth date reporting: Household population

Percent distribution of household population by completeness of date of birth information, Kakamega County MICS, 2013/14

	Completeness of reporting of month and year of birth					Number of household members
	Year and month of birth	Year of birth only	Month of birth only	Both missing	Total	
Total	**81.6**	**17.7**	**0.0**	**0.7**	**100.0**	**5,666**
Age						
0-4	96.8	2.6	0.0	0.6	100.0	842
5-14	85.1	14.3	0.0	0.6	100.0	1,770
15-24	85.2	14.6	0.0	0.2	100.0	1,085
25-49	77.6	22.2	0.0	0.1	100.0	1,304
50-64	62.5	35.8	0.0	1.7	100.0	457
65-84	41.6	55.8	0.0	2.6	100.0	191
85+	14.2	69.9	0.0	15.8	100.0	13
DK/Missing	na	na	0.0	100.0	100.0	4
Area						
Urban	83.3	16.1	0.0	0.6	100.0	2,653
Rural	80.1	19.1	0.0	0.8	100.0	3,013

na: not applicable

Table DQ.6: Birth date and age reporting: Women

Percent distribution of women age 15-49 years by completeness of date of birth/age information, Kakamega County MICS, 2013/14

| | Completeness of reporting of date of birth and age | | | | | | Number of women age 15-49 years |
	Year and month of birth	Year of birth and age	Year of birth only	Age only	Other/DK/Missing	Total	
Total	**93.1**	**6.9**	**0.0**	**0.0**	**0.0**	**100.0**	**998**
Area							
Urban	93.4	6.6	0.0	0.0	0.0	100.0	502
Rural	92.8	7.2	0.0	0.0	0.0	100.0	496

Table DQ.8: Birth date and age reporting: Under-5s

Percent distribution children under 5 by completeness of date of birth/age information, Kakamega County MICS, 2013/14

| | Completeness of reporting of date of birth and age | | | | | | Number of under-5 children |
	Year and month of birth	Year of birth and age	Year of birth only	Age only	Other/DK/Missing	Total	
Total	**98.4**	**1.6**	**0.0**	**0.0**	**0.0**	**100.0**	**806**
Area							
Urban	98.1	1.9	0.0	0.0	0.0	100.0	405
Rural	98.7	1.3	0.0	0.0	0.0	100.0	401

Table DQ.9: Birth date reporting: Children, adolescents and young people

Percent distribution of children, adolescents and young people age 5-24 years by completeness of date of birth information, Kakamega County MICS, 2013/14

| | Completeness of reporting of month and year of birth | | | | | Number of children, adolescents and young people age 5-24 years |
	Year and month of birth	Year of birth only	Month of birth only	Both missing	Total	
Total	**85.1**	**14.4**	**0.0**	**0.5**	**100.0**	**2,855**
Area						
Urban	85.5	14.2	0.0	0.3	100.0	1,269
Rural	84.8	14.6	0.0	0.6	100.0	1,586

Table DQ.10: Birth date reporting: First and last births

Percent distribution of first and last births to women age 15-49 years by completeness of date of birth, Kakamega County MICS, 2013/14

	Completeness of reporting of date of birth										
	Date of first birth						Date of last birth				
	Year and month of birth	Year of birth only	Completed years since first birth only	Other/DK/Missing	Total	Number of first births	Year and month of birth	Year of birth only	Other/DK/Missing	Total	Number of last births
Total	**97.0**	**2.8**	**0.0**	**0.2**	**100.0**	**749**	**98.1**	**1.7**	**0.2**	**100.0**	**620**
Area											
Urban	98.6	1.4	0.0	0.0	100.0	388	98.3	1.3	0.4	100.0	313
Rural	95.2	4.4	0.0	0.4	100.0	360	97.8	2.2	0.0	100.0	307

Table DQ.11: Completeness of reporting

Percentage of observations that are missing information for selected questions and indicators, Kakamega County MICS, 2013/14

Questionnaire and type of missing information	Reference group	Percent with missing/incomplete information[a]	Number of cases
Household			
Salt test result	All households interviewed that have salt	0.3	1,221
Starting time of interview	All households interviewed	0.1	1,221
Ending time of interview	All households interviewed	0.0	1,221
Women			
Date of first marriage/union	All ever married women age 15-49	7.8	728
Only month		1.4	728
Both month and year		0.0	728
Age at first marriage/union	All ever married women age 15-49 with year of first marriage not known	0.5	228
Age at first intercourse	All women age 15-24 who have ever had sex	0.5	228
Time since last intercourse	All women age 15-24 who have ever had sex	0.0	998
Starting time of interview	All women interviewed	0.0	998
Ending time of interview	All women interviewed		
Under-5			
Starting time of interview	All under-5 children	0.2	806
Ending time of interview	All under-5 children	0.1	806
[a] Includes "Don't know" responses			

Table DQ.12: Completeness of information for anthropometric indicators: Underweight

Percent distribution of children under 5 by completeness of information on date of birth and weight, Kakamega County MICS, 2013/14

	Valid weight and date of birth	Reason for exclusion from analysis				Total	Percent of children excluded from analysis	Number of children under 5
		Weight not measured	Incomplete date of birth	Weight not measured and incomplete date of birth	Flagged cases (outliers)			
Total	**92.6**	**5.8**	**1.5**	**0.1**	**0.0**	**100.0**	**7.4**	**806**
Age								
<6 months	97.0	3.0	0.0	0.0	0.0	100.0	3.0	70
6-11 months	95.6	2.9	1.5	0.0	0.0	100.0	4.4	81
12-23 months	96.8	3.2	0.0	0.0	0.0	100.0	3.2	161
24-35 months	92.5	5.0	2.6	0.0	0.0	100.0	7.5	150
36-47 months	90.1	7.3	2.3	0.3	0.0	100.0	9.9	205
48-59 months	87.8	10.4	1.8	0.0	0.0	100.0	12.2	140

Table DQ.13: Completeness of information for anthropometric indicators: Stunting

Percent distribution of children under 5 by completeness of information on date of birth and length or height, Kakamega County MICS, 2013/14

	Valid length/height and date of birth	Reason for exclusion from analysis				Total	Percent of children excluded from analysis	Number of children under 5
		Length/Height not measured	Incomplete date of birth	Length/Height not measured, incomplete date of birth	Flagged cases (outliers)			
Total	**90.0**	**6.7**	**1.5**	**0.1**	**1.7**	**100.0**	**10.0**	**806**
Age								
<6 months	86.3	6.6	0.0	0.0	7.1	100.0	13.7	70
6-11 months	91.2	2.9	1.5	0.0	4.3	100.0	8.8	81
12-23 months	92.8	5.3	0.0	0.0	1.9	100.0	7.2	161
24-35 months	91.1	5.9	2.6	0.0	0.4	100.0	8.9	150
36-47 months	89.4	7.3	2.3	0.3	0.6	100.0	10.6	205
48-59 months	87.5	10.4	1.8	0.0	0.3	100.0	12.5	140

Table DQ.14: Completeness of information for anthropometric indicators: Wasting

Percent distribution of children under 5 by completeness of information on weight and length or height, Kakamega County MICS, 2013/14

| | Valid weight and length/height | Reason for exclusion from analysis | | | | Total | Percent of children excluded from analysis | Number of children under 5 |
		Weight not measured	Length/Height not measured	Weight and length/height not measured	Flagged cases (outliers)			
Total	**90.6**	**0.1**	**1.0**	**5.8**	**2.5**	**100.0**	**9.4**	**806**
Age								
<6 months	79.2	0.0	3.6	3.0	14.2	100.0	20.8	70
6-11 months	92.0	0.0	0.0	2.9	5.0	100.0	8.0	81
12-23 months	93.4	0.0	2.1	3.2	1.3	100.0	6.6	161
24-35 months	92.1	0.6	1.5	4.4	1.4	100.0	7.9	150
36-47 months	91.2	0.0	0.0	7.6	1.1	100.0	8.8	205
48-59 months	89.6	0.0	0.0	10.4	0.0	100.0	10.4	140

Table DQ.15: Heaping in anthropometric measurements

Distribution of weight and height/length measurements by digits reported for the decimal points, Kakamega County MICS, 2013/14

| | Weight | | Height or length | |
	Number	Percent	Number	Percent
Total	**759**	**100.0**	**760**	**100.0**
Digits				
0	76	9.7	98	12.9
1	69	8.9	71	9.4
2	89	11.4	88	11.6
3	68	8.7	68	8.9
4	61	7.8	77	10.1
5	98	12.6	102	13.4
6	75	9.7	92	12.0
7	80	10.2	75	9.9
8	81	10.4	50	6.6
9	82	10.6	39	5.2
0 or 5	170	22.3	200	26.3

Figure DQ.2: Weight and height/length measurements by digits reported for the decimal points, Kakamega County MICS, 2013/14
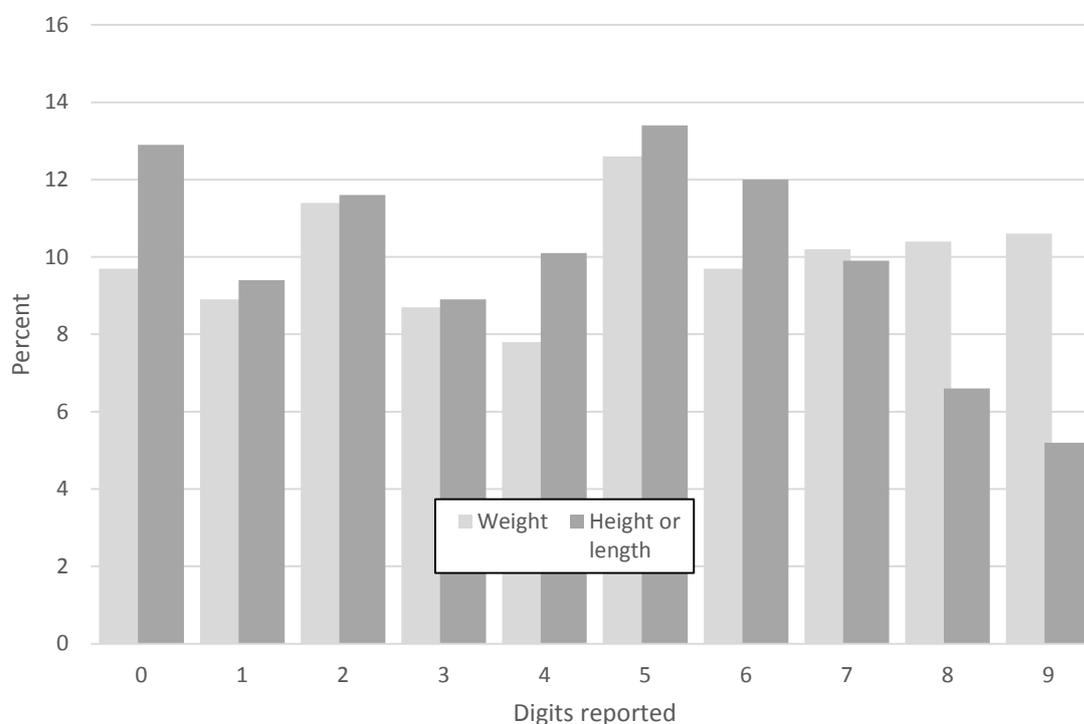
Table DQ.16: Observation of birth certificates							
Percent distribution of children under 5 by presence of birth certificates, and percentage of birth certificates seen, Kakamega County MICS, 2013/14							
	Child has birth certificate					Percentage of birth certificates seen by the interviewer (1)/(1+2)*100	Number of children under age 5
	Seen by the interviewer (1)	Not seen by the interviewer (2)	Child does not have birth certificate	DK/Missing	Total		
Total	**12.0**	**14.5**	**72.0**	**1.5**	**100.0**	**45.2**	**806**
Area							
Urban	13.7	14.6	70.1	1.6	100.0	48.3	405
Rural	10.3	14.4	73.9	1.4	100.0	41.7	401
Child's age							
0-5 months	0.9	3.1	96.1	0.0	100.0	22.3	70
6-11 months	6.5	16.0	77.5	0.0	100.0	28.8	81
12-23 months	12.1	14.8	73.1	0.0	100.0	45.0	161
24-35 months	14.4	16.2	67.5	1.9	100.0	47.1	150
36-47 months	14.4	16.1	65.6	3.9	100.0	47.1	205
48-59 months	14.5	14.8	69.6	1.0	100.0	49.4	140

Table DQ.17: Observation of vaccination cards

Percent distribution of children age 0-35 months by presence of a vaccination card, and the percentage of vaccination cards seen by the interviewers, Kakamega County MICS, 2013/14

	Child does not have vaccination card		Child has vaccination card				Percentage of vaccination cards seen by the interviewer (1)/(1+2)*100	Number of children age 0-35 months
	Had vaccination card previously	Never had vaccination card	Seen by the interviewer (1)	Not seen by the interviewer (2)	DK/Missing	Total		
Total	**3.2**	**3.2**	**67.3**	**25.7**	**0.6**	**100.0**	**72.4**	**462**
Area								
Urban	3.7	2.2	67.6	25.3	1.3	100.0	72.8	224
Rural	2.8	4.2	67.0	26.0	0.0	100.0	72.1	238
Child's age								
0-5 months	0.8	7.8	76.5	12.2	2.7	100.0	86.3	70
6-11 months	1.4	3.2	77.1	17.1	1.2	100.0	81.9	81
12-23 months	3.8	1.4	71.4	23.4	0.0	100.0	75.3	161
24-35 months	4.7	3.0	53.4	38.9	0.0	100.0	57.8	150

Table DQ.18: Observation of women's health cards

Percent distribution of women with a live birth in the last 2 years by presence of a health card, and the percentage of health cards seen by the interviewers, Kakamega County MICS, 2013/14

		Woman has health card				Percent of health cards seen by the interviewer (1)/(1+2)*100	Number of women with a live birth in the last two years
	Woman does not have health card	Seen by the interviewer (1)	Not seen by the interviewer (2)	DK/Missing	Total		
Total	**8.6**	**58.8**	**30.7**	**1.9**	**100.0**	**65.7**	**306**
Area							
Urban	8.5	60.1	30.2	1.2	100.0	66.6	168
Rural	8.8	57.2	31.3	2.6	100.0	64.7	138
Age							
15-24	7.8	63.8	28.5	0.0	100.0	69.1	122
25-34	7.9	59.4	28.7	4.1	100.0	67.5	140
35-49	13.5	43.5	43.0	0.0	100.0	50.3	44

Table DQ.19: Observation of bednets and places for handwashing

Percentage of bednets in all households observed by the interviewers, and percent distribution of places for handwashing observed by the interviewers in all interviewed households, Kakamega County MICS, 2013/14

	Percentage of bednets observed by interviewer	Total number of bednets	Place for handwashing					Number of households interviewed
			Observed	Not observed			Total	
				Not in the dwelling, plot or yard	No permission to see	Other reason		
Total	**84.1**	**2,547**	**9.8**	**89.4**	**0.1**	**0.4**	**100.0**	**1,221**
Area								
Urban	84.9	1,240	13.8	85.6	0.0	0.4	100.0	614
Rural	83.3	1,307	5.9	93.3	0.3	0.4	100.0	607
Wealth index quintile								
Poorest	89.8	408	3.1	96.3	0.3	0.3	100.0	246
Second	86.0	449	3.4	95.8	0.4	0.2	100.0	218
Middle	80.6	493	5.2	94.4	0.0	0.0	100.0	232
Fourth	85.2	547	9.0	90.7	0.0	0.0	100.0	234
Richest	80.9	650	24.7	74.0	0.0	1.3	100.0	292

Table DQ.20: Respondent to the under-5 questionnaire

Distribution of children under five by respondent to the under-5 questionnaire, Kakamega County MICS, 2013/14

	Mother in the household	Mother not in the household and primary caretaker identified:			Total	Number of children under 5
		Father	Other adult female	Other adult male		
Total	**85.1**	**0.4**	**13.9**	**0.5**	**100.0**	**842**
Age						
0	97.9	0.2	1.9	0.0	100.0	160
1	89.2	0.0	10.8	0.0	100.0	170
2	77.2	1.6	20.0	1.2	100.0	154
3	82.4	0.0	16.9	0.7	100.0	212
4	78.5	0.6	20.2	0.7	100.0	146

Table DQ.21: Selection of children age 1-17 years for the child labour and child discipline modules

Percent distribution of households by the number of children age 1-17 years, and the percentage of households with at least two children age 1-17 years where correct selection of one child for the child labour and child discipline modules was performed, Kakamega County MICS, 2013/14

	Number of children age 1-17 years			Total	Number of households	Percentage of households where correct selection was performed	Number of households with 2 or more children age 1-17 years
	None	One	Two or more				
Total	**23.8**	**15.2**	**61.0**	**100.0**	**1,221**	**97.6**	**745**
Area							
Urban	28.5	16.5	55.0	100.0	614	98.6	338
Rural	19.0	13.9	67.1	100.0	607	96.9	407
Wealth index quintile							
Poorest	20.7	14.5	64.9	100.0	246	98.2	160
Second	13.7	15.2	71.2	100.0	218	98.3	155
Middle	21.5	14.9	63.6	100.0	232	97.3	148
Fourth	24.1	8.8	67.1	100.0	234	97.5	157
Richest	35.6	21.2	43.2	100.0	292	96.7	126

Table DQ.22: School attendance by single age

Distribution of household population age 5-24 years by educational level and grade attended in the current (or most recent) school year, Kakamega County MICS, 2013/14

			Currently attending																
	Not attending school	Preschool	Primary school Grade								Missing/DK	Secondary school Grade				Higher than secondary	Total	Number of household members
			1	2	3	4	5	6	7	8		1	2	3	4			
Age at beginning of school year																		
5	10.6	59.6	20.9	7.6	0.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	208
6	5.0	30.4	40.4	20.2	1.8	1.4	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	177
7	3.7	12.0	23.8	36.0	16.6	4.8	2.8	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	100.0	189
8	0.4	4.2	9.9	29.4	31.8	19.1	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	194
9	0.6	1.7	2.6	12.0	25.2	34.9	16.7	5.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	154
10	1.7	0.0	1.7	4.8	16.7	29.9	26.3	14.8	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	160
11	0.0	0.9	0.6	2.5	5.2	21.4	25.8	29.4	12.5	1.6	0.0	0.0	0.0	0.0	0.0	0.0	100.0	152
12	2.0	0.2	1.7	1.7	4.6	11.9	22.0	27.2	21.0	5.8	0.0	0.6	1.1	0.0	0.0	0.0	100.0	175
13	6.4	0.0	0.4	0.3	0.9	8.8	14.9	16.4	26.3	17.0	0.0	5.2	1.5	1.6	0.0	0.0	100.0	161
14	8.0	0.0	0.6	0.4	0.4	3.0	11.5	14.8	24.9	18.4	0.0	8.1	6.5	2.8	0.6	0.0	100.0	159
15	23.4	0.0	0.0	0.0	0.5	0.3	4.2	7.9	21.1	17.2	0.0	8.6	8.0	8.0	0.7	0.0	100.0	140
16	21.9	0.0	0.0	0.0	0.0	0.0	0.5	9.2	16.0	13.0	0.0	7.9	12.7	5.6	13.2	0.0	100.0	142
17	32.0	0.0	0.0	0.0	0.0	0.0	0.5	4.8	3.7	8.2	0.0	7.2	9.9	17.7	14.0	2.1	100.0	123
18	48.9	0.0	0.0	0.0	0.0	0.0	0.0	0.4	6.1	7.0	0.0	1.8	7.7	13.3	11.6	3.2	100.0	114
19	50.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	3.6	0.0	5.6	6.9	11.8	13.2	7.0	100.0	92
20	66.4	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.8	1.6	0.0	0.8	2.6	5.4	6.5	14.1	100.0	107
21	69.9	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.6	0.0	3.8	2.3	6.2	4.2	11.5	100.0	68
22	78.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	1.1	1.2	7.9	1.3	9.5	100.0	76
23	82.3	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	0.9	16.8	100.0	75
24[a]	68.3	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	31.7	100.0	4

[a] Those age 25 at the time of interview who were age 24 at beginning of school year are excluded as current attendance was only collected for those age 5-24 at the time of interview

Table DQ.23: Sex ratio at birth among children ever born and living

Sex ratio (number of males per 100 females) among children ever born (at birth), children living, and deceased children, by age of women, Kakamega County MICS, 2013/14

	Children Ever Born			Children Living			Children Deceased			
	Sons	Daughters	Sex ratio at birth	Sons	Daughters	Sex ratio	Sons	Daughters	Sex ratio	Number of women
Total	**1,432**	**1,481**	**0.97**	**1,294**	**1,346**	**0.96**	**138**	**135**	**1.03**	**998**
Age										
15-19	21	18	1.13	20	17	1.17	1	1	0.60	210
20-24	102	131	0.78	96	119	0.81	6	12	0.49	170
25-29	264	296	0.89	242	279	0.87	22	16	1.33	192
30-34	228	239	0.95	209	222	0.94	19	17	1.12	119
35-39	394	353	1.12	354	329	1.08	40	24	1.65	152
40-44	233	254	0.92	206	216	0.96	26	38	0.69	87
45-49	191	189	1.01	168	165	1.02	23	25	0.94	69

Table DQ.24: Births by periods preceding the survey

Number of births, sex ratio at birth, and period ratio by periods preceding the survey, according to living, deceased, and total children (imputed), as reported in the birth histories, Kakamega County MICS, 2013/14

	Number of births			Percent with complete birth date[a]			Sex ratio at birth[b]			Period ratio[c]		
	Living	Deceased	Total	Living	Deceased	Total	Living	Deceased	Total	Living	Deceased	Total
Total	**2,641**	**273**	**2913**	**97.7**	**83.8**	**96.4**	**96.2**	**102.6**	**96.7**	**na**	**na**	**na**
Years												
0	148	8	156	100.0	100.0	100.0	87.3	115.8	88.6	na	na	na
1	143	8	151	98.6	100.0	98.7	93.8	309.4	99.3	108.9	101.2	108.5
2	115	8	123	99.3	100.0	99.3	83.1	154.6	86.3	71.2	91.1	72.2
3	180	9	189	98.0	74.1	96.9	101.0	140.6	102.6	153.5	98.9	149.7
4	120	10	130	99.3	94.0	98.9	95.6	24.0	87.2	71.8	99.4	73.3
5	153	12	165	98.4	94.4	98.1	121.9	105.3	120.6	112.5	99.7	111.5
6	153	13	166	96.4	65.7	94.0	73.4	178.2	78.7	104.3	111.9	104.9
7	140	12	152	96.3	100.0	96.6	112.1	81.6	109.4	101.5	92.4	100.7
8	123	13	135	97.6	86.3	96.6	119.2	319.2	129.4	85.2	105.2	86.7
9	148	12	160	98.0	100.0	98.1	95.7	133.8	98.2	22.1	13.3	21.0
10+	1,218	169	1,387	97.2	79.6	95.0	94.9	89.8	94.3	na	na	na
Five-year periods												
0-4	706	42	748	99.0	93.2	98.6	92.6	107.7	93.4	na	na	na
5-9	716	61	777	97.3	88.8	96.7	102.0	144.4	104.8	na	na	na
10-14	540	59	599	98.1	85.0	96.8	97.0	84.9	95.7	na	na	na
15-19	381	53	434	97.4	80.1	95.3	89.8	67.9	86.8	na	na	na
20+	297	57	354	95.3	73.7	91.8	97.9	123.0	101.6	na	na	na

na: not applicable

[a] Both month and year of birth given. The inverse of the percent reported is the percent with incomplete and therefore imputed date of birth

[b] (B_m/B_f) x 100, where B_m and B_f are the numbers of male and female births, respectively

[c] $(2 \times B_t/(B_{t-1} + B_{t+1}))$ x 100, where B_t is the number of births in year t preceding the survey

Table DQ.25: Reporting of age at death in days

Distribution of reported deaths under one month of age by age at death in days and the percentage of neonatal deaths reported to occur at ages 0–6 days, by 5-year periods preceding the survey (imputed), Kakamega County MICS, 2013/14

	Number of years preceding the survey				Total (0–19)
	0–4	5–9	10–14	15–19	
Age at death (days)					
0	1	4	2	2	8
1	15	7	5	2	29
2	1	0	2	1	4
3	1	0	0	1	2
4	1	2	0	1	3
7	2	2	3	1	7
10	0	0	1	0	1
14	0	1	1	0	2
Total 0–30 days	20	15	12	8	55
Percent early neonatal[a]	92.3	81.9	66.9	87.1	83.2

[a] Deaths during the first 7 days (0-6), divided by deaths during the first month (0-30 days)

Table DQ.26: Reporting of age at death in months

Distribution of reported deaths under two years of age by age at death in months and the percentage of infant deaths reported to occur at age under one month, for the 5-year periods of birth preceding the survey (imputed), Kakamega County MICS, 2013/14

	Number of years preceding the survey				Total (0-19)
	0–4	5–9	10–14	15–19	
Age at death (months)					
0[a]	20	15	12	8	55
1	1	3	1	3	8
2	1	1	0	2	4
3	2	5	1	6	13
4	1	4	2	0	8
5	1	1	5	2	9
6	3	1	1	1	7
7	0	0	3	1	5
8	2	5	5	2	13
9	3	1	1	2	7
10	0	0	1	0	1
11	0	1	1	1	3
15	0	0	0	1	1
16	0	1	0	0	1
17	0	0	0	1	1
18	2	1	0	1	3
20	0	1	0	1	2
21	0	1	0	0	1
Reported as 1 year	3	4	7	6	20
Total 0–11 months	34	37	34	27	132
Percent neonatal[b]	59.5	40.7	35.2	28.6	41.7

[a] Includes deaths under one month reported in days

[b] Deaths under one month, divided by deaths under one year

Appendix G. Kakamega County MICS5 Indicators: Numerators and Denominators

MICS INDICATOR		Module[117]	Numerator	Denominator	MDG Indicator Reference[118]
MORTALITY[119]					
1.1	Neonatal mortality rate	BH	Probability of dying within the first month of life		
1.2	Infant mortality rate	CM - BH	Probability of dying between birth and the first birthday		MDG 4.2
1.3	Post-neonatal mortality rate	BH	Difference between infant and neonatal mortality rates		
1.4	Child mortality rate	BH	Probability of dying between the first and the fifth birthdays		
1.5	Under-five mortality rate	CM - BH	Probability of dying between birth and the fifth birthday		MDG 4.1

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) of 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) of 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) of the median weight for height of the WHO standard	Total number of children under age 5	
2.4	Overweight prevalence	AN	Number of children under age 5 who are above two standard deviations of the median weight for height of the WHO standard	Total number of children under age 5	

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[117]Some indicators are constructed by using questions in several modules in the MICS questionnaires. In such cases, only the module(s) which contains most of the necessary information is indicated.
[118]Millennium Development Goals (MDG) indicators, effective 15 January 2008 - http://mdgs.un.org/unsd/mdg/Host.aspx?Content=Indicators/OfficialList.htm, accessed 10 June 2013.
[119]When the Birth History module is used, mortality indicators are calculated for the last 5-year period. When the indicators are estimated indirectly (using the Fertility module only), the rates refer to dates as estimated by the indirect technique.

2.5	Children ever breastfed	MN	Number of women with a live birth in the last 2 years who breastfed their last live-born child at any time	Total number of women with a live birth in the last 2 years	
2.6	Early initiation of breastfeeding	MN	Number of women with a live birth in the last 2 years who put their last newborn to the breast within one hour of birth	Total number of women with a live birth in the last 2 years	
2.7	Exclusive breastfeeding under 6 months	BD	Number of infants under 6 months of age who are exclusively breastfed[120]	Total number of infants under 6 months of age	
2.8	Predominant breastfeeding under 6 months	BD	Number of infants under 6 months of age who received breast milk as the predominant source of nourishment[121] during the previous day	Total number of infants under 6 months of age	
2.9	Continued breastfeeding at 1 year	BD	Number of children age 12-15 months who received breast milk during the previous day	Total number of children age 12-15 months	
2.10	Continued breastfeeding at 2 years	BD	Number of children age 20-23 months who received breast milk during the previous day	Total number of children age 20-23 months	
2.11	Duration of breastfeeding	BD	The age in months when 50 percent of children age 0-35 months did not receive breast milk during the previous day		
2.12	Age-appropriate breastfeeding	BD	Number of children age 0-23 months appropriately fed[122] during the previous day	Total number of children age 0-23 months	
2.13	Introduction of solid, semi-solid or soft foods	BD	Number of infants age 6-8 months who received solid, semi-solid or soft foods during the previous day	Total number of infants age 6-8 months	
2.14	Milk feeding frequency for non-breastfed children	BD	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	
2.15	Minimum meal frequency	BD	Number of children age 6-23 months who received solid, semi-solid and soft foods (plus milk feeds for non-breastfed children) the minimum number of times[123] or more during the previous day	Total number of children age 6-23 months	

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

[121]Infants who receive breast milk and certain fluids (water and water-based drinks, fruit juice, ritual fluids, oral rehydration solution, drops, vitamins, minerals, and medicines), but do not receive anything else (in particular, non-human milk and food-based fluids)

[122]Infants age 0-5 months who are exclusively breastfed, and children age 6-23 months who are breastfed and ate solid, semi-solid or soft foods

[123]Breastfeeding children: Solid, semi-solid, or soft foods, two times for infants age 6-8 months, and three 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

2.16	Minimum dietary diversity	BD	Number of children age 6–23 months who received foods from 4 or more food groups[124] during the previous day	Total number of children age 6–23 months	
2.17a 2.17b	Minimum acceptable diet	BD	(a) Number of breastfed children age 6–23 months who had at least the minimum dietary diversity and the minimum meal frequency during the previous day (b) Number of non-breastfed children age 6–23 months who received at least 2 milk feedings and had at least the minimum dietary diversity not including milk feeds and the minimum meal frequency during the previous day	(a) Number of breastfed children age 6–23 months (b) Number of non-breastfed children age 6–23 months	
2.18	Bottle feeding	BD	Number of children age 0-23 months who were fed with a bottle during the previous day	Total number of children age 0-23 months	
2.19	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 where there was no salt	
2.20	Low-birthweight infants	MN	Number of most recent live births in the last 2 years weighing below 2,500 grams at birth	Total number of most recent live births in the last 2 years	
2.21	Infants weighed at birth	MN	Number of most recent live births in the last 2 years who were weighed at birth	Total number of most recent live births in the last 2 years	

CHILD HEALTH					
3.1	Tuberculosis immunization coverage	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 the third dose of OPV vaccine (OPV3) before their first birthday	Total number of children age 12-23 months	
3.3	Diphtheria, pertussis and tetanus (DPT) immunization coverage	IM	Number of children age 12-23 months who received the third dose of DPT vaccine (DPT3) before their first birthday	Total number of children age 12-23 months	
3.4	Measles immunization coverage[125]	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
3.5	Hepatitis B immunization coverage	IM	Number of children age 12-23 months who received the third dose of Hepatitis B vaccine (HepB3) by their first birthday	Total number of children age 12-23 months	
3.6	Haemophilus influenzae type b (Hib) immunization coverage	IM	Number of children age 12-23 months who received the third dose of Hib vaccine (Hib3) by their first birthday	Total number of children age 12-23 months	

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[124]The indicator is based on consumption of any amount of food from at least 4 out of the 7 following food groups: 1) grains, roots and tubers, 2) legumes and nuts, 3) dairy products (milk, yogurt, cheese), 4) flesh foods (meat, fish, poultry and liver/organ meats), 5) eggs, 6) vitamin-A rich fruits and vegetables, and 7) other fruits and vegetables

3.7	Yellow fever immunization coverage	IM	Number of children age 12-23 months who received yellow fever vaccine by their first birthday	Total number of children age 12-23 months	
3.8	Full immunization coverage	IM	Number of children age 12-23 months who received all vaccinations recommended in the national immunization schedule before their first birthday	Total number of children age 12-23 months	
3.9	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[126] prior to the most recent birth	Total number of women age 15-49 years with a live birth in the 2 years preceding the survey	
3.10	Care-seeking for diarrhoea	CA	Number of children under age 5 with diarrhoea in the last 2 weeks for whom advice or treatment was sought from a health facility or provider	Total number of children under age 5 with diarrhoea in the last 2 weeks	
3.11	Diarrhoea treatment with oral rehydration salts (ORS) and zinc	CA	Number of children under age 5 with diarrhoea in the last 2 weeks who received ORS and zinc	Total number of children under age 5 with diarrhoea in the last 2 weeks	
3.12	Diarrhoea treatment with oral rehydration therapy (ORT) and continued feeding	CA	Number of children under age 5 with diarrhoea in the last 2 weeks who received ORT (ORS packet, pre-packaged ORS fluid, 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 last 2 weeks	
3.13	Care-seeking for children with acute respiratory infection (ARI) symptoms	CA	Number of children under age 5 with ARI symptoms in the last 2 weeks for whom advice or treatment was sought from a health facility or provider	Total number of children under age 5 with ARI symptoms in the last 2 weeks	
3.14	Antibiotic treatment for children with ARI symptoms	CA	Number of children under age 5 with ARI symptoms in the last 2 weeks who received antibiotics	Total number of children under age 5 with ARI symptoms in the last 2 weeks	
3.15	Use of solid fuels for cooking	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	
3.16a 3.16b	Household availability of insecticide-treated nets (ITNs)[127]	TN	Number of households with (a) at least one ITN (b) at least one ITN for every two people	Total number of households	

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[126]See the MICS tabulation plan for a detailed description

[127]An ITN is (a) a conventionally treated net which has been soaked with an insecticide within the past 12 months, (b) factory treated net which does not require any treatment (LLIN), (b) a pretreated net obtained within the past 12 months, or (c) a net that has been soaked with or dipped in insecticide within the past 12 months

3.17a 3.17b	Household vector control[128]	TN - IR	Number of households (a) with at least one ITN or that have been sprayed by IRS[129] in the last 12 months (b) with at least one ITN for every two people or that have been sprayed by IRS in the last 12 months	Total number of households	
3.18	Children under age 5 who slept under an ITN	TN	Number of children under age 5 who slept under an ITN the previous night	Total number of children under age 5	MDG 6.7
3.19	Population that slept under an ITN	TN	Number of household members who slept under an ITN the previous night	Total number of household members who spent the previous night in the interviewed households	
3.20	Care-seeking for fever	CA	Number of children under age 5 with fever in the last 2 weeks for whom advice or treatment was sought from a health facility or provider	Total number of children under age 5 with fever in the last 2 weeks	
3.21	Malaria diagnostics usage	CA	Number of children under age 5 with fever in the last 2 weeks who had a finger or heel prick for malaria testing	Total number of children under age 5 with fever in the last 2 weeks	
3.22	Anti-malarial treatment of children under age 5	CA	Number of children under age 5 who tested positive for malaria in the last 2 weeks who received any antimalarial treatment	Total number of children under age 5 who tested positive for malaria in the last 2 weeks	MDG 6.8
3.23	Treatment with Artemisinin-based Combination Therapy (ACT) among children who received malarial treatment	CA	Number of children under age 5 with fever in the last 2 weeks who received ACT or Quinine(or other first-line treatment according to national policy)	Total number of children under age 5 with fever in the last 2 weeks who received any anti-malarial drugs	
3.24	Pregnant women who slept under an ITN	TN – CP	Number of pregnant women who slept under an ITN the previous night	Total number of pregnant women	
3.25	Intermittent preventive treatment for malaria during pregnancy	MN	Number of women age 15-49 years who received two or more doses of SP/Fansidar, at least one of which was received during an ANC visit, to prevent malaria during their last pregnancy that led to a live birth in the last 2 years	Total number of women age 15-49 years who have had a live birth in the last 2 years	

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[128](a) Households covered by vector control, (b) Universal coverage of vector control
[129]Indoor Residual Spraying

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 in households using unimproved drinking water sources who use an appropriate treatment method	Total number of household members in households using unimproved drinking water sources	
4.3	Use of improved sanitation	WS	Number of household members using improved sanitation facilities which are not shared	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	
4.5	Place for handwashing	HW	Number of households with a specific place for hand washing where water and soap or other cleansing agent are present	Total number of households	
4.6	Availability of soap or other cleansing agent	HW	Number of households with soap or other cleansing agent	Total number of households	

REPRODUCTIVE HEALTH

5.1	Adolescent birth rate[130]	CM - BH	Age-specific fertility rate for women age 15-19 years		MDG 5.4
5.2	Early childbearing	CM - BH	Number of women age 20-24 years who had at least one live birth before age 18	Total number of women age 20-24 years	
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[131]	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 with a live birth in the last 2 years who were attended (a) at least once by skilled personnel (b) at least four times by skilled personnel during their last pregnancy that led to a live birth	Total number of women age 15-49 years with a live birth in the last 2 years	MDG 5.5

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[130]The indicator is calculated for the last 3-year period.
[131]See the MICS tabulation plan for a detailed description

5.6	Content of antenatal care	MN	Number of women age 15-49 years with a live birth in the last 2 years who had their blood pressure measured and gave urine and blood samples during the last pregnancy that led to a live birth	Total number of women age 15-49 years with a live birth in the last 2 years	
5.7	Skilled attendant at delivery	MN	Number of women age 15-49 years with a live birth in the last 2 years who were attended by skilled health personnel during their most recent live birth	Total number of women age 15-49 years with a live birth in the last 2 years	MDG 5.2
5.8	Institutional deliveries	MN	Number of women age 15-49 years with a live birth in the last 2 years whose most recent live birth was delivered in a health facility	Total number of women age 15-49 years with a live birth in the last 2 years	
5.9	Caesarean section	MN	Number of women age 15-49 years whose most recent live birth in the last 2 years was delivered by caesarean section	Total number of women age 15-49 years with a live birth in the last 2 years	
5.10	Post-partum stay in health facility	PN	Number of women age 15-49 years who stayed in the health facility for 24 hours or more after the delivery of their most recent live birth in the last 2 years	Total number of women age 15-49 years with a live birth in the last 2 years	
5.11	Post-natal health check for the newborn	PN	Number of last live births in the last 2 years who received a health check while in facility or at home following delivery, or a post-natal care visit within 2 days after delivery	Total number of last live births in the last 2 years	
5.12	Post-natal health check for the mother	PN	Number of women age 15-49 years who received a health check while in facility or at home following delivery, or a post-natal care visit within 2 days after delivery of their most recent live birth in the last 2 years	Total number of women age 15-49 years with a live birth in the last 2 years	
5.13	Maternal mortality ratio	MM	Deaths during pregnancy, childbirth, or within two months after delivery or termination of pregnancy, per 100,000 births within the 5-year period preceding the survey		MDG 5.1

CHILD DEVELOPMENT					
6.1	Net Attendance to early childhood education	EC	Number of children age 36-59 months who are attending an early childhood education programme	Total number of children age 36-59 months	
6.2	Support for learning	EC	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 last 3 days	Total number of children age 36-59 months	
6.3	Father's support for learning	EC	Number of children age 36-59 months whose father has engaged in four or more activities to promote learning and school readiness in the last 3 days	Total number of children age 36-59 months	
6.4	Mother's support for learning	EC	Number of children age 36-59 months whose mother has engaged in four or more activities to promote learning and school readiness in the last 3 days	Total number of children age 36-59 months	

6.5	Availability of children's books	EC	Number of children under age 5 who have three or more children's books	Total number of children under age 5	
6.6	Availability of playthings	EC	Number of children under age 5 with two or more types of playthings	Total number of children under age 5	
6.7	Inadequate care	EC	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 last week	Total number of children under age 5	
6.8	Early child development index	EC	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	

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
7.2	School readiness	ED	Number of children in first grade of primary school who attended pre-school during the previous school year	Total number of children attending the first grade of primary school	
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)[132]	ED	Number of of children of primary school age currently attending primary (primary 1-6; ISCED 1) or secondary school	Total number of children of primary school age ISCED)	MDG 2.1
7.S1	Primary school net attendance ratio (adjusted)	ED	Number of children of primary school age currently attending primary (primary 1-8; national) or secondary school	Total number of children of primary school age (national)	
7.5	Secondary school net attendance ratio (adjusted)	ED	Number children of secondary school age currently attending secondary (primary 7-8 included; ISCED) school or higher	Total number of children of secondary school age (ISCED)	
7.S2	Secondary school net attendance ratio (adjusted)	ED	Number of children of secondary school age currently attending secondary school (national) or higher	Total number of children of secondary school age	
7.6	Children reaching last grade of primary	ED	Proportion of children entering the first grade of primary school who eventually reach last grade (primary 6; ISCED)		MDG 2.2
7.S3	Children reaching last grade of primary	ED	Proportion of children entering the first grade of primary school who eventually reach last grade (primary 8; national)		
7.7	Primary completion rate	ED	Number of children attending the last grade of primary school (excluding repeaters) (ISCED)	Total number of children of primary school completion age (age appropriate to final grade of primary school) (ISCED)	

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[132]For Kenya, the International Standard Classification of Education (ISCED) 1997 classifies Primary 7 and 8 as Lower Secondary education. The indicators labelled ISCED calculates Primary School indicators based on Primary 1-6 only, whereas Primary 7 and 8 are included in Secondary School indicators. Those indicators labelled national and marked with S are based on the national education system, which includes Primary 7-8 in Primary School indicators.

7.S4	Primary completion rate	ED	Number of children attending the last grade of primary school (excluding repeaters) (national)	Total number of children of primary school completion age (age appropriate to final grade of primary school) (national)	
7.7a	Secondary completion rate	ED	Number of children attending the last grade of secondary school (form four), excluding repeaters	Total number of children of secondary school (form four) completion age (age appropriate to final grade of secondary school)	
7.8	Transition rate to secondary school	ED	Number of children attending the last grade of primary school during the previous school year who are in the first grade of secondary school during the current school year (ISCED)	Total number of children attending the last grade of primary school during the previous school year (ISCED)	
7.S5	Transition rate to secondary school	ED	Number of children attending the last grade of primary school during the previous school year who are in the first grade of secondary school during the current school year (national)	Total number of children attending the last grade of primary school during the previous school year (national)	
7.9	Gender parity index (primary school)	ED	Primary school net attendance ratio (adjusted) for girls (ISCED)	Primary school net attendance ratio (adjusted) for boys (ISCED)	MDG 3.1
7.S6	Gender parity index (primary school)	ED	Primary school net attendance ratio (adjusted) for girls (national)	Primary school net attendance ratio (adjusted) for boys (national)	
7.10	Gender parity index (secondary school)	ED	Secondary school net attendance ratio (adjusted) for girls (ISCED)	Secondary school net attendance ratio (adjusted) for boys (ISCED)	MDG 3.1
7.S7	Gender parity index (secondary school)	ED	Secondary school net attendance ratio (adjusted) for girls (national)	Secondary school net attendance ratio (adjusted) for boys (national)	

CHILD PROTECTION

			Numerator	Denominator	
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 5-17 years who are involved in child labour	Total number of children age 5-17 years	
8.3	Violent discipline	CD	Number of children age 1-14 years who experienced psychological aggression or physical punishment during the last one month	Total number of children age 1-14 years	
8.4	Marriage before age 15	MA	Number of women age 15-49 years who were first married or in union before age 15	Total number of women age 15-49 years	
8.5	Marriage before age 18	MA	Number of women age 20-49 years who were first married or in union before age 18	Total number of women age 20-49 years	
8.6	Young women age 15-19 years currently married or in union	MA	Number of women age 15-19 years who are married or in union	Total number of women age 15-19 years	
8.7	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 married or in union	
8.8a 8.8b	Spousal age difference	MA	Number of women who are married or in union and whose spouse is 10 or more years older, (a) among women age 15-19 years, (b) among women age 20-24 years	Total number of women who are married or in union (a) age 15-19 years, (b) age 20-24 years	
8.9	Approval for female genital mutilation/cutting (FGM/C)	FGM/C	Number of women age 15-49 years who state that FGM/C should be continued	Total number of women age 15-49 years	
8.10	Prevalence of FGM/C among women	FGM/C	Number of women age 15-49 years who report to have undergone any form of FGM/C	Total number of women age 15-49 years	
8.11	Prevalence of FGM/C among girls	FGM/C	Number of daughters age 0-14 years who have undergone any form of FGM/C, as reported by mothers age 15-49 years	Total number of daughters age 0-14 years	
8.12	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	

8.13	Children's living arrangements	HL	Number of children age 0-17 years living with neither biological parent	Total number of children age 0-17 years	
8.14	Prevalence of children with one or both parents dead	HL	Number of children age 0-17 years with one or both parents dead	Total number of children age 0-17 years	
8.15	Children with at least one parent living abroad	HL	Number of children 0-17 years with at least one parent living abroad	Number of children 0-17 years	

HIV/AIDS AND SEXUAL BEHAVIOUR

9.1	Knowledge about HIV prevention among young women	HA	Number of women age 15-24 years who correctly identify ways of preventing the sexual transmission of HIV[133], and who reject major misconceptions about HIV transmission	Total number of women age 15-24 years	MDG 6.3
9.2	Knowledge of mother-to-child transmission of HIV	HA	Number of women age 15-49 years who correctly identify all three means[134] of mother-to-child transmission of HIV	Total number of women age 15-49 years	
9.3	Accepting attitudes towards people living with HIV	HA	Number of women age 15-49 years expressing accepting attitudes on all four questions[135] toward people living with HIV	Total number of women age 15-49 years who have heard of HIV	
9.4	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	
9.5	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 last 12 months and who know their results	Total number of women age 15-49 years	
9.6	Sexually active young women who have been tested for HIV and know the results	HA	Number of women age 15-24 years who have had sex in the last 12 months, who have been tested for HIV in the last 12 months and who know their results	Total number of women age 15-24 years who have had sex in the last 12 months	
9.7	HIV counselling during antenatal care	HA	Number of women age 15-49 years who had a live birth in the last 2 years and received antenatal care during the pregnancy of their most recent birth, reporting that they received counselling on HIV during antenatal care	Total number of women age 15-49 years who had a live birth in the last 2 years	

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[133]Using condoms and limiting sex to one faithful, uninfected partner

[134]Transmission during pregnancy, during delivery, and by breastfeeding

[135]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

9.8	HIV testing during antenatal care	HA	Number of women age 15-49 years who had a live birth in the last 2 years and received antenatal care during the pregnancy of their most recent birth, 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 had a live birth in the last 2 years	
9.9	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	
9.10	Sex before age 15 among young women	SB	Number of women age 15-24 years who had sexual intercourse before age 15	Total number of women age 15-24 years	
9.11	Age-mixing among sexual partners	SB	Number of women age 15-24 years who had sex in the last 12 months with a partner who was 10 or more years older	Total number of women age 15-24 years who had sex in the last 12 months	
9.12	Multiple sexual partnerships	SB	Number of women age 15-49 years who had sexual intercourse with more than one partner in the last 12 months	Total number of women age 15-49 years	
9.13	Condom use at last sex among people with multiple sexual partnerships	SB	Number of women age 15-49 years who report having had more than one sexual partner in the last 12 months who also reported that a condom was used the last time they had sex	Total number of women age 15-49 years who reported having had more than one sexual partner in the last 12 months	
9.14	Sex with non-regular partners	SB	Number of sexually active women age 15-24 years who had sex with a non-marital, non-cohabitating partner in the last 12 months	Total number of women age 15-24 years who had sex in the last 12 months	
9.15	Condom use with non-regular partners	SB	Number of women age 15-24 years reporting the use of a condom during the last sexual intercourse with a non-marital, non-cohabiting sex partner in the last 12 months	Total number of women age 15-24 years who had a non-marital, non-cohabiting partner in the last 12 months	MDG 6.2
9.15a	Condom use with regular partners	SB	Number of women age 15-24 years reporting the use of a condom during the last sexual intercourse with a marital, cohabiting sex partner in the last 12 months	Total number of women age 15-24 years who had a marital, cohabiting partner in the last 12 months	

	ACCESS TO MASS MEDIA AND USE OF INFORMATION/COMMUNICATION TECHNOLOGY				
10.1	Exposure to mass media	MT	Number of women age 15-49 years who, at least once a week, read a newspaper or magazine, listen to the radio, and watch television	Total number of women age 15-49 years	
10.2	Use of computers	MT	Number of young women age 15-24 years who used a computer during the last 12 months	Total number of women age 15-24 years	
10.3	Use of internet	MT	Number of young women age 15-24 who used the internet during the last 12 months	Total number of women age 15-24 years	

	SUBJECTIVE WELL-BEING				
11.1	Life satisfaction		Number of young women age 15-24 years who are very or somewhat satisfied with their life, overall	Total number of young women age 15-24 years	
11.2	Happiness		Number of young women age 15-24 years who are very or somewhat happy	Total number of young women age 15-24 years	
11.3	Perception of a better life		Number of young women age 15-24 years whose life improved during the last one year, and who expect that their life will be better after one year	Total number of young women age 15-24 years	

	TOBACCO AND ALCOHOL USE				
12.1	Tobacco use	TA	Number of women age 15-49 years who smoked cigarettes, or used smoked or smokeless tobacco products at any time during the last one month	Total number of women age 15-49 years	
12.2	Smoking before age 15	TA	Number of women age 15-49 years who smoked a whole cigarette before age 15	Total number of women age 15-49 years	
12.3	Use of alcohol	TA	Number of women age 15-49 years who had at least one alcoholic drink at any time during the last one month	Total number of women age 15-49 years	
12.4	Use of alcohol before age 15	TA	Number of women age 15-49 years who had at least one alcoholic drink before age 15	Total number of women age 15-49 years	

Appendix H. Kakamega County MICS Questionnaires

HOUSEHOLD QUESTIONNAIRE
WESTERN AND NORTH RIFT SURVEY

MICS | **KNBS** KENYA NATIONAL BUREAU OF STATISTICS *Keeping you informed* | | **unicef**

HOUSEHOLD INFORMATION PANEL	HH

HH1. Cluster number: ___ ___ ___ ___

HH2. Household number: ___ ___ ___

HH3. Interviewer's name and number:

Name _____ ___ ___

HH4. Supervisor's name and number:

Name_____ ___ ___

HH5. Day / Month / Year of interview:

__ __ / __ __ / 201 __

HH6. Area:
Urban..1
Rural...2

HH7. Region*:*

Bungoma...1
Kakamega...2
Turkana...3

WE ARE FROM UNIVERSITY OF NAIROBI AND KENYA NATIONAL BUREAU OF STATISTICS*.* WE ARE CONDUCTING A SURVEY ABOUT THE SITUATION OF CHILDREN, FAMILIES AND HOUSEHOLDS. I WOULD LIKE TO TALK TO YOU ABOUT THESE SUBJECTS. THE INTERVIEW WILL TAKE ABOUT 55 MINUTES TO ONE HOUR. ALL THE INFORMATION WE OBTAIN WILL REMAIN STRICTLY CONFIDENTIAL AND ANONYMOUS. MAY I START NOW?

☐ *Yes, permission is given* ⇨ *Go to HH18 to record the time and then begin the interview.*

☐ *No, permission is not given* ⇨ *Circle 04 in HH9. Discuss this result with your supervisor.*

HH9. Result of household interview:

Completed 01
No household member or no competent respondent at home at time of visit 02
Entire household absent for extended period of time 03
Refused 04
Dwelling vacant / Address not a dwelling...05
Dwelling destroyed 06
Dwelling not found...07

Other (*specify*) _____ 96

After the household questionnaire has been completed, fill in the following information:

HH10. Respondent to Household Questionnaire:

Name _____ ___ ___

HH11. Total number of household members:___ ___

HH12. Number of women age 15-49 years: ___ ___

HH14. Number of children under age 5: ___ ___

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

HH13. Number of women's questionnaires completed: ___ ___

HH15. Number of under-5 questionnaires completed: ___ ___

HH16. Field editor's name and number:	**HH17**. Main data entry clerk's name and number:
Name_____ __ __	Name_____ __ __

HH18. *Record the time.*
Hour .... __ __
Minutes................ __ __

LIST OF HOUSEHOLD MEMBERS   HL

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?

If yes, complete listing for questions HL2-HL4. Then, ask questions starting with HL5 for each person at a time.

Use an additional questionnaire if all rows in the List of Household Members have been used.

								For women age **15-49**	For children age **0-4**	For children age **0-17** years						For children age **0-14**
HL1. Line no.	**HL2.** Name	**HL3.** WHAT IS THE RELATION-SHIP OF (*name*) TO THE HEAD OF HOUSE-HOLD?	**HL4.** IS (*name*) MALE OR FEMALE? 1 Male 2 Female	**HL5.** WHAT IS (*name*)'S DATE OF BIRTH? 98 DK 9998 DK	**HL6.** HOW OLD IS (*name*)? *Record in completed years. If age is 95 or above, record '95'*	**HL6A.** DID (*name*) STAY HERE LAST NIGHT? 1 Yes 2 No	**HL7.** *Circle line no. if woman age* **15-49**	**HL7B.** *Circle line no. if age* **0-4**	**HL11.** IS (*name*)'S NATURAL MOTHER ALIVE? 1 Yes 2 No⤷ HL13 8 DK⤷ HL13	**HL12.** DOES (*name*)'S NATURAL MOTHER LIVE IN THIS HOUSE-HOLD? *If "Yes" Record line no. of mother and go to HL13 Record 00 for "No"*	**HL12A.** WHERE DOES (*name*)'S NATURAL MOTHER LIVE? 1 In another household in this country 2 Institution in this country 3 Abroad 8 DK	**HL13.** IS (*name*)'S NATURAL FATHER ALIVE? 1 Yes 2 No⤷ HL15 8 DK⤷ HL15	**HL14.** DOES (*name*)'S NATURAL FATHER LIVE IN THIS HOUSE-HOLD? *If "Yes" Record line no. of father and go to HL15 Record 00 for "No"*	**HL14A.** WHERE DOES (*name*)'S NATURAL FATHER LIVE? 1 In another household in this country 2 Institution in this country 3 Abroad 8 DK	**HL15.** *Record line no. of mother from HL12 if indicated. If HL12 is blank, or "00" ask:* WHO IS THE PRIMARY CARETAKER OF (*name*)?
Line	Name	Relation*	M F	Month Year	Age	Y N	15-49	0-4	Y N DK	Mother		Y N DK	Father		Mother
01		**0 1**	1 2	__ __ __ __ __ __	__ __	1 2	01	01	1 2 8	__ __	1 2 3 8	1 2 8	__ __	1 2 3 8	__ __
02		__ __	1 2	__ __ __ __ __ __	__ __	1 2	02	02	1 2 8	__ __	1 2 3 8	1 2 8	__ __	1 2 3 8	__ __
03		__ __	1 2	__ __ __ __ __ __	__ __	1 2	03	03	1 2 8	__ __	1 2 3 8	1 2 8	__ __	1 2 3 8	__ __
04		__ __	1 2	__ __ __ __ __ __	__ __	1 2	04	04	1 2 8	__ __	1 2 3 8	1 2 8	__ __	1 2 3 8	__ __
05		__ __	1 2	__ __ __ __ __ __	__ __	1 2	05	05	1 2 8	__ __	1 2 3 8	1 2 8	__ __	1 2 3 8	__ __
06		__ __	1 2	__ __ __ __ __ __	__ __	1 2	06	06	1 2 8	__ __	1 2 3 8	1 2 8	__ __	1 2 3 8	__ __
07		__ __	1 2	__ __ __ __ __ __	__ __	1 2	07	07	1 2 8	__ __	1 2 3 8	1 2 8	__ __	1 2 3 8	__ __
08		__ __	1 2	__ __ __ __ __ __	__ __	1 2	08	08	1 2 8	__ __	1 2 3 8	1 2 8	__ __	1 2 3 8	__ __
09		__ __	1 2	__ __ __ __ __ __	__ __	1 2	09	09	1 2 8	__ __	1 2 3 8	1 2 8	__ __	1 2 3 8	__ __
10		__ __	1 2	__ __ __ __ __ __	__ __	1 2	10	10	1 2 8	__ __	1 2 3 8	1 2 8	__ __	1 2 3 8	__ __

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								For women age **15-49**	For children age **0-4**						For children age **0-14**

HL1. *Line no.*	**HL2**. *Name*	**HL3**. WHAT IS THE RELATION-SHIP OF (*name*) TO THE HEAD OF HOUSE-HOLD?	**HL4**. IS (*name*) MALE OR FEMALE? 1 Male 2 Female	**HL5**. WHAT IS (*name*)'S DATE OF BIRTH? 98 DK 9998 DK	**HL6**. HOW OLD IS (*name*)? *Record in completed years. If age is 95 or above, record '95'*	**HL6A**. DID (*name*) STAY HERE LAST NIGHT? 1 Yes 2 No	**HL7**. *Circle line no. if woman age* **15-49**	**HL7B**. *Circle line no. if age* **0-4**	**HL11**. IS (*name*)'S NATURAL MOTHER ALIVE? 1 Yes 2 No⤸ HL13 8 DK⤸ HL13	**HL12**. DOES (*name*)'S NATURAL MOTHER LIVE IN THIS HOUSE-HOLD? *If "Yes" Record line no. of mother and go to HL13 Record 00 for "No"*	**HL12A**. WHERE DOES (*name*)'S NATURAL MOTHER LIVE? 1 In another household in this country 2 Institution in this country 3 Abroad 8 DK	**HL13**. IS (*name*)'S NATURAL FATHER ALIVE? 1 Yes 2 No⤸ HL15 8 DK⤸ HL15	**HL14**. DOES (*name*)'S NATURAL FATHER LIVE IN THIS HOUSE-HOLD? *If "Yes" Record line no. of father and go to HL15 Record 00 for "No"*	**HL14A**. WHERE DOES (*name*)'S NATURAL FATHER LIVE? 1 In another household in this country 2 Institution in this country 3 Abroad 8 DK	**HL15**. *Record line no. of mother from HL12 if indicated. If HL12 is blank, or "00" ask:* WHO IS THE PRIMARY CARETAKER OF (*name*)?
Line	Name	Relation*	M F	Month | Year | Age		Y N	15-49	0-4	Y N DK	Mother		Y N DK	Father		Mother
11		__ __	1 2	__ __ | __ __ __ __ | __ __		1 2	11	11	1 2 8	__ __	1 2 3 8	1 2 8	__ __	1 2 3 8	__ __
12		__ __	1 2	__ __ | __ __ __ __ | __ __		1 2	12	12	1 2 8	__ __	1 2 3 8	1 2 8	__ __	1 2 3 8	__ __
13		__ __	1 2	__ __ | __ __ __ __ | __ __		1 2	13	13	1 2 8	__ __	1 2 3 8	1 2 8	__ __	1 2 3 8	__ __
14		__ __	1 2	__ __ | __ __ __ __ | __ __		1 2	14	14	1 2 8	__ __	1 2 3 8	1 2 8	__ __	1 2 3 8	__ __
15		__ __	1 2	__ __ | __ __ __ __ | __ __		1 2	15	15	1 2 8	__ __	1 2 3 8	1 2 8	__ __	1 2 3 8	__ __

Tick here if additional questionnaire used ☐

Probe for additional household members.
Probe especially for any infants or small children not listed, and others who may not be members of the family (such as servants, friends) but who usually live in the household.
Insert names of additional members in the household list and complete form accordingly.

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

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* Codes for **HL3**: Relationship to head of household:	01 Head 02 Spouse/Partner 03 Son / Daughter	04 Son-In-Law / Daughter-In-Law 05 Grandchild 06 Parent	07 Parent-In-Law 08 Brother / Sister 09 Brother-In-Law / Sister-In-Law	10 Uncle / Aunt 11 Niece / Nephew 12 Other relative	13 Adopted / Foster/ Stepchild 14 Servant (Live-in)	96 Other (Not related) 98 DK

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EDUCATION						ED			ED

			*For household members age **5** and above*			*For household members age **5-24** years*			
ED1. *Line number*	**ED2**. *Name and age* *Copy from HL2 and HL6*		**ED3**. Has (*name*) EVER ATTENDED SCHOOL OR PRE-SCHOOL? 1 Yes 2 No↯ Next Line	**ED4A**. WHAT IS THE HIGHEST LEVEL OF SCHOOL (*name*) HAS ATTENDED? Level: 0 Preschool 1 Primary 2 Secondary 3 Higher 8 DK *If level=0, skip to ED5*	**ED4B**. WHAT IS THE HIGHEST GRADE (*name*) COMPLETED AT THIS LEVEL? Grade: 98 DK *'If grade 1 is not completed at this level, enter "00"*	**ED5**. DURING THE CURRENT SCHOOL YEAR THAT IS 2013 - 2014, DID (*name*) ATTEND SCHOOL OR PRESCHOOL AT ANY TIME? 1 Yes 2 No↯ ED7	**ED6**. DURING THIS/THAT SCHOOL YEAR, WHICH LEVEL AND GRADE IS/WAS (*name*) ATTENDING? Level: Grade: 0 Preschool 98 DK 1 Primary 2 Secondary 3 Higher 8 DK *If level=0, skip to ED7*	**ED7**. DURING THE PREVIOUS SCHOOL YEAR, THAT IS 2012-2013, DID (*name*) ATTEND SCHOOL OR PRESCHOOL AT ANY TIME? 1 Yes 2 No ↯ Next Line 8 DK ↯ Next Line	**ED8**. DURING THAT PREVIOUS SCHOOL YEAR, WHICH LEVEL AND GRADE DID (*name*) ATTEND? Level: Grade: 0 Preschool 98 DK 1 Primary 2 Secondary 3 Higher 8 DK *If level=0, go to next line'*
Line	Name	Age	Yes No	Level	Grade	Yes No	Level	Grade	Yes No DK	Level	Grade
01		___ ___	1 2	0 1 2 3 8	___ ___	1 2	0 1 2 3 8	___ ___	1 2 8	0 1 2 3 8	___ ___
02		___ ___	1 2	0 1 2 3 8	___ ___	1 2	0 1 2 3 8	___ ___	1 2 8	0 1 2 3 8	___ ___
03		___ ___	1 2	0 1 2 3 8	___ ___	1 2	0 1 2 3 8	___ ___	1 2 8	0 1 2 3 8	___ ___
04		___ ___	1 2	0 1 2 3 8	___ ___	1 2	0 1 2 3 8	___ ___	1 2 8	0 1 2 3 8	___ ___
05		___ ___	1 2	0 1 2 3 8	___ ___	1 2	0 1 2 3 8	___ ___	1 2 8	0 1 2 3 8	___ ___
06		___ ___	1 2	0 1 2 3 8	___ ___	1 2	0 1 2 3 8	___ ___	1 2 8	0 1 2 3 8	___ ___
07		___ ___	1 2	0 1 2 3 8	___ ___	1 2	0 1 2 3 8	___ ___	1 2 8	0 1 2 3 8	___ ___
08		___ ___	1 2	0 1 2 3 8	___ ___	1 2	0 1 2 3 8	___ ___	1 2 8	0 1 2 3 8	___ ___
09		___ ___	1 2	0 1 2 3 8	___ ___	1 2	0 1 2 3 8	___ ___	1 2 8	0 1 2 3 8	___ ___
10		___ ___	1 2	0 1 2 3 8	___ ___	1 2	0 1 2 3 8	___ ___	1 2 8	0 1 2 3 8	___ ___
11		___ ___	1 2	0 1 2 3 8	___ ___	1 2	0 1 2 3 8	___ ___	1 2 8	0 1 2 3 8	___ ___
12		___ ___	1 2	0 1 2 3 8	___ ___	1 2	0 1 2 3 8	___ ___	1 2 8	0 1 2 3 8	___ ___
13		___ ___	1 2	0 1 2 3 8	___ ___	1 2	0 1 2 3 8	___ ___	1 2 8	0 1 2 3 8	___ ___
14		___ ___	1 2	0 1 2 3 8	___ ___	1 2	0 1 2 3 8	___ ___	1 2 8	0 1 2 3 8	___ ___
15		___ ___	1 2	0 1 2 3 8	___ ___	1 2	0 1 2 3 8	___ ___	1 2 8	0 1 2 3 8	___ ___

SELECTION OF ONE CHILD FOR CHILD LABOUR/CHILD DISCIPLINE	SL

SL1. *Check HL6 in the List of Household Members and write the total number of children age 1-17 years.*

Total number ....__ __

SL2. *Check the number of children age 1-17 years in SL1:*

☐ *Zero ⇨ Go to HOUSEHOLD CHARACTERISTICS module*

☐ *One ⇨ Go to SL9 and record the rank number as '1', enter the line number, child's name and age*

☐ *Two or more ⇨ Continue with SL2A*

SL2A. *List each of the children age 1-17 years below in the order they appear in the List of Household Members. Do not include other household members outside of the age range 1-17 years. Record the line number, name, sex, and age for each child.*

SL3. *Rank number*	**SL4**. *Line number from HL1*	**SL5**. *Name from HL2*	**SL6**. *Sex from HL4*		**SL7**. *Age from HL6*
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	___ ___

SL8. *Check the last digit of the household number (HH2) from the cover page. This is the number of the row you should go to in the table below.*

Check the total number of children age 1-17 years in SL1 above. This is the number of the column you should go to in the table below

Find the box where the row and the column meet and circle the number that appears in the box. This is the rank number (SL3) of the selected child.

Last Digit of Household Number (from HH2)	**Total Number of Eligible Children in the Household (from SL1)**						
	2	*3*	*4*	*5*	*6*	*7*	*8+*
0	2	2	4	3	6	5	4
1	1	3	1	4	1	6	5
2	2	1	2	5	2	7	6
3	1	2	3	1	3	1	7
4	2	3	4	2	4	2	8
5	1	1	1	3	5	3	1
6	2	2	2	4	6	4	2
7	1	3	3	5	1	5	3
8	2	1	4	1	2	6	4
9	1	2	1	2	3	7	5

SL9.*Record the rank number (SL3), line number (SL4), name (SL5) and age (SL7) of the selected child*

Rank number .... __

Line number .... __ __

Name_____

Age... __ __

MICS.HH.263

CHILD LABOUR   CL

CL1.*Check selected child's age from SL9:*

☐*1-4 years* ⇨ *Go to Next Module*

☐*5-17 years* ⇨ *Continue with CL2*

CL2. NOW I WOULD LIKE TO ASK ABOUT ANY WORK CHILDREN IN THIS HOUSEHOLD MAY DO. SINCE LAST (*day of the week*), DID (*name*) DO ANY OF THE FOLLOWING ACTIVITIES, EVEN FOR ONLY ONE HOUR? [A] DID (*name*) DO ANY WORK OR HELP ON HIS/HER OWN OR THE HOUSEHOLD'S PLOT/FARM/FOOD GARDEN OR LOOKED AFTER ANIMALS? FOR EXAMPLE, GROWING FARM PRODUCE, HARVESTING, OR FEEDING, GRAZING, MILKING ANIMALS? [B] DID (*name*) HELP IN FAMILY BUSINESS OR RELATIVE'S BUSINESS WITH OR WITHOUT PAY, OR RUN HIS/HER OWN BUSINESS? [C] DID (*name*) PRODUCE OR SELL ARTICLES, HANDICRAFTS, CLOTHES, FOOD OR AGRICULTURAL PRODUCTS? [D] SINCE LAST (*day of the week*), DID (*name*) ENGAGE IN ANY OTHER ACTIVITY IN RETURN FOR INCOME IN CASH OR IN KIND, EVEN FOR ONLY ONE HOUR? *If "No", Probe:* PLEASE INCLUDE ANY ACTIVITY (*name*) PERFORMED AS A REGULAR OR CASUAL EMPLOYEE, SELF-EMPLOYED OR EMPLOYER; OR AS AN UNPAID FAMILY WORKER HELPING OUT IN HOUSEHOLD BUSINESS OR FARM.	Yes No Worked on plot/farm/ food garden/looked after animals .... 1 2 Helped in family/relative's business/ran own business .... 1 2 Produce/sell articles/ handicrafts/clothes/food or agricultural products .... 1 2 Any other activity 1 2	

CL3. *Check CL2, A to D*

  ☐*There is at least one 'Yes'* ⇨ *continue with CL4*

  ☐*All answers are 'No* ⇨ *Go to CL8*

CL4. SINCE LAST (*day of the week*) ABOUT HOW MANY HOURS DID (*name*) ENGAGE IN THIS ACTIVITY/THESE ACTIVITIES, IN TOTAL? *'if less than one hour, record "00"*	Number of hours ....__ __	
CL5. DOES THE ACTIVITY/DO THESE ACTIVITIES REQUIRE CARRYING HEAVY LOADS?	Yes ....1 No...2	1⇨ CL8
CL6. DOES THE ACTIVITY/DO THESE ACTIVITIES REQUIRE WORKING WITH DANGEROUS TOOLS (KNIVES ETC.) OR OPERATING HEAVY MACHINERY?	Yes ....1 No...2	1⇨ CL8

CL7. HOW WOULD YOU DESCRIBE THE WORK ENVIRONMENT OF (*name*)?		
[A] IS (*name*) EXPOSED TO DUST, FUMES OR GAS?	Yes ....1 No..2	1⇨ CL8
[B] IS (*name*) EXPOSED TO EXTREME COLD, HEAT OR HUMIDITY?	Yes ....1 No..2	1⇨ CL8
[C] IS (*name*) EXPOSED TO LOUD NOISE OR VIBRATION?	Yes ....1 No..2	1⇨ CL8
[D] IS (*name*) REQUIRED TO WORK AT HEIGHTS?	Yes ....1 No..2	1⇨ CL8
[E] IS (*name*) REQUIRED TO WORK WITH CHEMICALS (PESTICIDES, GLUES, ETC.) OR EXPLOSIVES?	Yes ....1 No..2	1⇨ CL8
[F] IS (*name*) EXPOSED TO OTHER THINGS, PROCESSES OR CONDITIONS BAD FOR (*name*)'S HEALTH OR SAFETY?	Yes ....1 No..2	
CL8. SINCE LAST (*day of the week*), DID (*name*) FETCH WATER OR COLLECT FIREWOOD FOR HOUSEHOLD USE?	Yes ....1 No..2	2⇨ CL10
CL9. IN TOTAL, HOW MANY HOURS DID (*name*) SPEND ON FETCHING WATER OR COLLECTING FIREWOOD FOR HOUSEHOLD USE, SINCE LAST (*day of the week*)? *If less than one hour, record "00"*	Number of hours ....__ __	

CL10. SINCE LAST (*day of the week*), DID (*name*) DO ANY OF THE FOLLOWING FOR THIS HOUSEHOLD?		Yes No	
[A] SHOPPING FOR HOUSEHOLD?	Shopping for household 1	2	
[B] REPAIR ANY HOUSEHOLD EQUIPMENT?	Repair household equipment 1	2	
[C] COOKING OR CLEANING UTENSILS OR THE HOUSE?	Cooking/cleaning utensils/house 1	2	
[D] WASHING CLOTHES?	Washing clothes 1	2	
[E] CARING FOR CHILDREN?	Caring for children 1	2	
[F] CARING FOR THE OLD OR SICK?	Caring for old/sick 1	2	
[G] OTHER HOUSEHOLD TASKS?	Other household tasks 1	2	

CL11. *Check CL10, A to G* ☐*There is at least one 'Yes' ⇨ Continue with CL12* ☐*All answers are 'No' ⇨ Go to Next Module*	

CL12. SINCE LAST (*day of the week*), ABOUT HOW MANY HOURS DID (*name*) ENGAGE IN THIS ACTIVITY/THESE ACTIVITIES, IN TOTAL? *If less than one hour, record "00"*	Number of hours .... __ __	

CHILD DISCIPLINE		CD
CD1.*Check selected child's age from SL9:* ☐*1-14 years ⇨ Continue with CD2* ☐*15-17 years ⇨Go to Next Module*		
CD2.*Write the line number and name of the child from SL9.*	Line number .... __ __ Name _____	

CD3. ADULTS USE CERTAIN WAYS TO TEACH CHILDREN THE RIGHT BEHAVIOUR OR TO ADDRESS A BEHAVIOUR PROBLEM. I WILL READ VARIOUS METHODS THAT ARE USED. PLEASE TELL ME IF <u>YOU OR ANYONE ELSE IN YOUR HOUSEHOLD</u> HAS USED THIS METHOD WITH *(name)*<u>IN THE PAST MONTH</u>.		Yes	No
[A] TOOK AWAY PRIVILEGES, FORBADE SOMETHING (*name*) LIKED OR DID NOT ALLOW HIM/HER TO LEAVE THE HOUSE.	Took away privileges...........................	1	2
[B] EXPLAINED WHY (*name*)'S BEHAVIOUR WAS WRONG.	Explained wrong behaviour.................	1	2
[C] SHOOK HIM/HER.	Shook him/her	1	2
[D] SHOUTED, YELLED AT OR SCREAMED AT HIM/HER.	Shouted, yelled, screamed	1	2
[E] GAVE HIM/HER SOMETHING ELSE TO DO.	Gave something else to do	1	2
[F] SPANKED, HIT OR SLAPPED HIM/HER ON THE BOTTOM WITH BARE HAND.	Spanked, hit, slapped on bottom with bare hand	1	2
[G] HIT HIM/HER ON THE BOTTOM OR ELSEWHERE ON THE BODY WITH SOMETHING LIKE A BELT, HAIRBRUSH, STICK OR OTHER HARD OBJECT.	Hit with belt, hairbrush, stick, or other hard object	1	2
[H] CALLED HIM/HER DUMB, LAZY, OR ANOTHER NAME LIKE THAT.	Called dumb, lazy, or another name	1	2
[I] HIT OR SLAPPED HIM/HER ON THE FACE, HEAD OR EARS.	Hit/slapped on the face, head or ears	1	2
[J] HIT OR SLAPPED HIM/HER ON THE HAND, ARM, OR LEG.	Hit/slapped on hand, arm or leg	1	2
[K] BEAT HIM/HER UP, THAT IS HIT HIM/HER OVER AND OVER AS HARD AS ONE COULD.	Beat up, hit over and over as hard as one could......................	1	2
CD4. DO YOU BELIEVE THAT IN ORDER TO BRING UP, RAISE, OR EDUCATE A CHILD PROPERLY, THE CHILD NEEDS TO BE PHYSICALLY PUNISHED?	Yes ....1 No..2 DK / No opinion 8	

HOUSEHOLD CHARACTERISTICS		HC
HC1A. WHAT IS THE RELIGION OF THE HEAD OF THIS HOUSEHOLD?	*Catholic*...1 *Other Christian* ....2 *Muslim* ....3 *Traditional* ....4 Other religion (*specify*) _____ 6 No religion 7	
HC1B. WHAT IS THE MOTHER TONGUE/NATIVE LANGUAGE OF THE HEAD OF THIS HOUSEHOLD?	*Luhya*..1 *Turkana* ....2 *Swahili* ....3 Other language (*specify*) _____ 6	
HC1C. TO WHAT ETHNIC GROUP DOES THE HEAD OF THIS HOUSEHOLD BELONG?	*Luhya*..1 *Turkana* ....2 Other ethnic group (*specify*) _____ 6	
HC2. HOW MANY ROOMS IN THIS HOUSEHOLD ARE USED FOR SLEEPING?	Number 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
	   Thatch / Palm leaf...................................12
	   Sod 13
	Rudimentary roofing
	   Rustic mat...21
	   Palm / Bamboo 22
	   Wood planks..23
	   Cardboard...24
	Finished roofing
	   Metal/Tin...31
	   Wood 32
	   Calamine / Cement fibre.........................33
	   Ceramic tiles 34
	   Cement 35
	   Roofing shingles 36
	
	Other (*specify*) _____ 96	

HC5. *Main material of the exterior 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 <u>MAINLY</u> 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 No food cooked in household...................95 Other (*specify*) _____ 96	01⇨HC8 02⇨HC8 03⇨HC8 04⇨HC8 05⇨HC8 95⇨HC8

HC7. IS THE COOKING USUALLY DONE IN THE HOUSE, IN A SEPARATE BUILDING, OR OUTDOORS?
 	
If 'In the house', probe: IS IT DONE IN A SEPARATE ROOM USED AS A KITCHEN?
	In the house
	   In a separate room used as kitchen 1
	   Elsewhere in the house 2
	In a separate building 3
	Outdoors 4
	
	Other (*specify*) _____ 6	

HC8. DOES YOUR HOUSEHOLD HAVE:		Yes	No	
[A] ELECTRICITY?	Electricity 1		2	
[B] A RADIO?	Radio 1		2	
[C] A TELEVISION?	Television 1		2	
[D] A NON-MOBILE TELEPHONE?	Non-mobile telephone 1		2	
[E] A REFRIGERATOR?	Refrigerator...1		2	
[F] SOLAR PANEL	Solar Panel 1		2	
[G] CHAIR	Chair 1		2	
[H] SOFA SET	Sofa set 1		2	

[I] TABLE	Table 1 2	
[J] CUPBOARD	Cupboard 1 2	
[K] BED	Bed 1 2	
[L] CLOCK	Clock...1 2	
[M] CAMERA	Camera 1 2	
[N] COMPUTER	Computer 1 2	

HC9. DOES ANY MEMBER OF YOUR HOUSEHOLD OWN:	Yes No	
[A] A WATCH?	Watch 1 2	
[B] A MOBILE TELEPHONE?	Mobile telephone 1 2	
[C] A BICYCLE?	Bicycle 1 2	
[D] A MOTORCYCLE OR SCOOTER?	Motorcycle / Scooter 1 2	
[E] AN ANIMAL-DRAWN CART?	Animal-drawn cart.............................1 2	
[F] A CAR OR TRUCK?	Car / Truck.......................................1 2	
[G] A BOAT WITH A MOTOR?	Boat with motor.................................1 2	
HC10. DO YOU OR SOMEONE LIVING IN THIS HOUSEHOLD OWN THIS DWELLING? *If "No", then ask:* DO YOU RENT THIS DWELLING FROM SOMEONE NOT LIVING IN THIS HOUSEHOLD? *If "Rented from someone else", circle "2". For other responses, circle "6".*	Own ....1 Rent ....2 Other (*specify*) _____ 6	
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 HECTARES OF AGRICULTURAL LAND DO MEMBERS OF THIS HOUSEHOLD OWN? *If less than 1, record "00". If 95 or more, record '95'. If unknown, record '98'.*	Hectares .... ___ ___	
HC13. DOES THIS HOUSEHOLD OWN ANY LIVESTOCK, HERDS, OTHER FARM ANIMALS, OR POULTRY?	Yes ....1 No 2	2⇨HC15
HC14. HOW MANY OF THE FOLLOWING ANIMALS DOES THIS HOUSEHOLD HAVE?		
[A] CATTLE, MILK COWS, OR BULLS?	Cattle, milk cows, or bulls ....___ ___	
[B] HORSES, DONKEYS, OR MULES?	Horses, donkeys, or mules ....___ ___	
[C] GOATS?	Goats ....___ ___	
[D] SHEEP?	Sheep ....___ ___	

[E] CHICKENS?	Chickens ....___ ___	
[F] PIGS?	Pigs ....___ ___	
[G]CAMELS	Camels ....___ ___	
If none, record '00'.If 95 or more, record '95'. *If unknown, record '98'.*		
HC15. DOES ANY MEMBER OF THIS HOUSEHOLD HAVE A BANK ACCOUNT?	Yes ....1 No ....2 Dk 8	

INSECTICIDE TREATED NETS		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................................ ___ ___	

TN3. *Ask the respondent to show you the nets in the household. If more than 3 nets, use additional questionnaire(s).*

	1st Net	2nd Net	3rd Net
TN4. *Mosquito net observed?*	Observed .... 1 Not observed.................. 2	Observed......................... 1 Not observed.................. 2	Observed .... 1 Not observed 2

TN5. *Observe or ask the brand/type of mosquito net.*
 	
If brand is unknown and you cannot observe the net, show pictures of typical net types/brands to respondent.
	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) _____36
	
	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) _____36
		
		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) _____36
			
			DK brand / type............. 98

TN6. HOW MANY MONTHS AGO DID YOUR HOUSEHOLD GET THE MOSQUITO NET? *If less than one month, record "00"*	Months ago .... ___ ___ More than 36 mo. ago... 95 DK / Not sure 98	Months ago .... ___ ___ More than 36 mo. ago ...95 DK / Not sure.................98	Months ago...........___ ___ More than 36 mo. ago... 95 DK / Not sure 98

TN7. *Check TN5 for type of net*	☐ *Long-lasting (11-18)*
	   ⇨ *TN11*
	
	☐ *Pre-treated (21-28)*
	   ⇨ *TN9*
	
	☐ *Else ⇨ Continue*
		☐ *Long-lasting (11-18)*
		   ⇨ *TN11*
		
		☐ *Pre-treated (21-28)*
		   ⇨ *TN9*
		
		☐ *Else ⇨ Continue*
			☐ *Long-lasting (11-18)*
			   ⇨ *TN11*
			
			☐ *Pre-treated (21-28)*
			   ⇨ *TN9*
			
			☐ *Else ⇨ Continue*

TN8. WHEN YOU GOT THE NET, WAS IT ALREADY TREATED WITH AN INSECTICIDE TO KILL OR REPEL MOSQUITOES?	Yes................................. 1 No .... 2 DK / Not sure 8	Yes..................................1 No.....................................2 DK / Not sure...................8	Yes .... 1 No .... 2 DK / Not sure 8

TN9. SINCE YOU GOT THE NET, WAS IT EVER SOAKED OR DIPPED IN A LIQUID TO KILL OR REPEL MOSQUITOES?	Yes................................. 1
	No 2
	   ⇨ TN11
	DK / Not sure 8
	   ⇨ TN11
		Yes..................................1
		No.....................................2
		   ⇨ TN11
		DK / Not sure...................8
		   ⇨ TN11
			Yes 1
			No 2
			   ⇨ TN11
			DK / Not sure 8
			   ⇨ TN11

TN10. 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 DK / Not sure 98	Months ago .... ___ ___ More than 24 mo. ago ...95 DK / Not sure................98	Months ago........... ___ ___ More than 24 mo. ago... 95 DK / Not sure 98
TN11. Did anyone sleep under this mosquito net last night?	Yes.................................1 No ....2 ⇨ TN13 DK / Not sure ....8 ⇨ TN13	Yes ....1 No.................................2 ⇨ TN13 DK / Not sure..................8 ⇨ TN13	Yes .... 1 No.................................. 2 ⇨ TN13 DK / Not sure .... 8 ⇨ TN13
TN12. Who slept under this mosquito net last night? *Record the person's line number from the List of Household Members* *If someone not in the List of Household Members slept under the mosquito net, record "00"*	Name _____ Line number .... ___ ___ Name _____ Line number .... ___ ___ Name _____ Line number .... ___ ___ Name _____ Line number .... ___ ___ Name _____ Line number .... ___ ___ Name _____ Line number .... ___ ___	Name_____ Line number .... ___ ___ Name_____ Line number .... ___ ___ Name_____ Line number .... ___ ___ Name_____ Line number .... ___ ___ Name_____ Line number .... ___ ___ Name_____ Line number .... ___ ___	Name_____ Line number..........___ ___ Name_____ Line number..........___ ___ Name_____ Line number..........___ ___ Name_____ Line number..........___ ___ Name_____ Line number..........___ ___ Name_____ Line number..........___ ___
TN13.	*Go back to TN4 for next net. If no more nets, go to next module*	*Go back to TN4 for next net. If no more nets, go to next module*	*Go back to TN4 in first column of a new questionnaire for next net. If no more nets, go to next module*
			Tick here if additional questionnaire used ☐

INDOOR RESIDUAL SPRAYING		**IR**
IR1. AT ANY TIME IN THE PAST 12 MONTHS, HAS ANYONE COME INTO YOUR DWELLING TO SPRAY THE INTERIOR WALLS AGAINST MOSQUITOES?	Yes .... 1 No... 2 DK 8	2⇨Next Module 8⇨Next Module
IR2. WHO SPRAYED THE DWELLING? *Circle all that apply.*	Government worker / program ....A Private company ....B Non-governmental organization ....C Other (*specify*)_____X DK ....Z	

WATER AND SANITATION		WS
WS1. WHAT IS THE <u>MAIN</u> SOURCE OF DRINKING WATER FOR MEMBERS OF YOUR HOUSEHOLD?	Piped water Piped into dwelling .... 11 Piped into compound, yard or plot .... 12 Piped to neighbour .... 13 Public tap / standpipe .... 14 Tube Well, 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⇨WS6 12⇨WS6 13⇨WS6 14⇨WS3 21⇨WS3 31⇨WS3 32⇨WS3 41⇨WS3 42⇨WS3 51⇨WS3 61⇨WS3 71⇨WS3 81⇨WS3 96⇨WS3
WS2. WHAT IS THE <u>MAIN</u> SOURCE OF WATER USED BY YOUR HOUSEHOLD FOR OTHER PURPOSES SUCH AS COOKING AND HANDWASHING?	Piped water Piped into dwelling .... 11 Piped into compound, yard or plot .... 12 Piped to neighbour .... 13 Public tap / standpipe .... 14 Tube Well, 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⇨WS6 12⇨WS6 13⇨WS6
WS3. WHERE IS THAT WATER SOURCE LOCATED?	In own dwelling.. 1 In own yard / plot .... 2 Elsewhere... 3	1⇨WS6 2⇨WS6
WS4. HOW LONG DOES IT TAKE TO GO THERE, GET WATER, AND COME BACK?	Number of minutes .... __ __ __ DK 998	

WS5. WHO USUALLY GOES TO THIS SOURCE TO COLLECT THE WATER FOR YOUR HOUSEHOLD? *Probe:* IS THIS PERSON UNDER AGE 15? WHAT SEX?	Adult woman (age 15+ years) ....1 Adult man (age 15+ years)..........................2 Female child (under 15) ....3 Male child (under 15) ....4 DK 8	
WS6. DO YOU DO ANYTHING TO THE WATER TO MAKE IT SAFER TO DRINK?	Yes ....1 No..2 DK 8	2⇨WS8 8⇨WS8
WS7. WHAT DO YOU USUALLY DO TO MAKE THE WATER 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	

WS8. WHAT KIND OF TOILET FACILITY DO MEMBERS OF YOUR HOUSEHOLD USUALLY USE?
 	
 If "flush" or "pour flush", probe:
 WHERE DOES IT FLUSH TO?
 	
 If not possible to determine, 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
	 Pit latrine
	    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 facility, Bush, Field...............................95
	
	 Other (*specify*) _____ 96
		
		 95⇨Next Module

WS9. DO YOU SHARE THIS FACILITY WITH OTHERS WHO ARE NOT MEMBERS OF YOUR HOUSEHOLD?	Yes ....1 No..2	2⇨Next Module
WS10. DO YOU SHARE THIS FACILITY ONLY WITH MEMBERS OF 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
WS11. HOW MANY HOUSEHOLDS IN TOTAL USE THIS TOILET FACILITY, INCLUDING YOUR OWN HOUSEHOLD?	Number of households (if less than 10) 0 __ Ten or more households ....10 DK 98	

HANDWASHING		HW
HW1. WE WOULD LIKE TO LEARN ABOUT THE PLACES THAT HOUSEHOLDS USE TO WASH THEIR HANDS. CAN YOU PLEASE SHOW ME WHERE MEMBERS OF YOUR HOUSEHOLD <u>MOST OFTEN</u> WASH THEIR HANDS?	Observed .... 1 Not observed Moving basin/kettle/bucket.................. 2 Not in dwelling / plot / yard........................ 3 No permission to see .... 4 Other reason (*specify*)_____ 6	2 ⇨HW4 3 ⇨HW4 4 ⇨HW4 6 ⇨HW4
HW2. *Observe presence of water at the place for handwashing.* *Verify by checking the tap/pump, or basin, bucket, water container or similar objects for presence of water.*	Water is available.. 1 Water is not available 2	
HW3A. *Is soap, detergent or ash/mud/sand present at the place for handwashing?*	Yes, present.. 1 No, not present 2	2⇨HW4
HW3B. *Record your observation.* *Circle all that apply.*	Bar soap...A Detergent (Powder / Liquid / Paste)............B Liquid soap...C Ash / Mud / Sand ....D	A⇨HH19 B⇨HH19 C⇨HH19 D⇨HH19
HW4. DO YOU HAVE ANY SOAP OR DETERGENT OR ASH/MUD/SAND IN YOUR HOUSE FOR WASHING HANDS?	Yes.. 1 No 2	2⇨HH19
HW5A. CAN YOU PLEASE SHOW IT TO ME?	Yes, shown .... 1 No, not shown 2	2⇨HH19
HW5B. *Record your observation.* *Circle all that apply.*	Bar soap...A Detergent (Powder / Liquid / Paste)............B Liquid soap...C Ash / Mud / Sand ....D	

| **HH19**. *Record the time.* | Hour and minutes ....__ __ : __ __ | |

SALT IODIZATION		**SI**
SI1. WE WOULD LIKE TO CHECK WHETHER THE SALT USED IN YOUR HOUSEHOLD IS IODIZED. MAY I HAVE A SAMPLE OF THE SALT USED <u>TO COOK MEALS</u> IN YOUR HOUSEHOLD? *Once you have tested the salt, circle number that corresponds to test outcome.*	Not iodized - 0 PPM ....1 More than 0 PPM & less than 15 PPM........2 15 PPM or more ....3 No salt in the house....................................4 Salt not tested (*specify reason*) _____ 5	

HH20. *Thank the respondent for his/her cooperation and check the List of Household Members:*

☐ *A separate QUESTIONNAIRE FOR INDIVIDUAL WOMEN has been issued for each woman age 15-49 years in the List of Household Members (HL7)*

☐ *A separate QUESTIONNAIRE FOR CHILDREN UNDER FIVE has been issued for each child under age 5 years in the List of Household Members (HL7B)*

Return to the cover page and make sure that all information is entered, including the number of eligible women (HH12) and under-5s (HH14)

Make arrangements for the administration of the remaining questionnaire(s) in this household.

Interviewer's Observations

Field Editor's Observations

Supervisor's Observations

QUESTIONNAIRE FOR INDIVIDUAL WOMEN
WESTERN AND NORTH RIFT SURVEY

MICS   KNBS KENYA NATIONAL BUREAU OF STATISTICS *Keeping you informed*   unicef

WOMAN'S INFORMATION PANEL	**WM**

This questionnaire is to be administered to all women age 15 through 49 (see List of Household Members, column HL7).A separate questionnaire should be used for each eligible woman.

WM1. Cluster number: ___ ___ ___ ___	**WM2**. Household number: ___ ___ ___
WM3. Woman's name: Name_____	**WM4**. Woman's line number: ___ ___
WM5.Interviewer's name and number: Name_____ ___ ___	**WM6**. Day/Month/Year of interview: __ __ /__ __ / 201__

Repeat greeting if not already read to this woman: WE ARE FROM THE UNIVERSITY OF NAIROBI AND KENYA NATIONAL BUREAU OF STATISTICS. WE ARE CONDUCTING A SURVEY ABOUT THE SITUATION OF CHILDREN, FAMILIES AND HOUSEHOLDS. I WOULD LIKE TO TALK TO YOU ABOUT THESE SUBJECTS. THE INTERVIEW WILL TAKE ABOUT 45 MINUTES. ALL THE INFORMATION WE OBTAIN WILL REMAIN STRICTLY CONFIDENTIAL AND ANONYMOUS.	*If greeting at the beginning of the household questionnaire has already been read to this woman, then read the following:* NOW I WOULD LIKE TO TALK TO YOU MORE ABOUT YOUR HEALTH AND OTHER TOPICS. THIS INTERVIEW WILL TAKE ABOUT 45 MINUTES. AGAIN, ALL THE INFORMATION WE OBTAIN WILL REMAIN STRICTLY CONFIDENTIAL AND ANONYMOUS.

MAY I START NOW?

☐ *Yes, permission is given ⇨Go to WM10 to record the time and then begin the interview.*

☐ *No, permission is not given ⇨Circle '03' inWM7.Discuss this result with your supervisor.*

WM7. Result of woman's interview	Completed... 01 Not at home.. 02 Refused.. 03 Partly completed .... 04 Incapacitated... 05 Other (*specify*)_____ 96

WM8. Field editor's name and number: Name_____ __ __	**WM9**. Main data entry clerk's name and number: Name_____ __ __

| **WM10**. *Record the time.* | Hour and minutes ....__ __ : __ __ | |

WOMAN'S BACKGROUND		**WB**
WB1. IN WHAT MONTH AND YEAR WERE YOU BORN?	Date of birth Month..__ __ DK month..98 Year ....__ __ __ __ DK year..9998	
WB2. HOW OLD ARE YOU? *Probe:* HOW OLD WERE YOU AT YOUR LAST BIRTHDAY? *Compare and correct WB1 and/or WB2 if inconsistent*	Age (in completed years) ....__ __	
WB3. HAVE YOU EVER ATTENDED SCHOOL OR PRESCHOOL?	Yes ....1 No 2	2⇨WB7
WB4. WHAT IS THE HIGHEST LEVEL OF SCHOOL YOU ATTENDED?	Preschool ....0 Primary ....1 Secondary ....2 Higher 3	0⇨WB7
WB5. WHAT IS THE HIGHEST GRADE YOU COMPLETED AT THAT LEVEL? *If the first grade at this level is not completed, enter "00"*	Grade ....__ __	
WB6. *Check WB4:* ☐*Secondary or higher (WB4=2 or 3)* ⇨ *Go to Next Module* ☐*Primary (WB4=1)* ⇨ *Continue with WB7*		
WB7. NOW I WOULD LIKE YOU TO READ THIS SENTENCE TO ME. *Show sentence on the card to the respondent. If respondent cannot read whole sentence, probe:* CAN YOU READ PART OF THE SENTENCE TO ME?	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/visually impaired................................5	

ACCESS TO MASS MEDIA AND USE OF INFORMATION/COMMUNICATION TECHNOLOGY   MT

MT1. *Check WB7:*
 	
   ☐*Question left blank (Respondent has secondary or higher education)* ⇨ *Continue with MT2*
 	
   ☐*Able to read or no sentence in required language (WB7 = 2, 3 or 4)* ⇨ *Continue with MT2*
 	
   ☐*Cannot read at all or blind/visually impaired (WB7 = 1 or 5)* ⇨ *Go to MT3*		

MT2. HOW OFTEN DO YOU READ A NEWSPAPER OR MAGAZINE: ALMOST EVERY DAY, AT LEAST ONCE A WEEK, LESS THAN ONCE A WEEK OR NOT AT ALL?	Almost every day...1 At least once a week ....2 Less than once a week................................3 Not at all 4	
MT3. DO YOU LISTEN TO THE RADIO ALMOST EVERY DAY, AT LEAST ONCE A WEEK, LESS THAN ONCE A WEEK OR NOT AT ALL?	Almost every day...1 At least once a week ....2 Less than once a week................................3 Not at all 4	
MT4. HOW OFTEN DO YOU WATCH TELEVISION: WOULD YOU SAY THAT YOU WATCH ALMOST EVERY DAY, AT LEAST ONCE A WEEK, LESS THAN ONCE A WEEK OR NOT AT ALL?	Almost every day...1 At least once a week ....2 Less than once a week................................3 Not at all 4	

MT5.*Check WB2: Age of respondent?*
 	
   ☐*Age 15-24* ⇨ *Continue with MT6*
 	
   ☐ *Age 25-49* ⇨*Go to Next Module*		

MT6. HAVE YOU EVER USED A COMPUTER?	Yes ....1 No...2	2⇨MT9
MT7. HAVE YOU USED A COMPUTER FROM ANY LOCATION IN THE LAST 12 MONTHS?	Yes ....1 No...2	2⇨MT9
MT8. DURING THE LAST ONE MONTH, HOW OFTEN DID YOU USE A COMPUTER: ALMOST EVERY DAY, AT LEAST ONCE A WEEK, LESS THAN ONCE A WEEK OR NOT AT ALL?	Almost every day...1 At least once a week ....2 Less than once a week................................3 Not at all 4	
MT9. HAVE YOU EVER USED THE INTERNET?	Yes ....1 No...2	2⇨Next Module
MT10. IN THE LAST 12 MONTHS, HAVE YOU USED THE INTERNET? *If necessary, probe for use from any location, with any device.*	Yes ....1 No...2	2⇨Next Module
MT11. DURING THE LAST ONE MONTH, HOW OFTEN DID YOU USE THE INTERNET: ALMOST EVERY DAY, AT LEAST ONCE A WEEK, LESS THAN ONCE A WEEK OR NOT AT ALL?	Almost every day...1 At least once a week ....2 Less than once a week................................3 Not at all 4	

FERTILITY/BIRTH HISTORY		CM
CM1. NOW I WOULD LIKE TO ASK ABOUT ALL THE BIRTHS YOU HAVE HAD DURING YOUR LIFE. HAVE YOU EVER GIVEN BIRTH?	Yes .... 1 No 2	2⇨CM8
CM4. DO YOU HAVE ANY SONS OR DAUGHTERS TO WHOM YOU HAVE GIVEN BIRTH WHO ARE NOW LIVING WITH YOU?	Yes .... 1 No 2	2⇨CM6
CM5. HOW MANY SONS LIVE WITH YOU? HOW MANY DAUGHTERS LIVE WITH YOU? *If none, record '00'.*	Sons at home .... __ __ Daughters at home .... __ __	
CM6. 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⇨CM8
CM7. HOW MANY SONS ARE ALIVE BUT DO NOT LIVE WITH YOU? HOW MANY DAUGHTERS ARE ALIVE BUT DO NOT LIVE WITH YOU? *If none, record '00'.*	Sons elsewhere .... __ __ Daughters elsewhere .... __ __	
CM8. HAVE YOU EVER GIVEN BIRTH TO A BOY OR GIRL WHO WAS BORN ALIVE BUT LATER DIED? *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⇨CM10
CM9. HOW MANY BOYS HAVE DIED? HOW MANY GIRLS HAVE DIED? *If none, record '00'.*	Boys dead .... __ __ Girls dead .... __ __	
CM10. *Sum answers to CM5, CM7, and CM9.*	Sum .... __ __	

CM11. JUST TO MAKE SURE THAT I HAVE THIS RIGHT, YOU HAVE HAD IN TOTAL (*total number in CM10*) LIVE BIRTHS DURING YOUR LIFE. IS THIS CORRECT?

  ☐ *Yes. Check below:*

    ☐ *No live births* ⇨ *Go to* ILLNESS SYMPTOMS *Module*

    ☐ *One or more live births* ⇨ *Continue with the* BIRTH HISTORY *module*

  ☐ *No.* ⇨ *Check responses to CM1-CM10 and make corrections as necessary before proceeding to the* BIRTH HISTORY *Module or* ILLNESS SYMPTOMS *Module*

BIRTH HISTORY — BH

NOW I WOULD LIKE TO RECORD THE NAMES OF ALL OF YOUR BIRTHS, WHETHER STILL ALIVE OR NOT, STARTING WITH THE FIRST ONE YOU HAD.
Record names of all of the births in BH1. Record twins and triplets on separate lines. If there are more than 14 births, use an additional questionnaire.

BH Line No.	**BH1.** WHAT NAME WAS GIVEN TO YOUR (*first/next*) BABY?	**BH2.** WERE ANY OF THESE BIRTHS TWINS? 1 Single 2 Multiple	**BH3.** IS (*name*) A BOY OR A GIRL? 1 Boy 2 Girl	**BH4.** IN WHAT MONTH AND YEAR WAS (*name*) BORN? *Probe:* WHAT IS HIS/HER BIRTHDAY?		**BH5.** IS (*name*) STILL ALIVE? 1 Yes 2 No	**BH6.** HOW OLD WAS (*name*) AT HIS/HER LAST BIRTHDAY? *Record age in completed years.*	**BH7.** IS (*name*) LIVING WITH YOU? 1 Yes 2 No	**BH8.** *Record household line number of child (from HL1)* *Record "00" if child is not listed.*	**BH9.** *If dead:* HOW OLD WAS (*name*) WHEN HE/SHE DIED? *If "1 year", probe:* HOW MANY MONTHS OLD WAS (*name*)? *Record days if less than 1 month; record months if less than 2 years; or years*		**BH10.** WERE THERE ANY OTHER LIVE BIRTHS BETWEEN (*name of previous birth*) AND (*name*), INCLUDING ANY CHILDREN WHO DIED AFTER BIRTH? 1 Yes 2 No
Line	Name	SM	BG	Month	Year	Y N	Age	Y N	Line No	Unit	Number	Y N
01		1 2	1 2	___ ___	___ ___ ___ ___	1 2 ⇩ BH9	___ ___	1 2	___ ___ ⇨Next Line	Days .... 1 Months .... 2 Years 3	___ ___	
02		1 2	1 2	___ ___	___ ___ ___ ___	1 2 ⇩ BH9	___ ___	1 2	___ ___ ⇨BH10	Days .... 1 Months .... 2 Years 3	___ ___	1 2 Add Birth Next Birth
03		1 2	1 2	___ ___	___ ___ ___ ___	1 2 ⇩ BH9	___ ___	1 2	___ ___ ⇨BH10	Days .... 1 Months .... 2 Years 3	___ ___	1 2 Add Birth Next Birth
04		1 2	1 2	___ ___	___ ___ ___ ___	1 2 ⇩ BH9	___ ___	1 2	___ ___ ⇨BH10	Days .... 1 Months .... 2 Years 3	___ ___	1 2 Add Birth Next Birth
05		1 2	1 2	___ ___	___ ___ ___ ___	1 2 ⇩ BH9	___ ___	1 2	___ ___ ⇨BH10	Days .... 1 Months .... 2 Years 3	___ ___	1 2 Add Birth Next Birth
06		1 2	1 2	___ ___	___ ___ ___ ___	1 2 ⇩ BH9	___ ___	1 2	___ ___ ⇨BH10	Days .... 1 Months .... 2 Years 3	___ ___	1 2 Add Birth Next Birth
07		1 2	1 2	___ ___	___ ___ ___ ___	1 2 ⇩ BH9	___ ___	1 2	___ ___ ⇨BH10	Days .... 1 Months .... 2 Years 3	___ ___	1 2 Add Birth Next Birth

BH Line No.	BH1. WHAT NAME WAS GIVEN TO YOUR (*first/next*) BABY?	BH2. WERE ANY OF THESE BIRTHS TWINS? 1 Single 2 Multiple	BH3. IS (*name*) A BOY OR A GIRL? 1 Boy 2 Girl	BH4. IN WHAT MONTH AND YEAR WAS (*name*) BORN? *Probe*: WHAT IS HIS/HER BIRTHDAY?		BH5. IS (*name*) STILL ALIVE? 1 Yes 2 No	BH6. HOW OLD WAS (*name*) AT HIS/HER LAST BIRTHDAY? *Record age in completed years.*	BH7. IS (*name*) LIVING WITH YOU? 1 Yes 2 No	BH8. *Record household line number of child (from HL1)* *Record "00" if child is not listed.*	BH9. *If dead:* HOW OLD WAS (*name*) WHEN HE/SHE DIED? *If "1 year", probe:* HOW MANY MONTHS OLD WAS (*name*)? *Record days if less than 1 month; record months if less than 2 years; or years*		BH10. WERE THERE ANY OTHER LIVE BIRTHS BETWEEN (*name of previous birth*) AND (*name*), INCLUDING ANY CHILDREN WHO DIED AFTER BIRTH? 1 Yes 2 No
08		1 2	1 2	___ ___	___ ___ ___ ___	1 2 ⇩ BH9	___ ___	1 2	___ ___ ⇨BH10	Days .... 1 Months .... 2 Years 3	___ ___	1 2 Add Next Birth Birth
09		1 2	1 2	___ ___	___ ___ ___ ___	1 2 ⇩ BH9	___ ___	1 2	___ ___ ⇨BH10	Days .... 1 Months .... 2 Years 3	___ ___	1 2 Add Next Birth Birth
10		1 2	1 2	___ ___	___ ___ ___ ___	1 2 ⇩ BH9	___ ___	1 2	___ ___ ⇨BH10	Days .... 1 Months .... 2 Years 3	___ ___	1 2 Add Next Birth Birth
11		1 2	1 2	___ ___	___ ___ ___ ___	1 2 ⇩ BH9	___ ___	1 2	___ ___ ⇨BH10	Days .... 1 Months .... 2 Years 3	___ ___	1 2 Add Next Birth Birth
12		1 2	1 2	___ ___	___ ___ ___ ___	1 2 ⇩ BH9	___ ___	1 2	___ ___ ⇨BH10	Days .... 1 Months .... 2 Years 3	___ ___	1 2 Add Next Birth Birth
13		1 2	1 2	___ ___	___ ___ ___ ___	1 2 ⇩ BH9	___ ___	1 2	___ ___ ⇨BH10	Days .... 1 Months .... 2 Years 3	___ ___	1 2 Add Next Birth Birth
14		1 2	1 2	___ ___	___ ___ ___ ___	1 2 ⇩ BH9	___ ___	1 2	___ ___ ⇨BH10	Days .... 1 Months .... 2 Years 3	___ ___	1 2 Add Next Birth Birth

BH11. HAVE YOU HAD ANY LIVE BIRTHS SINCE THE BIRTH OF (*name of last birth in BIRTH HISTORY Module*)?

Yes 1

No 2

1⇨Record birth(s) in Birth History

CM12A. *Compare number in CM10 with number of births in the BIRTH HISTORY Module above and check:*

☐*Numbers are same ⇨Continue with CM13*

☐*Numbers are different ⇨ Probe and reconcile*

CM13. *Check BH4 in BIRTH HISTORY Module: Last birth occurred within the last 2 years, that is, since (month of interview) in* **2011***(if the month of interview and the month of birth are the same, and the year of birth is* **2011**, *consider this as a birth within the last 2 years)*

☐ *No live birth in last 2 years. ⇨ Go to ILLNESS SYMPTOMS Module.*

☐*One or more live births in last 2 years. ⇨Record name of last born child and continue with Next Module*

Name of last-born child_____

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

DESIRE FOR LAST BIRTH		**DB**
This module is to be administered to all women with a live birth in the 2 years preceding the date of interview. *Record name of last-born child from CM13 here _____.* *Use this child's name in the following questions, where indicated.*		
DB1. WHEN YOU GOT PREGNANT WITH (*name*), DID YOU WANT TO GET PREGNANT AT THAT TIME?	Yes .... 1 No 2	1⇨Next Module
DB2. DID YOU WANT TO HAVE A BABY LATER ON, OR DID YOU NOT WANT ANY (MORE) CHILDREN?	Later .... 1 No more.. 2	2⇨Next Module
DB3. HOW MUCH LONGER DID YOU WANT TO WAIT? *Record the answer as stated by respondent.*	Months... 1 __ __ Years .... 2 __ __ DK..998	

MATERNAL AND NEWBORN HEALTH		MN

This module is to be administered to all women with a live birth in the 2 years preceding the date of interview.
Record name of last-born child from CM13 here _____.
Use this child's name in the following questions, where indicated.

MN1. DID YOU SEE ANYONE FOR ANTENATAL CARE DURING YOUR PREGNANCY WITH (*name*)?	Yes .... 1 No... 2	2⇨MN5

MN2. WHOM DID YOU SEE?
 	
 Probe:
 ANYONE ELSE?
 	
 Probe for the type of person seen and circle all answers given.
	Health professional:
	    Doctor..A
	    Nurse/Midwife ....B
	    Clinical Officer C
	    Community Nurse ....D
	 Other person
	    Relative / friend ....E
	    Traditional birth attendant ....F
	    Community health worker .... G
	
	 Other (*specify*)_____X	

MN2A. HOW MANY WEEKS OR MONTHS PREGNANT WERE YOU WHEN YOU FIRST RECEIVED ANTENATAL CARE FOR THIS PREGNANCY? *Record the answer as stated by respondent.*	Weeks .... 1 __ __ Months .... 2 0 __ DK 998	
MN3. HOW MANY TIMES DID YOU RECEIVE ANTENATAL CARE DURING THIS PREGNANCY? *Probe to identify the number of times antenatal care was received. If a range is given, record the minimum number of times antenatal care received.*	Number of times.................................. __ __ DK 98	
MN4. AS PART OF YOUR ANTENATAL CARE DURING THIS PREGNANCY, WERE ANY OF THE FOLLOWING DONE AT LEAST ONCE: [A] WAS YOUR BLOOD PRESSURE MEASURED? [B] DID YOU GIVE A URINE SAMPLE? [C] DID YOU GIVE A BLOOD SAMPLE?	Yes No Blood pressure ....1 2 Urine sample ....1 2 Blood sample 1 2	
MN5. DO YOU HAVE A CARD OR OTHER DOCUMENT WITH YOUR OWN IMMUNIZATIONS LISTED? MAY I SEE IT PLEASE? *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	
MN6. WHEN YOU WERE PREGNANT WITH (*name*), DID YOU RECEIVE ANY INJECTION IN THE ARM OR SHOULDER TO PREVENT THE BABY FROM GETTING TETANUS, THAT IS CONVULSIONS AFTER BIRTH?	Yes .... 1 No... 2 DK 8	 2⇨MN9 8⇨MN9
MN7. HOW MANY TIMES DID YOU RECEIVE THIS TETANUS INJECTION DURING YOUR PREGNANCY WITH (*name*)?	Number of times.. __ DK 8	 8⇨MN9

MN8. *How many tetanus injections during last pregnancy were reported in MN7?*		
☐*At least two tetanus injections during last pregnancy.* ⇨ *Go to MN12* ☐*Only one tetanus injection during last pregnancy.* ⇨ *Continue with MN9*		
MN9. DID YOU RECEIVE ANY TETANUS INJECTION AT ANY TIME BEFORE YOUR PREGNANCY WITH (*name*), EITHER TO PROTECT YOURSELF OR ANOTHER BABY?	Yes .... 1 No.. 2 DK 8	 2⇨MN12 8⇨MN12
MN10. HOW MANY TIMES DID YOU RECEIVE A TETANUS INJECTION BEFORE YOUR PREGNANCY WITH (*name*)? *If 7 or more times, record '7'.*	Number of times.. __ DK 8	 8⇨MN12
MN11. HOW MANY YEARS AGO DID YOU RECEIVE THE LAST TETANUS INJECTION BEFORE YOUR PREGNANCY WITH (*name*)? *If less than 1 year, record '00'.*	Years ago... __ __	
MN12. *Check MN1 for presence of antenatal care during this pregnancy:*		
☐ *Yes, antenatal care received.* ⇨ *Continue with MN13* ☐*No antenatal care received* ⇨*Go to MN17*		
MN13. DURING (ANY OF)YOUR ANTENATAL VISIT(S) FOR THE PREGNANCY WITH (*name*), DID YOU TAKE ANY MEDICINE IN ORDER TO <u>PREVENT</u> YOU FROM GETTING MALARIA?	Yes .... 1 No.. 2 DK 8	 2⇨MN17 8⇨MN17
MN14. WHICH MEDICINES DID YOU TAKE TO PREVENT MALARIA? *Circle all medicines taken. If type of medicine is not determined, show typical anti-malarial to respondent.*	SP/Fansidar ....A Chloroquine..B Other (*specify*)_____X DK ....Z	
MN15. *Check MN14 for medicine taken:*		
☐ *SP/Fansidar taken.* ⇨ *Continue with MN16* ☐ *SP/Fansidar not taken.* ⇨ *Go to MN17*		
MN16. DURING YOUR PREGNANCY WITH (*name*), HOW MANY TIMES DID YOU TAKE SP/FANSIDAR IN TOTAL? PLEASE INCLUDE ALL THAT YOU OBTAINED EITHER DURING AN ANTENATAL CARE VISIT, DURING A VISIT TO A HEALTH FACILITY OR FROM ANOTHER SOURCE?	Number of times................................... __ __ DK 98	

MN17. WHO ASSISTED WITH THE DELIVERY OF (*name*)?
 	
Probe:
ANYONE ELSE?
 	
Probe for the type of person assisting and circle all answers given.
 	
If respondent says no one assisted, probe to determine whether any adults were present at the delivery.
	Health professional:
	    Doctor..A
	    Nurse / Midwife ....B
	    Clinical Officer C
	    Community Nurse ....D
	Other person
	    Traditional birth attendant ....F
	    Community health worker .... G
	    Relative / Friend ....H
	
	Other (*specify*)_____X
	No one..Y	

MN18. WHERE DID YOU GIVE BIRTH TO (*name*)?
 	
Probe to identify the type of source.
 	
If unable to determine whether public or private, write the name of the place.
 	
_____
(*Name of place*)
	Home
	    Respondent's home 11
	    Other home 12
	
	Public sector
	    Government hospital.............................. 21
	    Government clinic/health centre 22
	    Government dispensary 23
	    Other public (*specify*) _____ 26
	
	Private Medical Sector
	    Private hospital.................................... 31
	    Private clinic 32
	    Private maternity home 33
	    Mission hospital /clinic......................... 34
	
	    Other private
	        medical (*specify*) _____ 36
	
	Other (*specify*)_____ 96
		11⇨MN20
		12⇨MN20
		
		96⇨MN20

MN19. WAS (*name*) DELIVERED BY CAESAREAN SECTION? THAT IS, DID THEY CUT YOUR BELLY OPEN TO TAKE THE BABY OUT?	Yes .... 1 No... 2	 2⇨MN20
MN19A. WHEN WAS THE DECISION MADE TO HAVE THE CAESAREAN SECTION? WAS IT BEFORE OR AFTER YOUR LABOUR PAINS STARTED?	Before.. 1 After... 2	
MN20. WHEN (*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	
MN21. WAS (*name*) WEIGHED AT BIRTH?	Yes .... 1 No... 2 DK 8	 2⇨MN23 8⇨MN23
MN22.HOW MUCH DID (*name*) WEIGH? *If a card is available, record weight from card.*	From card........................1 (kg) __. __ __ __ From recall ....2 (kg) __. __ __ __	

	DK 99998	
MN23. HAS YOUR MENSTRUAL PERIOD RETURNED SINCE THE BIRTH OF (*name*)?	Yes .... 1 No... 2	
MN24. DID YOU EVER BREASTFEED (*name*)?	Yes .... 1 No... 2	2⇨Next Module
MN25. 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 __ __ DK/Don't remember 998	
MN26. IN THE FIRST THREE DAYS AFTER DELIVERY, WAS (*name*) GIVEN ANYTHING TO DRINK OTHER THAN BREAST MILK?	Yes .... 1 No... 2	2⇨Next Module
MN27. WHAT WAS (*name*) GIVEN TO DRINK? *Probe:* ANYTHING ELSE?	Milk (other than breast milk)........................A Plain water ....B Sugar or glucose water ....C Gripe water...D Sugar-salt-water solution ....E Fruit juice...F Infant formula .... G Tea / Infusions..H Honey... I Other (*specify*)_____X	

POST-NATAL HEALTH CHECKS	PN

This module is to be administered to all women with a live birth in the 2 years preceding the date of interview.
Record name of last-born child from CM13 here _____.
Use this child's name in the following questions, where indicated.

PN1. *Check MN18: Was the child delivered in a health facility?*

☐ *Yes, the child was delivered in a health facility (MN18=21-26 or 31-36)* ⇨ *Continue with PN2*

☐ *No, the child was not delivered in a health facility (MN18=11-12 or 96)* ⇨ *Go to PN6*

PN2. NOW I WOULD LIKE TO ASK YOU SOME QUESTIONS ABOUT WHAT HAPPENED IN THE HOURS AND DAYS AFTER THE BIRTH OF (*name*). YOU HAVE SAID THAT YOU GAVE BIRTH IN (*name or type of facility in MN18*). HOW LONG DID YOU STAY THERE AFTER THE DELIVERY? *If less than one day, record hours.* *If less than one week, record days.* *Otherwise, record weeks.*	Hours..1 __ __ Days ....2 __ __ Weeks ....3 __ __ DK / Don't remember 998	
PN3. I WOULD LIKE TO TALK TO YOU ABOUT CHECKS ON (*name*)'S HEALTH AFTER DELIVERY – FOR EXAMPLE, SOMEONE EXAMINING (*name*), CHECKING THE CORD, OR SEEING IF (*name*) IS OK. BEFORE YOU LEFT THE (*name or type of facility in MN18*), DID ANYONE CHECK ON (*name*)'S HEALTH?	Yes .... 1 No.. 2	
PN4. AND WHAT ABOUT CHECKS ON <u>YOUR</u> HEALTH – I MEAN, SOMEONE ASSESSING YOUR HEALTH, FOR EXAMPLE ASKING QUESTIONS ABOUT YOUR HEALTH OR EXAMINING YOU? DID ANYONE CHECK ON <u>YOUR</u> HEALTH BEFORE YOU LEFT (*name or type or facility in MN18*)?	Yes .... 1 No.. 2	
PN5. NOW I WOULD LIKE TO TALK TO YOU ABOUT WHAT HAPPENED AFTER YOU LEFT (*name or type of facility in MN18*). DID ANYONE CHECK ON (*name*)'S HEALTH AFTER YOU LEFT (*name or type of facility in MN18*)?	Yes .... 1 No.. 2	1⇨PN11 2⇨PN16

PN6. *Check MN17: Did a health professional, traditional birth attendant, or community health worker assist with the delivery?*

☐ *Yes, delivery assisted by a health professional, traditional birth attendant, or community health worker (MN17=A-G)* ⇨*Continue with PN7*

☐ *No, delivery not assisted by a health professional, traditional birth attendant, or community health worker (A-G not circled in MN17)* ⇨ *Go to PN10*

PN7. YOU HAVE ALREADY SAID THAT (*person or persons in MN17*) ASSISTED WITH THE BIRTH. NOW I WOULD LIKE TO TALK TO YOU ABOUT CHECKS ON (*name*)'S HEALTH AFTER DELIVERY, FOR EXAMPLE EXAMINING (*name*), CHECKING THE CORD, OR SEEING IF (*name*) IS OK. AFTER THE DELIVERY WAS OVER AND BEFORE (*person or persons in MN17*) LEFT YOU, DID (*person or persons in MN17*) CHECK ON (*name*)'S HEALTH?	Yes .... 1 No.. 2	
PN8. AND DID (*person or persons in MN17*) CHECK ON <u>YOUR</u> HEALTH BEFORE LEAVING? BY CHECK ON YOUR HEALTH, I MEAN ASSESSING YOUR HEALTH, FOR EXAMPLE ASKING QUESTIONS ABOUT YOUR HEALTH OR EXAMINING YOU.	Yes .... 1 No.. 2	
PN9. AFTER THE (*person or persons in MN17*) LEFT YOU, DID ANYONE CHECK ON THE HEALTH OF (*name*)?	Yes .... 1 No.. 2	1⇨PN11 2⇨PN18
PN10. I WOULD LIKE TO TALK TO YOU ABOUT CHECKS ON (*name*)'S HEALTH AFTER DELIVERY – FOR EXAMPLE, SOMEONE EXAMINING (*name*), CHECKING THE CORD, OR SEEING IF THE BABY IS OK. AFTER (*name*) WAS DELIVERED, DID ANYONE CHECK ON HIS/HER HEALTH?	Yes .... 1 No.. 2	2⇨PN19
PN11. DID SUCH A CHECK HAPPEN ONLY ONCE, OR MORE THAN ONCE?	Once... 1 More than once 2	1⇨PN12A 2⇨PN12B
PN12A. HOW LONG AFTER DELIVERY DID THAT CHECK HAPPEN? **PN12B**. HOW LONG AFTER DELIVERY DID THE FIRST OF THESE CHECKS HAPPEN? *If less than one day, record hours.* *If less than one week, record days.* *Otherwise, record weeks.*	Hours....................................... 1 __ __ Days .... 2 __ __ Weeks .... 3 __ __ DK / Don't remember 998	

PN13. WHO CHECKED ON (*name*)'S HEALTH AT THAT TIME?	Health professional:
	    Doctor...A
	    Nurse / Midwife ....B
	    Clinical Officer C
	    Community Nurse ....D
	
	Other person
	    Traditional birth attendant ....F
	    Community health worker .... G
	    Relative / Friend ....H
	
	Other (*specify*)_____X	

PN14. WHERE DID THIS CHECK TAKE PLACE?
 	
Probe to identify the type of source.
 	
If unable to determine whether public or private, write the name of the place.
 	
    _____
          (Name of place)
	Home
	    Respondent's home 11
	    Other home 12
	
	Public sector
	    Government hospital 21
	    Government clinic / health centre 22
	    Government dispensary 23
	    Other public (specify) 26
	
	Private Medical Sector
	    Private hospital..................................... 31
	    Private clinic 32
	    Private maternity home 33
	    Mission hospital /clinic......................... 34
	    Other Private Medical 35
	
	Other (*specify*)_____ 96	

PN15. *Check MN18: Was the child delivered in a health facility?*
 	
    ☐ *Yes, the child was delivered in a health facility (MN18=21-26 or 31-36)* ⇨ *Continue with PN16*
 	
    ☐ *No, the child was not delivered in a health facility (MN18=11-12 or 96)* ⇨ *Go to PN17*		

PN16. AFTER YOU LEFT (*name or type of facility in MN18*), DID ANYONE CHECK ON <u>YOUR</u> HEALTH?	Yes .... 1 No... 2	1⇨PN20 2⇨Next Module

PN17. *Check MN17: Did a health professional, traditional birth attendant, or community health worker assist with the delivery?*
 	
    ☐ *Yes, delivery assisted by a health professional, traditional birth attendant, or community health worker (MN17=A-G)* ⇨*Continue with PN18*
 	
    ☐ *No, delivery not assisted by a health professional, traditional birth attendant, or community health worker (A-G not circled in MN17)* ⇨ *Go to PN19*		

PN18. AFTER THE DELIVERY WAS OVER AND (*person or persons in MN17*) LEFT, DID ANYONE CHECK ON <u>YOUR</u> HEALTH?	Yes .... 1 No... 2	1⇨PN20 2⇨Next Module

PN19. AFTER THE BIRTH OF (*name*), DID ANYONE CHECK ON <u>YOUR</u> HEALTH? I MEAN SOMEONE ASSESSING YOUR HEALTH, FOR EXAMPLE ASKING QUESTIONS ABOUT YOUR HEALTH OR EXAMINING YOU.	Yes .... 1 No.. 2	2⇨Next Module
PN20. DID SUCH A CHECK HAPPEN ONLY ONCE, OR MORE THAN ONCE?	Once.. 1 More than once 2	1⇨PN21A 2⇨PN21B
PN21A. HOW LONG AFTER DELIVERY DID THAT CHECK HAPPEN? **PN21B**. HOW LONG AFTER DELIVERY DID THE FIRST OF THESE CHECKS HAPPEN? *If less than one day, record hours.* *If less than one week, record days.* *Otherwise, record weeks.*	Hours................................1 __ __ Days ....2 __ __ Weeks ....3 __ __ DK / Don't remember 998	

PN22. WHO CHECKED ON <u>YOUR</u> HEALTH AT THAT TIME?	Health professional:
	    Doctor..A
	    Nurse / Midwife ....B
	    Clinical Officer C
	    Community Nurse ....D
	
	Other person
	    Traditional birth attendant ....F
	    Community health worker .... G
	    Relative / Friend ....H
	
	Other (*specify*)_____X	

PN23. WHERE DID THIS CHECK TAKE PLACE?
 	
Probe to identify the type of source.
 	
If unable to determine whether public or private, write the name of the place.
 	
_____
(Name of place)
	Home
	    Respondent's home 11
	    Other home 12
	
	Public sector
	    Government hospital 21
	    Government clinic / health centre 22
	    Government dispensary 23
	    Other public (specify) 26
	
	Private Medical Sector
	    Private hospital..................................... 31
	    Private clinic 32
	    Private maternity home 33
	    Mission hospital /clinic......................... 34
	    Other Private Medical 35
	
	Other (specify) _____ 96	

ILLNESS SYMPTOMS   IS

IS1. *Check List of Household Members, columnsHL7B and HL15*

Is the respondent the mother or caretaker of any child under age 5?

☐ *Yes ⇨ Continue with IS2.*

☐*No ⇨ Go to Next Module.*

IS2. SOMETIMES CHILDREN HAVE SEVERE ILLNESSES AND SHOULD BE TAKEN IMMEDIATELY TO A HEALTH FACILITY. WHAT TYPES OF SYMPTOMS WOULD CAUSE YOU TO TAKE A CHILD UNDER THE AGE OF 5 TO A HEALTH FACILITY RIGHT AWAY? *Probe:* ANY OTHER SYMPTOMS? *Keep asking for more signs or symptoms until the mother/caretaker cannot recall any additional symptoms.* *Circle all symptoms mentioned, but do <u>not</u> prompt with any suggestions*	Child not able to drink or breastfeed .... A Child becomes sicker .... B Child develops a fever................................ C Child has fast breathing .... D Child has difficulty breathing .... E Child has blood in stool ....F Child is drinking poorly ....G Other (*specify*) _____ X Other (*specify*) _____ Y Other (*specify*) _____ Z	

CONTRACEPTION		CP
CP1. I WOULD LIKE TO TALK WITH YOU ABOUT ANOTHER SUBJECT – FAMILY PLANNING. ARE YOU PREGNANT NOW?	Yes, currently pregnant .... 1 No.. 2 Unsure or DK 8	1⇨CP2A
CP2. COUPLES 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	1⇨CP3
CP2A. HAVE YOU EVER DONE SOMETHING OR USED ANY METHOD TO DELAY OR AVOID GETTING PREGNANT?	Yes .... 1 No.. 2	1⇨Next Module 2⇨Next Module
CP3. WHAT ARE YOU DOING TO DELAY OR AVOID A PREGNANCY? *Do not prompt.* *If more than one method is mentioned, circle each one.*	Female sterilization ....A Male sterilization ....B IUD ....C Injectables ....D Implants..E Pill .... F Male condom.. G Female condom ....H Diaphragm.. I Foam/ Jelly... J Lactational amenorrhoea method (LAM) ....K Periodic abstinence/Rhythm ....L Withdrawal .... M Other (*specify*)_____X	

UNMET NEED		UN

UN1. *Check CP1. Currently pregnant?*		
☐ *Yes, currently pregnant* ⇨ *Continue with UN2* ☐ *No, unsure or DK* ⇨ *Go to UN5*		

UN2. NOW I WOULD LIKE TO TALK TO YOU ABOUT YOUR CURRENT PREGNANCY. WHEN YOU GOT PREGNANT, DID YOU WANT TO GET PREGNANT AT THAT TIME?	Yes...1 No 2	1⇨UN4
UN3. DID YOU WANT TO HAVE A BABY LATER ON OR DID YOU NOT WANT ANY (MORE) CHILDREN?	Later...1 No more 2	
UN4. 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 another child.................................1 No more / None......................................2 Undecided / DK......................................8	1⇨UN7 2⇨UN13 8⇨UN13

UN5. *Check CP3. Currently using "Female sterilization"?*		
☐ *Yes* ⇨ *Go to UN13* ☐ *No* ⇨ *Continue with UN6*		

UN6. NOW I WOULD LIKE TO ASK YOU SOME QUESTIONS ABOUT THE FUTURE. WOULD YOU LIKE TO HAVE (A/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 / DK......................................8	 2⇨UN9 3⇨UN11 8⇨UN9
UN7. HOW LONG WOULD YOU LIKE TO WAIT BEFORE THE BIRTH OF (A/ANOTHER) CHILD? *Record the answer as stated by respondent.*	Months ....1 __ __ Years..............................2 __ __ Does not want to wait (soon/now)...........993 Says she cannot get pregnant ....994 After marriage ....995 Other ....996 DK 998	 994⇨UN11

UN8. *Check CP1. Currently pregnant?*		
☐ *Yes, currently pregnant* ⇨ *Go to UN13* ☐ *No, unsure or DK* ⇨ *Continue with UN9*		

UN9. *Check CP2. Currently using a method?*		
☐ *Yes ⇨ Go to UN13*		
☐ *No ⇨ Continue with UN10*		

UN10. DO YOU THINK YOU ARE PHYSICALLY ABLE TO GET PREGNANT AT THIS TIME?	Yes... 1	1 ⇨UN13
	No 2	
	DK 8	8 ⇨UN13

| **UN11**. WHY DO YOU THINK YOU ARE NOT PHYSICALLY ABLE TO GET PREGNANT? | Infrequent sex / No sex ....A
 Menopausal ....B
 Never menstruated C
 Hysterectomy (surgical removal
   of uterus) ....D
 Has been trying to get pregnant
   for 2 years or more without result ....E
 Postpartum amenorrheic ....F
 Breastfeeding...G
 Too old ....H
 Fatalistic.. I

 Other (*specify*) _____ X

 DK ....Z | |

UN12. *Check UN11. "Never menstruated" mentioned?*		
☐ *Mentioned ⇨ Go to Next Module*		
☐ *Not mentioned ⇨ Continue with UN13*		

| **UN13**. WHEN DID YOUR LAST MENSTRUAL PERIOD START?

 Record the answer using the same unit stated by the respondent | Days ago... 1 __ __

 Weeks ago .... 2 __ __

 Months ago .... 3 __ __

 Years ago.. 4 __ __

 In menopause /
   Has had hysterectomy 994
 Before last birth...................................... 995
 Never menstruated .... 996 | |

FEMALE GENITAL MUTILATION/CUTTING		FG
FG1. HAVE YOU EVER HEARD OF FEMALE CIRCUMCISION?	Yes .... 1 No... 2	1⇨FG3
FG2. IN SOME 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⇨FG9
FG4. NOW I WOULD LIKE TO ASK YOU WHAT WAS DONE TO YOU AT THAT 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 SOWN CLOSED? *If necessary, probe*: WAS IT SEALED?	Yes .... 1 No... 2 DK 8	
FG7. HOW OLD WERE YOU WHEN YOU WERE CIRCUMCISED? *If the respondent does not know the exact age, probe to get an estimate*	Age at circumcision .... __ __ DK/Don't remember/Not sure.................... 98	

FG8. WHO PERFORMED THE CIRCUMCISION?	Health professional
	    Doctor.. 11
	    Nurse/Midwife 12
	    Other health
	      professional (*specify*) _____ 16
	
	 Traditional persons
	    Traditional 'circumciser'......................... 21
	    Traditional birth attendant 22
	    Other
	      traditional (*specify*) _____ 26
	
	 DK 98	

FG9. *Check CM5 for Number of daughters at home and CM7 for Number of daughters elsewhere, and sum the answers here*	Total number of living daughters......___ ___	

FG10. JUST TO MAKE SURE THAT I HAVE THIS RIGHT, YOU HAVE (*total number in FG9*) LIVING DAUGHTERS. IS THIS CORRECT?
 	
 ☐ *Yes*
     ☐ *One or more living daughters* ⇨*Continue with FG11*
 	
     ☐ *Does not have any living daughters* ⇨ *Go to FG22*
 	
 ☐ *No* ⇨ *Check responses to CM1 – CM10 and make corrections as necessary, until FG10 = Yes*		

FG11. *Ask the respondent to tell you the name(s) of her daughter(s), beginning with the youngest daughter (if more than one daughter). Write down the name of each daughter in FG12. Then, ask questions FG13 to FG20 for each daughter at a time.*

The total number of daughters in FG12 should be equal to the number in FG9

If more than 4 daughters, use additional questionnaires

	Daughter #1	Daughter #2	Daughter #3	Daughter #4
FG12. *Name of daughter*	_____	_____	_____	_____
FG13. HOW OLD IS (*name*)?	Age .... ___ ___	Age .... ___ ___	Age .... ___ ___	Age .... ___ ___
FG14. *Is (name) younger than 15 years of age?*	Yes ....1 No ....2 *If "No", go to FG13 for next daughter. If no more daughters, go to FG22*	Yes ....1 No ....2 *If "No", go to FG13 for next daughter. If no more daughters, go to FG22*	Yes ....1 No ....2 *If "No", go to FG13 for next daughter. If no more daughters, go to FG22*	Yes ....1 No ....2 *If "No", go to FG13 for next daughter. If no more daughters, go to FG22*
FG15. IS (*name*) CIRCUMCISED?	Yes ....1 No ....2 *If "No", go to FG13 for next daughter. If no more daughters, go to FG22*	Yes ....1 No ....2 *If "No", go to FG13 for next daughter. If no more daughters, go to FG22*	Yes ....1 No ....2 *If "No", go to FG13 for next daughter. If no more daughters, go to FG22*	Yes ....1 No ....2 *If "No", go to FG13 for next daughter. If no more daughters, go to FG22*
FG16. HOW OLD WAS (*name*) WHEN THIS OCCURRED? *If the respondent does not know the age, probe to get an estimate.*	Age ....___ ___ DK.....................98	Age ....___ ___ DK.....................98	Age ....___ ___ DK 98	Age ....___ ___ DK 98
FG17. 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 ⇨FG19 No ....2 DK.....................8	Yes ....1 ⇨FG19 No ....2 DK.....................8	Yes ....1 ⇨FG19 No ....2 DK 8	Yes ....1 ⇨FG19 No ....2 DK 8
FG18. WAS HER GENITAL AREA JUST NICKED WITHOUT REMOVING ANY FLESH?	Yes ....1 No ....2 DK.....................8	Yes ....1 No ....2 DK.....................8	Yes ....1 No ....2 DK 8	Yes ....1 No ....2 DK 8

FG19. WAS HER GENITAL AREA SEWN CLOSED? *If necessary, probe*: WAS IT SEALED?	Yes ....1 No ....2 DK......................8	Yes ....1 No ....2 DK......................8	Yes ....1 No ....2 DK 8	Yes ....1 No ....2 DK 8
FG20. WHO PERFORMED THE CIRCUMCISION?	Health professional Doctor ....11 Nurse/midwife ...12 Other health professional (*specify*) _____ 16 Traditional persons Traditional 'circumciser' ......21 Traditional birth attendant........22 Other traditional (*specify*) _____ 26 DK......................98	Health professional Doctor ....11 Nurse/midwife ...12 Other health professional (*specify*) _____16 Traditional persons Traditional 'circumciser' ......21 Traditional birth attendant........22 Other traditional (*specify*) _____26 DK......................98	Health professional Doctor ....11 Nurse/midwife ...12 Other health professional (*specify*) _____ 16 Traditional persons Traditional 'circumciser' ......21 Traditional birth attendant........22 Other traditional (*specify*) _____ 26 DK 98	Health professional Doctor ....11 Nurse/midwife ...12 Other health professional (*specify*) _____ 16 Traditional persons Traditional 'circumciser' ......21 Traditional birth attendant........22 Other traditional (*specify*) _____26 DK 98
FG21.	*Go back to FG13 for next daughter. If no more daughters, continue with FG22*	*Go back to FG13 for next daughter. If no more daughters, continue withFG22*	*Go back to FG13 for next daughter. If no more daughters, continue with FG22*	*Go back to FG13 in first column of additional questionnaire for next daughter. If no more daughters, continue with FG22*
				Tick here if additional questionnaire used ☐

FG22. 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				DV

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 GOES OUT WITHOUT TELLING HIM?	Goes out without telling	1	2	8
[B] IF SHE NEGLECTS THE CHILDREN?	Neglects children	1	2	8
[C] IF SHE ARGUES WITH HIM?	Argues with him	1	2	8
[D] IF SHE REFUSES TO HAVE SEX WITH HIM?	Refuses sex	1	2	8
[E] IF SHE BURNS THE FOOD?	Burns food	1	2	8

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⇨MA5
MA2. HOW OLD IS YOUR HUSBAND/PARTNER? *Probe*: HOW OLD WAS YOUR HUSBAND/PARTNER ON HIS LAST BIRTHDAY?	Age in years.. __ __ DK.. 98	
MA3. BESIDES YOURSELF, DOES YOUR HUSBAND/PARTNER HAVE ANY OTHER WIVES OR PARTNERS OR DOES HE LIVE WITH OTHER WOMEN AS IF MARRIED?	Yes ....1 No 2	2⇨MA7
MA4. HOW MANY OTHER WIVES OR PARTNERS DOES HE HAVE?	Number... __ __ DK... 98	⇨MA7 98⇨MA7
MA5. HAVE YOU EVER BEEN MARRIED OR LIVED TOGETHER WITH A MAN AS IF MARRIED?	Yes, formerly married ....1 Yes, formerly lived with a man ....2 No 3	3 ⇨Next Module
MA6. WHAT IS YOUR MARITAL STATUS NOW: ARE YOU WIDOWED, DIVORCED OR SEPARATED?	Widowed...1 Divorced ....2 Separated 3	
MA7. HAVE YOU BEEN MARRIED OR LIVED WITH A MAN ONLY ONCE OR MORE THAN ONCE?	Only once ....1 More than once..2	1 ⇨MA8A 2 ⇨MA8B
MA8A. IN WHAT MONTH AND YEAR DID YOU MARRY OR START LIVING WITH A MAN AS IF MARRIED? **MA8B**. IN WHAT MONTH AND YEAR DID YOU <u>FIRST</u> MARRY OR START LIVING WITH A MAN AS IF MARRIED?	Date of (first) marriage Month... __ __ DK month... 98 Year .... __ __ __ __ DK year.. 9998	⇨Next Module
MA9. HOW OLD WERE YOU WHEN YOU FIRST STARTED LIVING WITH YOUR (<u>FIRST</u>) HUSBAND/PARTNER?	Age in years.. __ __	

SEXUAL BEHAVIOUR		SB

Check for the presence of others. Before continuing, ensure privacy.

SB1. NOW I WOULD LIKE TO ASK YOU SOME QUESTIONS ABOUT SEXUAL ACTIVITY IN ORDER TO GAIN A BETTER UNDERSTANDING OF SOME IMPORTANT LIFE ISSUES. THE INFORMATION YOU SUPPLY WILL REMAIN STRICTLY CONFIDENTIAL. HOW OLD WERE YOU WHEN YOU HAD SEXUAL INTERCOURSE FOR THE VERY FIRST TIME?	Never had intercourse .... 00 Age in years.. __ __ First time when started living with (first) husband/partner..................................... 95	00⇨Next Module
SB2. THE FIRST TIME YOU HAD SEXUAL INTERCOURSE, WAS A CONDOM USED?	Yes..1 No ....2 DK / Don't remember 8	
SB3. WHEN WAS THE LAST TIME YOU HAD SEXUAL INTERCOURSE? *Record answers in days, weeks or months if less than 12 months (one year).* *If 12 months (one year) or more, answer must be recorded in years.*	Days ago... 1 __ __ Weeks ago....................................... 2 __ __ Months ago .... 3 __ __ Years ago .... 4 __ __	4⇨SB15
SB4. THE LAST TIME YOU HAD SEXUAL INTERCOURSE, WAS A CONDOM USED?	Yes..1 No 2	
SB5. WHAT WAS YOUR RELATIONSHIP TO THIS PERSON WITH WHOM YOU LAST HAD SEXUAL INTERCOURSE? *Probe to ensure that the response refers to the relationship at the time of sexual intercourse* *If 'boyfriend', then ask:* WERE YOU LIVING TOGETHER AS IF MARRIED? *If 'yes', circle '2'.If 'no', circle'3'.*	Husband ....1 Cohabiting partner ....2 Boyfriend...3 Casual acquaintance ....4 Other (*specify*) _____6	3⇨SB7 4⇨SB7 6⇨SB7

SB6. *Check MA1:* ☐ *Currently married or living with a man (MA1 = 1 or 2) ⇨ Go to SB8* ☐ *Not married / Not in union (MA1 = 3) ⇨ Continue with SB7*

SB7. HOW OLD IS THIS PERSON? *If response is DK, probe:* ABOUT HOW OLD IS THIS PERSON?	Age of sexual partner........................... __ __ DK... 98	
SB8. HAVE YOU HAD SEXUAL INTERCOURSE WITH ANY OTHER PERSON IN THE LAST 12 MONTHS?	Yes..1 No 2	2⇨SB15
SB9. THE LAST TIME YOU HAD SEXUAL INTERCOURSE WITH THIS OTHER PERSON, WAS A CONDOM USED?	Yes..1 No 2	

SB10. WHAT WAS YOUR RELATIONSHIP TO THIS PERSON? *Probe to ensure that the response refers to the relationship at the time of sexual intercourse* *If 'boyfriend' then ask:* WERE YOU LIVING TOGETHER AS IF MARRIED? *If 'yes', circle '2'. If 'no', circle '3'.*	Husband ....1 Cohabiting partner ....2 Boyfriend..3 Casual acquaintance ....4 Other (*specify*) _____6	3⇨SB12 4⇨SB12 6⇨SB12
SB11. *Check MA1 and MA7:* ☐ *Currently married or living with a man (MA1 = 1 or 2)* *AND* *Married only once or lived with a man only once (MA7 = 1)* ⇨ *Go to SB13* ☐ *Else* ⇨ *Continue with SB12*		
SB12. HOW OLD IS THIS PERSON? *If response is DK, probe:* ABOUT HOW OLD IS THIS PERSON?	Age of sexual partner........................... __ __ DK 98	
SB13. OTHER THAN THESE TWO PERSONS, HAVE YOU HAD SEXUAL INTERCOURSE WITH ANY OTHER PERSON IN THE LAST 12 MONTHS?	Yes...1 No 2	2⇨SB15
SB14. IN TOTAL, WITH HOW MANY DIFFERENT PEOPLE HAVE YOU HAD SEXUAL INTERCOURSE IN THE LAST 12 MONTHS?	Number of partners.............................. __ __	
SB15. IN TOTAL, WITH HOW MANY DIFFERENT PEOPLE HAVE YOU HAD SEXUAL INTERCOURSE IN YOUR LIFETIME? *If a non-numeric answer is given, probe to get an estimate.* *If number of partners is 95 or more, write '95'.*	Number of lifetime partners .... __ __ DK 98	

HIV/AIDS		HA
HA1. NOW I WOULD LIKE TO TALK WITH YOU ABOUT SOMETHING ELSE. HAVE YOU EVER HEARD OF AN ILLNESS CALLED AIDS?	Yes .... 1 No.. 2	2 ⇨Next Module
HA2. CAN PEOPLE REDUCE THEIR CHANCE OF GETTING THE AIDS VIRUS BY HAVING JUST ONE UNINFECTED SEX PARTNER WHO HAS NO OTHER SEX PARTNERS?	Yes .... 1 No.. 2 DK 8	
HA3. CAN PEOPLE GET 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 GET THE AIDS VIRUS BY SHARING FOOD WITH A PERSON WHO HAS THE AIDS VIRUS?	Yes .... 1 No.. 2 DK 8	
HA7. IS IT POSSIBLE FOR A HEALTHY-LOOKING PERSON TO HAVE THE AIDS VIRUS?	Yes .... 1 No.. 2 DK 8	
HA8. CAN THE VIRUS THAT CAUSES AIDS BE TRANSMITTED FROM A MOTHER TO HER 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	
HA9. IN YOUR OPINION, 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	
HA10. 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	
HA11. IF A MEMBER OF YOUR FAMILY GOT INFECTED WITH THE AIDS VIRUS, WOULD YOU WANT IT TO REMAIN A SECRET?	Yes .... 1 No.. 2 DK/Not sure/Depends 8	
HA12. IF A MEMBER OF YOUR FAMILY BECAME SICK WITH AIDS, WOULD YOU BE WILLING TO CARE FOR HER OR HIM IN YOUR OWN HOUSEHOLD?	Yes .... 1 No.. 2 DK/Not sure/Depends 8	

HA13. *Check CM13: Any live birth in last 2 years?*

☐ *No live birth in last 2 years (CM13="No" or blank)* ⇨ *Go to HA24*

☐ *One or more live births in last 2 years* ⇨ *Continue with HA14*

HA14. *Check MN1: Received antenatal care?*

☐ *Received antenatal care* ⇨ *Continue with HA15*

☐ *Did not receive antenatal care* ⇨ *Go to HA24*

HA15. DURING ANY OF THE ANTENATAL VISITS FOR YOUR PREGNANCY WITH (*name*), WERE YOU GIVEN ANY INFORMATION ABOUT:	Y	N	DK	
[A] BABIES GETTING THE AIDS VIRUS FROM THEIR MOTHER?	AIDS from mother........................1	2	8	
[B] THINGS THAT YOU CAN DO TO PREVENT GETTING THE AIDS VIRUS?	Things to do.................................1	2	8	
[C] GETTING TESTED FOR THE AIDS VIRUS?	Tested for AIDS...........................1	2	8	
WERE YOU: [D] OFFERED A TEST FOR THE AIDS VIRUS?	Offered a test..............................1	2	8	

HA16. I DON'T WANT TO KNOW THE RESULTS, BUT WERE YOU TESTED FOR THE AIDS VIRUS AS PART OF YOUR ANTENATAL CARE?	Yes ....1 No ....2 DK...8	 2⇨HA19 8⇨HA19
HA17. I DON'T WANT TO KNOW THE RESULTS, BUT DID YOU GET THE RESULTS OF THE TEST?	Yes ....1 No ....2 DK...8	 2⇨HA22 8⇨HA22
HA18. REGARDLESS OF THE RESULT, ALL WOMEN WHO ARE TESTED ARE SUPPOSED TO RECEIVE COUNSELLING AFTER GETTING THE RESULT. AFTER YOU WERE TESTED, DID YOU RECEIVE COUNSELLING?	Yes ....1 No ....2 DK...8	1⇨HA22 2⇨HA22 8⇨HA22

HA19. *Check MN17: Birth delivered by health professional (A, B or C)?*

☐ *Yes, birth delivered by health professional (MN17 = A, B or C)* ⇨*Continue with HA20*

☐ *No, birth not delivered by health professional (MN17 = else)* ⇨*Go to HA24*

HA20. I DON'T WANT TO KNOW THE RESULTS, BUT WERE YOU TESTED FOR THE AIDS VIRUS BETWEEN THE TIME YOU WENT FOR DELIVERY BUT BEFORE THE BABY WAS BORN?	Yes ....1 No 2	 2⇨HA24
HA21. I DON'T WANT TO KNOW THE RESULTS, BUT DID YOU GET THE RESULTS OF THE TEST?	Yes ....1 No 2	
HA22. HAVE YOU BEEN TESTED FOR THE AIDS VIRUS SINCE THAT TIME YOU WERE TESTED DURING YOUR PREGNANCY?	Yes ....1 No 2	1⇨HA25

HA23. WHEN WAS THE MOST RECENT TIME YOU WERE TESTED FOR THE AIDS VIRUS?	Less than 12 months ago .... 1 12-23 months ago .... 2 2 or more years ago 3	1 ⇨Next Module 2 ⇨Next Module 3 ⇨Next Module
HA24. I DON'T WANT TO KNOW THE RESULTS, BUT HAVE YOU EVER BEEN TESTED TO SEE IF YOU HAVE THE AIDS VIRUS?	Yes .... 1 No.. 2	2⇨HA27
HA25. WHEN WAS THE MOST RECENT TIME YOU WERE TESTED?	Less than 12 months ago .... 1 12-23 months ago .... 2 2 or more years ago 3	
HA26. I DON'T WANT TO KNOW THE RESULTS, BUT DID YOU GET THE RESULTS OF THE TEST?	Yes .... 1 No.. 2 DK 8	1 ⇨Next Module 2 ⇨Next Module 8 ⇨Next Module
HA27. DO YOU KNOW OF A PLACE WHERE PEOPLE CAN GO TO GET TESTED FOR THE AIDS VIRUS?	Yes .... 1 No.. 2	

TOBACCO AND ALCOHOL USE		**TA**
TA1. HAVE YOU EVER TRIED CIGARETTE SMOKING, EVEN ONE OR TWO PUFFS?	Yes ....1 No...2	2⇨TA6
TA2. HOW OLD WERE YOU WHEN YOU SMOKED A WHOLE CIGARETTE FOR THE FIRST TIME?	Never smoked a whole cigarette ....00 Age ....___ ___	00⇨TA6
TA3. DO YOU CURRENTLY SMOKE CIGARETTES?	Yes ....1 No...2	2⇨TA6
TA4. IN THE LAST 24 HOURS, HOW MANY CIGARETTES DID YOU SMOKE?	Number of cigarettes ....___ ___	
TA5. DURING THE LAST ONE MONTH, ON HOW MANY DAYS DID YOU SMOKE CIGARETTES? *If less than 10 days, record the number of days.* *If 10 days or more but less than a month, circle "10".* *If "everyday" or "almost every day", circle "30"*	Number of days ....0 ___ 10 days or more but less than a month.....10 Everyday / Almost every day....................30	
TA6. HAVE YOU EVER TRIED ANY SMOKED TOBACCO PRODUCTS OTHER THAN CIGARETTES, SUCH AS CIGARS, WATER PIPE, CIGARILLOS OR PIPE?	Yes ....1 No...2	2⇨TA10
TA7. DURING THE LAST ONE MONTH, DID YOU USE ANY SMOKED TOBACCO PRODUCTS?	Yes ....1 No...2	2⇨TA10
TA8. WHAT TYPE OF SMOKED TOBACCO PRODUCT DID YOU USE OR SMOKE DURING THE LAST ONE MONTH? *Circle all mentioned.*	Cigars .... A Water pipe .... B Cigarillos... C Pipe .... D Other (*specify*) _____ X	
TA9. DURING THE LAST ONE MONTH, ON HOW MANY DAYS DID YOU USE SMOKED TOBACCO PRODUCTS? *If less than 10 days, record the number of days.* *If 10 days or more but less than a month, circle "10".* *If "everyday" or "almost every day", circle "30"*	Number of days ....0 ___ 10 days or more but less than a month.....10 Everyday / Almost every day....................30	
TA10. HAVE YOU EVER TRIED ANY FORM OF SMOKELESS TOBACCO PRODUCTS, SUCH AS CHEWING TOBACCO, SNUFF, OR DIP?	Yes ....1 No...2	2 ⇨TA14
TA11. DURING THE LAST ONE MONTH, DID YOU USE ANY SMOKELESS TOBACCO PRODUCTS?	Yes ....1 No...2	2 ⇨TA14

TA12. WHAT TYPE OF SMOKELESS TOBACCO PRODUCT DID YOU USE DURING THE LAST ONE MONTH? *Circle all mentioned.*	Chewing tobacco .... A Snuff .... B Dip .... C Other (*specify*) _____ X	
TA13. DURING THE LAST ONE MONTH, ON HOW MANY DAYS DID YOU USE SMOKELESS TOBACCO PRODUCTS? *If less than 10 days, record the number of days.* *If 10 days or more but less than a month, circle "10".* *If "everyday" or "almost every day", circle "30"*	Number of days ....0 ___ 10 days or more but less than a month.....10 Everyday / Almost every day.....................30	
TA14. NOW I WOULD LIKE TO ASK YOU SOME QUESTIONS ABOUT DRINKING ALCOHOL. HAVE YOU EVER DRUNK ALCOHOL?	Yes ....1 No 2	2⇨Next Module
TA15. WE COUNT ONE DRINK OF ALCOHOL AS ONE CAN OR BOTTLE OF BEER, ONE GLASS OF WINE, OR ONE SHOT OF COGNAC, VODKA, WHISKEY, RUM OR CHANG'A HOW OLD WERE YOU WHEN YOU HAD YOUR FIRST DRINK OF ALCOHOL, OTHER THAN A FEW SIPS?	Never had one drink of alcohol ....00 Age ....___ ___	00⇨Next Module
TA16. DURING THE LAST ONE MONTH, ON HOW MANY DAYS DID YOU HAVE AT LEAST ONE DRINK OF ALCOHOL? *If respondent did not drink, circle "00".* *If less than 10 days, record the number of days.* *If 10 days or more but less than a month, circle "10".* *If "everyday" or "almost every day", circle "30"*	Did not have one drink in last one month..00 Number of days ....0 ___ 10 days or more but less than a month.....10 Everyday / Almost every day.....................30	00⇨Next Module
TA17. IN THE LAST ONE MONTH, ON THE DAYS THAT YOU DRANK ALCOHOL, HOW MANY DRINKS DID YOU USUALLY HAVE PER DAY?	Number of drinks ....___ ___	

LIFE SATISFACTION		LS

LS1. *Check WB2: Age of respondent is between 15 and 24?*

☐ *Age 25-49 ⇨Go to WM11*

☐*Age 15-24 ⇨ Continue with LS2*

LS2. I WOULD LIKE TO ASK YOU SOME SIMPLE QUESTIONS ON HAPPINESS AND SATISFACTION. FIRST, TAKING ALL THINGS TOGETHER, WOULD YOU SAY YOU ARE VERY HAPPY, SOMEWHAT HAPPY, NEITHER HAPPY NOR UNHAPPY, SOMEWHAT UNHAPPY OR VERY UNHAPPY? YOU CAN ALSO LOOK AT THESE PICTURES TO HELP YOU WITH YOUR RESPONSE. *Show side 1 of response card and explain what each symbol represents. Circle the response code selected by the respondent.*	Very happy .... 1 Somewhat happy .... 2 Neither happy nor unhappy......................... 3 Somewhat unhappy .... 4 Very unhappy.. 5	
LS3. NOW I WILL ASK YOU QUESTIONS ABOUT YOUR LEVEL OF SATISFACTION IN DIFFERENT AREAS. IN EACH CASE, WE HAVE FIVE POSSIBLE RESPONSES: PLEASE TELL ME, FOR EACH QUESTION, WHETHER YOU ARE VERY SATISFIED, SOMEWHAT SATISFIED, NEITHER SATISFIED NOR UNSATISFIED, SOMEWHAT UNSATISFIED OR VERY UNSATISFIED. AGAIN, YOU CAN LOOK AT THESE PICTURES TO HELP YOU WITH YOUR RESPONSE. *Show side 2 of response card and explain what each symbol represents. Circle the response code selected by the respondent, for questions LS3 to LS13.* HOW SATISFIED ARE YOU WITH YOUR FAMILY LIFE?	Very satisfied.. 1 Somewhat satisfied .... 2 Neither satisfied nor unsatisfied................. 3 Somewhat unsatisfied................................. 4 Very unsatisfied... 5	
LS4. HOW SATISFIED ARE YOU WITH YOUR FRIENDSHIPS?	Very satisfied.. 1 Somewhat satisfied .... 2 Neither satisfied nor unsatisfied................. 3 Somewhat unsatisfied................................. 4 Very unsatisfied... 5	
LS5. DURING THE current 2013/14 SCHOOL YEAR, DID YOU ATTEND SCHOOL AT ANY TIME?	Yes .... 1 No.. 2	2⇨LS7
LS6. HOW SATISFIED (*are/were*) YOU WITH YOUR SCHOOL?	Very satisfied.. 1 Somewhat satisfied .... 2 Neither satisfied nor unsatisfied................. 3 Somewhat unsatisfied................................. 4 Very unsatisfied... 5	

LS7. HOW SATISFIED ARE YOU WITH YOUR CURRENT JOB? *If the respondent says that she does not have a job, circle "0" and continue with the next question. Do not probe to find out how she feels about not having a job, unless she tells you herself.*	Does not have a job .... 0 Very satisfied.. 1 Somewhat satisfied..................................... 2 Neither satisfied nor unsatisfied................. 3 Somewhat unsatisfied................................. 4 Very unsatisfied.. 5	
LS8. HOW SATISFIED ARE YOU WITH YOUR HEALTH?	Very satisfied.. 1 Somewhat satisfied..................................... 2 Neither satisfied nor unsatisfied................. 3 Somewhat unsatisfied................................. 4 Very unsatisfied.. 5	
LS9. HOW SATISFIED ARE YOU WITH WHERE YOU LIVE? *If necessary, explain that the question refers to the living environment, including the neighbourhood and the dwelling.*	Very satisfied.. 1 Somewhat satisfied..................................... 2 Neither satisfied nor unsatisfied................. 3 Somewhat unsatisfied................................. 4 Very unsatisfied.. 5	
LS10. HOW SATISFIED ARE YOU WITH HOW PEOPLE AROUND YOU GENERALLY TREAT YOU?	Very satisfied.. 1 Somewhat satisfied..................................... 2 Neither satisfied nor unsatisfied................. 3 Somewhat unsatisfied................................. 4 Very unsatisfied.. 5	
LS11. HOW SATISFIED ARE YOU WITH THE WAY YOU LOOK?	Very satisfied.. 1 Somewhat satisfied..................................... 2 Neither satisfied nor unsatisfied................. 3 Somewhat unsatisfied................................. 4 Very unsatisfied.. 5	
LS12. HOW SATISFIED ARE YOU WITH YOUR LIFE, OVERALL?	Very satisfied.. 1 Somewhat satisfied..................................... 2 Neither satisfied nor unsatisfied................. 3 Somewhat unsatisfied................................. 4 Very unsatisfied.. 5	
LS13. HOW SATISFIED ARE YOU WITH YOUR CURRENT INCOME? *If the respondent says that she does not have any income, circle "0" and continue with the next question. Do not probe to find out how she feels about not having any income, unless she tells you herself.*	Does not have any income .... 0 Very satisfied.. 1 Somewhat satisfied..................................... 2 Neither satisfied nor unsatisfied................. 3 Somewhat unsatisfied................................. 4 Very unsatisfied.. 5	
LS14. COMPARED TO THIS TIME LAST YEAR, WOULD YOU SAY THAT YOUR LIFE HAS IMPROVED, STAYED MORE OR LESS THE SAME, OR WORSENED, OVERALL?	Improved .... 1 More or less the same .... 2 Worsened.. 3	
LS15. AND IN ONE YEAR FROM NOW, DO YOU EXPECT THAT YOUR LIFE WILL BE BETTER, WILL BE MORE OR LESS THE SAME, OR WILL BE WORSE, OVERALL?	Better.. 1 More or less the same .... 2 Worse.. 3	

WM11. *Record the time*.	Hour and minutes ....__ __ : __ __

WM12.*Check List of Household Members, columns HL7B and HL15.*
Is the respondent the mother or caretaker of any child age 0-4 living in this household?

☐ *Yes* ⇨*Proceed to complete the result of woman's interview (WM7) on the cover page and then go to*
QUESTIONNAIRE FOR CHILDREN UNDER FIVE for that child and start the interview with this respondent.

☐ *No*⇨*End the interview with this respondent by thanking her for her cooperation and proceed to*
complete the result of the woman's interview (WM7) on the cover page

Interviewer's Observations

Field Editor's Observations

Supervisor's Observations

RESPONSE CARD:

SIDE 1

| Very happy | Somewhat happy | Neither happy, nor unhappy | Somewhat unhappy | Very unhappy |

SIDE 2

Very satisfied	Somewhat satisfied	Neither satisfied, nor unsatisfied	Somewhat unsatisfied	Very unsatisfied
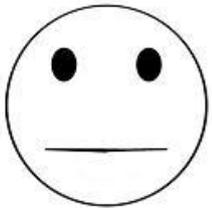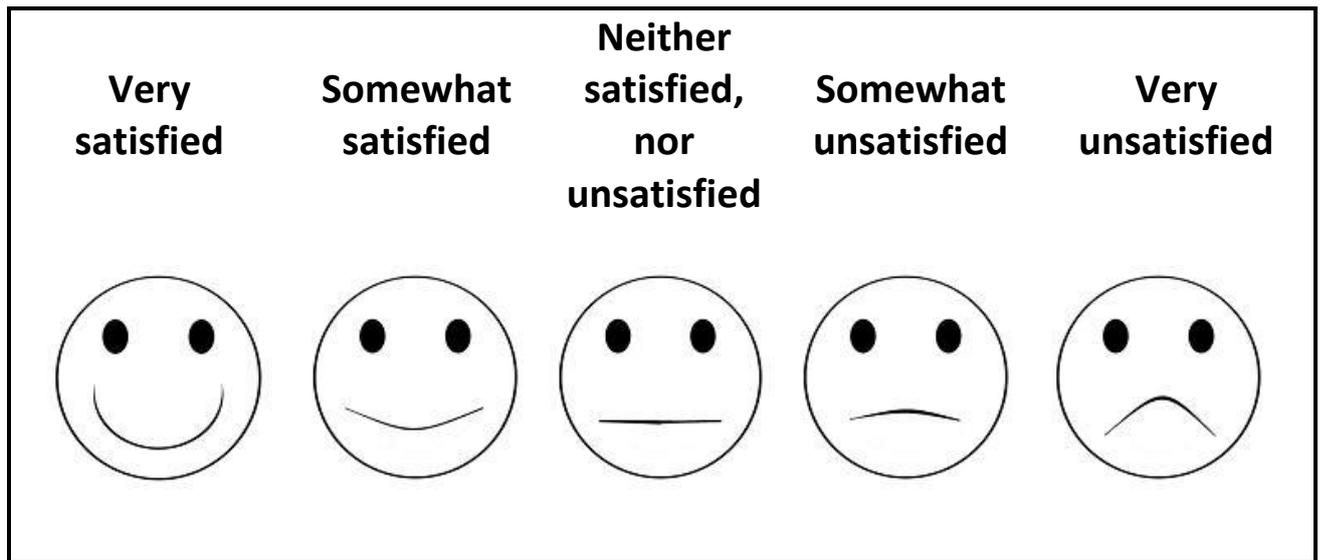
QUESTIONNAIRE FOR CHILDREN UNDER FIVE
WESTERN AND NORTH RIFT SURVEY

MICS KENYA NATIONAL BUREAU OF STATISTICS *Keeping you informed* unicef

UNDER-FIVE CHILD INFORMATION PANEL	UF

This questionnaire is to be administered to all mothers or caretakers (see List of Household Members, column HL15) who care for a child that lives with them and is under the age of 5 years (see List of Household Members, column HL7B).
A separate questionnaire should be used for each eligible child.

UF1. Cluster number: ___ ___ ___ ___	**UF2**. Household number: ___ ___ ___
UF3. Child's name: Name_____	**UF4**. Child's line number: ___ ___
UF5. Mother's/Caretaker's name: Name_____	**UF6**. Mother's/Caretaker's line number: ___ ___
UF7. Interviewer's name and number: Name_____ ___ ___ ___	**UF8**. Day/Month/Year of interview: ___ ___ /___ ___ / 201 ___

Repeat greeting if not already read to this respondent: WE ARE FROM THE UNIVERSITY OF NAIROBI AND KENYA NATIONAL BUREAU OF STATISTICS. WE ARE CONDUCTING A SURVEY ABOUT THE SITUATION OF CHILDREN, FAMILIES AND HOUSEHOLDS. I WOULD LIKE TO TALK TO YOU ABOUT (*child's name from UF3*)'S HEALTH AND WELL-BEING. THE INTERVIEW WILL TAKE ABOUT 20 TO 35 MINUTES. ALL THE INFORMATION WE OBTAIN WILL REMAIN STRICTLY CONFIDENTIAL AND ANONYMOUS.	*If greeting at the beginning of the household questionnaire has already been read to this person, then read the following:* NOW I WOULD LIKE TO TALK TO YOU MORE ABOUT (*child's name from UF3*)'S HEALTH AND OTHER TOPICS. THIS INTERVIEW WILL TAKE ABOUT 20 TO 35 MINUTES. AGAIN, ALL THE INFORMATION WE OBTAIN WILL REMAIN STRICTLY CONFIDENTIAL AND ANONYMOUS.

MAY I START NOW?

☐ *Yes, permission is given ⇨ Go to UF12 to record the time and then begin the interview.*

☐ *No, permission is not given ⇨ Circle '03' in UF9. Discuss this result with your supervisor*

UF9. Result of interview for children under 5 *Codes refer to mother/caretaker.*	Completed ....01 Not at home ....02 Refused ....03 Partly completed ....04 Incapacitated ....05 Other (*specify*) _____ 96

UF10. Field editor's name and number: Name_____ __ __	**UF11**. Main data entry clerk's name and number: Name_____ __ __

UF12. *Record the time.*	Hour and minutes __ __ : __ __	

AGE		**AG**

AG1 NOW I WOULD LIKE TO ASK YOU SOME QUESTIONS ABOUT THE DEVELOPMENT AND HEALTH OF (name).
 	
ON WHAT DAY, 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 .... 20 __ __	

AG2. HOW OLD IS (*name*)? *Probe*: HOW OLD WAS (*name*) AT HIS/HER LAST BIRTHDAY? *Record age in completed years.* *Record '0' if less than 1 year.* *Compare and correct AG1 and/or AG2 if inconsistent.*	Age (in completed years) ....__	

BIRTH REGISTRATION		BR
BR1. DOES (*name*) HAVE A BIRTH CERTIFICATE? *If yes, ask:* MAY I SEE IT?	Yes, seen..1 Yes, not seen...2 No ....3 DK...8	1⇨Next Module 2⇨Next Module
BR2. HAS (*name*)'S BIRTH BEEN REGISTERED WITH THE CIVIL AUTHORITIES?	Yes ....1 No ....2 DK...8	1⇨Next Module
BR3. DO YOU KNOW HOW TO REGISTER (*name*)'S BIRTH?	Yes ....1 No 2	

EARLY CHILDHOOD DEVELOPMENT		EC
EC1. HOW MANY CHILDREN'S BOOKS OR PICTURE BOOKS DO YOU HAVE FOR (*name*)?	None ....00 Number of children's books....................0 __ Ten or more books 10	
EC2. I AM INTERESTED IN LEARNING ABOUT THE THINGS THAT (*name*) PLAYS WITH WHEN HE/SHE IS AT HOME. DOES HE/SHE PLAY WITH: [A] HOMEMADE TOYS (SUCH AS DOLLS, CARS, OR OTHER TOYS MADE AT HOME)? [B] TOYS FROM A SHOP OR MANUFACTURED TOYS? [C] HOUSEHOLD OBJECTS (SUCH AS BOWLS OR POTS) OR OBJECTS FOUND OUTSIDE (SUCH AS STICKS, ROCKS, ANIMAL SHELLS OR LEAVES)? *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 Homemade toys ....1 2 8 Toys from a shop...........................1 2 8 Household objects or outside objects 1 2 8	
EC3. 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*): [A] LEFT ALONE FOR MORE THAN AN HOUR? [B] LEFT IN THE CARE OF ANOTHER CHILD, THAT IS, SOMEONE LESS THAN 10 YEARS OLD, FOR MORE THAN AN HOUR? *If 'none' enter '0'. If 'don't know' enter '8'*	Number of days left alone for more than an hour ....__ Number of days left with other child for more than an hour ....__	

EC4. *Check AG2: Age of child*
 	
    ☐ *Child age 0, 1 or 2 ⇨ Go to Next Module*
 	
    ☐ *Child age 3 or 4 ⇨ Continue with EC5*		

EC5. 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	

		Mother	Father	Other	No one	
EC7. IN THE PAST 3 DAYS, DID YOU OR ANY HOUSEHOLD MEMBER AGE 15 OR OVER ENGAGE IN ANY OF THE FOLLOWING ACTIVITIES WITH (*name*): *If yes, ask:* WHO ENGAGED IN THIS ACTIVITY WITH (*name*)? *Circle all that apply.* [A] READ BOOKS TO OR LOOKED AT PICTURE BOOKS WITH (*name*)?	Read books	A	B	X	Y	
[B] TOLD STORIES TO (*name*)?	Told stories	A	B	X	Y	
[C] SANG SONGS TO (*name*) OR WITH (*name*), INCLUDING LULLABIES?	Sang songs	A	B	X	Y	
[D] TOOK (*name*) OUTSIDE THE HOME, COMPOUND, YARD OR ENCLOSURE?	Took outside	A	B	X	Y	
[E] PLAYED WITH (*name*)?	Played with	A	B	X	Y	
[F] NAMED, COUNTED, OR DREW THINGS TO OR WITH (*name*)?	Named/counted	A	B	X	Y	

EC8. I WOULD LIKE TO ASK YOU SOME QUESTIONS ABOUT THE HEALTH AND DEVELOPMENT OF (*name*). 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 (*name*)'S DEVELOPMENT. CAN (*name*) IDENTIFY OR NAME AT LEAST TEN LETTERS OF THE ALPHABET?	Yes ....1 No ....2 DK...8	
EC9. CAN (*name*) READ AT LEAST FOUR SIMPLE, POPULAR WORDS?	Yes ....1 No ....2 DK...8	
EC10. DOES (*name*) KNOW THE NAME AND RECOGNIZE THE SYMBOL OF ALL NUMBERS FROM 1 TO 10?	Yes ....1 No ....2 DK...8	
EC11. CAN (*name*) PICK UP A SMALL OBJECT WITH TWO FINGERS, LIKE A STICK OR A ROCK FROM THE GROUND?	Yes ....1 No ....2 DK...8	
EC12. IS (*name*) SOMETIMES TOO SICK TO PLAY?	Yes ....1 No ....2 DK...8	
EC13. DOES (*name*) FOLLOW SIMPLE DIRECTIONS ON HOW TO DO SOMETHING CORRECTLY?	Yes ....1 No ....2 DK...8	

EC14. WHEN GIVEN SOMETHING TO DO, IS (*name*) ABLE TO DO IT INDEPENDENTLY?	Yes ....1 No ....2 DK..8
EC15. DOES (*name*) GET ALONG WELL WITH OTHER CHILDREN?	Yes ....1 No ....2 DK..8
EC16. DOES (*name*) KICK, BITE, OR HIT OTHER CHILDREN OR ADULTS?	Yes ....1 No ....2 DK..8
EC17. DOES (*name*) GET DISTRACTED EASILY?	Yes ....1 No ....2 DK..8

IMMUNIZATION		IM

*If an immunization (**child health**) card is available, copy the dates in IM3 for each type of immunization and Vitamin A recorded on the card. IM6-IM17 will only be asked when a card is not available.*

IM1. DO YOU HAVE A CARD WHERE (name)'S VACCINATIONS ARE WRITTEN DOWN? *If yes:* MAY I SEE IT PLEASE?	Yes, seen .... 1 Yes, not seen .... 2 No card 3	1⇨IM3 2⇨IM6
IM2. DID YOU EVER HAVE A VACCINATION CARD FOR (name)?	Yes.. 1 No 2	1⇨IM6 2⇨IM6

IM3.
(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	
BCG	**BCG**				
POLIO AT BIRTH	**OPV0**				
POLIO 1	**OPV1**				
POLIO 2	**OPV2**				
POLIO 3	**OPV3**				
DPT 1	**DPT1**				
DPT 2	**DPT2**				
DPT 3	**DPT3**				
HEPB AT BIRTH	**HEP0**				
HEPB 1	**HEP1**				
HEPB 2	**HEP2**				
HEPB 3	**HEP3**				
HIB 1	**HIB1**				
HIB 2	**HIB2**				
HIB 3	**HIB3**				
MEASLES (OR MMR OR MR)	**MEASLES**				
YELLOW FEVER	**YF**				
VITAMIN A (FIRST DOSE)	**VITA1**				
VITAMIN A (SECOND DOSE)	**VITA2**				

IM4. *Check IM3. Are all vaccines (**BCG to Yellow Fever**) recorded?*

☐ *Yes ⇨Go to IM19*

☐ *No⇨Continue with IM5*

IM5. IN ADDITION TO WHAT IS RECORDED ON THIS CARD, DID (*name*) RECEIVE ANY OTHER VACCINATIONS – INCLUDING VACCINATIONS RECEIVED IN CAMPAIGNS OR IMMUNIZATION DAYS OR CHILD HEALTH DAYS?

☐ *Yes ⇨ Go back to IM3 and probe for these vaccinations and write '66' in the corresponding day column for each vaccine mentioned. When finished, skip to IM19*

☐ *No/DK ⇨ Go to IM19*

IM6. HAS (*name*) EVER RECEIVED ANY VACCINATIONS TO PREVENT HIM/HER FROM GETTING DISEASES, INCLUDING VACCINATIONS RECEIVED IN A CAMPAIGN OR IMMUNIZATION DAY OR CHILD HEALTH DAY?	Yes... 1 No .... 2 DK.. 8	2⇨IM19 8⇨IM19
IM7. HAS (*name*) EVER RECEIVED A BCG VACCINATION AGAINST TUBERCULOSIS – THAT IS, AN INJECTION IN THE ARM OR SHOULDER THAT USUALLY CAUSES A SCAR?	Yes... 1 No .... 2 DK.. 8	
IM8. HAS (*name*) EVER RECEIVED ANY VACCINATION DROPS IN THE MOUTH TO PROTECT HIM/HER FROM POLIO?	Yes... 1 No .... 2 DK.. 8	2⇨IM11 8⇨IM11
IM9. WAS THE FIRST POLIO VACCINE RECEIVED IN THE FIRST TWO WEEKS AFTER BIRTH?	Yes... 1 No 2	
IM10. HOW MANY TIMES WAS THE POLIO VACCINE RECEIVED?	Number of times .... __	
IM11. HAS (*name*) EVER RECEIVED A DPT VACCINATION – THAT IS, AN INJECTION IN THE THIGH TO PREVENT HIM/HER FROM GETTING TETANUS, WHOOPING COUGH, OR DIPHTHERIA? *Probe by indicating that DPT vaccination is sometimes given at the same time as Polio*	Yes... 1 No .... 2 DK.. 8	2⇨IM13 8⇨IM13
IM12. HOW MANY TIMES WAS THE DPT VACCINE RECEIVED?	Number of times .... __	
IM13. HAS (*name*) EVER RECEIVED A HEPATITIS B VACCINATION – THAT IS, AN INJECTION IN THE THIGH TO PREVENT HIM/HER FROM GETTING HEPATITIS B? *Probe by indicating that the Hepatitis B vaccine is sometimes given at the same time as Polio and DPT vaccines*	Yes... 1 No .... 2 DK.. 8	2⇨IM15A 8⇨IM15A
IM14. WAS THE FIRST HEPATITIS B VACCINE RECEIVED WITHIN 24 HOURS AFTER BIRTH?	Yes... 1 No .... 2 DK.. 8	
IM15. HOW MANY TIMES WAS THE HEPATITIS B RECEIVED?	Number of times .... __	
IM15A. HAS (*name*) EVER RECEIVED A HIB VACCINATION – THAT IS, AN INJECTION IN THE THIGH TO PREVENT HIM/HER FROM GETTING HAEMOPHILUS INFLUENZAE TYPE B? *Probe by indicating that the Hib vaccine is sometimes given at the same time as Polio and DPT vaccines*	Yes... 1 No .... 2 DK.. 8	2⇨IM16 8⇨IM16

IM15B. HOW MANY TIMES WAS THE HIB VACCINE RECEIVED?	Number of times .... __	
IM16. HAS (*name*) EVER RECEIVED A MEASLES INJECTION (OR AN MMR OR MR) – 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	
IM17. HAS (*name*) EVER RECEIVED THE YELLOW FEVER VACCINATION – THAT IS, A SHOT IN THE ARM AT THE AGE OF 9MONTHS OR OLDER - TO PREVENT HIM/HER FROM GETTING YELLOW FEVER? *Probe by indicating that the Yellow Fever vaccine is sometimes given at the same time as the measles vaccine*	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: [A] MALEZI BORA AND MEASLES IMMUNIZATION CAMPAIGNS FROM NOVEMBER 2012 [B] MALEZI BORA AND MEASLES IMMUNIZATION CAMPAIGNS FROM MAY 2013 [C] POLIO CAMPAIGN JULY 2013 [D] POLIO CAMPAIGN AUGUST 2013	Y N DK Malezi bora, November 2012 ....1 2 8 Malezi bora, May 2013 ....1 2 8 Polio campaign, July 2013...............1 2 8 Polio campaign, August 2013.........1 2 8	

IM20. *Is the vaccination card of the child kept at the health facility?*

☐ *Yes ⇨ Issue a QUESTIONNAIRE FORM FOR VACCINATION RECORDS AT HEALTH FACILITY for this child. Complete the Information Panel on that Questionnaire and go to Next Module.*

☐*No ⇨ Continue with Next Module*

BREASTFEEDING AND DIETARY INTAKE		BD

BD1. *Check AG2: Age of child*		
☐ *Child age 0, 1 or 2* ⇨ *Continue with BD2*		
☐ *Child age 3 or 4* ⇨ *Go to CARE OF ILLNESS Module*		

BD2. HAS (*name*) EVER BEEN BREASTFED?	Yes .... 1 No.. 2 DK 8	2⇨BD4 8⇨BD4
BD3. IS (*name*) STILL BEING BREASTFED?	Yes .... 1 No.. 2 DK 8	
BD4. YESTERDAY, DURING THE DAY OR NIGHT, DID (*name*) DRINK ANYTHING FROM A BOTTLE WITH A NIPPLE?	Yes .... 1 No.. 2 DK 8	
BD5. DID (*name*) DRINK ORS (ORAL REHYDRATION SOLUTION) YESTERDAY, DURING THE DAY OR NIGHT?	Yes .... 1 No.. 2 DK 8	
BD6. DID (*name*) DRINK OR EAT VITAMIN OR MINERAL SUPPLEMENTS OR ANY MEDICINES YESTERDAY, DURING THE DAY OR NIGHT?	Yes .... 1 No.. 2 DK 8	

BD7. NOW I WOULD LIKE TO ASK YOU ABOUT (OTHER) LIQUIDS THAT (*name*) MAY HAVE HAD YESTERDAY DURING THE DAY OR THE NIGHT. I AM INTERESTED TO KNOW WHETHER (*name*) HAD THE ITEM EVEN IF COMBINED WITH OTHER FOODS. PLEASE INCLUDE LIQUIDS CONSUMED OUTSIDE OF YOUR HOME. DID (*name*) DRINK (*Name of item*) YESTERDAY DURING THE DAY OR THE NIGHT:			Yes	No	DK
[A] PLAIN WATER?	Plain water		1	2	8
[B] JUICE OR JUICE DRINKS?	Juice or juice drinks		1	2	8
[C] SOUP?	Soup		1	2	8
[D] MILK SUCH AS TINNED, POWDERED, OR FRESH ANIMAL MILK?	Milk		1	2	8
If yes: HOW MANY TIMES DID (*name*) DRINK MILK? *If 7 or more times, record '7'.* *If unknown, record '8'.*	Number of times drank milk........................... __				
[E] INFANT FORMULA?	Infant formula		1	2	8
If yes: HOW MANY TIMES DID (*name*) DRINK INFANT FORMULA? *If 7 or more times, record '7'.* *If unknown, record '8'.*	Number of times drank infant formula............. __				
[F] ANY OTHER LIQUIDS?	(*Specify*) _____		1	2	8

BD8. NOW I WOULD LIKE TO ASK YOU ABOUT (OTHER) FOODS THAT (*name*) MAY HAVE HAD YESTERDAY DURING THE DAY OR THE NIGHT. AGAIN, I AM INTERESTED TO KNOW WHETHER (*name*) HAD THE ITEM EVEN IF COMBINED WITH OTHER FOODS.

PLEASE INCLUDE FOODS CONSUMED OUTSIDE OF YOUR HOME.

DID (*name*) EAT (*Name of food*) YESTERDAY DURING THE DAY OR THE NIGHT:

		Yes	No	DK
[A] YOGURT?	Yogurt	1	2	8
If yes: HOW MANY TIMES DID (*name*) DRINK OR EAT YOGURT? *If 7 or more times, record '7'. If unknown, record '8'.*	Number of times drank/ate yogurt .... __			
[B] ANY FORTIFIED BABY FOOD E.G. CERELAC?	Cerelac	1	2	8
[C] BREAD, RICE, NOODLES, PORRIDGE, OR OTHER FOODS MADE FROM GRAINS?	Foods made from grains	1	2	8
[D] PUMPKIN, CARROTS, SQUASH OR SWEET POTATOES THAT ARE YELLOW OR ORANGE INSIDE?	Pumpkin, carrots, squash, etc.	1	2	8
[E] WHITE POTATOES, WHITE YAMS, MANIOC, CASSAVA, OR ANY OTHER FOODS MADE FROM ROOTS?	White potatoes, white yams, manioc, cassava, etc.	1	2	8
[F] ANY DARK GREEN, LEAFY VEGETABLES?	Dark green, leafy vegetables	1	2	8
[G] RIPE MANGOES, PAPAYAS?	Ripe mangoes or papayas	1	2	8
[H] ANY OTHER FRUITS OR VEGETABLES?	Other fruits or vegetables	1	2	8
[I] LIVER, KIDNEY, HEART OR OTHER ORGAN MEATS?	Liver, kidney, heart or other organ meats	1	2	8
[J] ANY MEAT, SUCH AS BEEF, PORK, LAMB, GOAT, CHICKEN, OR DUCK?	Meat, such as beef, pork, lamb, goat, etc.	1	2	8
[K] EGGS?	Eggs	1	2	8
[L] FRESH OR DRIED FISH OR SHELLFISH?	Fresh or dried fish	1	2	8
[M] ANY FOODS MADE FROM BEANS, PEAS, LENTILS, OR NUTS?	Foods made from beans, peas, etc.	1	2	8
[N] CHEESE OR OTHER FOOD MADE FROM MILK?	Cheese or other food made from milk	1	2	8
[O] ANY OTHER SOLID, SEMI-SOLID, OR SOFT FOOD THAT I HAVE NOT MENTIONED (*specify*)?	(*Specify*) _____	1	2	8

BD9. *Check BD8 (Categories "A" through "O")*

☐ *At least one "Yes" or all "DK"* ⇨ *Go to BD11*

☐ *Else* ⇨ *Continue with BD10*

BD10. *Probe to determine whether the child ate any solid, semi-solid or soft foods yesterday during the day or night*

☐ *The child did not eat or the respondent does not know* ⇨ *Go to Next Module*

☐ *The child ate at least one solid, semi-solid or soft food item mentioned by the respondent* ⇨ *Go back to BD8 and record food eaten yesterday [A to O]. When finished, continue with BD11*

| **BD11**. HOW MANY TIMES DID (*name*) EAT ANY SOLID, SEMI-SOLID OR SOFT FOODS YESTERDAY DURING THE DAY OR NIGHT?

 If 7 or more times, record '7'. | Number of times...__

 DK ....8 | |

CARE OF ILLNESS		CA
CA1. IN THE LAST TWO WEEKS, HAS (*name*) HAD DIARRHOEA?	Yes .... 1 No .... 2 DK 8	2⇨CA6A 8⇨CA6A
CA2. I WOULD LIKE TO KNOW HOW MUCH (*name*) WAS GIVEN TO DRINK DURING THE DIARRHOEA (INCLUDING BREAST MILK). DURING THE TIME (*name*) HAD DIARRHOEA, WAS HE/SHE GIVEN LESS THAN USUAL TO DRINK, ABOUT THE SAME AMOUNT, OR MORE THAN USUAL? *If 'less', probe*: WAS HE/SHE GIVEN MUCH LESS THAN USUAL TO DRINK, OR SOMEWHAT LESS?	Much less .... 1 Somewhat less .... 2 About the same .... 3 More .... 4 Nothing to drink .... 5 DK 8	
CA3. DURING THE TIME (*name*) HAD DIARRHOEA, WAS HE/SHE GIVEN LESS THAN USUAL TO EAT, ABOUT THE SAME AMOUNT, MORE THAN USUAL, OR NOTHING TO EAT? *If 'less', probe:* WAS HE/SHE GIVEN MUCH LESS THAN USUAL TO EAT OR SOMEWHAT LESS?	Much less .... 1 Somewhat less .... 2 About the same .... 3 More .... 4 Stopped food .... 5 Never gave food .... 6 DK 8	
CA3A. DID YOU SEEK ANY ADVICE OR TREATMENT FOR THE DIARRHOEA FROM ANY SOURCE?	Yes .... 1 No .... 2 DK 8	2⇨CA4 8⇨CA4

CA3B. FROM WHERE DID YOU SEEK ADVICE OR TREATMENT?
 	
 Probe:
 ANYWHERE ELSE?
 	
 Circle all providers mentioned,
 but do NOT prompt with any suggestions.
 	
 Probe to identify each type of source.
 	
 If unable to determine if public or private sector, write the name of the place.
 	
 _____
 (*Name of place*)
	Public sector
	     Government hospital .... A
	     Government health centre .... B
	     Government dispensary C
	     Community health worker .... D
	     Mobile / Outreach clinic .... E
	     Other public (*specify*) _____ H
	
	 Private medical sector
	     Private hospital / clinic I
	     Private physician .... J
	     Private pharmacy .... K
	     Mobile clinic L
	     Mission hospital /clinic .... M
	
	     Other private medical (*specify*)_____ O
	
	 Other source
	     Relative / Friend .... P
	     Shop .... Q
	     Traditional practitioner .... R
	
	 Other (*specify*) _____ X	

CA4. DURING THE TIME (*name*) HAD DIARRHOEA, WAS (*name*) GIVEN TO DRINK :		
		Y N DK
[A] A FLUID MADE FROM A SPECIAL PACKET CALLED ORS?	Fluid from ORS packet.....................1 2 8	
[B] A PRE-PACKAGED ORS FLUID FOR DIARRHOEA?	Pre-packaged ORS fluid 1 2 8	

CA4A. *Check CA4: ORS*

☐ *Child was given ORS ('Yes' circled in 'A' or 'B' in CA4) ⇨ Continue with CA4B*

☐ *Child was not given ORS ⇨ Go to CA4C*

CA4B. WHERE DID YOU GET THE ORS?
 	
Probe to identify the type of source.
 	
If unable to determine whether public or private, write the name of the place.
 	
_____
(Name of place)
	Public sector
	  Government hospital 11
	  Government health centre....................12
	  Government dispensary 13
	  Community health 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
	  Mission hospital /clinic.........................25
	  Other private medical (*specify*)_____26
	
	Other source
	  Relative / Friend 31
	  Shop 32
	  Traditional practitioner 33
	  Already had at home 40
	
	Other (*specify*) _____96	

CA4C. DURING THE TIME (*name*) HAD DIARRHOEA, WAS (*name*) GIVEN: [A] ZINC TABLETS? [B] ZINC SYRUP?	Y N DK Zinc tablets ....1 2 8 Zinc syrup 1 2 8	

CA4D. *Check CA4C: Any zinc?*

☐ *Child given any zinc ('Yes' circled in 'A' or 'B' in CA4C)* ⇨ *Continue with CA4E*

☐ *Child was not given any zinc'* ⇨ *Go to CA4F*

CA4E. WHERE DID YOU GET THE ZINC?
 	
Probe to identify the type of source.
 	
If unable to determine whether public or private, write the name of the place.
 	
_____
(Name of place)
	Public sector
	  Government hospital 11
	  Government health centre....................12
	  Government dispensary 13
	  Community health 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
	  Mission hospital /clinic.........................25
	  Other private medical (*specify*)_____26
	
	Other source
	  Relative / Friend 31
	  Shop 32
	  Traditional practitioner 33
	
	Already had at home 40
	
	Other (*specify*) _____96	

CA4F. DURING THE TIME (*name*) HAD DIARRHOEA, WAS (*name*) GIVEN TO DRINK ANY OF THE FOLLOWING: *Read each item aloud and record response before proceeding to the next item.* [A] CEREAL GRUEL (UJI)? [B] FRESH OR FERMENTED MILK? [C] FRESH FRUIT JUICES? [D] SOUPS PREPARED FROM MEAT, FISH AND CHICKEN? [E] CLEAN, SAFE WATER? [F] BREAST FEEDING?	Y N DK Cereal gruel (uji) ....1 2 8 Fresh or fermented milk ....1 2 8 Fresh fruit juices ....1 2 8 Soups ....1 2 8 Clean, Safe water..............................1 2 8 Breast feeding 1 2 8	
CA5. WAS ANYTHING (ELSE) GIVEN TO TREAT THE DIARRHOEA?	Yes ....1 No...2 DK...8	2⇨CA6A 8⇨CA6A

CA6. WHAT (ELSE) WAS GIVEN TO TREAT THE DIARRHOEA?
 	
Probe:
ANYTHING ELSE?
 	
Record all treatments given. Write brand name(s) of all medicines mentioned.
 	
_____
(Name)
	Pill or Syrup
	    Antibiotic.. A
	    Antimotility .... B
	    Other pill or syrup (Not antibiotic,
	        antimotility or zinc) ....G
	    Unknown pill or syrup .... H
	
	Injection
	    Antibiotic..L
	    Non-antibiotic ....M
	    Unknown injection .... N
	
	Intravenous...O
	
	Home remedy/Herbal medicine.................Q
	
	Other (*specify*) _____ X	

CA6A. IN THE LAST TWO WEEKS, HAS (*name*) BEEN ILL WITH A FEVER AT ANY TIME?	Yes ....1 No...2 DK...8	2⇨CA7 8⇨CA7
CA6B. AT ANY TIME DURING THE ILLNESS, DID (*name*) HAVE BLOOD TAKEN FROM HIS/HER FINGER OR HEEL FOR TESTING?	Yes ....1 No...2 DK...8	
CA7. AT ANY TIME IN THE LAST TWO WEEKS, HAS (*name*) HAD AN ILLNESS WITH A COUGH?	Yes ....1 No...2 DK...8	2⇨CA9A 8⇨CA9A
CA8. WHEN (*name*) HAD AN ILLNESS WITH A COUGH, DID HE/SHE BREATHE FASTER THAN	Yes ....1 No...2	2⇨CA10

USUAL WITH SHORT, RAPID BREATHS OR HAVE DIFFICULTY BREATHING?	DK 8	8⇨CA10

CA9. WAS THE FAST OR DIFFICULT BREATHING DUE TO A PROBLEM IN THE CHEST OR A BLOCKED OR RUNNY NOSE?	Problem in chest only .... 1 Blocked or runny nose only .... 2 Both .... 3 Other (*specify*) _____ 6 DK 8	1⇨CA10 2⇨CA10 3⇨CA10 6⇨CA10 8⇨CA10

CA9A. *Check CA6A: Had fever?*

 ☐ *Child had fever ⇨ Continue with CA10*

 ☐ *Child did not have fever ⇨ Go to CA14*

CA10. DID YOU SEEK ANY ADVICE OR TREATMENT FOR THE ILLNESS FROM ANY SOURCE?	Yes .... 1 No .... 2 DK 8	 2⇨CA12 8⇨CA12

CA11. FROM WHERE DID YOU SEEK ADVICE OR TREATMENT?
 	
 Probe:
 ANYWHERE ELSE?
 	
 Circle all providers mentioned, but do NOT prompt with any suggestions.
 	
 Probe to identify each type of source.
 	
 If unable to determine if public or private sector, write the name of the place.
 	
 _____
 (Name of place)
	Public sector
	  Government hospital .... A
	  Government health centre .... B
	  Government dispensary C
	  Community health worker .... D
	  Mobile / Outreach clinic .... E
	  Other public (*specify*) _____ F
	
	 Private medical sector
	  Private hospital / clinic .... G
	  Private physician .... H
	  Private pharmacy I
	  Mobile clinic .... J
	  Mission hospital /clinic .... K
	
	 Other source
	  Relative / Friend L
	  Shop ....M
	  Traditional practitioner .... N
	
	 Other (*specify*) _____ X	

CA12.AT ANY TIME DURING THE ILLNESS, WAS (*name*) GIVEN ANY MEDICINE FOR THE ILLNESS?	Yes .... 1 No .... 2 DK 8	 2⇨CA14 8⇨CA14

CA13. WHAT MEDICINE WAS (*name*) GIVEN?
 	
 Probe:
 ANY OTHER MEDICINE?
 	
 Circle all medicines given. Write brand name(s) of all medicines mentioned.
 	
 _____
 (Names of medicines)
	Anti-malarials:
	  SP / Fansidar .... A
	  Chloroquine .... B
	  Amodiaquine C
	  Quinine .... D
	  Combination with Artemisinin .... E
	  Other anti-malarial
	   (*specify*) _____ H
	
	 Antibiotics:
	  Pill / Syrup I
	  Injection .... J	

	Other medications:
	   Paracetamol/ Panadol /Acetaminophen . P
	   Aspirin.. Q
	   Ibuprofen .... R
	
	Other (*specify*) _____ X
	DK...Z	

CA13A. *Check CA13: Antibiotic mentioned (codes I or J)?* ☐*Yes ⇨Continue with CA13B* ☐*No⇨ Go to CA13C*		

CA13B. WHERE DID YOU GET THE ANTIBIOTICS?
 	
Probe to identify the type of source.
 	
If unable to determine whether public or private, write the name of the place.
 	
_____
(Name of place)
	Public sector
	   Government hospital 11
	   Government health centre.....................12
	   Government dispensary 13
	   Community health 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
	   Mission hospital /clinic..........................25
	
	Other private medical (*specify*)_____ 26
	
	Other source
	   Relative / Friend 31
	   Shop 32
	   Traditional practitioner 33
	
	Already had at home 40
	
	Other (*specify*) _____ 96	

CA13C. *Check CA13: Anti-malarial mentioned (codes A - H)?* ☐*Yes ⇨Continue with CA13D* ☐ *No ⇨ Go to CA14*		

CA13D. WHERE DID YOU GET THIS ANTI-MALARIAL?
 	
Probe to identify the type of source.
 	
If unable to determine whether public or private, write the name of the place.
 	
_____
(Name of place)
	Public sector
	   Government hospital 11
	   Government health centre.....................12
	   Government dispensary 13
	   Community health 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
	   Mission hospital /clinic..........................25
	   Other private medical (*specify*)_____ 26
	
	Other source	

	Relative / Friend ....31 Shop ....32 Traditional practitioner ....33 Already had at home ....40 Other (*specify*) _____ 96	
CA13E. HOW LONG AFTER THE FEVER STARTED DID (*name*) FIRST TAKE (*name of anti-malarial from CA13*)? *If multiple anti-malarials mentioned in CA13, name all anti-malarial medicines mentioned.*	Same day ....0 Next day ....1 2 days after the fever.................................2 3 days after the fever.................................3 4 or more days after the fever ....4 DK...8	
CA14. *Check AG2: Age of child* ☐ *Child age 0, 1 or 2* ⇨ *Continue with CA15* ☐*Child age 3 or 4* ⇨ *Go to UF13*		
CA15. 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	

UF13. *Record the time.*	Hour and minutes ....__ __ : __ __

UF14.*Check List of Household Members, columns HL7B and HL15.*
Is the respondent the mother or caretaker of another child age 0-4 living in this household?

      ☐ *Yes* ⇨*Indicate to the respondent that you will need to measure the weight and height of the child later. Go to the next QUESTIONNAIRE FOR CHILDREN UNDER FIVE to be administered to the same respondent*

      ☐*No* ⇨ *End the interview with this respondent by thanking her/him for her/his cooperation and tell her/him that you will need to measure the weight and height of the childbefore you leave the household*

            Check to see if there are other woman's, man's or under-5 questionnaires to be administered in this household.

ANTHROPOMETRY		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 in the List of Household Members before recording measurements.

AN1. *Measurer's name and number:*	Name_____ ___ ___	
AN2. *Result of height/length and weight measurement*	Either or both measured 1	
	Child not present 2	2⇨AN6
	Child or mother/caretaker refused 3	3⇨AN6
	Other (*specify*) _____ 6	6⇨AN6
AN3.*Child's weight*	Kilograms (kg) .... __ __ . __	
	Weight not measured 99.9	
AN3A. *Was the child undressed to the minimum?*		
☐*Yes*		
☐*No, the child could not be undressed to the minimum*		
AN3B. *Check age of child in AG2:*		
☐ *Child under 2 years old.* ⇨ *Measure length (lying down).*		
☐ *Child age 2 or more years.* ⇨ *Measure height (standing up).*		
AN4.*Child's length or height*	Length / Height (cm)................. __ __ __. __	
	Length/ Height not measured............... 999.9	⇨AN6
AN4A.*How was the child actually measured? Lying down or standing up?*	Lying down 1	
	Standing up 2	

AN6. *Is there another child in the household who is eligible for measurement?*
☐ *Yes* ⇨ *Record measurements for next child.*
☐ *No* ⇨ *Check if there are any other individual questionnaires to be completed in the household.*

MICS.WM.336

Interviewer's Observations

Field Editor's Observations

Supervisor's Observations

Measurer's Observations