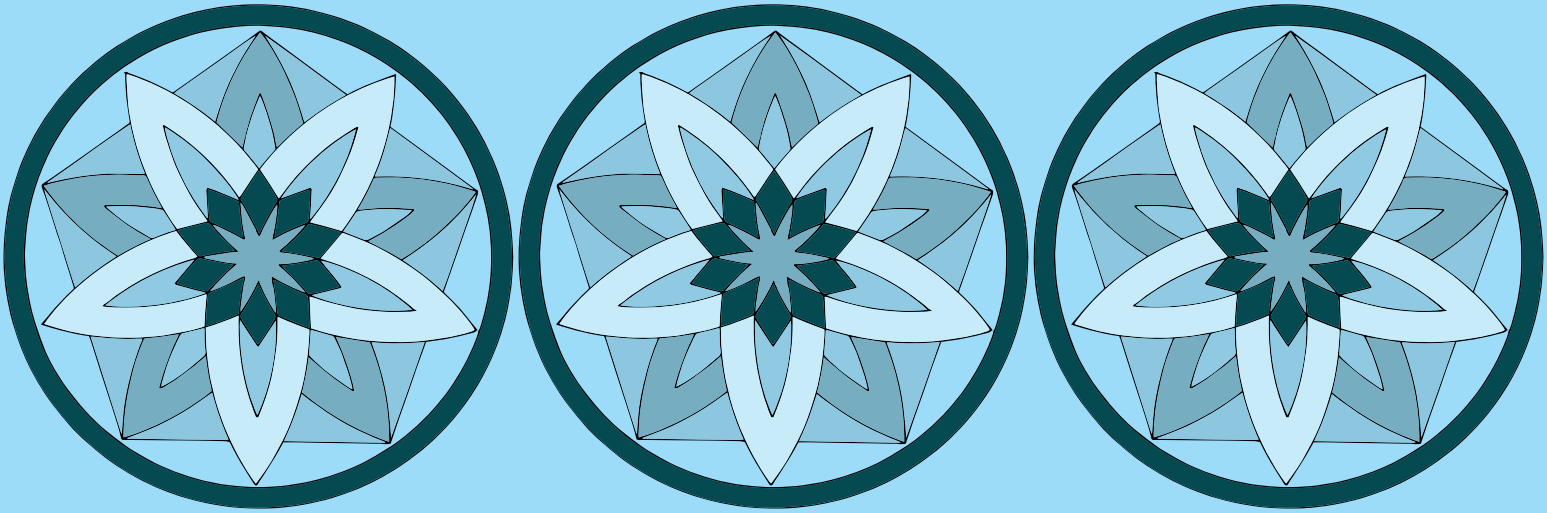
Kenya



Demographic and Health Survey

2014

Republic of Kenya

Kenya Demographic and Health Survey 2014

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FOREWORD

The 2014 Kenya Demographic and Health Survey (KDHS) provides information to help monitor and evaluate population and health status in Kenya. The survey, which follows up KDHS surveys conducted in 1989, 1993, 1998, 2003, and 2008-09, is of special importance for several reasons. New indicators not collected in previous KDHS surveys, such as noncommunicable diseases, fistula, and men's experience of domestic violence, are included. Also, it is the first national survey to provide estimates for demographic and health indicators at the county level. Following adoption of a constitution in Kenya in 2010 and devolution of administrative powers to the counties, the new 2014 KDHS data should be valuable to managers and planners.

The 2014 KDHS has specifically collected data to estimate fertility, to assess childhood, maternal, and adult mortality, to measure changes in fertility and contraceptive prevalence, to examine basic indicators of maternal and child health, to estimate nutritional status of women and children, to describe patterns of knowledge and behaviour related to the transmission of HIV and other sexually transmitted infections, and to ascertain the extent and pattern of domestic violence and female genital cutting. Unlike the 2003 and 2008-09 KDHS surveys, this survey did not include HIV and AIDS testing. HIV prevalence estimates are available from the 2012 Kenya AIDS Indicator Survey (KAIS), completed prior to the 2014 KDHS.

Results from the 2014 KDHS show a continued decline in the total fertility rate (TFR). Fertility decreased from 4.9 births per woman in 2003 to 4.6 in 2008-09 and further to 3.9 in 2014, a one-child decline over the past 10 years and the lowest TFR ever recorded in Kenya. This is corroborated by the marked increase in the contraceptive prevalence rate (CPR) from 46 percent in 2008-09 to 58 percent in the current survey. The decline in fertility accompanies a marked decline in infant and child mortality. All early childhood mortality rates have declined between the 2003 and 2014 KDHS surveys. Total under-5 mortality declined from 115 deaths per 1,000 live births in the 2003 KDHS to 52 deaths per 1,000 live births in the 2014 KDHS. The maternal mortality ratio is 362 maternal deaths per 100,000 live births for the seven-year period preceding the survey; however, this is not statistically different from the ratios reported in the 2003 and 2008-09 KDHS surveys and does not indicate any decline over time.

The proportion of mothers who reported receiving antenatal care from a skilled health provider increased from 88 percent to 96 percent between 2003 and 2014. The percentage of births attended by a skilled provider and the percentage of births occurring in health facilities each increased by about 20 percentage points between 2003 and 2014. The percentage of children age 12-23 months who have received all basic vaccines increased slightly from the 77 percent observed in the 2008-09 KDHS to 79 percent in 2014. Six in ten households (59 percent) own at least one insecticide-treated net, and 48 percent of Kenyans have access to one. In malaria endemic areas, 39 percent of women received the recommended dosage of intermittent preventive treatment for malaria during pregnancy. Awareness of AIDS is universal in Kenya; however, only 56 percent of women and 66 percent of men have comprehensive knowledge about HIV and AIDS prevention and transmission.

The 2014 KDHS was conducted as a joint effort by many organisations. The Kenya National Bureau of Statistics (KNBS) served as the implementing agency by providing guidance in the overall survey planning, development of survey tools, training of personnel, data collection, processing, analysis, and dissemination of the results. The Bureau would like to acknowledge and appreciate the institutions and agencies for roles they played that resulted in the success of this exercise: Ministry of Health (MOH), National AIDS Control Council (NACC), National Council for Population and Development (NCPD), Kenya Medical Research Institute (KEMRI), Ministry of Labour, Social Security and Services, United States Agency for International Development (USAID/Kenya), ICF International, United Nations Fund for

Population Activities (UNFPA), the United Kingdom Department for International Development (DfID), World Bank, Danish International Development Agency (DANIDA), United Nations Children's Fund (UNICEF), German Development Bank (KfW), World Food Programme (WFP), Clinton Health Access Initiative (CHAI), Micronutrient Initiative (MI), US Centers for Disease Control and Prevention (CDC), Japan International Cooperation Agency (JICA), Joint United Nations Programme on HIV/AIDS (UNAIDS), and the World Health Organization (WHO). The management of such a huge undertaking was made possible through the help of a signed memorandum of understanding (MoU) by all the partners and the creation of active Steering and Technical Committees. The Bureau is grateful to all the staff from various institutions and agencies who worked tirelessly to ensure the success of this exercise.

Special thanks go to all the KNBS staff, survey personnel, and ICF International staff who worked long hours to collect data and most important, to the respondents who gave time to provide the information from which this report is developed.

Zachary Mwangi
Director General
Kenya National Bureau of Statistics

MILLENNIUM DEVELOPMENT GOAL INDICATORS

Kenya 2014

Indicator	Sex		
	Male	Female	Total
1. Eradicate extreme poverty and hunger			
1.8 Prevalence of underweight children under 5 years of age	12.1	9.8	11.0
2. Achieve universal primary education			
2.1 Net attendance ratio in primary education[1]	85.5	87.6	86.6
2.3 Literacy rate of 15-24 year-olds[2]	94.6[a]	92.8	93.7[b]
3. Promote gender equality and empower women			
3.1 Ratio of girls to boys in primary, secondary and tertiary education			
3.1a Ratio of girls to boys in primary education[3]	na	na	1.0
3.1b Ratio of girls to boys in secondary education[3]	na	na	1.1
3.1c Ratio of girls to boys in tertiary education[3]	na	na	0.9
4. Reduce child mortality			
4.1 Under five mortality rate[4]	60	52	52
4.2 Infant mortality rate[4]	44	37	39
4.3 Percentage of 1 year old children immunised against measles	87.9	86.2	87.1
5. Improve maternal health			
5.1 Maternal mortality ratio[5]	na	na	362 *(CI: 254,471)*
5.2 Percentage of births attended by skilled health personnel[6]	na	na	61.8
5.3 Contraceptive prevalence rate[7]	na	58.0	na
5.4 Adolescent birth rate[8]	na	96.3	na
5.5 Antenatal care coverage			
5.5a At least one visit[9]	na	95.5	na
5.5b Four or more visits[10]	na	57.6	na
5.6 Unmet need for family planning	na	17.5	na
6. Combat HIV/AIDS, malaria and other diseases			
6.2 Condom use at last higher-risk sex[11]	75.0[a]	58.7	66.8
6.3 Percentage of the population age 15-24 years with comprehensive correct knowledge of HIV/AIDS[12]	63.7	54.2	59.0
6.4 Ratio of school attendance of orphans to school attendance of non-orphans age 10-14 years	0.98	1.01	0.99
6.7 Percentage of children under 5 sleeping under insecticide-treated bednets[13]	55.0	53.5	54.3
6.8 Percentage of children under 5 with fever who are treated with appropriate antimalarial drugs[14]	27.0	27.0	27.0
	Urban	Rural	Total
7. Ensure environmental sustainability			
7.8 Percentage of population using an improved water source[15]	85.7	57.0	66.9
7.9 Percentage of population using an improved sanitation facility[16]	30.5	21.6	24.7

na = Not applicable

[1] The ratio is based on reported attendance, not enrolment, in primary education among primary school age children (6-13 year-olds). The rate also includes children of primary school age enrolled in secondary education. This is a proxy for MDG indicator 2.1, Net enrolment ratio.

[2] Refers to respondents who attended secondary school or higher or who could read a whole sentence or part of a sentence

[3] Based on reported net attendance, not gross enrolment, among 6-13 year-olds for primary, 14-17 year-olds for secondary and 18-22 year-olds for tertiary education

[4] Expressed in terms of deaths per 1,000 live births. Mortality by sex refers to a 10-year reference period preceding the survey. Mortality rates for males and females combined refer to the 5-year period preceding the survey.

[5] Expressed in terms of maternal deaths per 100,000 live births in the 7-year period preceding the survey

[6] Among births in the five years preceding the survey

[7] Percentage of currently married women age 15-49 using any method of contraception

[8] Equivalent to the age-specific fertility rate for women age 15-19 for the 3-year period preceding the survey, expressed in terms of births per 1,000 women age 15-19

[9] With a skilled provider

[10] With any healthcare provider

[11] Higher-risk sex refers to sexual intercourse with a non-marital, non-cohabiting partner. Expressed as a percentage of men and women age 15-24 who had higher-risk sex in the past 12 months.

[12] Comprehensive knowledge means knowing that consistent use of a condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about transmission or prevention of the AIDS virus

[13] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment, or (2) a net that has been soaked with insecticide within the past 12 months

[14] Measured as the percentage of children age 0-59 months who were ill with a fever in the two weeks preceding the interview and received any anti-malarial drug

[15] Percentage of de jure population whose main source of drinking water is a household connection (piped), public tap or standpipe, tubewell or borehole, protected dug well, protected spring, rainwater collection, or bottled water

[16] Percentage of de jure population whose household has a flush toilet, ventilated improved pit latrine, pit latrine with a slab, or composting toilet and does not share this facility with other households

[a] Restricted to men in sub-sample of households selected for the male interview

[b] The total is calculated as the simple arithmetic mean of the percentages in the columns for males and females

SUMMARY OF FINDINGS

HOUSEHOLD POPULATION AND CHARACTERISTICS

Housing

The majority (71 percent) of households in Kenya have access to an improved source of drinking water. Twenty-three percent of households have an improved toilet facility that is not shared with other households. The majority (64 percent) of households in Kenya do not have electricity. Almost half (46 percent) of households live in dwellings with cement floors. More than half (53 percent) of households use one room for sleeping. More than half (56 percent) of households use wood as their main source of cooking fuel.

Education, Media, and Mobile Phones

The percentage of women and men with no education has dropped by half over the last 10 years, from 13 percent and 6 percent in 2003 to 7 percent and 3 percent, respectively, in the 2014 KDHS. Over the same period, the percentage of women and men with at least some secondary education increased from 29 percent and 37 percent in 2003 to 43 percent and 49 percent, respectively, in 2014. Eighty-eight percent of women and 92 percent of men are literate. Twenty-three percent of women and 10 percent of men are not exposed to any source of mass media. Eighty-six percent of households own mobile phones.

Employment

Sixty-one percent of women and 80 percent of men are currently employed. Women are mostly employed in agricultural or domestic service positions, while men are mostly employed in agricultural, unskilled manual, or domestic service positions.

MARRIAGE AND SEXUAL ACTIVITY

The median age at first marriage among women age 25-49 is 20.2 years; the median age at first marriage among men age 30-49 is 25.3 years. Median age at marriage has remained stable in the past 10 years for both women and men. Six percent of currently married men are in a polygynous union; 11 percent of currently married women have co-wives. The percentage of women married by age 15 appears to be declining; 9 percent of women age 45-49 were married by age 15, as compared with 2 percent among those age 15-19. Fifteen percent of women age 20-49 had first sexual intercourse by age 15, 50 percent by age 18, and 71 percent by age 20. Twenty-two percent of men age 20-49 had first sexual intercourse by age 15, 56 percent by age 18, and 76 percent by age 20.

FERTILITY

Fertility Levels and Trends

The total fertility rate for the three years preceding the survey is 3.9 births per woman, with rural women having at least one child more than urban women. Fertility has decreased from 4.9 births per woman in 2003 to 3.9 births per woman in 2014, a one-child decline in the past 10 years. Half of births occur within three years of a previous birth, with 18 percent occurring within 24 months. Childbearing begins early in Kenya, with almost one-quarter of women giving birth by age 18 and nearly half by age 20. Eighteen percent of adolescent women age 15-19 are already mothers or pregnant with their first child. In the last five years, teenage pregnancy has remained unchanged.

Fertility Preferences

Half of currently married women age 15-49 and 42 percent of currently married men age 15-49 want no more children or are sterilised. The mean ideal number of children among all women age 15-49 is 3.6, while that of all men is 3.9. The mean ideal number of children among women has declined marginally in the last 10 years from 3.9 in the 2003 KDHS to 3.6 in 2014. The gap between actual fertility and ideal family size has narrowed in the last 10 years, from 1.3 children in 2003 to 1.0 in 2014.

Family Planning

More than half of currently married women (58 percent) use a contraceptive method. The most popular modern contraceptive methods used by married women are injectables (26 percent), implants (10 percent), and the pill (8 percent). Use of modern methods has increased over the last decade from 32 percent in the 2003 KDHS to 53 percent in 2014. The public sector remains the major provider of contraceptive methods; 60 percent of modern contraceptive users obtain their contraception from a government source. Thirty-one percent of family planning users discontinue use of a method within 12 months of starting its use. Side effects and health concerns (11 percent) are the main reason for discontinuation. Eighteen percent of currently married women have an unmet need for family planning services, with 9 percent in need of spacing and 8 percent in need of limiting.

MATERNAL HEALTH

Antenatal Care

Ninety-six percent of women with a live birth in the five years preceding the survey received antenatal care from a skilled provider, an improvement from 92 percent in the 2008-09 KDHS and 88 percent in the 2003 KDHS. Fifty-eight percent of women make the recommended four or more antenatal care visits during their pregnancy, an increase of 11 percentage points from the 2008-09 KDHS (47 percent).

Delivery, Postnatal, and Newborn Care

Sixty-one percent of live births in the five years preceding the survey were delivered in a health facility; 62 percent were assisted by a skilled provider. More than half (53 percent) of women who gave birth in the two years before the survey received a postnatal care checkup in the first two days after delivery. Thirty-six percent of infants born in the two years before the survey had their first postnatal checkup within the first two days after birth. One in three newborns received postnatal care from a doctor, a nurse, or a midwife.

Fistula

More than half (54 percent) of the women interviewed in the survey had heard of fistula. However, only 1 percent of these women reported having ever experienced fistula-like symptoms.

CHILD HEALTH

Childhood Mortality

The infant mortality rate is 39 deaths per 1,000 live births, and under-5 mortality is 52 deaths per 1,000 live births. At these levels, about one in every 26 Kenyan children dies before reaching age 1, and about one in every 19 does not survive to his or her fifth birthday. All early childhood mortality rates declined between the 2003 and 2014 KDHS surveys. Neonatal mortality has exhibited the slowest rate of decline (33 percent). A child born in the Nyanza region is almost twice as likely to die before age 5 as a child born in the Central region. Nairobi has the second highest under-5 mortality rate, following Nyanza (72 deaths per 1,000 live births). Male children are more likely than female children to die during their first year of life (44 deaths versus 37 deaths per 1,000 live births). Once past infancy, male and female children one to four years of age experience the same level of mortality (16 deaths per 1,000 live births). The neonatal mortality rate for the five years preceding the survey is 22 deaths per 1,000 live births, 1.4 times the postneonatal rate. The perinatal mortality rate for the same reference period is 29 deaths per 1,000 pregnancies.

Childhood Vaccination Coverage

Seventy-nine percent of children age 12-23 months have received all basic vaccines, slightly higher than the 77 percent observed in the 2008-09 KDHS.

Childhood Illness and Treatment

Nine percent of children under age 5 showed symptoms of acute respiratory infection in the two weeks before the survey; 66 percent of these children were taken to a health facility or provider for advice or treatment. Twenty-four percent of children under age 5 had a fever in the two weeks before the survey; 63 percent of these children were taken to a health facility or provider for advice or treatment. Fifteen percent of children under age 5 had diarrhoea in the two weeks before the survey. The proportion of children with diarrhoea taken to a health provider for advice or treatment

increased from 49 percent in the 2008-09 KDHS to 58 percent in the 2014 KDHS. The proportion of children with diarrhoea given fluid from ORS packets has increased over the past five years, from 39 percent in 2008-09 to 54 percent in 2014. The percentage of women who know that ORS can be used to treat diarrhoea in children has increased from 78 percent in 2008-09 to 93 percent in 2014. The percentage of children whose stools are disposed of safely has increased from 78 percent in 2008-09 to 83 percent in 2014.

NUTRITION

Nutritional Status of Children

Twenty-six percent of children under age 5 are stunted, 4 percent are wasted, and 11 percent are underweight.

Nutritional Status of Women

Nine percent of women age 15-49 are thin or undernourished (BMI <18.5 kg/m^2); 33 percent of women are either overweight or obese (BMI ≥25 kg/m^2), with 10 percent of them being obese (BMI ≥30 kg/m^2).

Breastfeeding Practices

Ninety-nine percent of children have ever been breastfed; however, only 61 percent of children less than age 6 months are exclusively breastfed. Complementary foods are generally introduced at the recommended age; 81 percent of breastfed children age 6-9 months received complementary foods in the 24 hours preceding the survey. Only 22 percent of children are fed in accordance with the three recommended infant and young child feeding practices.

Supplements and Deworming for Children and Women

Seventy-two percent of children age 6-59 months received vitamin A supplements in the past six months. Fifty-one percent of children age 12-59 months received deworming medication in the same time period. Among women, only 8 percent took iron tablets daily for 90 or more days during the pregnancy of their last birth. Thirty-one percent of women took deworming medication during their last pregnancy.

MALARIA

Net Ownership and Use

Six in 10 households (59 percent) own at least one insecticide-treated mosquito net (ITN), while 34 percent of households have at least one net for every two people. Forty-eight percent of Kenyans have access to an ITN. Two-fifths of the household population (42 percent) slept under an ITN the night prior to the survey, and two-thirds (67 percent) of members of households with at least one ITN slept under an ITN the night prior to the survey. Fifty-four percent of children under age 5 slept under an ITN the night before the survey, and, among those living in households with an ITN, 77 percent slept under an ITN the night before the survey. Fifty-one percent of pregnant women overall slept under an ITN the night before the survey, and, among those living in households with an ITN, 77 percent slept under an ITN the night before the survey.

Pregnant Women and Children

Seventeen percent of women received intermittent preventive treatment (IPTp) for malaria during pregnancy; that is, they received two or more doses of SP/Fansidar, at least one during an antenatal care visit. In malaria endemic areas, 39 percent of women received IPTp. Twenty-three percent of children under age 5 who had a fever took ACT, and 13 percent took ACT within 24 hours of fever onset.

HIV/AIDS

Awareness of and Knowledge about AIDS

Awareness of AIDS is universal in Kenya. However, only 56 percent of women and 66 percent of men have comprehensive knowledge about HIV and AIDS prevention and transmission; that is, they know that both condom use and limiting sexual intercourse to one uninfected partner can prevent HIV, they are aware that a healthy-looking person can have HIV, and they reject the two most common local misconceptions about HIV: that HIV can be transmitted by mosquitoes and by sharing food. Seventy-two percent of women and 62 percent of men know both that HIV can be transmitted through breastfeeding and that the risk

of mother-to-child transmission can be reduced by taking special drugs during pregnancy.

HIV-related Behavioural Indicators

Among respondents who had more than one sexual partner in the past 12 months, 40 percent of women and 44 percent of men reported using a condom during their last sexual intercourse.

HIV Testing

Since the 2008-09 KDHS, there has been an increase in the percentage of both women (from 29 percent to 53 percent) and men (from 23 percent to 46 percent) who were tested for HIV in the past 12 months and received their results. Sixty-eight percent of women who gave birth in the two years before the survey received HIV counselling during antenatal care. Almost 7 in 10 women (69 percent) were tested for HIV during antenatal care and received the test results and post-test counselling, while 23 percent received results but did not receive post-test counselling.

OTHER HEALTH ISSUES

Ten percent of women have had both a breast exam from a health provider and a breast self-exam. Three-quarters (76 percent) of women have heard of cervical cancer, and 14 percent have had a cervical cancer screening exam. Approximately two-thirds (65 percent) of men have heard of prostate cancer, and 3 percent have been examined by a doctor or health care provider for prostate cancer. Tobacco use is more common among Kenyan men than women (83 percent of men don't use tobacco compared with 99 percent of women). Sixteen percent of men smoke cigarettes. Among men who smoke cigarettes, 28 percent smoked more than 10 cigarettes in the past 24 hours. Most Kenyans do not have health insurance; 82 percent of women and 79 percent of men are not covered by any health insurance.

WOMEN'S EMPOWERMENT

Nearly half (49 percent) of currently married employed women who earn cash make independent decisions about how to spend their earnings, an increase from the figure of 42 percent reported in the 2008-09 KDHS. Fifty-four percent of currently married women participate in decisions pertaining to their own health care, major household purchases, visits to their family or relatives, and major household purchases. Thirty-nine percent of women have the main say in their own health care.

Contraceptive use increases with women's empowerment. In general, unmet need for family planning decreases with improvements in women's empowerment. Access to antenatal care, delivery assistance from a skilled provider, and postnatal care within the first two days of delivery increases with increasing women's empowerment.

GENDER-BASED VIOLENCE

Violence Since Age 15

Forty-five percent of women and 44 percent of men age 15-49 have experienced physical violence since age 15, and 20 percent and 12 percent, respectively, experienced physical violence within the 12 months prior to the survey. The main perpetrators of physical violence against women are husbands, whereas the main perpetrators against men are parents, teachers, and others.

Sexual and Partner Violence

Fourteen percent of women and 6 percent of men age 15-49 report having experienced sexual violence at least once in their lifetime. Overall, 39 percent of ever-married women and 9 percent of men age 15-49 report having experienced spousal physical or sexual violence. Among women and men who have ever experienced spousal violence (physical or sexual), 39 percent and 24 percent, respectively, reported experiencing physical injuries. Forty-four percent of women and 27 percent of men have sought assistance to stop the violence they have experienced.

Female Genital Cutting

Twenty-one percent of women age 15-49 have been circumcised. There is some evidence of a trend over time to circumcise girls at younger ages. Twenty-eight percent of circumcised women age 20-24 were circumcised at age 5-9, as compared with 17 percent of circumcised women age 45-49. With respect to type of circumcision, 2 percent of circumcised women age 15-49 had cutting with no flesh removed, 87 percent had cutting with flesh removed, and 9 percent had their genital area sewn

closed after cutting (a procedure known as infibulation). Girls age 0-14 are more likely to be circumcised if their mother is circumcised. Likewise, girls age 0-14 are more likely to be infibulated if their mother is also infibulated. Eight percent of girls age 0-14 have had their genital area sewn closed. Eleven percent or less of women and men believe that the practice of female genital cutting is required by their community or their religion or that the practice should continue.

ADULT AND MATERNAL MORTALITY

Fourteen percent of women and 18 percent of men are likely to die between exact ages 15 and 50. Maternal deaths account for 14 percent of all deaths to women age 15-49. The maternal mortality ratio was 362 maternal deaths per 100,000 live births for the seven-year period preceding the survey. When comparing the estimate of an MMR of 362 with the MMR estimated in the previous DHS (2008-09 KDHS estimate of 520 maternal deaths per 100,000 live births), the differential is not large enough to conclude whether or not there has been any change over time between the two surveys.

KENYA

SOUTH SUDAN
ETHIOPIA
UGANDA
SOMALIA
TANZANIA
Lake Turkana
Lake Victoria
Indian Ocean
Rift Valley
Eastern
North Eastern
Western
Nyanza
Central
Nairobi
Coast
TURKANA
MARSABIT
MANDERA
WAJIR
SAMBURU
ISIOLO
WEST POKOT
TRANS-NZOIA
ELGEYO MARAKWET
BARINGO
UASIN GISHU
LAIKIPIA
MERU
NANDI
KISUMU
KERICHO
NAKURU
NYANDARUA
THARAKA NITHI
NYERI
KIRINYAGA
EMBU
GARISSA
HOMA BAY
NYAMIRA
KISII
BOMET
MIGORI
MURANG'A
KIAMBU
NAROK
MACHAKOS
KITUI
TANA RIVER
MAKUENI
KAJIADO
LAMU
KILIFI
TAITA TAVETA
MOMBASA
KWALE
0
120
240
Kilometres

INTRODUCTION 1

Macdonald Obudho, James N. Munguti, John K. Bore, Mutua Kakinyi

1.1 HISTORY, GEOGRAPHY, AND ECONOMY

1.1.1 History

Kenya is a former British colony. The independence process was met with resistance and an armed struggle by Kenyans against the British colonial rulers. The Mau Mau rebellion in the 1950s paved the way for constitutional reform and political development in the following years. The country achieved self-rule in June 1963 and gained independence on December 12, 1963. The country was a multi-party state until 1981, when it was converted to a single-party state by amending the constitution. Kenya reverted to the multi-party state in 1992. The Kenya African National Union (KANU) ruled the country from independence to 2002, when the National Alliance of Rainbow Coalition (NARC) was elected to power. To date, the multi-party state remains, with the Jubilee Coalition currently in power.

1.1.2 Geography

Kenya is situated in the eastern part of the African continent. The country lies between 5 degrees north and 5 degrees south latitude and between 24 and 31 degrees east longitude. The equator passes at the middle, separating the upper and lower parts almost equally. Kenya borders Ethiopia (north), Somalia (northeast), Tanzania (south), Uganda (west), and South Sudan (northwest). The Indian Ocean is on the eastern side. The coastline houses the port of Mombasa, which enables Kenya and several other countries, including Uganda, Rwanda, and South Sudan, to engage in global trade.

The country is administratively divided into 47 counties. It has a total of 582,646 square kilometres, of which 571,466 square kilometres are the dry land area. Most of the land area (80 percent) is arid or semi-arid, and only 20 percent is arable. The country has diverse physical features: Mount Kenya, the second highest mountain in Africa; Lake Victoria, the largest freshwater lake on the continent; the Great Rift Valley, which runs from north to south; and Lake Nakuru, a major tourist attraction due to the presence of flamingos.

The country falls within two regions: lowlands, including the coastal and lake region lowlands, and highlands, which fall on both sides of the Great Rift Valley. Rainfall and temperatures are influenced by altitude and proximity to the Indian Ocean. The coastal region has a tropical climate, with both rainfall and temperatures higher than the rest of the country throughout the year.

1.1.3 Economy

The Kenyan economy is predominantly agricultural with a strong industrial base. The performance of the Kenyan economy since the country gained independence has been mixed. Recent years have seen an estimated 5-6 percent growth. From the demand side, growth has mainly been driven by an increase in private consumption and rapid growth in capital investment. From the supply side, the major drivers of the economy have been agriculture, forestry, and fishing; construction wholesale and retail trade; education; and finance and insurance.

1.2 POPULATION

Kenya's population was enumerated at 38.6 million in the 2009 census (Table 1.1). The trend data from population censuses indicate that the total population more than tripled between 1969 and 2009.

These data also suggest that the population increased by approximately one million people per year between 1999 (28.7 million) and 2009. The inter-censal growth rate, which was 3.3 percent per annum in 1969, increased to a peak of 3.8 percent per annum in 1979 before declining to 2.9 percent per annum in 1999. At a growth rate of 2.9 percent per annum, the population may increase to 77 million by 2030.

Table 1.1 Basic demographic indicators

Selected demographic indicators for Kenya, 1969, 1979, 1989, 1999, 2009, and 2014

Indicator	1969	1979	1989	1999	2009	2014
Population (millions)	10.9	16.2	23.2	28.7	38.6	43.0[a]
Density (pop/km^2)	19.0	27.0	37.0	49.0	66.4	73.9[a]
Percent urban	9.9	15.1	18.1	19.4	32.3	32.3[c]
Crude birth rate	50.0	54.0	48.0	41.3	34.8	30.5[c]
Crude death rate	17.0	14.0	11.0	11.7	10.4	10.4[b]
Inter-censal growth rate	3.3	3.8	3.4	2.9	2.9	2.9[b]
Total fertility rate	7.6	7.8	6.7	5.0	4.8	3.9[c]
Infant mortality rate (per 1,000 births)	119	88	66	77.3	54.0	39.0[c]
Life expectancy at birth	50	54	60	56.6	58.0	58.0[b]

[a] Projected figures
[b] Assumed to remain constant over the inter-censal period
[c] 2014 KDHS results (see later chapters)
Source: CBS, 1970; CBS, 1981; CBS, 1994; CBS, 2002a; KNBS & ICF Macro, 2010; KNBS, 2012

1.3 POPULATION AND HEALTH POLICY FRAMEWORKS

1.3.1 Population Policy Framework

In 2012, the government of Kenya launched a new policy on population and national development. The policy is described in the Sessional Paper No. 3 of 2012; it outlines the goal of attaining a high quality of life for the people of Kenya by managing population growth to a level that can be sustained with the available resources. The principal objective of the policy is to provide a framework to guide national population programmes and activities for the next two decades (National Council for Population and Development [NCPD], 2012). Overall, the policy seeks to:

- Reduce the population growth rate in order to achieve harmony with the economic growth and social development goals envisioned in Vision 2030;
- Reduce fertility and mortality rates and at the same time assist individuals and couples who desire to have children but are unable to;
- Provide equitable and affordable quality reproductive health services, including family planning;
- Contribute to the planning and implementation of socioeconomic development programmes as a long-term measure to influence population dynamics, with a special focus on poverty reduction, technology and research, the environment, education, health and gender equity, and equality and empowerment of women; and
- Mobilise resources through government budgetary allocations, international cooperation, and public/private partnerships to ensure the sustainability of population programmes and significant impacts on population dynamics.

The policy has the following targets:

- Reduce the natural growth rate of the population from 2.5 percent in 2009 to 1.5 percent by 2030.

- Reduce the infant mortality rate from 52 per 1,000 live births in 2009 to 25 per 1,000 live births by 2030.
- Reduce the under-5 mortality rate from 74 per 1,000 live births in 2009 to 48 per 1,000 live births by 2030.
- Reduce the maternal mortality rate from 488 deaths per 100,000 live births in 2009 to 200 deaths per 100,000 live births by 2030.
- Reduce the crude death rate from 13 deaths per 1,000 people in 2009 to 8 deaths per 1000 people by 2030.
- Improve life expectancy at birth for both sexes from 57 years in 2009 to 64 years by 2030.
- Reduce the total fertility rate from 4.6 children per woman in 2009 to 2.6 children per woman by 2030.

1.3.2 Health Priorities and Programmes

The government of Kenya emphasises the health of its citizens and the improvement of health service delivery. The Ministry of Health plays a coordinating and capacity-building role in ensuring that all services offered are in line with established policies and standards. The government recognises that good health is a prerequisite to socioeconomic development. A number of government policy documents and successive national development plans, including Vision 2030, have stated that health services should meet the basic needs of the population, that health facilities should be situated so that they are within reach of all Kenyans, and that there should be a focus on preventive, promotive, and rehabilitative services without ignoring curative services.

Under the 2010 Kenya constitution, the health function has been devolved to the county governments, with distinct functions being assigned to the national and county governments. The national government is responsible for leadership in health policy development, management of national referral health facilities, capacity building and technical assistance to counties, and consumer protection, including the development of norms, standards, and guidelines. The county governments are responsible for county health services and pharmacies; ambulance services; promotion of primary health care; licensing and control of establishments that sell food to the public; cemeteries, funeral parlours, and crematoria; and refuse removal, refuse dumps, and solid waste disposal. With regard to their functions, the county governments have undertaken new strategies and initiatives to address the health needs of their populations, including the construction of more health facilities, the acquisition of new equipment and medication at these facilities, and the addition of ambulances and more medical staff.

The Kenya Health Policy 2014-2030 takes into account the objectives of devolution and adheres to the following principles:

- Equity in the distribution of health services and interventions;
- A people-centred approach to health and health interventions;
- A participatory approach to delivery of interventions;
- A multisectoral approach to realising health goals;
- Efficiency in the application of health technologies; and
- Social accountability.

1.4 OBJECTIVES OF THE SURVEY

The 2014 Kenya Demographic and Health Survey (KDHS) was designed to provide information to monitor and evaluate the population and health situations in Kenya and to be a follow-up to the previous

KDHS surveys. In addition, it provides information on indicators previously not collected in KDHS surveys, such as fistula and men's experience of domestic violence. Finally, the 2014 KDHS is the first such survey to provide estimates for selected demographic and health indicators at the county level.

The specific objectives of the 2014 KDHS were to:

- Estimate fertility and childhood, maternal, and adult mortality;
- Measure changes in fertility and contraceptive prevalence;
- Examine basic indicators of maternal and child health;
- Collect anthropometric measures for children and women;
- Describe patterns of knowledge and behaviour related to transmission of HIV and other sexually transmitted infections; and
- Ascertain the extent and pattern of domestic violence and female genital cutting.

1.5 SURVEY ORGANISATION

The 2014 KDHS was a joint effort of many organisations, including the following:

- Kenya National Bureau of Statistics (KNBS)
- Ministry of Health (MOH)
- National AIDS Control Council (NACC)
- National Council for Population and Development (NCPD)
- Kenya Medical Research Institute (KEMRI)
- Ministry of Labour, Social Security and Services
- United States Agency for International Development (USAID/Kenya)
- ICF International
- United Nations Population Fund (UNFPA)
- Department for International Development (DFID)
- World Bank
- Danish International Development Agency (DANIDA)
- United Nations Children's Fund (UNICEF)
- German Development Bank (KfW)
- World Food Programme (WFP)
- Clinton Health Access Initiative (CHAI)
- Micronutrient Initiative (MI)
- U.S. Centers for Disease Control and Prevention (CDC)
- Japan International Cooperation Agency (JICA)
- Joint United Nations Programme on HIV/AIDS (UNAIDS)
- World Health Organization (WHO)

The Kenya National Bureau of Statistics (KNBS) served as the implementing agency and, as such, had a primary role in the planning of the survey and in the analysis and dissemination of the survey results. As the implementing agency, the bureau took responsibility for operational matters including planning and conducting fieldwork and processing collected data. Staff from the KNBS and other partners were responsible for overseeing day-to-day technical operations, including recruitment and training of field and data processing staff and supervision of office and field operations. The bureau was also responsible for organising the writing and distribution of reports. With funding from USAID/Kenya, ICF International staff provided technical assistance, mainly through short-term visits to Kenya, in the areas of survey and sample design, questionnaire design, field staff training, fieldwork monitoring, data processing, and report writing and dissemination. NACC, as the body mandated to coordinate the national HIV and AIDS multisectoral response, assisted in reviewing the protocol and survey instruments to ensure that the information collected is relevant to the national HIV and AIDS programmes. USAID/Kenya provided

funding for survey field transport in addition to other logistical support. WHO-Kenya helped in mobilising logistical and financial support from member organisations. The Ministry of Health (MOH) assisted in reviewing the survey instruments in addition to participating in report writing.

1.6 SAMPLE DESIGN

The sample for the 2014 KDHS was drawn from a master sampling frame, the Fifth National Sample Survey and Evaluation Programme (NASSEP V). This is a frame that the KNBS currently operates to conduct household-based surveys throughout Kenya. Development of the frame began in 2012, and it contains a total of 5,360 clusters split into four equal subsamples. These clusters were drawn with a stratified probability proportional to size sampling methodology from 96,251 enumeration areas (EAs) in the 2009 Kenya Population and Housing Census. The 2014 KDHS used two subsamples of the NASSEP V frame that were developed in 2013. Approximately half of the clusters in these two subsamples were updated between November 2013 and September 2014. Kenya is divided into 47 counties that serve as devolved units of administration, created in the new constitution of 2010. During the development of the NASSEP V, each of the 47 counties was stratified into urban and rural strata; since Nairobi county and Mombasa county have only urban areas, the resulting total was 92 sampling strata.

The 2014 KDHS was designed to produce representative estimates for most of the survey indicators at the national level, for urban and rural areas separately, at the regional (former provincial[1]) level, and for selected indicators at the county level. In order to meet these objectives, the sample was designed to have 40,300 households from 1,612 clusters spread across the country, with 995 clusters in rural areas and 617 in urban areas. Samples were selected independently in each sampling stratum, using a two-stage sample design. In the first stage, the 1,612 EAs were selected with equal probability from the NASSEP V frame. The households from listing operations served as the sampling frame for the second stage of selection, in which 25 households were selected from each cluster.

The interviewers visited only the preselected households, and no replacement of the preselected households was allowed during data collection. The Household Questionnaire and the Woman's Questionnaire were administered in all households, while the Man's Questionnaire was administered in every second household. Because of the non-proportional allocation to the sampling strata and the fixed sample size per cluster, the survey was not self-weighting. The resulting data have, therefore, been weighted to be representative at the national, regional, and county levels.

1.7 QUESTIONNAIRES

The 2014 KDHS used a household questionnaire, a questionnaire for women age 15-49, and a questionnaire for men age 15-54. These instruments were based on the model questionnaires developed for The DHS Program, the questionnaires used in the previous KDHS surveys, and the current information needs of Kenya. During the development of the questionnaires, input was sought from a variety of organisations that are expected to use the resulting data. A two-day workshop involving key stakeholders was held to discuss the questionnaire design.

Producing county-level estimates requires collecting data from a large number of households within each county, resulting in a considerable increase in the sample size from 9,936 households in the 2008-09 KDHS to 40,300 households in 2014. A survey of this magnitude introduces concerns related to data quality and overall management. To address these concerns, reduce the length of fieldwork, and limit interviewer and respondent fatigue, a decision was made to not implement the full questionnaire in every household and, in so doing, to collect only priority indicators at the county level. Stakeholders generated a list of these priority indicators. Short household and woman's questionnaires were then designed based on the full questionnaires; the short questionnaires contain the subset of questions from the full questionnaires required to measure the priority indicators at the county level.

[1] Former provinces were Coast, North Eastern, Eastern, Central, Rift Valley, Western, Nyanza, and Nairobi.

Thus, a total of five questionnaires were used in the 2014 KDHS: (1) a full Household Questionnaire, (2) a short Household Questionnaire, (3) a full Woman's Questionnaire, (4) a short Woman's Questionnaire, and (5) a Man's Questionnaire. The 2014 KDHS sample was divided into halves. In one half, households were administered the full Household Questionnaire, the full Woman's Questionnaire, and the Man's Questionnaire. In the other half, households were administered the short Household Questionnaire and the short Woman's Questionnaire. Selection of these subsamples was done at the household level—within a cluster, one in every two households was selected for the full questionnaires, and the remaining households were selected for the short questionnaires.

It is important to note that the priority data collected in the short questionnaires were collected from all households and from all women since the short questionnaires were subsets of the full questionnaires. Therefore, data collected in both the full and the short questionnaires can produce estimates of indicators at the national, rural/urban, regional, and county levels. Data collected only in the full questionnaires (i.e., in one-half of households) can produce estimates at the national, rural/urban, and regional levels only. Data collected only in the full questionnaires are not recommended for estimation at the county level. A list of topics included in the full and short questionnaires is presented in Appendix E. In this report, county-level data are tabulated for nearly all of the indicators for which they are available; county-level tables are not presented for indicators with insufficient cases for evaluation (less than 50 unweighted cases) within each county. In the case of indicators not collected at the county level, the tables include data at the regional level only.

The Household Questionnaire was used to list all of the usual members of the household and visitors who stayed in the household the night before the survey. One of the main purposes of the Household Questionnaire was to identify women and men who were eligible for the individual interview. Some basic information was collected on the characteristics of each person listed, including age, sex, education, and relationship to the head of the household. The Household Questionnaire also collected information on characteristics of the household's dwelling unit, such as the source of water, type of toilet facilities, materials used for the floor and roof of the house, ownership of various durable goods, and ownership and use of mosquito nets. In addition, this questionnaire was used to record height and weight measurements of women age 15-49 and children under age 5.

The Woman's Questionnaires were used to collect information from women age 15-49. The full questionnaire covered the following topics (see Appendix E for a side-by-side comparison of topics included in the full and short questionnaires):

- Background characteristics (education, marital status, media exposure, etc.)
- Reproductive history
- Knowledge and use of family planning methods
- Fertility preferences
- Antenatal and delivery care
- Breastfeeding and infant feeding practices
- Vaccinations and childhood illnesses
- Marriage and sexual activity
- Women's work and husbands' background characteristics
- Childhood mortality
- Awareness and behaviour regarding HIV and other sexually transmitted infections
- Adult mortality, including maternal mortality
- Domestic violence
- Female circumcision
- Fistula

The Man's Questionnaire was administered to men age 15-54 living in every second household in the sample. The Man's Questionnaire collected information similar to that contained in the Woman's Questionnaire but was shorter because it did not contain questions on maternal and child health, nutrition, adult and maternal mortality, or experience of female circumcision or fistula.

Both the Woman's and the Man's Questionnaires also included a series of questions to obtain information on respondents' experience of domestic violence. The domestic violence questions were administered in the subsample of households that received the full Household Questionnaire, the full Woman's Questionnaire, and the Man's Questionnaire. Additionally, the violence questions were administered to only one eligible individual, a woman or a man, per household. In households with more than one eligible individual, special procedures were followed in order to ensure that there was random selection of the respondent to be interviewed for the domestic violence module.

After finalisation of the questionnaires in English, they were translated into 16 other languages, namely Borana, Embu, Kalenjin, Kamba, Kikuyu, Kisii, Luhya, Luo, Maasai, Maragoli, Meru, Mijikenda, Pokot, Somali, Swahili, and Turkana. The translated questionnaires were pretested to detect any possible problems in questionnaire translation or flow, as well as to gauge the length of time required for interviews.

1.8 TRAINING

1.8.1 Training of Trainers

Training of trainers was conducted by ICF International from January 20-25, 2014, with 18 trainers drawn from the KNBS and the Ministry of Health. The objectives of the training were to harmonise concepts related to survey design and questionnaire content, to review effective adult teaching techniques, and to familiarise trainers with the training materials and equipment. The trainers participated in leading the pretest and the main training and later served as fieldwork coordinators during data collection.

1.8.2 Pretest Activities

The pretest took place from January 17 to February 15, 2014. The objectives of the pretest were (1) to train interviewers, editors, and supervisors to fulfil their respective roles and to conduct high-quality household and individual interviews, (2) to pilot the questionnaires in the field, and (3) to review and modify the questionnaire translations based on field experience. Classroom training addressed all aspects of the questionnaire content and interviewing procedures and included anthropometry practice with children from neighbouring child care centres. Training concluded with two days of local field practice, after which field teams were formed and sent throughout Kenya (to clusters not included in the KDHS sample) to pilot the translated questionnaires. After the fieldwork, a two-day debriefing workshop was held to look at the issues emanating from the pretest. The resolutions from the debriefing were used to enrich the questionnaires and improve field logistics before implementation of the main training and the actual survey.

1.8.3 Main Training of Field Staff

Several categories of personnel were recruited and trained to undertake the 2014 KDHS. These included 48 supervisors, 48 field editors, 144 female interviewers, 48 male interviewers, 28 quality assurance personnel, and 20 reserves.

The training for these personnel took place from March 24 to April 17, 2014, in Nakuru. Trainees were divided into six classrooms, each managed by three trainers. The training consisted of a detailed, question-by-question explanation of the questionnaires, accompanied by explanations from the interviewer's manual, demonstration through role-plays, group discussions, and in-class practice

interviewing in pairs. Several graded take-home assignments and quizzes were administered, the results of which were used both to enhance understanding of key terms and concepts and to identify candidates for further strengthening or elimination from the field teams. A number of guest speakers were invited to give lectures on specific topics relevant to the KDHS.

Anthropometry training provided all trainees with instruction, demonstration, and practice in length/height and weight measurements for children and adults. Trainees completed a standardisation exercise measuring children, intended to gauge and improve measurement accuracy and precision. In this exercise, 175 children age 0-59 months and their caregivers were invited to the training site in groups of 50 child-caregiver pairs assigned throughout the day to one of three classrooms. Fifteen nutrition specialists from partnering organisations were trained to support the exercise; they provided a reference measurement for children and monitored the standardisation activity. Each of the 336 trainees served as both measurers and assistants and measured the same 10 children twice. Results were recorded and analysed using Software for Emergency Nutrition Assessment (ENA for SMART); more than 70 percent of trainees' scores were acceptable or higher. A debriefing session was held the following day to provide feedback and correction to trainees.

Three field practice sessions were held throughout the main training. Trainees were organised into teams with a team leader selected from the pretest trainees. Team leaders assisted with logistics, guided trainees through fieldwork, monitored trainees' performance, edited trainees' questionnaires for errors, and debriefed their team on errors/corrections. The first field practice occurred early in the training and focused only on the Household Questionnaire. The final two days of field practice occurred at the end of training and covered the full KDHS protocol: all questionnaires, salt testing, and anthropometry.

1.9 FIELDWORK

Fieldwork for the main survey took place from May 7 to October 20, 2014. Field staff were divided into 48 teams according to counties and languages spoken in the areas where they conducted the interviews. Each team had one supervisor, one field editor, three female interviewers, one male interviewer, a driver, and a vehicle. Data collection was overseen by 18 coordinators who had also served as trainers during the pretest and main training and by a staff of 28 quality assurance personnel. Coordinators were each assigned two to three teams for which they were responsible for observing and monitoring data collection quality, ensuring uniformity in data collection procedures and fidelity to the survey protocol, providing moral support to the field teams, and replenishing field team supplies. Coordinators met in person and via phone with teams throughout the fieldwork, spending a total of 70 days in the field. Quality control staff fulfilled similar responsibilities and spent a total of 60 days in the field.

1.10 DATA PROCESSING

Completed questionnaires were sent to the KNBS Data Processing Centre in Nairobi. Office editors who received the questionnaires verified cluster and household numbers to ensure that they were consistent with the sampled list. They also ensured that each cluster had 25 households and that all questionnaires for a particular household were packaged together.

Data entry began on May 28, 2014, with a four-day training session and continued until November 21, 2014. All data were double entered (100 percent verification) using CSPro software. The data processing team included 42 keyers, three office editors, two secondary editors, four supervisors, and one data manager. Secondary editing, which included further data cleaning and validation, ran simultaneously with data entry and was completed on January 28, 2015, in collaboration with ICF International. The KDHS Key Indicators Report was prepared and launched in April 2015.

1.11 RESPONSE RATES

Table 1.2 presents the summary response rates for the 2014 KDHS. A total of 39,679 households were selected for the sample, of which 36,812 were found occupied at the time of the fieldwork. Of these households, 36,430 were successfully interviewed, yielding an overall household response rate of 99 percent. The shortfall of households occupied was primarily due to structures that were found to be vacant or destroyed and households that were absent for an extended period of time.

Table 1.2 Results of the household and individual interviews

Number of households, number of interviews, and response rates, according to residence (unweighted), Kenya 2014

Result	Residence		Total
	Urban	Rural	
ALL HOUSEHOLDS			
Household interviews			
Households selected	15,419	24,260	39,679
Households occupied	14,177	22,635	36,812
Households interviewed	13,914	22,516	36,430
Household response rate[1]	98.1	99.5	99.0
Interviews with women age 15-49			
Number of eligible women	12,157	20,015	32,172
Number of eligible women interviewed	11,614	19,465	31,079
Eligible women response rate[2]	95.5	97.3	96.6
HOUSEHOLDS SELECTED FOR FULL QUESTIONNAIRES			
Household interviews			
Households selected	7,394	11,636	19,030
Households occupied	6,790	10,835	17,625
Households interviewed	6,645	10,764	17,409
Household response rate[1]	97.9	99.3	98.8
Interviews with women age 15-49			
Number of eligible women	5,772	9,545	15,317
Number of eligible women interviewed	5,472	9,269	14,741
Eligible women response rate[2]	94.8	97.1	96.2
Interviews with men age 15-54			
Number of eligible men	5,676	8,541	14,217
Number of eligible men interviewed	4,915	7,904	12,819
Eligible men response rate[2]	86.6	92.5	90.2
HOUSEHOLDS SELECTED FOR SHORT QUESTIONNAIRES			
Household interviews			
Households selected	8,025	12,624	20,649
Households occupied	7,387	11,800	19,187
Households interviewed	7,269	11,752	19,021
Household response rate[1]	98.4	99.6	99.1
Interviews with women age 15-49			
Number of eligible women	6,385	10,470	16,855
Number of eligible women interviewed	6,142	10,196	16,338
Eligible women response rate[2]	96.2	97.4	96.9

[1] Households interviewed/households occupied
[2] Respondents interviewed/eligible respondents

As noted, the 2014 KDHS sample was divided into halves, with one half of households receiving the full Household Questionnaire, the full Woman's Questionnaire, and the Man's Questionnaire and the other half receiving the short Household Questionnaire and the short Woman's Questionnaire. The household response rate for the full Household Questionnaire was 99 percent, as was the household response rate for the short Household Questionnaire.

In the households selected for and interviewed using the full questionnaires, a total of 15,317 women were identified as eligible for the full Woman's Questionnaire, of whom 14,741 were interviewed, generating a response rate of 96 percent. A total of 14,217 men were identified as eligible in these households, of whom 12,819 were successfully interviewed, generating a response rate of 90 percent.

In the households selected for and interviewed with the short questionnaires, a total of 16,855 women were identified as eligible for the short Woman's Questionnaire, of whom 16,338 were interviewed, yielding a response rate of 97 percent.

Response rates are lower in the urban sample than in the rural sample, more so for men. The principal reason for non-response among both eligible men and eligible women was failure to find them at home despite repeated visits to the household. The lower response rates for men reflect the more frequent and longer absences of men from the household.

HOUSING CHARACTERISTICS AND HOUSEHOLD POPULATION

2

Macdonald Obudho, James N. Munguti, John K. Bore, Mutua Kakinyi

Key Findings

- The majority (71 percent) of households in Kenya have access to an improved source of drinking water.
- Twenty-three percent of households have an improved toilet facility that is not shared with other households.
- The majority (64 percent) of households in Kenya do not have electricity.
- Almost half (46 percent) of households live in dwellings with cement floors.
- More than half (53 percent) of households use one room for sleeping.
- More than half (56 percent) of households use wood as their main source of cooking fuel.
- Eighty-six percent of households own mobile phones.
- Three in 10 Kenyans are below age 10.
- One-third of households are headed by women.
- The average household size in Kenya is 3.9 members.
- The births of two out of every three children below age 5 are registered with the civil authorities.

This chapter provides an overview of the demographic and socioeconomic characteristics of the households sampled in the 2014 KDHS. In the 2014 KDHS, a household is defined as a person or group of persons, related or unrelated, who usually live together, who acknowledge one adult member as the head of the household, and who have common cooking arrangements. Information was collected on all usual residents of a selected household (de jure population) as well as persons who had stayed in the selected household the night before the interview (de facto population).

This chapter presents information on the conditions of the households in which the survey population lives, including the source of drinking water, availability of electricity, sanitation facilities, building materials, and possession of household durable goods. Also included are findings on birth registration among children, living arrangements, orphanhood status, school attendance, and educational attainment. The background information presented in this chapter is intended to facilitate the interpretation of the demographic, socioeconomic, and health indices presented in later chapters.

2.1 HOUSEHOLD CHARACTERISTICS

The characteristics of a household determine the socioeconomic and health status of its members. The household is where decisions about health, education, and general welfare are made and acted upon. The 2014 KDHS asked respondents about their household environment, including the source of drinking water; type of sanitation facility; building characteristics such as type of material used for the roofing, flooring, and walls; and number of rooms used for sleeping. Many of these measures help to assess Kenya's progress towards Millennium Development Goal 7, which focuses on environmental sustainability and targets sustainable access to safe drinking water, basic sanitation, and adequate housing.

2.1.1 Water and Sanitation

Table 2.1 includes a number of indicators that are useful in monitoring household access to improved drinking water. Improved water sources include piped water into the dwelling, yard, or plot; a public tap/standpipe or borehole; a protected well or protected spring water; rainwater; and bottled water. Lack of easy access to an improved water source may limit the quantity of suitable drinking water that is available to a household as well as increase the risk of illness. Unimproved water sources increase the spread of waterborne disease and the burden of service delivery through increased demand for health care; these sources include unprotected wells or springs, water delivered by tanker trucks, and surface water.

Table 2.1 Household drinking water

Percent distribution of households and de jure population by source of drinking water, time to obtain drinking water, treatment of drinking water, and person who usually collects drinking water, according to residence, Kenya 2014

	Households			Population		
Characteristic	Urban	Rural	Total	Urban	Rural	Total
Source of drinking water						
Improved source	88.2	59.1	71.3	85.7	57.0	66.9
Piped water into dwelling/ yard/plot	45.5	15.0	27.8	43.2	12.1	22.8
Public tap/standpipe	24.8	9.3	15.8	22.6	9.6	14.0
Tube well or borehole	3.8	8.2	6.3	4.3	8.4	7.0
Protected well	3.9	10.3	7.6	4.5	10.7	8.6
Protected spring	3.4	11.6	8.2	4.5	12.3	9.6
Rain water	2.6	4.5	3.7	2.8	3.9	3.5
Bottled water	4.3	0.2	1.9	3.8	0.1	1.4
Non-improved source	10.1	39.2	26.9	12.5	41.5	31.6
Unprotected well	1.7	8.8	5.8	2.4	9.8	7.3
Unprotected spring	1.2	5.5	3.7	1.8	5.8	4.4
Tanker truck/cart with drum	3.1	0.8	1.8	3.0	0.7	1.5
Surface water	4.1	24.0	15.6	5.4	25.2	18.4
Other	1.7	1.7	1.7	1.8	1.4	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Time to obtain drinking water (round trip)						
Water on premises	53.7	27.0	38.2	52.1	23.6	33.4
Less than 30 minutes	33.4	32.7	33.0	32.2	33.4	33.0
30 minutes or longer	11.1	39.9	27.8	13.9	42.8	32.9
Don't know/missing	1.9	0.4	1.0	1.9	0.3	0.8
Total	100.0	100.0	100.0	100.0	100.0	100.0
Water treatment prior to drinking[1]						
Boiled	25.5	22.5	23.7	25.9	21.0	22.7
Bleach/chlorine added	21.7	22.5	22.2	24.0	23.8	23.8
Strained through cloth	0.4	1.1	0.8	0.6	1.3	1.0
Ceramic, sand or other filter	1.2	3.5	2.6	1.6	3.9	3.2
Solar disinfection	0.0	0.0	0.0	0.0	0.0	0.0
Other[2]	0.7	2.0	1.5	0.9	2.0	1.6
No treatment	54.5	54.1	54.3	51.9	54.1	53.3
Percentage using an appropriate treatment method[3]	44.9	44.2	44.5	47.5	44.1	45.3
Number of all households	15,290	21,140	36,430	48,946	93,762	142,708
Person who usually collects drinking water						
Adult female 15+	27.7	56.8	44.6	34.3	64.2	53.9
Adult male 15+	16.4	11.8	13.7	10.9	7.7	8.8
Female child under age 15	0.8	2.5	1.8	1.3	2.7	2.2
Male child under age 15	0.6	1.2	1.0	0.8	1.3	1.1
Other	0.8	0.8	0.8	0.8	0.6	0.7
Water on premises	53.5	26.7	38.0	51.8	23.3	33.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of households selected for full questionnaire	7,280	10,080	17,360	23,176	44,073	67,249

Note: Totals may not add up to 100 percent because households with missing information are not shown separately.
[1] Respondents may report multiple treatment methods; therefore, the sum of all treatment methods may exceed 100 percent.
[2] Other water treatment methods include covering the water container, and letting the water stand and settle.
[3] Appropriate water treatment methods include boiling, bleaching/adding chlorine, filtering/straining, and solar disinfecting.

Table 2.1 indicates that the majority of households in Kenya (71 percent) obtain drinking water from an improved source, while 27 percent use non-improved sources. This is an improvement since the 2008-09 KDHS, when 63 percent of households obtained drinking water from an improved source. Use of improved sources is more common among households in urban areas (88 percent) than among those in rural areas (59 percent). The most common source of drinking water in urban areas is water piped into the dwelling/yard/plot, with almost half (46 percent) of households using this source. In rural areas, the most common source of drinking water is surface water (24 percent), followed by water piped into the dwelling/yard/plot (15 percent).

Nearly 4 in 10 households have the source for their drinking water on their premises, but nearly 3 in 10 households (28 percent) spend 30 minutes or longer to obtain their drinking water. In rural areas, 4 in 10 households spend 30 minutes or more to obtain their drinking water, as compared with only 1 in 10 urban households.

Over half of households (54 percent) do not treat their drinking water, and this is true in both urban and rural areas. The most commonly used methods of water treatment are boiling and adding bleach/chlorine (24 percent and 22 percent of households, respectively). Overall, 45 percent of households use an appropriate treatment method.

When water is not on the premises, the responsibility of collecting drinking water usually rests on adult women. Forty-five percent of households reported that a female adult age 15 and above usually collects the drinking water for the household. An even higher percentage of rural households delegate collection of drinking water to women (57 percent), as these households are much less likely to have their water source on the premises.

Table 2.2 presents the percent distribution of households and the de jure population by the type of toilet/latrine facilities usually used by household members. Twenty-five percent of household members usually use an improved (and not shared) toilet/latrine facility. About 4 in 10 urban dwellers (43 percent) use an improved facility that is shared by two or more households, as compared with only about 1 in 10 (12 percent) rural dwellers. Approximately two-thirds of rural Kenyans usually use a non-improved toilet facility (66 percent), most commonly a pit latrine without a slab or an open pit (48 percent). One-half of urban Kenyans use a shared facility of which a pit latrine with a slab is the most common (17 percent).

Table 2.2 Household sanitation facilities

Percent distribution of households and de jure population by type of toilet/latrine facilities, according to residence, Kenya 2014

Type of toilet/latrine facility	Households			Population		
	Urban	Rural	Total	Urban	Rural	Total
Improved, not shared facility						
Flush/pour flush to piped sewer system	8.0	0.1	3.4	8.5	0.1	3.0
Flush/pour flush to septic tank	8.0	0.8	3.8	8.7	0.6	3.4
Flush/pour flush to pit latrine	0.9	0.3	0.6	1.2	0.3	0.6
Ventilated improved pit (VIP) latrine	4.2	8.6	6.8	6.1	9.2	8.1
Pit latrine with slab	4.0	10.5	7.8	5.7	11.1	9.2
Composting toilet	0.3	0.3	0.3	0.4	0.3	0.3
Total	25.5	20.6	22.7	30.5	21.6	24.7
Shared facility[1]						
Flush/pour flush to piped sewer system	11.9	0.1	5.1	9.6	0.1	3.3
Flush/pour flush to septic tank	5.2	0.3	2.4	4.4	0.2	1.6
Flush/pour flush to pit latrine	3.7	0.2	1.7	3.0	0.2	1.1
Ventilated improved pit (VIP) latrine	12.1	6.4	8.8	11.2	5.1	7.2
Pit latrine with slab	17.3	8.1	12.0	14.9	6.4	9.3
Composting toilet	0.2	0.1	0.2	0.2	0.1	0.2
Total	50.4	15.3	30.1	43.3	12.1	22.8
Non-improved facility						
Flush/pour flush not to sewer/ septic tank/pit latrine	1.5	0.0	0.6	1.4	0.0	0.5
Pit latrine without slab/open pit	19.4	47.7	35.9	21.4	48.3	39.1
Bucket	0.2	0.0	0.1	0.3	0.0	0.1
Hanging toilet/hanging latrine	0.5	0.2	0.3	0.4	0.3	0.3
No facility/bush/field	1.4	16.0	9.9	1.7	17.6	12.2
Other	0.9	0.1	0.5	0.7	0.1	0.3
Total	24.1	64.1	47.3	26.2	66.3	52.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number	15,290	21,140	36,430	48,946	93,762	142,708

Note: Totals may not add up to 100 percent because households with missing information are not shown separately.
[1] Facilities that would be considered improved if they were not shared by two or more households.

2.1.2 Housing Characteristics

Table 2.3 presents information on housing characteristics in Kenya. These characteristics are usually a function of the household's socioeconomic situation and have a direct bearing on the health and welfare of household members. The table includes information on access to electricity, type of flooring material, number of rooms used for sleeping, the place used for cooking, the type of fuel used for cooking, and the frequency of someone smoking in the home. The majority of households in urban areas have electricity (68 percent), while the vast majority of rural households do not (only 13 percent have electricity). Nationally, 36 percent of households have access to electricity, as compared with 23 percent in 2008-09.

Cement is the most common household flooring material; 46 percent of households have cement floors, up from 41 percent in 2008-09. Not surprisingly, cement floors are much more common in urban households (70 percent) than in rural households (28 percent). The most common flooring in rural households is earth/sand (43 percent).

The number of rooms used for sleeping provides an indication of the extent of crowding in households. Overcrowding increases the risk of contracting infectious diseases such as acute respiratory infections and skin diseases, which particularly affect children and the elderly population. The proportion of households using one room for sleeping has increased from 48 percent to 53 percent in the last five years. The presence and extent of indoor pollution are dependent on cooking practices, the cooking location, and types of fuel used. According to the 2014 KDHS, 50 percent of households cook inside the

Table 2.3 Household characteristics

Percent distribution of households by housing characteristics, percentage using solid fuel for cooking, and percent distribution by frequency of smoking in the home, according to residence, Kenya 2014

Housing characteristic	Residence		Total
	Urban	Rural	
Electricity			
Yes	68.4	12.6	36.0
No	31.6	87.4	64.0
Total	100.0	100.0	100.0
Flooring material			
Earth, sand	10.9	43.1	29.6
Dung	5.0	26.9	17.7
Wood/planks	0.1	0.2	0.2
Palm/bamboo	0.0	0.0	0.0
Parquet or polished wood	0.4	0.1	0.3
Vinyl or asphalt strips	1.4	0.0	0.6
Ceramic tiles	7.3	0.8	3.5
Cement	70.3	28.4	46.0
Carpet	4.4	0.3	2.0
Other	0.1	0.1	0.1
Total	100.0	100.0	100.0
Rooms used for sleeping			
One	68.4	42.0	53.1
Two	21.3	36.5	30.2
Three or more	9.9	21.1	16.4
Total	100.0	100.0	100.0
Place for cooking			
In the house	77.0	30.4	50.0
In a separate building	14.5	61.1	41.5
Outdoors	6.2	7.4	6.9
No food cooked in household	2.3	1.0	1.5
Other	0.0	0.0	0.0
Missing	0.0	0.0	0.0
Total	100.0	100.0	100.0
Cooking fuel			
Electricity	0.9	0.1	0.4
LPG/natural gas/biogas	24.5	2.0	11.5
Paraffin/kerosene	26.6	1.3	11.9
Coal/lignite	0.1	0.1	0.1
Charcoal	27.6	9.7	17.2
Wood	17.2	84.2	56.1
Straw/shrubs/grass	0.7	1.4	1.1
Agricultural crop	0.0	0.1	0.0
Animal dung	0.0	0.0	0.0
Other	0.0	0.0	0.0
No food cooked in household	2.3	1.0	1.5
Total	100.0	100.0	100.0
Percentage using solid fuel for cooking[1]	45.6	95.5	74.6
Number of all households	15,290	21,140	36,430
Frequency of smoking in the home			
Daily	10.9	12.9	12.1
Weekly	1.8	1.9	1.9
Monthly	0.2	0.5	0.4
Less than monthly	0.6	0.5	0.5
Never	86.3	84.1	85.0
Total	100.0	100.0	100.0
Number of households selected for full questionnaire	7,280	10,080	17,360

LPG = Liquid petroleum gas
Note: Totals may not add up to 100 percent because households with missing information are not shown separately.
[1] Includes coal/lignite, charcoal, wood, straw/shrubs/grass, agricultural crops, and animal dung.

home, while 42 percent cook in a separate building and 7 percent cook outdoors. The percentage of households that cook within the dwelling unit is much higher in urban areas (77 percent) than in rural areas (30 percent). Using solid fuels for cooking increases indoor pollution. Solid fuels are defined as coal/lignite, charcoal, wood, straw/shrubs/grass, and agricultural crops. Nationally, 75 percent of households use solid fuels, mostly wood (56 percent) and charcoal (17 percent). While this is a decrease

from the 84 percent of households using solid fuels reported in the 2008-09 KDHS, over 9 in 10 rural households continue to use solid fuels. Households that do not use solid fuels mostly use gas or kerosene (12 percent of households each, compared with 7 percent and 8 percent, respectively in 2008-09).

A major concern for the government of Kenya is the effect of secondhand smoke on the health of children and neonates. The purpose of the Tobacco Control Act of 2007, followed in 2014 by the Tobacco Control Regulations (2014), is to control tobacco and tobacco-related product use. Secondhand smoke is a risk factor for children and adults who do not smoke. Children who are exposed to secondhand smoke are at a higher risk of respiratory and ear infections and poor lung development (U.S. Department of Health and Human Services, 2006). Pregnant women who are exposed to secondhand smoke have a higher risk of giving birth to a low birth weight baby (Windham et al., 1999). To measure the extent of smoke exposure among household members, respondents were asked how often anyone smokes inside the house. In Kenya, someone smokes in the house on a daily basis in 12 percent of households (11 percent in urban areas and 13 percent in rural areas).

2.1.3 Household Possessions

The availability of durable consumer goods is a useful indicator of a household's socioeconomic status. Moreover, particular goods have specific benefits. For instance, having access to a radio or a television exposes household members to innovative ideas; a refrigerator prolongs the wholesomeness of foods; and a means of transport allows greater access to services away from the local area. Table 2.4 shows the availability of selected consumer goods by residence.

Table 2.4 Household possessions

Percentage of households possessing various household effects, means of transportation, agricultural land and livestock/farm animals, a dwelling, and land on which the dwelling is built, by residence, Kenya 2014

Possession	Residence		Total
	Urban	Rural	
Household effects			
Watch	24.9	15.0	19.2
Radio	73.5	63.1	67.5
Television	56.0	18.9	34.5
Mobile telephone	94.2	80.0	86.0
Non-mobile telephone	0.7	0.2	0.4
Refrigerator	12.7	1.5	6.2
Solar panel	4.0	14.0	9.8
Table	87.8	83.1	85.1
Chair	79.4	86.3	83.4
Sofa	64.5	47.5	54.6
Bed	94.1	92.7	93.3
Cupboard	51.9	41.7	46.0
Clock	27.3	14.4	19.8
Microwave oven	7.2	0.7	3.4
DVD player	40.6	9.5	22.5
Cassette or CD player	19.5	5.8	11.6
Means of transport			
Bicycle	16.2	24.8	21.2
Animal drawn cart	1.1	2.5	1.9
Motorcycle/scooter	6.0	8.2	7.3
Car/truck	7.2	2.7	4.6
Boat with a motor	0.2	0.2	0.2
Ownership of agricultural land	47.7	79.2	66.0
Ownership of farm animals[1]	43.2	80.4	64.8
Number of all households	15,290	21,140	36,430
Ownership of dwelling	25.5	85.2	60.2
Ownership of land on which dwelling is built	24.4	81.9	57.8
Number of households selected for full questionnaire	7,280	10,080	17,360

[1] Local cattle, exotic/grade cattle, horses, donkeys, camels, goats, sheep or chickens

Possession of mobile phones has significantly increased from 62 percent in 2008-09 to 86 percent in 2014; rural areas have registered a greater increase (from 53 percent to 80 percent), as ownership of mobile phones among urban households was already relatively high. More than 9 in 10 urban households (94 percent) own a mobile phone. Sixty-eight percent of households have a radio, and about one-third (35 percent) have a television. Urban households are somewhat more likely to possess a radio (74 percent) than rural households (63 percent). Fifty-six percent of urban households and 19 percent of rural households possess a television, and television ownership has increased nationally from 28 percent to 35 percent since 2008-09. A refrigerator is available in 13 percent of urban households and only 2 percent of rural households.

Bicycles are still the most common means of transport owned by households. Twenty-one percent of households own a bicycle (25 percent in rural areas and 16 percent in urban areas).

The agricultural sector plays a large role in the Kenyan economy, and a substantial proportion of the population is engaged in this sector. The 2014 KDHS indicates that two of every three households own agricultural land, with 79 percent of rural households and 48 percent of urban households owning land. Two in three households (65 percent) own farm animals, 80 percent in rural areas and 43 percent in urban areas. In urban areas, ownership of agricultural land and farm animals has increased since 2008-09 (from 35 percent to 48 percent and 27 percent to 43 percent, respectively), while the national figure has remained at two-thirds.

More than 8 in 10 rural households own their dwelling (85 percent) and the land on which the dwelling is built (82 percent). About one-quarter (26 percent) of urban households own their dwelling and the land on which it is built (24 percent). Thus, nationally, 6 in 10 Kenyan households own their dwelling (60 percent), and nearly 6 in 10 (58 percent) own the land on which the dwelling is built.

2.2 HOUSEHOLD WEALTH

The wealth index used in this report and in many other DHS survey reports serves as a proxy for a household's long-term standard of living. It has been demonstrated to be consistent with expenditure and income measures (Rutstein, 1999; Rutstein and Johnson, 2004). The index is constructed using household asset data collected in the Household Questionnaire and is generated via a principal components analysis.

The wealth index has been improved to better take into account urban-rural differences in scores and indicators of wealth by performing the first and second steps of its creation separately for urban and rural areas prior to creating a national wealth index in the last step. In the first step, a subset of indicators common to urban and rural areas is used to create wealth scores for households in both areas. Categorical variables to be used are transformed into separate dichotomous (0-1) indicators. These indicators and those that are continuous are then examined using a principal components analysis to produce a common factor score for each household. In the second step, separate factor scores are produced for households in urban and rural areas using area-specific indicators. The third step combines the separate area-specific factor scores to produce a nationally applicable combined wealth index by adjusting area-specific scores through a regression on the common factor scores. The resulting combined wealth index has a mean of zero and a standard deviation of one. Once the index is computed, national-level wealth quintiles (from lowest to highest) are obtained by assigning the household score to each de jure household member, ranking each person in the population by his or her score, and then dividing the ranking into five equal categories, each comprising 20 percent of the population.

Thus, throughout this report, wealth quintiles are expressed in terms of quintiles of individuals in the overall population rather than quintiles of individuals at risk for any one health or population indicator. For example, quintile rates for infant mortality refer to infant mortality rates per 1,000 live births among all people in the population quintile concerned, as distinct from quintiles of live births or newly born infants, who constitute the only members of the population at risk of mortality during infancy.

Table 2.5 presents percent distributions of the de jure population across the five wealth quintiles by residence and region. Three-quarters of urban residents (75 percent) are in the two highest wealth quintiles, while more than three-quarters of rural residents (78 percent) are in the lowest three quintiles (and are nearly equally distributed across these quintiles). By region, the most skewed distributions are seen in Nairobi and North Eastern. Nine in 10 people in Nairobi are in the two highest wealth quintiles, and 7 in 10 people in North Eastern are in the lowest wealth quintile. Populations in the other regions are more spread out across the quintiles.

Table 2.5 Wealth quintiles

Percent distribution of the de jure population by wealth quintiles, and the Gini Coefficient, according to residence and region, Kenya 2014

Residence/ region/county	Wealth quintile					Total	Number of persons	Gini coefficient
	Lowest	Second	Middle	Fourth	Highest			
Residence								
Urban	6.0	8.3	10.6	26.1	49.0	100.0	48,946	0.18
Rural	27.3	26.1	24.9	16.8	4.9	100.0	93,762	0.19
Region								
Coast	40.0	10.4	10.6	14.5	24.5	100.0	13,972	0.34
North Eastern	72.9	4.5	4.5	9.0	9.1	100.0	4,164	0.36
Eastern	19.5	27.7	22.4	19.7	10.7	100.0	20,960	0.21
Central	2.4	12.0	21.9	32.0	31.7	100.0	16,297	0.21
Rift Valley	26.5	20.2	19.7	19.1	14.5	100.0	37,746	0.29
Western	12.3	30.9	33.8	16.8	6.2	100.0	16,692	0.20
Nyanza	16.6	31.2	23.8	17.5	10.9	100.0	20,050	0.28
Nairobi	0.2	0.8	6.0	25.6	67.4	100.0	12,827	0.15
Total	20.0	20.0	20.0	20.0	20.0	100.0	142,708	0.27

Table 2.5 also includes information on the Gini coefficient, which indicates the level of concentration of wealth (0 being an equal distribution and 1 a totally unequal distribution). This ratio is expressed as a proportion between 0 and 1. The coefficient indicates the distribution of wealth independent of the level of wealth. The coefficient is lowest in Nairobi, indicating that people in that region are more similar to each other with regard to wealth than people in any other region. With the highest Gini coefficient of 0.36, the most unequal distribution of wealth is seen in the North Eastern region.

2.3 FOOD SECURITY

The National Food and Nutrition Security Policy of 2011 states that all Kenyans should at all times have access to safe food of sufficient quantity and quality to satisfy their nutritional needs for optimal health. Household respondents in the 2014 KDHS were asked on how many days during the seven days preceding the survey members of their household had consumed items from various food groups (staples, pulses, vegetables, fruits, meat, dairy, oil, and sugar). They were also asked if there were any days in the seven days preceding the survey when their household did not have food or enough money to buy food. Respondents who answered 'yes' to the latter question were asked to indicate how many days in that week their household had to rely on less preferred food, rely on borrowed food, reduce the number of meals, reduce the size of meals, and/or reduce what adults ate in order for small children to eat. These questions and the three measures described below were developed by the World Food Programme.

The first measure, the food consumption score (FCS), derived from the household consumption history questions, is a composite calculation including dietary diversity (the number of food groups consumed by a household over a seven-day period), food frequency (the number of days a particular food group is consumed), and the relative nutritional importance of different food groups. The FCS is intended to describe short-term food security at the time of data collection. Food consumption scores are divided into poor, borderline, and acceptable food consumption groups.

The second measure is the percentage of households that report lacking food or money to purchase food in the seven days preceding the survey. The third measure is the coping strategy index (CSI). The CSI is a composite calculation of the frequency and severity of coping strategies that households adopt when facing lack of food or money to purchase food. A higher CSI score indicates a more serious food security

situation. The minimum possible CSI score (among households reporting any of the provided list of coping strategies) is 7.0, and the maximum possible score is 56.0.

Table 2.6 presents the percent distribution of households with poor, borderline, or acceptable food consumption; the percentage of households that report lacking food or money to purchase food; and the mean CSI score, according to background characteristics.

Table 2.6 Food security status

Percent distribution of households with poor, borderline or acceptable food consumption, percentage of households that report lacking food or money to purchase food in the seven days preceding the survey, and the mean coping strategy index, according to background characteristics, Kenya 2014

Background characteristic	Food consumption score groups			Total	Number of households with valid food consumption score	Percentage of households that report lacking food or money to purchase food	Number of households	Mean coping strategy index	Number of households with total coping strategy index greater than zero
	Poor	Borderline	Acceptable						
Residence									
Urban	1.4	7.3	91.3	100.0	7,217	23.0	7,280	17.4	1,658
Rural	1.7	11.4	86.9	100.0	10,041	36.2	10,080	19.6	3,645
Region									
Coast	1.1	10.7	88.2	100.0	1,651	24.5	1,688	16.1	414
North Eastern	1.9	8.5	89.6	100.0	342	37.8	344	15.4	130
Eastern	0.8	8.0	91.2	100.0	2,510	37.5	2,516	20.0	942
Central	1.3	5.8	92.9	100.0	2,391	17.4	2,400	16.7	418
Rift Valley	2.3	11.4	86.4	100.0	4,387	25.4	4,406	22.1	1,119
Western	1.4	10.8	87.8	100.0	1,720	44.6	1,726	17.3	769
Nyanza	1.6	12.9	85.5	100.0	2,174	41.9	2,187	18.4	915
Nairobi	1.6	7.5	90.8	100.0	2,085	29.1	2,093	18.3	597
Wealth quintile									
Lowest	3.8	17.9	78.3	100.0	2,888	54.4	2,894	21.7	1,574
Second	1.8	14.0	84.2	100.0	3,152	41.6	3,166	19.5	1,316
Middle	1.1	9.8	89.1	100.0	3,244	32.6	3,262	17.4	1,061
Fourth	0.8	6.2	93.0	100.0	3,913	21.1	3,948	16.3	824
Highest	0.8	3.7	95.5	100.0	4,062	13.0	4,091	16.1	528
Total	1.5	9.7	88.8	100.0	17,258	30.7	17,360	18.9	5,303

Note: The food consumption score reflects the quantity and quality of people's diet. The coping strategy index measures behaviours adopted by households when they have difficulties in covering their food needs.

The majority of households (89 percent) in Kenya had acceptable food consumption scores. Two percent of households had poor food consumption scores and 10 percent had borderline scores. Rural households were more likely to have borderline scores (11 percent) than urban households (7 percent). Households in Nyanza were most likely (13 percent) to have borderline scores, followed closely by households in Rift Valley, Western, and Coast (all 11 percent). The proportion of households with borderline scores decreased with increasing household wealth.

Three in 10 (31 percent) households in Kenya reported not having enough food or money to buy food in the seven days preceding the survey. More than 3 in 10 rural households (36 percent) and households in Western (45 percent), Nyanza (42 percent), North Eastern (38 percent), and Eastern (38 percent) reported lacking food or money to purchase food. As expected, the likelihood of lacking food or money to purchase food decreased with increasing household wealth. However, 13 percent of households in the highest wealth quintile did report not having enough food or money to buy food.

Among households that reported not having food or enough money to purchase food, the mean CSI score was 18.9. The mean score was highest in Rift Valley (22.1) and lowest in North Eastern (15.4). Mean CSI scores decreased slightly with increasing household wealth.

2.4 HAND WASHING

Environmental management at the household level is a key indicator of a household's intention to manage its health. Hand washing is one of the most effective ways to prevent the spread of germs, and it is used here as an indicator of personal and household hygiene. Table 2.7 provides information on places designated for hand washing and the availability of water and cleansing agents by residence, region, and wealth quintile.

Table 2.7 Hand washing

Percentage of households in which the place most often used for washing hands was observed, and among households in which the place for washing hands was observed, percent distribution by availability of water, soap and other cleansing agents, Kenya 2014

Background characteristic	Percentage of households where place for washing hands was observed	Number of households	Among households where place for washing hands was observed, percentage with:							Number of households with place for washing hands was observed
			Soap and water[1]	Water and cleansing agent[2] other than soap only	Water only	Soap but no water[3]	Cleansing agent other than soap only[2]	No water, no soap, no other cleansing agent	Total	
Residence										
Urban	42.7	7,280	60.1	0.2	21.8	3.5	0.0	14.2	100.0	3,111
Rural	27.1	10,080	37.5	0.1	26.0	2.7	0.1	33.2	100.0	2,729
Region										
Coast	30.3	1,688	24.5	0.1	23.2	6.0	0.0	45.9	100.0	512
North Eastern	23.6	344	26.5	2.4	18.1	1.7	0.0	50.7	100.0	81
Eastern	39.1	2,516	37.5	0.0	17.4	6.3	0.1	38.4	100.0	985
Central	55.7	2,400	45.2	0.5	41.7	1.7	0.0	10.8	100.0	1,337
Rift Valley	29.5	4,406	62.4	0.1	20.4	0.9	0.0	15.8	100.0	1,300
Western	25.6	1,726	38.1	0.1	10.3	3.8	0.0	47.3	100.0	442
Nyanza	16.5	2,187	51.8	0.0	25.2	6.1	0.1	16.2	100.0	360
Nairobi	39.3	2,093	73.4	0.0	15.1	2.1	0.0	9.5	100.0	823
Wealth quintile										
Lowest	18.0	2,894	18.5	0.6	18.8	2.7	0.0	59.0	100.0	520
Second	24.8	3,166	33.2	0.1	20.8	3.7	0.3	41.5	100.0	784
Middle	27.9	3,262	40.7	0.0	23.4	3.7	0.0	31.8	100.0	911
Fourth	36.6	3,948	48.5	0.0	30.6	2.9	0.0	17.9	100.0	1,445
Highest	53.3	4,091	67.2	0.3	21.7	3.0	0.0	7.7	100.0	2,180
Total	33.6	17,360	49.5	0.2	23.8	3.2	0.0	23.1	100.0	5,840

Note: Totals may not add up to 100 percent because households with missing information are not shown separately.
[1] Soap includes soap or detergent in bar, liquid, powder or paste form. This column includes households with soap and water only as well as those that had soap and water and another cleansing agent.
[2] Cleansing agents other than soap include locally available materials such as ash, mud or sand.
[3] Includes households with soap only as well as those with soap and another cleansing agent

Interviewers collected data by observing the place household members use for hand washing. A place for handwashing was only observed in one-third of households. A place for hand washing was observed in about 4 in 10 urban households (43 percent) and fewer than 3 in 10 rural households (27 percent). The ability of interviewers to observe a place for hand washing varied substantially across regions, from a low of 17 percent in Nyanza to a high of 56 percent in Central. It is especially interesting to note that the ability of interviewers to observe a place for hand washing steadily increased with increasing wealth, from a low of only 18 percent among households in the lowest quintile to a high of 53 percent observed among households in the highest quintile.

Both water and soap were available in 50 percent of the households where a place for hand washing was observed (60 percent of urban households and 38 percent of rural households). The presence of soap and water increases steadily with increasing wealth, from 19 percent in the lowest quintile to 67 percent in the highest quintile. Approximately half of households in Coast, North Eastern, and Western where a place for hand washing was observed had neither water nor soap available.

2.5 HOUSEHOLD POPULATION BY AGE AND SEX

The distribution of the de facto household population in the 2014 KDHS is shown in Table 2.8 by five-year age groups, according to sex and residence. The age and sex structure of the population is key in all demographic analyses. The 2014 KDHS de facto household population constitutes 137,780 persons, of whom 51 percent are female and 49 percent are male. Among this population, 34 percent live in urban areas and 66 live in rural areas. Half of the population is below age 20 (52 percent). At 14 percent, the under-5 population constitutes the largest age group in urban areas, while the 5-9 population is the largest five-year age group in rural areas (17 percent).

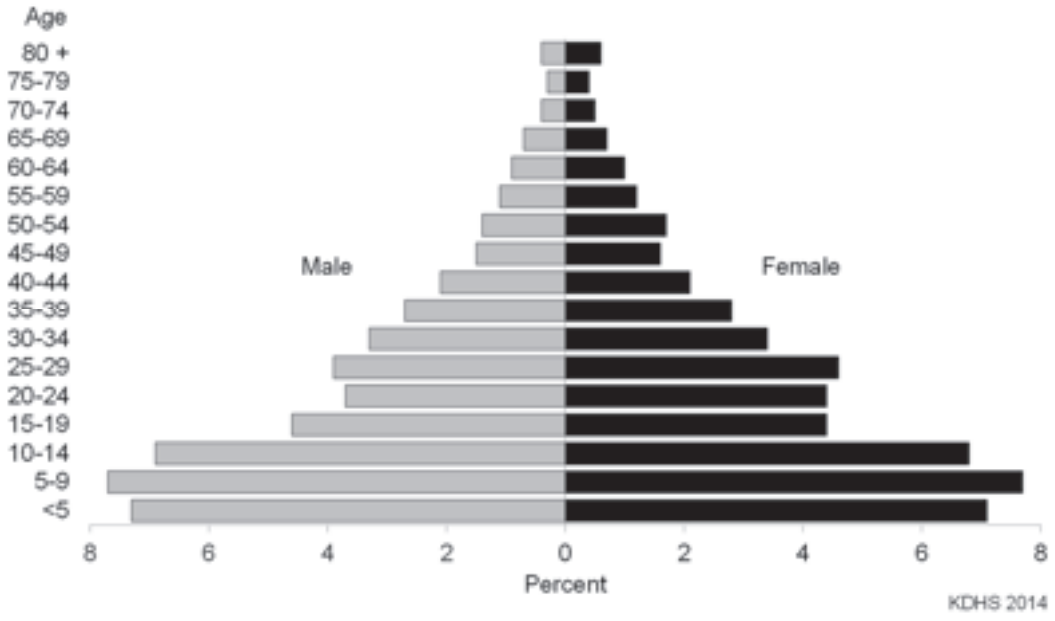
Table 2.8 Household population by age, sex, and residence

Percent distribution of the de facto household population by five-year age groups, according to sex and residence, Kenya 2014

	Urban			Rural			Total		
Age	Male	Female	Total	Male	Female	Total	Male	Female	Total
<5	13.8	13.9	13.9	15.6	13.9	14.7	15.0	13.9	14.4
5-9	12.6	12.5	12.5	17.4	16.3	16.8	15.7	15.0	15.3
10-14	10.3	10.4	10.4	16.0	14.8	15.4	14.0	13.3	13.7
15-19	7.3	8.3	7.8	10.5	8.9	9.7	9.4	8.7	9.0
20-24	10.0	12.0	11.0	6.3	6.8	6.6	7.6	8.6	8.1
25-29	11.8	12.8	12.3	5.8	7.0	6.4	7.9	8.9	8.4
30-34	9.8	9.0	9.4	5.2	5.5	5.4	6.8	6.7	6.7
35-39	7.1	6.1	6.6	4.7	5.2	4.9	5.5	5.5	5.5
40-44	5.3	4.2	4.7	3.8	4.2	4.0	4.3	4.2	4.3
45-49	3.3	2.8	3.1	2.9	3.5	3.2	3.1	3.2	3.2
50-54	3.0	2.9	3.0	2.9	3.7	3.3	3.0	3.4	3.2
55-59	2.3	1.6	1.9	2.2	2.8	2.5	2.2	2.4	2.3
60-64	1.3	1.1	1.2	2.2	2.3	2.3	1.9	1.9	1.9
65-69	0.8	0.8	0.8	1.6	1.7	1.7	1.3	1.4	1.4
70-74	0.6	0.7	0.6	1.1	1.2	1.2	0.9	1.0	1.0
75-79	0.3	0.4	0.3	0.7	0.9	0.8	0.6	0.7	0.6
80 +	0.4	0.6	0.5	0.9	1.4	1.2	0.7	1.1	0.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	23,574	23,871	47,445	43,865	46,470	90,335	67,439	70,341	137,780

Figure 2.1 depicts the age-sex structure of the Kenyan population in a population pyramid. The broad base depicts the youthfulness of the population. The drop in the female population between ages 10-14 and 15-19 is a bit steep and could partially be due to some interviewers estimating ages of women to be under the interview cutoff age of 15 to reduce their workload. Similarly, there is an increase in the female population between ages 45-49 and 50-54, which might be due to pushing some of the women out of the age eligibility category. The drop in population between ages 5-9 and under 5 among both males and females reflects a fertility decline, addressed in the chapter on fertility.

Figure 2.1 **Population pyramid**



2.6 HOUSEHOLD COMPOSITION

Information on key aspects of the composition of households is presented in Table 2.9. Nationally, one-third of households are headed by women. A higher proportion of rural than urban households are headed by women (36 percent and 27 percent, respectively).

Table 2.9 Household composition

Percent distribution of households by sex of head of household and by household size; mean size of household, and percentage of households with orphans and foster children under 18 years of age, according to residence, Kenya 2014

Characteristic	Residence		Total
	Urban	Rural	
Household headship			
Male	72.7	64.2	67.8
Female	27.3	35.8	32.2
Total	100.0	100.0	100.0
Number of usual members			
0	0.1	0.0	0.0
1	27.3	13.5	19.3
2	16.6	10.2	12.9
3	16.5	14.1	15.1
4	15.6	17.0	16.4
5	10.7	15.2	13.3
6	6.1	10.9	8.8
7	3.4	7.8	6.0
8	1.8	5.2	3.8
9+	1.9	6.2	4.4
Total	100.0	100.0	100.0
Mean size of households	3.2	4.4	3.9
Percentage of households with orphans and foster children under 18 years of age			
Foster children[1]	10.8	21.3	16.9
Double orphans	1.3	1.9	1.6
Single orphans[2]	5.4	10.8	8.5
Foster and/or orphan children	13.5	26.4	21.0
Number of households	15,290	21,140	36,430

Note: Table is based on de jure household members, i.e., usual residents.
[1] Foster children are those under age 18 living in households with neither their mother nor their father present.
[2] Includes children with one dead parent and an unknown survival status of the other parent.

The data also show that the mean size of a Kenyan household is 3.9 people, lower than the mean size of 4.2 recorded in the 2008-09 KDHS. As expected, rural households are larger on average (4.4 people) than urban households (3.2 people).

Nationally, 17 percent of Kenyan households are fostering a child under age 18 (1 in every 10 urban households and 2 in every 10 rural households). Nine percent of all Kenyan children under age 18 have had one parent die. The percentage of households housing a single or double orphan is higher in rural areas (13 percent) than in urban areas (7 percent).

2.7 BIRTH REGISTRATION

Birth registration is the inscription of the facts of the birth into an official log kept at the registrar's office. A birth certificate is issued at the time of registration or later as proof of the registration of the birth. Birth registration is basic to ensuring a child's legal status and, thus, basic rights and services.

Table 2.10 presents the percentage of the de jure population under age 5 whose births are registered with the civil authorities, according to background characteristics. Two-thirds of children in Kenya have their births registered (67 percent). This is an improvement of 7 percentage points since the 2008-09 KDHS, which reported a figure of 60 percent. However, only about one-quarter (24 percent) of children are reported to have a birth certificate.

Table 2.10 Birth registration of children under age five

Percentage of de jure children under five years of age whose births are registered with the civil authorities, according to background characteristics, Kenya 2014

Background characteristic	Children whose births are registered			Number of children
	Percentage who had a birth certificate	Percentage who did not have birth certificate	Percentage registered	
Age				
<2	19.8	48.2	68.0	7,662
2-4	26.8	39.4	66.2	12,291
Sex				
Male	24.9	42.5	67.4	10,170
Female	23.3	43.1	66.4	9,784
Residence				
Urban	37.4	41.4	78.8	6,603
Rural	17.5	43.4	61.0	13,351
Region				
Coast	21.3	53.5	74.8	2,019
North Eastern	44.7	17.1	61.8	682
Eastern	18.1	57.0	75.1	2,458
Central	36.3	53.4	89.7	1,789
Rift Valley	20.1	42.8	62.9	5,727
Western	19.6	33.6	53.2	2,585
Nyanza	19.5	34.6	54.1	2,929
Nairobi	42.6	36.9	79.5	1,765
Wealth quintile				
Lowest	12.3	39.8	52.1	4,924
Second	15.4	43.2	58.6	4,277
Middle	19.7	45.4	65.0	3,652
Fourth	27.5	49.6	77.1	3,430
Highest	51.4	37.3	88.7	3,670
Total	24.1	42.8	66.9	19,954

There is little age or sex differential nationally in the percentage of children registered. However, only slightly more than half of children in Western and Nyanza are registered, as compared with 9 in 10 children in Central. The percentage of children registered and the percentage having a birth certificate both increase steadily with increasing wealth.

2.8 CHILDREN'S LIVING ARRANGEMENTS, ORPHANHOOD, AND SCHOOL ATTENDANCE

Children's living arrangements affect their development and well-being. Table 2.11 presents the percent distribution of children by their living arrangements and the survival status of their biological parents. For 22 percent of children, both parents are alive but their father is living elsewhere; 10 percent of children are not living with either parent although both are alive.

There is not a great deal of variation in living arrangements by sex of the child. Children in urban areas are slightly more likely to be living with both parents (59 percent) than children in rural areas (53 percent).

Nationally, only 55 percent of children age 0-17 live with both of their biological parents and living arrangements vary by region. Two-thirds of children in Nairobi are living with both of their parents, the highest percentage in the country, while only half of children in the Eastern and Western regions are living with both parents. Children in the Western region are most likely (16 percent) to not be living with either parent despite both of them being alive. Nyanza has the highest percentage of children who have experienced the death of their father; 9 percent of these children are living with their mother, and 3 percent are living with neither parent. Children in the Eastern region are most likely to be living with their mother but not their father even though their father is alive (28 percent).

A notable pattern by wealth quintile is seen among children living with their mother but not their father. The percentage of children who are living with their mother and whose father has died decreases with increasing wealth.

Table 2.11 Children's living arrangements and orphanhood

Percent distribution of de jure children under age 18 by living arrangements and survival status of parents, the percentage of children not living with a biological parent, and the percentage of children with one or both parents dead, according to background characteristics, Kenya 2014

Background characteristic	Living with both parents	Living with mother but not with father		Living with father but not with mother		Not living with either parent					Total	Percentage not living with a biological parent	Percentage with one or both parents dead[1]	Number of children
		Father alive	Father dead	Mother alive	Mother dead	Both alive	Only father alive	Only mother alive	Both dead	Missing information on father/ mother				
Age														
0-4	63.8	25.1	2.2	0.9	0.2	5.2	0.4	0.4	0.1	1.6	100.0	6.2	3.4	19,954
<2	67.0	27.6	1.7	0.3	0.0	1.9	0.2	0.1	0.0	1.2	100.0	2.2	2.0	7,662
2-4	61.8	23.6	2.5	1.2	0.2	7.3	0.5	0.6	0.2	1.9	100.0	8.7	4.2	12,291
5-9	55.6	21.4	4.5	2.7	0.6	10.4	0.8	1.2	0.9	1.9	100.0	13.3	8.2	21,331
10-14	49.1	20.3	7.4	3.2	1.2	11.3	1.4	2.2	1.9	2.0	100.0	16.8	14.5	19,914
15-17	44.1	17.8	9.1	3.6	1.7	13.1	1.6	3.0	2.9	3.0	100.0	20.6	18.7	9,058
Sex														
Male	54.5	21.9	5.2	2.9	0.9	9.1	0.8	1.5	1.2	1.9	100.0	12.6	9.8	35,442
Female	54.6	21.5	5.3	2.0	0.7	9.9	1.1	1.5	1.3	2.1	100.0	13.8	10.1	34,815
Residence														
Urban	58.6	20.5	4.2	2.5	0.8	7.7	0.9	1.4	1.3	2.2	100.0	11.2	8.6	20,440
Rural	52.9	22.2	5.7	2.4	0.8	10.3	1.0	1.5	1.2	1.9	100.0	14.0	10.5	49,817
Region														
Coast	54.2	24.1	5.7	3.1	0.5	8.6	1.0	1.0	0.8	1.1	100.0	11.4	9.1	6,802
North Eastern	63.9	16.4	3.5	3.1	0.8	9.3	1.3	0.9	0.5	0.4	100.0	12.0	6.9	2,593
Eastern	49.4	27.6	4.5	2.0	0.8	8.3	0.8	1.1	1.1	4.4	100.0	11.4	8.7	9,875
Central	58.2	23.2	4.1	2.0	0.9	6.3	0.6	1.1	0.5	3.2	100.0	8.4	7.6	6,606
Rift Valley	55.8	22.9	5.1	2.1	0.6	9.9	0.7	1.0	0.7	1.3	100.0	12.3	8.1	19,358
Western	49.5	19.7	3.8	3.7	0.7	16.1	1.6	2.1	1.3	1.6	100.0	21.0	9.5	9,309
Nyanza	52.1	16.6	8.8	2.0	1.2	9.2	1.4	3.2	3.3	2.1	100.0	17.2	18.2	11,010
Nairobi	67.0	17.6	4.7	2.3	1.1	4.1	0.5	0.7	0.8	1.2	100.0	6.1	7.8	4,704
Wealth quintile														
Lowest	54.3	21.7	7.3	2.8	0.8	9.0	0.7	1.3	1.0	1.2	100.0	12.0	11.1	16,700
Second	52.3	21.7	6.4	2.5	1.0	9.7	1.2	1.6	1.4	2.2	100.0	13.9	11.8	15,350
Middle	51.1	23.2	5.3	2.0	0.7	10.6	1.1	1.8	1.5	2.7	100.0	15.1	10.8	14,448
Fourth	53.8	21.7	3.8	2.5	0.6	10.9	1.1	1.6	1.3	2.6	100.0	15.0	8.7	12,658
Highest	63.7	19.7	2.4	2.3	0.9	7.1	0.7	1.2	0.8	1.4	100.0	9.7	5.9	11,100
Total <15	56.1	22.3	4.7	2.3	0.7	9.0	0.9	1.3	1.0	1.8	100.0	12.1	8.6	61,199
Total <18	54.6	21.7	5.3	2.4	0.8	9.5	1.0	1.5	1.2	2.0	100.0	13.2	9.9	70,257

Note: Table is based on de jure members, i.e., usual residents.
[1] Includes children with father dead, mother dead, both dead and one parent dead but missing information on survival status of the other parent.

Table 2.12 presents the percentage of children age 10-14 who are attending school, by the survivorship of their parents. The results show a high level of school attendance overall among both boys and girls, regardless of whether or not a parent is deceased (96 percent and 98 percent respectively). It is sometimes assumed that becoming an orphan jeopardises a child's chances of attending school, but the data in Table 2.12 do not strongly support this conjecture. In fact, the greatest differential is seen in the lowest wealth quintile, in which only 89 percent of children living with at least one parent are attending school, as compared with 94 percent of double orphans (both parents have died).

Table 2.12 School attendance by survivorship of parents

For de jure children 10-14 years of age, the percentage attending school by parental survival and the ratio of the percentages attending school, by parental survival, according to background characteristics, Kenya 2014

Background characteristic	Percentage attending school by survivorship of parents: Both parents deceased	Number	Both parents alive and living with at least one parent	Number	Ratio[1]
Sex					
Male	95.0	185	97.0	7,309	0.98
Female	97.4	198	96.5	7,144	1.01
Residence					
Urban	96.2	118	98.3	3,982	0.98
Rural	96.2	265	96.1	10,471	1.00
Region					
Coast	(78.9)	28	95.5	1,430	(0.83)
North Eastern	*	6	72.2	616	*
Eastern	92.2	47	98.6	2,135	0.94
Central	*	13	99.5	1,514	1.01
Rift Valley	95.2	62	95.9	4,046	0.99
Western	(100.0)	48	99.3	1,743	(1.01)
Nyanza	99.0	169	99.4	2,053	1.00
Nairobi	*	10	99.2	916	*
Wealth quintile					
Lowest	94.4	69	88.7	3,420	1.06
Second	97.1	93	99.1	3,101	0.98
Middle	97.6	100	99.4	2,984	0.98
Fourth	98.8	81	99.1	2,671	1.00
Highest	(88.8)	41	99.2	2,277	(0.90)
Total	96.2	383	96.7	14,453	0.99

Note: Table is based only on children who usually live in the household. Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Ratio of the percentage with both parents deceased to the percentage with both parents alive and living with at least one parent

2.9 EDUCATION OF THE HOUSEHOLD POPULATION

Education is a key determinant of the lifestyle and status an individual enjoys in a society. Studies have consistently shown that educational attainment has a strong effect on health behaviours and attitudes. Results from the 2014 KDHS can be used to look at educational attainment among household members and school attendance ratios among youth.

2.9.1 Educational Attainment

Tables 2.13.1 and 2.13.2 present data on the educational attainment of household members age 6 and older. Continuing a trend found in earlier KDHS surveys, the data show a slight decrease in the proportion of women and men with no education. Compared with the 2008-09 KDHS, the 2014 KDHS shows a decline from 19 percent to 16 percent among women and from 13 percent to 11 percent among men. As expected, more men (13 percent and 8 percent, respectively) than women (10 percent and 7 percent, respectively) have completed a secondary education and more than a secondary education.

Table 2.13.1 Educational attainment of the female household population

Percent distribution of the de facto female household population age six and over by highest level of schooling attended or completed and median years completed, according to background characteristics, Kenya 2014

Background characteristic	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary	Total	Number	Median years completed
Age									
6-9	33.5	66.3	0.0	0.0	0.0	0.0	100.0	8,598	0.0
10-14	3.9	92.9	0.8	2.2	0.0	0.0	100.0	9,376	3.8
15-19	2.6	38.1	12.0	36.4	7.9	2.7	100.0	6,118	7.5
20-24	5.3	17.4	24.7	15.7	23.0	13.8	100.0	6,027	8.5
25-29	7.9	20.3	27.2	9.8	17.7	16.9	100.0	6,293	7.8
30-34	7.9	25.3	28.7	8.4	15.8	13.8	100.0	4,699	7.6
35-39	8.9	26.9	28.5	8.7	15.8	11.1	100.0	3,888	7.5
40-44	10.5	31.3	25.3	8.8	15.2	8.6	100.0	2,950	7.3
45-49	12.8	26.1	26.6	10.7	14.6	8.8	100.0	2,272	6.8
50-54	23.1	24.5	24.2	8.4	12.9	6.8	100.0	2,400	6.1
55-59	35.9	26.2	20.5	6.4	6.4	4.1	100.0	1,660	3.4
60-64	46.7	26.8	16.9	3.3	2.9	2.6	100.0	1,342	1.1
65+	67.3	23.0	5.7	1.4	0.9	1.1	100.0	2,979	0.0
Residence									
Urban	8.9	31.6	17.6	11.2	16.6	13.8	100.0	19,931	7.4
Rural	19.5	48.1	14.6	8.8	5.9	3.0	100.0	38,677	4.7
Region									
Coast	26.5	39.8	14.3	6.3	9.0	3.8	100.0	5,591	4.1
North Eastern	69.0	23.4	2.3	2.1	1.5	1.1	100.0	1,562	0.0
Eastern	14.4	45.8	19.0	9.0	6.9	4.8	100.0	8,731	5.5
Central	7.2	35.0	21.1	13.1	14.2	9.3	100.0	7,104	7.2
Rift Valley	18.2	44.0	14.0	8.8	8.4	6.4	100.0	15,121	5.4
Western	12.5	55.2	12.0	10.8	5.3	4.1	100.0	6,920	5.1
Nyanza	13.7	49.1	14.9	10.2	7.6	4.2	100.0	8,334	5.5
Nairobi	4.5	24.0	18.3	11.3	22.7	18.9	100.0	5,245	8.8
Wealth quintile									
Lowest	40.2	47.0	7.7	3.4	1.3	0.2	100.0	11,197	1.1
Second	16.2	55.4	15.6	8.0	3.9	0.8	100.0	11,628	4.7
Middle	11.8	48.9	18.4	11.3	6.9	2.6	100.0	12,066	5.7
Fourth	8.1	38.0	20.6	13.1	13.9	6.2	100.0	11,618	7.0
Highest	4.8	23.9	15.3	11.8	21.2	22.7	100.0	12,099	9.4
Total	15.9	42.5	15.6	9.6	9.6	6.7	100.0	58,608	5.8

Note: Totals may not add up to 100 percent because individuals with missing information on education are not shown separately. Total includes seven women for whom information on age is missing.
[1] Completed Grade 8 at the primary level, for those under age 45; because of the change in the school system in the 1980s, those age 45 and above are considered to have completed primary if they completed grade 7
[2] Completed Form 4 at the secondary level

With the exception of children age 6-9, fewer males than females have never been to school. In that age group, boys (38 percent) are more likely than girls (34 percent) to have never attended school. Meanwhile, 4 percent of both boys and girls age 10-14 have never been to school, indicating that boys enrol in school slightly later than girls. However, the proportion of the population with no education steadily increases thereafter with age, as does the gap between the proportion of males and females with no education, indicating a gender differential in educational attainment as students age.

Nationally, the median number of years of schooling completed is slightly higher among males (6.3 years) than females (5.8 years). Over the years, median number of years of schooling completed has been increasing among both men (from 5.0 in 2003 and 6.0 in 2008-09 to 6.3 in 2014) and women (from 4.3 in 2003 and 5.2 in 2008-09 to 5.8 in 2014).

About twice as many women and men in rural areas as in urban areas have no education. The proportion of respondents who have never been to school varies rather dramatically across regions. For example, the proportion of women who have never been to school varies from a low of 5 percent in Nairobi to a high of 69 percent in North Eastern. As expected, the proportion of women and men with no education decreases dramatically as wealth increases.

Table 2.13.2 Educational attainment of the male household population

Percent distribution of the de facto male household population age six and over by highest level of schooling attended or completed and median years completed, according to background characteristics, Kenya 2014

Background characteristic	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary	Total	Number	Median years completed
Age									
6-9	37.9	61.9	0.0	0.0	0.0	0.0	100.0	8,615	0.0
10-14	3.7	93.5	0.6	2.0	0.1	0.0	100.0	9,441	3.5
15-19	2.1	46.3	9.5	35.6	5.0	1.3	100.0	6,342	7.1
20-24	2.6	16.5	20.6	17.5	25.5	17.3	100.0	5,133	9.9
25-29	3.5	17.7	26.3	8.1	24.7	19.5	100.0	5,336	9.0
30-34	4.3	21.9	27.0	7.2	22.6	16.6	100.0	4,589	7.9
35-39	4.7	22.6	29.5	7.6	21.9	13.5	100.0	3,723	7.8
40-44	6.0	21.7	26.8	7.8	24.6	12.8	100.0	2,923	7.8
45-49	5.5	18.4	26.3	7.7	28.2	13.7	100.0	2,071	8.0
50-54	8.9	15.8	28.4	8.4	24.0	13.7	100.0	1,997	7.0
55-59	12.7	19.9	27.9	9.6	20.2	9.6	100.0	1,492	6.7
60-64	19.3	26.1	25.9	6.8	13.7	8.1	100.0	1,286	6.2
65+	32.4	30.9	20.1	5.1	6.2	4.9	100.0	2,422	3.6
Residence									
Urban	6.3	29.8	17.0	10.2	20.9	15.5	100.0	19,729	7.7
Rural	13.7	49.3	14.7	9.2	8.7	4.2	100.0	35,652	5.2
Region									
Coast	15.9	38.2	17.1	8.1	13.7	6.5	100.0	5,574	6.1
North Eastern	49.2	35.0	4.8	4.8	3.0	2.8	100.0	1,640	0.0
Eastern	8.5	49.0	17.5	9.0	10.2	5.8	100.0	8,388	5.8
Central	3.8	36.3	19.1	12.7	18.9	9.2	100.0	6,637	7.3
Rift Valley	13.8	44.4	14.7	8.2	11.2	7.6	100.0	14,341	5.8
Western	8.8	54.7	11.8	11.3	8.5	4.7	100.0	6,114	5.3
Nyanza	10.7	45.3	14.8	11.1	10.6	7.2	100.0	7,405	6.1
Nairobi	3.1	21.9	17.0	9.1	26.4	22.0	100.0	5,281	10.5
Wealth quintile									
Lowest	28.7	52.4	9.9	4.8	3.3	0.7	100.0	10,439	2.5
Second	10.5	55.0	16.9	8.9	6.7	1.7	100.0	10,942	5.1
Middle	7.9	46.8	18.7	11.6	10.9	4.0	100.0	11,217	6.3
Fourth	5.9	35.3	19.5	11.9	18.8	8.3	100.0	11,865	7.3
Highest	3.7	23.1	11.9	10.1	24.5	26.3	100.0	10,918	11.0
Total	11.1	42.3	15.5	9.6	13.0	8.2	100.0	55,381	6.3

Note: Totals may not add up to 100 percent because individuals with missing information on education are not shown separately. Total includes nine men for whom information on age is missing.
[1] Completed Grade 8 at the primary level, for those under age 45; because of the change in the school system in the 1980s, those age 45 and above are considered to have completed primary if they completed grade 7
[2] Completed Form 4 at the secondary level

2.9.2 School Attendance Ratios

Table 2.14 presents the primary school and secondary school net and gross attendance ratios (NAR and GAR) by household residence, region, and wealth quintile. The NAR for primary school is the percentage of the primary-school-age population (age 6-13) that is attending primary school. The NAR for secondary school is the percentage of the secondary-school-age population (age 14-17) that is attending secondary school. By definition, the NAR cannot exceed 100 percent. The GAR for primary school is the total number of primary school students of any age, expressed as a percentage of the official primary-school-age population. The GAR for secondary school is the total number of secondary school students of any age, expressed as a percentage of the official secondary-school-age population. If there are significant numbers of over-age and under-age students at a given level of schooling, the GAR can exceed 100 percent. Youth are considered to be attending school currently if they attended a formal academic school at any point during the given school year. Note that the NAR and GAR values reported here are not comparable with those from previous DHS surveys due to an improvement in the precision of calculation.

The NAR is 86 percent at the primary school level. It is slightly higher for girls (87 percent) than for boys (85 percent). Note, however, that differentials in attendance ratios are much greater across regions than between girls and boys. Sixty percent of boys age 6-13 in the North Eastern region are attending primary school, while 94 percent are attending in the Central region. Similarly, only 51 percent of girls age 6-13 in North Eastern are attending primary school, as compared with 95 percent of girls in Central. Large regional differentials also exist in secondary school attendance rates. As might be expected, the NAR for primary school is higher in urban (89 percent) than in rural (85 percent) areas, and it increases with increasing wealth.

Table 2.14 School attendance ratios

Net attendance ratios (NAR) and gross attendance ratios (GAR) for the de facto household population by sex and level of schooling; and the Gender Parity Index (GPI), according to background characteristics, Kenya 2014

Background characteristic	Net attendance ratio[1]				Gross attendance ratio[2]			
	Male	Female	Total	Gender Parity Index[3]	Male	Female	Total	Gender Parity Index[3]
	PRIMARY SCHOOL							
Residence								
Urban	88.1	90.2	89.2	1.02	106.6	103.2	104.9	0.97
Rural	83.6	85.3	84.5	1.02	110.1	106.4	108.2	0.97
Region								
Coast	76.6	80.3	78.5	1.05	103.4	100.2	101.8	0.97
North Eastern	59.6	50.5	55.5	0.85	81.0	61.5	72.2	0.76
Eastern	90.8	92.3	91.5	1.02	118.8	114.9	116.8	0.97
Central	93.7	95.0	94.3	1.01	111.9	108.4	110.2	0.97
Rift Valley	84.1	85.9	85.0	1.02	108.4	105.5	107.0	0.97
Western	86.1	89.5	87.9	1.04	118.0	114.3	116.0	0.97
Nyanza	83.8	85.3	84.5	1.02	105.8	102.9	104.3	0.97
Nairobi	92.3	93.2	92.8	1.01	105.7	101.2	103.3	0.96
Wealth quintile								
Lowest	71.0	71.1	71.0	1.00	97.5	90.5	94.1	0.93
Second	86.9	89.5	88.2	1.03	115.6	112.9	114.2	0.98
Middle	89.4	91.6	90.5	1.02	116.7	114.5	115.6	0.98
Fourth	91.0	93.0	92.0	1.02	112.5	108.4	110.4	0.96
Highest	91.6	92.6	92.2	1.01	103.9	101.3	102.6	0.97
Total	84.8	86.7	85.7	1.02	109.2	105.5	107.3	0.97
	SECONDARY SCHOOL							
Residence								
Urban	44.2	42.9	43.6	0.97	67.9	61.5	64.7	0.91
Rural	26.8	30.4	28.5	1.13	51.3	49.4	50.4	0.96
Region								
Coast	22.1	22.2	22.1	1.00	44.8	38.3	41.7	0.85
North Eastern	21.4	16.3	19.3	0.76	40.7	26.1	34.7	0.64
Eastern	27.0	35.0	30.7	1.30	52.4	55.1	53.7	1.05
Central	50.6	58.1	54.2	1.15	80.7	82.6	81.6	1.02
Rift Valley	26.6	28.7	27.6	1.08	48.4	49.1	48.8	1.02
Western	24.3	28.0	26.1	1.15	50.6	46.2	48.5	0.91
Nyanza	38.7	36.3	37.5	0.94	64.0	52.8	58.5	0.83
Nairobi	51.7	45.2	48.3	0.87	70.9	61.8	66.1	0.87
Wealth quintile								
Lowest	12.8	13.6	13.1	1.06	27.6	23.9	25.9	0.86
Second	22.9	27.7	25.2	1.21	46.0	46.1	46.0	1.00
Middle	31.4	33.9	32.6	1.08	60.7	55.2	58.1	0.91
Fourth	41.9	47.0	44.3	1.12	66.7	69.6	68.0	1.04
Highest	64.4	52.7	58.0	0.82	97.5	75.1	85.4	0.77
Total	31.3	33.9	32.6	1.08	55.6	52.8	54.3	0.95

[1] The NAR for primary school is the percentage of the primary-school age (6-13 years) population that is attending primary school. The NAR for secondary school is the percentage of the secondary-school age (14-17 years) population that is attending secondary school. By definition the NAR cannot exceed 100 percent.
[2] The GAR for primary school is the total number of primary school students, expressed as a percentage of the official primary-school-age population. The GAR for secondary school is the total number of secondary school students, expressed as a percentage of the official secondary-school-age population. If there are significant numbers of overage and underage students at a given level of schooling, the GAR can exceed 100 percent.
[3] The Gender Parity Index for primary school is the ratio of the primary school NAR(GAR) for females to the NAR(GAR) for males. The Gender Parity Index for secondary school is the ratio of the secondary school NAR(GAR) for females to the NAR(GAR) for males.

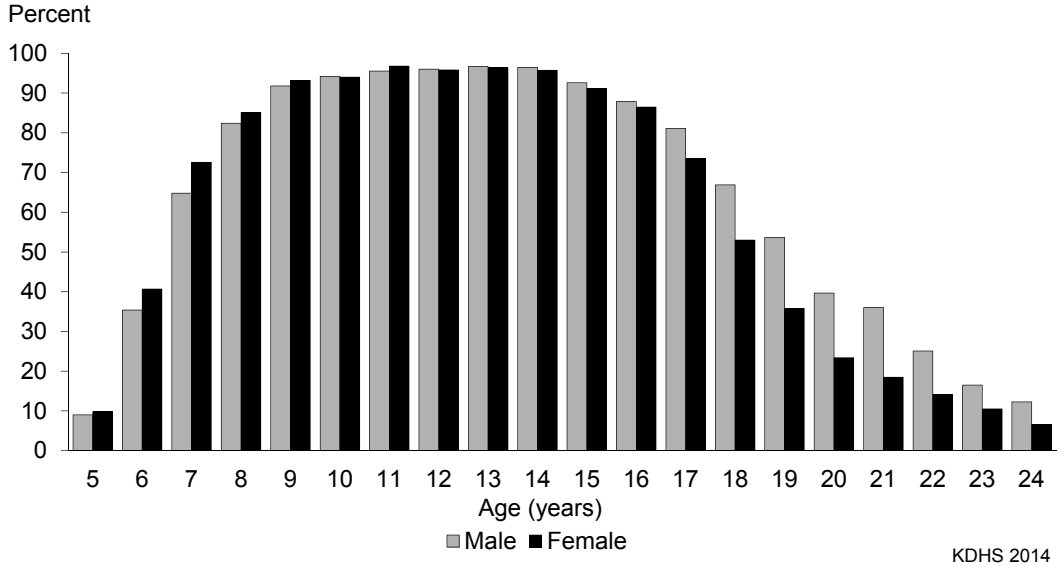
With the exception of North Eastern, GARs are quite high in all regions, indicating that a substantial number of boys and girls who are not of official primary school age are attending primary school.

Table 2.14 also shows the gender parity index (GPI), which assesses sex-related differences in school attendance rates. The GPI is calculated by dividing the GAR for the female population by the GAR for the male population. A GPI of less than 1 indicates a gender disparity in favour of the male population; that is, a higher proportion of males than females attend that level of schooling. A GPI greater than 1 indicates a gender disparity in favour of females. A GPI of 1 indicates parity or equality between the rates of participation for the sexes.

The GPI for NAR shows close to gender parity at the national level in both primary and secondary school; however, the GPI for GAR at the primary (0.97) as well as the secondary (0.95) level is skewed to favour male children. Differentials across the country exist, especially at the secondary school level. Among the regions, North Eastern has the lowest NARs, GARs, and GPIs for both primary and secondary school.

Figure 2.2 illustrates age-specific attendance rates, that is, the percentage of a given age cohort attending school regardless of the level attended (primary, secondary, or higher). At age 5-10, attendance rates are higher among girls than they are among boys. Between age 10 and age 14, the peak ages of school attendance, boys and girls attend in similar proportions. At age 15 and older, attendance rates decline among both boys and girls, and the gender differential in favour of boys increases with increasing age.

Figure 2.2 **Age-specific school attendance rates of the de-facto population age 5 to 24 years**



CHARACTERISTICS OF RESPONDENTS 3

Michael M. Musyoka, John K. Bore, Godfrey Odhiambo Otieno

Key Findings

- The percentage of women and men with no education has dropped by half over the last 10 years, from 13 percent and 6 percent in 2003 to 7 percent and 3 percent, respectively, in the 2014 KDHS. Over the same period, the percentage of women and men with at least some secondary education increased from 29 percent and 37 percent in 2003 to 43 percent and 49 percent, respectively, in 2014.
- Eighty-eight percent of women and 92 percent of men are literate.
- Twenty-three percent of women and 10 percent of men are not exposed to any source of mass media.
- Sixty-one percent of women and 80 percent of men are currently employed. Women are mostly employed in agricultural or domestic service positions, while men are mostly employed in agricultural, unskilled manual, or domestic service positions.

This chapter provides a description of the respondents who were interviewed in the 2014 KDHS. Women age 15-49 and men age 15-54 were interviewed in the course of the survey. This information is useful for understanding the context of the reproductive and health status of women and men discussed in later chapters of this report. Percent distributions of various demographic and socioeconomic characteristics are shown for the full sample. Data are provided on the main background characteristics discussed in subsequent chapters, including age at the time of the survey, marital status, urban/rural residence, region, educational level, and the wealth quintile to which respondents belong. In addition, information is provided on employment and work status.

3.1 CHARACTERISTICS OF SURVEY RESPONDENTS

Table 3.1 presents the percent distribution of women and men age 15-49 by the following background characteristics: age, religion, ethnic group, marital status, residence, region, education, and wealth quintile.

The distribution of both women and men tends to decline with increasing age, reflecting the comparatively young age structure of the Kenyan population. Thirty-seven percent of women and 39 percent of men are in the 15-24 age group. Thirty-four percent of women and 32 percent of men are in the 25-34 age group. The remaining respondents (29 percent of both women and men) are age 35-49.

The majority of both women (71 percent) and men (68 percent) are Protestant or another Christian denomination. Twenty percent of women and 21 percent of men are Roman Catholic, 7 percent of both women and men are Muslim, and 2 percent of women and 4 percent of men have no religion.

Ethnic affiliation is associated with various demographic behaviours because of differences in cultural beliefs. For example, in Kenya, certain ethnic groups encourage initiation to some rites while others consider them as taboo. The largest ethnic groups are the Kikuyu (women, 22 percent; men, 21 percent) and Luhya (women, 15 percent; men, 16 percent). Eleven to 12 percent of women and 11 to 13 percent of men are Luo, Kamba, or Kalenjin. Six percent or less of both women and men belong to other ethnic groups.

Table 3.1 Background characteristics of respondents

Percent distribution of women and men age 15-49 by selected background characteristics, Kenya 2014

Background characteristic	Women			Men		
	Weighted percent	Weighted number	Unweighted number	Weighted percent	Weighted number	Unweighted number
Age						
15-19	18.7	5,820	6,078	21.1	2,540	2,811
20-24	18.5	5,735	5,405	17.6	2,125	1,981
25-29	19.6	6,100	5,939	17.4	2,104	1,942
30-34	14.5	4,510	4,452	14.8	1,785	1,701
35-39	12.1	3,773	3,868	12.3	1,483	1,486
40-44	9.3	2,885	2,986	10.1	1,224	1,198
45-49	7.3	2,257	2,351	6.6	800	895
Religion						
Roman Catholic	20.3	6,315	6,229	21.4	2,583	2,551
Protestant/other Christian	71.1	22,091	20,072	67.5	8,141	7,500
Muslim	6.8	2,107	4,161	6.5	784	1,460
No religion	1.5	466	506	4.1	492	449
Other	0.2	65	73	0.5	59	51
Ethnic group						
Embu	1.0	312	398	1.0	118	170
Kalenjin	12.0	3,718	4,335	12.2	1,467	1,729
Kamba	11.4	3,543	2,950	12.6	1,521	1,275
Kikuyu	21.9	6,798	5,033	20.9	2,523	1,946
Kisii	5.7	1,771	1,788	5.9	712	680
Luhya	15.0	4,667	3,653	16.0	1,927	1,555
Luo	11.1	3,453	3,060	10.9	1,311	1,179
Maasai	1.9	589	655	1.8	220	235
Meru	5.6	1,749	1,593	5.9	717	682
Mijikenda/Swahili	5.3	1,642	1,708	5.2	623	648
Somali	2.6	816	1,815	2.2	260	616
Taita/Taveta	0.9	295	452	1.1	134	199
Turkana	1.3	394	717	0.9	106	191
Samburu	0.5	143	620	0.1	12	45
Other	3.8	1,186	2,294	3.3	399	848
Marital status						
Never married	28.9	8,997	8,575	44.4	5,350	5,384
Married	54.6	16,961	17,751	48.4	5,839	5,748
Living together	5.1	1,588	1,285	2.1	256	241
Divorced/separated	7.7	2,394	2,277	4.7	567	585
Widowed	3.7	1,139	1,191	0.4	50	56
Residence						
Urban	40.8	12,690	11,614	43.9	5,300	4,648
Rural	59.2	18,389	19,465	56.1	6,762	7,366
Region						
Coast	9.9	3,076	3,902	10.4	1,260	1,505
North Eastern	2.1	648	1,664	1.9	227	591
Eastern	14.1	4,375	5,247	15.1	1,825	2,144
Central	12.9	3,994	3,114	13.0	1,564	1,248
Rift Valley	25.6	7,953	9,059	25.3	3,050	3,484
Western	10.4	3,225	2,840	9.6	1,164	1,130
Nyanza	13.0	4,038	4,254	11.6	1,405	1,542
Nairobi	12.1	3,770	999	13.0	1,568	370
Education						
No education	7.0	2,176	4,183	2.9	345	663
Primary incomplete	25.7	7,989	8,431	25.5	3,071	3,466
Primary complete	24.6	7,637	7,182	22.7	2,734	2,720
Secondary incomplete	15.8	4,922	4,537	16.2	1,960	1,850
Secondary complete	15.7	4,880	4,058	18.9	2,282	1,980
More than secondary	11.2	3,475	2,688	13.9	1,671	1,335
Wealth quintile						
Lowest	15.6	4,838	7,262	14.0	1,691	2,504
Second	17.6	5,457	5,970	17.8	2,145	2,443
Middle	19.4	6,032	5,946	19.7	2,370	2,466
Fourth	21.1	6,550	5,958	24.5	2,959	2,579
Highest	26.4	8,203	5,943	24.0	2,897	2,022
Total 15-49	100.0	31,079	31,079	100.0	12,063	12,014
50-54	na	na	na	na	756	805
Total 15-54	na	na	na	na	12,819	12,819

Note: Totals may not add up to 100 percent because women and men with missing information are not shown separately.
na = Not applicable

Table 3.1C Background characteristics of respondents

Percent distribution of women and men age 15-49 by county, Kenya 2014

	Women			Men		
County	Weighted percent	Weighted number	Unweighted number	Weighted percent	Weighted number	Unweighted number
Coast	**9.9**	**3,076**	**3,902**	**10.4**	**1,260**	**1,505**
Mombasa	2.9	912	598	4.0	481	270
Kwale	2.0	619	671	1.9	226	250
Kilifi	3.4	1,043	824	3.0	359	304
Tana River	0.6	197	686	0.5	65	204
Lamu	0.3	89	600	0.3	37	227
Taita Taveta	0.7	215	523	0.8	93	250
North Eastern	**2.1**	**648**	**1,664**	**1.9**	**227**	**591**
Garissa	0.8	261	609	0.8	94	208
Wajir	0.7	212	532	0.6	72	187
Mandera	0.6	175	523	0.5	60	196
Eastern	**14.1**	**4,375**	**5,247**	**15.1**	**1,825**	**2,144**
Marsabit	0.4	115	575	0.3	40	199
Isiolo	0.3	104	606	0.3	35	196
Meru	3.6	1,110	682	4.1	495	320
Tharaka-Nithi	0.9	275	528	0.8	102	215
Embu	1.5	459	645	1.4	164	266
Kitui	2.4	759	747	2.5	303	318
Machakos	2.8	873	718	3.6	436	335
Makueni	2.2	680	746	2.1	250	295
Central	**12.9**	**3,994**	**3,114**	**13.0**	**1,564**	**1,248**
Nyandarua	1.4	436	562	1.6	198	242
Nyeri	2.1	650	708	1.9	229	275
Kirinyaga	1.5	451	560	1.5	184	250
Murang'a	2.4	735	633	2.4	284	250
Kiambu	5.5	1,722	651	5.5	669	231
Rift Valley	**25.6**	**7,953**	**9,059**	**25.3**	**3,050**	**3,484**
Turkana	1.0	320	514	0.6	76	118
West Pokot	0.9	267	534	0.9	103	234
Samburu	0.4	123	579	0.3	35	159
Trans-Nzoia	2.5	768	695	2.7	329	322
Uasin Gishu	2.5	784	689	2.9	355	335
Elgeyo Marakwet	0.8	250	630	0.7	86	234
Nandi	2.0	628	742	2.2	264	338
Baringo	1.1	335	598	1.0	125	229
Laikipia	1.1	342	631	1.0	124	234
Nakuru	5.1	1,574	741	4.9	589	280
Narok	2.1	642	702	2.0	240	265
Kajiado	2.2	670	642	2.0	241	226
Kericho	1.8	563	654	1.8	215	227
Bomet	2.2	687	708	2.2	267	283
Western	**10.4**	**3,225**	**2,840**	**9.6**	**1,164**	**1,130**
Kakamega	3.6	1,108	725	3.4	411	312
Vihiga	1.2	368	634	1.2	140	252
Bungoma	3.9	1,203	805	3.4	413	307
Busia	1.8	546	676	1.6	199	259
Nyanza	**13.0**	**4,038**	**4,254**	**11.6**	**1,405**	**1,542**
Siaya	1.8	572	654	1.8	213	264
Kisumu	2.6	820	696	2.6	309	272
Homa Bay	2.6	798	716	2.0	243	238
Migori	2.1	650	770	1.7	211	251
Kisii	2.8	864	794	2.6	315	291
Nyamira	1.1	334	624	0.9	114	226
Nairobi	**12.1**	**3,770**	**999**	**13.0**	**1,568**	**370**
Total 15-49	100.0	31,079	31,079	100.0	12,063	12,014
50-54	na	na	na	na	756	805
Total 15-54	na	na	na	na	12,819	12,819

na = Not applicable

Sixty percent of women and 51 percent of men are married or living in an informal union. About 4 in 10 men (44 percent) have never been married, as compared with about 3 in 10 (29 percent) women. Women (11 percent) are more likely than men (5 percent) to be divorced, separated, or widowed.

Fifty-nine percent of women and 56 percent of men live in rural areas. The Rift Valley region has a quarter of all women (26 percent) and men (25 percent). The North Eastern region has 2 percent of all

women and men. The remaining regions each have between 10 percent and 15 percent of the remaining population.

Slightly more women (7 percent) than men (3 percent) have no education. Twenty-six percent of both women and men did not finish primary school. Slightly more women (25 percent) than men (23 percent) ended their schooling by completing primary school, and thereafter slightly fewer women than men obtained some secondary education, completed secondary education, or advanced beyond secondary education. The smallest proportions of both women (16 percent) and men (14 percent) are in the lowest wealth quintile. Almost half of the population (48 percent of women and 49 percent of men) is in the two highest wealth quintiles.

The distribution of female and male respondents by county shows that more respondents live in Nairobi, Kiambu, and Nakuru (between 5 percent and 13 percent) than the other 44 counties (Table 3.1C).

3.2 EDUCATIONAL ATTAINMENT BY BACKGROUND CHARACTERISTICS

Tables 3.2.1 and 3.2.2 show the percent distribution of women and men age 15-49 by educational attainment and median years of schooling completed, according to background characteristics. Men have achieved more education than women. In 2014, the proportion of women with no education declined marginally to 7 percent from the 9 percent figure recorded in the 2008-09 KDHS, but this proportion remains more than twice that of men with no education (3 percent).

Table 3.2.1 shows that 93 percent of women age 15-49 have attended school. Five in 10 women either have some primary education (26 percent) or have completed primary education (25 percent). Three in 10 have either some secondary education or a completed secondary education (16 percent each). One in 10 (11 percent) have gone beyond a secondary education, an increase from 7 percent in 2008-09.

The urban-rural difference in level of education is pronounced for women on either end of the educational attainment scale. Four percent of urban women have no education compared with 9 percent of rural women, and 14 percent of urban women have some primary education compared with 34 percent of rural women. About a quarter of women in both rural and urban areas have completed primary education, and 16 percent of women in both areas have some secondary education. The differences pick up again for women who have completed secondary school (urban women, 23 percent; rural women, 11 percent) or gone beyond secondary school (urban women, 19 percent; rural women, 6 percent). At the regional level, Nairobi had the highest proportion of women with more than a secondary education (24 percent), although this figure was a decline from the 31 percent reported in 2008-09. The North Eastern region had the most women with no education at 75 percent, a slight improvement from 78 percent in 2008-09.

Education increases with wealth; 31 percent of women in the lowest wealth quintile have no education, as compared with 2 percent of women in the highest wealth quintile. Almost one in three (29 percent) women in the highest quintile have more than a secondary education, compared with only one in 10 (10 percent) women in the fourth highest wealth quintile. Table 3.2.2 shows similar patterns in educational attainment among men, although men are more educated than women. County level differences are presented in Table 3.2.1C and Table 3.2.2C.

Table 3.2.1 Educational attainment: Women

Percent distribution of women age 15-49 by highest level of schooling attended or completed, and median years completed, according to background characteristics, Kenya 2014

Background characteristic	Highest level of schooling						Total	Median years completed	Number of women
	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary			
Age									
15-24	3.8	27.0	18.6	26.4	15.8	8.4	100.0	7.9	11,555
15-19	2.3	36.1	13.8	36.5	8.5	2.8	100.0	7.6	5,820
20-24	5.3	17.7	23.6	16.2	23.2	14.1	100.0	8.7	5,735
25-29	7.7	20.9	27.5	10.3	16.9	16.7	100.0	7.8	6,100
30-34	7.8	25.7	28.2	8.7	15.7	14.0	100.0	7.6	4,510
35-39	8.9	27.3	28.3	9.1	15.2	11.1	100.0	7.5	3,773
40-44	10.1	31.6	26.3	9.2	14.6	8.3	100.0	7.3	2,885
45-49	12.8	22.1	31.3	10.8	14.2	8.7	100.0	6.7	2,257
Residence									
Urban	3.6	14.1	24.1	15.8	22.9	19.4	100.0	9.4	12,690
Rural	9.3	33.7	24.9	15.9	10.7	5.5	100.0	7.2	18,389
Region									
Coast	16.3	29.0	23.1	11.0	14.5	6.0	100.0	7.2	3,076
North Eastern	74.9	9.9	4.8	4.1	3.5	2.7	100.0	0.0	648
Eastern	4.8	28.4	31.2	15.6	11.8	8.3	100.0	7.5	4,375
Central	0.9	14.7	29.7	17.8	21.8	15.1	100.0	8.8	3,994
Rift Valley	9.2	27.7	22.7	15.3	14.0	11.0	100.0	7.5	7,953
Western	2.8	40.8	19.5	20.0	9.6	7.3	100.0	7.2	3,225
Nyanza	1.4	33.4	25.3	18.6	13.5	7.7	100.0	7.5	4,038
Nairobi	1.7	8.9	23.4	14.7	27.9	23.5	100.0	11.0	3,770
Wealth quintile									
Lowest	30.6	42.5	16.5	7.1	2.7	0.4	100.0	5.0	4,838
Second	3.9	44.1	27.6	15.3	7.5	1.6	100.0	7.0	5,457
Middle	3.0	29.6	30.5	20.1	12.0	4.9	100.0	7.5	6,032
Fourth	2.4	17.1	28.9	19.9	21.6	10.1	100.0	8.0	6,550
Highest	1.8	7.5	19.5	15.0	26.8	29.4	100.0	11.2	8,203
Total	7.0	25.7	24.6	15.8	15.7	11.2	100.0	7.6	31,079

[1] Completed Grade 8 at the primary level, for those under age 45; because of the change in the school system in the 1980s, those age 45 and above are considered to have completed primary if they completed Grade 7.
[2] Completed Form 4 at the secondary level

Table 3.2.1C Educational attainment: Women

Percent distribution of women age 15-49 by highest level of schooling attended or completed, and median years completed, according to county, Kenya 2014

County	Highest level of schooling						Total	Median years completed	Number of women
	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary			
Coast	**16.3**	**29.0**	**23.1**	**11.0**	**14.5**	**6.0**	**100.0**	**7.2**	**3,076**
Mombasa	5.8	18.8	26.9	15.0	23.6	9.9	100.0	7.9	912
Kwale	21.7	35.0	23.5	6.9	8.5	4.4	100.0	6.1	619
Kilifi	20.4	34.1	19.3	10.5	11.4	4.4	100.0	6.4	1,043
Tana River	41.7	33.3	13.5	5.6	4.1	1.8	100.0	2.4	197
Lamu	17.0	39.1	21.0	10.4	6.2	6.3	100.0	6.4	89
Taita Taveta	2.3	22.6	34.5	13.3	21.1	6.2	100.0	7.7	215
North Eastern	**74.9**	**9.9**	**4.8**	**4.1**	**3.5**	**2.7**	**100.0**	**0.0**	**648**
Garissa	72.7	9.6	5.7	4.4	3.6	4.0	100.0	0.0	261
Wajir	76.9	9.9	4.6	4.2	2.5	1.7	100.0	0.0	212
Mandera	75.9	10.4	3.7	3.6	4.3	2.0	100.0	0.0	175
Eastern	**4.8**	**28.4**	**31.2**	**15.6**	**11.8**	**8.3**	**100.0**	**7.5**	**4,375**
Marsabit	61.9	16.0	10.3	5.0	4.3	2.4	100.0	0.0	115
Isiolo	39.7	22.5	18.1	6.0	8.7	5.0	100.0	5.0	104
Meru	4.1	37.4	27.5	11.1	11.0	9.0	100.0	7.2	1,110
Tharaka-Nithi	2.0	35.8	28.4	12.9	12.3	8.5	100.0	7.4	275
Embu	1.3	28.6	29.2	16.6	13.7	10.6	100.0	7.6	459
Kitui	3.9	35.4	34.4	12.9	8.7	4.6	100.0	7.3	759
Machakos	0.2	15.9	36.9	20.1	16.5	10.4	100.0	7.8	873
Makueni	0.9	21.6	34.6	24.0	10.4	8.5	100.0	7.7	680
Central	**0.9**	**14.7**	**29.7**	**17.8**	**21.8**	**15.1**	**100.0**	**8.8**	**3,994**
Nyandarua	0.8	17.1	39.1	18.0	18.6	6.4	100.0	7.8	436
Nyeri	1.1	11.5	27.8	21.1	24.2	14.3	100.0	9.2	650
Kirinyaga	0.8	28.0	29.8	15.0	21.1	5.4	100.0	7.7	451
Murang'a	1.6	19.4	29.9	20.8	20.7	7.6	100.0	7.9	735
Kiambu	0.5	9.9	27.9	15.9	22.4	23.3	100.0	10.1	1,722
Rift Valley	**9.2**	**27.7**	**22.7**	**15.3**	**14.0**	**11.0**	**100.0**	**7.5**	**7,953**
Turkana	64.1	24.1	3.1	1.2	5.5	2.0	100.0	0.0	320
West Pokot	33.8	41.0	12.0	5.2	4.7	3.4	100.0	4.6	267
Samburu	55.7	21.1	7.3	5.2	5.4	5.4	100.0	0.0	123
Trans-Nzoia	2.6	39.3	22.9	19.2	10.8	5.2	100.0	7.3	768
Uasin Gishu	1.5	25.1	21.9	18.6	17.2	15.7	100.0	7.9	784
Elgeyo Marakwet	1.2	27.7	28.6	14.4	15.0	13.0	100.0	7.7	250
Nandi	0.8	37.8	23.9	16.6	12.6	8.3	100.0	7.4	628
Baringo	9.3	30.0	24.5	15.0	12.1	9.0	100.0	7.4	335
Laikipia	13.4	19.8	24.7	14.9	14.9	12.3	100.0	7.6	342
Nakuru	1.9	14.7	30.1	19.0	19.2	15.2	100.0	8.3	1,574
Narok	15.5	38.2	17.3	12.0	10.4	6.6	100.0	6.6	642
Kajiado	18.0	12.8	17.9	14.1	17.0	20.2	100.0	8.0	670
Kericho	0.3	32.0	24.9	15.6	16.3	10.8	100.0	7.6	563
Bomet	0.4	39.8	25.7	14.3	11.5	8.2	100.0	7.3	687
Western	**2.8**	**40.8**	**19.5**	**20.0**	**9.6**	**7.3**	**100.0**	**7.2**	**3,225**
Kakamega	4.0	38.7	18.5	20.3	10.5	8.1	100.0	7.3	1,108
Vihiga	0.4	30.0	26.7	25.2	9.6	8.2	100.0	7.6	368
Bungoma	0.9	41.2	19.8	20.7	10.3	7.2	100.0	7.3	1,203
Busia	6.6	51.6	16.1	14.3	6.0	5.2	100.0	6.5	546
Nyanza	**1.4**	**33.4**	**25.3**	**18.6**	**13.5**	**7.7**	**100.0**	**7.5**	**4,038**
Siaya	1.9	35.7	28.6	18.6	9.5	5.6	100.0	7.4	572
Kisumu	1.2	23.7	24.7	20.8	16.2	13.4	100.0	7.9	820
Homa Bay	1.1	39.7	28.1	18.2	8.9	4.0	100.0	7.3	798
Migori	2.6	49.9	24.0	14.2	6.7	2.6	100.0	6.8	650
Kisii	0.9	28.8	22.0	19.1	19.2	10.0	100.0	7.8	864
Nyamira	0.8	17.8	25.6	21.9	23.9	10.0	100.0	9.1	334
Nairobi	**1.7**	**8.9**	**23.4**	**14.7**	**27.9**	**23.5**	**100.0**	**11.0**	**3,770**
Total	7.0	25.7	24.6	15.8	15.7	11.2	100.0	7.6	31,079

[1] Completed Grade 8 at the primary level, for those under age 45; because of the change in the school system in the 1980s, those age 45 and above are considered to have completed primary if they completed Grade 7.
[2] Completed Form 4 at the secondary level

Table 3.2.2 Educational attainment: Men

Percent distribution of men age 15-49 by highest level of schooling attended or completed, and median years completed, according to background characteristics, Kenya 2014

Background characteristic	Highest level of schooling						Total	Median years completed	Number of men
	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary			
Age									
15-24	1.4	29.9	15.8	28.7	15.3	8.9	100.0	7.9	4,666
15-19	1.2	42.6	10.9	37.2	6.6	1.5	100.0	7.3	2,540
20-24	1.8	14.7	21.7	18.5	25.6	17.8	100.0	10.0	2,125
25-29	2.7	18.5	26.9	9.4	20.9	21.6	100.0	8.6	2,104
30-34	4.0	25.7	24.8	8.1	18.7	18.7	100.0	7.8	1,785
35-39	5.1	26.2	28.9	7.5	19.7	12.7	100.0	7.6	1,483
40-44	3.7	24.1	24.5	9.3	24.5	13.9	100.0	7.9	1,224
45-49	3.7	18.0	32.4	7.0	25.5	13.5	100.0	7.7	800
Residence									
Urban	1.2	14.4	21.8	14.8	25.7	22.1	100.0	10.4	5,300
Rural	4.2	34.1	23.4	17.4	13.6	7.4	100.0	7.4	6,762
Region									
Coast	4.2	25.0	26.9	14.3	18.9	10.7	100.0	7.7	1,260
North Eastern	36.9	20.9	13.8	12.7	9.8	5.9	100.0	5.7	227
Eastern	3.0	31.7	26.3	14.0	16.3	8.7	100.0	7.5	1,825
Central	0.3	16.1	25.2	21.2	24.2	13.0	100.0	9.1	1,564
Rift Valley	4.3	27.4	22.6	14.5	17.8	13.3	100.0	7.7	3,050
Western	0.9	42.9	17.4	20.0	10.6	8.2	100.0	7.3	1,164
Nyanza	0.5	28.3	22.7	19.5	15.9	13.2	100.0	7.8	1,405
Nairobi	0.0	9.4	17.7	13.7	29.1	30.1	100.0	11.3	1,568
Wealth quintile									
Lowest	14.4	49.0	19.1	9.5	6.5	1.4	100.0	6.1	1,691
Second	1.4	41.5	25.8	17.1	10.7	3.4	100.0	7.2	2,145
Middle	1.3	28.4	27.5	19.5	17.2	6.2	100.0	7.7	2,370
Fourth	0.9	16.3	24.8	18.5	26.2	13.3	100.0	9.2	2,959
Highest	0.5	6.8	16.3	14.5	26.3	35.7	100.0	11.4	2,897
Total 15-49	2.9	25.5	22.7	16.2	18.9	13.9	100.0	7.9	12,063
50-54	7.0	19.3	28.6	9.2	23.8	12.2	100.0	6.9	756
Total 15-54	3.1	25.1	23.0	15.8	19.2	13.8	100.0	7.9	12,819

[1] Completed Grade 8 at the primary level, for those under age 45; because of the change in the school system in the 1980s, those age 45 and above are considered to have completed primary if they completed Grade 7.
[2] Completed Form 4 at the secondary level

Table 3.2.2C Educational attainment: Men

Percent distribution of men age 15-49 by highest level of schooling attended or completed, and median years completed, according to county, Kenya 2014

County	Highest level of schooling						Total	Median years completed	Number of men
	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary			
Coast	**4.2**	**25.0**	**26.9**	**14.3**	**18.9**	**10.7**	**100.0**	**7.7**	**1,260**
Mombasa	2.5	10.0	31.3	16.8	25.9	13.4	100.0	9.1	481
Kwale	7.8	38.7	19.6	11.2	14.1	8.7	100.0	7.1	226
Kilifi	2.6	34.4	24.9	15.9	13.5	8.7	100.0	7.4	359
Tana River	18.2	33.3	25.2	5.1	13.6	4.7	100.0	6.8	65
Lamu	5.8	41.2	18.4	11.2	9.6	13.7	100.0	7.0	37
Taita Taveta	0.0	20.6	34.1	9.6	22.7	13.1	100.0	7.8	93
North Eastern	**36.9**	**20.9**	**13.8**	**12.7**	**9.8**	**5.9**	**100.0**	**5.7**	**227**
Garissa	33.2	16.2	17.7	12.6	12.1	8.2	100.0	7.0	94
Wajir	38.2	23.2	10.5	12.4	9.6	6.1	100.0	4.7	72
Mandera	41.2	25.3	11.8	13.0	6.5	2.1	100.0	5.2	60
Eastern	**3.0**	**31.7**	**26.3**	**14.0**	**16.3**	**8.7**	**100.0**	**7.5**	**1,825**
Marsabit	35.7	18.6	10.0	7.7	15.4	12.6	100.0	6.3	40
Isiolo	11.3	29.7	21.1	12.5	21.9	3.5	100.0	7.4	35
Meru	4.7	35.7	25.3	10.4	14.9	9.0	100.0	7.3	495
Tharaka-Nithi	2.0	38.9	18.0	17.3	12.5	11.4	100.0	7.4	102
Embu	1.0	33.6	27.4	16.6	12.2	9.3	100.0	7.5	164
Kitui	2.7	44.8	23.3	15.5	9.2	4.4	100.0	7.0	303
Machakos	0.3	21.4	31.6	12.5	24.3	10.0	100.0	7.8	436
Makueni	0.3	24.4	28.5	20.0	17.1	9.7	100.0	7.8	250
Central	**0.3**	**16.1**	**25.2**	**21.2**	**24.2**	**13.0**	**100.0**	**9.1**	**1,564**
Nyandarua	0.4	17.8	31.7	22.5	21.4	6.2	100.0	7.9	198
Nyeri	0.2	8.6	30.7	20.6	24.1	15.9	100.0	9.3	229
Kirinyaga	0.7	27.7	28.8	14.8	20.5	7.6	100.0	7.7	184
Murang'a	0.8	22.5	27.7	24.6	16.8	7.8	100.0	7.9	284
Kiambu	0.0	12.2	19.3	21.4	29.3	17.8	100.0	10.5	669
Rift Valley	**4.3**	**27.4**	**22.6**	**14.5**	**17.8**	**13.3**	**100.0**	**7.7**	**3,050**
Turkana	35.2	35.3	7.7	6.7	5.2	9.9	100.0	4.1	76
West Pokot	18.9	50.8	14.7	6.0	5.0	4.6	100.0	6.1	103
Samburu	25.9	25.2	13.4	11.9	12.5	11.1	100.0	6.8	35
Trans-Nzoia	2.0	34.9	24.3	15.5	14.6	8.7	100.0	7.5	329
Uasin Gishu	1.1	21.0	24.6	15.0	26.1	12.1	100.0	8.2	355
Elgeyo Marakwet	0.2	24.4	26.6	13.3	21.4	14.1	100.0	7.9	86
Nandi	0.3	33.3	26.3	9.7	18.9	11.5	100.0	7.6	264
Baringo	5.9	33.3	16.7	15.3	20.1	8.7	100.0	7.6	125
Laikipia	2.6	25.1	15.5	22.1	19.4	15.3	100.0	8.0	124
Nakuru	1.9	16.3	26.2	17.0	19.4	19.2	100.0	9.2	589
Narok	13.0	32.8	21.5	11.0	14.0	7.7	100.0	7.2	240
Kajiado	4.8	17.2	15.9	16.1	17.3	28.7	100.0	10.0	241
Kericho	0.0	32.9	22.2	16.8	16.2	11.9	100.0	7.7	215
Bomet	0.0	33.1	27.2	14.4	18.1	7.2	100.0	7.6	267
Western	**0.9**	**42.9**	**17.4**	**20.0**	**10.6**	**8.2**	**100.0**	**7.3**	**1,164**
Kakamega	1.6	41.3	15.8	21.5	9.9	9.9	100.0	7.3	411
Vihiga	0.3	36.4	24.3	24.5	7.5	7.1	100.0	7.4	140
Bungoma	0.4	45.2	16.9	17.9	11.5	8.1	100.0	7.2	413
Busia	1.1	45.7	16.9	18.1	12.4	5.8	100.0	7.1	199
Nyanza	**0.5**	**28.3**	**22.7**	**19.5**	**15.9**	**13.2**	**100.0**	**7.8**	**1,405**
Siaya	0.7	33.9	23.0	20.2	14.4	7.8	100.0	7.5	213
Kisumu	0.7	19.6	23.8	21.3	12.8	21.8	100.0	8.3	309
Homa Bay	0.0	35.0	27.1	18.2	12.0	7.8	100.0	7.4	243
Migori	0.8	42.5	24.3	14.4	12.9	5.3	100.0	7.2	211
Kisii	0.4	23.3	17.7	21.8	22.1	14.8	100.0	8.9	315
Nyamira	0.0	14.1	21.2	19.3	23.6	21.8	100.0	10.2	114
Nairobi	**0.0**	**9.4**	**17.7**	**13.7**	**29.1**	**30.1**	**100.0**	**11.3**	**1,568**
Total 15-49	2.9	25.5	22.7	16.2	18.9	13.9	100.0	7.9	12,063
50-54	7.0	19.3	28.6	9.2	23.8	12.2	100.0	6.9	756
Total 15-54	3.1	25.1	23.0	15.8	19.2	13.8	100.0	7.9	12,819

[1] Completed Grade 8 at the primary level, for those under age 45; because of the change in the school system in the 1980s, those age 45 and above are considered to have completed primary if they completed Grade 7.
[2] Completed Form 4 at the secondary level

3.3 LITERACY

The ability to read and write empowers women and men. Literacy statistics are important for policymakers to determine how best to reach the populations they serve. In the 2014 KDHS, literacy was determined by respondents' ability to read all or part of a simple sentence. During data collection, interviewers carried a set of cards on which simple sentences were printed in 17 of the country's major languages (English, Swahili, Borana, Embu, Kalenjin, Kamba, Kikuyu, Kisii, Luhya, Maragoli, Luo, Maasai, Meru, Mijikenda, Pokot, Somali, and Turkana) for testing a respondent's reading ability. Those who had never been to school and those who had only a primary education were asked to read the cards in the language they were most familiar with. Those with a secondary education or higher were assumed to be literate.

Table 3.3.1 shows the percent distribution of women age 15-49 by level of schooling attended and level of literacy, along with the percentage literate, according to background characteristics. The proportion of literate women (88 percent) was slightly higher than in 2008-09 (85 percent). Eight percent of women could read part of a sentence.

Literacy declines with age and varies by place of residence. Ninety-four percent of women residing in urban areas are literate, as compared with 84 percent of rural women. Regional differences are notable, with the proportion of literate women being highest in Nairobi (97 percent) and lowest in North Eastern (24 percent). Literacy increases with wealth; virtually all women (97 percent) in the highest quintile are literate, compared with 58 percent of women in the lowest quintile.

Literacy among women age 15-49 at the county level was highest in Nandi and Nyamira (98 percent each). The counties with the lowest proportion of literate women were Wajir (21 percent), Mandera (24 percent), Turkana (25 percent), Garissa (26 percent), and Marsabit (36 percent). In most counties, the proportion of literate women is above 80 percent (Table 3.3.1C).

Men are more likely to be literate than women. Table 3.3.2 shows that 92 percent of men age 15-49 are literate, not much of a difference from the 91 percent figure reported in the 2008-09 KDHS. The pattern of literacy among men is similar to that of women. However, there are marked differences between men and women across age groups. Ninety-one percent of men age 45-49 are literate, as compared with 78 percent of women in the same age group. The absolute difference in urban-rural literacy among men (8 percentage points) is slightly lower than that among women (10 percentage points). Men in the North Eastern region are more likely to be illiterate (32 percent) than those in the other regions. County level differences for men are presented in Table 3.3.2C and are similar to those observed among women.

Table 3.3.1 Literacy: Women

Percent distribution of women age 15-49 by level of schooling attended and level of literacy, and percentage literate, according to background characteristics, Kenya 2014

Background characteristic	Secondary school or higher	No schooling or primary school: Can read a whole sentence	No schooling or primary school: Can read part of a sentence	No schooling or primary school: Cannot read at all	No schooling or primary school: No card with required language	No schooling or primary school: Blind/ visually impaired	Total	Percentage literate[1]	Number of women
Age									
15-24	50.6	36.0	6.1	6.8	0.1	0.1	100.0	92.8	11,555
15-19	47.8	41.1	6.0	4.5	0.1	0.1	100.0	95.0	5,820
20-24	53.5	30.8	6.3	9.2	0.1	0.1	100.0	90.5	5,735
25-29	43.9	35.5	7.6	12.4	0.0	0.2	100.0	87.0	6,100
30-34	38.3	38.8	9.6	12.8	0.0	0.3	100.0	86.8	4,510
35-39	35.4	40.1	9.4	14.8	0.0	0.1	100.0	84.9	3,773
40-44	32.0	38.9	12.0	16.5	0.0	0.6	100.0	82.8	2,885
45-49	33.7	31.9	12.2	21.4	0.0	0.9	100.0	77.7	2,257
Residence									
Urban	58.2	29.5	6.0	5.8	0.1	0.2	100.0	93.6	12,690
Rural	32.1	41.8	9.9	15.8	0.0	0.3	100.0	83.8	18,389
Region									
Coast	31.5	42.9	5.8	19.3	0.0	0.2	100.0	80.2	3,076
North Eastern	10.3	7.0	6.5	75.9	0.0	0.1	100.0	23.9	648
Eastern	35.7	43.1	10.7	10.3	0.0	0.2	100.0	89.4	4,375
Central	54.7	34.3	5.9	4.4	0.0	0.1	100.0	94.9	3,994
Rift Valley	40.3	35.8	8.3	15.2	0.0	0.1	100.0	84.5	7,953
Western	36.8	43.4	9.8	9.1	0.0	0.6	100.0	90.1	3,225
Nyanza	39.9	40.2	11.6	7.7	0.0	0.4	100.0	91.7	4,038
Nairobi	66.1	24.8	5.6	3.0	0.2	0.2	100.0	96.5	3,770
Wealth quintile									
Lowest	10.3	36.3	11.7	41.2	0.0	0.3	100.0	58.3	4,838
Second	24.4	49.4	13.7	12.0	0.0	0.3	100.0	87.5	5,457
Middle	36.9	46.5	9.1	6.9	0.0	0.4	100.0	92.5	6,032
Fourth	51.6	36.6	6.2	5.2	0.1	0.1	100.0	94.5	6,550
Highest	71.2	21.6	3.8	2.9	0.0	0.1	100.0	96.6	8,203
Total	42.7	36.8	8.3	11.7	0.0	0.2	100.0	87.8	31,079

Note: Totals may not add up to 100 percent because women with missing information have been are not shown separately.
[1] Refers to women who attended secondary school or higher and women who can read a whole sentence or part of a sentence

Table 3.3.1C Literacy: Women

Percent distribution of women age 15-49 by level of schooling attended and level of literacy, and percentage literate, according to county, Kenya 2014

County	Secondary school or higher	No schooling or primary school: Can read a whole sentence	No schooling or primary school: Can read part of a sentence	No schooling or primary school: Cannot read at all	No schooling or primary school: No card with required language	No schooling or primary school: Blind/ visually impaired	Total	Percentage literate[1]	Number of women
Coast	**31.5**	**42.9**	**5.8**	**19.3**	**0.0**	**0.2**	**100.0**	**80.2**	**3,076**
Mombasa	48.5	39.2	4.9	6.5	0.0	0.2	100.0	92.6	912
Kwale	19.8	45.3	7.6	26.4	0.0	0.2	100.0	72.7	619
Kilifi	26.3	43.4	5.4	24.9	0.0	0.0	100.0	75.1	1,043
Tana River	11.5	34.9	7.0	45.0	0.0	1.4	100.0	53.5	197
Lamu	22.9	51.5	9.9	15.6	0.0	0.1	100.0	84.2	89
Taita Taveta	40.6	52.4	3.0	3.7	0.0	0.0	100.0	96.1	215
North Eastern	**10.3**	**7.0**	**6.5**	**75.9**	**0.0**	**0.1**	**100.0**	**23.9**	**648**
Garissa	12.0	7.3	7.1	73.2	0.0	0.2	100.0	26.3	261
Wajir	8.5	7.0	5.2	79.3	0.0	0.0	100.0	20.7	212
Mandera	10.0	6.7	7.4	75.7	0.0	0.0	100.0	24.0	175
Eastern	**35.7**	**43.1**	**10.7**	**10.3**	**0.0**	**0.2**	**100.0**	**89.4**	**4,375**
Marsabit	11.8	13.3	10.5	64.5	0.0	0.0	100.0	35.5	115
Isiolo	19.7	23.8	14.4	42.0	0.0	0.0	100.0	58.0	104
Meru	31.1	41.8	13.3	13.9	0.0	0.0	100.0	86.1	1,110
Tharaka-Nithi	33.7	40.2	10.1	15.2	0.0	0.2	100.0	84.1	275
Embu	40.9	47.5	7.0	4.4	0.0	0.0	100.0	95.4	459
Kitui	26.2	47.6	17.9	8.3	0.0	0.0	100.0	91.7	759
Machakos	47.0	40.8	7.5	3.9	0.0	0.8	100.0	95.3	873
Makueni	42.9	49.3	4.7	3.0	0.0	0.0	100.0	96.9	680
Central	54.7	34.3	5.9	4.4	0.0	0.1	100.0	94.9	3,994
Nyandarua	43.0	47.6	3.7	5.1	0.0	0.2	100.0	94.3	436
Nyeri	59.7	31.9	4.7	3.7	0.0	0.0	100.0	96.3	650
Kirinyaga	41.5	46.6	3.5	7.6	0.0	0.0	100.0	91.5	451
Murang'a	49.1	38.9	5.9	5.8	0.0	0.3	100.0	93.9	735
Kiambu	61.7	26.5	7.6	3.2	0.0	0.0	100.0	95.8	1,722
Rift Valley	**40.3**	**35.8**	**8.3**	**15.2**	**0.0**	**0.1**	**100.0**	**84.5**	**7,953**
Turkana	8.6	12.6	3.4	75.2	0.0	0.3	100.0	24.5	320
West Pokot	13.3	15.8	20.9	49.9	0.0	0.1	100.0	50.0	267
Samburu	16.0	12.9	11.2	59.3	0.3	0.0	100.0	40.1	123
Trans-Nzoia	35.2	43.9	6.5	14.2	0.0	0.1	100.0	85.6	768
Uasin Gishu	51.5	36.8	5.6	5.9	0.0	0.0	100.0	93.9	784
Elgeyo Marakwet	42.5	48.5	5.9	3.0	0.0	0.1	100.0	96.8	250
Nandi	37.5	47.3	13.6	1.4	0.0	0.2	100.0	98.4	628
Baringo	36.1	37.9	12.3	12.3	0.1	0.3	100.0	86.3	335
Laikipia	42.0	33.4	7.5	16.7	0.0	0.0	100.0	83.0	342
Nakuru	53.4	34.6	6.1	5.6	0.0	0.0	100.0	94.0	1,574
Narok	29.0	40.4	4.6	25.9	0.0	0.1	100.0	74.0	642
Kajiado	51.3	28.0	3.9	16.7	0.0	0.0	100.0	83.1	670
Kericho	42.7	34.3	12.3	9.8	0.0	0.7	100.0	89.3	563
Bomet	34.0	41.1	14.2	10.4	0.0	0.1	100.0	89.4	687
Western	**36.8**	**43.4**	**9.8**	**9.1**	**0.0**	**0.6**	**100.0**	**90.1**	**3,225**
Kakamega	38.8	48.5	4.8	6.8	0.0	1.1	100.0	92.1	1,108
Vihiga	43.0	43.6	6.5	6.7	0.0	0.0	100.0	93.1	368
Bungoma	38.1	38.4	12.2	10.5	0.1	0.3	100.0	88.7	1,203
Busia	25.6	44.2	17.2	12.3	0.0	0.7	100.0	87.0	546
Nyanza	**39.9**	**40.2**	**11.6**	**7.7**	**0.0**	**0.4**	**100.0**	**91.7**	**4,038**
Siaya	33.7	46.5	11.3	8.1	0.0	0.0	100.0	91.5	572
Kisumu	50.3	35.7	6.5	6.8	0.0	0.4	100.0	92.6	820
Homa Bay	31.1	45.1	17.6	5.6	0.0	0.6	100.0	93.8	798
Migori	23.5	51.8	10.3	13.2	0.0	0.8	100.0	85.7	650
Kisii	48.3	32.2	10.7	8.4	0.0	0.3	100.0	91.2	864
Nyamira	55.8	26.9	15.5	1.5	0.0	0.0	100.0	98.2	334
Nairobi	**66.1**	**24.8**	**5.6**	**3.0**	**0.2**	**0.2**	**100.0**	**96.5**	**3,770**
Total	42.7	36.8	8.3	11.7	0.0	0.2	100.0	87.8	31,079

Note: Totals may not add up to 100 percent because women with missing information are not shown separately.
[1] Refers to women who attended secondary school or higher and women who can read a whole sentence or part of a sentence

Table 3.3.2 Literacy: Men

Percent distribution of men age 15-49 by level of schooling attended and level of literacy, and percentage literate, according to background characteristics, Kenya 2014

Background characteristic	Secondary school or higher	No schooling or primary school: Can read a whole sentence	No schooling or primary school: Can read part of a sentence	No schooling or primary school: Cannot read at all	No schooling or primary school: No card with required language	No schooling or primary school: Blind/ visually impaired	Total	Percentage literate[1]	Number of men
Age									
15-24	52.9	35.2	6.6	5.2	0.0	0.0	100.0	94.6	4,666
15-19	45.3	43.0	6.9	4.6	0.0	0.0	100.0	95.2	2,540
20-24	61.9	25.9	6.1	5.9	0.0	0.0	100.0	93.9	2,125
25-29	51.9	33.2	6.9	7.8	0.0	0.0	100.0	92.1	2,104
30-34	45.5	36.8	7.6	10.0	0.0	0.0	100.0	89.9	1,785
35-39	39.9	43.4	7.4	9.2	0.0	0.0	100.0	90.6	1,483
40-44	47.7	37.0	6.9	8.2	0.0	0.2	100.0	91.6	1,224
45-49	45.9	37.2	7.5	9.2	0.0	0.1	100.0	90.7	800
Residence									
Urban	62.6	29.5	4.7	3.2	0.0	0.0	100.0	96.7	5,300
Rural	38.4	41.9	8.8	10.8	0.0	0.1	100.0	89.0	6,762
Region									
Coast	43.9	45.8	4.2	5.9	0.0	0.1	100.0	93.9	1,260
North Eastern	28.4	29.2	9.6	32.3	0.4	0.0	100.0	67.2	227
Eastern	38.9	46.2	6.5	8.4	0.0	0.0	100.0	91.6	1,825
Central	58.4	32.3	5.0	4.2	0.0	0.1	100.0	95.8	1,564
Rift Valley	45.7	34.4	10.1	9.7	0.0	0.0	100.0	90.1	3,050
Western	38.8	41.5	6.5	12.8	0.0	0.0	100.0	86.9	1,164
Nyanza	48.6	36.9	9.6	4.6	0.0	0.2	100.0	95.0	1,405
Nairobi	72.9	22.4	3.3	1.4	0.0	0.0	100.0	98.6	1,568
Wealth quintile									
Lowest	17.4	44.0	15.0	23.3	0.1	0.1	100.0	76.4	1,691
Second	31.2	49.3	9.7	9.5	0.0	0.1	100.0	90.2	2,145
Middle	42.8	43.4	7.1	6.6	0.0	0.0	100.0	93.3	2,370
Fourth	58.0	33.5	4.9	3.5	0.0	0.1	100.0	96.4	2,959
Highest	76.5	19.7	2.4	1.4	0.0	0.0	100.0	98.5	2,897
Total 15-49	49.0	36.4	7.0	7.4	0.0	0.0	100.0	92.4	12,063
50-54	45.2	33.4	8.0	12.1	0.0	1.3	100.0	86.6	756
Total 15-54	48.8	36.2	7.0	7.7	0.0	0.1	100.0	92.1	12,819

Note: Totals may not add up to 100 percent because men with missing information are not shown separately.
[1] Refers to men who attended secondary school or higher and men who can read a whole sentence or part of a sentence

Table 3.3.2C Literacy: Men

Percent distribution of men age 15-49 by level of schooling attended and level of literacy, and percentage literate, according to county, Kenya 2014

County	Secondary school or higher	No schooling or primary school: Can read a whole sentence	No schooling or primary school: Can read part of a sentence	No schooling or primary school: Cannot read at all	No schooling or primary school: No card with required language	No schooling or primary school: Blind/ visually impaired	Total	Percentage literate[1]	Number of men
Coast	**43.9**	**45.8**	**4.2**	**5.9**	**0.0**	**0.1**	**100.0**	**93.9**	**1,260**
Mombasa	56.1	40.4	2.4	1.1	0.0	0.0	100.0	98.9	481
Kwale	33.9	42.1	11.6	12.4	0.0	0.0	100.0	87.6	226
Kilifi	38.1	54.1	1.9	5.5	0.0	0.0	100.0	94.1	359
Tana River	23.3	50.8	6.6	18.8	0.0	0.4	100.0	80.8	65
Lamu	34.5	48.3	4.2	12.4	0.0	0.6	100.0	87.1	37
Taita Taveta	45.3	46.3	3.2	4.3	0.0	0.4	100.0	94.8	93
North Eastern	**28.4**	**29.2**	**9.6**	**32.3**	**0.4**	**0.0**	**100.0**	**67.2**	**227**
Garissa	32.9	28.2	11.1	27.8	0.0	0.0	100.0	72.2	94
Wajir	28.1	27.7	8.9	33.9	1.3	0.0	100.0	64.7	72
Mandera	21.6	32.7	7.9	37.4	0.0	0.0	100.0	62.2	60
Eastern	**38.9**	**46.2**	**6.5**	**8.4**	**0.0**	**0.0**	**100.0**	**91.6**	**1,825**
Marsabit	35.7	7.1	20.8	36.4	0.0	0.0	100.0	63.6	40
Isiolo	37.9	27.7	22.3	12.1	0.0	0.0	100.0	87.9	35
Meru	34.3	52.1	3.9	9.6	0.0	0.0	100.0	90.4	495
Tharaka-Nithi	41.1	47.1	2.3	9.5	0.0	0.0	100.0	90.5	102
Embu	38.0	44.3	9.8	7.8	0.0	0.0	100.0	92.2	164
Kitui	29.1	43.7	11.9	15.3	0.0	0.0	100.0	84.7	303
Machakos	46.8	47.3	4.6	1.4	0.0	0.0	100.0	98.6	436
Makueni	46.8	45.4	3.3	4.5	0.0	0.0	100.0	95.5	250
Central	**58.4**	**32.3**	**5.0**	**4.2**	**0.0**	**0.1**	**100.0**	**95.8**	**1,564**
Nyandarua	50.1	36.9	10.1	2.9	0.0	0.0	100.0	97.0	198
Nyeri	60.5	29.4	5.6	4.0	0.0	0.4	100.0	95.6	229
Kirinyaga	42.9	45.0	5.8	6.3	0.0	0.0	100.0	93.7	184
Murang'a	49.1	37.5	4.1	9.3	0.0	0.0	100.0	90.7	284
Kiambu	68.5	26.2	3.5	1.8	0.0	0.0	100.0	98.2	669
Rift Valley	**45.7**	**34.4**	**10.1**	**9.7**	**0.0**	**0.0**	**100.0**	**90.1**	**3,050**
Turkana	21.8	6.8	24.2	47.2	0.0	0.0	100.0	52.8	76
West Pokot	15.6	47.0	8.7	28.7	0.0	0.0	100.0	71.3	103
Samburu	35.5	22.0	13.3	29.2	0.0	0.0	100.0	70.8	35
Trans-Nzoia	38.8	45.3	3.9	12.1	0.0	0.0	100.0	87.9	329
Uasin Gishu	53.3	38.2	5.9	2.7	0.0	0.0	100.0	97.3	355
Elgeyo Marakwet	48.7	41.8	5.0	4.1	0.0	0.0	100.0	95.5	86
Nandi	40.1	39.2	14.8	5.9	0.0	0.0	100.0	94.1	264
Baringo	44.1	35.7	5.1	14.5	0.0	0.7	100.0	84.9	125
Laikipia	56.8	29.7	2.2	11.4	0.0	0.0	100.0	88.6	124
Nakuru	55.6	31.2	8.6	4.7	0.0	0.0	100.0	95.3	589
Narok	32.7	22.6	25.9	17.9	0.0	0.0	100.0	81.1	240
Kajiado	62.1	21.3	5.9	10.7	0.0	0.0	100.0	89.3	241
Kericho	44.9	44.7	7.6	2.6	0.0	0.0	100.0	97.1	215
Bomet	39.7	35.8	17.5	7.1	0.0	0.0	100.0	92.9	267
Western	**38.8**	**41.5**	**6.5**	**12.8**	**0.0**	**0.0**	**100.0**	**86.9**	**1,164**
Kakamega	41.4	47.0	5.7	5.9	0.0	0.0	100.0	94.1	411
Vihiga	39.0	28.8	27.7	3.7	0.0	0.0	100.0	95.5	140
Bungoma	37.5	39.3	2.7	19.8	0.0	0.0	100.0	79.5	413
Busia	36.3	43.7	1.4	18.7	0.0	0.0	100.0	81.3	199
Nyanza	48.6	36.9	9.6	4.6	0.0	0.2	100.0	95.0	1,405
Siaya	42.3	46.6	6.5	4.4	0.0	0.0	100.0	95.4	213
Kisumu	55.8	28.0	14.0	1.9	0.0	0.2	100.0	97.9	309
Homa Bay	37.9	49.4	1.5	9.8	0.0	1.0	100.0	88.8	243
Migori	32.5	51.9	8.5	7.1	0.0	0.0	100.0	92.9	211
Kisii	58.7	27.8	10.1	3.4	0.0	0.0	100.0	96.6	315
Nyamira	64.7	13.6	21.4	0.0	0.0	0.3	100.0	99.7	114
Nairobi	**72.9**	**22.4**	**3.3**	**1.4**	**0.0**	**0.0**	**100.0**	**98.6**	**1,568**
Total 15-49	49.0	36.4	7.0	7.4	0.0	0.0	100.0	92.4	12,063
50-54	45.2	33.4	8.0	12.1	0.0	1.3	100.0	86.6	756
Total 15-54	48.8	36.2	7.0	7.7	0.0	0.1	100.0	92.1	12,819

Note: Totals may not add up to 100 percent because men with missing information are not shown separately.
[1] Refers to men who attended secondary school or higher and men who can read a whole sentence or part of a sentence

3.4 ACCESS TO MASS MEDIA

Information access is essential in increasing people's knowledge and awareness of the world around them, which may eventually influence their perceptions and behaviour. Exposure to media was assessed by asking respondents how often they read a newspaper, watched television, or listened to a radio. It is important to know the types of persons who are more or less likely to be reached by the various types of media to plan programmes intended to spread information about health and family planning. Tables 3.4.1 and 3.4.2 show the percentage of women and men age 15-49 exposed to different types of mass communication media by background characteristics. Tables 3.4.1C and 3.4.2C show these data by county.

Women are less likely than men to have access to mass media; this is true for all types of media. Radio is the most popular medium for both women and men (accessed at least weekly by 70 percent of women and 86 percent of men), while newspapers are the least popular medium (accessed at least weekly by 18 percent of women and 41 percent of men). Only 11 percent of women and 33 percent of men have weekly exposure to all three media sources. Twenty-three percent of women and 10 percent of men have no weekly access to mass media.

There are no overarching patterns in media consumption by age group, although newspaper reading declines among women with age (as does literacy, noted above) and men age 15-19 are much less likely to have weekly exposure to any of the media than men in other age groups.

Urban women and men have more access to all forms of mass media than their rural counterparts; only 13 percent of women and 28 percent of men in rural areas read a newspaper at least once a week, as compared with 25 percent of women and 58 percent of men in urban areas. Although 66 percent of women and 78 percent of men in urban areas watch television at least once a week, only 20 percent of women and 44 percent of men residing in rural areas do so. Access to all three forms of mass media is highest among women in the Central region (18 percent) and men in Central and Nairobi (52 percent each) and lowest among residents of the North Eastern region (2 percent for women and 4 percent for men).

Access to mass media increases with increasing education and wealth among both women and men. The proportion of women who listen to the radio at least once a week increases from 28 percent among those with no education to 79 percent among those with at least some secondary schooling. Similarly, the proportion of women who watch television at least once a week increases from only 3 percent among those in the lowest wealth quintile to 90 percent among those in the highest quintile.

Across counties, women in Kiambu (27 percent), Nakuru and Nyeri (21 percent each) are most likely to have access to all three media at least once a week. Counties where the highest proportions of women have no access to any of the three media sources at least once a week are Turkana (80 percent), Garissa (77 percent), and Wajir (72 percent).

Men in Mombasa and Nyeri (71 percent each) and in Machakos and Kajiado (62 percent each) have higher access to all three media services at least once a week than their counterparts in the other counties. The counties with the highest proportions of men with no access to the three media services at least once a week are Turkana (84 percent), Wajir (51 percent), and Garissa (48 percent).

Table 3.4.1 Exposure to mass media: Women

Percentage of women age 15-49 who are exposed to specific media on a weekly basis, by background characteristics, Kenya 2014

Background characteristic	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	Accesses all three media at least once a week	Accesses none of the three media at least once a week	Number of women
Age						
15-19	21.7	33.2	66.0	9.5	25.2	5,820
20-24	19.4	44.2	73.5	12.2	18.6	5,735
25-29	18.2	45.2	71.6	11.8	20.3	6,100
30-34	16.8	41.1	70.5	10.9	22.5	4,510
35-39	14.9	36.8	68.1	9.5	25.2	3,773
40-44	15.0	31.4	67.4	9.5	28.1	2,885
45-49	15.1	32.0	68.5	9.3	25.7	2,257
Residence						
Urban	24.9	66.4	75.6	17.9	11.2	12,690
Rural	13.2	19.9	65.6	5.7	31.0	18,389
Region						
Coast	13.6	38.2	50.2	9.0	37.8	3,076
North Eastern	4.0	11.4	20.9	1.5	72.4	648
Eastern	17.4	24.7	67.0	8.1	29.0	4,375
Central	25.5	57.1	84.1	18.1	9.0	3,994
Rift Valley	19.1	34.6	70.3	10.9	23.4	7,953
Western	14.1	21.2	73.3	5.9	22.8	3,225
Nyanza	14.9	25.3	68.6	6.7	25.7	4,038
Nairobi	20.7	80.3	78.7	16.5	6.1	3,770
Education						
No education	0.3	9.7	28.0	0.2	68.1	2,176
Primary incomplete	5.8	17.1	61.9	1.9	34.4	7,989
Primary complete	10.3	36.6	73.0	5.0	20.5	7,637
Secondary +	32.6	58.1	79.3	20.9	10.1	13,277
Wealth quintile						
Lowest	4.1	3.2	37.6	0.7	61.1	4,838
Second	9.9	7.5	63.3	2.2	34.2	5,457
Middle	14.6	16.5	74.6	4.3	21.5	6,032
Fourth	19.6	48.3	80.9	11.0	12.1	6,550
Highest	32.7	89.8	80.4	26.5	2.7	8,203
Total	17.9	38.9	69.7	10.7	22.9	31,079

Table 3.4.1C Exposure to mass media: Women

Percentage of women age 15-49 who are exposed to specific media on a weekly basis, by county, Kenya 2014

County	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	Accesses all three media at least once a week	Accesses none of the three media at least once a week	Number of women
Coast	**13.6**	**38.2**	**50.2**	**9.0**	**37.8**	**3,076**
Mombasa	26.3	70.3	66.6	20.0	12.7	912
Kwale	7.6	21.3	38.5	3.4	53.5	619
Kilifi	6.7	23.9	37.8	3.6	53.2	1,043
Tana River	7.8	16.5	38.4	3.5	55.4	197
Lamu	8.4	35.5	65.0	4.9	25.6	89
Taita Taveta	18.1	41.4	78.8	11.9	13.6	215
North Eastern	**4.0**	**11.4**	**20.9**	**1.5**	**72.4**	**648**
Garissa	3.1	15.1	12.8	1.3	76.9	261
Wajir	4.4	8.8	23.1	1.3	71.6	212
Mandera	5.0	9.0	30.4	2.0	66.6	175
Eastern	**17.4**	**24.7**	**67.0**	**8.1**	**29.0**	**4,375**
Marsabit	1.9	19.2	20.7	0.8	69.2	115
Isiolo	16.1	34.7	46.7	11.7	45.0	104
Meru	13.4	27.0	58.7	6.8	37.8	1,110
Tharaka-Nithi	12.5	20.6	54.6	6.1	41.2	275
Embu	18.3	27.5	72.5	8.5	22.5	459
Kitui	2.8	11.7	56.6	1.5	40.9	759
Machakos	17.2	33.4	82.2	10.2	14.4	873
Makueni	44.7	23.7	85.2	15.8	10.1	680
Central	**25.5**	**57.1**	**84.1**	**18.1**	**9.0**	**3,994**
Nyandarua	17.4	32.3	86.1	8.5	10.2	436
Nyeri	29.7	61.6	90.5	21.3	3.7	650
Kirinyaga	17.6	37.4	64.5	8.7	26.7	451
Murang'a	11.9	36.8	84.1	6.4	12.9	735
Kiambu	33.9	75.5	86.4	26.7	4.5	1,722
Rift Valley	**19.1**	**34.6**	**70.3**	**10.9**	**23.4**	**7,953**
Turkana	4.1	7.1	18.8	2.7	79.5	320
West Pokot	9.3	12.3	31.2	6.7	67.3	267
Samburu	3.4	16.3	28.1	1.8	67.2	123
Trans-Nzoia	14.9	22.0	67.4	4.8	25.8	768
Uasin Gishu	22.1	45.6	78.0	14.5	17.0	784
Elgeyo Marakwet	10.1	24.5	71.3	7.0	26.6	250
Nandi	7.9	16.6	67.1	3.4	30.1	628
Baringo	9.8	16.3	50.9	4.3	44.1	335
Laikipia	15.3	33.9	74.3	10.7	20.7	342
Nakuru	33.5	59.0	81.4	21.4	8.8	1,574
Narok	13.1	26.1	82.3	5.9	13.0	642
Kajiado	19.1	55.7	64.5	13.4	19.4	670
Kericho	30.3	33.3	79.3	14.7	15.6	563
Bomet	17.1	22.8	83.6	7.1	14.6	687
Western	**14.1**	**21.2**	**73.3**	**5.9**	**22.8**	**3,225**
Kakamega	15.2	23.4	73.3	6.3	21.8	1,108
Vihiga	22.0	29.8	84.9	12.0	12.5	368
Bungoma	12.1	18.0	71.3	4.8	25.8	1,203
Busia	10.8	17.9	69.9	3.6	25.4	546
Nyanza	**14.9**	**25.3**	**68.6**	**6.7**	**25.7**	**4,038**
Siaya	16.8	16.9	76.7	6.1	19.3	572
Kisumu	21.5	50.8	83.3	14.5	9.8	820
Homa Bay	16.4	15.6	66.8	5.5	29.8	798
Migori	8.4	18.4	70.0	4.5	27.3	650
Kisii	14.2	23.9	50.6	4.0	38.4	864
Nyamira	6.2	17.1	66.7	3.0	30.8	334
Nairobi	**20.7**	**80.3**	**78.7**	**16.5**	**6.1**	**3,770**
Total	17.9	38.9	69.7	10.7	22.9	31,079

Table 3.4.2 Exposure to mass media: Men

Percentage of men age 15-49 who are exposed to specific media on a weekly basis, by background characteristics, Kenya 2014

Background characteristic	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	Accesses all three media at least once a week	Accesses none of the three media at least once a week	Number of men
Age						
15-19	29.4	43.6	77.9	19.0	16.2	2,540
20-24	44.4	65.1	88.0	36.1	7.5	2,125
25-29	44.7	66.5	88.0	37.7	6.4	2,104
30-34	46.1	63.9	86.5	37.7	8.2	1,785
35-39	43.1	60.8	86.7	34.5	8.7	1,483
40-44	45.5	58.4	88.1	37.1	8.2	1,224
45-49	42.1	57.5	87.9	33.1	9.6	800
Residence						
Urban	58.3	78.3	89.0	49.2	3.9	5,300
Rural	28.0	43.8	82.8	19.8	14.1	6,762
Region						
Coast	51.0	67.6	83.6	42.2	10.6	1,260
North Eastern	7.9	22.5	42.6	4.2	47.5	227
Eastern	33.5	59.5	87.4	27.6	9.5	1,825
Central	61.3	76.5	95.6	51.9	1.8	1,564
Rift Valley	31.6	49.2	84.4	23.9	11.3	3,050
Western	32.8	45.7	83.2	23.7	14.3	1,164
Nyanza	29.6	41.5	81.5	19.7	13.4	1,405
Nairobi	63.3	83.2	88.3	51.6	1.1	1,568
Education						
No education	1.1	20.8	50.4	0.8	47.3	345
Primary incomplete	15.1	38.1	79.3	10.1	17.6	3,071
Primary complete	35.2	57.5	89.6	27.6	6.7	2,734
Secondary +	60.1	72.7	88.9	48.7	4.6	5,913
Wealth quintile						
Lowest	13.1	22.1	64.8	6.8	32.0	1,691
Second	23.8	37.9	85.2	15.0	11.3	2,145
Middle	35.2	49.1	88.5	24.8	8.2	2,370
Fourth	48.6	69.8	91.3	38.9	4.4	2,959
Highest	68.3	92.9	89.4	61.2	1.6	2,897
Total 15-49	41.3	58.9	85.5	32.7	9.6	12,063
50-54	40.9	51.8	84.4	30.9	12.2	756
Total 15-54	41.3	58.5	85.4	32.6	9.7	12,819

Table 3.4.2C Exposure to mass media: Men

Percentage of men age 15-49 who are exposed to specific media on a weekly basis, by county, Kenya 2014

County	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	Accesses all three media at least once a week	Accesses none of the three media at least once a week	Number of men
Coast	**51.0**	**67.6**	**83.6**	**42.2**	**10.6**	**1,260**
Mombasa	72.7	96.8	97.6	70.8	0.7	481
Kwale	28.6	44.0	64.7	19.4	26.0	226
Kilifi	48.0	49.0	77.4	29.6	13.9	359
Tana River	18.7	43.5	75.8	11.7	20.2	65
Lamu	22.9	49.7	84.3	14.5	6.9	37
Taita Taveta	38.4	69.0	86.0	30.9	6.4	93
North Eastern	**7.9**	**22.5**	**42.6**	**4.2**	**47.5**	**227**
Garissa	3.1	26.5	37.1	1.5	47.5	94
Wajir	9.7	13.5	40.6	2.8	51.4	72
Mandera	13.1	26.9	53.7	10.3	43.0	60
Eastern	**33.5**	**59.5**	**87.4**	**27.6**	**9.5**	**1,825**
Marsabit	10.6	52.1	56.1	8.6	39.3	40
Isiolo	18.5	39.3	51.6	11.4	36.4	35
Meru	32.2	81.8	91.7	29.1	5.4	495
Tharaka-Nithi	21.0	40.3	87.4	14.9	8.3	102
Embu	20.1	41.1	84.1	12.7	12.4	164
Kitui	11.9	15.2	68.5	3.8	26.6	303
Machakos	66.8	90.0	98.9	61.9	0.2	436
Makueni	23.9	40.0	93.9	13.5	2.9	250
Central	**61.3**	**76.5**	**95.6**	**51.9**	**1.8**	**1,564**
Nyandarua	34.9	54.2	88.5	22.7	5.6	198
Nyeri	71.7	93.9	97.4	70.6	0.7	229
Kirinyaga	41.0	69.9	91.0	32.4	4.6	184
Murang'a	66.4	74.7	98.2	59.1	0.6	284
Kiambu	68.9	79.8	97.2	56.4	0.7	669
Rift Valley	**31.6**	**49.2**	**84.4**	**23.9**	**11.3**	**3,050**
Turkana	5.2	7.8	14.0	4.2	83.6	76
West Pokot	15.5	30.4	74.2	11.1	23.8	103
Samburu	13.8	27.5	55.1	8.6	40.6	35
Trans-Nzoia	29.7	53.4	84.4	19.8	6.4	329
Uasin Gishu	45.2	63.6	93.1	35.5	5.0	355
Elgeyo Marakwet	26.8	60.1	92.1	19.9	4.2	86
Nandi	30.4	33.7	89.4	20.2	7.6	264
Baringo	21.7	37.9	80.3	14.8	16.6	125
Laikipia	21.2	37.7	78.2	11.2	13.5	124
Nakuru	24.1	46.5	83.9	17.4	10.4	589
Narok	21.2	48.9	83.8	19.0	14.2	240
Kajiado	64.8	84.3	92.9	61.9	3.8	241
Kericho	44.0	44.6	88.4	27.8	7.6	215
Bomet	30.1	47.7	89.3	22.2	7.3	267
Western	**32.8**	**45.7**	**83.2**	**23.7**	**14.3**	**1,164**
Kakamega	39.9	57.6	91.7	31.0	4.9	411
Vihiga	67.0	54.0	97.3	44.6	1.1	140
Bungoma	14.0	25.0	66.7	8.2	31.6	413
Busia	33.2	58.2	90.3	25.9	6.8	199
Nyanza	**29.6**	**41.5**	**81.5**	**19.7**	**13.4**	**1,405**
Siaya	50.3	57.8	93.7	37.6	4.3	213
Kisumu	41.1	61.3	86.6	31.0	4.3	309
Homa Bay	27.1	32.6	90.6	15.5	7.4	243
Migori	19.2	38.5	87.5	12.4	11.5	211
Kisii	16.4	25.1	57.8	5.6	32.0	315
Nyamira	20.4	27.5	79.4	16.9	19.9	114
Nairobi	**63.3**	**83.2**	**88.3**	**51.6**	**1.1**	**1,568**
Total 15-49	41.3	58.9	85.5	32.7	9.6	12,063
50-54	40.9	51.8	84.4	30.9	12.2	756
Total 15-54	41.3	58.5	85.4	32.6	9.7	12,819

3.5 EMPLOYMENT

3.5.1 Employment Status

The 2014 KDHS asked respondents a number of questions regarding their employment status, including whether they were working in the seven days preceding the survey and, if not, whether they had worked in the 12 months before the survey. The results for women and men are presented in Tables 3.5.1 and 3.5.2.

At the time of the survey, 61 percent of women were employed and 5 percent were not currently employed but had worked sometime during the past 12 months (Figure 3.1). In general, the proportion of women who are currently employed increases with age, peaking at age 40-44 (84 percent) before dropping slightly at age 45-49 (80 percent). Employment increases with the number of living children. The North Eastern region has the lowest proportion of women who are currently employed (13 percent). Women with no education are less likely to be currently employed (43 percent) than those with any degree of education (60 percent and above). Similarly, women in the lowest wealth quintile are less likely to be currently employed (50 percent) than women in the other quintiles (61 percent or higher).

Men are more likely to be currently employed (80 percent) than women. The 15-19 age group has the lowest employment (35 percent); thereafter, employment rises more sharply than for women. Urban men are more likely to be currently employed (84 percent) than rural men (77 percent). Patterns are similar to those found with women by region and wealth quintile, but men at the highest level of education are less likely to be employed than men with no education.

Since the 2008-09 KDHS, current employment has improved among women (from 57 percent to 61 percent) but has declined among men (from 86 percent to 80 percent).

Figure 3.1 **Women's employment status in the past 12 months**

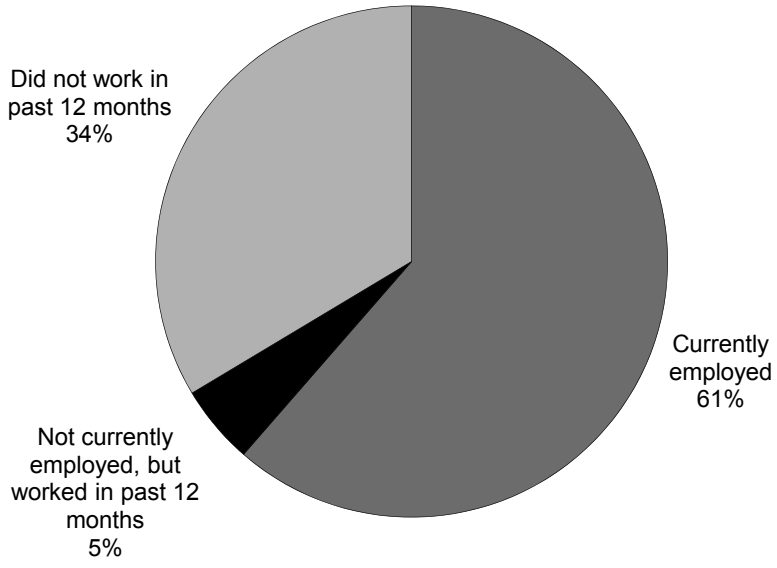


Table 3.5.1 Employment status: Women

Percent distribution of women age 15-49 by employment status, according to background characteristics, Kenya 2014

Background characteristic	Employed in the 12 months preceding the survey		Not employed in the 12 months preceding the survey	Total	Number of women
	Currently employed[1]	Not currently employed			
Age					
15-19	18.8	3.6	77.5	100.0	2,717
20-24	53.1	6.9	40.0	100.0	2,691
25-29	71.1	5.2	23.7	100.0	2,932
30-34	75.9	5.0	19.0	100.0	2,162
35-39	78.7	3.8	17.4	100.0	1,780
40-44	83.9	3.8	12.3	100.0	1,292
45-49	79.5	5.9	14.6	100.0	1,052
Marital status					
Never married	37.1	4.1	58.8	100.0	4,255
Married or living together	69.4	5.3	25.3	100.0	8,710
Divorced/separated/ widowed	82.1	5.3	12.6	100.0	1,660
Number of living children					
0	32.8	4.6	62.5	100.0	3,890
1-2	69.0	5.4	25.6	100.0	5,000
3-4	74.6	5.2	20.2	100.0	3,381
5+	73.9	4.1	22.0	100.0	2,354
Residence					
Urban	63.3	5.9	30.8	100.0	5,929
Rural	60.2	4.3	35.5	100.0	8,696
Region					
Coast	52.8	4.3	42.9	100.0	1,421
North Eastern	13.3	0.4	86.3	100.0	299
Eastern	66.4	6.1	27.5	100.0	2,066
Central	73.3	6.3	20.4	100.0	1,905
Rift Valley	59.9	3.9	36.2	100.0	3,714
Western	56.4	5.3	38.3	100.0	1,571
Nyanza	62.0	3.0	35.0	100.0	1,908
Nairobi	65.3	7.6	27.0	100.0	1,742
Education					
No education	42.7	1.4	55.8	100.0	1,015
Primary incomplete	59.8	5.0	35.1	100.0	3,793
Primary complete	70.0	6.3	23.7	100.0	3,543
Secondary +	60.6	4.7	34.6	100.0	6,274
Wealth quintile					
Lowest	50.4	3.6	46.1	100.0	2,236
Second	62.5	5.3	32.2	100.0	2,590
Middle	60.8	5.2	34.0	100.0	2,859
Fourth	63.7	4.5	31.8	100.0	3,113
Highest	65.9	5.7	28.4	100.0	3,827
Total	61.4	5.0	33.6	100.0	14,625

[1] "Currently employed" is defined as having done work in the past seven days. Includes persons who did not work in the past seven days but who are regularly employed and were absent from work for leave, illness, vacation, or any other such reason.

Table 3.5.2 Employment status: Men

Percent distribution of men age 15-49 by employment status, according to background characteristics, Kenya 2014

Background characteristic	Employed in the 12 months preceding the survey		Not employed in the 12 months preceding the survey	Total	Number of men
	Currently employed[1]	Not currently employed			
Age					
15-19	34.7	5.5	59.6	100.0	2,540
20-24	75.8	3.7	20.5	100.0	2,125
25-29	94.9	2.1	3.0	100.0	2,104
30-34	98.1	1.3	0.6	100.0	1,785
35-39	98.2	1.3	0.5	100.0	1,483
40-44	96.5	2.8	0.7	100.0	1,224
45-49	97.8	1.0	1.2	100.0	800
Marital status					
Never married	57.8	4.6	37.6	100.0	5,350
Married or living together	98.2	1.4	0.4	100.0	6,095
Divorced/separated/ widowed	95.1	3.5	1.2	100.0	618
Number of living children					
0	59.3	4.5	36.1	100.0	5,540
1-2	97.9	1.2	0.9	100.0	3,206
3-4	97.9	1.8	0.3	100.0	2,032
5+	97.3	1.8	0.9	100.0	1,285
Residence					
Urban	84.1	2.2	13.7	100.0	5,300
Rural	77.0	3.4	19.5	100.0	6,762
Region					
Coast	76.1	2.8	21.2	100.0	1,260
North Eastern	60.0	0.1	39.9	100.0	227
Eastern	79.8	2.6	17.6	100.0	1,825
Central	85.9	2.3	11.8	100.0	1,564
Rift Valley	81.6	4.0	14.4	100.0	3,050
Western	73.1	1.2	25.6	100.0	1,164
Nyanza	77.0	3.0	19.9	100.0	1,405
Nairobi	86.0	3.4	10.7	100.0	1,568
Education					
No education	85.4	8.1	6.5	100.0	345
Primary incomplete	73.4	3.6	22.9	100.0	3,071
Primary complete	93.0	1.7	5.3	100.0	2,734
Secondary +	77.3	2.8	19.9	100.0	5,913
Wealth quintile					
Lowest	71.5	4.2	24.3	100.0	1,691
Second	79.8	3.2	17.0	100.0	2,145
Middle	77.8	3.2	19.0	100.0	2,370
Fourth	82.6	2.9	14.4	100.0	2,959
Highest	84.7	1.6	13.6	100.0	2,897
Total 15-49	80.1	2.9	17.0	100.0	12,063
50-54	96.1	2.1	1.8	100.0	756
Total 15-54	81.0	2.8	16.1	100.0	12,819

Note: Totals may not add up to 100 percent because men with missing information are not shown separately.
[1] "Currently employed" is defined as having done work in the past seven days. Includes persons who did not work in the past seven days but who are regularly employed and were absent from work for leave, illness, vacation, or any other such reason.

3.5.2 Occupation

Respondents who were currently employed or had worked in the 12 months preceding the survey were asked to specify their occupation. Table 3.6.1 and Table 3.6.2 show the percent distribution of women and men age 15-49 by occupation according to background characteristics.

Most of the women (a combined 59 percent) in Kenya are employed in either agriculture or domestic service. The other notable occupations include professional, technical, or managerial (14 percent); sales and services (14 percent); and unskilled manual labour (10 percent). There is a great deal of variation by background characteristics.

Employed men age 15-49 are mostly engaged in agricultural, unskilled manual, or domestic service occupations (24 percent, 22 percent, and 21 percent, respectively). As among women, 14 percent of men work in professional, technical, or managerial occupations.

Table 3.6.1 Occupation: Women

Percent distribution of women age 15-49 employed in the 12 months preceding the survey by occupation, according to background characteristics, Kenya 2014

Background characteristic	Profes-sional/ technical/ managerial	Clerical	Sales and services	Skilled manual	Unskilled manual	Domestic service	Agriculture	Missing	Total	Number of women
Age										
15-19	7.5	0.8	15.2	0.2	15.2	28.6	28.5	4.1	100.0	609
20-24	13.0	1.5	20.6	0.7	9.7	30.1	23.7	0.7	100.0	1,614
25-29	16.9	0.9	18.9	0.9	10.8	26.8	23.9	0.8	100.0	2,237
30-34	15.4	1.6	12.9	0.2	9.5	29.6	30.2	0.7	100.0	1,750
35-39	14.8	1.4	9.6	0.2	10.5	26.9	36.1	0.5	100.0	1,470
40-44	12.6	0.8	10.0	0.9	9.6	25.9	39.7	0.5	100.0	1,133
45-49	12.9	0.2	5.8	0.4	7.5	23.3	48.8	1.1	100.0	899
Marital status										
Never married	19.2	2.3	20.0	0.5	11.2	30.2	14.9	1.7	100.0	1,754
Married or living together	13.5	0.8	12.5	0.5	9.6	25.1	37.3	0.7	100.0	6,508
Divorced/separated/ widowed	11.4	1.4	15.1	0.7	11.3	35.2	24.2	0.7	100.0	1,450
Number of living children										
0	21.6	2.5	19.8	0.6	10.7	28.7	14.2	2.0	100.0	1,459
1-2	16.5	1.5	17.7	0.7	9.7	30.0	23.3	0.7	100.0	3,719
3-4	12.4	0.6	11.5	0.5	10.0	25.3	38.5	1.2	100.0	2,698
5+	6.4	0.1	6.7	0.4	11.0	24.9	50.4	0.1	100.0	1,836
Residence										
Urban	19.6	2.0	20.4	0.5	9.4	37.2	10.0	0.8	100.0	4,104
Rural	10.3	0.5	9.7	0.6	10.7	20.4	46.9	0.9	100.0	5,608
Region										
Coast	13.9	0.9	20.9	0.5	11.7	34.3	16.6	1.3	100.0	811
North Eastern	21.1	2.0	29.4	0.0	5.5	32.9	9.2	0.0	100.0	41
Eastern	8.8	1.1	12.2	1.0	7.9	19.5	48.7	0.9	100.0	1,497
Central	12.7	1.5	15.7	0.7	8.0	24.2	35.9	1.2	100.0	1,516
Rift Valley	14.0	1.2	12.7	0.4	13.5	26.1	31.1	1.1	100.0	2,369
Western	16.2	0.8	10.4	0.5	13.3	19.6	38.6	0.7	100.0	969
Nyanza	13.4	0.6	9.7	0.8	7.3	28.3	39.6	0.4	100.0	1,239
Nairobi	22.0	1.5	20.3	0.0	8.9	44.7	2.0	0.6	100.0	1,271
Education										
No education	4.9	0.0	13.6	0.5	11.0	32.1	36.9	0.8	100.0	448
Primary incomplete	4.3	0.0	10.6	0.4	11.5	27.8	44.5	0.9	100.0	2,461
Primary complete	5.4	0.1	15.0	0.3	12.3	27.3	38.5	1.1	100.0	2,702
Secondary +	26.9	2.6	16.0	0.8	7.9	27.1	17.9	0.7	100.0	4,100
Wealth quintile										
Lowest	4.6	0.0	8.1	0.6	12.4	24.8	49.0	0.6	100.0	1,206
Second	6.7	0.2	8.1	0.5	11.4	20.5	51.6	1.2	100.0	1,756
Middle	9.6	0.3	11.2	0.7	11.1	22.1	44.4	0.6	100.0	1,887
Fourth	13.3	1.0	16.1	0.5	11.8	31.2	24.8	1.4	100.0	2,123
Highest	27.1	3.0	21.5	0.6	6.6	34.2	6.5	0.6	100.0	2,740
Total	14.2	1.1	14.2	0.5	10.2	27.5	31.3	0.9	100.0	9,712

Table 3.6.2 Occupation: Men

Percent distribution of men age 15-49 employed in the 12 months preceding the survey by occupation, according to background characteristics, Kenya 2014

Background characteristic	Profes-sional/ technical/ managerial	Clerical	Sales and services	Skilled manual	Unskilled manual	Domestic service	Agriculture	Missing	Total	Number of men
Age										
15-19	3.7	0.0	5.8	3.5	26.7	15.8	39.8	4.7	100.0	1,023
20-24	13.6	0.4	8.7	9.5	22.2	23.0	21.1	1.5	100.0	1,690
25-29	13.9	1.4	8.3	12.8	23.7	21.5	17.6	0.8	100.0	2,042
30-34	16.9	1.0	6.4	11.5	20.8	21.4	21.7	0.3	100.0	1,774
35-39	14.1	1.6	7.4	9.4	21.2	23.8	22.3	0.4	100.0	1,476
40-44	15.9	0.9	4.8	7.5	21.8	21.0	27.7	0.5	100.0	1,215
45-49	18.5	1.5	4.4	7.4	17.3	16.8	33.2	0.8	100.0	791
Marital status										
Never married	12.4	0.6	7.6	6.4	23.1	21.5	26.1	2.4	100.0	3,335
Married or living together	15.4	1.3	6.6	11.2	21.6	20.6	23.0	0.4	100.0	6,067
Divorced/separated/ widowed	9.1	0.2	6.0	9.2	22.5	23.1	28.6	1.3	100.0	609
Number of living children										
0	13.2	0.9	7.7	6.1	22.4	22.0	25.4	2.2	100.0	3,535
1-2	15.6	0.9	6.8	12.7	23.4	21.8	18.1	0.6	100.0	3,178
3-4	13.9	1.2	6.5	11.7	20.6	20.3	25.2	0.5	100.0	2,025
5+	12.0	0.9	5.5	7.6	20.5	17.8	35.5	0.2	100.0	1,273
Residence										
Urban	18.4	1.6	9.9	12.7	23.4	26.4	6.8	0.9	100.0	4,573
Rural	10.3	0.5	4.4	6.8	21.1	16.5	39.1	1.3	100.0	5,438
Region										
Coast	15.5	1.4	7.7	12.0	24.4	27.6	10.9	0.6	100.0	993
North Eastern	21.0	0.2	11.9	8.9	15.1	28.9	13.2	0.9	100.0	136
Eastern	10.8	0.6	4.9	7.2	22.5	22.9	29.2	1.8	100.0	1,504
Central	13.7	0.1	8.0	10.0	18.3	21.1	27.3	1.4	100.0	1,379
Rift Valley	12.5	1.0	6.0	9.6	22.2	16.9	31.0	0.9	100.0	2,610
Western	11.7	1.3	6.2	9.1	23.6	14.7	33.1	0.3	100.0	864
Nyanza	15.4	0.7	5.0	8.2	19.3	17.4	33.2	0.7	100.0	1,124
Nairobi	18.9	2.0	10.7	10.9	25.8	28.0	1.9	1.7	100.0	1,401
Education										
No education	4.2	0.0	5.8	7.3	23.8	25.0	33.3	0.7	100.0	323
Primary incomplete	3.8	0.2	4.1	7.7	24.1	23.1	36.1	1.0	100.0	2,364
Primary complete	6.2	0.2	6.6	11.4	26.5	21.8	26.5	0.7	100.0	2,588
Secondary +	24.0	1.9	8.6	9.5	18.6	19.3	16.7	1.4	100.0	4,737
Wealth quintile										
Lowest	6.5	0.0	4.2	3.6	23.8	19.7	41.2	1.0	100.0	1,280
Second	6.2	0.3	4.6	6.4	23.4	18.5	39.0	1.6	100.0	1,779
Middle	9.0	0.6	5.2	10.7	22.1	19.1	32.5	0.9	100.0	1,919
Fourth	14.6	1.2	8.2	12.0	23.1	22.8	17.2	1.0	100.0	2,530
Highest	26.6	2.1	9.9	11.3	19.5	23.2	6.4	1.1	100.0	2,503
Total 15-49	14.0	1.0	6.9	9.5	22.1	21.0	24.3	1.1	100.0	10,012
50-54	17.1	0.9	3.1	5.7	19.6	16.1	37.4	0.1	100.0	743
Total 15-54	14.2	1.0	6.6	9.2	22.0	20.7	25.3	1.0	100.0	10,754

3.5.3 Earnings, Employers, and Continuity of Employment

Table 3.7 shows the percent distribution of women age 15-49 by type of earnings, type of employer, and continuity of employment, by whether their work is agricultural or nonagricultural.

Almost two in every three women (66 percent) are paid cash only for their work. This is mostly in nonagricultural work (83 percent, compared with 29 percent for agricultural work). Forty-three percent of those who work in agriculture are not paid, while 9 percent are paid in-kind.

Half of Kenyan women (52 percent) are self-employed. Most of those in agricultural work are self-employed (68 percent), while women doing nonagricultural work are slightly more likely to be employed by a nonfamily member (50 percent) than to be self-employed (45 percent).

Sixty-five percent of women are employed year-round, and 28 percent are employed on a seasonal basis. Nonagricultural work is more continuous than agricultural work, with 73 percent of women doing nonagricultural work employed all year compared with 49 percent of women doing agricultural work.

Table 3.7 Type of employment among women

Percent distribution of women age 15-49 employed in the 12 months preceding the survey by type of earnings, type of employer, and continuity of employment, according to type of employment (agricultural or nonagricultural), Kenya 2014

Employment characteristic	Agricultural work	Nonagricultural work	Total
Type of earnings			
Cash only	29.0	82.8	65.7
Cash and in-kind	19.7	10.2	13.1
In-kind only	8.8	1.2	3.6
Not paid	42.5	5.7	17.5
Total	100.0	100.0	100.0
Type of employer			
Employed by family member	18.0	4.7	9.1
Employed by nonfamily member	14.0	50.3	38.7
Self-employed	68.0	45.0	52.2
Total	100.0	100.0	100.0
Continuity of employment			
All year	48.8	73.2	65.4
Seasonal	45.9	19.2	27.6
Occasional	5.1	7.6	6.8
Total	100.0	100.0	100.0
Number of women employed during the last 12 months	3,038	6,587	9,712

Note: Total includes women with missing information on type of employment who are not shown separately.

MARRIAGE AND SEXUAL ACTIVITY 4

Ben Obonyo Jarabi, Samwel Ogola, Henry Z. Osoro

Key Findings

- The median age at first marriage among women age 25-49 is 20.2 years; the median age at first marriage among men age 30-49 is 25.3 years. Median age at marriage has remained stable in the past 10 years for both women and men.
- Six percent of currently married men are in a polygynous union; 11 percent of currently married women have co-wives.
- The percentage of women married by age 15 appears to be declining; 9 percent of women age 45-49 were married by age 15, as compared with 2 percent among those age 15-19.
- Fifteen percent of women age 20-49 had first sexual intercourse by age 15, 50 percent by age 18, and 71 percent by age 20. Twenty-two percent of men age 20-49 had first sexual intercourse by age 15, 56 percent by age 18, and 76 percent by age 20.

This chapter discusses the principal factors, other than contraception, that affect a woman's risk of becoming pregnant. These factors include marriage and sexual activity. Marriage signals the onset of exposure to the risk of pregnancy for most women and is an important fertility indicator. In the context of the 2014 KDHS, the term *married* refers to legal or formal marriage, and the phrase *living together* designates an informal union in which a man and a woman live together, whether or not a formal civil or religious ceremony has occurred. In later tables that do not list living together as a separate category, these women and men are included in the *currently married* group. Respondents who are currently married, divorced, separated, or widowed are referred to as *ever married*. This chapter also includes information on more direct measures of the beginning of exposure to pregnancy and the level of exposure, for example, age at first sexual intercourse and frequency of recent sexual intercourse.

4.1 CURRENT MARITAL STATUS

Marriage is a primary indication of regular exposure of women to the risk of pregnancy and therefore is important in the understanding of fertility. Populations in which age at first marriage is low tend to have early childbearing and high fertility.

Table 4.1 shows the percent distribution of women and men by marital status, according to age. Sixty percent of women and 51 percent of men age 15-49 are currently in a union; the majority report being married, while 5 percent of women and 2 percent of men report living together as if married. A higher proportion of men (44 percent) than women (29 percent) have never been married. A lower proportion of men are divorced, separated, or widowed compared with women (5 percent and 11 percent, respectively).

Table 4.1 Current marital status

Percent distribution of women and men age 15-49 by current marital status, according to age, Kenya 2014

Age	Marital status						Total	Percentage of respondents currently in union	Number of respondents
	Never married	Married	Living together	Divorced	Separated	Widowed			
					WOMEN				
15-19	86.8	10.5	1.5	0.3	0.8	0.1	100.0	11.9	5,820
20-24	38.8	47.6	7.0	1.0	5.0	0.6	100.0	54.6	5,735
25-29	14.0	69.2	5.5	2.0	7.4	1.9	100.0	74.7	6,100
30-34	8.0	73.4	5.7	2.5	7.1	3.3	100.0	79.1	4,510
35-39	6.7	70.3	6.4	3.5	7.5	5.6	100.0	76.7	3,773
40-44	5.0	67.0	5.5	3.7	8.1	10.7	100.0	72.5	2,885
45-49	4.8	66.8	4.8	4.2	5.5	14.0	100.0	71.6	2,257
Total 15-49	28.9	54.6	5.1	2.1	5.6	3.7	100.0	59.7	31,079
					MEN				
15-19	99.3	0.5	0.1	0.0	0.1	0.0	100.0	0.6	2,540
20-24	79.6	15.1	2.7	0.6	2.1	0.0	100.0	17.7	2,125
25-29	37.0	53.8	3.3	1.5	4.4	0.1	100.0	57.1	2,104
30-34	12.6	75.4	3.0	2.0	6.5	0.6	100.0	78.3	1,785
35-39	4.8	83.9	2.2	3.1	4.7	1.3	100.0	86.1	1,483
40-44	3.2	88.6	1.3	1.6	4.8	0.5	100.0	89.9	1,224
45-49	2.7	87.5	3.3	1.9	2.9	1.6	100.0	90.8	800
Total 15-49	44.4	48.4	2.1	1.3	3.4	0.4	100.0	50.5	12,063
50-54	1.5	86.6	1.6	3.0	3.9	3.5	100.0	88.1	756
Total 15-54	41.8	50.7	2.1	1.4	3.4	0.6	100.0	52.7	12,819

Eleven percent of women age 15-19 are currently married, as compared with just 1 percent of men age 15-19. The proportion of women who are married increases rapidly between age 15-19 and age 20-24 (from 11 percent to 48 percent); the highest proportion of women married are age 30-34 (73 percent). Among men, the percentage married increases most rapidly between age 20-24 and age 25-29 (from 15 percent to 54 percent). After age 35, 84 percent or more of men are married.

4.2 POLYGYNY

Polygyny, the practice of having more than one wife, has implications for the frequency of sexual activity and fertility. The extent of polygyny was measured in the 2014 KDHS by asking all currently married female respondents whether their husband or partner had other wives (co-wives) and, if so, how many. Currently married men were also asked whether they had one or more wives or partners with whom they were living.

Table 4.2.1 shows the percent distribution of currently married women by the number of co-wives they have, and Table 4.2.2 shows the percent distribution of currently married men by the number of wives they have, according to background characteristics. The results show that the majority of Kenyan women (86 percent) and men (95 percent) are in monogamous unions. Eleven percent of married women and 6 percent of married men are in polygynous unions. Three percent of women age 15-19 report that they have co-wives, and this proportion rises with age to 18-19 percent among women in the 40-44 and 45-49 age groups. The percentage of men having more than one wife rises from 1 percent among men age 20-24 to 11 percent among men age 45-49. Seven percent of urban women and 4 percent of urban men are in polygynous unions, as compared with 14 percent of rural women and 6 percent of rural men.

Table 4.2.1 Number of women's co-wives

Percent distribution of currently married women age 15-49 by number of co-wives, according to background characteristics, Kenya 2014

Background characteristic	Number of co-wives					Total	Number of women
	0	1	2+	Don't know	Missing		
Age							
15-19	95.7	2.9	0.3	1.1	0.0	100.0	301
20-24	91.9	5.6	0.5	1.6	0.4	100.0	1,465
25-29	89.5	7.7	1.0	1.8	0.1	100.0	2,171
30-34	86.6	9.1	2.0	2.4	0.0	100.0	1,717
35-39	82.2	12.6	2.7	2.5	0.1	100.0	1,365
40-44	77.9	14.3	4.6	3.0	0.2	100.0	923
45-49	78.4	13.4	4.1	4.0	0.1	100.0	768
Residence							
Urban	90.3	6.4	0.7	2.3	0.2	100.0	3,445
Rural	83.5	11.4	2.9	2.2	0.1	100.0	5,265
Region							
Coast	84.0	11.6	2.0	2.1	0.3	100.0	850
North Eastern	67.8	27.5	4.5	0.0	0.2	100.0	209
Eastern	92.3	5.1	0.7	1.9	0.1	100.0	1,268
Central	91.4	3.9	0.0	4.7	0.0	100.0	1,113
Rift Valley	84.5	10.7	2.5	2.3	0.0	100.0	2,171
Western	81.8	11.4	4.0	2.7	0.2	100.0	929
Nyanza	79.5	14.9	3.7	1.9	0.0	100.0	1,203
Nairobi	94.5	4.1	0.4	0.5	0.5	100.0	968
Education							
No education	66.8	25.0	6.8	1.3	0.0	100.0	795
Primary incomplete	82.3	12.4	2.8	2.3	0.1	100.0	2,274
Primary complete	88.9	7.1	1.5	2.3	0.2	100.0	2,465
Secondary+	91.7	5.1	0.6	2.5	0.1	100.0	3,177
Wealth quintile							
Lowest	74.6	18.9	4.9	1.7	0.1	100.0	1,457
Second	85.4	10.1	2.1	2.3	0.1	100.0	1,567
Middle	87.9	6.9	2.5	2.4	0.3	100.0	1,663
Fourth	87.5	9.0	1.3	2.2	0.1	100.0	1,885
Highest	92.3	4.8	0.2	2.6	0.1	100.0	2,138
Total	86.2	9.4	2.0	2.3	0.1	100.0	8,710

Women in the North Eastern region are most likely to be in polygamous unions (32 percent), followed by those in Nyanza (19 percent). Six percent or less of women in Nairobi and the Eastern and Central regions are in polygamous unions. Eighteen percent of men in the North Eastern region report being in a polygynous union, followed by 12 percent in Nyanza and 8 percent in Coast. Education is negatively associated with polygyny for both women and men, with the proportion of women in a polygynous union decreasing from 32 percent among those with no education to 6 percent among those with at least some secondary education and, similarly, from 16 percent to 4 percent among men. Among both women and men, wealth quintile is also negatively associated with polygyny. The proportion of women in a polygynous union ranges from 5 percent among those in the highest wealth quintile to 24 percent among those in the lowest wealth quintile, and for men, from 4 percent to 11 percent.

Table 4.2.2 Number of men's wives

Percent distribution of currently married men age 15-49 by number of wives, according to background characteristics, Kenya 2014

Background characteristic	Number of wives		Total	Number of men
	1	2+		
Age				
15-19	*	*	100.0	16
20-24	98.7	1.3	100.0	377
25-29	97.8	2.2	100.0	1,201
30-34	96.3	3.7	100.0	1,398
35-39	92.9	7.1	100.0	1,277
40-44	92.7	7.3	100.0	1,100
45-49	89.1	10.9	100.0	727
Residence				
Urban	95.6	4.4	100.0	2,894
Rural	93.6	6.4	100.0	3,201
Region				
Coast	91.9	8.1	100.0	617
North Eastern	81.9	18.1	100.0	103
Eastern	97.0	3.0	100.0	835
Central	97.6	2.4	100.0	773
Rift Valley	94.5	5.5	100.0	1,523
Western	94.1	5.9	100.0	561
Nyanza	88.2	11.8	100.0	767
Nairobi	98.5	1.5	100.0	916
Education				
No education	83.6	16.4	100.0	234
Primary incomplete	93.7	6.3	100.0	1,370
Primary complete	94.4	5.6	100.0	1,677
Secondary+	96.0	4.0	100.0	2,814
Wealth quintile				
Lowest	88.9	11.1	100.0	813
Second	93.7	6.3	100.0	1,036
Middle	95.5	4.5	100.0	1,110
Fourth	95.4	4.6	100.0	1,481
Highest	96.5	3.5	100.0	1,655
Total 15-49	94.5	5.5	100.0	6,095
50-54	89.0	11.0	100.0	667
Total 15-54	94.0	6.0	100.0	6,762

Note: An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

4.3 AGE AT FIRST MARRIAGE

The start of marriage is an important social and demographic indicator and, in most societies, represents the point in a person's life when childbearing first becomes acceptable. The duration of exposure to the risk of pregnancy depends primarily on the age at which women first marry. Women who marry early, on average, are more likely to have their first child at a young age and give birth to more children overall, contributing to higher fertility. Age at first marriage is defined as the age at which the respondent began living with her or his first spouse/partner.

Table 4.3 shows the percentage of women and men age 15-49 who were first married by specific ages, according to current age. Marriage occurs relatively early in Kenya; among women age 25-49, 29 percent were married by age 18, and 48 percent were married by age 20. The median age at first marriage among women age 25-49 is 20.2 years.

The median age at first marriage does not vary much across the age cohorts from 25-29 to 45-49, hovering around age 20. However, the proportion of women married by age 15 increases with age from about 2 percent among those currently age 15-19 to 9 percent among those currently age 40-49. This is an indication of rising age at first marriage.

Men tend to marry later than women. The median age at first marriage among men age 30-49 is 25.3 years. Eleven percent of men age 25-49 were married by age 20, and less than half (48 percent) were married before age 25. The median age at first marriage for men is almost constant across the age cohorts, reflecting stability over time.

Table 4.3 Age at first marriage

Percentage of women and men age 15-49 who were first married by specific exact ages and median age at first marriage, according to current age, Kenya 2014

Current age	Percentage first married by exact age: 15	18	20	22	25	Percentage never married	Number of respondents	Median age at first marriage
				WOMEN				
15-19	1.6	na	na	na	na	86.8	5,820	a
20-24	4.4	22.9	40.7	na	na	38.8	5,735	a
25-29	8.4	28.4	45.9	62.3	79.1	14.0	6,100	20.5
30-34	6.3	28.6	48.2	63.9	78.5	8.0	4,510	20.2
35-39	6.6	25.5	46.0	64.2	79.8	6.7	3,773	20.4
40-44	8.9	30.5	51.1	67.6	80.3	5.0	2,885	19.9
45-49	9.3	32.5	52.2	68.4	82.2	4.8	2,257	19.8
20-49	7.0	27.4	46.3	na	na	15.6	25,259	a
25-49	7.8	28.7	48.0	64.5	79.6	8.8	19,524	20.2
				MEN				
15-19	0.1	na	na	na	na	99.3	2,540	a
20-24	0.3	2.5	7.9	na	na	79.6	2,125	a
25-29	0.1	3.9	12.2	24.0	48.1	37.0	2,104	a
30-34	0.2	4.0	11.3	24.5	49.5	12.6	1,785	25.1
35-39	0.2	3.5	9.6	24.1	51.0	4.8	1,483	24.9
40-44	0.3	3.3	9.5	21.3	43.1	3.2	1,224	25.6
45-49	0.1	2.9	9.3	21.1	44.3	2.7	800	25.8
20-49	0.2	3.4	10.1	na	na	29.7	9,522	a
25-49	0.2	3.6	10.7	23.4	47.8	15.4	7,397	a
30-49	0.2	3.5	10.1	23.1	47.7	6.8	5,293	25.3
20-54	0.2	3.3	10.0	na	na	27.6	10,279	a
25-54	0.2	3.6	10.6	23.1	47.6	14.1	8,153	a
30-54	0.2	3.4	10.0	22.8	47.5	6.1	6,049	25.3

Note: The age at first marriage is defined as the age at which the respondent began living with her/his first spouse/partner.
na = Not applicable due to censoring
a = Omitted because less than 50 percent of the women or men began living with their spouse or partner for the first time before reaching the beginning of the age group

Table 4.4 shows the median age at first marriage among women age 25-49 and men age 30-54, according to background characteristics. Urban women marry two years later than rural women (21.5 years and 19.5 years, respectively). Women from Nairobi, the region with the highest median at 22.1 years, marry about three years later than women from the North Eastern, Nyanza, and Western regions. Median age at first marriage increases with increasing education. Women with at least some secondary education marry about five years later than those with no education (22.7 years and 17.9 years, respectively). Also, women from the highest wealth quintile marry more than four years later than those from the lowest quintile.

Although some variation exists in the median age at first marriage for men, the range in age at marriage is not as broad by background characteristics as it is for women. Urban men marry one year later than rural men. Men from the Nairobi, Coast, and Central regions have the highest median age at first marriage (26.0 years or greater), while those from the Nyanza and Western regions have the lowest median age (23.8 and 24.1 years, respectively). Wealth quintile has a positive association with men's age at first marriage, as it does for women, but the age range is only 2 years for men, whereas it is 5 years for women.

Table 4.4 Median age at first marriage by background characteristics

Median age at first marriage among women age 25-49, and median age at first marriage among men age 30-54, according to background characteristics, Kenya 2014

Background characteristic	Women age 25-49	Men age 30-54
Residence		
Urban	21.5	25.9
Rural	19.5	24.8
Region		
Coast	19.7	26.4
North Eastern	18.6	24.9
Eastern	20.5	25.5
Central	21.4	26.0
Rift Valley	20.0	25.3
Western	19.2	24.1
Nyanza	18.6	23.8
Nairobi	22.1	26.1
Education		
No education	17.9	24.5
Primary incomplete	18.3	24.0
Primary complete	19.7	24.5
Secondary+	22.7	26.3
Wealth quintile		
Lowest	18.3	24.3
Second	19.1	24.6
Middle	19.6	25.0
Fourth	20.6	25.1
Highest	22.6	26.6
Total	20.2	25.3

Note: The age at first marriage is defined as the age at which the respondent began living with her/his first spouse/partner.

At the county level, median age at first marriage for women is highest in Nairobi (22.1 years), Nyeri (21.8), Kiambu and Embu (21.6 each), and Mombasa (21.5) and lowest in Migori (17.1), Tana River (17.3), Homa Bay (17.5), Wajir (18.1), and Marsabit (18.3). The median age at first marriage for men is highest in Mombasa (27.7 years) and Marsabit (27.6), and lowest in Migori (22.2) and Busia (22.3) (Table 4.4C).

Table 4.4C Median age at first marriage by county

Median age at first marriage among women age 25-49, and median age at first marriage among men age 30-54, according to county, Kenya 2014

County	Women age 25-49	Men age 30-54
Coast	**19.7**	**26.4**
Mombasa	21.5	27.7
Kwale	19.1	25.3
Kilifi	18.9	24.8
Tana River	17.3	24.5
Lamu	19.4	25.1
Taita Taveta	21.4	26.7
North Eastern	**18.6**	**24.9**
Garissa	18.7	24.8
Wajir	18.1	24.0
Mandera	19.0	26.6
Eastern	**20.5**	**25.5**
Marsabit	18.3	27.6
Isiolo	18.5	25.3
Meru	20.3	25.4
Tharaka-Nithi	21.0	25.1
Embu	21.6	26.5
Kitui	19.8	24.3
Machakos	21.0	26.4
Makueni	20.4	24.5
Central	**21.4**	**26.0**
Nyandarua	20.7	25.6
Nyeri	21.8	25.3
Kirinyaga	21.1	25.3
Murang'a	21.3	26.6
Kiambu	21.6	26.3
Rift Valley	**20.0**	**25.3**
Turkana	18.9	24.2
West Pokot	19.0	24.5
Samburu	18.4	26.2
Trans-Nzoia	19.6	24.6
Uasin Gishu	20.9	25.9
Elgeyo Marakwet	20.5	24.2
Nandi	20.7	25.4
Baringo	20.7	26.1
Laikipia	20.6	26.0
Nakuru	20.6	25.6
Narok	18.6	24.9
Kajiado	21.3	26.7
Kericho	19.5	25.0
Bomet	18.9	24.8
Western	**19.2**	**24.1**
Kakamega	19.2	24.7
Vihiga	20.6	24.6
Bungoma	19.2	23.9
Busia	18.4	22.3
Nyanza	**18.6**	**23.8**
Siaya	19.1	24.3
Kisumu	19.1	24.5
Homa Bay	17.5	23.8
Migori	17.1	22.2
Kisii	19.3	23.4
Nyamira	19.7	24.5
Nairobi	**22.1**	**26.1**
Total	20.2	25.3

Note: The age at first marriage is defined as the age at which the respondent began living with her/his first spouse/partner.

4.4 AGE AT FIRST SEXUAL INTERCOURSE

Age at first marriage is often used as a proxy for first exposure to sexual intercourse, but the two events do not necessarily occur at the same time. In the 2014 KDHS, women and men were asked how old they were when they first had sexual intercourse. Table 4.5 shows the percentage of women and men who had first sexual intercourse by specific ages and the median age at first intercourse, irrespective of marital status. This information allows an assessment of the age at which women and men start having sexual intercourse and the trends across age cohorts.

Fifteen percent of women age 20-49 had first sexual intercourse by age 15, 50 percent by age 18, and 71 percent by age 20. Older women are slightly more likely to have had their first sexual encounter at an earlier age. Men have an earlier sexual debut than women, a pattern that holds true for most age groups. For example, 22 percent of men age 20-49 had first sexual intercourse by age 15, 56 percent by age 18, and 76 percent by age 20. The median age at first sexual intercourse among men age 20-49 (17.4 years) is also slightly lower than that among women (18.0 years).

Three percent of both women and men age 20-49 have never had sexual intercourse, while 37 percent of women and 38 percent of men age 15-24 have never had sexual intercourse. There does not appear to be a change in age at first sex compared with the 2008-09 KDHS.

Table 4.5 Age at first sexual intercourse

Percentage of women and men age 15-49 who had first sexual intercourse by specific exact ages, percentage who never had sexual intercourse, and median age at first sexual intercourse, according to current age, Kenya 2014

Current age	Percentage who had first sexual intercourse by exact age: 15	18	20	22	25	Percentage who never had intercourse	Number	Median age at first intercourse
				WOMEN				
15-19	10.7	na	na	na	na	62.7	5,820	a
20-24	13.6	46.7	71.1	na	na	10.7	5,735	18.2
25-29	14.9	49.0	69.8	81.8	90.6	1.7	6,100	18.1
30-34	13.8	49.1	69.4	80.8	88.6	0.7	4,510	18.1
35-39	14.7	50.1	69.6	81.8	89.1	0.4	3,773	18.0
40-44	17.0	52.2	72.2	83.7	89.6	0.4	2,885	17.8
45-49	16.4	54.3	73.4	83.0	90.7	0.3	2,257	17.6
20-49	14.7	49.5	70.6	na	na	3.1	25,259	18.0
25-49	15.1	50.3	70.4	82.0	89.7	0.9	19,524	18.0
15-24	12.1	na	na	na	na	36.9	11,555	a
				MEN				
15-19	19.6	na	na	na	na	59.4	2,540	a
20-24	22.6	57.2	78.6	na	na	11.5	2,125	17.3
25-29	25.0	60.3	78.5	88.3	93.9	2.8	2,104	17.0
30-34	23.1	55.7	76.1	88.3	93.9	0.6	1,785	17.4
35-39	17.3	54.4	73.6	86.7	92.2	0.3	1,483	17.6
40-44	20.7	52.9	74.5	85.6	90.3	0.3	1,224	17.7
45-49	16.2	54.0	74.1	84.7	91.9	0.3	800	17.6
20-49	21.6	56.3	76.4	na	na	3.4	9,522	17.4
25-49	21.3	56.1	75.8	87.2	92.8	1.1	7,397	17.4
15-24	21.0	na	na	na	na	37.6	4,666	a
20-54	21.3	56.0	76.1	na	na	3.2	10,279	17.4
25-54	20.9	55.7	75.5	86.8	92.6	1.0	8,153	17.4

na = Not applicable due to censoring
a = Omitted because less than 50 percent of the respondents had sexual intercourse for the first time before reaching the beginning of the age group

Table 4.6 shows the median age at first sexual intercourse among women age 20-49 and 25-49 and men age 20-54 and 25-54 by background characteristics. Women in rural areas initiate sexual activity slightly earlier than their urban counterparts. Among women age 20-49, sexual activity begins earliest in the Nyanza region (16.4 years) and latest in Nairobi (19.3 years). With respect to education, women with at least some secondary education begin sexual activity three years later than those with no education. Similarly, women in the highest wealth quintile tend to initiate sexual activity three years later than those in the lowest.

The data for men age 25-54 show fewer and less dramatic patterns than those seen among women. There are minimal differences in median age by residence, education, and wealth. By region, however, differences in median age at first sex are more substantial. The median age at first sex for men in the Eastern region is 16.1 years, as compared with 24.1 years for men in the North Eastern region.

Table 4.6 Median age at first sexual intercourse by background characteristics

Median age at first sexual intercourse among women age 20-49 and age 25-49, and median age at first sexual intercourse among men age 20-54 and age 25-54, according to background characteristics, Kenya 2014

Background characteristic	Women age 20-49	Women age 25-49	Men age 20-54	Men age 25-54
Residence				
Urban	18.8	18.8	17.6	17.6
Rural	17.4	17.3	17.3	17.3
Region				
Coast	18.3	18.2	18.2	18.3
North Eastern	19.0	18.9	a	24.1
Eastern	18.0	17.9	16.2	16.1
Central	19.1	19.0	18.3	18.4
Rift Valley	17.7	17.7	16.9	16.9
Western	17.1	16.9	17.1	17.1
Nyanza	16.4	16.3	17.1	17.2
Nairobi	19.3	19.6	17.8	17.9
Education				
No education	16.4	16.5	18.2	18.3
Primary incomplete	16.2	16.2	16.5	16.6
Primary complete	17.5	17.6	17.2	17.3
Secondary+	19.5	19.7	17.8	17.9
Wealth quintile				
Lowest	16.6	16.6	17.3	17.3
Second	16.9	16.9	16.9	16.9
Middle	17.4	17.3	17.1	17.2
Fourth	18.2	18.1	17.4	17.4
Highest	19.6	19.7	18.0	18.1
Total	18.0	18.0	17.4	17.4

a = Omitted because less than 50 percent of the respondents had intercourse for the first time before reaching the beginning of the age group

At the county level, the five counties with the highest median age at first sexual intercourse for women are Mandera (19.4 years), Tharaka-Nithi (19.4), Kiambu (19.4), Mombasa (19.3), and Nairobi (19.3). The counties with the lowest median age include Migori (15.5), Homa Bay (15.7), Samburu (15.7), Kisumu (16.4), and Siaya (16.6). For men, Garissa (23.6) and Wajir (22.7) counties recorded the highest median age at first sexual intercourse, while Meru (14.4) and Samburu (15.0) had the lowest median age at first sexual intercourse (Table 4.6C).

Table 4.6C Median age at first sexual intercourse by county

Median age at first sexual intercourse among women age 20-49 and age 25-49, and median age at first sexual intercourse among men age 20-54 and age 25-54, according to county, Kenya 2014

	Women age		Men age	
County	20-49	25-49	20-54	25-54
Coast	**18.3**	**18.2**	**18.2**	**18.3**
Mombasa	19.3	19.3	18.1	18.1
Kwale	16.6	16.3	18.5	18.5
Kilifi	18.4	18.3	17.7	17.8
Tana River	17.0	17.0	18.9	19.6
Lamu	18.8	18.6	18.8	18.9
Taita Taveta	19.0	19.0	17.8	17.8
North Eastern	**19.0**	**18.9**	**a**	**24.1**
Garissa	19.1	18.9	a	23.6
Wajir	18.5	18.5	a	22.7
Mandera	19.4	19.3	a	a
Eastern	**18.0**	**17.9**	**16.2**	**16.1**
Marsabit	17.5	17.5	17.9	17.9
Isiolo	18.2	18.5	17.1	17.1
Meru	17.1	17.0	14.6	14.4
Tharaka-Nithi	19.4	19.5	16.3	16.0
Embu	19.1	18.9	18.0	18.3
Kitui	17.7	17.6	16.9	17.0
Machakos	18.3	18.2	15.8	15.6
Makueni	18.1	18.0	17.9	17.8
Central	**19.1**	**19.0**	**18.3**	**18.4**
Nyandarua	18.9	18.8	18.3	18.4
Nyeri	18.7	18.6	19.0	18.9
Kirinyaga	18.9	18.9	17.5	17.3
Murang'a	19.1	19.0	19.0	19.2
Kiambu	19.4	19.3	18.0	18.2
Rift Valley	**17.7**	**17.7**	**16.9**	**16.9**
Turkana	17.6	18.1	18.0	18.0
West Pokot	17.0	17.2	15.8	15.9
Samburu	15.7	15.7	14.9	15.0
Trans-Nzoia	17.8	17.7	17.5	17.6
Uasin Gishu	17.3	17.2	16.1	16.2
Elgeyo Marakwet	17.9	17.8	16.3	16.4
Nandi	16.9	16.7	16.7	16.7
Baringo	17.6	17.7	16.6	16.6
Laikipia	18.1	18.1	18.2	18.3
Nakuru	18.7	18.6	17.2	16.9
Narok	16.7	16.7	17.8	17.6
Kajiado	18.3	18.3	16.6	16.3
Kericho	17.4	17.5	17.0	17.0
Bomet	17.5	17.5	16.6	16.7
Western	**17.1**	**16.9**	**17.1**	**17.1**
Kakamega	17.0	16.8	16.7	16.5
Vihiga	18.1	18.0	17.7	17.5
Bungoma	17.1	16.9	17.1	17.3
Busia	16.6	16.5	17.4	17.4
Nyanza	**16.4**	**16.3**	**17.1**	**17.2**
Siaya	16.6	16.5	16.6	16.7
Kisumu	16.4	16.2	17.9	18.0
Homa Bay	15.7	15.6	15.6	15.8
Migori	15.5	15.4	17.0	17.2
Kisii	17.2	17.3	17.7	17.8
Nyamira	17.1	17.1	18.1	18.1
Nairobi	**19.3**	**19.6**	**17.8**	**17.9**
Total	18.0	18.0	17.4	17.4

a = Omitted because less than 50 percent of the respondents had intercourse for the first time before reaching the beginning of the age group

4.5 RECENT SEXUAL ACTIVITY

In the absence of contraception, the probability of pregnancy is related to the regularity of sexual intercourse. Thus, information on sexual activity can give added perspective to measurement of exposure to pregnancy. The 2014 KDHS asked all women and men how long ago their last sexual intercourse occurred. Tables 4.7.1 and 4.7.2 show the percent distribution of women and men age 15-49 by the timing of their last sexual intercourse, according to background characteristics.

Fourteen percent of women and 15 percent of men age 15-49 have never had sexual intercourse. Twelve percent of women and 10 percent of men report that their last sexual encounter occurred more than one year before the survey. Slightly more than half of women (51 percent) and men (54 percent) reported that they had a recent sexual encounter (within the last four weeks). The proportion of both women and men who reported having a recent sexual encounter is similar to that observed in the 2008-09 KDHS.

The proportion of women who were sexually active within the last four weeks is lowest among those in the youngest age group of 15-19 (11 percent) and highest among those age 30-34 (69 percent). Similarly, the proportion of men sexually active in the last four weeks ranges from 10 percent among those age 15-19 to 80 percent among those age 40-44. By marital status, recent sexual activity is most common among those currently married or living together, with 80 percent of married women and 84 percent of married men having had sex in the four weeks before the survey. Male-female differences are greatest among those who have never been married and those who were formerly married. The proportion of never-married men who reported having a recent sexual encounter is about three times that of women (20 percent and 7 percent, respectively), and the proportion among formerly married men is more than twice that among women (37 percent and 17 percent, respectively). These patterns are similar to patterns in the 2003 and 2008-09 KDHS surveys.

Recent sexual activity for both women and men differed by rural-urban residence, with women and men in urban areas somewhat more likely than those in rural areas to report being sexually active in the four weeks preceding the survey. By region, women in Nairobi and Central are most likely to have been sexually active in the four weeks before the survey (55 percent), although regional differences are minimal. Regional variations are wider for men, with Nairobi having the highest proportion of men with recent sexual activity (61 percent) and North Eastern having the lowest (37 percent). There are no patterns evident in recent sexual activity by educational level or wealth among women and no evident pattern for education among men. The proportion of men with recent sexual activity is higher among those in the highest wealth quintile (61 percent) than among those in the other quintiles (50-53 percent).

Table 4.7.1 Recent sexual activity: Women

Percent distribution of women age 15-49 by timing of last sexual intercourse, according to background characteristics, Kenya 2014

Background characteristic	Timing of last sexual intercourse			Never had sexual intercourse	Total	Number of women
	Within the past 4 weeks	Within 1 year[1]	One or more years			
Age						
15-19	11.4	15.3	9.6	63.7	100.0	2,717
20-24	49.2	28.0	12.3	10.5	100.0	2,691
25-29	63.0	25.9	9.0	1.9	100.0	2,932
30-34	69.0	22.3	7.8	0.8	100.0	2,162
35-39	64.9	20.3	14.2	0.6	100.0	1,780
40-44	60.3	20.0	19.1	0.4	100.0	1,292
45-49	57.1	17.4	25.0	0.4	100.0	1,052
Marital status						
Never married	6.8	24.7	18.8	49.5	100.0	4,255
Married or living together	79.5	18.1	2.3	0.0	100.0	8,710
Divorced/separated/widowed	17.3	35.3	47.3	0.0	100.0	1,660
Marital duration[2]						
0-4 years	79.7	18.9	1.3	0.0	100.0	1,992
5-9 years	80.5	18.3	1.1	0.0	100.0	1,747
10-14 years	79.5	18.6	1.8	0.0	100.0	1,593
15-19 years	81.9	15.1	2.8	0.0	100.0	1,260
20-24 years	76.0	20.1	3.9	0.0	100.0	807
25+ years	72.6	20.3	6.9	0.0	100.0	700
Married more than once	83.7	14.1	2.2	0.0	100.0	612
Residence						
Urban	53.9	22.4	11.8	11.7	100.0	5,929
Rural	49.5	21.6	12.5	16.3	100.0	8,696
Region						
Coast	52.5	21.1	10.3	16.1	100.0	1,421
North Eastern	48.7	19.0	9.0	22.4	100.0	299
Eastern	52.8	20.3	10.2	16.7	100.0	2,066
Central	54.8	18.3	13.0	13.8	100.0	1,905
Rift Valley	49.2	23.4	14.1	13.2	100.0	3,714
Western	46.5	23.1	11.8	18.6	100.0	1,571
Nyanza	50.6	23.2	12.9	13.2	100.0	1,908
Nairobi	55.0	23.7	11.5	9.4	100.0	1,742
Education						
No education	55.0	25.4	14.8	4.3	100.0	1,015
Primary incomplete	51.2	19.6	11.3	17.8	100.0	3,793
Primary complete	59.6	21.5	12.4	6.5	100.0	3,543
Secondary+	46.1	23.1	12.3	18.4	100.0	6,274
Wealth quintile						
Lowest	48.0	24.6	13.7	13.4	100.0	2,236
Second	50.7	20.4	12.5	16.3	100.0	2,590
Middle	49.3	22.3	12.2	16.2	100.0	2,859
Fourth	53.9	21.5	11.6	13.1	100.0	3,113
Highest	53.0	21.7	11.6	13.5	100.0	3,827
Total	51.3	22.0	12.2	14.4	100.0	14,625

Note: Totals may not add up to 100 percent because women with missing information are not shown separately.
[1] Excludes women who had sexual intercourse within the last 4 weeks
[2] Excludes women who are not currently married

Table 4.7.2 Recent sexual activity: Men

Percent distribution of men age 15-49 by timing of last sexual intercourse, according to background characteristics, Kenya 2014

Background characteristic	Timing of last sexual intercourse			Never had sexual intercourse	Total	Number of men
	Within the past 4 weeks	Within 1 year[1]	One or more years			
Age						
15-19	9.6	15.8	15.0	59.4	100.0	2,540
20-24	38.0	34.8	15.6	11.5	100.0	2,125
25-29	62.2	26.6	7.9	2.8	100.0	2,104
30-34	75.2	19.0	5.1	0.6	100.0	1,785
35-39	77.8	16.4	5.4	0.3	100.0	1,483
40-44	79.6	15.7	4.2	0.3	100.0	1,224
45-49	77.2	16.5	5.8	0.3	100.0	800
Marital status						
Never married	20.1	27.7	17.7	34.3	100.0	5,350
Married or living together	84.4	14.5	0.9	0.0	100.0	6,095
Divorced/separated/widowed	37.3	38.9	23.8	0.0	100.0	618
Marital duration[2]						
0-4 years	84.6	13.7	0.8	0.0	100.0	1,483
5-9 years	82.7	16.7	0.5	0.0	100.0	1,282
10-14 years	85.2	13.5	1.2	0.0	100.0	1,089
15-19 years	84.1	14.7	1.1	0.0	100.0	735
20-24 years	82.4	15.9	1.7	0.0	100.0	358
25+ years	87.4	12.2	0.4	0.0	100.0	127
Married more than once	85.7	13.5	0.7	0.0	100.0	1,021
Residence						
Urban	56.7	24.1	8.4	10.4	100.0	5,300
Rural	51.0	19.6	10.4	19.0	100.0	6,762
Region						
Coast	48.8	23.1	11.0	16.7	100.0	1,260
North Eastern	37.1	9.9	9.8	43.1	100.0	227
Eastern	51.7	20.6	11.9	15.9	100.0	1,825
Central	54.4	20.4	9.5	15.5	100.0	1,564
Rift Valley	54.0	22.1	9.6	14.3	100.0	3,050
Western	48.3	19.1	11.1	21.4	100.0	1,164
Nyanza	56.1	20.6	7.5	15.6	100.0	1,405
Nairobi	61.0	26.3	6.2	5.9	100.0	1,568
Education						
No education	58.4	21.0	9.4	11.1	100.0	345
Primary incomplete	48.6	17.9	9.4	24.1	100.0	3,071
Primary complete	64.0	21.1	8.2	6.4	100.0	2,734
Secondary+	50.8	23.8	10.2	14.9	100.0	5,913
Wealth quintile						
Lowest	49.6	18.3	11.5	20.4	100.0	1,691
Second	50.9	21.4	10.0	17.7	100.0	2,145
Middle	50.1	21.3	10.8	17.6	100.0	2,370
Fourth	52.7	24.0	8.8	14.4	100.0	2,959
Highest	61.1	21.5	7.6	9.3	100.0	2,897
Total 15-49	53.5	21.6	9.5	15.2	100.0	12,063
50-54	75.1	17.0	7.2	0.1	100.0	756
Total 15-54	54.7	21.3	9.4	14.3	100.0	12,819

Note: Totals may not add up to 100 percent because men with missing information are not shown separately.
[1] Excludes men who had sexual intercourse within the last 4 weeks
[2] Excludes men who are not currently married

FERTILITY 5

Andrew Kyalo Mutuku, Samwel Ogola, Michael Musyoka

Key Findings

- The total fertility rate for the three years preceding the survey is 3.9 births per woman, with rural women having at least one child more than urban women.
- Fertility has decreased from 4.9 births per woman in 2003 to 3.9 births per woman in 2014, a one-child decline in the past 10 years.
- Half of births occur within three years of a previous birth, with 18 percent occurring within 24 months.
- Childbearing begins early in Kenya, with almost one-quarter of women giving birth by age 18 and nearly half by age 20.
- Eighteen percent of adolescent women age 15-19 are already mothers or pregnant with their first child. In the last five years, teenage pregnancy has remained unchanged.

One of the major objectives of the 2014 KDHS was to examine fertility levels, trends, and differentials in Kenya. Fertility is a principal component of population change that contributes to the size, structure, and composition of the population in a country. This chapter focuses on a number of fertility indicators including levels, patterns, and trends in both current and cumulative fertility; the length of birth intervals; and the age at which women begin childbearing. Birth intervals are important because short intervals are associated with high childhood mortality. The age at which childbearing begins can have a major impact on the health and well-being of both the mother and the child.

To generate data on fertility, a birth history was collected from each woman interviewed in the 2014 KDHS. Women were asked to report on the total number of sons and daughters to whom they had given birth in their lifetime. To ensure that all information was reported, women were asked separately about children still living at home, those living elsewhere, and those who had died. The sex, date of birth, and survival status of each child were obtained, and age at death for deceased children was recorded.

5.1 CURRENT FERTILITY

Measures of current fertility are presented in Table 5.1 for the three-year period preceding the survey, corresponding to the calendar period 2011-2014. A three-year period was used 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 estimate. Age-specific fertility rates (ASFRs), expressed as the number of births per thousand women in a specified age group, show the age pattern of fertility.[1] The total fertility rate (TFR) is the number of live births a woman would have if she were subject to the current age-specific fertility rates throughout her reproductive period (age 15-49). More generalised indicators of fertility include the general fertility rate (GFR), expressed as the annual number of live births per 1,000 women age 15-44, and the crude birth rate (CBR), expressed as the annual number of live births per 1,000 population.

[1] Numerators for ASFRs are calculated by summing the live births that occurred in the three-year period preceding the survey classified 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.

Table 5.1 shows that the TFR is 3.9 births per woman. This means that a Kenyan woman would bear about four children in her lifetime if fertility were to remain constant at current levels. This represents a decrease since the 2008-09 KDHS, when the TFR was 4.6 births per woman. The TFR is higher among rural women than urban women (4.5 and 3.1, respectively), and this trend is evident across all age groups. The largest absolute difference is seen among women age 20-24; the ASFR for rural women of this age is 248 births per 1,000, compared with 164 per 1,000 among urban women. Rural-urban differences appear to be narrowing over time. In the 2008-09 KDHS, the TFR was 5.2 in rural areas and 2.9 in urban areas. The overall age pattern, as reflected in the ASFRs, indicates that fertility is low among adolescents, increases to a peak of 206 births per 1,000 among women age 20-24, and declines thereafter. The table also shows a GFR of 141 live births per 1,000 women and a CBR of 30.5 live births per 1,000 population. This is a decrease from the figures of 161 and 34.8, respectively, reported in the 2008-09 KDHS.

Table 5.1 Current fertility

Age-specific and total fertility rates, the general fertility rate, and the crude birth rate for the three years preceding the survey, by residence, Kenya 2014

	Residence		
Age group	Urban	Rural	Total
15-19	81	106	96
20-24	164	248	206
25-29	149	214	183
30-34	119	170	148
35-39	73	116	100
40-44	23	45	38
45-49	6	10	9
TFR (15-49)	3.1	4.5	3.9
GFR	118	158	141
CBR	31.0	30.3	30.5

Note: Age-specific fertility rates are per 1,000 women. Rates for age group 45-49 may be slightly biased due to truncation. Rates are for the period 1-36 months prior to interview.
TFR: Total fertility rate expressed per woman
GFR: General fertility rate expressed per 1,000 women age 15-44
CBR: Crude birth rate, expressed per 1,000 population

5.2 FERTILITY DIFFERENTIALS

This section examines the association between a woman's background characteristics and her fertility. Table 5.2 presents the TFR, the percentage of women age 15-49 who are currently pregnant, and the mean number of children ever born to women age 40-49 by background characteristics. Fertility is lowest in Nairobi and Central region (TFRs of 2.7 and 2.8, respectively) and highest in North Eastern (6.4).

Table 5.2 Fertility by background characteristics

Total fertility rate for the three years preceding the survey, percentage of women age 15-49 currently pregnant, and mean number of children ever born to women age 40-49 years, by background characteristics, Kenya 2014

Background characteristic	Total fertility rate	Percentage of women age 15-49 currently pregnant	Mean number of children ever born to women age 40-49
Residence			
Urban	3.1	6.0	3.9
Rural	4.5	6.4	5.6
Region			
Coast	4.3	6.6	5.5
North Eastern	6.4	12.0	7.1
Eastern	3.4	4.6	4.7
Central	2.8	4.8	3.7
Rift Valley	4.5	7.0	5.5
Western	4.7	6.7	6.1
Nyanza	4.3	5.9	5.8
Nairobi	2.7	6.8	3.1
Education			
No education	6.5	11.0	6.5
Primary incomplete	4.8	6.3	6.0
Primary complete	4.2	6.3	5.1
Secondary+	3.0	5.4	3.7
Wealth quintile			
Lowest	6.4	9.4	6.7
Second	4.7	6.5	5.9
Middle	3.8	5.7	5.5
Fourth	3.1	5.7	4.3
Highest	2.8	5.0	3.4
Total	3.9	6.3	5.0

Note: Total fertility rates are for the period 1-36 months prior to interview.

Fertility rates decrease as women's education and wealth increase. Table 5.2 shows that the TFR decreases from 6.5 among women with no education to 4.8 among women with some education and further to 3.0 among women with a secondary or higher education. Fertility is also closely associated with wealth, with women in the lowest quintile (6.4) having more children than those in the highest quintile (2.8).

Table 5.2 shows that 6 percent of women were pregnant at the time of the survey. This may be an underestimate as women in the early stages of pregnancy may be unaware or unsure that they are pregnant, and some may choose not to declare that they are pregnant. Differentials in pregnancy rates are generally consistent with the pattern of fertility depicted across the various subgroups. The proportion of women who are pregnant is highest in North Eastern region (12 percent) and lowest in Eastern and Central (5 percent each). The findings show that the proportion of women who are currently pregnant declines as the level of education increases, from 11 percent among those with no education to 5 percent among those with a secondary or higher education.

Comparison of the mean number of lifetime births to older women with the current TFR can provide some insight into changes in fertility over the previous two decades or so. For example, the 2014 KDHS data show that the mean number of children ever born to women age 40-49 is 5.0, a decline from the figure of 5.6 reported in the 2008-09 KDHS and approximately one child more than the current TFR (3.9). On average, rural women age 40-49 have given birth to 5.6 children, as compared with only 3.9 among their urban counterparts. Women age 40-49 in Nairobi have the lowest mean number of children ever born (3.1), while those in the North Eastern region have the highest (7.1). The largest absolute differences between completed fertility at age 40-49 and the level of current fertility occur in Nyanza and Western regions (1.5 and 1.4, respectively). The mean number of children born to women age 40-49 decreases as education and wealth quintile increase.

Table 5.2C shows indicators of fertility by county. The county with the lowest TFR is Kirinyaga (2.3), followed by Nyeri, Kiambu, and Nairobi (2.7 each). The counties with the highest TFR are Wajir (7.8), West Pokot (7.2), Turkana (6.9), and Samburu (6.3). Counties with higher TFRs tend to be in northern Kenya.

Table 5.2C Fertility

Total fertility rate for the three years preceding the survey, percentage of women age 15-49 currently pregnant, and mean number of children ever born to women age 40-49 years, by county, Kenya 2014

County	Total fertility rate	Percentage of women age 15-49 currently pregnant	Mean number of children ever born to women age 40-49
Coast	**4.3**	**6.6**	**5.5**
Mombasa	3.2	5.4	4.1
Kwale	4.7	7.5	5.8
Kilifi	5.1	7.1	6.4
Tana River	5.8	10.2	7.4
Lamu	4.3	5.6	5.0
Taita Taveta	3.2	3.7	4.3
North Eastern	**6.4**	**12.0**	**7.1**
Garissa	6.1	11.7	6.8
Wajir	7.8	13.6	7.9
Mandera	5.2	10.6	6.4
Eastern	**3.4**	**4.6**	**4.7**
Marsabit	5.0	12.7	6.0
Isiolo	4.9	6.2	6.1
Meru	3.1	4.8	4.3
Tharaka-Nithi	3.4	4.4	4.3
Embu	3.1	4.5	4.1
Kitui	3.9	4.1	5.3
Machakos	3.4	3.9	4.3
Makueni	3.3	4.0	5.5
Central	**2.8**	**4.8**	**3.7**
Nyandarua	3.5	6.0	4.8
Nyeri	2.7	4.8	3.3
Kirinyaga	2.3	4.1	3.4
Murang'a	3.0	4.3	3.9
Kiambu	2.7	5.0	3.6
Rift Valley	**4.5**	**7.0**	**5.5**
Turkana	6.9	10.6	6.4
West Pokot	7.2	10.7	6.4
Samburu	6.3	11.6	6.5
Trans-Nzoia	5.2	6.3	6.6
Uasin Gishu	3.6	8.4	5.3
Elgeyo Marakwet	4.1	5.9	5.8
Nandi	4.0	4.8	6.1
Baringo	4.8	7.8	6.2
Laikipia	3.7	7.9	4.9
Nakuru	3.7	5.3	4.7
Narok	6.0	10.2	6.7
Kajiado	4.5	7.7	4.3
Kericho	4.0	5.7	5.0
Bomet	4.3	5.5	5.7
Western	**4.7**	**6.7**	**6.1**
Kakamega	4.4	7.3	5.4
Vihiga	4.5	6.2	5.3
Bungoma	5.0	6.2	6.9
Busia	4.7	6.8	6.5
Nyanza	**4.3**	**5.9**	**5.8**
Siaya	4.2	5.9	5.9
Kisumu	3.6	5.3	5.6
Homa Bay	5.2	6.4	6.2
Migori	5.3	9.0	7.0
Kisii	3.7	5.0	5.1
Nyamira	3.5	3.2	4.7
Nairobi	**2.7**	**6.8**	**3.1**
Total	3.9	6.3	5.0

Note: Total fertility rates are for the period 1-36 months prior to interview.

5.3 FERTILITY TRENDS

Fertility trends can be further investigated using retrospective data from the birth histories collected in the 2014 KDHS. Table 5.3.1 shows age-specific fertility rates for successive five-year periods preceding the 2014 KDHS. Because women age 50 or above were not interviewed in the survey, the rates for older age groups are successively truncated for periods more distant from the survey date. For example, rates cannot be calculated for women age 35-39 for the period 15-19 years before the survey because these women are currently over age 50 and therefore not eligible to be interviewed. Fertility rates are lower in every age group during the period 0-4 years before the survey than they are in periods more distant from the survey, suggesting a decline in fertility over time.

Table 5.3.1 Trends in age-specific fertility rates

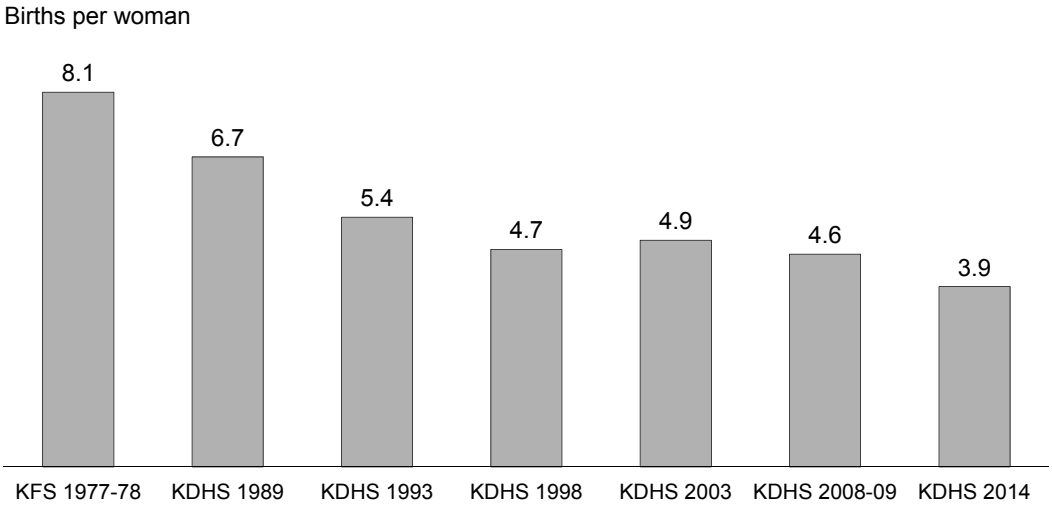
Age-specific fertility rates for five-year periods preceding the survey, by mother's age at the time of the birth, Kenya 2014

Mother's age at birth	Number of years preceding survey			
	0-4	5-9	10-14	15-19
15-19	101	120	132	120
20-24	206	228	247	253
25-29	193	216	238	243
30-34	154	192	198	[214]
35-39	106	127	[160]	
40-44	40	[76]		
45-49	[10]			

Note: Age-specific fertility rates are per 1,000 women. Estimates in brackets are truncated. Rates exclude the month of interview.

Kenya has undertaken many surveys that have collected data on fertility, allowing for examination of trends over the last few decades. Figure 5.1 and Table 5.3.2 compare age-specific and total fertility rates from estimates obtained since 1977. There was a sharp decline in the TFR between the 1977-78 Kenya Fertility Survey (8.1), the 1989 KDHS (6.7), and the 1993 KDHS (5.4), after which time there was further decline to 4.7 in the 1998 KDHS. Fertility seemed to rise, albeit marginally, afterwards, to a TFR of 4.9 children reported in 2003. The decrease in the TFR from 4.9 and 4.6 in the 2003 and 2008-09 KDHS surveys, respectively, to the current 3.9 indicates that Kenya's fertility is again on the decline. The TFR of 3.9 is the lowest ever recorded in Kenya.

Figure 5.1 **Trends in total fertility rate, 1978-2014***



* Data from 2003 and later are nationally representative while data before 2003 exclude North Eastern region and several northern districts in the Eastern and Rift Valley regions.

Table 5.3.2 Trends in age-specific and total fertility rates

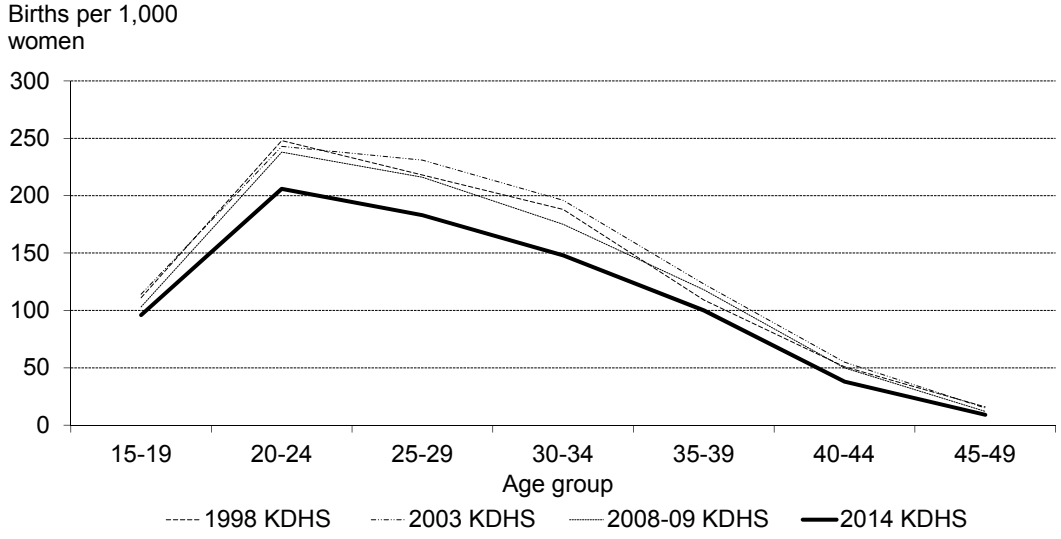
Age-specific and total fertility rates (TFR) for the three-year period preceding several surveys

Mother's age at birth	1977/78 KFS[1] 1975-78	1989 KDHS[1] 1984-88	1993 KDHS[1] 1990-92	1998 KDHS[1] 1995-97	1999 Census	2003 KDHS 2000-02	2008-09 KDHS 2006-08	2014 KDHS 2011-2013
15-19	168	152	110	111	142	114	103	96
20-24	342	314	257	248	254	243	238	206
25-29	357	303	241	218	236	231	216	183
30-34	293	255	197	188	185	196	175	148
35-39	239	183	154	109	127	123	118	100
40-44	145	99	70	51	56	55	50	38
45-49	59	35	50	16	7	15	12	9
TFR 15-49	8.1	6.7	5.4	4.7	5.0	4.9	4.6	3.9

Note: Age-specific fertility rates are per 1,000 women. Rates refer to the three-year period preceding the surveys except for the 1989 KDHS, which used a five-year period and the 1999 census, which used a period that varied with the age groups used to make the adjustment.
Sources: NCPD et al., 1999; Central Bureau of Statistics, 2002b.
[1] Data exclude North Eastern region and several northern districts in the Eastern and Rift Valley regions.

Table 5.3.2 and Figure 5.2 show the ASFRs for recent surveys. The largest decline in fertility is seen among women of peak childbearing ages (20-34).

Figure 5.2 **Trends in age-specific fertility rates**



Data collected before 2003 exclude North Eastern region and several northern districts in the Eastern and Rift Valley.

5.4 CHILDREN EVER BORN AND LIVING

Information on children ever born (or parity) is useful in looking at how average family size varies across age groups. The percentage of currently married women in their 40s who have never had children also provides an indicator of the inability to bear children in societies in which voluntary childlessness is rare. Comparisons of differences in the mean number of children ever born and surviving reflect the cumulative effects of mortality levels during the period in which women have been bearing children.

Table 5.4 shows the percent distribution of all women and currently married women by number of children ever born, mean number of children ever born, and mean number of children living. In Kenya, childbearing starts early and is nearly universal. Eighty-five percent of women age 15-19 have never given birth, as compared with only 35 percent of women age 20-24 and 12 percent of women age 25-29. In the subsequent age groups, the percentage of women who have never given birth drops to 4 percent or lower. A similar pattern is observed among currently married women. The proportion of women who have never given birth declines from 32 percent among those age 15-19 to 5 percent or less among those age 25 and above.

Table 5.4 Children ever born and living

Percent distribution of all women and currently married women age 15-49 by number of children ever born, mean number of children ever born and mean number of living children, according to age group, Kenya 2014

Age	Number of children ever born											Total	Number of women	Mean number of children ever born	Mean number of living children
	0	1	2	3	4	5	6	7	8	9	10+				
ALL WOMEN															
15-19	85.3	12.1	2.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	5,820	0.18	0.17
20-24	35.3	32.6	21.4	7.9	2.3	0.3	0.1	0.0	0.0	0.0	0.0	100.0	5,735	1.11	1.05
25-29	11.5	24.0	26.2	19.2	11.5	4.9	1.9	0.7	0.1	0.0	0.0	100.0	6,100	2.22	2.09
30-34	3.7	11.3	23.0	22.8	16.3	9.9	6.9	4.1	1.5	0.3	0.3	100.0	4,510	3.27	3.07
35-39	3.3	6.7	15.0	19.6	16.1	13.5	10.0	7.1	5.0	2.3	1.5	100.0	3,773	4.13	3.81
40-44	2.6	4.7	10.2	15.5	15.5	14.0	12.6	10.0	6.7	3.7	4.6	100.0	2,885	4.85	4.40
45-49	1.9	3.8	9.8	12.9	15.0	13.2	11.9	10.8	7.8	5.0	7.9	100.0	2,257	5.27	4.73
Total	26.1	16.2	16.3	13.3	9.5	6.3	4.6	3.3	2.0	1.0	1.2	100.0	31,079	2.48	2.29
CURRENTLY MARRIED WOMEN															
15-19	31.6	51.5	15.5	1.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	100.0	695	0.87	0.84
20-24	12.5	36.9	33.2	12.8	3.8	0.5	0.2	0.0	0.0	0.0	0.0	100.0	3,133	1.61	1.51
25-29	5.0	21.1	28.9	22.1	13.5	6.1	2.4	0.8	0.1	0.0	0.0	100.0	4,556	2.51	2.37
30-34	1.5	8.0	22.1	23.9	17.9	11.3	8.1	4.7	1.8	0.3	0.3	100.0	3,566	3.54	3.32
35-39	0.9	4.1	13.2	20.9	16.9	14.4	11.2	7.9	5.9	2.7	1.6	100.0	2,894	4.46	4.12
40-44	1.5	2.2	8.2	15.4	16.0	14.9	13.2	11.6	7.2	4.3	5.5	100.0	2,091	5.19	4.73
45-49	0.9	1.9	8.0	12.1	15.5	13.4	12.8	11.0	8.7	5.5	10.1	100.0	1,615	5.65	5.06
Total	5.2	15.9	21.2	18.3	13.2	8.9	6.5	4.6	2.9	1.5	1.8	100.0	18,549	3.37	3.12

Parity increases with age. On average, a woman in Kenya has given birth to more than two children by her late 20s and to more than four children by her late 30s. These figures are slightly lower than those reported in the 2008-09 KDHS. In all age groups, the mean number of children ever born is higher among currently married women than among women overall. The largest difference is in the youngest age group (15-19). Currently married women age 15-19 have an average of 0.9 children, compared with 0.2 children among all women age 15-19.

Because voluntary childlessness is rare in Kenya, it might be assumed that most married women with no births are unable to physiologically bear children. The percentage of women who are childless at the end of the reproductive period is an indirect measure of primary infertility (the proportion of women who are unable to bear children at all). Table 5.4 shows that primary infertility is less than 2 percent. Primary infertility has changed little since 2003.

The last column in Table 5.4 shows the mean number of living children. The difference between the mean number of children ever born (2.5) and living (2.3) is an indicator of the level of mortality in the population.

5.5 BIRTH INTERVALS

The length of time between births affects the overall level of fertility and also affects the health of both the mother and the child. Examining birth intervals provides insights into birth patterns and maternal and child health. Studies have shown that children born fewer than 24 months after a previous sibling are at greater risk of having poor health and that such births threaten maternal health. Table 5.5 shows the percent distribution of non-first births in the five years before the survey by the number of months since the preceding birth and the median number of months since the preceding birth, according to background characteristics.

Eighteen percent of Kenyan children are born less than 24 months after a previous birth. The most common birth interval category is 24-35 months (32 percent), while the least common birth interval is 7-17 months (7 percent). The median birth interval is 36.3 months, a slight increase from 33.1 months in the 2008-09 KDHS. The median birth interval increases with the age of the mother, is longer for children whose preceding sibling is living (36.8 months) than for those whose preceding sibling is dead (26.9 months), decreases with birth order, and is longer for urban children (41.0 months) than for rural children (34.7 months). There are regional variations; Central region has the longest median birth interval (53.9 months) and North Eastern the shortest (27.7 months). Median birth intervals increase with increasing mother's education and wealth.

Table 5.5 Birth intervals

Percent distribution of non-first births in the five years preceding the survey by number of months since preceding birth, and median number of months since preceding birth, according to background characteristics, Kenya 2014

Background characteristic	Months since preceding birth						Total	Number of non-first births	Median number of months since preceding birth
	7-17	18-23	24-35	36-47	48-59	60+			
Age									
15-19	16.3	25.7	40.9	12.2	2.9	2.1	100.0	157	26.3
20-29	8.2	14.1	36.0	18.4	9.9	13.4	100.0	6,860	32.7
30-39	4.9	9.0	27.8	16.9	13.5	27.9	100.0	6,057	40.9
40-49	3.3	6.7	24.1	17.0	12.9	36.0	100.0	1,314	47.4
Sex of preceding birth									
Male	6.3	11.2	31.4	17.9	11.6	21.6	100.0	7,041	36.5
Female	6.6	11.6	31.6	17.3	11.6	21.3	100.0	7,346	36.1
Survival of preceding birth									
Living	5.4	11.0	31.8	18.0	11.9	21.9	100.0	13,546	36.8
Dead	24.0	17.3	27.3	10.8	7.0	13.5	100.0	842	26.9
Birth order									
2-3	6.5	11.1	28.3	17.2	11.2	25.7	100.0	7,651	38.0
4-6	6.5	10.7	33.5	17.8	12.7	18.8	100.0	4,902	35.7
7+	6.3	14.4	39.6	18.6	10.1	11.0	100.0	1,835	32.3
Residence									
Urban	6.8	9.9	25.1	16.7	12.1	29.4	100.0	4,540	41.0
Rural	6.3	12.1	34.4	18.0	11.4	17.8	100.0	9,848	34.7
Region									
Coast	7.1	10.9	33.5	17.2	10.7	20.6	100.0	1,516	35.2
North Eastern	15.3	18.9	37.5	16.9	5.6	5.8	100.0	574	27.7
Eastern	4.1	8.2	31.0	18.8	11.2	26.8	100.0	1,680	39.8
Central	3.6	6.9	17.5	15.3	14.6	42.1	100.0	1,216	53.9
Rift Valley	6.0	12.0	35.4	18.0	11.3	17.2	100.0	4,255	34.4
Western	6.6	13.7	33.8	17.8	13.8	14.3	100.0	1,780	34.3
Nyanza	7.6	12.7	32.8	17.9	11.1	17.9	100.0	2,184	34.5
Nairobi	6.9	9.3	21.4	16.7	11.8	33.9	100.0	1,182	43.7
Education									
No education	8.8	14.2	41.0	18.4	8.1	9.5	100.0	2,060	31.6
Primary incomplete	6.0	12.6	35.9	18.3	10.8	16.3	100.0	4,655	34.2
Primary complete	5.9	11.2	28.3	17.2	12.6	24.8	100.0	4,063	38.0
Secondary+	6.3	8.5	24.0	16.6	13.5	31.1	100.0	3,610	43.0
Wealth quintile									
Lowest	8.1	13.6	42.1	17.9	8.7	9.6	100.0	3,864	31.7
Second	6.1	13.3	34.7	19.0	10.1	16.8	100.0	3,186	34.0
Middle	6.0	10.5	28.2	18.6	14.4	22.1	100.0	2,626	39.1
Fourth	5.2	8.5	25.6	15.5	14.6	30.6	100.0	2,318	43.9
Highest	6.0	9.1	19.5	16.0	12.3	37.0	100.0	2,394	47.5
Total	6.5	11.4	31.5	17.6	11.6	21.4	100.0	14,388	36.3

Note: First-order births are excluded. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth.

By county (Table 5.5C), the median birth interval is longest in Kirinyaga (65.4 months), Nyeri, Kiambu, Tharaka-Nithi, and Meru (each over 50 months) and shortest in Garissa, Wajir, West Pokot, and Narok (all less than 30 months).

Table 5.5C Birth intervals

Percent distribution of non-first births in the five years preceding the survey by number of months since preceding birth, and median number of months since preceding birth, according to county, Kenya 2014

County	Months since preceding birth						Total	Number of non-first births	Median number of months since preceding birth
	7-17	18-23	24-35	36-47	48-59	60+			
Coast	**7.1**	**10.9**	**33.5**	**17.2**	**10.7**	**20.6**	**100.0**	**1,516**	**35.2**
Mombasa	6.5	5.9	27.1	14.9	14.4	31.2	100.0	354	41.6
Kwale	5.6	16.3	32.2	18.2	9.2	18.4	100.0	331	34.4
Kilifi	8.5	11.1	37.7	17.1	9.0	16.6	100.0	548	33.4
Tana River	8.4	12.0	37.1	23.0	10.4	9.2	100.0	145	33.4
Lamu	9.9	14.0	34.0	17.2	11.4	13.5	100.0	47	32.1
Taita Taveta	2.4	6.6	30.8	14.1	12.1	34.0	100.0	91	43.0
North Eastern	**15.3**	**18.9**	**37.5**	**16.9**	**5.6**	**5.8**	**100.0**	**574**	**27.7**
Garissa	15.0	21.8	39.7	12.8	4.0	6.8	100.0	207	26.9
Wajir	15.4	19.2	38.3	19.8	3.4	3.8	100.0	230	27.5
Mandera	15.4	13.9	33.0	18.3	11.7	7.7	100.0	138	31.1
Eastern	**4.1**	**8.2**	**31.0**	**18.8**	**11.2**	**26.8**	**100.0**	**1,680**	**39.8**
Marsabit	2.9	13.0	37.6	22.1	12.5	11.9	100.0	73	34.9
Isiolo	10.9	10.0	35.3	18.0	12.1	13.7	100.0	70	34.0
Meru	1.6	5.2	23.1	16.2	10.8	43.1	100.0	348	50.5
Tharaka-Nithi	1.9	6.3	21.2	14.3	15.4	41.0	100.0	107	50.8
Embu	5.4	10.1	19.0	21.2	10.6	33.7	100.0	130	43.9
Kitui	5.2	10.6	44.1	21.0	5.7	13.4	100.0	342	32.9
Machakos	5.2	6.8	26.9	19.2	15.2	26.8	100.0	343	40.4
Makueni	3.5	8.7	36.6	18.9	11.4	20.9	100.0	266	37.0
Central	**3.6**	**6.9**	**17.5**	**15.3**	**14.6**	**42.1**	**100.0**	**1,216**	**53.9**
Nyandarua	3.7	6.9	21.8	20.6	17.3	29.6	100.0	189	46.2
Nyeri	2.4	6.7	16.0	12.3	17.2	45.5	100.0	157	56.6
Kirinyaga	1.9	3.3	15.7	14.3	10.2	54.5	100.0	130	65.4
Murang'a	2.2	5.5	18.6	20.9	12.0	40.7	100.0	227	49.8
Kiambu	5.1	8.4	16.3	11.9	15.2	43.2	100.0	512	54.7
Rift Valley	**6.0**	**12.0**	**35.4**	**18.0**	**11.3**	**17.2**	**100.0**	**4,255**	**34.4**
Turkana	8.6	8.6	41.8	19.3	8.9	12.9	100.0	278	32.4
West Pokot	5.0	20.6	46.6	12.9	6.9	8.0	100.0	255	29.7
Samburu	4.4	13.7	37.4	23.7	10.0	10.8	100.0	95	33.6
Trans-Nzoia	5.6	7.0	39.2	15.8	13.2	19.2	100.0	381	35.5
Uasin Gishu	4.5	9.8	26.4	23.0	12.9	23.3	100.0	332	40.7
Elgeyo Marakwet	5.6	12.8	39.5	16.6	9.9	15.6	100.0	129	32.4
Nandi	6.8	11.3	26.7	20.1	13.4	21.6	100.0	301	38.9
Baringo	7.9	18.0	37.3	13.7	12.0	11.2	100.0	190	30.6
Laikipia	1.9	8.1	28.0	23.0	15.7	23.3	100.0	155	40.7
Nakuru	4.5	12.9	30.7	18.1	13.2	20.6	100.0	665	37.2
Narok	6.1	16.7	46.2	14.7	6.6	9.5	100.0	499	29.9
Kajiado	10.1	11.6	31.2	18.8	8.9	19.4	100.0	322	35.4
Kericho	5.0	8.3	29.4	17.6	15.3	24.4	100.0	268	41.0
Bomet	7.0	9.8	36.2	19.7	12.0	15.4	100.0	385	34.3
Western	**6.6**	**13.7**	**33.8**	**17.8**	**13.8**	**14.3**	**100.0**	**1,780**	**34.3**
Kakamega	6.1	14.3	33.3	17.0	13.8	15.4	100.0	582	34.5
Vihiga	9.1	9.5	31.1	14.6	14.0	21.7	100.0	179	36.1
Bungoma	6.4	15.4	32.0	19.0	15.3	11.9	100.0	703	34.6
Busia	6.7	11.3	40.3	18.5	10.1	13.0	100.0	317	32.7
Nyanza	**7.6**	**12.7**	**32.8**	**17.9**	**11.1**	**17.9**	**100.0**	**2,184**	**34.5**
Siaya	7.7	14.4	32.7	19.3	10.3	15.5	100.0	311	33.9
Kisumu	8.8	7.9	31.0	18.0	13.2	21.1	100.0	379	36.8
Homa Bay	7.4	13.0	34.1	18.3	10.0	17.2	100.0	527	33.8
Migori	8.1	16.8	40.0	16.8	7.9	10.5	100.0	471	30.1
Kisii	6.3	11.8	25.7	16.2	15.1	24.9	100.0	349	38.8
Nyamira	6.5	9.6	26.1	20.8	12.7	24.3	100.0	148	39.5
Nairobi	**6.9**	**9.3**	**21.4**	**16.7**	**11.8**	**33.9**	**100.0**	**1,182**	**43.7**
Total	6.5	11.4	31.5	17.6	11.6	21.4	100.0	14,388	36.3

Note: First-order births are excluded. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth.

5.6 POSTPARTUM AMENORRHOEA, ABSTINENCE, AND INSUSCEPTIBILITY

Postpartum amenorrhoea refers to the interval between childbirth and the return of menstruation. The length and intensity of breastfeeding influence the duration of amenorrhoea, which offers protection from conception. Postpartum abstinence refers to the period between childbirth and the time when a woman resumes sexual activity. Women are considered to be insusceptible to pregnancy if they are not exposed to the risk of conception, either because their menstrual period has not resumed since giving birth or because they are abstaining from intercourse after childbirth.

Table 5.6 shows that the median duration of amenorrhoea among women who gave birth in the three years preceding the survey is 6.2 months and the median duration of postpartum abstinence is 3.0 months. The two factors, postpartum amenorrhoea and abstinence, taken together indicate that the median duration of postpartum insusceptibility to pregnancy is 8.6 months. Almost all women are insusceptible to pregnancy (98 percent) within the first two months following childbirth. The contribution of abstinence is greatly reduced after the second month. At 8-9 months, 41 percent of women are still amenorrhoeic, but only 18 percent are still abstaining. At 26-27 months after birth, insusceptibility drops to 10 percent or less.

Table 5.6 Postpartum amenorrhoea, abstinence and insusceptibility

Percentage of births in the three years preceding the survey for which mothers are postpartum amenorrhoeic, abstaining, and insusceptible, by number of months since birth, and median and mean durations, Kenya 2014

Months since birth	Percentage of births for which the mother is:			Number of births
	Amenorrhoeic	Abstaining	Insusceptible[1]	
<2	93.8	91.4	97.6	224
2-3	78.6	51.2	85.7	304
4-5	59.7	30.1	67.4	289
6-7	44.0	20.3	54.5	311
8-9	41.2	17.8	49.2	288
10-11	38.0	16.8	47.2	331
12-13	24.0	13.1	32.4	331
14-15	20.9	7.0	26.1	323
16-17	19.9	6.8	25.5	323
18-19	10.2	3.5	13.2	322
20-21	6.1	9.3	14.9	303
22-23	4.8	8.3	12.8	284
24-25	11.2	9.3	18.3	300
26-27	3.4	3.4	6.6	322
28-29	5.9	4.4	9.9	346
30-31	6.5	3.2	9.7	281
32-33	1.4	1.1	2.5	276
34-35	3.3	4.6	7.7	302
Total	25.2	15.5	31.3	5,462
Median	6.2	3.0	8.6	na
Mean	9.7	6.3	11.9	na

Note: Estimates are based on status at the time of the survey.
na = Not applicable
[1] Includes births for which mothers are either still amenorrhoeic or still abstaining (or both) following birth

Table 5.7 shows the median duration of postpartum amenorrhoea, abstinence, and insusceptibility by background characteristics. Older women (age 30 and above) have a slightly longer median period of insusceptibility, even though they have a lower median duration of abstaining, because of the longer duration of postpartum amenorrhoea. Women living in urban areas report a shorter median duration of amenorrhoea and, hence, have a shorter period of insusceptibility than rural women (5.1 months versus 10.8 months). The median duration of both amenorrhoea and insusceptibility declines as education increases. Women in the lowest wealth quintile have the longest durations of amenorrhoea and abstinence, and thus insusceptibility.

Table 5.7 Median duration of amenorrhoea, postpartum abstinence and postpartum insusceptibility

Median number of months of postpartum amenorrhoea, postpartum abstinence, and postpartum insusceptibility following births in the three years preceding the survey, by background characteristics, Kenya 2014

Background characteristic	Postpartum amenorrhoea	Postpartum abstinence	Postpartum insusceptibility[1]
Mother's age			
15-29	5.6	3.3	7.8
30-49	9.3	2.3	9.9
Residence			
Urban	4.3	2.9	5.1
Rural	8.7	3.0	10.8
Region			
Coast	7.9	3.4	9.3
North Eastern	5.4	2.8	8.2
Eastern	4.3	3.4	6.1
Central	4.8	*	4.9
Rift Valley	8.8	3.8	11.2
Western	5.3	*	10.8
Nyanza	7.5	(2.0)	9.4
Nairobi	*	*	*
Education			
No education	10.7	3.7	12.0
Primary incomplete	9.6	2.9	11.1
Primary complete	5.5	2.7	6.9
Secondary+	4.3	3.0	5.4
Wealth quintile			
Lowest	10.9	3.5	12.3
Second	7.3	2.6	10.7
Middle	6.1	2.7	10.5
Fourth	5.1	2.8	5.8
Highest	4.0	2.9	4.5
Total	6.2	3.0	8.6

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed. Medians are based on the status at the time of the survey (current status).
[1] Includes births for which mothers are either still amenorrhoeic or still abstaining (or both) following birth

5.7 MENOPAUSE

Another factor influencing the risk of pregnancy is menopause. In the 2014 KDHS, women were considered menopausal if they were neither pregnant nor postpartum amenorrhoeic and had not had a menstrual period in the six months preceding the survey (Table 5.8). Prevalence of menopause increases with age, ranging from 5 percent among women age 30-34 to 45 percent among women age 48-49. The proportion of women age 30-49 who are menopausal (11 percent) has not changed from the 2008-09 KDHS.

Table 5.8 Menopause

Percentage of women age 30-49 who are menopausal, by age, Kenya 2014

Age	Percentage menopausal[1]	Number of women
30-34	4.7	2,162
35-39	6.1	1,780
40-41	9.2	632
42-43	8.9	426
44-45	20.8	520
46-47	24.4	424
48-49	45.1	343
Total	10.7	6,286

[1] Percentage of all women who are not pregnant and not postpartum amenorrhoeic whose last menstrual period occurred six or more months preceding the survey

5.8 AGE AT FIRST BIRTH

The age at which childbearing starts has important consequences for the overall level of fertility as well as the health and welfare of the mother and the child. Early age at initiation of childbearing lengthens the reproductive period. Table 5.9 shows the percentage of women age 15-49 who gave birth by exact ages, the percentage who have never given birth, and the median age at first birth, according to current age. Medians for women age 15-24 are not presented because less than 50 percent had given birth before age 15.

Table 5.9 Age at first birth

Percentage of women age 15-49 who gave birth by specific exact ages, percentage who have never given birth, and median age at first birth, according to current age, Kenya 2014

Current age	Percentage who gave birth by exact age					Percentage who have never given birth	Number of women	Median age at first birth
	15	18	20	22	25			
15-19	1.4	na	na	na	na	85.3	5,820	a
20-24	4.1	23.3	43.0	na	na	35.3	5,735	a
25-29	4.9	25.7	46.8	64.4	81.3	11.5	6,100	20.3
30-34	3.7	24.8	48.3	67.7	82.9	3.7	4,510	20.2
35-39	4.4	21.7	44.4	65.5	83.6	3.3	3,773	20.5
40-44	4.7	25.0	47.5	68.4	85.2	2.6	2,885	20.2
45-49	5.4	29.8	50.7	69.5	85.0	1.9	2,257	19.9
20-49	4.5	24.7	46.3	na	na	12.4	25,259	a
25-49	4.6	25.1	47.2	66.6	83.1	5.7	19,524	20.3

na = Not applicable due to censoring
a = Omitted because less than 50 percent of women had a birth before reaching the beginning of the age group

The median age at first birth for women age 25-29 is 20.3 years and is relatively unchanged from that reported in the 2008-09 KDHS (19.8). One-quarter of Kenyan women age 25-49 (25 percent) have given birth by age 18, while about half (47 percent) have given birth by age 20. The median age at first birth does not vary much across age groups, indicating no change over time in median age at first birth.

Table 5.10 presents the median age at first birth among women age 25-49 by background characteristics. In all age groups, women in urban areas have a slightly higher median age at first birth than their rural counterparts. The highest median age at first birth among women age 25-49 was recorded in Nairobi (22.2), while the lowest was observed in Nyanza (18.9). This implies that, on average, women in Nyanza have their first birth about three years earlier than those in Nairobi. Table 5.10C reflects these regional findings in that the counties of Homa Bay, Migori, and Siaya, all located in Nyanza, report some of the lowest median ages at first birth.

Table 5.10 Median age at first birth

Median age at first birth among women age 25-49 years, by background characteristics, Kenya 2014

Background characteristic	Women age					
	25-29	30-34	35-39	40-44	45-49	25-49
Residence						
Urban	21.6	21.2	21.4	20.9	20.7	21.3
Rural	19.4	19.5	20.0	19.9	19.7	19.7
Region						
Coast	20.2	20.5	20.8	20.2	20.0	20.3
North Eastern	19.6	19.2	20.7	21.4	25.3	20.2
Eastern	20.2	20.1	20.5	20.4	20.1	20.3
Central	21.1	21.1	21.1	20.6	20.2	20.9
Rift Valley	20.1	20.1	20.3	20.1	20.0	20.1
Western	19.4	19.3	19.9	19.6	19.5	19.6
Nyanza	18.7	18.6	19.4	19.1	18.9	18.9
Nairobi	22.7	21.9	21.9	21.4	22.9	22.2
Education						
No education	18.4	18.9	19.7	20.2	19.4	19.2
Primary incomplete	18.1	18.6	19.1	18.9	18.3	18.6
Primary complete	19.6	19.8	19.9	19.8	19.4	19.7
Secondary+	22.9	22.6	22.5	22.1	22.0	22.5
Wealth quintile						
Lowest	18.8	18.9	19.4	19.8	19.5	19.1
Second	18.8	19.4	19.7	19.3	19.2	19.3
Middle	19.5	19.4	20.1	19.7	19.0	19.5
Fourth	20.4	20.2	20.6	20.6	20.3	20.4
Highest	23.0	22.6	22.6	21.6	22.1	22.6
Total	20.3	20.2	20.5	20.2	19.9	20.3

Age at first birth increases with increasing education; on average, women with at least some secondary education begin childbearing more than three years after women with no education (22.5 and 19.2, respectively). Similarly, women in the highest wealth quintile have their first birth about three and one-half years later, on average, than women in the lowest quintile.

Table 5.10C Median age at first birth

Median age at first birth among women age 25-49 years, by county, Kenya 2014

	Women age					
County	25-29	30-34	35-39	40-44	45-49	25-49
Coast	**20.2**	**20.5**	**20.8**	**20.2**	**20.0**	**20.3**
Mombasa	21.6	21.9	22.7	20.6	21.3	21.6
Kwale	18.7	19.7	19.3	20.6	19.8	19.5
Kilifi	20.4	19.9	20.8	19.4	18.7	19.9
Tana River	18.7	18.7	18.4	19.5	20.7	19.0
Lamu	19.3	21.2	20.9	21.6	24.2	20.6
Taita Taveta	20.3	20.5	21.0	21.5	21.5	21.0
North Eastern	**19.6**	**19.2**	**20.7**	**21.4**	**25.3**	**20.2**
Garissa	20.3	19.8	20.5	21.6	23.4	20.5
Wajir	19.4	18.8	19.1	19.5	26.2	19.6
Mandera	19.6	18.7	21.9	23.0	25.1	20.8
Eastern	**20.2**	**20.1**	**20.5**	**20.4**	**20.1**	**20.3**
Marsabit	18.7	18.8	20.1	22.4	23.0	19.6
Isiolo	20.0	19.9	20.0	20.1	21.5	20.2
Meru	20.0	19.5	20.1	20.6	20.2	20.0
Tharaka-Nithi	20.7	21.1	21.7	20.8	22.1	21.2
Embu	21.3	21.3	21.5	21.3	20.3	21.1
Kitui	19.9	19.7	20.2	20.0	18.6	19.8
Machakos	20.1	20.6	20.5	20.6	20.2	20.4
Makueni	20.8	20.3	20.6	20.0	20.3	20.4
Central	**21.1**	**21.1**	**21.1**	**20.6**	**20.2**	**20.9**
Nyandarua	20.8	20.5	19.8	20.1	19.6	20.1
Nyeri	21.7	21.3	20.7	20.4	20.9	21.1
Kirinyaga	20.6	20.5	20.8	20.0	19.8	20.4
Murang'a	20.6	21.1	21.7	20.6	20.0	20.8
Kiambu	21.5	21.3	21.7	21.3	20.5	21.3
Rift Valley	**20.1**	**20.1**	**20.3**	**20.1**	**20.0**	**20.1**
Turkana	20.6	20.2	19.7	21.4	20.9	20.5
West Pokot	19.2	19.5	19.8	21.3	21.8	20.0
Samburu	18.7	19.7	20.6	20.8	22.5	19.9
Trans-Nzoia	19.7	19.6	20.1	19.0	19.7	19.6
Uasin Gishu	20.4	20.4	21.1	19.7	19.8	20.3
Elgeyo Marakwet	20.9	19.9	21.0	21.2	20.6	20.6
Nandi	20.0	20.4	19.6	19.6	19.4	19.8
Baringo	19.9	21.1	21.5	19.8	20.0	20.4
Laikipia	21.3	18.4	20.2	20.5	19.8	20.2
Nakuru	20.9	20.9	20.9	19.8	19.8	20.6
Narok	19.0	19.6	18.8	20.2	20.3	19.5
Kajiado	21.6	20.8	20.9	21.3	22.1	21.3
Kericho	19.7	19.2	20.5	20.6	19.5	19.9
Bomet	19.2	19.2	19.7	19.1	18.9	19.3
Western	**19.4**	**19.3**	**19.9**	**19.6**	**19.5**	**19.6**
Kakamega	19.4	19.5	20.1	20.3	19.8	19.8
Vihiga	19.7	20.2	20.5	20.8	20.4	20.3
Bungoma	19.4	19.3	20.4	19.3	19.3	19.5
Busia	19.1	18.7	18.5	18.4	19.3	18.8
Nyanza	**18.7**	**18.6**	**19.4**	**19.1**	**18.9**	**18.9**
Siaya	18.4	18.8	20.2	18.1	18.4	18.7
Kisumu	19.6	18.9	19.4	20.2	19.1	19.4
Homa Bay	17.6	17.5	18.7	18.4	17.2	17.9
Migori	17.7	18.0	18.1	18.1	17.4	17.9
Kisii	19.5	19.4	20.5	20.0	19.8	19.9
Nyamira	19.2	19.5	20.0	20.9	18.6	19.6
Nairobi	**22.7**	**21.9**	**21.9**	**21.4**	**22.9**	**22.2**
Total	20.3	20.2	20.5	20.2	19.9	20.3

5.9 TEENAGE PREGNANCY AND MOTHERHOOD

Teenage pregnancy and motherhood has remained a major health and social concern because of its association with higher morbidity and mortality for both the mother and the child. Childbearing during the teenage years also frequently has other adverse social consequences, particularly for female educational attainment, as women who become mothers in their teens are more likely to curtail education.

Table 5.11 presents the percentage of women age 15-19 who have had a live birth or who are pregnant with their first child and the percentage of women who have begun childbearing by selected background characteristics. Fifteen percent of women age 15-19 have already had a birth, and 3 percent are pregnant with their first child. The percentage of women who have begun childbearing increases rapidly with age, from about 3 percent among those age 15 to 40 percent among those age 19.

Table 5.11 Teenage pregnancy and motherhood

Percentage of women age 15-19 who have had a live birth or who are pregnant with their first child, and percentage who have begun childbearing, by background characteristics, Kenya 2014

Background characteristic	Percentage of women age 15-19 who:		Percentage who have begun childbearing	Number of women
	Have had a live birth	Are pregnant with first child		
Age				
15	1.7	1.6	3.2	1,226
16	5.9	2.0	8.0	1,206
17	10.3	4.7	15.0	1,078
18	21.5	4.4	25.9	1,185
19	35.3	4.6	39.9	1,125
Residence				
Urban	14.0	3.3	17.3	1,859
Rural	15.0	3.5	18.5	3,961
Region				
Coast	16.6	4.3	20.8	604
North Eastern	8.7	3.5	12.2	143
Eastern	12.1	2.3	14.4	849
Central	7.7	2.7	10.4	600
Rift Valley	17.0	4.3	21.2	1,492
Western	14.1	2.7	16.8	790
Nyanza	19.2	3.0	22.2	874
Nairobi	13.1	4.3	17.4	467
Education				
No education	29.2	4.1	33.2	133
Primary incomplete	15.7	3.2	18.9	2,102
Primary complete	30.0	6.2	36.2	801
Secondary+	8.8	2.7	11.5	2,783
Wealth quintile				
Lowest	22.3	3.9	26.2	1,040
Second	14.5	3.9	18.4	1,220
Middle	15.8	3.4	19.1	1,331
Fourth	13.1	3.7	16.8	1,113
Highest	8.1	2.1	10.2	1,116
Total	14.7	3.4	18.1	5,820

While rural-urban differences are small, the prevalence of early childbearing varies by region, ranging from 10 percent in Central region to 21 percent in Rift Valley and Coast and 22 percent in Nyanza. One-third of women age 15-19 with no education (33 percent) have begun childbearing, as compared with only 12 percent among those who have a secondary or higher education (Table 5.11). Similarly, teenagers from the poorest households are more likely to have begun childbearing (26 percent) than teenagers from the wealthiest households (10 percent). The proportion of teenagers who have begun childbearing has not changed since the 2008-09 KDHS.

At the county level (Table 5.11C), early childbearing is lowest in Murang'a, Nyeri, Embu, and Elgeyo Marakwet (less than 10 percent each) and highest in Samburu, Nyamira, Tana River, West Pokot, Homa Bay, and Narok (more than 25 percent each).

Table 5.11C Teenage pregnancy and motherhood

Percentage of women age 15-19 who have had a live birth or who are pregnant with their first child, and percentage who have begun childbearing, by county, Kenya 2014

County	Percentage of women age 15-19 who:		Percentage who have begun childbearing	Number of women
	Have had a live birth	Are pregnant with first child		
Coast	**16.6**	**4.3**	**20.8**	**604**
Mombasa	11.6	5.0	16.6	123
Kwale	18.9	5.3	24.2	132
Kilifi	18.8	3.0	21.8	252
Tana River	20.4	7.8	28.2	41
Lamu	8.2	1.9	10.0	20
Taita Taveta	10.0	3.4	13.4	36
North Eastern	**8.7**	**3.5**	**12.2**	**143**
Garissa	8.5	1.7	10.2	67
Wajir	13.8	3.5	17.4	41
Mandera	3.3	6.8	10.1	36
Eastern	**12.1**	**2.3**	**14.4**	**849**
Marsabit	11.9	4.8	16.6	25
Isiolo	18.0	0.9	18.9	18
Meru	18.3	1.5	19.9	185
Tharaka-Nithi	10.4	3.2	13.7	50
Embu	4.7	3.3	8.0	91
Kitui	11.8	3.0	14.8	169
Machakos	12.2	1.7	14.0	143
Makueni	9.3	1.8	11.1	168
Central	**7.7**	**2.7**	**10.4**	**600**
Nyandarua	4.0	5.7	9.7	67
Nyeri	4.2	2.7	6.9	101
Kirinyaga	9.2	2.1	11.3	54
Murang'a	2.6	3.8	6.3	137
Kiambu	12.7	1.4	14.1	242
Rift Valley	**17.0**	**4.3**	**21.2**	**1,492**
Turkana	17.6	2.6	20.2	51
West Pokot	22.8	5.9	28.6	38
Samburu	19.7	6.0	25.7	21
Trans-Nzoia	18.9	4.3	23.3	185
Uasin Gishu	16.4	5.9	22.2	137
Elgeyo Marakwet	7.4	1.2	8.7	51
Nandi	13.8	1.8	15.6	133
Baringo	10.5	2.7	13.2	83
Laikipia	14.8	3.9	18.7	65
Nakuru	13.4	5.0	18.4	295
Narok	33.0	7.4	40.4	107
Kajiado	16.2	4.0	20.2	106
Kericho	17.6	2.9	20.5	91
Bomet	19.6	4.5	24.0	129
Western	**14.1**	**2.7**	**16.8**	**790**
Kakamega	13.5	6.0	19.4	242
Vihiga	10.8	2.0	12.7	98
Bungoma	13.8	0.7	14.4	319
Busia	18.4	2.3	20.8	131
Nyanza	**19.2**	**3.0**	**22.2**	**874**
Siaya	13.6	3.6	17.2	130
Kisumu	12.4	3.1	15.4	179
Homa Bay	31.2	2.1	33.3	177
Migori	20.9	3.4	24.3	140
Kisii	15.9	2.5	18.4	191
Nyamira	23.5	4.3	27.8	58
Nairobi	**13.1**	**4.3**	**17.4**	**467**
Total	14.7	3.4	18.1	5,820

FERTILITY PREFERENCES 6

Samwel Ogola, Michael Musyoka, Andrew Kyalo Mutuku

Key Findings

- Half of currently married women age 15-49 and 42 percent of currently married men age 15-49 want no more children or are sterilised.
- The mean ideal number of children among all women age 15-49 is 3.6, while that of all men is 3.9. The mean ideal number of children among women has declined marginally in the last 10 years from 3.9 in the 2003 KDHS to 3.6 in 2014.
- The gap between actual fertility and ideal family size has narrowed in the last 10 years, from 1.3 children in 2003 to 1.0 in 2014.

Information on fertility preferences is of considerable importance to family planning programmes because it allows planners to assess the need for contraception, whether for spacing or limiting of births, and also to assess the extent of unwanted and mistimed pregnancies. Data on fertility preferences may also be useful as an indicator of the direction that future fertility efforts of a country's citizens may take.

The 2014 KDHS included questions to ascertain fertility preferences. Women who were either not pregnant or unsure about their pregnancy status were asked the following question: *Would you like to have (a/another) child or would you prefer not to have any (more) children?* A different question was posed to women who were pregnant at the time of the survey. Pregnant women were asked *After the child you are expecting now, would you like to have another child or would you prefer not to have any more children?* Women who indicated that they wanted another child were asked how long they would like to wait before the birth of the next child. Finally, women were asked the total number of children they would like to have if they were to start childbearing afresh.

Given that ongoing family planning programmes seek to address both men and women and that men play a crucial role in the realisation of reproductive goals, the 2014 KDHS also included questions that elicited information on the fertility preferences of men.

6.1 DESIRE FOR MORE CHILDREN

Data on desire for more children can indicate future reproductive behaviour provided that the required family planning services are available, affordable, and accessible to allow people to realise their fertility preferences. Table 6.1 presents the distribution of currently married women and men by the desire for more children and according to the number of living children.

Table 6.1 shows that there is widespread desire among Kenyans to control the timing and number of births they have. Among all currently married women, almost half do not want to have another child (47 percent), and for an additional 3 percent, either they or their husband/partner are sterilised. Nearly one-third (32 percent) of married women would like to wait two years or more for their next birth, and 13 percent would like to have a child soon (within two years). The remainder are uncertain about their fertility desires (3 percent) or say they are unable to get pregnant (infecund; 1 percent). Proportions are similar among currently married men, although men tend to be slightly more pronatalist than women.

Table 6.1 Fertility preferences by number of living children

Percent distribution of currently married women and currently married men age 15-49 by desire for children, according to number of living children, Kenya 2014

Desire for children	Number of living children							Total 15-49	Total 15-54
	0	1	2	3	4	5	6+		
				WOMEN[1]					
Have another soon[2]	72.6	25.2	12.8	7.5	4.6	4.5	4.3	12.9	na
Have another later[3]	18.2	64.8	47.0	27.4	16.0	12.3	7.2	31.9	na
Have another, undecided when	1.5	1.4	1.1	0.5	0.2	0.1	0.5	0.7	na
Undecided	2.1	1.3	2.8	3.4	4.1	2.6	4.7	3.1	na
Want no more	2.7	6.2	34.7	57.3	69.2	72.7	72.7	47.0	na
Sterilised[4]	0.0	0.0	0.6	2.8	5.0	6.9	8.7	3.3	na
Declared infecund	2.4	0.7	0.8	0.7	0.6	0.9	1.4	0.9	na
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	na
Number of women	312	1,439	2,020	1,676	1,225	825	1,214	8,710	na
				MEN[5]					
Have another soon[2]	69.0	26.9	15.2	12.1	6.0	6.6	9.7	16.2	15.3
Have another later[3]	23.2	64.9	47.7	31.3	22.2	21.8	14.8	36.8	33.9
Have another, undecided when	2.8	0.8	1.4	1.4	1.0	1.1	1.6	1.3	1.2
Undecided	0.4	1.7	4.2	4.6	3.8	1.5	2.2	3.1	3.0
Want no more	0.8	5.6	30.9	49.6	64.3	67.7	70.1	41.4	45.2
Sterilised[4]	0.0	0.0	0.0	0.7	2.4	0.8	1.3	0.7	0.7
Declared infecund	1.6	0.0	0.1	0.0	0.0	0.2	0.2	0.1	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of men	244	1,086	1,468	1,209	796	505	786	6,095	6,762

Note: Totals may not add up to 100 percent because respondents with missing information are not shown separately.
na = Not applicable
[1] The number of living children includes the current pregnancy.
[2] Wants next birth within 2 years
[3] Wants to delay next birth for 2 or more years
[4] Includes both female and male sterilisation
[5] The number of living children includes one additional child if respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

Fertility preferences are closely related to the number of living children a person already has (Table 6.1). About three in four currently married women without a child want to have a child soon (73 percent). This proportion declines dramatically as women have more children, so that among women with three or more children, less than 10 percent want to have another child soon. The proportion of women who want no more children increases greatly after two children, from 35 percent among those with two children to 73 percent among those with five or more children. Only 3 percent of childless women say they do not want to have a child at all. These patterns are similar for men. There have been minimal changes in these numbers since the 2003 and 2008-09 KDHS surveys.

6.2 DESIRE TO LIMIT CHILDBEARING BY BACKGROUND CHARACTERISTICS

Tables 6.2.1 and 6.2.2 provide information on women's and men's desire to stop childbearing, by background characteristics. Overall, rural women are more likely than urban women to want no more children; however, this is likely associated with the finding that rural women have more children than urban women. When the number of living children is held constant, the pattern is reversed; that is, urban women are more likely than rural women to want no more children. For example, at parities between one and five, urban women are more likely to want to limit childbearing than rural women. Interestingly, at six or more children, rural women are more likely to want to limit childbearing than urban women. By region, the proportion of married women who want no more children is highest in Eastern (60 percent) and Nyanza (58 percent) and lowest in North Eastern (6 percent).

In general, fertility preferences and education are positively associated. For women with two to five children, the desire to limit childbearing increases as education increases. For women with one or no children or women with six or more children, the relationship between desire to control fertility and education is mixed. A similar pattern exists for wealth: for women with three to five children, the desire to limit childbearing increases as wealth increases. However, this pattern is not observed for women with lower or higher parities.

Table 6.2.1 Desire to limit childbearing: Women

Percentage of currently married women age 15-49 who want no more children, by number of living children, according to background characteristics, Kenya 2014

Background characteristic	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
Residence								
Urban	0.7	6.4	38.2	65.8	81.4	82.3	75.3	42.7
Rural	6.5	6.1	32.3	56.8	71.1	78.7	82.4	55.1
Region								
Coast	0.0	2.2	21.2	50.0	52.2	53.9	71.7	37.1
North Eastern	(0.0)	(1.4)	1.2	8.3	0.3	0.8	13.4	6.1
Eastern	(0.0)	8.3	46.5	70.4	88.2	92.2	95.4	60.3
Central	*	6.3	42.4	71.5	91.8	100.0	98.4	55.5
Rift Valley	14.5	5.1	29.2	48.0	65.0	81.1	83.0	48.1
Western	*	7.1	26.4	57.3	72.2	73.9	94.6	56.4
Nyanza	(0.0)	6.7	35.2	59.5	81.8	84.7	83.6	57.5
Nairobi	*	8.6	38.9	(77.8)	*	*	*	41.6
Education								
No education	0.0	8.8	12.1	25.4	27.2	42.7	52.8	33.4
Primary incomplete	(0.0)	10.1	26.3	52.3	71.8	78.5	84.2	57.3
Primary complete	3.8	7.3	35.5	60.9	79.6	88.3	96.3	55.3
Secondary+	3.5	4.9	41.1	73.4	90.0	93.7	90.7	45.4
Wealth quintile								
Lowest	0.0	5.6	19.5	30.8	42.7	58.0	67.4	41.9
Second	(3.4)	8.9	30.3	59.7	75.3	82.2	91.0	58.4
Middle	(16.1)	3.8	29.1	60.4	81.4	87.7	88.8	58.1
Fourth	1.6	6.1	37.3	63.3	83.3	89.3	87.9	49.1
Highest	1.3	6.6	44.3	73.6	90.4	88.6	72.8	44.7
Total	2.7	6.3	35.3	60.2	74.2	79.6	81.4	50.2

Note: Women who have been sterilised are considered to want no more children. Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
[1] The number of living children includes the current pregnancy.

Table 6.2.2 Desire to limit childbearing: Men

Percentage of currently married men age 15-49 who want no more children, by number of living children, according to background characteristics, Kenya 2014

Background characteristic	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
Residence								
Urban	0.5	6.3	30.3	54.8	69.8	64.4	73.8	37.6
Rural	1.5	4.5	31.8	46.2	64.6	70.3	70.4	46.1
Region								
Coast	(2.9)	11.8	31.7	38.2	64.7	56.5	58.8	36.2
North Eastern	*	(2.1)	(11.1)	(0.5)	(5.2)	(1.3)	2.3	3.5
Eastern	(0.0)	3.5	41.0	58.1	76.0	77.7	79.6	47.7
Central	*	4.6	38.8	53.3	81.6	(84.4)	(93.2)	43.2
Rift Valley	0.0	5.8	27.9	49.6	63.4	63.9	74.4	42.3
Western	*	0.9	16.5	36.0	62.4	74.4	77.8	46.0
Nyanza	(3.9)	3.9	31.4	42.8	58.7	72.0	75.2	46.9
Nairobi	*	(5.7)	26.4	(63.7)	*	*	*	37.3
Education								
No education	*	(4.2)	(8.3)	18.4	34.6	35.3	20.3	21.1
Primary incomplete	(3.1)	4.1	25.7	34.7	57.1	68.9	73.6	43.1
Primary complete	(0.0)	9.0	27.9	51.2	71.0	66.3	79.8	44.7
Secondary+	0.6	4.4	35.5	59.3	73.7	76.4	75.2	41.7
Wealth quintile								
Lowest	(0.0)	5.5	16.3	27.2	34.8	50.2	55.4	33.5
Second	(0.0)	4.2	33.7	44.0	69.6	73.0	77.1	49.2
Middle	(5.0)	2.4	27.8	46.9	71.0	78.9	81.4	47.6
Fourth	(0.0)	6.0	31.0	58.5	73.4	73.4	70.2	42.5
Highest	0.8	7.0	35.1	58.8	75.7	(58.9)	80.6	37.6
Total 15-49	0.8	5.6	31.0	50.3	66.7	68.4	71.3	42.0
50-54	*	*	(81.0)	84.5	77.1	88.6	82.0	81.0
Total 15-54	0.8	5.9	32.1	52.5	68.3	71.6	74.3	45.9

Note: Men who have been sterilised or who state in response to the question about desire for children that their wife has been sterilised are considered to want no more children. Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
[1] The number of living children includes one additional child if respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

Fertility preferences among men show similar patterns to those for women, although the overall proportions of men who do not want to have more children are lower. In terms of a rural-urban comparison, 46 percent of rural men want no more children, as compared with 38 percent of urban men. Men in the Eastern, Nyanza, and Western regions (48 percent, 47 percent, and 46 percent, respectively) are more likely to want to limit childbearing than men in other regions. The proportion of married men in North Eastern who want no more children is only 4 percent. The same relationships between fertility desires and both education and wealth that were observed for women were also observed for men.

6.3 IDEAL FAMILY SIZE

Women and men, regardless of marital status, were asked about the number of children they would choose to have if they could start afresh. Respondents who had no children were asked *If you could choose exactly the number of children to have in your whole life, how many would that be?* For respondents who had children, the question was rephrased as follows: *If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be?* Responses to these questions are summarised in Table 6.3 for both men and women age 15-49.

Table 6.3 indicates that almost 98 percent each of women and men provided a numeric response. Among all women, the mean ideal family size is 3.6 children, a slight decline from 3.8 children recorded in the 2008-09 KDHS. The mean ideal family size among all men (3.9 children) is slightly higher than for women (3.6 children) and is also similar to that observed in the 2008-09 KDHS.

Ideal family size increases with the number of living children. For example, women with six or more children have an ideal family size of 5.4 children (similar to the 2008-09 KDHS ideal family size), as compared with 3.0 children for those with one child. This pattern can be attributed to two possibilities: women achieve their desired family size or women adjust their ideal number of children to be the actual number they have. Among men, the ideal family size ranges from 3.3 children for those with one child to 6.7 children for men with six or more living children.

The majority of women and men (77 percent of each) prefer two to four children, with men slightly more inclined to want three or four. Only 2 percent of women and 1 percent of men say that having one child is ideal.

Table 6.3 Ideal number of children by number of living children

Percent distribution of women and men 15-49 by ideal number of children, and mean ideal number of children for all respondents and for currently married respondents, according to the number of living children, Kenya 2014

Ideal number of children	Number of living children							Total
	0	1	2	3	4	5	6+	
				WOMEN[1]				
0	2.1	0.6	0.5	0.7	1.0	0.3	0.6	1.0
1	1.9	4.4	2.9	2.8	1.7	0.7	0.6	2.4
2	31.9	30.7	28.0	17.8	16.6	14.9	7.0	24.0
3	31.3	37.8	28.6	27.2	14.4	15.3	12.7	26.8
4	20.3	18.1	29.9	31.7	38.4	22.6	28.0	25.9
5	5.6	4.0	4.6	9.8	9.7	21.4	10.3	7.7
6+	4.8	2.9	4.5	8.2	16.6	21.6	34.9	10.1
Non-numeric responses	2.1	1.5	1.0	1.9	1.6	3.2	5.8	2.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	3,637	2,495	2,590	2,025	1,470	987	1,422	14,625
Mean ideal number of children for:[2]								
All women	3.1	3.0	3.3	3.6	4.1	4.5	5.4	3.6
Number of women	3,560	2,459	2,564	1,988	1,446	955	1,339	14,311
Currently married women	3.5	3.1	3.3	3.7	4.2	4.6	5.4	3.9
Number of currently married women	300	1,408	2,002	1,649	1,205	801	1,138	8,503
				MEN[3]				
0	0.7	0.0	0.1	0.2	1.0	0.7	0.0	0.4
1	0.9	2.8	0.7	0.4	0.5	0.5	0.2	1.0
2	24.8	22.9	20.8	10.7	14.0	9.3	4.5	19.8
3	33.1	41.7	32.3	29.0	15.8	15.5	10.0	30.2
4	24.3	22.3	30.3	35.2	37.9	25.5	25.0	27.1
5	7.1	5.3	6.8	13.9	11.7	19.0	8.9	8.5
6+	7.6	4.0	7.1	8.5	17.6	25.0	44.8	11.1
Non-numeric responses	1.4	0.9	1.8	2.1	1.5	4.6	6.6	2.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of men	5,396	1,557	1,662	1,278	842	526	803	12,063
Mean ideal number of children for:[2]								
All men	3.6	3.3	3.6	4.0	4.4	4.9	6.7	3.9
Number of men	5,318	1,543	1,631	1,251	829	502	750	11,825
Currently married men	3.3	3.2	3.6	4.0	4.4	4.9	6.7	4.2
Number of currently married men	235	1,077	1,441	1,184	784	484	733	5,938
Mean ideal number of children for men 15-54:[2]								
All men	3.6	3.3	3.6	4.0	4.4	4.8	6.6	4.0
Number of men	5,334	1,558	1,673	1,349	980	598	1,052	12,544
Currently married men	3.3	3.2	3.6	4.0	4.4	4.8	6.6	4.3
Number of currently married men	239	1,084	1,472	1,268	924	574	1,010	6,573

[1] The number of living children includes current pregnancy for women.
[2] Means are calculated excluding respondents who gave non-numeric responses.
[3] The number of living children includes one additional child if respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

Table 6.4 shows the mean ideal number of children for all women age 15-49 by background characteristics. Ideal family size increases with age; for example, the mean ideal number of children for women age 15-19 is 3.2, compared with 4.5 among women age 45-49. Women in rural areas have a higher ideal family size (3.9 children) than women in urban areas (3.2 children). By region, North Eastern recorded the highest ideal family size for women (9.3 children) and Nairobi the lowest (3.0 children). Education and wealth are negatively associated with ideal family size. As education and wealth increase, ideal family size decreases. Notably, there is a large decrease in ideal family size from 7.0 children among women with no education to 3.9 children among those with at least some primary education. Similarly, there is a large decrease in ideal family size from 5.1 children among women in the lowest wealth quintile to 3.6 children among those in the second wealth quintile.

Table 6.4 Mean ideal number of children

Mean ideal number of children for all women age 15-49 by background characteristics, Kenya 2014

Background characteristic	Mean	Number of women[1]
Age		
15-19	3.2	2,662
20-24	3.3	2,654
25-29	3.5	2,888
30-34	3.6	2,111
35-39	4.0	1,728
40-44	4.2	1,252
45-49	4.5	1,015
Residence		
Urban	3.2	5,818
Rural	3.9	8,493
Region		
Coast	4.2	1,336
North Eastern	9.3	270
Eastern	3.1	2,046
Central	3.2	1,887
Rift Valley	3.8	3,659
Western	3.7	1,544
Nyanza	3.4	1,856
Nairobi	3.0	1,712
Education		
No education	7.0	935
Primary incomplete	3.9	3,671
Primary complete	3.5	3,490
Secondary+	3.0	6,214
Wealth quintile		
Lowest	5.1	2,136
Second	3.6	2,531
Middle	3.5	2,808
Fourth	3.3	3,067
Highest	3.1	3,769
Total	3.6	14,311

[1] Number of women who gave a numeric response

6.4 FERTILITY PLANNING

Analysis of the level of fertility planning in a society provides some insight into the degree to which couples are able to control their fertility. To measure the level of unwanted fertility, the KDHS asked women a series of questions for each child born in the preceding five years and any current pregnancy to determine whether the particular pregnancy was desired at the time ('wanted then'), not desired at the time but wanted at a later time ('wanted later'), or unwanted at any time ('wanted no more'). The questions required the respondents to accurately recall their wishes at one or more points in the last five years. Care has to be exercised in interpreting these results because an unwanted conception may well have become a cherished child, leading to the rationalisation of responses to these questions. Such rationalisation may result in an underestimate of the true extent of unwanted births.

Table 6.5 presents the percent distribution of births to women age 15-49 in the five years preceding the survey, by planning status of the birth, according to birth order and mother's age at birth. Ten percent of births in Kenya are unwanted and 25 percent are wanted later. The percentage of unwanted births increases with birth order and with the mother's age at birth. The percentage of births wanted later generally decreases with birth order and with mother's age at birth. Overall, the proportion of births considered unwanted has declined since the 2008-09 KDHS, from 17 percent to 10 percent, while the proportion of births wanted later has remained stable.

Table 6.5 Fertility planning status

Percent distribution of births to women age 15-49 in the five years preceding the survey (including current pregnancies), by planning status of the birth, according to birth order and mother's age at birth, Kenya 2014

Birth order and mother's age at birth	Planning status of birth				Total	Number of births
	Wanted then	Wanted later	Wanted no more	Missing		
Birth order						
1	64.7	34.5	0.5	0.3	100.0	2,652
2	73.1	24.8	1.8	0.2	100.0	2,275
3	67.1	25.9	7.0	0.0	100.0	1,764
4+	56.3	18.8	24.4	0.4	100.0	3,582
Mother's age at birth						
<20	52.7	46.4	0.5	0.4	100.0	1,479
20-24	67.1	29.3	3.5	0.2	100.0	3,201
25-29	71.4	20.1	8.2	0.3	100.0	2,710
30-34	64.0	17.8	17.8	0.4	100.0	1,677
35-39	56.1	13.5	30.3	0.0	100.0	916
40-44	45.9	7.6	45.9	0.6	100.0	258
45-49	(40.7)	(2.0)	(57.3)	(0.0)	100.0	31
Total	64.1	25.4	10.3	0.3	100.0	10,273

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

6.5 WANTED FERTILITY RATES

The wanted fertility rate measures the potential demographic impact of avoiding unwanted births. It is calculated in the same manner as the total fertility rate presented in Chapter 5 but excludes births classified as unwanted from the numerator. A birth is considered wanted if the number of living children at the time of conception is less than the ideal number of children reported by the respondent. The gap between wanted fertility and actual fertility shows how successful women are in achieving their reproductive intentions. This measure may also be an underestimate because women may not want to report an ideal family size that is lower than their actual family size.

The total wanted fertility rates in Table 6.6 represent the levels of fertility that would have prevailed in the three years preceding the survey if all unwanted births had been avoided. Overall, women have 1.0 child more than their ideal number (4.0 compared with 3.0). This implies that the total fertility rate is one child higher than it would be if unwanted births were avoided. The level of wanted fertility is less than the actual fertility for all background characteristics. The gap between wanted and observed fertility is greatest among women living in rural areas, those with less than a secondary education, and those in the lower wealth quintiles.

Table 6.6 Wanted fertility rates

Total wanted fertility rates and total fertility rates for the three years preceding the survey, by background characteristics, Kenya 2014

Background characteristic	Total wanted fertility rates	Total fertility rate
Residence		
Urban	2.6	3.1
Rural	3.4	4.6
Region		
Coast	3.8	4.4
North Eastern	6.4	6.7
Eastern	2.5	3.6
Central	2.1	2.7
Rift Valley	3.4	4.6
Western	3.2	4.5
Nyanza	3.0	4.5
Nairobi	2.3	2.8
Education		
No education	6.1	6.8
Primary incomplete	3.3	4.8
Primary complete	3.1	4.1
Secondary+	2.4	3.0
Wealth quintile		
Lowest	5.0	6.5
Second	3.1	4.7
Middle	2.7	4.0
Fourth	2.7	3.2
Highest	2.3	2.7
Total	3.0	4.0

Note: Rates are calculated based on births to women age 15-49 in the period 1-36 months preceding the survey. The total fertility rates are the same as those presented in Table 5.2.

FAMILY PLANNING 7

Alfred Agwanda, Abdulkadir Amin Awes, Ruth Wayua Muia

Key Findings

- Knowledge of at least one contraceptive method is universal in Kenya.
- More than half of currently married women are using a contraceptive method (58 percent).
- The most popular modern contraceptive methods used by married women are injectables (26 percent), implants (10 percent), and the pill (8 percent).
- Use of modern methods has increased over the last decade from 32 percent in the 2003 KDHS to 53 percent in 2014.
- The public sector remains the major provider of contraceptive methods; 60 percent of modern contraceptive users obtain their contraception from a government source.
- Thirty-one percent of family planning users discontinue use of a method within 12 months of starting its use. Side effects and health concerns (11 percent) are the main reason for discontinuation.
- Eighteen percent of currently married women have an unmet need for family planning services, with 9 percent in need of spacing and 8 percent in need of limiting.

7.1 INTRODUCTION

This chapter presents information on knowledge of various contraceptive methods and discusses past and current use of contraception. For users of periodic abstinence and withdrawal methods, knowledge of the ovulatory cycle is examined; for those relying on sterilisation, the timing of the procedure is assessed. Also discussed are sources of modern contraceptive methods, informed choice, discontinuation rates and reasons for discontinuation, unmet need for family planning, demand for contraception, non-use of contraception, and intention to use contraceptive methods in the future. In addition, information is provided on exposure to family planning messages through the media and contact with family planning providers. These topics are of practical use to policymakers in formulating efficient and effective family planning strategies and policies. Although the main focus of this chapter is on women, results from male respondents are also presented because men play an important role in the realisation of reproductive goals. Wherever possible, comparisons are made with findings from previous surveys in order to evaluate trends and progress made in family planning in Kenya over time.

7.2 KNOWLEDGE OF CONTRACEPTIVE METHODS

Development of a profile regarding knowledge of family planning methods was one of the objectives of the survey, because knowledge of methods is a prerequisite for making a decision to initiate contraceptive use. The 2014 KDHS collected information on knowledge of contraception by asking respondents whether or not they had heard of 10 modern methods (female sterilisation, male sterilisation, the pill, intra-uterine devices [IUDs], injectables, implants, male condoms, female condoms, lactational amenorrhoea, and emergency contraception) and two traditional methods (rhythm or calendar method and withdrawal). Provision was also made within the questionnaire to record any other methods named

spontaneously by the respondent. Most emphasis is placed on women because they bear the risk of exposure to pregnancy and most methods of contraception are designed for them.

Table 7.1 shows the level of knowledge of contraceptive methods among all women and men age 15-49. Knowledge is also presented for women and men who are currently married and who are sexually active and unmarried. Knowledge of at least one family planning method is virtually universal: 98 percent among women and 99 percent among men.

Women are more familiar with modern methods of contraception (98 percent) than with traditional methods (84 percent). Similar to results from the 2008-09 KDHS, the most widely known modern methods of contraception among women are male condoms (96 percent), injectables (95 percent), and the pill (94 percent). The least known methods among women are the lactational amenorrhoea method (LAM) (12 percent), male sterilisation (47 percent), and emergency contraception (59 percent). With regard to traditional methods, about four out of every five women (79 percent) know of the rhythm method and three out of every five (61 percent) know of the withdrawal method.

Similar to women, men are more familiar with modern than with traditional methods (99 percent compared with 86 percent), and the most widely known methods among men include male condoms (99 percent), injectables (92 percent), and the pill (92 percent). Men are more likely than women to know about male sterilisation and withdrawal, while women are more likely than men to know about IUDs, implants, and LAM. On average, women and men know about the same number of methods (mean of 8.7 for women and 8.5 for men), an increase in number and a narrowing of the gap between women and men from the 2008-09 KDHS (mean of 7.5 for women and 6.6 for men).

Table 7.1 Knowledge of contraceptive methods

Percentage of all respondents, currently married respondents and sexually active unmarried respondents age 15-49 who know any contraceptive method, by specific method, Kenya 2014

	Women			Men		
Method	All women	Currently married women	Sexually active unmarried women[1]	All men	Currently married men	Sexually active unmarried men[1]
Any method	98.4	98.7	100.0	99.3	99.7	100.0
Any modern method	98.4	98.7	100.0	99.3	99.7	100.0
Female sterilisation	78.5	84.2	83.6	76.2	87.0	78.2
Male sterilisation	46.6	50.3	50.2	55.6	65.4	56.3
Pill	94.2	97.0	97.5	91.7	96.8	93.6
IUD	77.3	85.8	84.7	63.0	77.3	61.6
Injectables	95.3	98.0	99.3	92.4	97.9	96.2
Implants	85.6	92.4	93.1	65.3	80.7	64.7
Male condom	96.4	96.8	99.1	98.8	99.3	100.0
Female condom	75.6	78.9	84.6	79.0	87.1	84.8
Lactational amenorrhoea (LAM)	12.1	14.2	11.5	8.7	11.2	7.8
Emergency contraception	59.2	60.4	73.6	62.5	70.6	70.3
Any traditional method	83.8	88.7	91.8	85.9	94.9	90.8
Rhythm	78.9	83.5	87.1	80.8	90.8	84.7
Withdrawal	61.2	67.5	78.0	71.9	82.8	79.2
Other methods	4.6	5.7	4.6	3.4	4.4	2.8
Mean number of methods known by respondents 15-49	8.7	9.1	9.5	8.5	9.5	8.8
Number of respondents	31,079	18,549	583	12,063	6,095	1,308
Mean number of methods known by respondents 15-54	na	na	na	8.5	9.5	8.8
Number of respondents	na	na	na	12,819	6,762	1,338

na = Not applicable
[1] Had last sexual intercourse within 30 days preceding the survey

Table 7.2 shows knowledge of contraceptive methods among currently married women and men age 15-49 who have heard of at least one method and who have heard of at least one modern method by background characteristics. Since knowledge of contraception is virtually universal, there is little variation in knowledge according to background characteristics. Knowledge of contraceptive methods is universal in almost all regions except North Eastern (71 percent of women and 89 percent of men). Women and men with no education demonstrated slightly less knowledge of contraceptives (88 percent and 95 percent, respectively) than women and men with at least some education (100 percent). Women and men in the lowest wealth quintile had less knowledge of contraceptive methods than those in higher wealth quintiles, although the differences are less striking among men than they are among women.

More than 95 percent of women demonstrate knowledge of at least one contraceptive method in all counties other than Mandera, Wajir, West Pokot, Garissa, Turkana, Tana River, and Marsabit. Among men, only two counties fall at or below 95 percent: Mandera and Turkana (Table 7.2C).

Table 7.2 Knowledge of contraceptive methods by background characteristics

Percentage of currently married women and currently married men age 15-49 who have heard of at least one contraceptive method and who have heard of at least one modern method by background characteristics, Kenya 2014

	Women			Men		
Background characteristic	Heard of any method	Heard of any modern method[1]	Number	Heard of any method	Heard of any modern method[1]	Number
Age						
15-19	98.2	98.2	695	*	*	16
20-24	98.8	98.7	3,133	99.7	99.7	377
25-29	98.6	98.5	4,556	100.0	99.9	1,201
30-34	98.9	98.9	3,566	99.8	99.8	1,398
35-39	98.9	98.8	2,894	99.3	99.2	1,277
40-44	98.7	98.6	2,091	99.8	99.8	1,100
45-49	98.9	98.8	1,615	99.7	99.6	727
Residence						
Urban	99.6	99.5	7,285	99.8	99.8	2,894
Rural	98.2	98.1	11,265	99.6	99.5	3,201
Region						
Coast	99.4	99.3	1,821	100.0	99.8	617
North Eastern	70.8	68.8	451	89.2	89.2	103
Eastern	99.7	99.7	2,667	100.0	100.0	835
Central	99.9	99.9	2,323	99.4	99.4	773
Rift Valley	98.5	98.4	4,696	99.9	99.7	1,523
Western	100.0	100.0	1,950	100.0	100.0	561
Nyanza	99.9	99.9	2,525	100.0	100.0	767
Nairobi	99.8	99.8	2,117	100.0	100.0	916
Education						
No education	87.8	86.9	1,692	94.7	93.5	234
Primary incomplete	99.6	99.6	4,694	100.0	99.9	1,370
Primary complete	99.9	99.9	5,389	99.7	99.7	1,677
Secondary+	100.0	100.0	6,774	100.0	100.0	2,814
Wealth quintile						
Lowest	93.7	93.2	3,174	98.5	98.1	813
Second	99.7	99.7	3,290	99.9	99.9	1,036
Middle	99.8	99.8	3,503	100.0	100.0	1,110
Fourth	99.8	99.8	3,957	100.0	100.0	1,481
Highest	99.8	99.8	4,626	99.7	99.7	1,655
Total 15-49	98.7	98.7	18,549	99.7	99.7	6,095
50-54	na	na	na	99.7	99.7	667
Total 15-54	na	na	na	99.7	99.7	6,762

Note: An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
na = Not applicable
[1] Female sterilisation, male sterilisation, pill, IUD, injectables, implants, male condom, female condom, lactational amenorrhoea method (LAM), and emergency contraception

Table 7.2C Knowledge of contraceptive methods by county

Percentage of currently married women and currently married men age 15-49 who have heard of at least one contraceptive method and who have heard of at least one modern method by county, Kenya 2014

	Women			Men		
County	Heard of any method	Heard of any modern method[1]	Number	Heard of any method	Heard of any modern method[1]	Number
Coast	**99.4**	**99.3**	**1,821**	**100.0**	**99.8**	**617**
Mombasa	99.8	99.8	537	100.0	100.0	254
Kwale	100.0	100.0	357	100.0	100.0	91
Kilifi	99.7	99.7	600	100.0	100.0	168
Tana River	94.0	94.0	144	100.0	97.5	40
Lamu	100.0	100.0	55	100.0	100.0	19
Taita Taveta	100.0	100.0	128	100.0	100.0	46
North Eastern	**70.8**	**68.8**	**451**	**89.2**	**89.2**	**103**
Garissa	86.7	86.1	165	100.0	100.0	40
Wajir	70.9	67.6	158	97.8	97.8	37
Mandera	50.3	48.1	128	59.7	59.7	26
Eastern	**99.7**	**99.7**	**2,667**	**100.0**	**100.0**	**835**
Marsabit	94.0	93.3	76	100.0	100.0	17
Isiolo	98.3	97.8	65	100.0	100.0	17
Meru	100.0	100.0	690	100.0	100.0	273
Tharaka-Nithi	99.8	99.8	169	100.0	100.0	52
Embu	100.0	100.0	266	100.0	100.0	69
Kitui	100.0	100.0	445	100.0	100.0	112
Machakos	99.8	99.8	553	100.0	100.0	186
Makueni	100.0	100.0	404	100.0	100.0	108
Central	**99.9**	**99.9**	**2,323**	**99.4**	**99.4**	**773**
Nyandarua	99.4	99.4	273	100.0	100.0	82
Nyeri	99.8	99.8	358	100.0	100.0	129
Kirinyaga	100.0	100.0	281	100.0	100.0	104
Murang'a	100.0	100.0	444	100.0	100.0	124
Kiambu	100.0	100.0	967	98.7	98.7	333
Rift Valley	**98.5**	**98.4**	**4,696**	**99.9**	**99.7**	**1,523**
Turkana	93.1	92.3	214	94.6	91.7	40
West Pokot	75.7	75.0	197	100.0	98.5	60
Samburu	99.6	98.8	83	100.0	100.0	19
Trans-Nzoia	99.9	99.9	467	100.0	100.0	139
Uasin Gishu	100.0	100.0	460	100.0	100.0	178
Elgeyo Marakwet	100.0	100.0	139	100.0	100.0	49
Nandi	100.0	100.0	335	100.0	100.0	119
Baringo	98.2	98.0	190	100.0	100.0	57
Laikipia	98.8	98.8	207	100.0	100.0	59
Nakuru	100.0	100.0	851	100.0	100.0	273
Narok	100.0	100.0	446	100.0	100.0	142
Kajiado	99.6	99.3	387	100.0	100.0	133
Kericho	100.0	100.0	327	100.0	100.0	115
Bomet	100.0	100.0	394	100.0	100.0	140
Western	**100.0**	**100.0**	**1,950**	**100.0**	**100.0**	**561**
Kakamega	99.9	99.9	697	100.0	100.0	212
Vihiga	100.0	100.0	212	100.0	100.0	48
Bungoma	100.0	100.0	696	100.0	100.0	201
Busia	100.0	100.0	345	100.0	100.0	100
Nyanza	**99.9**	**99.9**	**2,525**	**100.0**	**100.0**	**767**
Siaya	100.0	100.0	326	100.0	100.0	110
Kisumu	100.0	100.0	500	100.0	100.0	166
Homa Bay	100.0	100.0	520	100.0	100.0	132
Migori	99.3	99.3	432	100.0	100.0	128
Kisii	100.0	100.0	531	100.0	100.0	160
Nyamira	100.0	100.0	216	100.0	100.0	73
Nairobi	**99.8**	**99.8**	**2,117**	**100.0**	**100.0**	**916**
Total 15-49	98.7	98.7	18,549	99.7	99.7	6,095
50-54	na	na	na	99.7	99.7	667
Total 15-54	na	na	na	99.7	99.7	6,762

na = Not applicable

[1] Female sterilisation, male sterilisation, pill, IUD, injectables, implants, male condom, female condom, lactational amenorrhoea method (LAM), and emergency contraception

7.3 CURRENT USE OF CONTRACEPTION

This section presents information on the prevalence of current contraceptive use among all women, currently married women, and sexually active unmarried women age 15-49. Current use of contraceptives is the most widely employed and valuable measure of the success of family planning programmes. The contraceptive prevalence rate (CPR) is usually defined as the percentage of currently married women who are currently using a method of contraception.

Table 7.3 shows the percent distribution by age of all women, currently married women, and sexually active unmarried women who use specific family planning methods. Contraceptive methods are grouped into modern and traditional methods.

Table 7.3 Current use of contraception by age

Percent distribution of all women, currently married women, and sexually active unmarried women age 15-49 by contraceptive method currently used, according to age, Kenya 2014

			Modern method										Any traditional method	Traditional method					
Age	Any method	Any modern method	Female sterilisation	Male sterilisation	Pill	IUD	Injectables	Implants	Male condom	Female condom	LAM	Other		Rhythm	Withdrawal	Other	Not currently using	Total	Number of women
									ALL WOMEN										
15-19	10.1	9.3	0.0	0.0	0.5	0.0	4.9	1.2	2.5	0.1	0.0	0.0	0.8	0.6	0.2	0.0	89.9	100.0	5,820
20-24	42.0	38.5	0.0	0.0	4.6	0.9	20.6	7.2	4.9	0.1	0.0	0.0	3.5	2.9	0.4	0.2	58.0	100.0	5,735
25-29	54.2	51.0	0.4	0.0	5.9	2.7	27.7	11.0	3.2	0.0	0.1	0.1	3.2	2.6	0.4	0.2	45.8	100.0	6,100
30-34	57.5	53.8	2.0	0.0	7.9	3.6	26.5	10.8	2.7	0.0	0.1	0.1	3.7	2.7	0.6	0.4	42.5	100.0	4,510
35-39	55.7	51.0	4.2	0.1	9.1	3.7	21.6	9.2	3.0	0.0	0.1	0.0	4.7	4.0	0.6	0.2	44.3	100.0	3,773
40-44	48.4	43.4	7.1	0.0	7.3	5.2	15.3	5.8	2.5	0.0	0.0	0.1	5.0	4.1	0.6	0.4	51.6	100.0	2,885
45-49	37.3	31.0	9.5	0.0	5.9	2.0	9.4	2.4	1.8	0.0	0.0	0.0	6.3	5.2	0.5	0.6	62.7	100.0	2,257
Total	42.6	39.1	2.2	0.0	5.5	2.3	18.7	7.1	3.1	0.0	0.1	0.0	3.5	2.8	0.4	0.2	57.4	100.0	31,079
									CURRENTLY MARRIED WOMEN										
15-19	40.2	36.8	0.0	0.0	1.9	0.2	27.1	5.4	2.1	0.0	0.0	0.0	3.4	2.0	1.3	0.1	59.8	100.0	695
20-24	53.5	49.8	0.1	0.0	6.3	1.4	30.2	9.6	2.2	0.0	0.0	0.0	3.7	2.9	0.5	0.3	46.5	100.0	3,133
25-29	60.8	57.3	0.4	0.0	7.2	3.1	31.4	12.9	2.1	0.0	0.1	0.0	3.6	2.9	0.4	0.2	39.2	100.0	4,556
30-34	63.5	59.1	2.3	0.0	9.1	4.0	29.7	11.9	1.9	0.0	0.2	0.0	4.5	3.2	0.7	0.5	36.5	100.0	3,566
35-39	63.0	57.7	4.8	0.1	10.8	4.5	24.5	10.4	2.6	0.0	0.1	0.0	5.3	4.4	0.8	0.1	37.0	100.0	2,894
40-44	57.7	51.1	8.1	0.1	9.1	6.7	18.0	6.5	2.6	0.0	0.0	0.1	6.6	5.3	0.8	0.5	42.3	100.0	2,091
45-49	45.2	37.2	11.0	0.0	7.5	2.3	11.6	2.9	1.9	0.0	0.0	0.0	8.0	6.7	0.7	0.6	54.8	100.0	1,615
Total	58.0	53.2	3.2	0.0	8.0	3.4	26.4	9.9	2.2	0.0	0.1	0.0	4.8	3.8	0.7	0.3	42.0	100.0	18,549
									SEXUALLY ACTIVE UNMARRIED WOMEN[1]										
15-19	50.1	49.3	0.0	0.0	1.8	0.0	14.3	6.0	27.2	0.0	0.0	0.0	0.7	0.7	0.0	0.0	49.9	100.0	79
20-24	69.3	64.2	0.0	0.0	12.2	0.0	13.4	1.5	35.0	2.1	0.0	0.0	5.1	3.8	1.3	0.0	30.7	100.0	157
25-29	75.7	69.8	0.0	0.0	7.6	1.8	35.0	8.2	17.2	0.0	0.0	0.0	5.8	3.2	2.0	0.6	24.3	100.0	117
30-34	74.4	71.3	0.4	0.0	3.9	3.9	30.2	15.1	17.8	0.0	0.0	0.0	3.1	1.3	1.8	0.0	25.6	100.0	94
35-39	64.2	55.2	5.3	0.0	4.8	1.6	25.1	9.4	7.8	0.0	0.0	1.2	9.1	9.1	0.0	0.0	35.8	100.0	57
40-44	(39.0)	(38.3)	(5.0)	(0.0)	(5.5)	(0.0)	(18.1)	(0.0)	(9.7)	(0.0)	(0.0)	(0.0)	(0.7)	(0.7)	(0.0)	(0.0)	(61.0)	100.0	52
45-49	(64.6)	(56.3)	(20.6)	(0.0)	(0.0)	(0.0)	(17.2)	(12.5)	(6.0)	(0.0)	(0.0)	(0.0)	(8.3)	(8.3)	(0.0)	(0.0)	(35.4)	100.0	26
Total	65.4	60.9	1.9	0.0	6.6	1.1	22.3	6.8	21.4	0.6	0.0	0.1	4.5	3.3	1.1	0.1	34.6	100.0	583

Note: If more than one method is used, only the most effective method is considered in this tabulation. Figures in parentheses are based on 25-49 unweighted cases.
na = Not applicable
LAM = Lactational amenorrhoea method
[1] Women who have had sexual intercourse within 30 days preceding the survey

Nearly 6 in 10 currently married women (58 percent) are using a method of family planning. Modern methods of contraception are more commonly used (53 percent) than are traditional methods (5 percent). Of the modern methods, injectables are the most widely used (26 percent), followed by implants (10 percent) and the pill (8 percent); all other modern methods are used by 3 percent or less of married women.

Use of any contraceptive method is higher among sexually active unmarried women (65 percent) than among currently married women (58 percent). More sexually active unmarried women use modern (61 percent) than traditional (5 percent) contraceptive methods. Injectables are the most commonly used form of modern contraception for sexually active unmarried women at 22 percent, followed by male condoms at 21 percent.

Table 7.3 further shows that contraceptive use varies by age, peaking at age 30-34 among currently married women and at age 25-29 among sexually active unmarried women.

7.4 CURRENT USE OF CONTRACEPTION BY BACKGROUND CHARACTERISTICS

Analysing current use of contraception by background characteristics is important because it helps identify subgroups of the population to target for family planning services. Table 7.4 presents the percent distribution of currently married women age 15-49 by their use of family planning methods, according to background characteristics. This table allows a comparison of levels of current contraceptive use across major population groups and an examination of differences in use in the various subgroups.

Table 7.4 shows that contraceptive use is associated with the number of children a woman has. Only 15 percent of currently married women with no living children use contraception; the percentage increases to 61 percent among women with one or two children and 66 percent among women with three or four children before declining to 52 percent among women with five or more children. A higher percentage of urban women (62 percent) than rural women (56 percent) use some method of contraception, although this gap is smaller than the one observed in the 2008-09 KDHS (53 percent urban, 43 percent rural).

Table 7.4 Current use of contraception by background characteristics

Percent distribution of currently married women age 15-49 by contraceptive method currently used, according to background characteristics, Kenya 2014

			Modern method										Any tradi-	Traditional method					
Background characteristic	Any method	Any modern method	Female sterili-sation	Male sterili-sation	Pill	IUD	Inject-ables	Im-plants	Male condom	Female condom	LAM	Other	tional method	Rhythm	With-drawal	Other	Not cur-rently using	Total	Number of women
Number of living children																			
0	15.4	12.3	0.0	0.0	3.7	0.4	3.0	0.4	4.8	0.0	0.0	0.0	3.1	2.5	0.6	0.0	84.6	100.0	1,086
1-2	61.4	56.5	0.4	0.0	9.5	3.9	29.7	10.8	2.2	0.0	0.1	0.0	4.8	3.8	0.6	0.4	38.6	100.0	7,339
3-4	65.9	61.3	4.0	0.0	9.4	4.3	30.3	11.2	2.0	0.0	0.1	0.0	4.6	3.7	0.6	0.3	34.1	100.0	5,936
5+	51.9	46.6	7.7	0.1	4.4	2.2	21.3	8.9	1.8	0.0	0.1	0.1	5.3	4.1	0.8	0.3	48.1	100.0	4,188
Residence																			
Urban	61.8	56.9	2.1	0.0	10.7	4.7	24.7	12.0	2.6	0.0	0.1	0.0	4.9	3.8	0.7	0.4	38.2	100.0	7,285
Rural	55.5	50.9	3.9	0.0	6.2	2.6	27.5	8.6	1.9	0.0	0.1	0.0	4.6	3.7	0.7	0.3	44.5	100.0	11,265
Region																			
Coast	43.9	38.3	1.6	0.0	4.7	2.2	18.7	9.4	1.5	0.0	0.1	0.0	5.6	4.2	1.4	0.1	56.1	100.0	1,821
North Eastern	3.4	3.4	0.0	0.0	0.6	0.1	1.9	0.6	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	96.6	100.0	451
Eastern	70.4	63.9	4.8	0.0	8.9	2.9	37.9	7.8	1.5	0.0	0.0	0.0	6.5	5.6	0.5	0.3	29.6	100.0	2,667
Central	72.8	66.9	3.5	0.0	19.5	9.0	21.6	10.7	2.4	0.0	0.2	0.0	5.9	4.9	0.7	0.3	27.2	100.0	2,323
Rift Valley	52.8	46.8	2.2	0.0	5.5	2.9	26.8	7.2	1.9	0.0	0.2	0.0	6.0	4.7	1.0	0.3	47.2	100.0	4,696
Western	58.6	56.9	5.9	0.0	4.6	1.3	27.5	15.2	2.5	0.0	0.0	0.0	1.7	1.1	0.3	0.3	41.4	100.0	1,950
Nyanza	56.4	53.9	3.6	0.0	3.4	2.0	29.3	12.4	2.9	0.0	0.1	0.1	2.5	2.0	0.3	0.2	43.6	100.0	2,525
Nairobi	62.6	58.3	2.0	0.1	12.5	4.5	23.6	12.1	3.3	0.0	0.0	0.0	4.4	3.2	0.3	0.9	37.4	100.0	2,117
Education																			
No education	17.7	15.3	1.2	0.0	1.3	0.2	8.3	3.7	0.5	0.0	0.0	0.0	2.4	1.5	0.7	0.1	82.3	100.0	1,692
Primary incomplete	54.6	51.1	3.9	0.1	4.5	1.8	28.5	10.4	1.9	0.0	0.1	0.0	3.4	2.7	0.4	0.3	45.4	100.0	4,694
Primary complete	64.3	59.6	4.2	0.0	9.7	3.6	30.7	9.9	1.6	0.0	0.1	0.0	4.7	3.7	0.7	0.3	35.7	100.0	5,389
Secondary+	65.3	59.0	2.4	0.0	10.7	5.3	26.1	11.1	3.3	0.0	0.1	0.0	6.3	5.1	0.8	0.4	34.7	100.0	6,774
Wealth quintile																			
Lowest	32.3	29.2	1.9	0.0	1.4	0.5	19.0	5.7	0.8	0.0	0.0	0.0	3.1	2.2	0.8	0.1	67.7	100.0	3,174
Second	58.2	54.1	3.6	0.0	5.6	1.5	31.4	10.1	1.8	0.0	0.0	0.0	4.1	3.4	0.5	0.2	41.8	100.0	3,290
Middle	64.2	59.5	4.8	0.0	7.3	3.0	32.4	9.8	2.1	0.0	0.1	0.1	4.7	3.8	0.6	0.3	35.8	100.0	3,503
Fourth	65.9	60.9	3.1	0.1	9.5	3.7	30.4	11.1	2.9	0.0	0.1	0.0	5.0	4.0	0.7	0.3	34.1	100.0	3,957
Highest	63.9	57.7	2.7	0.0	13.4	7.0	19.9	11.7	2.9	0.0	0.1	0.0	6.2	4.9	0.7	0.6	36.1	100.0	4,626
Total	58.0	53.2	3.2	0.0	8.0	3.4	26.4	9.9	2.2	0.0	0.1	0.0	4.8	3.8	0.7	0.3	42.0	100.0	18,549

Note: If more than one method is used, only the most effective method is considered in this tabulation.
LAM = Lactational amenorrhoea method

Use of any method is highest in the Central (73 percent) and Eastern (70 percent) regions and lowest in the North Eastern (3 percent) and Coast (44 percent) regions. There is a noticeable increase in current use among women with at least some education and a higher degree of household wealth. Only 18 percent of currently married women with no education use contraception, while more than half of women with at least some schooling use a method (55-65 percent). Thirty-two percent of women in the lowest wealth quintile use a method of contraception, as compared with 58 percent to 66 percent of women in the higher wealth quintiles.

Twenty-two counties have a CPR above the national average (58 percent). Approximately three-quarters of currently married women use a contraceptive method in Kirinyaga (81 percent), Makueni (80 percent), Meru (78 percent), Machakos (76 percent), and Tharaka-Nithi and Kiambu (74 percent each). The counties with the lowest CPR include Mandera and Wajir (2 percent each), Garissa (6 percent), Turkana (10 percent), and Marsabit (12 percent) (Table 7.4C).

Table 7.4C Current use of contraception by county

Percent distribution of currently married women age 15-49 by contraceptive method currently used, according to county, Kenya 2014

			Modern method										Any traditional method	Traditional method					
County	Any method	Any modern method	Female sterilisation	Male sterilisation	Pill	IUD	Injectables	Implants	Male condom	Female condom	LAM	Other		Rhythm	Withdrawal	Other	Not currently using	Total	Number of women
Coast	**43.9**	**38.3**	**1.6**	**0.0**	**4.7**	**2.2**	**18.7**	**9.4**	**1.5**	**0.0**	**0.1**	**0.0**	**5.6**	**4.2**	**1.4**	**0.1**	**56.1**	**100.0**	**1,821**
Mombasa	55.0	43.6	0.2	0.0	6.5	3.2	17.7	12.6	2.9	0.0	0.4	0.0	11.4	9.0	2.4	0.0	45.0	100.0	537
Kwale	41.5	38.2	3.0	0.0	4.3	1.6	21.6	6.8	0.8	0.0	0.0	0.0	3.3	2.2	1.1	0.0	58.5	100.0	357
Kilifi	34.1	32.8	2.8	0.0	2.7	1.1	15.9	10.0	0.3	0.0	0.0	0.0	1.3	0.9	0.3	0.0	65.9	100.0	600
Tana River	28.7	20.5	0.2	0.0	1.1	0.4	13.1	2.7	3.0	0.0	0.0	0.0	8.2	3.9	4.3	0.0	71.3	100.0	144
Lamu	42.2	39.5	1.2	0.0	10.2	1.0	19.0	6.4	1.2	0.0	0.5	0.0	2.6	2.6	0.1	0.0	57.8	100.0	55
Taita Taveta	68.0	61.3	0.4	0.0	10.0	6.9	34.1	8.6	1.5	0.0	0.0	0.0	6.6	5.4	0.5	0.7	32.0	100.0	128
North Eastern	**3.4**	**3.4**	**0.0**	**0.0**	**0.6**	**0.1**	**1.9**	**0.6**	**0.1**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**96.6**	**100.0**	**451**
Garissa	5.5	5.5	0.0	0.0	1.1	0.2	2.4	1.5	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	94.5	100.0	165
Wajir	2.3	2.3	0.0	0.0	0.2	0.0	1.6	0.2	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	97.7	100.0	158
Mandera	1.9	1.9	0.0	0.0	0.4	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	98.1	100.0	128
Eastern	**70.4**	**63.9**	**4.8**	**0.0**	**8.9**	**2.9**	**37.9**	**7.8**	**1.5**	**0.0**	**0.0**	**0.0**	**6.5**	**5.6**	**0.5**	**0.3**	**29.6**	**100.0**	**2,667**
Marsabit	11.7	10.9	0.4	0.0	1.1	0.3	6.3	2.7	0.0	0.0	0.0	0.0	0.8	0.8	0.0	0.0	88.3	100.0	76
Isiolo	27.0	26.3	0.8	0.0	7.2	1.4	13.2	3.3	0.4	0.0	0.0	0.0	0.7	0.6	0.1	0.0	73.0	100.0	65
Meru	78.2	73.2	4.3	0.0	12.3	5.4	44.8	3.5	2.8	0.0	0.0	0.0	5.0	4.3	0.7	0.0	21.8	100.0	690
Tharaka-Nithi	74.0	67.2	1.8	0.0	7.0	7.2	44.1	5.5	1.3	0.2	0.0	0.0	6.8	4.3	0.6	1.9	26.0	100.0	169
Embu	70.6	67.2	3.8	0.0	15.2	4.6	31.2	11.0	1.5	0.0	0.0	0.0	3.4	3.2	0.2	0.0	29.4	100.0	266
Kitui	57.3	55.1	3.0	0.0	4.5	1.1	36.9	9.5	0.0	0.0	0.0	0.0	2.2	2.0	0.0	0.2	42.7	100.0	445
Machakos	75.9	67.5	5.5	0.0	9.1	0.5	41.6	10.4	0.5	0.0	0.0	0.0	8.3	7.5	0.5	0.3	24.1	100.0	553
Makueni	80.3	65.0	10.2	0.0	5.9	1.8	33.8	10.3	2.9	0.0	0.0	0.0	15.3	13.4	1.1	0.8	19.7	100.0	404
Central	**72.8**	**66.9**	**3.5**	**0.0**	**19.5**	**9.0**	**21.6**	**10.7**	**2.4**	**0.0**	**0.2**	**0.0**	**5.9**	**4.9**	**0.7**	**0.3**	**27.2**	**100.0**	**2,323**
Nyandarua	65.6	60.4	2.8	0.0	13.8	8.0	22.9	10.8	0.9	0.0	1.3	0.0	5.2	5.0	0.2	0.0	34.4	100.0	273
Nyeri	73.1	67.1	7.3	0.0	16.7	10.0	22.3	9.2	1.6	0.0	0.0	0.0	6.0	5.3	0.6	0.2	26.9	100.0	358
Kirinyaga	81.0	75.6	0.9	0.0	26.0	13.2	20.4	13.0	2.0	0.0	0.0	0.0	5.4	4.3	1.1	0.0	19.0	100.0	281
Murang'a	68.9	63.4	4.0	0.0	22.1	6.3	20.6	7.8	2.5	0.0	0.0	0.0	5.5	4.3	0.0	1.2	31.1	100.0	444
Kiambu	74.0	67.8	2.7	0.0	19.2	8.9	21.9	12.0	3.1	0.0	0.0	0.0	6.3	5.3	1.0	0.0	26.0	100.0	967
Rift Valley	**52.8**	**46.8**	**2.2**	**0.0**	**5.5**	**2.9**	**26.8**	**7.2**	**1.9**	**0.0**	**0.2**	**0.0**	**6.0**	**4.7**	**1.0**	**0.3**	**47.2**	**100.0**	**4,696**
Turkana	10.4	10.1	0.0	0.0	0.5	0.5	5.7	3.0	0.4	0.0	0.0	0.0	0.3	0.3	0.0	0.0	89.6	100.0	214
West Pokot	14.2	13.3	0.4	0.0	0.7	0.2	9.0	3.1	0.0	0.0	0.0	0.0	0.9	0.2	0.0	0.7	85.8	100.0	197
Samburu	22.7	20.0	0.5	0.0	2.9	0.6	10.9	4.4	0.8	0.0	0.0	0.0	2.7	2.4	0.3	0.0	77.3	100.0	83
Trans-Nzoia	63.9	56.4	4.0	0.0	4.9	0.7	38.7	4.6	3.2	0.1	0.2	0.0	7.5	5.9	1.1	0.4	36.1	100.0	467
Uasin Gishu	62.6	56.0	1.8	0.0	7.4	2.7	28.7	12.9	2.4	0.0	0.0	0.0	6.6	5.3	0.8	0.5	37.4	100.0	460
Elgeyo Marakwet	55.2	43.6	1.1	0.0	1.6	1.3	28.5	8.7	2.1	0.3	0.0	0.0	11.6	10.6	1.0	0.0	44.8	100.0	139
Nandi	64.5	59.2	1.8	0.0	5.5	0.9	40.3	9.1	1.6	0.0	0.0	0.0	5.4	3.9	1.5	0.0	35.5	100.0	335
Baringo	41.4	33.1	0.7	0.0	4.6	3.2	16.2	5.5	2.3	0.0	0.6	0.0	8.3	6.5	1.4	0.4	58.6	100.0	190
Laikipia	59.1	51.3	5.0	0.0	12.5	5.1	20.8	4.5	3.1	0.0	0.0	0.4	7.8	6.6	0.6	0.7	40.9	100.0	207
Nakuru	56.8	53.5	1.4	0.2	10.4	6.7	25.4	7.6	1.4	0.0	0.4	0.0	3.2	2.6	0.4	0.2	43.2	100.0	851
Narok	47.8	38.1	1.9	0.0	3.7	1.1	25.3	3.8	2.2	0.0	0.0	0.1	9.7	6.9	2.4	0.4	52.2	100.0	446
Kajiado	54.5	45.2	1.5	0.0	6.5	5.9	20.0	8.9	2.2	0.0	0.2	0.0	9.3	6.7	2.1	0.6	45.5	100.0	387
Kericho	62.9	56.9	3.5	0.0	3.2	2.1	35.8	9.9	1.9	0.0	0.3	0.2	6.1	5.1	1.0	0.0	37.1	100.0	327
Bomet	54.8	50.4	4.9	0.0	0.4	1.7	33.9	7.5	2.0	0.0	0.0	0.0	4.4	3.5	0.6	0.4	45.2	100.0	394
Western	**58.6**	**56.9**	**5.9**	**0.0**	**4.6**	**1.3**	**27.5**	**15.2**	**2.5**	**0.0**	**0.0**	**0.0**	**1.7**	**1.1**	**0.3**	**0.3**	**41.4**	**100.0**	**1,950**
Kakamega	62.1	60.3	6.9	0.0	5.4	1.0	30.4	14.1	2.6	0.0	0.0	0.0	1.7	1.0	0.5	0.3	37.9	100.0	697
Vihiga	59.5	56.6	3.9	0.0	4.8	3.3	25.3	16.2	3.1	0.0	0.0	0.0	2.9	2.9	0.0	0.0	40.5	100.0	212
Bungoma	55.5	53.9	5.1	0.0	4.4	0.8	29.0	11.8	2.9	0.0	0.0	0.0	1.6	0.9	0.2	0.5	44.5	100.0	696
Busia	57.5	56.5	6.5	0.0	3.5	1.8	20.2	23.6	1.0	0.0	0.0	0.0	0.9	0.9	0.1	0.0	42.5	100.0	345
Nyanza	**56.4**	**53.9**	**3.6**	**0.0**	**3.4**	**2.0**	**29.3**	**12.4**	**2.9**	**0.0**	**0.1**	**0.1**	**2.5**	**2.0**	**0.3**	**0.2**	**43.6**	**100.0**	**2,525**
Siaya	55.0	51.0	3.2	0.0	5.8	1.8	19.3	15.3	5.7	0.0	0.0	0.0	4.0	3.3	0.7	0.0	45.0	100.0	326
Kisumu	62.4	59.3	5.2	0.0	3.7	1.5	24.3	21.1	3.5	0.0	0.0	0.0	3.1	3.1	0.0	0.0	37.6	100.0	500
Homa Bay	46.7	45.5	3.8	0.0	2.1	1.1	26.1	8.6	3.5	0.0	0.0	0.3	1.2	1.2	0.0	0.0	53.3	100.0	520
Migori	44.6	43.9	1.9	0.0	2.3	1.1	24.6	10.6	3.1	0.3	0.0	0.0	0.7	0.2	0.3	0.3	55.4	100.0	432
Kisii	66.1	62.8	3.2	0.0	4.0	3.5	41.8	9.2	0.8	0.0	0.3	0.0	3.4	2.2	0.7	0.4	33.9	100.0	531
Nyamira	67.9	64.2	4.2	0.0	3.5	3.9	42.6	8.2	1.2	0.0	0.3	0.3	3.7	3.0	0.3	0.3	32.1	100.0	216
Nairobi	**62.6**	**58.3**	**2.0**	**0.1**	**12.5**	**4.5**	**23.6**	**12.1**	**3.3**	**0.0**	**0.0**	**0.0**	**4.4**	**3.2**	**0.3**	**0.9**	**37.4**	**100.0**	**2,117**
Total	58.0	53.2	3.2	0.0	8.0	3.4	26.4	9.9	2.2	0.0	0.1	0.0	4.8	3.8	0.7	0.3	42.0	100.0	18,549

Note: If more than one method is used, only the most effective method is considered in this tabulation.
LAM = Lactational amenorrhoea method.

7.5 TRENDS IN CURRENT USE OF CONTRACEPTION

Trends in current use of family planning can be used to monitor and evaluate the success of family planning programmes over time. Table 7.5 and Figure 7.1 show trends in the use of modern contraceptives among currently married women from 2003 to 2014. Data from the three DHS surveys conducted in Kenya over the past 11 years show an impressive increase in the use of modern contraceptive methods.

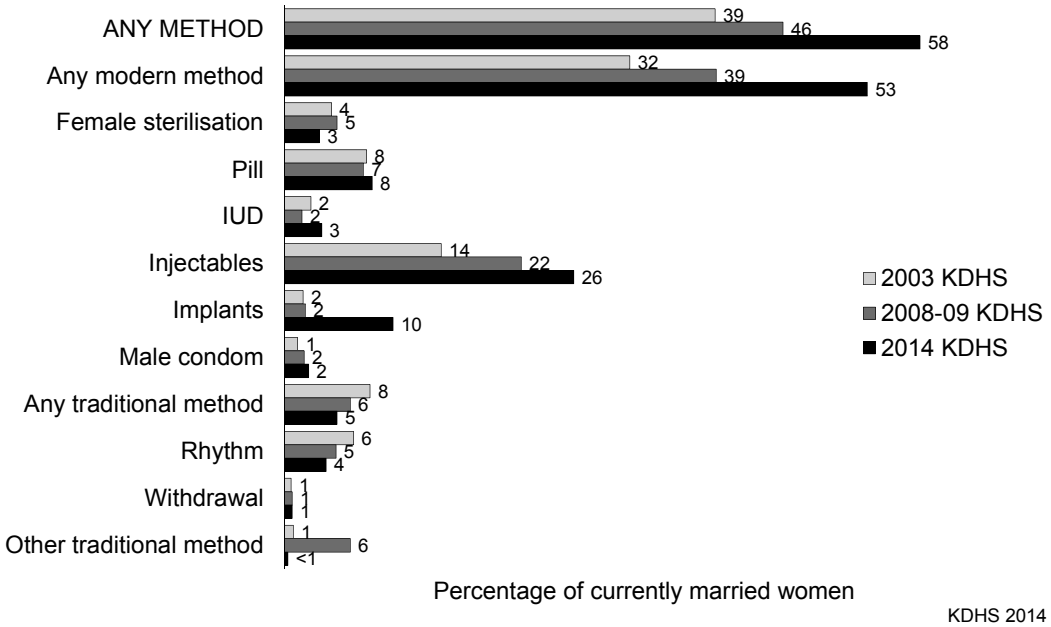
Table 7.5 Trends in the current use of contraception

Percent distribution of currently married women age 15-49 by contraceptive method currently used, according to several surveys

Method	2003 KDHS	2008-09 KDHS	2014 KDHS
Any method	**39.3**	**45.5**	**58.0**
Any modern method	**31.5**	**39.4**	**53.2**
Female sterilisation	4.3	4.8	3.2
Male sterilisation		0.0	0.0
Pill	7.5	7.2	8.0
IUD	2.4	1.6	3.4
Injectables	14.3	21.6	26.4
Implants	1.7	1.9	9.9
Male condom	1.2[a]	1.8[a]	2.2
Other modern method	1.5	0.5	0.1
Any traditional method	**7.0**	**5.3**	**4.8**
Rhythm	6.3	4.7	3.8
Withdrawal	0.6	0.7	0.7
Other	1.9	0.7	0.3
Not currently using	60.7	54.5	42.0
Total	100.0	100.0	100.0
Number of women	4,919	4,928	18,549

[a] The question did not specify male condom.

Figure 7.1 **Trends in contraceptive use among currently married women**



KDHS 2014

Currently married women's use of modern contraceptives increased from 32 percent in 2003 to 39 percent in 2008-09 and again to the current 53 percent. With these increases, the government of Kenya's Population Policy for National Development has achieved its target of 52 percent of currently married women using a modern contraceptive method by 2015. While the use of modern methods has increased, uptake of traditional contraceptive methods has decreased slightly over the years (8 percent in 2003 to 5 percent in 2014). Among the various methods women use, the biggest change is reported for injectables and for implants. Currently married women's use of injectables increased from 14 percent in 2003 to the current 26 percent. Use of implants increased from 2 percent in 2003 to the current 10 percent.

7.6 TIMING OF STERILISATION

Sterilisation is a very effective permanent method of family planning. In women, it involves blocking or occluding the fallopian tubes to prevent eggs and sperm from uniting. This is one of the

options that may be adopted by couples who do not want any more children; therefore, it is important to know if the age at which women get sterilised is changing. Table 7.6 shows the percent distribution of sterilised women age 15-49 by age at the time of sterilisation and median age at sterilisation, according to the number of years since the operation. The median age at sterilisation for Kenyan women is 33.2 years, which does not differ much from the median age (33.0 years) reported in the 2008-09 KDHS.

Table 7.6 Timing of sterilisation

Percent distribution of sterilised women age 15-49 by age at the time of sterilisation and median age at sterilisation, according to the number of years since the operation, Kenya 2014

Years since operation	Age at time of sterilisation						Total	Number of women	Median age[1]
	<25	25-29	30-34	35-39	40-44	45-49			
<2	(0.0)	(18.6)	(34.9)	(30.1)	(14.1)	(2.3)	100.0	48	(33.4)
2-3	4.6	11.1	36.1	24.5	15.4	8.5	100.0	68	32.4
4-5	0.0	25.3	31.3	20.1	23.3	0.0	100.0	56	33.3
6-7	(0.0)	(8.0)	(25.4)	(59.2)	(7.5)	(0.0)	100.0	46	(36.4)
8-9	(1.0)	(12.3)	(19.9)	(63.3)	(3.5)	(0.0)	100.0	40	(36.3)
10+	8.4	32.9	42.9	15.8	0.0	0.0	100.0	81	a
Total	3.0	19.4	33.4	31.7	10.4	2.0	100.0	339	33.2

Note: Figures in parentheses are based on 25-49 unweighted cases.
a = Not calculated due to censoring
[1] Median age at sterilisation is calculated only for women sterilised before age 40 to avoid problems of censoring.

7.7 SOURCE OF CONTRACEPTION

Table 7.7 presents the main sources of contraception for users of modern methods. Information on where users obtain their contraceptive method is important for programme managers and implementers in designing family planning policies and programmes. All current users of modern contraceptive methods were asked the most recent source of their method.

The public sector is the major source of contraceptive methods in Kenya, providing contraception to 60 percent of current users. Within the public sector, 24 percent of users obtain their methods from government dispensaries, 20 percent from government hospitals, and 16 percent from government health centres. Thirty-four percent of modern contraceptive users obtain their methods from the private medical sector, mainly from private hospitals/clinics (21 percent) and pharmacies (10 percent). Sources of contraception remain stable compared with those reported in 2008-09, when 57 percent of users obtained contraception from the public sector and 36 percent from the private sector.

Except for the pill and male condoms, the public sector is the primary provider of most types of contraception used in Kenya. The majority of women who use the pill obtain it from the private sector (57 percent), and nearly half of women who use male condoms obtain them from other sources, largely from shops (39 percent). These findings point to the continued reliance on government facilities as a major source of contraceptives.

Table 7.7 Source of modern contraception methods

Percent distribution of users of modern contraceptive methods age 15-49 by most recent source of method, according to method, Kenya 2014

Source	Female sterilisation	Pill	IUD	Injectables	Implants	Male condom	Total
Public sector	**74.5**	**39.6**	**64.3**	**62.7**	**78.2**	**23.7**	**59.9**
Government hospital	50.8	13.3	32.1	15.2	28.4	9.4	19.9
Government health centre	14.7	11.0	19.6	15.6	23.5	6.4	15.9
Government dispensary	9.0	15.3	12.7	31.9	26.3	7.9	24.1
Other public	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Private medical sector	**21.4**	**57.0**	**34.5**	**36.4**	**18.2**	**19.4**	**33.7**
Private hospital/clinic	9.3	10.4	29.0	29.3	15.6	1.9	20.7
Pharmacy/chemist	0.0	45.4	0.0	5.4	0.0	16.1	10.3
Nursing/maternity home	0.9	0.2	0.9	0.1	0.3	0.6	0.3
Faith-based church, mission hospital/clinic	10.3	0.6	2.8	1.4	1.8	0.8	1.9
Family options/FHOK clinic	0.9	0.0	1.9	0.2	0.4	0.0	0.3
Other private	0.0	0.3	0.0	0.0	0.0	0.0	0.1
Other source	**0.6**	**2.9**	**1.0**	**0.6**	**3.5**	**48.3**	**5.3**
Shop	0.0	1.3	0.0	0.0	0.0	39.0	3.3
Mobile clinic	0.6	0.1	1.0	0.6	3.5	0.4	1.1
Community-based distributor	0.0	0.5	0.0	0.0	0.0	0.8	0.1
Community health worker (CHW)	0.0	0.5	0.0	0.0	0.0	0.4	0.1
Friend/relative	0.0	0.6	0.0	0.0	0.0	7.6	0.7
Other	**0.3**	**0.1**	**0.0**	**0.0**	**0.0**	**7.2**	**0.6**
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	691	1,703	712	5,818	2,213	975	12,131

Note: Total includes other modern methods but excludes lactational amenorrhoea method (LAM). Total includes contraceptive methods with too few users to show separately, including one user of male sterilisation and six female condom users. Totals may not add up to 100 percent because women with missing information are not shown separately.
FHOK = Family Health Organisation of Kenya

7.8 INFORMED CHOICE

Informed choice is an important principle in the delivery of family planning services. It is required that all family planning providers inform potential users about the side effects of the method and what they should do if they encounter such problems. This information assists users in making an informed decision about what contraceptive method may work best for them and in coping with side effects. By making an informed choice, users can choose the method that is right for them, and thereby decrease the likelihood that they will discontinue use of the method. Women should be informed of all methods available to them. Table 7.8 shows the percentage of current users of modern methods who were informed about side effects or problems of the method used, about what to do if they experienced side effects, and about other methods they could use. These data are also presented by method type and initial source.

Sixty percent of current users of modern contraceptive methods were informed about potential side effects of their method, 52 percent were told what to do if they experienced side effects, and 79 percent were given information about other methods. Since the 2008-09 KDHS, only one of these indicators, being informed about alternative methods (61 percent in 2008-09), has improved.

Users were slightly more likely to receive information about side effects or problems associated with a method from a government medical facility (63 percent) than from a private facility (55 percent). This pattern prevails for being informed about what to do when experiencing side effects (public sector, 56 percent; private sector, 45 percent) and being informed about alternative methods (public sector, 81 percent; private sector, 75 percent).

Table 7.8 Informed choice

Among current users of modern methods age 15-49 who started the last episode of use within the five years preceding the survey, the percentage who were informed about possible side effects or problems of that method, the percentage who were informed about what to do if they experienced side effects, and the percentage who were informed about other methods they could use, by method and initial source, Kenya 2014

	Among women who started last episode of modern contraceptive method within five years preceding the survey:			
Method/source	Percentage who were informed about side effects or problems of method used	Percentage who were informed about what to do if side effects experienced	Percentage who were informed by a health or family planning worker of other methods that could be used	Number of women
Method				
Female sterilisation	51.2	44.1	77.4	142
Pill	50.8	42.6	77.4	661
IUD	81.4	74.9	88.8	246
Injectables	55.0	46.8	75.1	2,260
Implants	71.6	64.3	85.8	1,012
Initial source of method[1]				
Public sector	**62.9**	**56.0**	**81.2**	**2,800**
Government hospital	67.2	59.6	83.1	944
Government health centre	61.8	56.6	82.3	759
Government dispensary	60.0	52.6	78.8	1,097
Private medical sector	**54.9**	**45.3**	**75.4**	**1,407**
Private hospital/clinic	58.8	49.3	79.9	918
Pharmacy/chemist	41.3	32.2	63.6	377
Nursing/maternity home	*	*	*	16
Faith-based church, mission hospital/clinic	68.3	51.3	72.1	85
Family options/FHOK clinic	*	*	*	10
Other private	*	*	*	1
Other source	**52.4**	**39.2**	**85.4**	**73**
Total	59.6	51.8	78.8	4,322

Note: Table includes users of only the methods listed individually. Total includes 39 cases for whom information about informed choice is missing. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
FHOK = Family Health Organisation of Kenya
[1] Source at start of current episode of use

7.9 CONTRACEPTIVE DISCONTINUATION RATES

Couples can realise their reproductive goals only when they use contraceptive methods consistently and correctly. Discontinuation of contraception, for reasons other than to conceive, interferes with family planning and increases the risk for unplanned pregnancies. In the "calendar" section of the Woman's Questionnaire, all segments of contraceptive use from 62 months prior to the survey are recorded. When calculating discontinuation rates, the month of the interview and the two months prior to the survey are ignored in order to avoid the bias that may be introduced by unrecognised pregnancies. Twelve-month contraceptive discontinuation rates based on the calendar data are presented in Table 7.9.

Thirty-one percent of contraceptive users discontinue use of the method within 12 months of starting its use. Discontinuation rates are highest for methods in the "other" category (e.g., female condom, LAM, withdrawal) (46 percent), followed by the pill (45 percent) and male condoms (43 percent). The lowest discontinuation rates are for IUDs (6 percent) and implants (8 percent). Users of the pill are most likely (22 percent) to switch to another method, while users of IUDs and implants are least likely to switch to another method (4 percent each). Eleven percent of episodes of discontinuation occurred because of side effects or health concerns, and 5 percent because the woman wanted to become pregnant.

Table 7.9 Twelve-month contraceptive discontinuation rates

Among women age 15-49 who started an episode of contraceptive use within the five years preceding the survey, the percentage of episodes discontinued within 12 months, by reason for discontinuation and specific method, Kenya 2014

Method	Method failure	Desire to become pregnant	Other fertility related reasons[2]	Side effects/ health concerns	Wanted more effective method	Other method related reasons[3]	Other reasons	Any reason[4]	Switched to another method[5]	Number of episodes of use[6]
Female sterilisation	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.9)	(0.9)	(0.0)	150
Pill	5.3	6.2	4.0	15.7	6.8	2.2	4.6	44.9	21.5	1,727
IUD	0.8	0.2	0.4	4.2	0.0	0.2	0.6	6.4	3.8	298
Injectables	1.7	5.4	2.8	14.4	1.9	1.2	3.4	30.9	10.2	4,054
Implants	0.3	0.3	0.2	6.6	0.1	0.1	0.3	8.0	3.7	1,164
Male condom	1.9	5.3	21.4	0.8	2.3	0.3	10.8	42.9	4.6	859
Rhythm	9.1	4.1	3.8	0.0	6.3	0.2	1.4	24.8	6.7	661
Other[1]	9.0	10.5	2.4	5.7	9.3	2.8	6.2	45.8	15.9	243
All methods[1]	3.0	4.7	4.4	10.5	3.1	1.1	3.7	30.5	10.5	9,158

Note: Figures are based on life table calculations using information on episodes of use that began 3-62 months preceding the survey. Figures in parentheses are based on 125-249 unweighted cases.
[1] Includes female condom, LAM, withdrawal, other modern and other traditional methods
[2] Includes infrequent sex/husband away, difficult to get pregnant/menopausal, and marital dissolution/separation
[3] Includes lack of access/too far, costs too much, and inconvenient to use
[4] Reasons for discontinuation are mutually exclusive and add to the total given in this column
[5] The episodes of use included in this column are a subset of the discontinued episodes included in the discontinuation rate. A woman is considered to have switched to another method if she used a different method in the month following discontinuation or if she gave "wanted a more effective method" as the reason for discontinuation and started another method within two months of discontinuation.
[6] Number of episodes of use includes both episodes of use that were discontinued during the period of observation and episodes of use that were not discontinued during the period of observation

7.10 REASONS FOR DISCONTINUATION OF CONTRACEPTIVE USE

Table 7.10 shows the percent distribution of discontinuations of contraceptive methods in the five years preceding the survey by the main reason for discontinuation, according to method. The most common reason for discontinuing a method is health concerns or side effects (29 percent), followed by desire to become pregnant (26 percent) and pregnancy (11 percent). Health concerns or side effects are most often cited as the reason for discontinuing use of implants (52 percent), IUDs (43 percent), injectables (38 percent), and the pill (28 percent). Infrequent sex or absence of the husband is the reason most often reported for discontinuing use of the male condom (38 percent).

Table 7.10 Reasons for discontinuation

Percent distribution of discontinuations of contraceptive methods in the five years preceding the survey by main reason stated for discontinuation, according to specific method, Kenya 2014

Reason	Pill	IUD	Injectables	Implants	Male condom	LAM	Rhythm	Withdrawal	Other	All methods
Became pregnant while using	14.1	4.7	6.2	1.3	6.2	(1.5)	38.5	35.7	(16.7)	10.8
Wanted to become pregnant	23.5	24.2	29.0	24.5	16.5	(8.7)	21.8	29.2	(34.7)	25.6
Husband/partner disapproved	0.6	4.2	0.9	1.1	5.6	(0.0)	0.7	1.6	(1.9)	1.3
Wanted more effective method	12.8	4.7	4.9	2.4	9.6	(60.1)	19.4	12.4	(6.4)	8.7
Health concerns/side effects	27.6	42.9	37.6	51.5	1.2	(0.0)	0.0	3.4	(15.6)	29.0
Lack of access/too far	0.5	0.0	1.4	0.1	0.2	(0.0)	0.0	0.0	(0.0)	0.8
Cost too much	0.9	0.0	1.2	0.2	0.0	(0.0)	0.0	0.0	(0.0)	0.8
Inconvenient to use	3.5	2.2	1.2	1.1	1.4	(7.7)	0.9	2.5	(3.8)	1.9
Up to God/fatalistic	0.1	0.9	0.1	0.0	0.0	(0.0)	0.1	0.0	(0.0)	0.1
Difficult to get pregnant/menopausal	0.6	2.9	0.4	0.2	0.2	(0.0)	0.7	0.0	(1.2)	0.5
Infrequent sex/husband away	6.2	1.9	6.5	3.9	38.0	(1.3)	5.8	1.4	(8.5)	8.9
Marital dissolution/separation	1.1	0.7	1.2	4.4	0.5	(0.0)	0.1	0.6	(0.0)	1.1
Other	3.4	7.7	3.6	5.7	4.2	(14.5)	2.6	1.1	(2.9)	3.8
Don't know/missing	5.2	3.1	5.7	3.7	16.2	(6.2)	9.3	12.2	(8.3)	6.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of discontinuations	1,713	119	3,394	374	624	41	541	76	72	6,961

Note: Total includes contraceptive methods with too few users to show separately, including four users of female sterilisation and three female condom users. Figures in parentheses are based on 25-49 unweighted cases.
LAM = Lactational amenorrhoea method

7.11 KNOWLEDGE OF FERTILE PERIOD

A basic understanding of the reproductive cycle is important for successful use of coitus-related methods of contraception such as the rhythm method. The successful practice of such methods depends in large part on understanding when during the ovulatory cycle a woman is most likely to conceive. All women in the survey were asked about their knowledge of a woman's fertile period. Specifically, they were asked whether there are certain days between two menstrual periods when a woman is most likely to become pregnant if she has sexual intercourse. Those who answered in the affirmative were further asked if this time is just before the period begins, during the period, right after the period ends, or halfway between the two periods.

Table 7.11 Knowledge of fertile period

Percent distribution of women age 15-49 by knowledge of the fertile period during the ovulatory cycle, according to current use of the rhythm method, Kenya 2014

Perceived fertile period	Users of rhythm method	Nonusers of rhythm method	All women
Just before her menstrual period begins	20.2	16.0	16.1
During her menstrual period	1.7	3.6	3.5
Right after her menstrual period has ended	32.6	32.3	32.3
Halfway between two menstrual periods	35.8	25.2	25.5
Other	0.0	0.2	0.2
No specific time	4.2	10.8	10.6
Don't know	5.5	11.9	11.7
Total	100.0	100.0	100.0
Number of women	425	14,200	14,625

Note: Totals may not add up to 100 percent because women with missing information are not shown separately.

Table 7.11 shows the percent distribution of women age 15-49 by knowledge of women's fertile period, according to current use of the rhythm method. Only 26 percent of all women correctly reported the most fertile time as being halfway between two menstrual periods. Among users of the rhythm method, 36 percent were able to correctly identify the fertile period, while 33 percent incorrectly reported that the fertile period is directly after menstruation has ended and 20 percent incorrectly reported that it is just before menstruation begins. These numbers do not indicate any improvement in understanding of the reproductive cycle since the 2008-09 KDHS. There is continued need for education about women's reproductive system and effective use of contraceptive methods.

7.12 NEED AND DEMAND FOR FAMILY PLANNING SERVICES

This section provides information on the extent of need and potential demand for family planning services in Kenya. Unmet need for family planning refers to fecund women who are not using contraception but who wish to postpone their next birth (spacing) or stop childbearing altogether (limiting). Specifically, women are considered to have an unmet need for spacing if they are:

- At risk of becoming pregnant, not using contraception, and either do not want to become pregnant within the next two years or are unsure if or when they want to become pregnant.
- Pregnant with a mistimed pregnancy.
- Postpartum amenorrhoeic for up to two years following a mistimed birth and not using contraception.

Women are considered to have an unmet need for limiting if they are:

- At risk of becoming pregnant, not using contraception, and want no (more) children.
- Pregnant with an unwanted pregnancy.
- Postpartum amenorrhoeic for up to two years following an unwanted birth and not using contraception.

Women who are classified as infecund have no unmet need because they are not at risk of becoming pregnant.

Women using contraception are considered to have a met need. Women using contraception who say they want no (more) children are considered to have a met need for limiting, and women who are using contraception and say they want to delay having a child, or are unsure if or when they want a (another) child, are considered to have a met need for spacing.

Unmet need, total demand, percentage of demand satisfied, and percentage of demand satisfied by modern methods are defined as follows:

Unmet need:	the sum of unmet need for spacing plus unmet need for limiting
Total demand for family planning:	the sum of unmet need plus total contraceptive use
Percentage of demand satisfied:	total contraceptive use divided by the sum of unmet need plus total contraceptive use
Percentage of demand satisfied by modern methods:	use of modern contraceptive methods divided by the sum of unmet need plus total contraceptive use

In the past, the definition of unmet need used information from the contraceptive calendar and other questions that were not included in every survey, which led to unmet need being calculated inconsistently across surveys. The revised definition uses only information that has been collected in every survey so that unmet need can be measured in the same way over time (see Bradley et al., 2012).

Table 7.12 shows need and demand for family planning among currently married women age 15-49 by background characteristics. Eighteen percent of currently married women have an unmet need for family planning, with 9 percent having an unmet need for spacing and 8 percent having an unmet need for limiting.

Fifty-eight percent of women have a met need for family planning. If all currently married women who say they want to space or limit their children were to use a family planning method, the contraceptive prevalence rate would increase to 76 percent. Currently, 77 percent of the family planning needs of married women are being met.

Unmet need is higher in rural areas (20 percent) than in urban areas (13 percent). Unmet need is highest in North Eastern (30 percent) and lowest in Central (9 percent) and Nairobi (11 percent). Unmet need decreases with increasing education; married women with no education have a higher unmet need for family planning (28 percent) than their educated counterparts (23 percent or less). Unmet need declines steadily as household wealth increases, from 29 percent in the lowest wealth quintile to 11 percent in the highest quintile.

Total demand for family planning is highest among women age 35-39 (82 percent) and lowest among women at the beginning (age 15-19) and end (age 45-49) of their reproductive years (each 61 percent). Demand for family planning does not vary much by urban-rural residence; however, there are wide variations by region. North Eastern has the lowest demand (33 percent) and Eastern the highest (83 percent). Women with no education (47 percent) and women in the lowest wealth quintile (60 percent) have a lower demand than their more educated or wealthier counterparts.

Table 7.12 Need and demand for family planning among currently married women

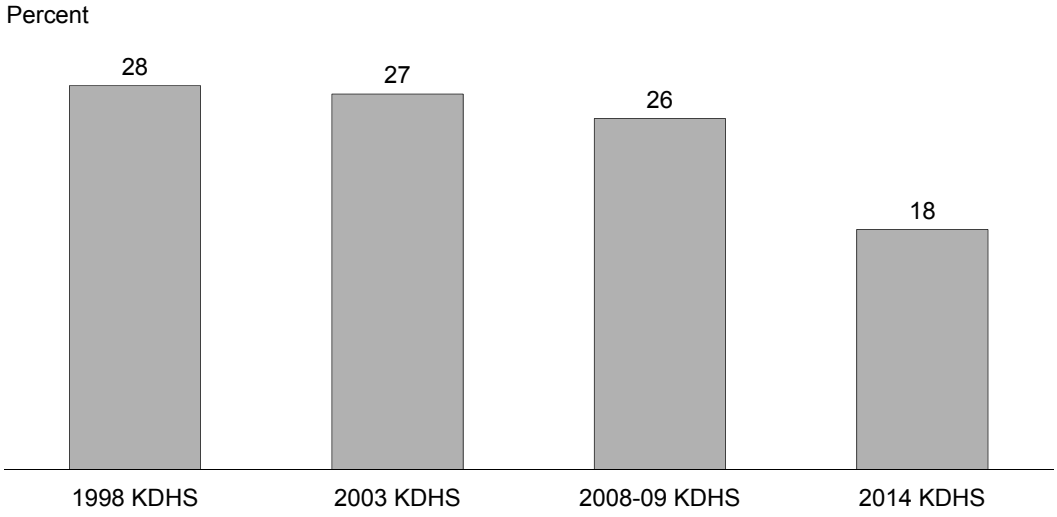
Percentage of currently married women age 15-49 with unmet need for family planning, percentage with met need for family planning, the total demand for family planning, and the percentage of the demand for contraception that is satisfied, by background characteristics, Kenya 2014

Background characteristic	Unmet need for family planning			Met need for family planning (currently using)			Total demand for family planning[1]			Percentage of demand satisfied[2]	Percentage of demand satisfied by modern methods[3]	Number of women
	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total			
Age												
15-19	21.8	1.3	23.0	37.1	1.3	38.4	58.9	2.5	61.4	62.5	56.2	301
20-24	17.1	1.8	18.9	43.5	9.5	53.1	60.6	11.3	71.9	73.8	68.3	1,465
25-29	11.1	3.7	14.9	37.7	23.0	60.7	48.9	26.7	75.6	80.3	76.5	2,171
30-34	7.5	8.3	15.9	24.5	39.2	63.7	32.0	47.6	79.6	80.0	74.4	1,717
35-39	5.1	13.4	18.5	12.0	51.2	63.2	17.1	64.6	81.7	77.3	70.3	1,365
40-44	3.3	18.5	21.8	5.0	54.0	59.0	8.2	72.5	80.8	73.1	65.3	923
45-49	1.8	15.0	16.7	0.9	43.7	44.5	2.6	58.6	61.3	72.7	59.5	768
Residence												
Urban	7.3	6.1	13.4	32.3	30.2	62.5	39.5	36.4	75.9	82.4	76.7	3,445
Rural	10.4	9.7	20.2	20.8	34.3	55.1	31.2	44.0	75.2	73.2	66.7	5,265
Region												
Coast	12.3	8.4	20.6	24.3	20.1	44.4	36.5	28.5	65.0	68.3	58.4	850
North Eastern	27.2	2.7	29.9	2.8	0.6	3.4	30.1	3.3	33.3	10.2	10.2	209
Eastern	4.0	8.4	12.4	27.4	43.1	70.5	31.4	51.5	82.9	85.1	77.2	1,268
Central	3.0	5.8	8.8	30.8	42.3	73.0	33.8	48.1	81.8	89.3	83.9	1,113
Rift Valley	11.1	9.7	20.8	25.2	27.4	52.6	36.2	37.1	73.4	71.6	62.3	2,171
Western	11.0	9.7	20.7	24.9	34.7	59.6	35.9	44.4	80.3	74.2	71.8	929
Nyanza	12.6	10.6	23.2	20.4	35.0	55.3	33.0	45.6	78.5	70.5	67.4	1,203
Nairobi	6.3	4.8	11.1	29.1	33.2	62.3	35.4	38.0	73.4	84.9	81.5	968
Education												
No education	18.7	9.1	27.7	7.2	11.8	19.0	25.9	20.9	46.8	40.7	35.8	795
Primary incomplete	11.5	11.9	23.4	20.4	33.6	54.1	31.9	45.5	77.4	69.8	64.7	2,274
Primary complete	7.3	8.1	15.3	26.0	38.7	64.7	33.3	46.7	80.0	80.8	74.9	2,465
Secondary+	6.6	5.8	12.4	32.8	32.6	65.5	39.5	38.4	77.9	84.1	76.7	3,177
Wealth quintile												
Lowest	18.4	10.2	28.6	13.5	17.6	31.1	31.9	27.8	59.7	52.1	45.6	1,457
Second	11.4	11.7	23.1	22.4	35.8	58.3	33.8	47.6	81.4	71.6	66.4	1,567
Middle	7.2	9.9	17.1	25.3	38.0	63.4	32.5	48.0	80.5	78.7	72.8	1,663
Fourth	6.2	5.8	12.0	30.2	36.1	66.3	36.4	41.8	78.3	84.7	78.2	1,885
Highest	5.5	5.5	11.0	31.2	33.5	64.8	36.7	39.0	75.7	85.5	78.8	2,138
Total	9.2	8.3	17.5	25.3	32.7	58.0	34.5	41.0	75.5	76.8	70.7	8,710

Note: Numbers in this table correspond to the revised definition of unmet need described in Bradley et al., 2012.
[1] Total demand is the sum of unmet need and met need
[2] Percentage of demand satisfied is met need divided by total demand
[3] Modern methods include female sterilisation, male sterilisation, pill, IUD, injectables, implants, male condom, female condom, and lactational amenorrhoea method (LAM)

Figure 7.2 shows that unmet need decreased only marginally from 1998 (28 percent) to 2008-09 (26 percent) before a more substantial decrease to the current 18 percent.

Figure 7.2 **Trends in unmet need for family planning**



Note: Estimates for all years are based on the revised definition of unmet need. Data collected before 2003 exclude North Eastern region and several northern districts in the Eastern and Rift Valley.

7.13 FUTURE USE OF CONTRACEPTION

An important indicator of the changing demand for family planning is the extent to which nonusers plan to use contraceptive methods in the future. In the 2014 KDHS, currently married women age 15-49 who were not using any contraceptive method at the time of the survey were asked about their intention to use family planning in the future. Women who stated that they did not intend to use a contraceptive method in the future were also asked the reason behind this intention.

Table 7.13 shows that among currently married women not using contraception, 57 percent intend to use a family planning method in the future, 4 percent are unsure of their intentions, and 38 percent have no intention of using any method in the future. These data do not indicate any change from 2008-09. The proportion of women intending to use family planning peaks at 69 percent among nonusers with one child and declines to 45 percent among those with four or more children.

Table 7.13 Future use of contraception

Percent distribution of currently married women age 15-49 who are not using a contraceptive method by intention to use in the future, according to number of living children, Kenya 2014

	Number of living children[1]					
Intention	0	1	2	3	4+	Total
Intends to use	64.9	68.8	68.3	58.4	45.4	57.3
Unsure	6.8	4.0	3.1	2.6	3.7	3.7
Does not intend to use	28.3	26.3	27.7	37.6	50.2	38.2
Missing	0.0	0.9	0.9	1.4	0.6	0.8
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	231	626	708	616	1,475	3,656

[1] Includes current pregnancy

Table 7.14 presents the distribution of currently married nonusers who do not intend to use a contraceptive method in the future by the main reason why they do not intend to use. Method-related reasons, especially fear of side effects (17 percent) and health concerns (12 percent), were commonly cited reasons for not intending to use family planning in the future. Fertility-related reasons were also common, including menopause (13 percent), desire for many children (9 percent), and infrequent sex (9 percent). Religious prohibition and opposition to use each accounted for 9 percent of women's reasons for not intending to use a family planning method in the future.

Table 7.14 Reason for not intending to use contraception in the future

Percent distribution of currently married women age 15-49 who are not using contraception and who do not intend to use in the future by main reason for not intending to use, Kenya 2014

Reason	Total
Fertility-related reasons	
Infrequent sex/no sex	8.7
Menopausal/had hysterectomy	12.5
Subfecund/infecund	5.7
Wants as many children as possible	9.1
Opposition to use	
Respondent opposed	8.6
Husband/partner opposed	4.7
Others opposed	0.1
Religious prohibition	9.3
Lack of knowledge	
Knows no method	3.5
Knows no source	0.3
Method-related reasons	
Health concerns	12.4
Fear of side effects	17.1
Lack of access/too far	0.1
Cost too much	0.1
Inconvenient to use	0.5
Interfere with body's normal process	3.0
Other	3.8
Don't know	0.2
Missing	0.2
Total	100.0
Number of women	1,398

7.14 EXPOSURE TO FAMILY PLANNING MESSAGES

The media play an important role in communicating messages about family planning. In assessing the reach of family planning messages, the 2014 KDHS asked women and men age 15-49 whether they had heard or seen a message about family planning on the radio, on television, or in a newspaper or magazine in the last few months before the survey (Table 7.15).

Most women (75 percent) and men (82 percent) hear family planning messages on the radio; 46 percent of women and 58 percent of men hear messages on television. A lower proportion of women (29 percent) and men (43 percent) access family planning messages through a magazine or newspaper. In general, men are more exposed to family planning messages via mass media than women. One out of five women (20 percent) and about one in 10 men (13 percent) have not been exposed to family planning messages through any media. This trend has not changed substantially since the 2008-09 KDHS.

Not surprisingly, women and men residing in urban areas are much more likely to have been exposed to family planning messages in any media than their rural counterparts. Twenty-six percent of rural women have had no exposure compared with 11 percent of urban women, and 17 percent of rural men have had no exposure compared with 7 percent of urban men. Education has a positive influence on media exposure. For example, 69 percent of uneducated women have no exposure to family planning information in any form of mass media, as compared with only 9 percent among those with a secondary or higher education. A similar pattern is observed for men. Among both women and men, exposure to family planning messages via media increases with increasing household wealth.

Table 7.15 Exposure to family planning messages

Percentage of women and men age 15-49 who heard or saw a family planning message on radio, on television or in a newspaper or magazine in the past few months, according to background characteristics, Kenya 2014

Background characteristic	Women					Men				
	Radio	Television	Newspaper/ magazine	None of these three media sources	Number of women	Radio	Television	Newspaper/ magazine	None of these three media sources	Number of men
Age										
15-19	65.8	38.7	27.6	27.9	2,717	71.0	39.2	26.6	23.7	2,540
20-24	78.5	51.9	34.0	16.1	2,691	85.5	62.1	47.6	10.1	2,125
25-29	78.2	53.1	31.9	16.3	2,932	85.5	65.8	45.7	8.5	2,104
30-34	77.0	48.2	30.1	17.8	2,162	83.9	62.5	48.0	10.6	1,785
35-39	73.8	43.3	26.8	22.2	1,780	83.4	63.4	45.1	11.6	1,483
40-44	73.7	39.7	25.4	22.4	1,292	88.0	60.5	52.9	8.8	1,224
45-49	75.3	37.1	22.7	22.1	1,052	87.0	61.8	47.0	9.7	800
Residence										
Urban	80.0	71.2	40.4	11.4	5,929	85.9	76.9	55.6	7.1	5,300
Rural	71.0	28.7	21.9	26.4	8,696	79.5	43.1	33.3	17.2	6,762
Region										
Coast	63.4	42.8	20.4	30.1	1,421	77.8	60.9	36.5	17.9	1,260
North Eastern	13.8	8.4	4.6	81.2	299	32.8	20.5	5.5	53.3	227
Eastern	66.9	32.3	23.4	28.7	2,066	77.8	50.8	35.6	17.6	1,825
Central	78.3	57.1	32.9	15.7	1,905	84.3	68.1	52.3	10.6	1,564
Rift Valley	74.8	43.7	31.3	20.9	3,714	81.3	49.6	36.7	14.5	3,050
Western	78.3	31.7	22.6	18.9	1,571	84.7	48.9	41.1	12.6	1,164
Nyanza	83.4	36.1	26.3	13.5	1,908	91.1	52.6	42.8	5.1	1,405
Nairobi	86.1	87.3	49.6	4.6	1,742	88.7	86.9	67.5	3.1	1,568
Education										
No education	29.5	7.7	1.2	69.2	1,015	41.1	11.8	2.6	57.4	345
Primary incomplete	67.2	23.4	11.5	30.1	3,793	74.3	31.9	16.4	23.3	3,071
Primary complete	79.8	44.3	23.4	16.2	3,543	84.9	57.0	38.0	10.8	2,734
Secondary+	83.6	66.7	48.1	8.9	6,274	87.6	74.6	61.7	5.6	5,913
Wealth quintile										
Lowest	46.5	8.1	8.8	52.4	2,236	63.1	21.7	16.8	34.6	1,691
Second	72.2	19.0	18.1	26.4	2,590	82.5	37.0	28.4	14.9	2,145
Middle	78.9	29.9	24.8	18.0	2,859	85.7	50.8	39.9	11.3	2,370
Fourth	83.4	57.5	33.1	12.4	3,113	86.6	68.0	49.2	8.6	2,959
Highest	82.4	88.9	49.4	5.7	3,827	86.2	90.2	65.6	4.0	2,897
Total 15-49	74.6	46.0	29.4	20.3	14,625	82.3	58.0	43.1	12.8	12,063
50-54	na	na	na	na	na	82.6	52.3	45.9	14.7	756
Total 15-54	na	na	na	na	na	82.3	57.6	43.2	12.9	12,819

na = Not applicable

7.15 CONTACT OF NONUSERS WITH FAMILY PLANNING PROVIDERS

When family planning providers visit women in their households or when women visit health facilities, family planning fieldworkers and health providers are expected to discuss reproductive health needs and available contraceptive options and to counsel women on adopting a method of family planning. To get insight into the level of contact between nonusers and health workers, women age 15-49 who were not using contraception were asked if they had been visited by a fieldworker during the 12 months preceding the survey and if, during that visit, they had discussed family planning issues. In addition, women were asked whether they had visited a health facility in the 12 months preceding the survey for any reason and whether anyone at the facility had discussed family planning with them during the visit. This information is especially useful for determining if nonusers of family planning are being reached by family planning programmes.

Table 7.16 shows that only 6 percent of nonusers during the 12 months preceding the survey were visited by a fieldworker who discussed family planning. Only 14 percent of nonusers who had visited a health facility discussed family planning at the facility (45 percent visited a facility and did not discuss family planning). Overall, 82 percent of nonusers did not discuss family planning with a fieldworker or while visiting a health facility in the past 12 months, indicating missed opportunities to inform and educate women about family planning. These data show a slight improvement in opportunities to discuss family planning in these specific scenarios compared with the 2008-09 KDHS (88 percent).

Table 7.16 Contact of nonusers with family planning providers

Among women age 15-49 who are not using contraception, the percentage who during the past 12 months were visited by a fieldworker who discussed family planning, the percentage who visited a health facility and discussed family planning, the percentage who visited a health facility but did not discuss family planning, and the percentage who did not discuss family planning either with a fieldworker or at a health facility, by background characteristics, Kenya 2014

Background characteristic	Percentage of women who were visited by fieldworker who discussed family planning	Percentage of women who visited a health facility in the past 12 months and who:		Percentage of women who did not discuss family planning either with fieldworker or at a health facility	Number of women
		Discussed family planning	Did not discuss family planning		
Age					
15-19	3.4	4.9	39.4	92.3	2,443
20-24	6.1	17.1	45.0	79.1	1,585
25-29	8.0	20.2	48.4	75.5	1,329
30-34	9.0	22.3	44.7	72.3	898
35-39	7.1	17.7	48.1	78.4	775
40-44	5.2	15.2	49.0	81.2	654
45-49	6.7	10.0	49.3	85.1	654
Residence					
Urban	6.6	13.2	41.8	82.5	3,164
Rural	5.6	14.4	46.6	82.1	5,174
Region					
Coast	4.6	16.7	47.5	80.4	949
North Eastern	14.9	8.6	32.9	81.8	291
Eastern	3.7	14.2	54.5	82.7	995
Central	10.2	13.6	54.0	78.6	913
Rift Valley	5.1	13.7	42.9	83.6	2,275
Western	7.0	13.9	50.0	82.0	904
Nyanza	7.3	17.2	37.1	78.7	1,079
Nairobi	2.7	9.5	34.9	88.1	932
Education					
No education	6.9	11.3	39.0	84.2	827
Primary incomplete	5.0	13.1	44.9	83.6	2,277
Primary complete	7.5	19.4	46.1	76.4	1,659
Secondary+	5.8	12.5	45.4	83.6	3,575
Wealth quintile					
Lowest	6.4	14.3	42.3	81.3	1,669
Second	6.1	14.7	47.1	81.8	1,476
Middle	5.4	15.3	46.7	81.2	1,548
Fourth	5.5	14.2	44.1	82.4	1,600
Highest	6.6	11.7	44.3	83.9	2,045
Total	6.0	13.9	44.8	82.2	8,338

This low level of contact of nonusers with family planning providers varies little by background characteristics. However, adolescents are least likely to have discussed family planning either with a fieldworker or at a health facility.

7.16 MEN'S KNOWLEDGE OF AND ATTITUDES TOWARDS CONTRACEPTIVE USE

Use of family planning methods is facilitated when couples discuss and agree on the issue. To assess the extent to which women use contraception without telling their partners, married women interviewed in the 2014 KDHS were asked whether their husbands or partners knew that they were using a method of family planning. Table 7.17 shows that 92 percent of currently married women reported that their husbands/partners knew they were using a method of family planning. There is no notable variation in husbands/partners' knowledge of use of a family planning method by age or residence; however, a substantially lower proportion of women in the North Eastern region (53 percent) than in the other regions (88 percent or more) report that their husband/partner knows they are using a method of family planning. Husbands/partners' knowledge increases gradually with increasing women's education and household wealth.

Table 7.17 Husband/partner's knowledge of women's use of contraception

Among currently married women age 15-49 who are using a method, percent distribution by whether they report that their husbands/partners know about their use, according to background characteristics, Kenya 2014

Background characteristic	Knows[1]	Does not know	Unsure whether knows/missing	Total	Number of women
Age					
15-19	92.9	7.1	0.0	100.0	116
20-24	92.8	7.0	0.2	100.0	778
25-29	92.3	7.5	0.2	100.0	1,319
30-34	92.2	7.8	0.0	100.0	1,093
35-39	91.3	8.5	0.2	100.0	863
40-44	90.6	8.9	0.5	100.0	545
45-49	91.8	7.5	0.7	100.0	342
Residence					
Urban	93.3	6.5	0.2	100.0	2,154
Rural	91.0	8.7	0.3	100.0	2,900
Region					
Coast	93.0	7.0	0.1	100.0	377
North Eastern	52.6	47.4	0.0	100.0	7
Eastern	94.1	5.7	0.1	100.0	894
Central	93.5	6.4	0.2	100.0	813
Rift Valley	91.6	8.0	0.4	100.0	1,141
Western	88.0	11.8	0.2	100.0	554
Nyanza	88.8	10.8	0.4	100.0	666
Nairobi	94.7	5.3	0.0	100.0	603
Education					
No education	81.7	17.5	0.7	100.0	151
Primary incomplete	86.9	12.7	0.4	100.0	1,230
Primary complete	93.2	6.7	0.1	100.0	1,594
Secondary+	94.8	5.0	0.2	100.0	2,080
Wealth quintile					
Lowest	84.2	15.4	0.5	100.0	453
Second	89.4	10.5	0.2	100.0	913
Middle	90.7	9.0	0.3	100.0	1,054
Fourth	93.7	6.2	0.1	100.0	1,250
Highest	95.8	4.0	0.2	100.0	1,385
Total	92.0	7.8	0.2	100.0	5,054

[1] Includes women who report use of male sterilisation, male condoms, or withdrawal

Additionally, men were asked whether they agreed or disagreed with two statements about family planning use: (1) contraception is women's business and a man should not have to worry about it, and (2) women who use contraception may become promiscuous. The results in Table 7.18 indicate that only 13 percent of men believe that contraception is solely women's business, while 29 percent believe that women who use family planning may become promiscuous. A higher percentage of divorced, separated, and widowed men agree with the above two statements than their married and never-married counterparts. Accepting views on contraception are more likely to be expressed by men with a secondary or higher education, and such views increase with increasing household wealth.

Table 7.18 Men's attitudes towards contraception

Percentage of men age 15-49 who agree with statements about contraceptive use, by background characteristics, Kenya 2014

Background characteristic	Woman's business	Woman may become promiscuous	Number of men
Age			
15-19	13.4	27.8	2,540
20-24	11.3	34.2	2,125
25-29	12.1	29.9	2,104
30-34	14.0	27.5	1,785
35-39	14.2	26.4	1,483
40-44	11.6	29.3	1,224
45-49	13.4	28.8	800
Marital status			
Never married	11.9	30.5	5,350
Married or living together	12.7	27.1	6,095
Divorced/separated/ widowed	21.3	40.2	618
Residence			
Urban	12.7	27.4	5,300
Rural	12.9	30.7	6,762
Region			
Coast	14.9	34.1	1,260
North Eastern	16.7	16.9	227
Eastern	18.3	37.7	1,825
Central	10.7	21.2	1,564
Rift Valley	8.5	25.3	3,050
Western	4.7	32.0	1,164
Nyanza	16.1	29.3	1,405
Nairobi	17.6	31.2	1,568
Education			
No education	19.9	38.1	345
Primary incomplete	19.0	35.0	3,071
Primary complete	15.4	33.3	2,734
Secondary+	8.0	23.9	5,913
Wealth quintile			
Lowest	17.1	35.1	1,691
Second	14.1	33.1	2,145
Middle	13.5	32.8	2,370
Fourth	11.9	27.6	2,959
Highest	9.6	21.9	2,897
Total	12.8	29.3	12,063

INFANT AND CHILD MORTALITY 8

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Key Findings

- The infant mortality rate is 39 deaths per 1,000 live births, and under-5 mortality is 52 deaths per 1,000 live births. At these levels, about one in every 26 Kenyan children dies before reaching age 1, and about one in every 19 does not survive to his or her fifth birthday.
- All early childhood mortality rates declined between the 2003 and 2014 KDHS surveys. Neonatal mortality has exhibited the slowest rate of decline (33 percent).
- A child born in the Nyanza region is almost twice as likely to die before age 5 as a child born in the Central region. Nairobi has the second highest under-5 mortality rate, following Nyanza (72 deaths per 1,000 live births).
- Male children are more likely than female children to die during their first year of life (44 deaths versus 37 deaths per 1,000 live births). Once past infancy, male and female children 1-4 years of age experience the same level of mortality (16 deaths per 1,000 live births).
- The neonatal mortality rate for the five years preceding the survey is 22 deaths per 1,000 live births, 1.4 times the postneonatal rate.
- The perinatal mortality rate for the same reference period is 29 deaths per 1,000 pregnancies.

This chapter presents levels, trends, and differentials in early childhood mortality and, among women in Kenya, high-risk fertility behaviour. This information is relevant for the planning and evaluation of health policies and programmes, and it serves the needs of the health sector by identifying vulnerable groups that are at high risk for early childhood deaths. Infant and child mortality rates are also regarded as indices that reflect the degree of poverty and deprivation of a population. Under-5 and infant mortality rates are two indicators used to monitor child health under Millennium Development Goal (MDG) 4. The government of Kenya is undertaking a number of interventions aimed at reducing childhood mortality. Targets for these programmes, including the Vision 2030 indicators and Sustainable Development Goals (SDGs), rely on data from census and from household surveys, such as the KDHS. The data presented in this chapter will contribute to planning and assessment of the progress of those interventions.

In the 2014 KDHS, data for child mortality estimations were collected in the birth history section of the Woman's Questionnaire. The birth history section began with questions about the respondent's experience with childbearing (i.e., the number of sons and daughters she has given birth to, the number who are alive, and the number who have died). These questions were followed by a retrospective birth history in which the respondent was asked to list chronologically each of her births, starting with the first one. For each birth, data were obtained on sex, month and year of birth, survivorship status, and current age or, if the child had died, the age at death. This information was used to directly estimate early childhood mortality rates. Because the primary causes of childhood mortality change as children age—from biological factors to environmental factors—childhood mortality rates are expressed by age categories and are defined as follows:

Neonatal mortality (NN): the probability of dying within the first month of life
Postneonatal mortality (PNN): the difference between infant and neonatal mortality
Infant mortality ($_1q_0$): the probability of dying before the first birthday
Child mortality ($_4q_1$): the probability of dying between the first and the fifth birthday
Under-5 mortality ($_5q_0$): the probability of dying between birth and the fifth birthday

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

8.1 DATA QUALITY

The quality of mortality estimates can be affected by both sampling and nonsampling error. Estimates of sampling error can be found in Appendix B. Nonsampling error is affected by the accuracy with which births and deaths are reported and recorded and the completeness with which births and deaths are reported.

Nonsampling error arises from problems occurring during the collection or processing of mortality data. Specifically, the reliability of mortality estimates depends upon full reporting of children who have died, the absence of differential displacement of birth dates of surviving and dead children, and accurate information on ages at death. Although the nonsampling error associated with the KDHS mortality data cannot be evaluated statistically, Appendix C includes several tables that can be used to assess the extent to which the KDHS mortality data may be subject to common reporting errors.

When age at death is misreported or misrecorded, this may distort the age pattern of mortality, especially if the net effect of the age misreporting results in children moving from one age group to another. For example, a net transfer of deaths from under one month to a higher age range will affect the estimates of neonatal and postneonatal mortality.

Displacement of dates of birth can distort mortality trends. This can occur if an interviewer knowingly recorded a death as occurring in a different year, which may happen if an interviewer were trying to cut down on overall workload because live births occurring during the five years preceding the interview are the subject of a lengthy set of additional questions. In the 2014 KDHS questionnaire, the cut-off for asking these questions was January 2009. For possible misreporting of children's birth dates, the results are shown in Appendix Table C.4. The calendar year ratios for living and deceased children are 86 and 78, respectively, for 2009, compared with 113 and 118, respectively, in 2008. This suggests some level of transference of births from 2009 to the previous year. This pattern has also been observed in the previous KDHS surveys and could be due to some interviewers transferring births out of the five-year reference period to reduce their workload.

Another potential data quality problem is selective omission from the birth histories of the births of infants who did not survive, which can lead to underestimation of mortality rates. These omissions may occur when mothers are reluctant to discuss their dead children because of grief or cultural stigma surrounding discussing such deaths. When selective omission of childhood deaths occurs, it is usually most pronounced for deaths occurring early in infancy. One way such omissions can be detected is by examining the proportion of neonatal deaths to infant deaths. Generally, if there is substantial underreporting of deaths, the result is an abnormally low ratio of neonatal deaths to infant deaths. Appendix Table C.5 does not show any sign of severe underreporting of early neonatal deaths at the national level. For the five-year period before the survey, the proportion of neonatal deaths occurring in the first week of life is 71 percent, slightly lower than that recorded in the 2008-09 KDHS (82 percent) but

within the expected range.[1] Moreover, this ratio is approximately stable over the 20 years preceding the survey, a further indication that early infant deaths have not been grossly underreported.

Examination of the 2014 KDHS infant death data shows that the proportion of neonatal to infant deaths ranges from 59 percent in the period 0 to 4 years prior to the survey to 46 percent during the period 15 to 19 years before the survey (Table C.6). This pattern conforms to the expectation that, as mortality levels decline, a larger proportion of infant deaths will take place during the early neonatal period. Although slightly lower than that in the 2008-09 KDHS (61 percent), the 59 percent observed in 2014 is higher than those recorded in the 2003 (47 percent) and the 1998 (41 percent) KDHS surveys, an indication that underreporting of deaths was minimal. This high percentage of neonatal deaths implies that there was little if any selective omission of childhood deaths that could compromise the quality of the 2014 KDHS early childhood mortality rates.

Another potential data quality problem is heaping of the age at death. Errors in the reporting of the age at death may result in the transference of deaths from one age bracket for which mortality rates are being calculated to another. For example, heaping on age 1 year or 12 months can result in an underestimate of the infant mortality rate and an overestimate of the child mortality level. Several steps were taken in the training of the KDHS interviewers and in the structuring of the KDHS birth history to reduce errors in reporting the age at death. Interviewers were instructed to record age at death in days if the child died during the first month of life. They were to record age at death in months if the child died in the first two years of life. Because heaping on "1 year" or "12 months" is very common, interviewers were asked specifically to probe when the mothers gave these responses. The distribution of deaths under two years during the 20 years prior to the survey by age at death in months can show if there is heaping at age 12 months during any of the periods before the survey, with corresponding deficits in adjacent months. Table C.6 shows that there are 256 reported deaths at 12 months compared with 46 deaths at 11 months, 30 deaths at 13 months, and 33 deaths at 14 months. This is likely to somewhat underestimate infant mortality and overestimate child mortality. However, this will have minimal effect on the mortality estimates for the period 0 to 4 years before the survey since heaping of deaths at age 12 months is much less pronounced in the most recent period of 0 to 4 years prior to the survey (37 deaths) than in the periods of 5-9 years, 10-14 years, and 15-19 years prior to the survey (49-77 deaths).

In addition to recall errors for the more distant retrospective periods, there are structural reasons for limiting mortality estimation to recent periods, preferably to the periods 0-4, 5-9, and 10-14 years before the survey. In fact, the periods other than the first (0-4 years) have slightly biased estimates because they are based on the child mortality experiences of women age 15-44 and 15-39, respectively, instead of women age 15-49 as in the period 0-4 years preceding the survey. Therefore, estimating mortality for periods more than 10-14 years before the survey is not advisable.

In summary, while there is evidence of some omission or displacement of infant deaths from one period to another, infant deaths in the 2014 KDHS do not appear to be severely underreported.

8.2 LEVELS AND TRENDS IN INFANT AND CHILD MORTALITY

Table 8.1 shows neonatal, postneonatal, infant, child, and under-5 mortality rates for three successive five-year periods before the survey. For the five years immediately preceding the 2014 KDHS (approximate calendar years 2010-2014), the infant mortality rate is 39 deaths per 1,000 live births and the under-5 mortality rate is 52 deaths per 1,000 live births. This implies that about one in every 26 children born in Kenya dies before age 1, while one in every 19 does not survive to age 5. Neonatal mortality is 22 deaths per 1,000 live births during the same period, while postneonatal mortality is 16 deaths per 1,000 live births. Fifty-six percent of infant deaths in Kenya occur during the first month of life.

[1] There are no models for mortality patterns during the neonatal period. However, one review of data from several developing countries concluded that, at neonatal mortality levels of 20 per 1,000 or higher, approximately 70 percent of neonatal deaths occur within the first six days of life (Boerma, 1988).

Table 8.1 Early childhood mortality rates

Neonatal, postneonatal, infant, child, and under-5 mortality rates for five-year periods preceding the survey, Kenya 2014

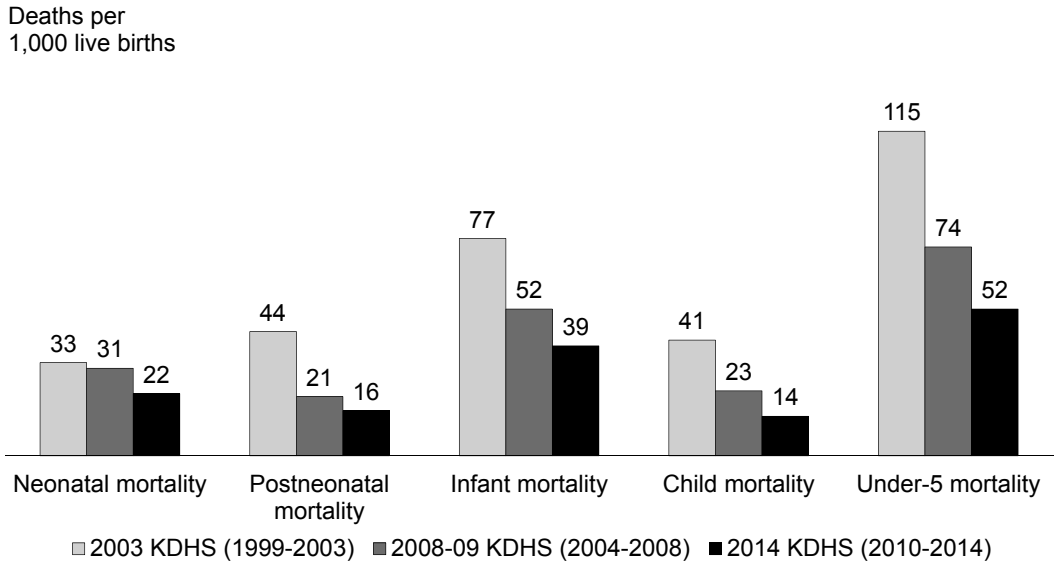
Years preceding the survey	Approximate calendar years	Neonatal mortality (NN)	Postneonatal mortality (PNN)[1]	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-5 mortality ($_5q_0$)
0-4	2010-2014	22	16	39	14	52
5-9	2005-2009	24	19	43	18	60
10-14	2000-2004	26	26	51	30	80

[1] Computed as the difference between the infant and neonatal mortality rates

The 2014 KDHS documents a pattern of decreasing under-5 mortality during the 15 years prior to the survey. Results from the three recent KDHS surveys conducted between 2003 and 2014 show a similar decline in childhood mortality over the past 15 years (Figure 8.1).

Comparing data for the five-year period preceding each of the three KDHS surveys, under-5 mortality declined from 115 deaths per 1,000 live births in 1999-2003 to 74 deaths per 1,000 in 2004-08, and further decreased by 30 percent to 52 deaths per 1,000 in the five years preceding the 2014 KDHS. The infant mortality rate similarly declined from 77 deaths per 1,000 deaths in 1999-2003 to 52 deaths per 1,000 in 2004-08, and it declined further by 25 percent to 39 deaths per 1,000 in the five years preceding the 2014 KDHS. Postneonatal mortality has also steadily declined, from 44 deaths to 21 deaths per 1,000 live births between 1999-2003 and 2004-08, and then to 16 deaths per 1,000 in the five years preceding 2014, a 24 percent decrease in the past five years. Similar declines are observed for neonatal and child mortality rates.

Figure 8.1 **Trends in childhood mortality, 1999-2014**



The observed trends imply that the increase in mortality witnessed in the 1990s has potentially reversed (Opiyo and Sawhney, 2014; Wafula et al., 2012). These findings are consistent with and may be related to other improved health outcomes and behaviours presented elsewhere in this report, including improvements in utilisation of maternal health care services, such as deliveries in a health facility, deliveries by a skilled health provider, and uptake of postnatal care services for mothers and newborns (Chapter 9); improved health care seeking behaviour for childhood illnesses such as pneumonia, diarrhoea, and malaria (Chapter 10); and increased levels of ownership and use of insecticide-treated mosquito nets (Chapter 12). The decline in childhood mortality reflects the recent global trend of under-5 mortality reducing faster than at any other time in the past two decades (UNICEF, 2014).

However, accelerated change for child survival, health, and development needs more focus on a healthy start of life. The neonatal mortality rate of 22 deaths per 1,000 live births indicates that progress remains to be made before Kenya achieves the Every Newborn Action Plan's goal of a neonatal mortality rate below 10 deaths per 1,000 live births by 2035 (UNICEF, 2014).

8.3 SOCIOECONOMIC DIFFERENTIALS IN INFANT AND CHILD MORTALITY

The probability of dying in early childhood is higher in some population subgroups than in others. Table 8.2 and Figure 8.2 show differentials in early childhood mortality rates by residence, region, level of mother's education, and household wealth. The childhood mortality rates by background characteristics are calculated for the 10-year period before the survey (approximately 2005-2014) so that the estimates are based on a sufficient number of births in each category to study mortality differentials across subgroups.

While postneonatal and child mortality are slightly lower in urban areas than in rural areas, neonatal mortality is 24 percent higher in urban areas than it is in rural areas (26 deaths versus 21 deaths per 1,000 live births).

Table 8.2 Early childhood mortality rates by socioeconomic characteristics

Neonatal, postneonatal, infant, child, and under-5 mortality rates for the 10-year period preceding the survey, by background characteristics, Kenya 2014

Background characteristic	Neonatal mortality (NN)	Postneonatal mortality (PNN)[1]	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-5 mortality ($_5q_0$)
Residence					
Urban	26	16	43	15	57
Rural	21	18	40	16	56
Region					
Coast	25	19	44	14	57
North Eastern	24	13	37	8	44
Eastern	24	12	36	9	45
Central	24	14	38	4	42
Rift Valley	20	14	34	12	45
Western	19	21	40	25	64
Nyanza	19	31	50	33	82
Nairobi	39	16	55	17	72
Mother's education					
No education	21	16	36	15	51
Primary incomplete	22	22	44	20	63
Primary complete	25	15	40	17	56
Secondary+	23	17	40	11	51
Wealth quintile					
Lowest	20	20	40	18	57
Second	23	19	42	23	63
Middle	21	17	39	16	54
Fourth	26	20	46	13	58
Highest	26	13	38	9	47

[1] Computed as the difference between the infant and neonatal mortality rates

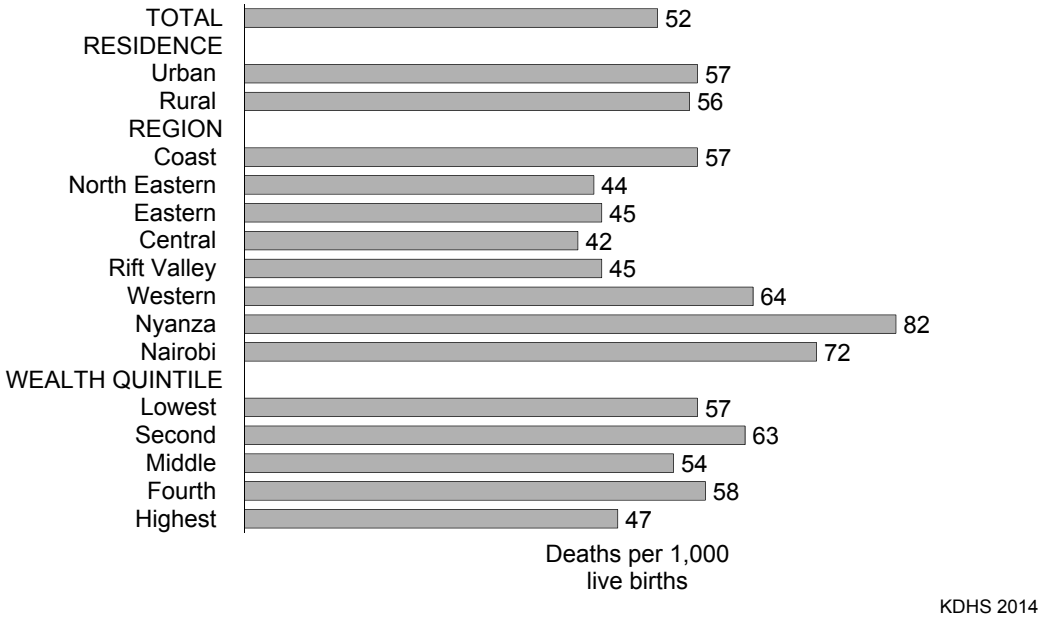
The under-5 mortality rate summarises the mortality rate from birth to age 5. As is true in each of its component rates, the under-5 mortality differentials are most pronounced across regions. The range in under-5 mortality ranges from a low of 42 deaths per 1,000 live births in Central region to a high of 82 deaths per 1,000 live births in Nyanza. Nairobi has the second highest under-5 mortality rate.

Focusing on the component parts of under-5 mortality, the highest infant mortality is experienced in Nairobi and Nyanza (55 and 50 deaths per 1,000 live births). The highest neonatal mortality is experienced in Nairobi (39 deaths per 1,000 live births) and the highest postneonatal mortality is experienced in Nyanza region (31 deaths per 1,000 live births). Nyanza also has the highest child mortality rate (33 deaths per 1,000 live births), followed by Western region (25 deaths per 1,000 live births).

The highest under-5 mortality rate by education is among those born to mothers with an incomplete primary education (63 deaths per 1,000 live births). Children in these households experience both the highest postneonatal and child mortality (20 and 22 deaths per 1,000 live births).

While infants born into the wealthiest households experience the lowest levels of both postneonatal and child mortality, they, along with the second wealthiest households (fourth wealth quintile), experience the highest neonatal mortality. The highest child mortality occurs in households in the second wealth quintile (63 deaths per 1,000 live births).

Figure 8.2 **Under-5 mortality by background characteristics**



8.4 DEMOGRAPHIC DIFFERENTIALS IN INFANT AND CHILD MORTALITY

The demographic characteristics of both mother and child play an important role in the survival of children. Table 8.3 presents early childhood mortality rates for the 10-year period preceding the survey by demographic characteristics (i.e., sex of child, mother's age at birth, birth order, previous birth interval, and birth size).

Male children are more likely than female children to die during their first year of life (44 deaths versus 37 deaths per 1,000 live births). Once past infancy, male and female children one to four years of age experience the same level of mortality (16 deaths per 1,000 live births).

Both mother's age at the time of the birth of the child and the child's birth order exhibit a U-shaped association with neonatal mortality. Babies born to the youngest and oldest mothers experience the highest neonatal mortality rates, as do babies born after the shortest and longest birth intervals.

Shorter birth intervals have been demonstrated to be associated with higher mortality, both during and after infancy. Kenya follows suit with a strong association as well during neonatal, postneonatal, and child portions of life. Babies born after the shortest birth intervals, less than two years, are nearly twice as likely to die (83 deaths per 1,000 live births) as babies born after three (42 deaths per 1,000 live births) or four or more years (44 deaths per 1,000 live births). An anomaly to this pattern is the higher neonatal mortality of births born after four or more years as compared with births born after an interval of two or three years; a further analysis that accounts for other co-factors of mortality might elucidate why this is so.

Table 8.3 Early childhood mortality rates by demographic characteristics

Neonatal, postneonatal, infant, child, and under-5 mortality rates for the 10-year period preceding the survey, by demographic characteristics, Kenya 2014

Demographic characteristic	Neonatal mortality (NN)	Postneonatal mortality (PNN)[1]	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-5 mortality ($_5q_0$)
Child's sex					
Male	25	19	44	16	60
Female	21	17	37	16	52
Mother's age at birth					
<20	27	19	45	20	65
20-29	21	17	38	15	52
30-39	25	18	43	14	57
40-49	28	20	48	(15)	(62)
Birth order					
1	28	15	43	15	57
2-3	20	17	36	14	49
4-6	21	21	42	20	62
7+	28	20	48	18	65
Previous birth interval[2]					
<2 years	31	29	60	25	83
2 years	17	19	36	17	53
3 years	14	14	29	14	42
4+ years	22	13	36	9	44
Birth size[3]					
Small/very small	41	15	57	na	na
Average or larger	17	17	35	na	na

Note: Figures in parentheses are based on 250-499 unweighted exposed persons.
na = Not applicable
[1] Computed as the difference between the infant and neonatal mortality rates
[2] Excludes first-order births
[3] Rates for the five-year period before the survey

The 2014 KDHS reports size at birth according to the size of the baby as gauged by the mother. Women were asked: *When (NAME) was born, was he/she very large, larger than average, average, smaller than average, or very small?* Children whose birth size is small or very small are more than two times as likely to die during the first month of life as children whose birth size is average or larger (41 deaths per 1,000 live births versus 17 deaths per 1,000 live births).

8.5 PERINATAL MORTALITY

Perinatal mortality is a good indicator of the state of health in general and the health status of the mother at the time of delivery. Pregnancy losses occurring after seven completed months of gestation (stillbirths) plus deaths to live births within the first seven days of life (early neonatal deaths) constitute perinatal deaths. The distinction between a stillbirth and an early neonatal death may be a fine one, often depending on observing and then remembering sometimes faint signs of life after delivery. The causes of stillbirths and early neonatal deaths are closely linked, and examining just one or the other can understate the true level of mortality at or near the time of delivery. For this reason, deaths around delivery are combined into the perinatal mortality rate, defined as the number of perinatal deaths per 1,000 pregnancies reaching seven months of gestation.

Table 8.4 presents the number of stillbirths and early neonatal deaths and the perinatal mortality rate for the five-year period preceding the 2014 KDHS, by background characteristics. Of the 9,484 reported pregnancies of at least seven months' duration, 126 ended in stillbirths and 146 were neonatal deaths, thus giving a perinatal mortality rate of 29 deaths per 1,000 pregnancies, a decline from the 37 deaths per 1,000 pregnancies reported in the 2008-09 KDHS.

Babies born to mothers in their 20s experience the lowest perinatal mortality rate (22 deaths per 1,000 pregnancies). The shortest of birth intervals, those less than 15 months in duration, experience the highest perinatal mortality rates of all birth interval lengths (37 deaths per 1,000 pregnancies). There is no difference in the perinatal mortality rate by urban-rural residence, similar to the findings in the 2003 and

2008-09 KDHS surveys. There are regional variations in the level of perinatal mortality, although the results should be interpreted with caution. The North Eastern region has the lowest perinatal mortality rate (16 deaths per 1,000 pregnancies) and the Eastern region the highest (44 deaths per 1,000 pregnancies). However, the small number of pregnancies of at least seven months' gestation in North Eastern should be kept in mind when interpreting these data.

There is no strong pattern of association between perinatal mortality rates and mother's education status or household wealth. The rate is highest among children whose mothers have a complete primary education (33 deaths per 1,000 pregnancies) and children in the second wealth quintile (34 deaths per 1,000 pregnancies).

Table 8.4 Perinatal mortality

Number of stillbirths and early neonatal deaths, and the perinatal mortality rate for the five-year period preceding the survey, by background characteristics, Kenya 2014

Background characteristic	Number of stillbirths[1]	Number of early neonatal deaths[2]	Perinatal mortality rate[3]	Number of pregnancies of 7+ months duration
Mother's age at birth				
<20	27	28	39	1,395
20-29	58	60	22	5,431
30-39	37	52	37	2,392
40-49	4	6	36	266
Previous pregnancy interval in months[4]				
First pregnancy	36	44	34	2,346
<15	25	20	37	1,214
15-26	15	25	21	1,891
27-38	14	19	24	1,362
39+	36	39	28	2,671
Residence				
Urban	48	52	29	3,436
Rural	78	94	28	6,048
Region				
Coast	22	16	39	974
North Eastern	3	2	16	310
Eastern	27	24	44	1,173
Central	15	14	34	852
Rift Valley	22	36	22	2,711
Western	18	12	26	1,145
Nyanza	13	24	28	1,332
Nairobi	5	19	25	987
Mother's education				
No education	15	18	29	1,126
Primary incomplete	35	40	27	2,816
Primary complete	42	41	33	2,513
Secondary+	34	47	27	3,029
Wealth quintile				
Lowest	24	35	27	2,216
Second	33	33	34	1,923
Middle	19	34	31	1,745
Fourth	19	19	23	1,721
Highest	30	25	29	1,879
Total	126	146	29	9,484

[1] Stillbirths are foetal deaths in pregnancies lasting seven or more months.
[2] Early neonatal deaths are deaths at age 0-6 days among live-born children.
[3] The sum of the number of stillbirths and early neonatal deaths divided by the number of pregnancies of seven or more months' duration, expressed per 1,000
[4] Categories correspond to birth intervals of <24 months, 24-35 months, 36-47 months, and 48+ months.

8.6 HIGH-RISK FERTILITY BEHAVIOUR

The survival of infants and children depends in part on the demographic and biological characteristics of their mothers. Because the probability of dying in early childhood is typically much greater if children are born to mothers who are too young (under age 18) or too old (over age 34), if they are born after a short birth interval (less than 24 months after the preceding birth), or if they are born to

mothers with high parity (birth order four or higher), the risk of mortality is examined for births occurring in each of these categories and for births occurring under a combination of these categories. Table 8.5 shows three different measures related to risk that are meaningful to interpret together.

The first data column presents the percent distribution of births in the five years preceding the survey by risk category. Since no birth carries zero risk, the lowest risk categories are classified into two groups: births not in any high-risk category and births in an unavoidable risk category. The births that are not in any high-risk category are those that meet all of these criteria: they are born to women between age 18 and 34, they follow a birth interval of longer than 24 months, and they are of second or third birth order. Those in the unavoidable risk category are first-order births to women between age 18 and 34.

The second column in Table 8.5 denotes the relationship between the risk factors and mortality. The risk ratio compares each risk category with the "not in any high risk" category. Being in multiple risk categories usually places a baby at a higher risk of dying than does being in any one single risk category.

The last column in Table 8.5 looks to the future and addresses the question of what proportion of currently married women have the potential for having a high-risk birth. Results were obtained by classifying a currently married woman into the risk category she would fall into if she were to become pregnant at the time of the survey.

Table 8.5 High-risk fertility behaviour

Percent distribution of children born in the five years preceding the survey by category of elevated risk of mortality and the risk ratio, and percent distribution of currently married women by category of risk if they were to conceive a child at the time of the survey, Kenya 2014

	Births in the 5 years preceding the survey		Percentage of currently married women[1]
Risk category	Percentage of births	Risk ratio	
Not in any high risk category	30.3	1.00	25.6[a]
Unavoidable risk category			
First order births between ages 18 and 34 years	21.0	1.34	4.5
Single high-risk category			
Mother's age <18	5.7	0.95	0.3
Mother's age >34	1.6	0.72	5.4
Birth interval <24 months	6.4	0.93	9.1
Birth order >3	19.4	0.96	16.7
Subtotal	33.1	0.94	31.5
Multiple high-risk category			
Age <18 and birth interval <24 months[2]	0.4	2.90	0.1
Age >34 and birth interval <24 months	0.1	*	0.3
Age >34 and birth order >3	8.8	1.31	26.5
Age >34 and birth interval <24 months and birth order >3	1.2	1.84	3.2
Birth interval <24 months and birth order >3	5.1	1.95	8.2
Subtotal	15.6	1.60	38.3
In any avoidable high-risk category	48.7	1.15	69.9
Total	100.0	na	100.0
Number of births/women	19,564	na	18,549

Note: Risk ratio is the ratio of the proportion dead among births in a specific high-risk category to the proportion dead among births not in any high-risk category. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
na = Not applicable
[1] Women are assigned to risk categories according to the status they would have at the birth of a child if they were to conceive at the time of the survey: current age less than 17 years and 3 months or older than 34 years and 2 months, latest birth less than 15 months ago, or latest birth being of order 3 or higher.
[2] Includes the category age <18 and birth order >3
[a] Includes sterilised women

Nationally, only 3 in 10 births were in no high-risk birth category at the time they occurred, and 2 in 10 fell into the unavoidable risk category. The other 49 percent were high-risk births, of whom 33 percent were in a single risk category and 16 percent were in more than one risk category. The most common single risk category is being of birth order four or higher, with about one in five births born in the preceding five years falling into this category. The most common multiple risk category is being of birth order four or higher and being born to a mother over age 34; 9 percent of births fell in this category.

Births born into just one single high-risk mortality category actually experienced lower mortality rates (an average risk ratio of 0.94) than births not born into any high-risk category. It is in the situation of being in multiple risk categories that births experience higher mortality levels. Births born to women less than age 18 and born less than 24 months after the preceding birth are at nearly three times the risk of dying as compared with births born to women who are not in any high-risk category (risk ratio of 2.90). It is, of course, an unusual scenario; less than 1 percent of births were born into this category. Those who experience nearly double the risk of mortality (risk ratio of 1.95), are those births that are above birth order three, born after a birth interval of less than 24 months.

The most common multiple risk category among women is being over age 34 and having already given birth to at least three children. One-quarter of women fall in this category, and births born to women in this category experience 30 percent higher mortality than births born to women who are not in any high-risk category (risk ratio of 1.31).

Nationally, 70 percent of currently married women are in a high-risk birth category, such that if they had given birth at the time of the survey, their baby would have been in a high-risk situation. Thirty-two percent of women, and thus their births, would fall into a single high-risk category, while 38 percent would fall into multiple high-risk categories.

MATERNAL HEALTH 9

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Key Findings

- Ninety-six percent of women with a live birth in the five years preceding the survey received antenatal care from a skilled provider, an improvement from 92 percent in the 2008-09 KDHS and 88 percent in the 2003 KDHS.
- Fifty-eight percent of women make the recommended four or more antenatal care visits during their pregnancy, an increase of 11 percentage points from the 2008-09 KDHS (47 percent).
- Sixty-one percent of live births in the five years preceding the survey were delivered in a health facility; 62 percent were assisted by a skilled provider.
- More than half (53 percent) of women who gave birth in the two years before the survey received a postnatal care checkup in the first two days after delivery.
- Thirty-six percent of infants born in the two years before the survey had their first postnatal checkup within the first two days after birth. One in three newborns received postnatal care from a doctor, a nurse, or a midwife.
- More than half (54 percent) of the women interviewed in the survey had heard of fistula. However, only 1 percent of these women reported having ever experienced fistula-like symptoms.

The health status of mothers and children is an important indicator of the overall economic health and well-being of a country (United Nations, 2010). Maternal health is inextricably linked with the survival of newborns. For every woman who dies, another 30 suffer long-lasting injuries and illnesses such as obstetric fistula (UNDP, WHO, UNFPA, and World Bank, 2006). The International Conference on Population and Development, held in Cairo, Egypt, in 1994, called for the development of comprehensive reproductive health policies, programmes, and implementation plans (UNFPA, 1994). This call defined the focus of the Kenya National Reproductive Health Programme, through which efforts towards improvements in maternal health have been made.

Provision of a continuum of care during pregnancy, labour and delivery, and the postnatal period results in reduced maternal and neonatal morbidity and mortality. The 2014 KDHS collected information on the extent to which women in Kenya receive care during each of these stages by asking women age 15-49 who had a live birth in the five years preceding the survey questions about the antenatal, labour and delivery, and postnatal care they received. The findings can be used to identify populations underusing maternal health services and to assist in the planning of improvements in services.

9.1 ANTENATAL CARE

Antenatal care (ANC) from a skilled provider is important to monitor pregnancy and reduce the risk of morbidity for mother and baby during pregnancy and delivery. The quality of antenatal care can be monitored through the content of services received and the kind of information mothers are given during their visit. In the 2014 KDHS, women who gave birth in the five years preceding the survey were asked to

report on all persons they saw for antenatal care for their most recent birth. When a woman saw more than one provider, only the provider with the highest qualifications was considered in the tabulation of results.

Table 9.1 shows the percent distribution of women age 15-49 who had a live birth in the five years preceding the survey by source of antenatal care received during pregnancy, according to background characteristics. Ninety-six percent of women received antenatal care from a skilled provider (a doctor, a nurse, or a midwife) for their most recent birth in the five years preceding the survey. The majority of women (64 percent) received care from a nurse or midwife, while 31 percent received care from a doctor. Urban women (98 percent) were slightly more likely than rural women (94 percent) to receive antenatal care services from a skilled provider. In all regions except North Eastern (67 percent), 94 percent or more of women received antenatal care from a skilled provider. Receipt of antenatal care services from a skilled provider increased with increasing education and wealth. Eighty-nine percent of women in the lowest wealth quintile received antenatal care services from a skilled provider, compared with virtually all women (99 percent) in the highest wealth quintile.

Table 9.1 Antenatal care

Percent distribution of women age 15-49 who had a live birth in the five years preceding the survey by antenatal care (ANC) provider during pregnancy for the most recent birth and the percentage receiving antenatal care from a skilled provider for the most recent birth, according to background characteristics, Kenya 2014

Background characteristic	Antenatal care provider					No ANC	Total	Percentage receiving antenatal care from a skilled provider[1]	Number of women
	Doctor	Nurse/ midwife	Community health worker	Traditional birth attendant	Missing				
Mother's age at birth									
<20	28.6	66.3	0.1	0.0	0.0	5.0	100.0	94.9	1,871
20-34	31.8	64.2	0.4	0.0	0.2	3.3	100.0	96.0	10,641
35-49	29.8	63.4	0.5	0.0	0.2	6.0	100.0	93.2	1,930
Birth order									
1	37.4	60.0	0.1	0.0	0.0	2.5	100.0	97.3	3,659
2-3	33.1	64.0	0.3	0.1	0.2	2.3	100.0	97.1	5,815
4-5	25.7	68.1	0.6	0.0	0.1	5.4	100.0	93.8	2,795
6+	22.5	67.9	0.7	0.1	0.4	8.4	100.0	90.3	2,173
Residence									
Urban	41.0	56.8	0.2	0.0	0.2	1.8	100.0	97.8	5,561
Rural	24.9	69.1	0.5	0.1	0.2	5.2	100.0	94.0	8,881
Region									
Coast	46.3	51.2	0.0	0.0	0.2	2.3	100.0	97.5	1,471
North Eastern	9.2	57.4	7.7	0.2	0.4	24.9	100.0	66.5	372
Eastern	18.3	78.9	0.0	0.0	0.1	2.6	100.0	97.2	1,834
Central	61.7	35.6	0.2	0.0	0.0	2.4	100.0	97.3	1,528
Rift Valley	29.4	64.4	0.1	0.1	0.1	5.8	100.0	93.9	4,002
Western	20.3	76.8	0.0	0.1	0.2	2.5	100.0	97.2	1,590
Nyanza	13.0	83.5	0.6	0.0	0.4	2.4	100.0	96.6	1,988
Nairobi	44.8	52.8	0.5	0.0	0.2	1.7	100.0	97.6	1,657
Education									
No education	18.9	63.2	2.1	0.3	0.5	15.1	100.0	82.1	1,409
Primary incomplete	26.1	68.7	0.1	0.0	0.2	4.9	100.0	94.7	3,846
Primary complete	31.5	65.4	0.5	0.0	0.1	2.5	100.0	96.8	4,024
Secondary+	38.0	60.6	0.1	0.0	0.1	1.1	100.0	98.6	5,163
Wealth quintile									
Lowest	20.5	68.0	1.1	0.2	0.2	9.9	100.0	88.5	2,947
Second	22.5	73.0	0.1	0.0	0.2	4.1	100.0	95.5	2,782
Middle	27.4	69.7	0.2	0.0	0.3	2.4	100.0	97.1	2,660
Fourth	33.8	63.6	0.4	0.0	0.0	2.2	100.0	97.4	2,777
Highest	48.8	50.0	0.2	0.0	0.1	0.9	100.0	98.8	3,277
Total	31.1	64.3	0.4	0.0	0.2	3.9	100.0	95.5	14,442

Note: If more than one source of ANC was mentioned, only the provider with the highest qualifications is considered in this tabulation.
[1] Skilled provider includes doctor, nurse, or midwife.

Table 9.1C shows the percent distribution of women age 15-49 who had a live birth in the five years preceding the survey by county and source of antenatal care. ANC from a skilled provider is virtually universal in Mombasa, Embu, Machakos, and Nandi (99 percent). Less than 90 percent of women in Garissa, Marsabit, West Pokot, and Samburu and less than 60 percent in Mandera and Wajir received ANC from a skilled provider; 47 percent of women in Mandera received no ANC at all.

Table 9.1C Antenatal care

Percent distribution of women age 15-49 who had a live birth in the five years preceding the survey by antenatal care (ANC) provider during pregnancy for the most recent birth and the percentage receiving antenatal care from a skilled provider for the most recent birth, according to county, Kenya 2014

County	Antenatal care provider					No ANC	Total	Percentage receiving antenatal care from a skilled provider[1]	Number of women
	Doctor	Nurse/ midwife	Community health worker	Traditional birth attendant	Missing				
Coast	**46.3**	**51.2**	**0.0**	**0.0**	**0.2**	**2.3**	**100.0**	**97.5**	**1,471**
Mombasa	61.3	37.9	0.0	0.0	0.0	0.8	100.0	99.2	422
Kwale	15.2	80.5	0.0	0.0	0.9	3.4	100.0	95.7	304
Kilifi	70.0	28.2	0.0	0.0	0.0	1.8	100.0	98.2	503
Tana River	0.1	93.4	0.0	0.0	0.0	6.4	100.0	93.6	115
Lamu	6.3	89.4	0.0	0.0	1.0	3.3	100.0	95.7	36
Taita Taveta	24.5	73.4	0.0	0.0	0.0	2.1	100.0	97.9	90
North Eastern	**9.2**	**57.4**	**7.7**	**0.2**	**0.4**	**24.9**	**100.0**	**66.5**	**372**
Garissa	2.9	84.5	0.0	0.0	0.0	12.7	100.0	87.3	135
Wajir	4.0	53.6	19.9	0.0	0.0	21.9	100.0	57.6	141
Mandera	25.7	24.8	0.5	0.8	1.7	46.5	100.0	50.5	96
Eastern	**18.3**	**78.9**	**0.0**	**0.0**	**0.1**	**2.6**	**100.0**	**97.2**	**1,834**
Marsabit	12.9	62.7	1.4	0.0	0.0	23.1	100.0	75.6	64
Isiolo	20.6	75.4	0.0	0.3	0.0	3.5	100.0	96.0	58
Meru	24.2	73.0	0.0	0.0	0.2	2.5	100.0	97.3	442
Tharaka-Nithi	22.5	75.8	0.0	0.0	0.0	1.7	100.0	98.3	121
Embu	21.5	77.7	0.0	0.0	0.0	0.8	100.0	99.2	167
Kitui	11.2	86.3	0.0	0.0	0.0	2.5	100.0	97.5	313
Machakos	24.1	74.7	0.0	0.0	0.2	1.0	100.0	98.8	396
Makueni	5.7	92.3	0.0	0.0	0.0	2.0	100.0	98.0	274
Central	**61.7**	**35.6**	**0.2**	**0.0**	**0.0**	**2.4**	**100.0**	**97.3**	**1,528**
Nyandarua	40.4	56.3	0.0	0.0	0.0	3.3	100.0	96.7	195
Nyeri	62.3	34.4	0.0	0.0	0.0	2.8	100.0	96.7	216
Kirinyaga	36.8	59.6	0.0	0.0	0.0	3.6	100.0	96.4	174
Murang'a	74.3	23.1	0.0	0.0	0.0	2.6	100.0	97.4	255
Kiambu	69.3	28.7	0.4	0.0	0.0	1.7	100.0	97.9	688
Rift Valley	**29.4**	**64.4**	**0.1**	**0.1**	**0.1**	**5.8**	**100.0**	**93.9**	**4,002**
Turkana	0.6	90.4	0.0	0.0	0.0	9.0	100.0	91.0	214
West Pokot	14.7	70.5	0.0	0.2	0.0	14.6	100.0	85.2	180
Samburu	2.7	71.1	0.4	0.0	0.6	25.2	100.0	73.8	79
Trans-Nzoia	44.6	47.4	0.0	0.0	0.0	8.0	100.0	92.0	382
Uasin Gishu	30.4	65.6	0.2	0.3	0.0	3.4	100.0	96.1	363
Elgeyo Marakwet	20.8	77.3	0.0	0.0	0.0	1.9	100.0	98.1	114
Nandi	8.5	90.0	0.0	0.0	0.0	1.5	100.0	98.5	302
Baringo	11.5	81.4	0.0	1.1	0.0	5.9	100.0	92.8	160
Laikipia	23.8	69.9	0.0	0.0	0.0	6.3	100.0	93.7	165
Nakuru	39.9	55.7	0.0	0.0	0.5	3.9	100.0	95.6	674
Narok	13.5	78.1	0.0	0.0	0.3	8.1	100.0	91.6	403
Kajiado	59.9	36.7	0.0	0.0	0.0	3.3	100.0	96.7	335
Kericho	46.8	50.3	0.0	0.0	0.3	2.6	100.0	97.1	277
Bomet	30.0	63.6	1.1	0.0	0.0	5.4	100.0	93.5	354
Western	**20.3**	**76.8**	**0.0**	**0.1**	**0.2**	**2.5**	**100.0**	**97.2**	**1,590**
Kakamega	29.4	67.1	0.0	0.3	0.5	2.7	100.0	96.4	532
Vihiga	16.5	80.6	0.2	0.0	0.0	2.6	100.0	97.1	164
Bungoma	13.2	84.4	0.0	0.0	0.0	2.4	100.0	97.6	607
Busia	20.8	76.8	0.0	0.0	0.0	2.4	100.0	97.6	287
Nyanza	**13.0**	**83.5**	**0.6**	**0.0**	**0.4**	**2.4**	**100.0**	**96.6**	**1,988**
Siaya	1.6	96.2	0.6	0.1	0.0	1.5	100.0	97.8	268
Kisumu	21.9	76.6	0.3	0.0	0.0	1.3	100.0	98.4	378
Homa Bay	23.1	70.4	2.1	0.0	1.1	3.3	100.0	93.5	447
Migori	4.5	91.9	0.0	0.0	0.3	3.3	100.0	96.4	360
Kisii	10.7	87.0	0.0	0.0	0.0	2.3	100.0	97.7	384
Nyamira	7.7	88.6	0.0	0.0	0.7	2.9	100.0	96.4	152
Nairobi	**44.8**	**52.8**	**0.5**	**0.0**	**0.2**	**1.7**	**100.0**	**97.6**	**1,657**
Total	31.1	64.3	0.4	0.0	0.2	3.9	100.0	95.5	14,442

Note: If more than one source of ANC was mentioned, only the provider with the highest qualifications is considered in this tabulation.
[1] Skilled provider includes doctor, nurse, or midwife.

9.1.1 Number and Timing of Antenatal Visits

Regular antenatal care is helpful in identifying and preventing adverse pregnancy outcomes when it is sought early in the pregnancy and is continued until delivery. The World Health Organization recommends that women have at least four antenatal care visits during each pregnancy. It is possible

during these visits to detect health problems associated with a pregnancy and to plan interventions. In the event of any complications, more frequent visits are advised, and admission to a health facility may be necessary (MOH, 2012).

Table 9.2 presents the percent distribution of women age 15-49 who had a live birth in the five years preceding the survey by number of antenatal care (ANC) visits for the most recent live birth and by the timing of the first visit, according to residence and region. It also shows median number of months pregnant at first visit. Fifty-eight percent of pregnant women made four or more antenatal care visits during their pregnancy. This is an increase from 47 percent in the 2008-09 KDHS.

Table 9.2 Number of antenatal care visits and timing of first visit

Percent distribution of women age 15-49 who had a live birth in the five years preceding the survey by number of antenatal care (ANC) visits for the most recent live birth, and by the timing of the first visit, and among women with ANC, median months pregnant at first visit, according to residence and region, Kenya 2014

Number and timing of ANC visits	Residence		Region								Total
	Urban	Rural	Coast	North Eastern	Eastern	Central	Rift Valley	Western	Nyanza	Nairobi	
Number of ANC visits											
None	1.8	5.3	2.5	25.2	2.7	2.4	5.9	2.6	2.6	1.7	4.0
1	2.1	4.1	3.2	6.6	3.2	2.1	4.1	4.0	3.0	2.0	3.3
2-3	27.9	39.1	32.0	31.2	37.3	31.7	38.1	41.8	35.5	22.6	34.8
4+	67.7	51.3	62.3	36.8	56.3	63.4	51.7	51.3	58.7	73.1	57.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of months pregnant at time of first ANC visit											
No antenatal care	1.8	5.3	2.5	25.2	2.7	2.4	5.9	2.6	2.6	1.7	4.0
<4	25.6	16.2	17.6	12.1	18.0	22.9	16.2	19.7	21.2	30.2	19.8
4-5	44.4	41.4	43.2	37.9	45.7	40.8	39.7	43.7	44.7	44.7	42.6
6-7	26.1	33.7	32.5	22.3	31.0	32.2	34.7	30.9	29.0	22.5	30.8
8+	1.8	3.1	3.5	2.4	2.4	1.7	3.4	2.8	2.4	1.0	2.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	5,561	8,881	1,471	372	1,834	1,528	4,002	1,590	1,988	1,657	14,442
Median months pregnant at first visit (for those with ANC)	5.1	5.6	5.4	5.4	5.4	5.3	5.6	5.4	5.3	4.9	5.4
Number of women with ANC	5,459	8,411	1,435	278	1,783	1,491	3,767	1,549	1,937	1,629	13,869

Note: Totals may not add up to 100 percent because women with missing information are not shown separately.

Urban women were more likely than rural women to have had four or more antenatal visits (68 percent and 51 percent, respectively). By region, the proportion of women having four or more ANC visits ranges from 37 percent in North Eastern to 73 percent in Nairobi.

Forty-three percent of women made their first antenatal care visit between the fourth and fifth months of pregnancy, and only 20 percent made their first visit before the fourth month of pregnancy. The median duration of pregnancy at the first antenatal care visit is 5.4 months. The timing of the first ANC visit is fairly consistent across regions.

9.1.2 Components of Antenatal Care

High-quality antenatal care operates on the principle that every pregnancy is at risk of complications. Therefore, apart from receiving basic care, every pregnant woman should be routinely monitored for complications. To assess the quality of antenatal care services, women who gave birth in the five years preceding the survey were asked a number of questions about the components of care they received when they were pregnant with their most recent live birth.

Table 9.3 presents information on the percentage of women age 15-49 with a live birth in the five years preceding the survey who took iron tablets, iron syrup, or iron and folic acid supplementation and intestinal parasite drugs during their most recent pregnancy in the five years preceding the survey. It also shows the percentage of women receiving antenatal care who were informed about the signs of pregnancy complications and who received specific routine services during ANC visits.

Table 9.3 Components of antenatal care

Among women age 15-49 with a live birth in the five years preceding the survey, the percentage who took iron tablets or syrup and drugs for intestinal parasites during the pregnancy of the most recent birth, and among women receiving antenatal care (ANC) for the most recent live birth in the five years preceding the survey, the percentage receiving specific antenatal services, according to background characteristics, Kenya 2014

Background characteristic	Among women with a live birth in the past five years, the percentage who during the pregnancy of their last birth:			Among women who received antenatal care for their most recent birth in the past five years, the percentage with selected services								
	Took iron tablets, iron syrup, or iron and folic acid supple-ments	Took intestinal parasite drugs	Number of women with a live birth in the past five years	Informed of signs of pregnancy compli-cations	Blood pressure measured	Urine sample taken	Blood sample taken	Weighed	Height measured	Given information on breast-feeding	Given information on iron and/or folic acid supple-mentation	Number of women with ANC for their most recent birth
Mother's age at birth												
<20	65.0	27.4	867	58.1	91.5	86.7	95.8	96.6	46.4	63.7	64.2	827
20-34	71.1	31.6	5,074	59.5	94.3	89.5	96.4	97.5	46.3	70.3	70.5	4,910
35-49	64.4	33.2	935	52.6	94.4	86.3	93.7	97.1	40.9	62.5	66.8	888
Birth order												
1	70.4	30.4	1,705	66.8	95.1	93.2	97.4	97.8	52.3	70.4	71.5	1,656
2-3	72.4	32.5	2,747	59.8	94.7	91.3	97.3	98.0	47.9	70.8	70.8	2,692
4-5	69.0	31.5	1,351	52.1	92.6	85.3	95.2	96.8	40.1	67.8	68.6	1,287
6+	60.7	29.4	1,072	48.4	91.9	79.0	91.1	95.3	35.5	59.3	61.9	992
Residence												
Urban	74.9	31.6	2,677	66.9	97.9	95.8	97.8	99.1	59.2	75.6	76.0	2,629
Rural	65.9	31.1	4,199	52.8	91.4	84.2	94.8	96.2	36.7	63.6	64.8	3,997
Region												
Coast	82.4	50.5	698	55.1	95.3	93.3	96.5	97.8	51.3	66.9	75.9	690
North Eastern	40.4	7.4	178	36.0	83.6	77.6	82.8	84.6	41.2	53.3	51.0	135
Eastern	68.5	34.5	891	59.7	94.8	91.5	96.8	98.3	44.8	59.1	62.0	868
Central	71.3	34.2	715	62.3	98.9	96.7	99.3	98.0	53.5	70.4	75.7	694
Rift Valley	61.7	23.8	1,899	47.2	94.1	84.4	95.5	96.6	40.8	64.0	62.6	1,810
Western	60.9	33.5	790	62.4	83.8	80.0	92.7	95.2	32.5	72.8	66.3	768
Nyanza	83.2	32.9	934	67.9	94.3	86.8	96.7	98.3	37.7	74.8	80.4	910
Nairobi	74.7	27.4	771	71.3	98.7	97.9	97.7	100.0	69.6	79.5	74.2	751
Education												
No education	57.1	21.5	675	35.9	87.4	76.6	89.5	91.3	31.6	50.6	55.4	578
Primary incomplete	65.0	30.4	1,901	50.6	90.4	82.3	95.3	96.3	38.1	61.6	62.4	1,818
Primary complete	71.4	34.1	1,856	57.5	94.9	90.4	96.4	97.9	46.1	71.5	69.7	1,818
Secondary+	74.7	32.6	2,445	70.2	97.5	95.3	97.7	99.1	54.2	75.5	77.4	2,412
Wealth quintile												
Lowest	62.8	27.5	1,381	44.7	89.3	77.1	91.8	93.4	34.4	55.3	58.8	1,249
Second	66.6	30.1	1,312	51.0	90.3	85.2	95.6	97.4	38.4	64.7	63.9	1,268
Middle	66.0	34.6	1,276	60.3	93.0	87.5	95.3	97.8	40.2	68.1	68.8	1,242
Fourth	74.0	32.8	1,372	61.2	97.0	93.6	98.0	98.2	49.0	74.0	73.4	1,350
Highest	76.4	31.6	1,536	71.7	98.9	98.1	98.5	99.3	62.4	77.6	79.0	1,516
Total	69.4	31.3	6,876	58.4	94.0	88.8	96.0	97.3	45.6	68.4	69.2	6,625

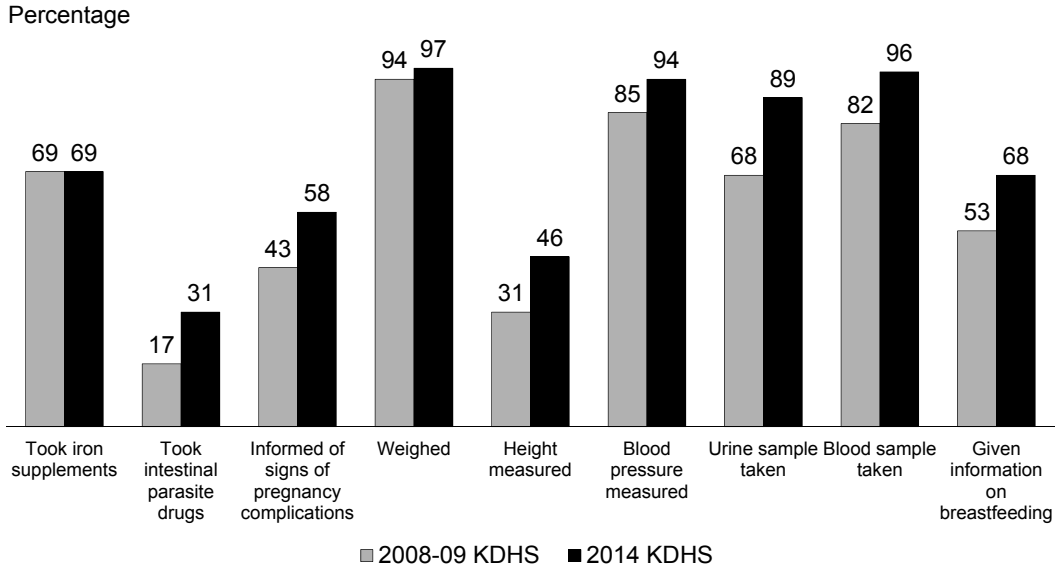
Sixty-nine percent of women with a live birth in the last five years took iron tablets, iron syrup, or iron and folic acid supplementation during the pregnancy of their most recent birth, and 31 percent took drugs for intestinal parasites. There are variations by background characteristics in intake of iron supplements and anti-parasite drugs. Iron supplements were most commonly taken by women age 20-34 (71 percent), while the proportion of women taking anti-parasite drugs increased with age. Women having a child of birth order six or higher (61 percent) were least likely to take iron supplements, but there was not much variation in use of anti-parasite drugs by birth order. While urban women were more likely to take iron supplements (75 percent) than rural women (66 percent), similar proportions of urban and rural women took anti-parasite drugs (32 percent and 31 percent, respectively). Regions with high proportions of women taking iron supplements (Nyanza, 83 percent; Coast, 82 percent; Nairobi, 75 percent) varied in the proportion of women taking anti-parasite drugs (Coast, 51 percent; Nyanza, 33 percent; Nairobi, 27 percent). Women with no education and women in the lowest wealth quintile were less likely to take either iron supplements or anti-parasite drugs than women with some education and those in wealthier households.

Use of various antenatal care services shows a general pattern according to which use is more common among women with births of lower order, women in urban areas, and women at higher levels of education and wealth. There are small variations in receipt of some of these services.

At least 9 in 10 women receiving ANC had their blood pressure measured (94 percent), had a blood sample taken (96 percent), and were weighed (97 percent); 89 percent had a urine sample taken. Lower proportions of women were given information on iron supplements (69 percent) and breastfeeding (68 percent), were informed of signs of pregnancy complications (58 percent), or had height measurements taken (46 percent). Women having a first birth (67 percent) and urban women (67 percent) were more likely than their counterparts to be informed about signs of pregnancy complications. Women in North Eastern (36 percent) were least likely to be informed about signs of complications. The proportion of women informed of signs of pregnancy complications increases with increasing education and wealth.

As shown in Figure 9.1, the proportion of women receiving all of the selected components of antenatal care except iron supplements, which has remained stable, has increased since the 2008-09 KDHS.

Figure 9.1 **Trends in components of antenatal care**



9.2 TETANUS TOXOID VACCINATION

Neonatal tetanus is a leading cause of death among infants in developing countries, where a considerable proportion of deliveries take place at home or at locations where hygienic conditions may be poor. Tetanus toxoid (TT) vaccine is given to women during pregnancy to prevent infant deaths caused by neonatal tetanus, which can occur when unclean tools are used to cut the umbilical cord after delivery. For full protection, women should receive at least two doses of TT vaccine during each pregnancy. If a woman has been vaccinated during a previous pregnancy or during maternal and neonatal tetanus vaccination campaigns, she may require only one dose for her current pregnancy. Five doses are considered to provide lifetime protection (Ministry of Health [MOH], 2012).

Table 9.4 presents the percentage of women age 15-49 with a live birth in the five years preceding the survey who received two or more TT injections during their last pregnancy and the percentage whose last live birth was protected against neonatal tetanus. More than half (51 percent) of pregnant women received two or more tetanus injections during their last pregnancy, and 76 percent had their last birth protected against neonatal tetanus. There has been a slight increase in the percentage of women whose last birth was protected against neonatal tetanus since the 2008-09 KDHS (73 percent).

Table 9.4 Tetanus toxoid injections

Among mothers age 15-49 with a live birth in the five years preceding the survey, the percentage receiving two or more tetanus toxoid injections during the pregnancy for the last live birth and the percentage whose last live birth was protected against neonatal tetanus, according to background characteristics, Kenya 2014

Background characteristic	Percentage receiving two or more injections during last pregnancy	Percentage whose last birth was protected against neonatal tetanus[1]	Number of mothers
Mother's age at birth			
<20	61.2	73.4	867
20-34	50.9	76.2	5,074
35-49	42.4	74.4	935
Birth order			
1	68.7	74.9	1,705
2-3	50.8	79.3	2,747
4-5	41.7	73.0	1,351
6+	35.7	70.8	1,072
Residence			
Urban	56.5	76.4	2,677
Rural	47.6	75.1	4,199
Region			
Coast	64.5	83.7	698
North Eastern	33.5	59.9	178
Eastern	54.7	79.1	891
Central	58.0	79.7	715
Rift Valley	45.3	74.3	1,899
Western	45.3	66.9	790
Nyanza	44.5	70.1	934
Nairobi	60.3	83.0	771
Education			
No education	41.6	66.9	675
Primary incomplete	46.1	74.0	1,901
Primary complete	49.8	76.6	1,856
Secondary+	58.5	78.6	2,445
Wealth quintile			
Lowest	42.8	69.5	1,381
Second	45.3	75.3	1,312
Middle	50.6	74.5	1,276
Fourth	52.2	77.0	1,372
Highest	62.8	81.1	1,536
Total	51.1	75.6	6,876

[1] Includes mothers with two injections during the pregnancy of her last birth, or two or more injections (the last within 3 years of the last live birth), or three or more injections (the last within 5 years of the last birth), or four or more injections (the last within 10 years of the last live birth), or five or more injections at any time prior to the last birth.

There are some differences in tetanus protection by region. More than 8 in 10 women in Coast and Nairobi (84 percent and 83 percent, respectively) had their last birth protected against neonatal tetanus, as compared with 6 in 10 women (60 percent) in North Eastern. Education and wealth have a positive association with receipt of two or more TT injections and protection of births against neonatal tetanus. Sixty-seven percent of births to women with no education were protected against neonatal tetanus, compared with 79 percent of births to women with a secondary or higher education. Similarly, women in the lowest wealth quintile (70 percent) were less likely than women in the highest quintile (81 percent) to have their last birth protected against neonatal tetanus.

9.3 PLACE OF DELIVERY

Increasing the percentage of births delivered in health facilities is important for reducing deaths arising from complications of pregnancy. The expectation is that if complications arise during delivery in a health facility, a skilled birth attendant can manage them or refer the mother to the next level of care. Kenya is promoting skilled care during pregnancy and childbirth for both mothers and newborns (MOH, 2009).

Table 9.5 presents the percent distribution of live births in the five years preceding the survey by place of delivery and the percentage of births delivered in a health facility, according to background characteristics. More than one-third of births (37 percent) took place at home. Sixty-one percent of births were delivered in a health facility: 46 percent in a public-sector facility and 15 percent in a private-sector facility. This is a large increase in facility deliveries from 43 percent in 2008-09.

Table 9.5 Place of delivery

Percent distribution of live births in the five years preceding the survey by place of delivery and percentage delivered in a health facility, according to background characteristics, Kenya 2014

Background characteristic	Health facility		Home	Other	Missing	Total	Percentage delivered in a health facility	Number of births
	Public sector	Private sector						
Mother's age at birth								
<20	49.8	11.9	37.3	0.6	0.4	100.0	61.7	2,924
20-34	46.4	16.1	36.0	1.1	0.4	100.0	62.5	14,342
35-49	38.8	13.7	45.7	1.2	0.6	100.0	52.5	2,298
Birth order								
1	57.8	20.7	20.6	0.4	0.4	100.0	78.6	5,176
2-3	47.6	18.4	32.4	1.2	0.4	100.0	66.1	7,651
4-5	38.8	8.6	50.7	1.2	0.6	100.0	47.5	3,785
6+	30.2	5.4	62.5	1.4	0.6	100.0	35.6	2,952
Antenatal care visits[1]								
None	12.4	5.3	79.4	1.2	1.7	100.0	17.7	573
1-3	44.6	12.6	41.4	1.2	0.1	100.0	57.3	5,505
4+	54.1	20.9	23.8	1.2	0.1	100.0	75.0	8,319
Residence								
Urban	54.8	27.2	16.7	0.9	0.3	100.0	82.0	7,024
Rural	41.1	8.4	48.9	1.1	0.5	100.0	49.5	12,540
Region								
Coast	48.2	9.5	41.1	0.8	0.4	100.0	57.7	2,023
North Eastern	26.1	3.2	68.6	0.7	1.5	100.0	29.2	650
Eastern	45.0	17.7	35.3	1.8	0.3	100.0	62.7	2,321
Central	64.2	26.1	8.6	1.0	0.1	100.0	90.2	1,796
Rift Valley	38.5	11.7	48.8	0.5	0.5	100.0	50.2	5,677
Western	40.8	6.2	51.3	1.4	0.3	100.0	47.0	2,255
Nyanza	54.8	10.0	33.1	1.3	0.9	100.0	64.8	2,790
Nairobi	50.1	38.6	10.1	1.0	0.3	100.0	88.7	2,051
Mother's education								
No education	21.0	3.9	73.7	0.6	0.8	100.0	24.9	2,307
Primary incomplete	37.5	7.0	53.6	1.4	0.4	100.0	44.6	5,582
Primary complete	52.7	14.1	31.8	1.0	0.4	100.0	66.8	5,397
Secondary+	57.0	27.4	14.3	0.8	0.4	100.0	84.4	6,277
Wealth quintile								
Lowest	27.3	2.9	68.2	1.1	0.6	100.0	30.1	4,657
Second	42.0	7.1	49.1	1.3	0.5	100.0	49.1	3,987
Middle	50.8	11.5	36.1	1.1	0.6	100.0	62.3	3,525
Fourth	60.6	19.3	19.0	0.7	0.4	100.0	79.9	3,453
Highest	55.1	37.6	6.2	0.9	0.2	100.0	92.7	3,942
Total	46.0	15.2	37.4	1.0	0.5	100.0	61.2	19,564

Note: Total includes 51 births for whom information on ANC visits is missing.
[1] Includes only the most recent birth in the five years preceding the survey

By age, delivery in a health facility is least common among births to mothers age 35-49 (53 percent), and it decreases as birth order increases. Delivery in a health facility increases with the number of ANC visits the mother made. Children in urban areas (82 percent) are much more likely to be delivered in a health facility than rural children (50 percent). The percentage of births delivered in a health facility ranges from 29 percent in North Eastern region to 90 percent in Central.

Health facility delivery increases with increasing mother's education and wealth. For example, 25 percent of births to mothers with no education are delivered in a health facility, as compared with 84 percent of births to mothers with a secondary or higher education. Similarly, 30 percent of births to mothers in the lowest wealth quintile are delivered in a health facility, compared with 93 percent of births to mothers in the highest quintile. Private-sector deliveries are more common among births to women in the higher wealth quintiles and women at higher educational levels.

Table 9.5C shows the county-level percent distribution of live births in the five years preceding the survey by place of delivery and the percentage of births delivered in a health facility. The proportion of health facility deliveries ranges from 18 percent in Wajir to 93 percent each in Kiambu and Kirinyaga.

Table 9.5C Place of delivery

Percent distribution of live births in the five years preceding the survey by place of delivery and percentage delivered in a health facility, according to county, Kenya 2014

County	Health facility		Home	Other	Missing	Total	Percentage delivered in a health facility	Number of births
	Public sector	Private sector						
Coast	**48.2**	**9.5**	**41.1**	**0.8**	**0.4**	**100.0**	**57.7**	**2,023**
Mombasa	58.6	23.2	17.6	0.3	0.4	100.0	81.8	512
Kwale	44.5	4.5	48.0	1.8	1.1	100.0	49.0	427
Kilifi	46.5	6.1	46.6	0.7	0.1	100.0	52.6	739
Tana River	30.5	1.1	67.6	0.0	0.8	100.0	31.6	175
Lamu	41.0	2.9	55.9	0.0	0.2	100.0	43.9	56
Taita Taveta	56.7	5.3	37.3	0.8	0.0	100.0	61.9	113
North Eastern	**26.1**	**3.2**	**68.6**	**0.7**	**1.5**	**100.0**	**29.2**	**650**
Garissa	35.5	1.1	62.7	0.0	0.7	100.0	36.7	237
Wajir	17.3	1.0	78.5	1.8	1.5	100.0	18.3	258
Mandera	26.1	9.9	61.2	0.0	2.7	100.0	36.0	155
Eastern	**45.0**	**17.7**	**35.3**	**1.8**	**0.3**	**100.0**	**62.7**	**2,321**
Marsabit	22.3	3.5	74.2	0.0	0.0	100.0	25.8	91
Isiolo	35.7	6.4	57.6	0.0	0.2	100.0	42.1	85
Meru	47.9	33.9	15.5	2.4	0.3	100.0	81.8	517
Tharaka-Nithi	58.7	19.0	19.0	2.4	0.9	100.0	77.7	141
Embu	60.3	21.2	16.2	2.3	0.0	100.0	81.5	201
Kitui	32.4	13.2	52.1	2.3	0.0	100.0	45.6	438
Machakos	48.8	14.1	35.1	1.3	0.7	100.0	62.9	493
Makueni	44.7	8.5	45.6	1.1	0.0	100.0	53.3	355
Central	**64.2**	**26.1**	**8.6**	**1.0**	**0.1**	**100.0**	**90.2**	**1,796**
Nyandarua	69.8	16.3	12.8	1.0	0.1	100.0	86.1	248
Nyeri	72.9	16.1	9.6	1.4	0.0	100.0	89.0	249
Kirinyaga	76.7	15.7	6.5	0.0	1.1	100.0	92.5	197
Murang'a	72.4	12.6	14.3	0.7	0.0	100.0	85.0	308
Kiambu	53.4	40.0	5.4	1.2	0.0	100.0	93.4	794
Rift Valley	**38.5**	**11.7**	**48.8**	**0.5**	**0.5**	**100.0**	**50.2**	**5,677**
Turkana	20.4	2.7	75.9	0.8	0.1	100.0	23.1	347
West Pokot	24.5	1.3	73.6	0.0	0.6	100.0	25.8	302
Samburu	16.8	7.7	74.0	1.1	0.4	100.0	24.5	117
Trans-Nzoia	34.9	6.6	57.7	0.8	0.1	100.0	41.5	528
Uasin Gishu	45.4	12.0	42.5	0.0	0.1	100.0	57.4	483
Elgeyo Marakwet	48.7	16.0	34.0	1.3	0.0	100.0	64.7	168
Nandi	39.3	7.2	53.1	0.4	0.0	100.0	46.5	402
Baringo	48.9	4.7	45.4	1.0	0.0	100.0	53.5	238
Laikipia	36.1	12.0	51.0	0.3	0.6	100.0	48.1	209
Nakuru	53.7	16.0	29.7	0.5	0.2	100.0	69.7	909
Narok	32.0	6.6	60.7	0.5	0.1	100.0	38.6	638
Kajiado	35.8	26.7	37.0	0.2	0.4	100.0	62.4	461
Kericho	44.4	17.8	35.3	1.0	1.5	100.0	62.2	373
Bomet	32.6	16.3	48.3	0.4	2.4	100.0	49.0	502
Western	**40.8**	**6.2**	**51.3**	**1.4**	**0.3**	**100.0**	**47.0**	**2,255**
Kakamega	37.7	9.2	50.6	2.1	0.3	100.0	47.0	747
Vihiga	42.8	7.3	47.0	2.1	0.7	100.0	50.2	229
Bungoma	36.3	4.5	58.1	0.9	0.2	100.0	40.8	870
Busia	54.7	3.7	40.3	1.0	0.2	100.0	58.4	409
Nyanza	**54.8**	**10.0**	**33.1**	**1.3**	**0.9**	**100.0**	**64.8**	**2,790**
Siaya	62.4	7.2	27.0	1.2	2.2	100.0	69.6	391
Kisumu	57.5	12.0	28.8	1.3	0.4	100.0	69.5	500
Homa Bay	57.1	4.8	35.7	1.5	0.9	100.0	61.9	658
Migori	41.7	11.6	43.9	2.1	0.6	100.0	53.3	565
Kisii	54.3	15.0	30.0	0.7	0.0	100.0	69.3	482
Nyamira	63.3	10.9	23.5	0.2	2.0	100.0	74.3	195
Nairobi	**50.1**	**38.6**	**10.1**	**1.0**	**0.3**	**100.0**	**88.7**	**2,051**
Total	46.0	15.2	37.4	1.0	0.5	100.0	61.2	19,564

9.4 ASSISTANCE DURING DELIVERY

Obstetric care from a health professional during delivery is recognised as critical in reducing maternal and neonatal mortality. Table 9.6 shows the percent distribution of live births in the five years preceding the survey by person providing assistance during delivery, the percentage of births assisted by a skilled provider, and the percentage of births delivered via caesarean section, according to background

characteristics. Sixty-two percent of births were assisted at delivery by a skilled birth attendant (doctor, nurse, or midwife), 13 percent were assisted by relatives or friends, and 19 percent were assisted by a traditional birth attendant. Five percent of births were unassisted. The role of community health workers in delivery assistance is very limited (less than 1 percent). Almost all health facility births (99 percent) were assisted by a skilled provider, as compared with just 3 percent of births delivered outside of health facilities.

Table 9.6 Assistance during delivery

Percent distribution of live births in the five years preceding the survey by person providing assistance during delivery, percentage of birth assisted by a skilled provider and percentage delivered by caesarean-section, according to background characteristics, Kenya 2014

	Person providing assistance during delivery									Percentage delivered by a skilled provider[1]	Percentage delivered by C-section	Number of births
Background characteristic	Doctor	Nurse/ midwife	Community health worker	Traditional birth attendant	Relative/ friend	Other	No one	Don't know/ missing	Total			
Mother's age at birth												
<20	24.3	37.8	0.4	21.6	13.3	0.4	1.9	0.3	100.0	62.1	5.9	2,924
20-34	27.1	36.0	0.3	19.0	12.1	0.9	4.2	0.4	100.0	63.1	9.0	14,342
35-49	23.2	30.7	0.3	19.2	14.1	1.5	10.5	0.5	100.0	53.9	10.0	2,298
Birth order												
1	36.0	43.1	0.2	11.9	7.3	0.4	0.7	0.4	100.0	79.1	13.1	5,176
2-3	29.5	36.8	0.3	17.9	11.6	0.6	2.9	0.3	100.0	66.3	9.7	7,651
4-5	17.1	31.4	0.5	25.6	17.2	1.7	6.1	0.4	100.0	48.5	4.2	3,785
6+	12.4	24.8	0.4	28.7	17.7	1.6	13.8	0.5	100.0	37.2	3.9	2,952
Antenatal care visits[2]												
None	8.6	10.0	0.0	39.7	26.1	1.3	12.5	1.7	100.0	18.6	1.4	573
1-3	23.4	34.3	0.3	20.7	14.0	1.0	6.2	0.1	100.0	57.7	6.5	5,505
4+	33.9	41.8	0.3	12.4	8.2	0.7	2.7	0.0	100.0	75.7	12.3	8,319
Place of delivery												
Health facility	42.5	56.7	0.2	0.1	0.1	0.1	0.3	0.1	100.0	99.2	14.2	11,969
Elsewhere	0.5	2.3	0.5	50.5	32.4	2.3	11.5	0.1	100.0	2.8	0.0	7,505
Residence												
Urban	41.7	40.6	0.2	9.9	4.6	0.6	2.0	0.3	100.0	82.4	14.7	7,024
Rural	17.6	32.8	0.4	24.8	16.9	1.1	6.0	0.5	100.0	50.4	5.3	12,540
Region												
Coast	32.0	26.3	0.1	18.4	18.7	0.4	3.8	0.4	100.0	58.2	7.0	2,023
North Eastern	7.2	25.1	0.5	64.2	1.5	0.1	0.1	1.2	100.0	32.4	2.9	650
Eastern	22.1	41.2	0.2	19.8	12.2	0.5	3.7	0.3	100.0	63.3	11.7	2,321
Central	55.4	34.3	0.2	0.9	5.8	0.4	2.9	0.1	100.0	89.7	15.7	1,796
Rift Valley	22.2	29.0	0.3	20.9	21.2	1.2	4.9	0.3	100.0	51.3	5.6	5,677
Western	11.2	36.6	0.2	30.9	9.1	1.2	10.5	0.3	100.0	47.8	4.3	2,255
Nyanza	11.4	53.6	0.9	19.5	7.2	1.5	5.0	0.9	100.0	65.0	5.1	2,790
Nairobi	53.4	35.7	0.3	5.5	2.8	0.8	1.3	0.3	100.0	89.1	20.7	2,051
Mother's education												
No education	9.2	17.2	0.2	39.5	25.8	1.3	6.1	0.7	100.0	26.4	2.2	2,307
Primary incomplete	15.3	29.8	0.4	25.6	18.6	1.4	8.5	0.4	100.0	45.1	4.4	5,582
Primary complete	29.9	37.5	0.4	17.3	9.9	1.0	3.6	0.4	100.0	67.4	8.2	5,397
Secondary+	39.1	45.9	0.2	8.4	4.3	0.3	1.4	0.3	100.0	85.1	15.2	6,277
Wealth quintile												
Lowest	10.3	20.9	0.4	34.3	25.7	1.2	6.8	0.5	100.0	31.1	2.1	4,657
Second	14.3	35.6	0.5	24.8	15.7	1.4	7.2	0.5	100.0	49.9	4.8	3,987
Middle	24.4	38.7	0.3	19.7	10.6	1.1	4.8	0.5	100.0	63.0	7.4	3,525
Fourth	36.2	44.4	0.1	11.2	4.7	0.2	2.8	0.3	100.0	80.6	11.5	3,453
Highest	50.1	42.6	0.2	3.5	2.1	0.6	0.7	0.1	100.0	92.7	19.0	3,942
Total	26.2	35.6	0.3	19.4	12.5	0.9	4.6	0.4	100.0	61.8	8.7	19,564

Note: If the respondent mentioned more than one person attending during delivery, only the most qualified person is considered in this tabulation. Total includes 51 births for whom information on ANC visits is missing and 114 births for whom place of delivery is missing.
[1] Skilled provider includes doctor, nurse, or midwife.
[2] Includes only the most recent birth in the five years preceding the survey

The percentage of births assisted by a skilled birth attendant has increased in the last five years, from 44 percent in 2008-09 to 62 percent in 2014. It is noteworthy that delivery assistance by a skilled birth attendant in rural areas has increased from 37 percent to 50 percent.

Nine percent of births are delivered via caesarean section. The likelihood of this type of delivery increases with mother's age, decreases with birth order, and increases with the number of ANC visits the mother made. Births in urban areas (15 percent) are more likely to be delivered via caesarean section. The likelihood of caesarean-section deliveries increases with increasing mother's education and wealth.

Caesarean deliveries are noticeably more common in Nairobi and among babies born to women in the highest wealth quintile; about one in five of these births occurs via caesarean-section.

Table 9.6C shows the county-level percent distribution of live births in the five years preceding the survey by person providing assistance during delivery, the percentage of births assisted by a skilled provider, and the percentage delivered via caesarean section. The proportion of births assisted by a skilled provider ranges from 22 percent in Wajir to 93 percent in Kiambu. Caesarean-section deliveries are least common in Turkana and Wajir (1 percent). In five counties, caesarean deliveries exceed 15 percent: Kirinyaga, Embu, Tharaka-Nithi, Kiambu, and Nairobi.

Table 9.6C Assistance during delivery

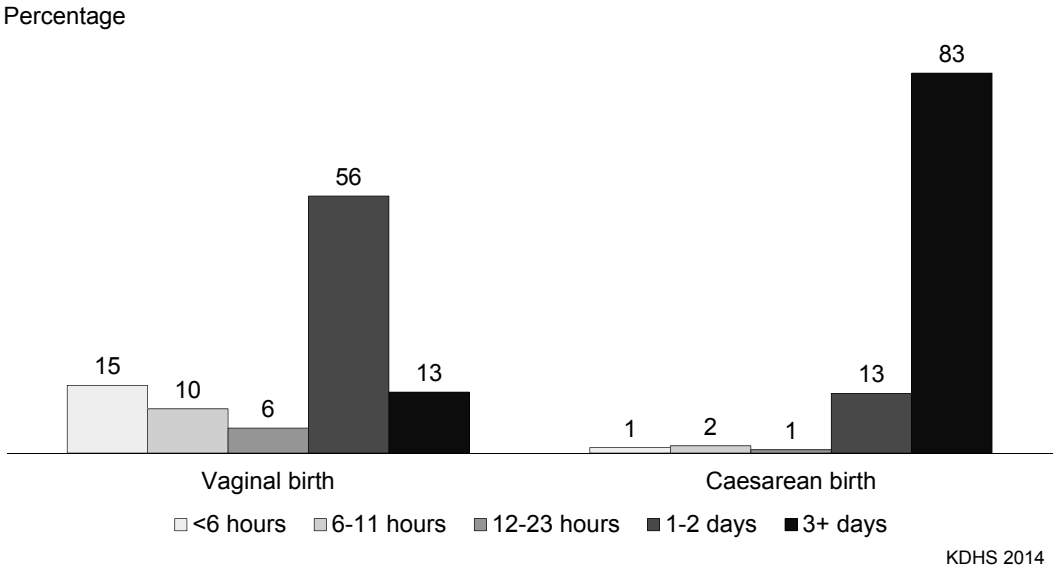
Percent distribution of live births in the five years preceding the survey by person providing assistance during delivery, percentage of birth assisted by a skilled provider and percentage delivered by caesarean-section, according to county, Kenya 2014

	Person providing assistance during delivery											
County	Doctor	Nurse/ midwife	Community health worker	Traditional birth attendant	Relative/ friend	Other	No one	Don't know/ missing	Total	Percentage delivered by a skilled provider[1]	Percentage delivered by C-section	Number of births
Coast	**32.0**	**26.3**	**0.1**	**18.4**	**18.7**	**0.4**	**3.8**	**0.4**	**100.0**	**58.2**	**7.0**	**2,023**
Mombasa	54.2	28.6	0.0	13.9	3.3	0.0	0.0	0.0	100.0	82.8	13.3	512
Kwale	12.8	37.3	0.3	17.6	21.6	0.9	8.4	1.0	100.0	50.1	5.3	427
Kilifi	38.2	14.0	0.2	10.8	31.4	0.1	4.9	0.3	100.0	52.3	4.4	739
Tana River	2.0	30.2	0.0	62.9	3.3	0.8	0.5	0.3	100.0	32.2	2.4	175
Lamu	9.3	38.0	0.0	44.8	5.0	1.8	0.9	0.2	100.0	47.3	7.3	56
Taita Taveta	20.7	41.8	0.0	9.7	24.2	0.6	3.1	0.0	100.0	62.5	8.7	113
North Eastern	**7.2**	**25.1**	**0.5**	**64.2**	**1.5**	**0.1**	**0.1**	**1.2**	**100.0**	**32.4**	**2.9**	**650**
Garissa	5.5	34.2	1.0	55.0	3.9	0.0	0.4	0.0	100.0	39.8	5.5	237
Wajir	1.2	20.5	0.0	76.5	0.0	0.3	0.0	1.4	100.0	21.7	1.3	258
Mandera	20.0	18.8	0.4	57.9	0.2	0.0	0.0	2.7	100.0	38.7	1.8	155
Eastern	**22.1**	**41.2**	**0.2**	**19.8**	**12.2**	**0.5**	**3.7**	**0.3**	**100.0**	**63.3**	**11.7**	**2,321**
Marsabit	4.4	21.4	0.5	64.0	7.3	0.9	1.4	0.0	100.0	25.8	2.3	91
Isiolo	14.4	29.4	0.0	45.8	6.8	1.7	1.8	0.2	100.0	43.8	6.9	85
Meru	28.0	54.7	0.0	1.3	10.0	0.2	5.4	0.3	100.0	82.8	18.5	517
Tharaka-Nithi	37.6	39.0	0.0	2.5	14.8	0.4	4.5	1.2	100.0	76.6	14.5	141
Embu	34.1	47.4	0.0	0.3	16.4	0.0	1.9	0.0	100.0	81.5	15.9	201
Kitui	16.6	29.6	0.2	24.3	25.9	0.0	3.5	0.0	100.0	46.2	5.4	438
Machakos	22.3	41.0	0.5	26.1	6.6	0.5	2.4	0.7	100.0	63.4	11.4	493
Makueni	13.6	41.0	0.3	32.7	5.6	1.8	5.1	0.0	100.0	54.6	9.9	355
Central	**55.4**	**34.3**	**0.2**	**0.9**	**5.8**	**0.4**	**2.9**	**0.1**	**100.0**	**89.7**	**15.7**	**1,796**
Nyandarua	47.7	37.6	0.0	0.7	9.1	0.5	4.2	0.1	100.0	85.3	9.0	248
Nyeri	56.1	32.0	1.1	0.2	4.8	0.8	5.0	0.0	100.0	88.1	13.5	249
Kirinyaga	41.3	50.9	0.0	1.6	4.9	0.4	0.4	0.5	100.0	92.3	15.3	197
Murang'a	64.9	20.6	0.0	0.5	10.4	0.0	3.6	0.0	100.0	85.5	11.7	308
Kiambu	57.4	35.2	0.0	1.2	3.5	0.4	2.3	0.0	100.0	92.6	20.1	794
Rift Valley	**22.2**	**29.0**	**0.3**	**20.9**	**21.2**	**1.2**	**4.9**	**0.3**	**100.0**	**51.3**	**5.6**	**5,677**
Turkana	0.8	22.0	0.1	7.4	49.9	5.0	14.4	0.3	100.0	22.8	0.5	347
West Pokot	8.2	18.7	0.0	69.4	2.6	0.1	0.2	0.7	100.0	27.0	2.2	302
Samburu	3.8	25.3	0.0	5.7	52.7	2.4	9.7	0.4	100.0	29.0	2.9	117
Trans-Nzoia	26.5	15.3	0.6	34.3	13.6	0.3	9.5	0.1	100.0	41.8	5.3	528
Uasin Gishu	29.7	29.3	0.2	30.6	7.4	0.4	2.4	0.0	100.0	59.0	4.8	483
Elgeyo Marakwet	12.3	52.8	0.0	31.9	2.6	0.3	0.1	0.1	100.0	65.0	3.5	168
Nandi	5.6	41.1	0.0	44.9	6.0	0.0	2.4	0.0	100.0	46.8	2.8	402
Baringo	9.5	44.3	0.0	16.4	25.7	2.1	2.1	0.0	100.0	53.8	5.2	238
Laikipia	22.8	26.7	0.0	5.5	37.4	0.6	6.4	0.6	100.0	49.5	6.5	209
Nakuru	34.1	35.3	0.0	7.3	18.8	0.8	3.4	0.2	100.0	69.5	6.9	909
Narok	12.9	27.4	1.0	17.8	34.4	0.9	5.5	0.1	100.0	40.3	5.1	638
Kajiado	40.2	23.0	0.0	13.7	21.4	0.2	1.3	0.2	100.0	63.2	11.1	461
Kericho	35.6	28.7	0.1	18.7	7.3	6.5	2.4	0.6	100.0	64.4	10.3	373
Bomet	24.6	27.6	0.9	3.8	33.8	0.0	8.6	0.8	100.0	52.2	4.8	502
Western	**11.2**	**36.6**	**0.2**	**30.9**	**9.1**	**1.2**	**10.5**	**0.3**	**100.0**	**47.8**	**4.3**	**2,255**
Kakamega	15.3	33.4	0.7	30.1	11.2	0.9	8.1	0.3	100.0	48.6	3.1	747
Vihiga	16.6	33.7	0.0	27.5	8.7	0.0	12.8	0.7	100.0	50.3	6.6	229
Bungoma	6.6	34.8	0.0	35.4	8.5	2.1	12.5	0.2	100.0	41.4	5.0	870
Busia	10.7	47.8	0.0	24.4	7.2	0.3	9.4	0.2	100.0	58.5	4.0	409
Nyanza	**11.4**	**53.6**	**0.9**	**19.5**	**7.2**	**1.5**	**5.0**	**0.9**	**100.0**	**65.0**	**5.1**	**2,790**
Siaya	3.7	66.7	2.6	11.2	4.3	0.4	8.8	2.2	100.0	70.4	4.3	391
Kisumu	20.0	49.2	0.0	25.0	1.8	1.0	2.6	0.4	100.0	69.2	6.8	500
Homa Bay	12.7	47.6	1.1	28.9	2.0	1.0	5.6	0.9	100.0	60.4	3.1	658
Migori	5.7	47.7	0.7	28.6	7.0	3.2	6.7	0.4	100.0	53.4	6.5	565
Kisii	15.2	57.6	0.0	3.8	18.5	1.5	3.1	0.3	100.0	72.8	5.3	482
Nyamira	7.5	66.6	1.5	2.2	16.5	0.8	2.0	2.9	100.0	74.1	5.2	195
Nairobi	**53.4**	**35.7**	**0.3**	**5.5**	**2.8**	**0.8**	**1.3**	**0.3**	**100.0**	**89.1**	**20.7**	**2,051**
Total	26.2	35.6	0.3	19.4	12.5	0.9	4.6	0.4	100.0	61.8	8.7	19,564

Note: If the respondent mentioned more than one person attending during delivery, only the most qualified person is considered in this tabulation.
[1] Skilled provider includes doctor, nurse, or midwife.

Figure 9.2 shows the percent distribution of mothers with a birth in the five years preceding the survey who delivered their last birth in a health facility, by duration of stay in the facility and type of delivery. The majority of women with a vaginal birth stayed at a health facility for two days or fewer (87 percent). In contrast, the majority of women who delivered via caesarean section (83 percent) stayed at a health facility for three or more days.

Figure 9.2 **Mother's duration of stay in the health facility after giving birth**



9.5 POSTNATAL CARE

The postpartum period is particularly important for women, since during this period they may develop serious, life-threatening complications. Evidence has shown that a large proportion of deaths occur during the postpartum period, with postpartum haemorrhage being a major cause (UNDP, WHO, UNFPA, World Bank, 2006). A postnatal care visit is an ideal time to educate a new mother on how to care for herself and her newborn. The 2014 KDHS asked women age 15-49 who had a live birth in the two years preceding the survey about what postnatal care they and their newborn received, including timing and provider.

9.5.1 Timing of First Postnatal Checkup for the Mother

Table 9.7 presents, among women age 15-49 giving birth in the two years before the survey, the percent distribution of mothers' first postnatal checkup for their last live birth by time after delivery and the percentage of women who received a postnatal checkup in the first two days after giving birth, according to background characteristics. Fifty-three percent of women received postnatal care within the critical two-day period following delivery. Thirty-eight percent of women received postnatal care within four hours after delivery, 9 percent received care within 4-23 hours, and 6 percent were seen 1-2 days following delivery. Overall, 43 percent of women did not receive a postnatal checkup within the first six weeks after delivery. In the North Eastern region, 80 percent of women did not have any postnatal care.

Table 9.7 Timing of first postnatal checkup for the mother

Among women age 15-49 giving birth in the two years preceding the survey, the percent distribution of the mother's first postnatal checkup for the last live birth by time after delivery, and the percentage of women with a live birth in the two years preceding the survey who received a postnatal checkup in the first two days after giving birth, according to background characteristics, Kenya 2014

Background characteristic	Time after delivery of mother's first postnatal checkup								Percentage of women with a postnatal checkup in the first two days after birth	Number of women
	Less than 4 hours	4-23 hours	1-2 days	3-6 days	7-41 days	Don't know/ missing	No postnatal checkup[1]	Total		
Mother's age at birth										
<20	38.1	11.3	5.7	1.0	3.0	0.7	40.2	100.0	55.1	502
20-34	38.5	9.1	6.0	1.1	2.0	0.3	43.0	100.0	53.5	2,627
35-49	33.3	9.1	3.4	1.4	6.0	0.3	46.6	100.0	45.8	415
Birth order										
1	45.1	12.4	8.2	0.3	2.6	0.7	30.6	100.0	65.7	946
2-3	39.0	10.7	6.8	1.6	1.7	0.4	39.8	100.0	56.5	1,413
4-5	35.7	6.0	2.0	1.0	3.2	0.1	52.0	100.0	43.7	662
6+	23.9	4.9	2.6	1.5	4.1	0.2	62.9	100.0	31.3	523
Place of delivery										
Health facility	52.1	13.5	6.9	1.0	1.7	0.6	24.2	100.0	72.5	2,314
Elsewhere	10.8	1.7	3.4	1.4	4.3	0.0	78.3	100.0	15.9	1,226
Residence										
Urban	44.7	14.3	8.5	1.0	2.7	0.7	28.1	100.0	67.5	1,261
Rural	34.0	6.7	4.1	1.2	2.6	0.2	51.3	100.0	44.7	2,282
Region										
Coast	37.8	7.3	4.4	2.3	1.9	0.0	46.3	100.0	49.5	374
North Eastern	7.0	4.3	3.6	0.8	3.8	0.5	80.0	100.0	14.9	108
Eastern	46.0	10.2	4.9	0.7	4.2	0.0	34.0	100.0	61.1	429
Central	45.9	15.4	10.6	0.8	3.7	0.0	23.7	100.0	71.9	312
Rift Valley	32.8	9.0	4.1	1.1	3.0	0.3	49.6	100.0	45.9	1,057
Western	26.4	4.2	4.1	2.1	2.5	0.0	60.8	100.0	34.6	414
Nyanza	47.6	10.8	2.7	0.4	1.2	0.8	36.7	100.0	61.0	484
Nairobi	44.9	12.2	14.5	0.8	0.9	1.6	25.1	100.0	71.6	366
Education										
No education	15.3	2.6	3.4	1.3	2.5	0.4	74.6	100.0	21.3	414
Primary incomplete	31.1	5.5	4.1	1.3	2.4	0.3	55.3	100.0	40.7	999
Primary complete	42.1	8.8	6.5	0.7	2.7	0.3	38.9	100.0	57.5	914
Secondary+	47.7	15.3	7.1	1.3	2.8	0.5	25.3	100.0	70.1	1,216
Wealth quintile										
Lowest	23.9	3.6	3.4	1.5	2.5	0.2	64.8	100.0	31.0	879
Second	37.8	7.3	3.0	0.8	2.9	0.0	48.1	100.0	48.2	698
Middle	38.7	8.8	4.8	1.2	1.9	0.3	44.3	100.0	52.3	631
Fourth	43.3	13.0	9.0	1.1	3.2	0.8	29.7	100.0	65.2	648
Highest	49.5	16.1	8.8	0.9	2.6	0.7	21.4	100.0	74.4	687
Total	37.8	9.4	5.7	1.1	2.6	0.4	43.0	100.0	52.9	3,544

Note: Total includes six women for whom information on place of delivery is missing.
[1] Includes women who received a checkup after 41 days

9.5.2 Provider of First Postnatal Checkup for the Mother

The skill level of the person who provides the first postnatal checkup has important implications for maternal and neonatal health. Table 9.8 shows, among women age 15-49 giving birth in the two years preceding the survey, the percent distribution by type of provider of the mother's first postnatal health check in the two days after the last live birth, according to background characteristics. Just under half (49 percent) of women received postnatal care from a doctor, a nurse, or a midwife, an increase of 12 percentage points from the 2008-09 KDHS (37 percent). At the same time, the role of traditional birth attendants in providing postnatal checks declined from 10 percent in 2008-09 to 4 percent in 2014.

Postnatal care from a skilled provider is highest among women younger than age 35 (50 percent), first-order births (64 percent), mothers who delivered in a health facility (72 percent), and mothers in urban areas (66 percent). Across regions, postnatal care from a skilled birth attendant is highest in Central (72 percent) and Nairobi (71 percent) and lowest in North Eastern (14 percent). Skilled postnatal care increases with increasing education and wealth, from 16 percent of women with no education and 25 percent of women in the lowest wealth quintile to 68 percent of women with a secondary or higher education and 74 percent of women in the highest wealth quintile.

Table 9.8 Type of provider of first postnatal checkup for the mother

Among women age 15-49 giving birth in the two years preceding the survey, the percent distribution by type of provider of the mother's first postnatal health check in the two days after the last live birth, according to background characteristics, Kenya 2014

Background characteristic	Type of health provider of mother's first postnatal checkup			No postnatal checkup in the first two days after birth	Total	Number of women
	Doctor/nurse/ midwife	Community health worker	Traditional birth attendant			
Mother's age at birth						
<20	50.3	0.3	4.6	44.9	100.0	502
20-34	50.0	0.3	3.3	46.5	100.0	2,627
35-49	41.6	0.8	3.3	54.2	100.0	415
Birth order						
1	63.8	0.1	1.8	34.3	100.0	946
2-3	53.1	0.1	3.3	43.5	100.0	1,413
4-5	37.4	1.1	5.2	56.3	100.0	662
6+	26.3	0.5	4.6	68.7	100.0	523
Place of delivery						
Health facility	72.2	0.1	0.2	27.5	100.0	2,314
Elsewhere	5.5	0.9	9.6	84.1	100.0	1,226
Residence						
Urban	65.8	0.0	1.7	32.5	100.0	1,261
Rural	39.8	0.5	4.4	55.3	100.0	2,282
Region						
Coast	45.4	0.0	4.1	50.5	100.0	374
North Eastern	13.5	0.5	0.9	85.1	100.0	108
Eastern	58.7	0.0	2.4	38.9	100.0	429
Central	71.9	0.0	0.0	28.1	100.0	312
Rift Valley	40.3	0.6	5.0	54.1	100.0	1,057
Western	30.9	0.0	3.7	65.4	100.0	414
Nyanza	54.6	1.1	5.3	39.0	100.0	484
Nairobi	71.0	0.0	0.6	28.4	100.0	366
Education						
No education	16.2	0.4	4.7	78.7	100.0	414
Primary incomplete	35.7	0.6	4.4	59.3	100.0	999
Primary complete	53.4	0.4	3.7	42.5	100.0	914
Secondary+	68.0	0.1	2.1	29.9	100.0	1,216
Wealth quintile						
Lowest	25.3	0.5	5.2	69.0	100.0	879
Second	43.3	0.9	4.0	51.8	100.0	698
Middle	47.8	0.3	4.3	47.7	100.0	631
Fourth	62.6	0.0	2.6	34.8	100.0	648
Highest	73.6	0.0	0.7	25.6	100.0	687
Total	49.1	0.4	3.5	47.1	100.0	3,544

Note: Total includes six women for whom information on place of delivery is missing.

9.5.3 Timing of First Postnatal Checkup for the Newborn

Newborn care is essential to reduce neonatal health problems and death. To identify, manage, and prevent newborn health complications, the government of Kenya recommends at least three postnatal checkups for the newborn within the seven days after delivery, which is considered a critical time period for neonates and mothers (MOH, 2012).

Table 9.9 shows the percent distribution of last births in the two years preceding the survey by timing of the first postnatal checkup, along with the percentage of births with a postnatal checkup in the first two days after birth, according to background characteristics.

Thirty-six percent of newborns had a postnatal checkup within the critical first two days after birth. The majority of newborns (62 percent) did not receive a postnatal checkup in the first week after birth. Although the patterns seen above for mothers' postnatal care are largely repeated for newborns' postnatal care, it is noteworthy that more than half of infants born in a health facility (52 percent) did not receive postnatal checkups.

Table 9.9 Timing of first postnatal checkup for the newborn

Percent distribution of last births in the two years preceding the survey by time after birth of first postnatal checkup, and the percentage of births with a postnatal checkup in the first two days after birth, according to background characteristics, Kenya 2014

Background characteristic	Time after birth of newborn's first postnatal checkup						No postnatal checkup[1]	Total	Percentage of births with a postnatal checkup in the first two days after birth	Number of births
	Less than 1 hour	1-3 hours	4-23 hours	1-2 days	3-6 days	Don't know/ missing				
Mother's age at birth										
<20	8.6	16.0	4.7	5.1	2.8	0.0	62.8	100.0	34.3	502
20-34	10.7	16.8	4.9	4.5	2.5	0.4	60.2	100.0	36.9	2,627
35-49	8.0	10.8	7.1	2.6	2.0	0.0	69.6	100.0	28.4	415
Birth order										
1	11.0	19.2	5.7	5.4	2.3	0.7	55.7	100.0	41.3	946
2-3	11.5	17.6	5.6	4.5	2.7	0.1	58.0	100.0	39.2	1,413
4-5	8.6	13.7	4.2	3.0	2.1	0.1	68.3	100.0	29.6	662
6+	6.7	8.9	3.8	3.5	2.8	0.1	74.2	100.0	22.8	523
Place of delivery										
Health facility	13.8	22.4	6.4	4.0	1.4	0.4	51.6	100.0	46.6	2,314
Elsewhere	3.1	4.0	2.7	4.9	4.6	0.0	80.6	100.0	14.7	1,226
Residence										
Urban	13.2	21.1	6.4	4.5	2.0	0.7	52.2	100.0	45.1	1,261
Rural	8.4	13.2	4.4	4.3	2.8	0.0	66.9	100.0	30.3	2,282
Region										
Coast	10.6	13.1	9.9	5.5	4.6	1.0	55.4	100.0	39.0	374
North Eastern	0.0	2.2	1.1	1.9	1.9	0.7	92.2	100.0	5.1	108
Eastern	8.6	17.2	5.1	5.5	2.5	0.1	61.1	100.0	36.3	429
Central	14.6	33.7	10.2	4.2	1.2	0.0	36.1	100.0	62.8	312
Rift Valley	9.6	8.7	2.5	2.0	2.0	0.1	75.2	100.0	22.7	1,057
Western	9.7	11.1	2.4	4.4	3.1	0.2	69.1	100.0	27.6	414
Nyanza	7.1	21.6	8.1	4.5	2.7	0.0	56.1	100.0	41.2	484
Nairobi	16.7	25.9	3.9	9.0	2.3	0.8	41.4	100.0	55.5	366
Mother's education										
No education	7.1	7.1	2.7	2.2	3.6	0.1	77.2	100.0	19.1	414
Primary incomplete	8.0	12.9	4.1	4.0	2.5	0.1	68.4	100.0	29.0	999
Primary complete	9.2	17.9	5.2	4.5	3.3	0.1	59.8	100.0	36.9	914
Secondary+	13.6	20.2	6.7	5.1	1.5	0.6	52.3	100.0	45.6	1,216
Wealth quintile										
Lowest	6.2	9.7	3.9	3.6	3.6	0.0	72.9	100.0	23.5	879
Second	8.1	12.5	3.3	4.2	2.2	0.0	69.6	100.0	28.2	698
Middle	9.7	19.0	5.0	4.0	1.9	0.3	60.2	100.0	37.7	631
Fourth	13.4	17.3	7.5	4.2	2.2	0.6	54.8	100.0	42.4	648
Highest	14.4	23.6	6.2	5.8	2.3	0.6	47.1	100.0	50.1	687
Total	10.1	16.0	5.1	4.3	2.5	0.3	61.7	100.0	35.6	3,544

Note: Total includes six births for whom information on place of delivery is missing.
[1] Includes newborns who received a checkup after the first week

9.5.4 Provider of First Postnatal Checkup for the Newborn

Table 9.10 presents the percent distribution of last births in the two years preceding the survey by type of provider of newborn care during the first two days after delivery, according to background characteristics. Thirty-three percent of newborns received postnatal care in the two days following birth from a doctor, nurse, or midwife, and 2 percent received care from a traditional birth attendant. As is the case with postnatal care for mothers, practically no newborns received postnatal care from a community health worker. Patterns of postnatal care for newborns by background characteristics are similar to the patterns observed for their mothers.

Table 9.10 Type of provider of first postnatal checkup for the newborn

Percent distribution of last births in the two years preceding the survey by type of provider of the newborn's first postnatal health check during the two days after the last live birth, according to background characteristics, Kenya 2014

Background characteristic	Type of health provider of newborn's first postnatal checkup			No postnatal checkup in the first two days after birth	Total	Number of births
	Doctor/nurse/ midwife	Community health worker	Traditional birth attendant			
Mother's age at birth						
<20	31.7	0.0	2.6	65.7	100.0	502
20-34	34.4	0.0	2.5	63.1	100.0	2,627
35-49	26.7	0.0	1.7	71.6	100.0	415
Birth order						
1	40.1	0.0	1.2	58.7	100.0	946
2-3	36.9	0.0	2.3	60.8	100.0	1,413
4-5	25.5	0.1	4.0	70.4	100.0	662
6+	20.0	0.0	2.9	77.2	100.0	523
Place of delivery						
Health facility	46.2	0.0	0.4	53.4	100.0	2,314
Elsewhere	8.5	0.0	6.2	85.3	100.0	1,226
Residence						
Urban	44.0	0.0	1.1	54.9	100.0	1,261
Rural	27.1	0.0	3.1	69.7	100.0	2,282
Region						
Coast	37.5	0.0	1.5	61.0	100.0	374
North Eastern	4.2	0.5	0.5	94.9	100.0	108
Eastern	34.4	0.0	1.9	63.7	100.0	429
Central	62.8	0.0	0.0	37.2	100.0	312
Rift Valley	19.3	0.1	3.4	77.3	100.0	1,057
Western	24.8	0.0	2.8	72.4	100.0	414
Nyanza	37.4	0.0	3.9	58.8	100.0	484
Nairobi	54.3	0.0	1.2	44.5	100.0	366
Mother's education						
No education	14.7	0.1	4.3	80.9	100.0	414
Primary incomplete	26.0	0.1	3.0	71.0	100.0	999
Primary complete	34.6	0.0	2.3	63.1	100.0	914
Secondary+	44.2	0.0	1.4	54.4	100.0	1,216
Wealth quintile						
Lowest	19.5	0.1	4.0	76.5	100.0	879
Second	24.9	0.1	3.2	71.8	100.0	698
Middle	35.9	0.0	1.8	62.3	100.0	631
Fourth	40.8	0.0	1.6	57.6	100.0	648
Highest	49.2	0.0	0.9	49.9	100.0	687
Total	33.1	0.0	2.4	64.4	100.0	3,544

Note: Total includes six births for whom information on place of delivery is missing.

9.6 PROBLEMS IN ACCESSING HEALTH CARE

Many factors can prevent women from getting medical advice or treatment for themselves when they are sick. Information on such factors is particularly important in understanding and addressing the barriers women may face in seeking care during pregnancy and labour.

In the 2014 KDHS, women age 15-49 were asked whether or not each of the following factors would be a significant problem for them in seeking medical care: getting permission to go for treatment, getting money for treatment, distance to a health facility, and not wanting to go alone. Table 9.11 presents the percentage of women who reported that they have serious problems accessing health care for themselves when they are sick, according to type of problem and background characteristics. The most often cited problem is getting money to go for treatment (37 percent), followed by distance to the health facility (23 percent). Eleven percent of women cited not wanting to go alone as a problem, and 6 percent reported that getting permission to go for treatment was a problem. Overall, 46 percent of women reported that at least one of these problems would pose a barrier to seeking health care for themselves when they are sick.

Table 9.11 Problems in accessing health care

Percentage of women age 15-49 who reported that they have serious problems in accessing health care for themselves when they are sick, by type of problem, according to background characteristics, Kenya 2014

Background characteristic	Problems in accessing health care					
	Getting permission to go for treatment	Getting money for treatment	Distance to health facility	Not wanting to go alone	At least one problem accessing health care	Number of women
Age						
15-19	7.4	33.0	20.4	13.7	44.3	2,717
20-34	5.9	34.3	21.6	9.6	43.9	7,784
35-49	5.2	43.7	26.1	10.3	51.6	4,124
Number of living children						
0	6.3	29.3	17.8	12.2	38.9	3,890
1-2	5.0	30.7	18.0	7.7	40.1	5,000
3-4	6.0	42.5	26.8	11.5	52.5	3,381
5+	7.3	53.3	34.6	12.8	61.9	2,354
Marital status						
Never married	6.0	31.6	18.1	11.7	40.5	4,255
Married or living together	5.8	37.3	24.4	9.8	47.4	8,710
Divorced/separated/ widowed	6.3	46.6	25.0	11.5	53.7	1,660
Employed last 12 months						
Not employed	6.6	36.3	23.1	12.6	47.0	4,913
Employed for cash	4.5	34.0	19.3	8.2	42.3	7,655
Employed not for cash	9.7	47.8	34.0	14.4	58.5	2,040
Residence						
Urban	4.3	26.7	12.4	7.8	34.0	5,929
Rural	7.1	43.5	29.7	12.5	54.4	8,696
Region						
Coast	5.1	39.3	23.5	6.7	49.3	1,421
North Eastern	26.7	60.2	51.9	31.2	66.1	299
Eastern	4.2	37.7	31.7	14.2	51.5	2,066
Central	2.8	21.3	11.2	7.1	29.4	1,905
Rift Valley	9.1	32.2	22.5	12.4	41.7	3,714
Western	6.4	59.4	33.2	13.3	68.6	1,571
Nyanza	6.3	53.4	24.7	8.4	60.6	1,908
Nairobi	1.1	16.9	7.1	5.6	25.4	1,742
Education						
No education	12.6	57.1	43.5	18.1	66.4	1,015
Primary incomplete	7.7	48.4	28.7	13.1	58.7	3,793
Primary complete	5.3	38.1	22.3	9.6	48.0	3,543
Secondary+	4.2	25.5	15.8	8.3	34.2	6,274
Wealth quintile						
Lowest	11.7	57.7	43.4	18.8	68.1	2,236
Second	7.4	50.6	31.0	12.6	61.1	2,590
Middle	5.8	42.0	25.0	10.9	52.8	2,859
Fourth	4.5	29.7	17.1	8.1	39.6	3,113
Highest	2.9	16.8	7.7	6.1	23.6	3,827
Total	6.0	36.7	22.7	10.6	46.1	14,625

Note: Total includes 11 women for whom information on employment in the last 12 months is missing.

Younger women, women with fewer children, and women who have never been married are less likely than other women to report having any of these four problems in accessing health care. Women who are employed but not for cash are more likely to report at least one problem than women who are either unemployed or employed for cash. Although getting permission is not widely observed as a problem at the national level, 27 percent of women in the North Eastern region cited this problem as a barrier to accessing care.

9.7 FISTULA

The 2014 KDHS included a series of questions on fistula, a condition that may develop during prolonged or obstructed labour when the blood supply to the tissues of the vagina, bladder, and/or rectum is cut off, resulting in the formation of an opening through which urine and/or faeces pass uncontrollably. Women who develop fistulas are often socially rejected and face a number of related health concerns. All

women were asked whether they had heard of fistula and, if they had, whether they themselves had experienced fistula-like symptoms. Results are presented in Table 9.12 by background characteristics.

Slightly over half (54 percent) of women have heard of fistula. Urban women are more likely (63 percent) than rural women (48 percent) to have heard of fistula. Awareness of fistula is higher among women in Nairobi (70 percent) and awareness increases with increasing wealth and education. One percent of women have experienced fistula-like symptoms. Because of the low percentage of women who have experienced symptoms indicative of fistula, any variations by background characteristics should be considered with caution.

Table 9.12 Fistula

Percentage of women who have ever heard of fistula and percentage who have experienced fistula, according to background characteristics, Kenya 2014

Background characteristic	Percentage who have ever heard of fistula	Percentage who have ever had fistula	Number of women
Age			
15-19	33.2	0.3	2,717
20-24	52.9	1.1	2,691
25-29	59.7	1.1	2,932
30-34	61.3	1.6	2,162
35-39	59.3	1.1	1,780
40-44	60.5	1.1	1,292
45-49	63.4	1.0	1,052
Residence			
Urban	62.7	1.3	5,929
Rural	48.1	0.8	8,696
Region			
Coast	52.0	0.7	1,421
North Eastern	23.2	1.8	299
Eastern	46.9	0.8	2,066
Central	55.8	1.8	1,905
Rift Valley	50.3	0.7	3,714
Western	49.7	0.5	1,571
Nyanza	62.9	1.3	1,908
Nairobi	69.6	1.6	1,742
Education			
No education	30.0	1.1	1,015
Primary incomplete	44.6	0.6	3,793
Primary complete	56.5	1.4	3,543
Secondary+	62.3	1.1	6,274
Wealth quintile			
Lowest	36.6	0.7	2,236
Second	45.3	0.9	2,590
Middle	54.1	0.7	2,859
Fourth	57.1	1.8	3,113
Highest	67.6	0.9	3,827
Total	54.0	1.0	14,625

CHILD HEALTH 10

Andolo Miheso, Lucy Gathigi Maina, Annah W. Wamae

Key Findings

- The percentage of all births with a reported birth weight has increased in the last five years from 47 percent to 66 percent.
- Seventy-nine percent of children age 12-23 months have received all basic vaccines, slightly higher than the 77 percent observed in the 2008-09 KDHS.
- Nine percent of children under age 5 showed symptoms of acute respiratory infection in the two weeks before the survey; 66 percent of these children were taken to a health facility or provider for advice or treatment.
- Twenty-four percent of children under age 5 had a fever in the two weeks before the survey; 63 percent of these children were taken to a health facility or provider for advice or treatment.
- Fifteen percent of children under age 5 had diarrhoea in the two weeks before the survey.
- The proportion of children with diarrhoea taken to a health provider for advice or treatment increased from 49 percent in the 2008-09 KDHS to 58 percent in the 2014 KDHS.
- The proportion of children with diarrhoea given fluid from ORS packets has increased over the past five years, from 39 percent in 2008-09 to 54 percent in 2014.
- The percentage of women who know that ORS can be used to treat diarrhoea in children has increased from 78 percent in 2008-09 to 93 percent in 2014.
- The percentage of children whose stools are disposed of safely has increased from 78 percent in 2008-09 to 83 percent in 2014.

The Division of Family Health in the Ministry of Health is supporting several child survival interventions, including various operational initiatives, to improve the health of children in Kenya. These include the Expanded Programme on Immunisation, the Integrated Management of Childhood Illnesses Initiative, the Community-Based Newborn Care Programme, the Infant and Young Child Feeding Programme, a micronutrient supplementation programme, and a vitamin A and deworming campaign. Biannual child-mother health and nutrition weeks, called 'Malezi Bora' in Kiswahili, also are held in May and November to deliver a specific package of health interventions targeting mothers and children under age 5. The ultimate goal of the 'Malezi Bora' strategy is to improve delivery of routine health and nutrition services targeting children, expectant women, and lactating mothers.

This chapter reviews information from the 2014 KDHS that is useful in managing the Ministry of Health's child health and survival programmes. Specifically, the chapter presents findings on infant birth weight and size at birth, childhood vaccination coverage, and treatment practices and contact with health services when a child is ill with respiratory infection, diarrhoea, and fever.

10.1 CHILD'S WEIGHT AND SIZE AT BIRTH

A child's birth weight or size at birth is an important indicator of the child's vulnerability to the risk of childhood illnesses and chances of survival. For births in the five years preceding the 2014 KDHS, birth weight was recorded in the questionnaire if available from the Mother and Child Health Booklet, some other written record, or the mother's recall. Since birth weight may not be known for many babies, the mother's estimate of the baby's size at birth was also obtained. Such estimates, even though subjective, can be a useful proxy for the weight of the child at birth. Children reported to be "very small" or "smaller than average" at birth or children whose birth weight was less than 2.5 kilograms are considered to have a higher than average risk of early childhood death.

Table 10.1 presents information on size and weight at birth for children born in the five years prior to the 2014 KDHS according to background characteristics. Based on the mother's assessment, 3 percent of children were very small at birth, 12 percent were smaller than average, and 84 percent were average or larger in size. Children were most likely to be reported by their mothers as very small or smaller than average in the North Eastern region (25 percent) and least likely in Nyanza (8 percent). Twenty percent of children born to mothers with no education were considered by the mother to be very small or smaller than average, as compared with 14 percent of children born to mothers who had a secondary or higher education.

Table 10.1 Child's size and weight at birth

Percent distribution of live births in the five years preceding the survey by mother's estimate of baby's size at birth, percentage of live births in the five years preceding the survey that have a reported birth weight, and among live births in the five years preceding the survey with a reported birth weight, percentage less than 2.5 kg, according to background characteristics, Kenya 2014

	Percent distribution of all live births by size of child at birth					Percentage of all births that have a reported birth weight[1]	Number of births	Births with a reported birth weight[1]	
Background characteristic	Very small	Smaller than average	Average or larger	Don't know/ missing	Total			Percentage less than 2.5 kg	Number of births
Mother's age at birth									
<20	3.5	12.4	82.0	2.0	100.0	66.3	1,368	9.0	906
20-34	3.1	11.3	84.1	1.4	100.0	66.7	6,892	7.0	4,596
35-49	4.1	12.6	81.8	1.6	100.0	58.6	1,098	9.4	643
Birth order									
1	3.6	13.9	81.4	1.1	100.0	80.5	2,417	9.4	1,947
2-3	2.3	10.6	85.8	1.3	100.0	69.4	3,658	6.5	2,540
4-5	3.8	10.1	84.4	1.8	100.0	56.6	1,818	6.1	1,029
6+	4.7	12.3	80.4	2.6	100.0	43.0	1,464	8.9	630
Mother's smoking status									
Smokes cigarettes/ tobacco	(12.2)	(15.6)	(72.1)	(0.0)	100.0	(74.7)	30	*	22
Does not smoke	3.3	11.6	83.6	1.5	100.0	65.6	9,328	7.6	6,123
Residence									
Urban	3.6	12.2	83.1	1.2	100.0	85.7	3,388	8.6	2,904
Rural	3.1	11.3	83.8	1.7	100.0	54.3	5,970	6.7	3,242
Region									
Coast	5.3	13.2	80.5	1.0	100.0	73.2	952	12.7	697
North Eastern	11.3	13.5	65.6	9.6	100.0	27.4	307	7.9	84
Eastern	2.6	15.4	81.2	0.8	100.0	66.7	1,146	8.4	764
Central	3.1	17.5	79.1	0.3	100.0	95.6	837	9.2	800
Rift Valley	3.1	11.4	84.7	0.8	100.0	53.9	2,689	6.6	1,448
Western	3.4	8.5	87.5	0.7	100.0	51.1	1,127	4.8	575
Nyanza	1.8	6.3	88.5	3.4	100.0	69.2	1,319	3.5	913
Nairobi	2.3	11.4	84.4	1.8	100.0	87.9	982	8.9	864
Mother's education									
No education	5.5	14.4	76.3	3.8	100.0	30.4	1,111	9.4	338
Primary incomplete	3.5	10.2	84.2	2.1	100.0	51.7	2,781	8.9	1,436
Primary complete	3.4	12.1	83.5	1.1	100.0	72.1	2,472	7.8	1,781
Secondary+	2.3	11.5	85.7	0.5	100.0	86.5	2,995	6.5	2,590
Wealth quintile									
Lowest	3.5	11.7	81.9	2.8	100.0	35.9	2,192	8.5	787
Second	3.3	10.2	85.3	1.3	100.0	56.4	1,890	5.7	1,066
Middle	3.0	11.7	83.0	2.3	100.0	64.5	1,725	8.0	1,113
Fourth	3.1	13.6	82.7	0.6	100.0	82.8	1,702	8.8	1,410
Highest	3.5	11.2	85.0	0.3	100.0	95.7	1,849	7.0	1,770
Total	3.3	11.6	83.5	1.5	100.0	65.7	9,358	7.6	6,146

Note: Total includes one birth for whom information on mother's smoking status is missing. Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
[1] Based on either a written record or the mother's recall

Table 10.1 shows that birth weights were reported for 66 percent of children born in the five years before the survey. This represents an improvement from the 47 percent of children for whom birth weights were obtained in the 2008-09 KDHS. The increased availability of birth weight data is not surprising since the proportion of births occurring in health facilities increased between the two surveys (see Chapter 9), and children are more likely to be weighed at birth when delivered in an institutional setting. The variation in the proportion of children for whom a birth weight was obtained in the KDHS in fact closely parallels differences in the proportions of births delivered in health facilities.

Among children born in the five years before the survey with a reported birth weight, 8 percent were of low birth weight (less than 2.5 kg). The percentage of low birth weight children varied from a high of 13 percent in the Coast region to a low of 4 percent in the Nyanza region. Differences by other background characteristics are generally small.

10.2 VACCINATION COVERAGE

Universal immunisation of children against six common vaccine-preventable diseases, namely tuberculosis, diphtheria, whooping cough (pertussis), tetanus, polio, and measles, is crucial to reducing infant and child mortality. Other childhood vaccines given in Kenya protect against hepatitis B and *Haemophilus influenzae* type b (Hib). The pneumococcal vaccine introduced into Kenya's routine immunisation programme in February 2012 protects against *Streptococcus pneumoniae* bacteria, which cause severe pneumonia, meningitis, and other illnesses. The 2014 KDHS collected information on the coverage of all of these vaccines among children born in the five years preceding the survey. The information obtained in the survey on differences in vaccination coverage among subgroups of children is useful for programme planning and targeting resources towards areas most in need.

According to the guidelines developed by the World Health Organization, children are considered to have received all basic vaccinations when they have received a vaccination against tuberculosis (also known as BCG), three doses each of the DPT-HepB-Hib (also called pentavalent) and polio vaccines, and a vaccination against measles. The BCG vaccine is usually given at birth or at first clinical contact, while the DPT-HepB-Hib and polio vaccines are given at approximately age 6, 10, and 14 weeks. Measles vaccinations should be given at or soon after age 9 months. The Kenyan immunisation programme considers a child to be fully vaccinated if the child has received all basic vaccinations and three doses of the pneumococcal vaccine (also given at age 6, 10, and 14 weeks).

Information on vaccination coverage was obtained in two ways in the 2014 KDHS: from written vaccination records, including the Mother and Child Health Booklet and other health cards, and from mothers' verbal reports. The Ministry of Health introduced the Mother and Child Health Booklet in 2010 to replace the various cards used to record services offered in maternal and child health clinics, maternity wards, and family planning clinics. In the KDHS, for each child born in the five years before the survey, mothers were asked to show the interviewer the Mother and Child Health Booklet or health card used for recording the child's immunisations. If the Mother and Child Health Booklet or the card was available, the interviewer copied the dates of each vaccination received. If a vaccination was not recorded in the Mother and Child Health Booklet or on the card as being given, the mother was asked to recall whether that particular vaccination had been given. If the mother was not able to present the Mother and Child Health Booklet or card for a child, she was asked to recall whether the child had received BCG, polio, DPT-HepB-Hib, measles, and pneumococcal vaccine. If she indicated that the child had received the polio, DPT-HepB-Hib, or pneumococcal vaccine, she was asked the number of doses that the child received.

Table 10.2 presents data on vaccination coverage among children age 12-23 months by source of information (i.e., vaccination record or mother's report). Children age 12-23 months are the youngest cohort who have reached the age by which a child should be fully immunised.

Table 10.2 Vaccinations by source of information

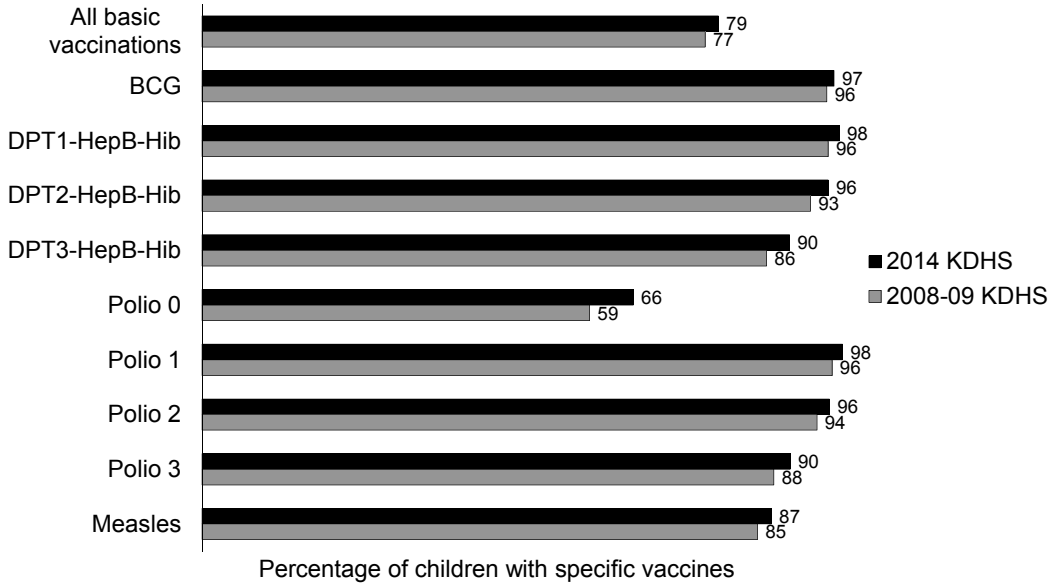
Percentage of children age 12-23 months who received specific vaccines at any time before the survey, by source of information (vaccination card or mother's report), and percentage vaccinated by 12 months of age, Kenya 2014

Source of information	BCG	DPT-HepB-Hib[1] 1	DPT-HepB-Hib[1] 2	DPT-HepB-Hib[1] 3	Polio[2] 0	Polio[2] 1	Polio[2] 2	Polio[2] 3	Measles	All basic vacci-nations[3]	Pneumococcal 1	Pneumococcal 2	Pneumococcal 3	Fully vacci-nated[4]	No vacci-nations	Number of children
Vaccinated at any time before survey																
Vaccination card	73.2	74.2	73.5	70.9	57.4	74.5	73.7	71.3	65.4	63.0	71.2	69.8	67.1	59.6	0.0	2,820
Mother's report	23.5	23.3	22.4	18.9	8.8	23.6	22.3	18.8	21.7	16.3	22.5	21.1	18.0	15.2	1.6	957
Either source	96.7	97.5	95.8	89.9	66.2	98.0	96.1	90.0	87.1	79.4	93.7	90.8	85.1	74.9	1.6	3,777
Vaccinated by 12 months of age[5]	95.9	97.0	94.9	88.3	66.1	97.5	94.9	88.1	78.9	71.3	93.0	90.0	83.2	67.2	2.0	3,777

[1] DPT-HepB-Hib is also called pentavalent.
[2] Polio 0 is the polio vaccination given at birth. The data on polio vaccination were adjusted for a likely misinterpretation of polio 0 and polio 1; for children whose mothers reported that they received three doses of DPT-HepB-Hib and polio 0, polio 1, and polio 2, it was assumed that polio 0 was in fact polio 1, polio 1 was polio 2 and polio 2 was polio 3.
[3] BCG, measles, and three doses each of DPT-HepB-Hib and polio vaccine (excluding polio vaccine given at birth)
[4] BCG, measles, and three doses each of DPT-HepB-Hib, polio (excluding polio vaccine given at birth), and pneumococcal vaccine
[5] For children whose information is based on the mother's report, the proportion of vaccinations given during the first year of life is assumed to be the same as for children with a written record of vaccination.

Table 10.2 and Figure 10.1 show that 79 percent of children age 12-23 months received all basic vaccinations, and 75 percent are fully vaccinated. Only 2 percent of children had not received any vaccinations. Ninety-seven percent of children received the BCG vaccination, 98 percent the first dose of DPT-HepB-Hib, 98 percent the first dose of polio, and 94 percent the first dose of the pneumococcal vaccine. Eighty-seven percent of children have received a measles vaccination. Coverage rates decline for subsequent doses, with 90 percent of children receiving the recommended three doses of DPT-HepB-Hib, 90 percent the three doses of polio, and 85 percent the three doses of the pneumococcal vaccine. Dropout rates, which represent the proportion of children who receive the first dose of a vaccine but do not go on to get the third dose, were around 8 percent for both polio and DPT-HepB-Hib and 9 percent for the pneumococcal vaccine.

Figure 10.1 **Trends in vaccination coverage among children age 12-23 months***



* Refers to vaccinations received at any time before the survey

Table 10.3 presents vaccination coverage (according to card information and mothers' reports) among children age 12-23 months by background characteristics. Vaccination records were available for 75 percent of these children. For the remaining children, information on vaccinations is based solely on the mother's report. There is no difference in the coverage rates between male and female children. Immunisation coverage decreases as birth order increases, with 80 percent of first-born children and only 59 percent of children of birth order six and above being fully immunised. Immunisation coverage increases with increasing mother's education; more than three-quarters of children whose mothers have completed primary or higher education are fully immunised, as compared with 55 percent of children whose mothers have no education. Only 62 percent of children in the lowest wealth quintile are fully immunised, compared with around 8 in 10 children in the other quintiles.

Coverage is highest in the Central (90 percent) region and lowest in the North Eastern region, where only 51 percent of children are fully immunised. Eleven percent of children in North Eastern have not received any of the recommended immunisations, as compared with 2 percent or less in the other regions.

Table 10.3 Vaccinations by background characteristics

Percentage of children age 12-23 months who received specific vaccines at any time before the survey (according to a vaccination card or the mother's report), and percentage with a vaccination card, by background characteristics, Kenya 2014

Background characteristic	BCG	DPT-HepB-Hib[1]			Polio[2]				Measles	All basic vaccinations[3]	Pneumococcal			Fully vaccinated[4]	No vaccinations	Percentage with a vaccination card seen	Number of children
		1	2	3	0	1	2	3			1	2	3				
Sex																	
Male	97.1	98.3	96.3	89.6	67.2	98.5	96.2	89.9	87.9	79.3	94.3	90.8	84.5	74.1	1.2	75.3	1,966
Female	96.2	96.7	95.3	90.2	65.1	97.5	95.9	90.1	86.2	79.5	93.0	90.9	85.9	75.7	2.2	73.9	1,811
Birth order																	
1	97.4	97.8	95.8	93.1	73.4	98.2	96.6	93.7	91.9	84.8	95.2	91.7	88.0	80.2	1.6	71.2	1,015
2-3	97.7	98.5	97.3	91.6	68.8	98.7	97.2	92.1	90.1	83.0	94.3	92.5	87.1	77.9	1.0	74.7	1,511
4-5	96.3	97.4	95.8	90.3	62.5	97.8	95.8	89.7	84.9	77.2	93.7	90.8	85.2	73.2	1.7	78.7	709
6+	92.9	94.6	91.7	78.5	50.6	96.0	92.3	77.8	72.4	62.2	89.1	84.7	74.3	58.5	3.6	75.8	542
Residence																	
Urban	97.7	98.0	95.9	91.2	74.1	98.4	96.6	91.4	91.7	83.0	94.1	90.3	86.3	77.8	1.3	67.2	1,330
Rural	96.1	97.3	95.8	89.2	61.9	97.8	95.7	89.3	84.6	77.4	93.5	91.1	84.5	73.3	1.8	78.7	2,447
Region																	
Coast	97.1	97.2	96.6	91.9	75.8	98.2	96.6	92.0	86.6	80.5	95.7	93.9	89.8	77.9	1.3	78.6	391
North Eastern	83.4	87.5	82.9	77.4	41.4	88.7	82.2	74.6	69.8	55.6	84.8	80.6	72.7	51.1	10.6	51.1	121
Eastern	98.7	99.0	98.2	93.6	71.8	99.2	97.5	92.1	92.1	85.9	94.6	93.7	89.6	81.5	0.5	85.3	431
Central	99.6	99.4	98.4	95.5	80.1	99.8	98.9	96.0	97.2	93.3	97.6	95.2	92.3	90.3	0.2	76.1	363
Rift Valley	96.7	97.4	95.1	87.9	59.9	97.6	94.7	86.8	83.1	74.0	92.3	89.7	81.7	68.7	1.8	77.3	1,083
Western	95.9	96.8	95.4	90.2	52.1	97.8	96.2	91.2	85.7	81.4	94.1	92.3	87.3	77.8	2.2	74.6	419
Nyanza	95.6	98.5	98.0	89.7	70.6	98.7	97.5	90.9	85.3	77.2	93.6	90.7	82.8	72.8	1.0	72.4	552
Nairobi	97.6	97.3	93.6	88.0	71.4	98.3	96.9	91.3	92.5	81.2	93.6	85.9	83.3	74.4	1.7	61.7	417
Mother's education																	
No education	89.9	91.4	87.3	77.3	46.0	92.9	87.5	74.4	70.8	56.9	89.4	85.1	74.5	54.6	5.4	71.0	431
Primary incomplete	95.8	97.8	96.1	88.0	59.4	98.5	96.6	89.2	82.5	74.8	92.6	90.1	82.8	69.8	1.4	77.5	1,072
Primary complete	97.9	98.7	98.1	93.0	68.2	98.7	97.2	92.6	90.2	84.0	93.5	91.6	87.0	78.8	1.2	76.6	1,021
Secondary+	98.7	98.4	96.7	93.3	77.4	98.9	97.6	94.0	94.1	87.3	96.3	92.9	89.3	83.0	0.9	71.9	1,253
Wealth quintile																	
Lowest	92.8	94.8	91.7	83.3	51.7	95.8	91.9	83.5	76.4	66.1	90.4	86.6	78.9	61.5	3.4	77.7	940
Second	96.7	98.4	97.7	90.1	62.6	98.7	98.0	90.8	86.9	80.0	93.9	92.2	84.2	75.3	1.1	79.4	765
Middle	98.1	98.3	97.2	92.0	67.8	98.5	96.6	90.4	88.3	81.7	94.8	92.5	87.4	78.3	1.3	74.5	667
Fourth	98.6	99.2	98.7	93.7	75.5	99.4	98.2	93.2	94.5	87.3	94.7	92.3	88.3	81.5	0.3	76.9	666
Highest	98.4	97.8	95.2	92.7	78.6	98.5	96.9	94.4	93.1	86.4	95.9	92.0	89.3	82.4	1.5	64.0	739
Total	96.7	97.5	95.8	89.9	66.2	98.0	96.1	90.0	87.1	79.4	93.7	90.8	85.1	74.9	1.6	74.7	3,777

[1] DPT-HepB-Hib is also called pentavalent.
[2] Polio 0 is the polio vaccination given at birth. The data on polio vaccination were adjusted for a likely misinterpretation of polio 0 and polio 1; for children whose mothers reported that they received three doses of DPT-HepB-Hib and polio 0, polio 1, and polio 2, it was assumed that polio 0 was in fact polio 1, polio 1 was polio 2 and polio 2 was polio 3.
[3] BCG, measles, and three doses each of DPT-HepB-Hib and polio vaccine (excluding polio vaccine given at birth)
[4] BCG, measles, and three doses each of DPT-HepB-Hib, polio (excluding polio vaccine given at birth), and pneumococcal vaccine

Differentials in immunisation coverage across counties are presented in Table 10.3C. The proportion of children who are fully immunised is 90 percent or higher in Machakos, Nyamira, Vihiga, Tharaka-Nithi, Nandi, and Kiambu. Less than half of children are fully immunised in Wajir and Mandera, and only 31 percent are fully immunised in West Pokot.

Table 10.3C Vaccinations by county

Percentage of children age 12-23 months who received specific vaccines at any time before the survey (according to a vaccination card or the mother's report), and percentage with a vaccination card, by county, Kenya 2014

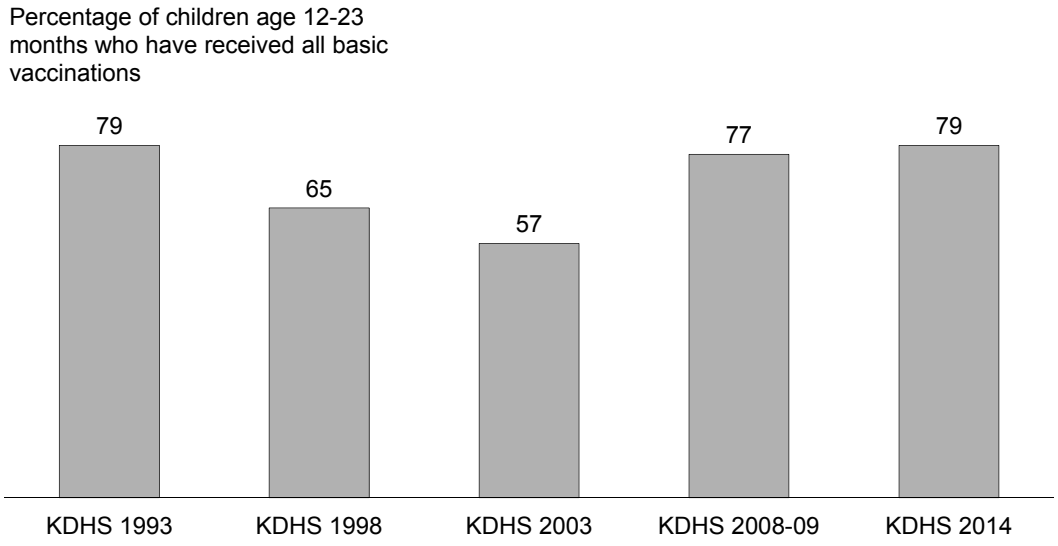
County	BCG	DPT-HepB-Hib[1]			Polio[2]				Measles	All basic vaccinations[3]	Pneumococcal			Fully vaccinated[4]	No vaccinations	Percentage with a vaccination card seen	Number of children
		1	2	3	0	1	2	3			1	2	3				
Coast	**97.1**	**97.2**	**96.6**	**91.9**	**75.8**	**98.2**	**96.6**	**92.0**	**86.6**	**80.5**	**95.7**	**93.9**	**89.8**	**77.9**	**1.3**	**78.6**	**391**
Mombasa	100.0	100.0	98.3	95.6	78.9	100.0	98.3	93.8	89.1	84.6	96.7	93.7	92.3	78.6	0.0	66.4	93
Kwale	98.6	96.7	96.7	95.1	73.5	99.4	95.9	94.6	90.7	85.9	96.1	96.1	93.6	84.5	0.0	92.3	89
Kilifi	94.3	95.3	95.3	87.5	81.9	96.2	95.8	88.8	83.7	74.7	95.3	92.9	87.4	74.1	3.0	80.9	144
Tana River	97.1	97.1	95.0	89.9	41.8	97.1	93.8	89.4	77.6	73.3	94.3	92.8	85.2	70.2	2.5	72.1	32
Lamu	94.2	99.3	97.0	84.7	62.1	100.0	97.7	94.2	83.2	69.9	91.9	90.4	79.3	67.4	0.0	72.3	9
Taita Taveta	98.4	98.4	98.4	97.5	87.1	100.0	100.0	97.5	93.0	93.0	95.6	95.6	90.4	88.8	0.0	71.5	23
North Eastern	**83.4**	**87.5**	**82.9**	**77.4**	**41.4**	**88.7**	**82.2**	**74.6**	**69.8**	**55.6**	**84.8**	**80.6**	**72.7**	**51.1**	**10.6**	**51.1**	**121**
Garissa	80.3	94.4	93.9	91.6	49.8	94.4	88.2	84.1	81.2	62.1	94.4	91.3	84.7	57.9	5.6	61.2	43
Wajir	91.0	90.8	86.2	79.1	39.2	91.7	87.4	77.0	64.5	55.8	83.8	82.4	74.1	49.5	6.6	58.6	54
Mandera	71.8	68.3	56.5	48.8	31.3	71.8	60.1	52.3	61.7	43.8	70.3	57.9	48.7	42.7	28.2	16.5	24
Eastern	**98.7**	**99.0**	**98.2**	**93.6**	**71.8**	**99.2**	**97.5**	**92.1**	**92.1**	**85.9**	**94.6**	**93.7**	**89.6**	**81.5**	**0.5**	**85.3**	**431**
Marsabit	92.6	96.4	93.4	85.7	41.2	99.0	95.6	88.3	76.8	70.8	94.7	92.2	84.6	67.5	1.0	80.5	16
Isiolo	96.4	98.6	96.5	94.4	72.0	98.6	95.9	93.7	86.5	83.3	94.9	93.8	92.0	82.3	1.4	89.0	20
Meru	99.2	100.0	100.0	93.6	69.0	100.0	100.0	92.4	91.3	88.4	97.2	97.2	89.1	83.9	0.0	89.9	95
Tharaka-Nithi	100.0	98.3	98.3	96.8	95.3	100.0	100.0	98.3	98.5	95.3	100.0	100.0	100.0	95.3	0.0	92.2	33
Embu	100.0	100.0	100.0	99.2	89.9	100.0	100.0	92.7	92.8	85.5	100.0	100.0	99.2	85.5	0.0	83.4	42
Kitui	96.1	96.1	93.1	81.5	42.7	97.7	93.1	81.9	84.9	69.3	81.0	78.1	69.2	56.8	2.3	85.3	76
Machakos	100.0	100.0	100.0	97.8	86.0	98.4	98.4	96.2	97.2	93.4	98.0	97.2	95.9	90.0	0.0	72.7	86
Makueni	100.0	100.0	100.0	99.1	75.6	100.0	96.2	95.3	96.8	92.0	96.2	95.3	95.3	89.7	0.0	93.1	63
Central	**99.6**	**99.4**	**98.4**	**95.5**	**80.1**	**99.8**	**98.9**	**96.0**	**97.2**	**93.3**	**97.6**	**95.2**	**92.3**	**90.3**	**0.2**	**76.1**	**363**
Nyandarua	100.0	100.0	98.1	90.8	84.9	100.0	98.1	94.6	95.1	86.2	98.0	89.7	84.9	81.4	0.0	81.3	53
Nyeri	98.7	97.2	97.2	94.9	84.4	100.0	100.0	95.1	92.7	87.8	94.4	93.1	89.1	84.3	0.0	82.2	59
Kirinyaga	(100.0)	(100.0)	(100.0)	(100.0)	(60.3)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(92.3)	(92.3)	(92.3)	(92.3)	(0.0)	(60.3)	31
Murang'a	99.0	99.0	95.7	89.9	78.0	99.0	95.7	89.9	97.3	88.2	97.3	92.0	89.9	86.4	1.0	74.3	70
Kiambu	100.0	100.0	100.0	99.0	81.8	100.0	100.0	99.0	99.0	99.0	100.0	100.0	97.2	97.2	0.0	76.1	150
Rift Valley	**96.7**	**97.4**	**95.1**	**87.9**	**59.9**	**97.6**	**94.7**	**86.8**	**83.1**	**74.0**	**92.3**	**89.7**	**81.7**	**68.7**	**1.8**	**77.3**	**1,083**
Turkana	94.5	94.4	91.5	86.2	63.7	94.4	90.8	83.9	71.9	62.5	93.8	89.8	83.2	61.8	3.7	87.1	61
West Pokot	78.9	86.4	80.6	68.3	35.3	87.3	78.6	60.5	58.2	35.9	78.7	73.1	58.7	31.2	11.2	60.8	66
Samburu	96.8	93.2	89.7	86.9	48.4	96.6	92.6	87.9	71.7	66.6	94.5	89.6	84.8	64.1	1.4	79.4	23
Trans-Nzoia	100.0	100.0	98.1	77.8	56.8	100.0	98.3	89.8	84.8	71.5	93.3	91.3	73.0	63.9	0.0	64.7	105
Uasin Gishu	95.9	97.3	95.9	91.5	54.3	95.9	94.6	90.2	91.3	85.6	83.4	82.3	75.8	72.3	2.7	73.7	96
Elgeyo Marakwet	100.0	100.0	97.9	97.9	78.4	99.4	97.9	95.3	86.6	85.9	99.4	97.9	97.0	85.2	0.0	91.2	32
Nandi	99.4	100.0	100.0	99.4	69.1	100.0	100.0	99.4	97.5	96.3	99.4	99.4	99.4	96.3	0.0	92.1	82
Baringo	100.0	100.0	98.3	94.5	60.5	100.0	99.0	94.1	82.5	78.3	92.6	90.9	85.1	69.4	0.0	81.8	49
Laikipia	98.7	98.7	98.7	89.7	72.0	98.7	96.3	91.1	92.3	83.2	96.6	96.6	90.9	79.3	1.3	79.9	38
Nakuru	97.2	97.9	96.1	90.9	74.6	97.9	95.1	90.4	86.4	79.2	94.8	93.0	86.5	74.7	2.1	81.8	167
Narok	95.0	96.3	91.2	83.0	37.6	98.4	95.0	82.1	74.5	66.4	90.8	86.3	74.8	58.5	1.6	79.1	118
Kajiado	97.7	97.0	92.4	79.1	51.9	96.2	87.6	68.5	80.9	58.5	90.3	83.3	71.9	56.4	1.1	57.2	95
Kericho	100.0	100.0	100.0	95.7	81.0	100.0	100.0	93.0	82.9	76.3	94.2	92.9	88.3	71.8	0.0	84.5	67
Bomet	100.0	100.0	99.2	98.0	62.4	100.0	100.0	95.6	92.1	87.0	96.1	95.3	92.8	81.3	0.0	84.7	84
Western	**95.9**	**96.8**	**95.4**	**90.2**	**52.1**	**97.8**	**96.2**	**91.2**	**85.7**	**81.4**	**94.1**	**92.3**	**87.3**	**77.8**	**2.2**	**74.6**	**419**
Kakamega	94.9	98.9	94.9	89.5	43.4	98.9	94.9	89.5	80.1	77.3	97.6	94.6	86.2	73.1	1.1	77.0	125
Vihiga	98.3	98.3	98.3	97.0	75.0	98.3	98.3	94.4	98.3	94.4	98.3	98.3	97.0	94.4	1.7	72.9	48
Bungoma	95.3	95.0	95.0	88.9	51.3	96.2	95.7	90.5	84.3	80.8	89.1	88.2	83.7	75.9	3.8	71.7	187
Busia	98.0	96.9	95.3	90.4	54.1	100.0	98.4	94.1	92.2	81.6	98.9	95.5	92.7	80.4	0.0	80.0	59
Nyanza	**95.6**	**98.5**	**98.0**	**89.7**	**70.6**	**98.7**	**97.5**	**90.9**	**85.3**	**77.2**	**93.6**	**90.7**	**82.8**	**72.8**	**1.0**	**72.4**	**552**
Siaya	98.4	100.0	100.0	93.9	78.6	100.0	100.0	91.9	84.8	79.3	99.5	99.5	91.3	78.0	0.0	78.1	84
Kisumu	97.2	97.6	97.6	87.0	76.3	97.6	96.4	87.7	89.5	78.9	96.8	95.1	84.7	78.9	2.4	51.5	96
Homa Bay	94.5	97.9	97.2	82.3	64.8	97.9	95.3	84.7	80.3	69.0	90.9	84.6	74.7	64.4	2.1	73.9	131
Migori	87.6	99.6	97.7	89.9	39.9	98.9	96.9	92.4	82.0	70.3	87.4	82.1	71.2	57.2	0.4	69.0	102
Kisii	100.0	97.8	97.8	95.3	90.5	99.1	99.1	97.2	86.5	84.6	94.4	94.4	91.9	82.2	0.0	87.2	99
Nyamira	99.0	99.0	99.0	97.6	88.0	100.0	100.0	97.0	98.0	95.0	96.1	94.6	94.6	92.1	0.0	78.0	39
Nairobi	**97.6**	**97.3**	**93.6**	**88.0**	**71.4**	**98.3**	**96.9**	**91.3**	**92.5**	**81.2**	**93.6**	**85.9**	**83.3**	**74.4**	**1.7**	**61.7**	**417**
Total	96.7	97.5	95.8	89.9	66.2	98.0	96.1	90.0	87.1	79.4	93.7	90.8	85.1	74.9	1.6	74.7	3,777

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] DPT-HepB-Hib is also called pentavalent.
[2] Polio 0 is the polio vaccination given at birth. The data on polio vaccination were adjusted for a likely misinterpretation of polio 0 and polio 1; for children whose mothers reported that they received three doses of DPT-HepB-Hib and polio 0, polio 1, and polio 2, it was assumed that polio 0 was in fact polio 1, polio 1 was polio 2 and polio 2 was polio 3.
[3] BCG, measles, and three doses each of DPT-HepB-Hib and polio vaccine (excluding polio vaccine given at birth)
[4] BCG, measles, and three doses each of DPT-HepB-Hib, polio (excluding polio vaccine given at birth), and pneumococcal vaccine

Figure 10.2 compares the results of the 2014 KDHS with immunisation data from the KDHS surveys carried out between 1993 and 2008-09 in order to explore the trends in childhood vaccination coverage over the past 20 years in Kenya. Because the pneumococcal vaccine was introduced only in 2012, Figure 10.2 focuses on changes in the proportion of children receiving all basic immunisations, that is, a BCG vaccination, three doses each of the DPT-HepB-Hib and polio vaccines, and a vaccination against measles. Some caution should be exercised in interpreting the trends in Figure 10.2 since some areas in northern Kenya were not included in the 1993 and 1998 surveys, and there are minor differences in the method used for calculating the polio immunisation rate.

Figure 10.2 shows that the proportion of children age 12-23 months who received all basic immunisations declined from 79 percent in 1993 to 65 percent in 1998 and then dropped again to a low of 57 percent in 2003. By 2008-09, the rate had rebounded to 77 percent. Between 2008-09 and 2014, however, the rate increased slightly to 79 percent.

Figure 10.2 **Trends in childhood vaccination coverage**



* Data from 2003 and later are nationally representative, while data before 2003 exclude North Eastern region and several northern districts in the Eastern and Rift Valley regions.

10.3 ACUTE RESPIRATORY INFECTION

Acute respiratory infection (ARI) is a leading cause of childhood morbidity and mortality throughout the world. Early diagnosis and treatment with antibiotics can reduce the number of deaths caused by ARI. In the 2014 KDHS, the prevalence of ARI symptoms was estimated by asking mothers whether, in the two weeks preceding the survey, their children under age 5 had been ill with a cough accompanied by short, rapid breathing and difficulty breathing as a result of a problem in the chest. These symptoms are consistent with pneumonia. It should be noted that the data collected on ARI symptoms are subjective because they are based on a mother's perception of the illness without validation by medical personnel.

Table 10.4 shows that 9 percent of children under age 5 were ill with symptoms of an acute respiratory infection in the two weeks before the survey. Differences in the prevalence of ARI symptoms by background characteristics are generally minor, with the largest differentials observed by age and region. Considering the age pattern, the proportion of children reported to have ARI symptoms was lowest among those less than age 6 months (4 percent) and peaked among those age 6-11 months (11 percent). With regard to regional differences, the highest prevalence of ARI symptoms was reported among children in the Western region (13 percent) and the lowest among children in the North Eastern region (4 percent).

Table 10.4 Prevalence and treatment of symptoms of ARI

Among children under age five, the percentage who had symptoms of acute respiratory infection (ARI) in the two weeks preceding the survey and among children with symptoms of ARI, the percentage for whom advice or treatment was sought from a health facility or provider and the percentage who received antibiotics as treatment, according to background characteristics, Kenya 2014

	Among children under age five:		Among children under age five with symptoms of ARI:		
Background characteristic	Percentage with symptoms of ARI[1]	Number of children	Percentage for whom advice or treatment was sought from a health facility or provider[2]	Percentage who received antibiotics	Number of children
Age in months					
<6	4.4	1,694	77.6	58.0	74
6-11	11.4	1,909	73.3	53.3	218
12-23	10.0	3,777	67.4	56.6	379
24-35	8.7	3,760	62.4	53.1	326
36-47	7.9	3,889	68.3	52.6	308
48-59	7.5	3,672	55.3	47.1	276
Sex					
Male	8.7	9,477	67.7	54.1	820
Female	8.2	9,225	63.7	51.9	761
Mother's smoking status					
Smokes cigarettes/tobacco	(11.4)	27	*	*	3
Does not smoke	8.5	18,675	65.7	53.1	1,578
Cooking fuel					
Electricity or gas	6.7	1,607	75.4	65.1	108
Paraffin/kerosene	6.2	1,358	(61.5)	(34.2)	84
Coal/lignite	*	18	*	*	3
Charcoal	8.4	3,529	66.5	58.1	298
Wood/straw[3]	9.0	12,163	64.8	51.8	1,089
Animal dung	*	6	*	*	0
Other fuel	*	4	*	*	0
No food cooked in household	*	13	*	*	0
Residence					
Urban	7.3	6,677	63.6	50.0	490
Rural	9.1	12,025	66.7	54.4	1,091
Region					
Coast	7.2	1,936	66.0	47.5	140
North Eastern	4.0	625	35.4	34.1	25
Eastern	8.7	2,235	67.6	55.7	195
Central	7.2	1,725	70.3	58.8	125
Rift Valley	8.3	5,457	68.1	61.9	453
Western	12.8	2,166	56.5	53.0	276
Nyanza	9.7	2,638	71.0	41.1	255
Nairobi	5.9	1,920	(65.2)	(44.8)	113
Mother's education					
No education	6.2	2,218	57.1	45.2	138
Primary incomplete	9.3	5,304	63.2	45.8	491
Primary complete	9.6	5,164	68.1	56.6	493
Secondary+	7.6	6,016	68.5	59.4	459
Wealth quintile					
Lowest	8.7	4,457	62.6	47.9	388
Second	9.5	3,803	66.7	49.3	363
Middle	9.7	3,375	64.9	51.7	328
Fourth	8.3	3,285	63.4	61.6	271
Highest	6.1	3,782	73.5	59.3	231
Total	8.5	18,702	65.7	53.1	1,582

Note: Total includes one child for whom information on mother's smoking status is missing and five children for whom information on cooking fuel in the household is missing. Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
[1] Symptoms of ARI, considered a proxy for pneumonia, include cough accompanied by short, rapid breathing which was chest-related and/or by difficult breathing which was chest-related.
[2] Excludes pharmacy, shop, and traditional practitioner
[3] Includes grass, shrubs, crop residues

Mothers who reported that their child had ARI symptoms were asked about the actions they had taken to treat the illness. Table 10.4 shows that, among children with ARI symptoms, two-thirds were taken to a health facility or health provider for advice or treatment. This is an increase from the 2008-09 KDHS, when treatment or advice was sought from a health provider for 56 percent of children ill with ARI symptoms. Also, antibiotics were used to treat children with ARI symptoms somewhat more often in 2014 than in 2008-09 (53 percent and 50 percent, respectively).

As Table 10.4 shows, the treatment that children ill with ARI symptoms received differed across subgroups. The proportion of children with ARI symptoms for whom medical treatment or advice was sought and the proportion receiving antibiotics generally decrease with child's age and increase with increasing mother's education and wealth. The greatest variations in treatment patterns were by region. The proportion of children with ARI symptoms for whom treatment or advice was sought from a health provider ranged from only 35 percent in North Eastern to 71 percent in Nyanza. The proportion of children with ARI symptoms who were treated with antibiotics was lowest in North Eastern (34 percent) and highest in Rift Valley (62 percent).

Differentials in ARI prevalence across counties are presented in Table 10.4C. The counties with the highest proportion of children reported as ill with ARI symptoms included Vihiga (17 percent), Bungoma (16 percent), Baringo (14 percent), Homa Bay (13 percent), and Migori (13 percent), while ARI prevalence was lowest in Mandera (2 percent) and in Turkana, Garissa, Kisumu, Kirinyaga, and Nyamira (each 3 percent). Due to the small numbers of children with ARI symptoms in most counties, it is not possible to compare treatment patterns across counties.

Table 10.4C Prevalence of symptoms of ARI

Among children under age five, the percentage who had symptoms of acute respiratory infection (ARI) in the two weeks preceding the survey, according to county, Kenya 2014

County	Among children under age five: Percentage with symptoms of ARI[1]	Number of children
Coast	**7.2**	**1,936**
Mombasa	6.0	493
Kwale	5.3	408
Kilifi	8.7	705
Tana River	7.6	166
Lamu	8.9	52
Taita Taveta	9.0	110
North Eastern	**4.0**	**625**
Garissa	2.9	223
Wajir	6.5	252
Mandera	1.5	150
Eastern	**8.7**	**2,235**
Marsabit	10.7	88
Isiolo	10.7	81
Meru	7.1	490
Tharaka-Nithi	10.8	137
Embu	6.3	194
Kitui	9.9	424
Machakos	7.8	474
Makueni	10.3	346
Central	**7.2**	**1,725**
Nyandarua	7.5	232
Nyeri	9.5	240
Kirinyaga	3.2	188
Murang'a	11.5	293
Kiambu	5.9	772
Rift Valley	**8.3**	**5,457**
Turkana	2.5	333
West Pokot	3.6	294
Samburu	4.4	114
Trans-Nzoia	9.3	516
Uasin Gishu	7.3	463
Elgeyo Marakwet	9.4	164
Nandi	7.0	388
Baringo	13.6	230
Laikipia	11.7	206
Nakuru	7.9	849
Narok	11.7	614
Kajiado	10.8	452
Kericho	7.7	359
Bomet	7.1	475
Western	**12.8**	**2,166**
Kakamega	11.9	721
Vihiga	16.6	215
Bungoma	15.6	842
Busia	6.2	388
Nyanza	**9.7**	**2,638**
Siaya	11.4	378
Kisumu	3.2	478
Homa Bay	12.8	616
Migori	12.7	516
Kisii	10.0	463
Nyamira	3.1	187
Nairobi	**5.9**	**1,920**
Total	8.5	18,702

[1] Symptoms of ARI, considered a proxy for pneumonia, include cough accompanied by short, rapid breathing which was chest-related and/or by difficult breathing which was chest-related.

10.4 FEVER

Fever is a major symptom of malaria and other acute infections in children. In the 2014 KDHS, mothers were asked whether their children under age 5 had a fever in the two weeks preceding the survey and, if so, whether any treatment was sought. Table 10.5 shows the percentage of children under age 5 with a fever during the two weeks preceding the survey and the percentage receiving antimalarial drugs and antibiotics, by background characteristics.

Twenty-four percent of children under age 5 had a fever in the two weeks preceding the survey. Fever was least common among children under age 6 months (17 percent) and most common among children age 6-23 months (30-31 percent). The prevalence of fever was highest in Nyanza (37 percent), Western (36 percent), and Coast (27 percent) and lowest in North Eastern (9 percent).

Advice or treatment was obtained from a health provider for 63 percent of children with a fever. This represents an increase from the 49 percent reported in 2008-09. The proportion of children for whom advice or treatment was sought from a health provider was lowest in the North Eastern and Western regions (50 percent and 52 percent, respectively). The likelihood that a child ill with fever received care or treatment generally increased with increasing mother's education and wealth.

Just over one-quarter of children with a fever received antimalarial drugs. Additional information on the use of antimalarial drugs to treat fever in children is provided in Chapter 12, which presents data

from the KDHS relating to efforts to prevent and treat malaria. Slightly more than 4 in 10 children with a fever were given antibiotics. Antibiotics were given most often to children age 6-23 months; urban children; children from the Central, Rift Valley, and Eastern regions; children whose mothers had completed primary or higher education; and children in the two highest wealth quintiles.

Table 10.5 Prevalence and treatment of fever

Among children under age five, the percentage who had a fever in the two weeks preceding the survey; and among children with fever, the percentage for whom advice or treatment was sought from a health facility or provider, the percentage who took antimalarial drugs, and the percentage who received antibiotics as treatment, by background characteristics, Kenya 2014

	Among children under age five:		Among children under age five with fever:			
Background characteristic	Percentage with fever	Number of children	Percentage for whom advice or treatment was sought from a health facility or provider[1]	Percentage who took antimalarial drugs	Percentage who took antibiotic drugs	Number of children
Age in months						
<6	16.9	1,694	58.3	11.9	38.4	286
6-11	31.2	1,909	67.3	18.0	48.3	597
12-23	29.9	3,777	63.0	24.3	45.7	1,131
24-35	24.8	3,760	60.8	29.5	41.5	933
36-47	21.2	3,889	62.7	32.7	41.7	826
48-59	21.5	3,672	61.6	34.0	40.7	789
Sex						
Male	24.5	9,477	62.0	27.0	42.5	2,325
Female	24.2	9,225	63.1	27.0	43.8	2,237
Residence						
Urban	21.7	6,677	62.3	20.4	46.0	1,447
Rural	25.9	12,025	62.6	30.0	41.8	3,114
Region						
Coast	27.2	1,936	67.6	11.9	40.8	526
North Eastern	8.7	625	49.5	7.3	42.1	54
Eastern	18.2	2,235	68.7	18.1	47.5	406
Central	17.9	1,725	68.2	4.8	58.6	308
Rift Valley	20.9	5,457	61.6	13.3	50.3	1,139
Western	36.1	2,166	51.5	51.8	38.6	782
Nyanza	37.4	2,638	65.8	48.7	32.6	987
Nairobi	18.7	1,920	63.3	10.6	44.9	359
Mother's education						
No education	17.7	2,218	60.7	17.5	39.8	392
Primary incomplete	29.2	5,304	57.1	32.0	36.8	1,550
Primary complete	24.2	5,164	64.4	27.7	45.2	1,250
Secondary+	22.8	6,016	67.5	23.3	49.5	1,369
Wealth quintile						
Lowest	25.1	4,457	59.5	23.1	38.1	1,119
Second	28.5	3,803	63.3	36.3	39.5	1,082
Middle	26.1	3,375	60.4	31.9	40.4	881
Fourth	24.0	3,285	62.5	26.2	51.0	788
Highest	18.3	3,782	69.0	13.2	51.6	691
Total	24.4	18,702	62.5	27.0	43.2	4,562

[1] Excludes pharmacy, shop, market, and traditional practitioner

As Table 10.5C shows, the prevalence of fever varied greatly across counties, from a high of 49 percent in Vihiga to a low of 5 percent in Mandera. Children with a fever were most likely to be taken to a health facility or provider for advice or treatment in West Pokot (77 percent) and least likely in Kakamega (42 percent). Children with a fever were most likely to have received antibiotics in Elgeyo Marakwet (73 percent).

Table 10.5C Prevalence and treatment of fever

Among children under age five, the percentage who had a fever in the two weeks preceding the survey; and among children with fever, the percentage for whom advice or treatment was sought from a health facility or provider, the percentage who took antimalarial drugs, and the percentage who received antibiotics as treatment, by county, Kenya 2014

	Among children under age five:		Among children under age five with fever:			
County	Percentage with fever	Number of children	Percentage for whom advice or treatment was sought from a health facility or provider[1]	Percentage who took antimalarial drugs	Percentage who took antibiotic drugs	Number of children
Coast	**27.2**	**1,936**	**67.6**	**11.9**	**40.8**	**526**
Mombasa	22.5	493	75.1	14.9	32.3	111
Kwale	25.7	408	63.1	33.2	51.1	105
Kilifi	31.3	705	69.7	2.1	35.5	221
Tana River	26.8	166	62.9	12.3	49.0	45
Lamu	22.2	52	45.3	5.7	44.3	12
Taita Taveta	29.5	110	56.3	1.3	59.8	33
North Eastern	**8.7**	**625**	**49.5**	**7.3**	**42.1**	**54**
Garissa	7.0	223	(41.4)	(5.6)	(43.2)	16
Wajir	12.5	252	54.2	4.3	46.2	31
Mandera	4.8	150	*	*	*	7
Eastern	**18.2**	**2,235**	**68.7**	**18.1**	**47.5**	**406**
Marsabit	19.3	88	63.1	10.6	51.0	17
Isiolo	13.2	81	74.6	51.1	34.0	11
Meru	26.0	490	72.0	23.1	65.8	128
Tharaka-Nithi	28.1	137	75.2	27.2	19.2	39
Embu	13.8	194	(72.4)	(21.7)	(68.9)	27
Kitui	17.0	424	60.8	7.4	37.1	72
Machakos	13.6	474	(61.4)	(12.8)	(25.2)	64
Makueni	14.1	346	74.8	13.7	57.0	49
Central	**17.9**	**1,725**	**68.2**	**4.8**	**58.6**	**308**
Nyandarua	17.2	232	67.0	6.7	69.1	40
Nyeri	14.1	240	(65.6)	(0.0)	(47.4)	34
Kirinyaga	21.2	188	(74.8)	(18.6)	(47.6)	40
Murang'a	17.7	293	(83.3)	(0.0)	(66.1)	52
Kiambu	18.5	772	61.8	3.2	58.6	143
Rift Valley	**20.9**	**5,457**	**61.6**	**13.3**	**50.3**	**1,139**
Turkana	11.4	333	61.7	29.9	20.3	38
West Pokot	9.4	294	76.9	32.2	45.1	28
Samburu	19.1	114	53.4	6.8	31.3	22
Trans-Nzoia	21.9	516	56.2	12.4	64.6	113
Uasin Gishu	19.3	463	52.3	5.8	61.6	89
Elgeyo Marakwet	29.7	164	63.9	2.0	73.3	49
Nandi	19.7	388	50.9	8.8	60.1	76
Baringo	22.9	230	71.6	27.7	63.9	53
Laikipia	21.6	206	73.6	16.8	64.7	44
Nakuru	15.5	849	67.1	11.6	50.9	132
Narok	30.7	614	61.7	13.3	34.5	188
Kajiado	25.7	452	53.4	1.4	54.0	116
Kericho	25.6	359	65.3	19.4	40.5	92
Bomet	20.8	475	68.9	21.0	42.2	99
Western	**36.1**	**2,166**	**51.5**	**51.8**	**38.6**	**782**
Kakamega	28.9	721	42.2	38.7	33.3	209
Vihiga	49.2	215	52.5	40.7	55.5	106
Bungoma	35.8	842	52.6	58.7	42.5	302
Busia	42.7	388	60.9	62.9	27.4	166
Nyanza	**37.4**	**2,638**	**65.8**	**48.7**	**32.6**	**987**
Siaya	44.9	378	73.7	59.4	42.2	170
Kisumu	30.9	478	62.5	46.0	44.8	148
Homa Bay	45.6	616	64.7	51.7	19.1	281
Migori	48.2	516	61.4	42.4	26.0	249
Kisii	28.1	463	71.1	46.9	49.4	130
Nyamira	5.7	187	*	*	*	11
Nairobi	**18.7**	**1,920**	**63.3**	**10.6**	**44.9**	**359**
Total	24.4	18,702	62.5	27.0	43.2	4,562

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
[1] Excludes pharmacy, shop, market, and traditional practitioner

10.5 DIARRHOEAL DISEASE

Dehydration caused by severe diarrhoea is a major cause of morbidity and mortality among young children, although the condition can be easily treated with oral rehydration therapy (ORT). Exposure to diarrhoea-causing agents is frequently related to the use of contaminated water and to unhygienic practices in food preparation and disposal of excreta. Reducing deaths from diarrhoea largely depends on whether the children are able to access lifesaving oral rehydration salts (ORS) and zinc tablets.

In the 2014 KDHS, mothers of children born during the five years preceding the survey were asked a series of questions about episodes of diarrhoea suffered by their children in the two weeks before the survey, including questions on feeding practices during diarrhoea, treatment of the condition, and their knowledge and use of ORS.

Table 10.6 shows the percentage of children under age 5 who had diarrhoea in the two weeks preceding the survey, by background characteristics. Overall, 15 percent of children under age 5 had diarrhoea, with 2 percent having diarrhoea with blood. Diarrhoea prevalence is highest among children age 6-11 and 12-23 months (27 percent and 24 percent, respectively). Diarrhoea is less common among children who used improved, private toilet facilities (11 percent) than among those who use non-improved or shared improved facilities (16 percent each). The Western, Nyanza, and Coast regions have the highest prevalence of diarrhoea (18-20 percent), and North Eastern has the lowest (8 percent).

Table 10.6C presents differences in diarrhoea prevalence by county. The proportion of children reported to have had diarrhoea was highest in Migori (28 percent), Homa Bay (24 percent), and Vihiga (24 percent). The lowest proportions of children with diarrhoea were in Nyamira (3 percent), Mandera (3 percent), and Nyeri (5 percent).

Table 10.6 Prevalence of diarrhoea

Percentage of children under age five who had diarrhoea in the two weeks preceding the survey, by background characteristics, Kenya 2014

Background characteristic	Diarrhoea in the two weeks preceding the survey: All diarrhoea	Diarrhoea with blood	Number of children
Age in months			
<6	12.9	1.3	1,694
6-11	26.6	2.2	1,909
12-23	24.2	1.9	3,777
24-35	15.8	2.3	3,760
36-47	9.2	1.5	3,889
48-59	6.7	1.0	3,672
Sex			
Male	15.9	1.6	9,477
Female	14.4	1.8	9,225
Source of drinking water[1]			
Improved	14.8	1.5	12,024
Not improved	16.1	2.2	6,496
Other/missing	7.1	0.0	182
Toilet facility[2]			
Improved, not shared	11.2	1.0	3,983
Shared[3]	16.2	1.2	4,854
Non-improved	16.4	2.2	9,855
Residence			
Urban	14.3	1.2	6,677
Rural	15.7	2.0	12,025
Region			
Coast	17.6	2.6	1,936
North Eastern	7.8	1.3	625
Eastern	14.3	0.7	2,235
Central	10.4	0.4	1,725
Rift Valley	13.2	1.8	5,457
Western	20.1	2.7	2,166
Nyanza	18.9	2.7	2,638
Nairobi	15.6	0.7	1,920
Mother's education			
No education	14.1	2.8	2,218
Primary incomplete	18.4	2.4	5,304
Primary complete	14.2	1.1	5,164
Secondary+	13.7	1.2	6,016
Wealth quintile			
Lowest	17.2	2.7	4,457
Second	17.1	2.3	3,803
Middle	15.5	1.7	3,375
Fourth	15.4	1.1	3,285
Highest	10.5	0.4	3,782
Total	15.2	1.7	18,702

Note: Total includes 14 children for whom information on toilet facility is missing.
[1] See Table 2.1 for definition of categories
[2] See Table 2.2 for definition of categories
[3] Facilities that would be considered improved if they were not shared by two or more households

Table 10.6C Prevalence of diarrhoea

Percentage of children under age five who had diarrhoea in the two weeks preceding the survey, by county, Kenya 2014

County	Diarrhoea in the two weeks preceding the survey: All diarrhoea	Diarrhoea in the two weeks preceding the survey: Diarrhoea with blood	Number of children
Coast	**17.6**	**2.6**	**1,936**
Mombasa	11.8	0.5	493
Kwale	14.6	2.6	408
Kilifi	22.9	4.0	705
Tana River	21.3	3.5	166
Lamu	17.3	2.2	52
Taita Taveta	16.1	1.0	110
North Eastern	**7.8**	**1.3**	**625**
Garissa	5.5	2.3	223
Wajir	12.6	1.1	252
Mandera	3.0	0.1	150
Eastern	**14.3**	**0.7**	**2,235**
Marsabit	14.9	0.6	88
Isiolo	6.8	1.2	81
Meru	12.9	0.4	490
Tharaka-Nithi	20.5	1.5	137
Embu	11.5	0.5	194
Kitui	18.2	0.7	424
Machakos	15.1	1.3	474
Makueni	11.3	0.3	346
Central	**10.4**	**0.4**	**1,725**
Nyandarua	11.3	0.1	232
Nyeri	4.6	0.5	240
Kirinyaga	12.0	1.0	188
Murang'a	12.1	1.0	293
Kiambu	11.0	0.0	772
Rift Valley	**13.2**	**1.8**	**5,457**
Turkana	14.3	3.9	333
West Pokot	8.4	0.2	294
Samburu	18.1	3.4	114
Trans-Nzoia	14.9	1.7	516
Uasin Gishu	9.3	1.4	463
Elgeyo Marakwet	11.6	1.7	164
Nandi	10.9	0.6	388
Baringo	16.0	2.5	230
Laikipia	13.5	0.5	206
Nakuru	11.7	1.9	849
Narok	18.8	3.3	614
Kajiado	10.6	0.6	452
Kericho	16.3	2.3	359
Bomet	12.3	1.2	475
Western	**20.1**	**2.7**	**2,166**
Kakamega	20.8	3.9	721
Vihiga	23.6	2.5	215
Bungoma	19.5	2.0	842
Busia	18.2	2.0	388
Nyanza	**18.9**	**2.7**	**2,638**
Siaya	14.1	0.7	378
Kisumu	15.5	2.4	478
Homa Bay	23.5	3.7	616
Migori	27.9	3.6	516
Kisii	16.9	3.3	463
Nyamira	2.9	0.3	187
Nairobi	**15.6**	**0.7**	**1,920**
Total	15.2	1.7	18,702

Prompt treatment, including oral rehydration therapy, is important in treating diarrhoea. Table 10.7 shows the percentage of children with diarrhoea who according to the mother's report received specific treatments, by background characteristics. Advice or treatment was sought from a health provider in the case of 58 percent of children with diarrhoea. Children age 6-11 months (65 percent), male children (59 percent), and children with bloody diarrhoea (74 percent) were more likely than their counterparts to have received advice or treatment from a health facility or provider. Considering regional differentials, treatment or advice was least likely to be sought from a health facility or provider for children with diarrhoea in North Eastern (44 percent) and Western (47 percent) regions and most likely in Coast (65 percent). Children of mothers with no education (63 percent) and children of mothers in the lowest wealth quintile (61 percent) were more likely than others to be taken to a health facility or provider for advice or treatment.

Table 10.7 Diarrhoea treatment

Among children under age five who had diarrhoea in the two weeks preceding the survey, the percentage for whom advice or treatment was sought from a health facility or provider, the percentage given oral rehydration therapy (ORT), the percentage given increased fluids, the percentage given ORT or increased fluids, and the percentage who were given other treatments, by background characteristics, Kenya 2014

Background characteristic	Percentage of children with diarrhoea for whom advice or treatment was sought from a health facility or provider[1]	Oral rehydration therapy (ORT)						Other treatments							Number of children with diarrhoea
		Fluid from ORS packets	Fluid from ORS packets and zinc	Home-made fluids	Either ORS or home-made fluids	In-creased fluids	ORT or in-creased fluids	Antibiotic drugs	Anti-motility drugs	Zinc supple-ments	Intra-venous solution	Home remedy/ other	Missing	No treat-ment	
Age in months															
<6	42.6	31.1	1.7	35.5	55.4	8.1	58.6	11.5	1.4	1.8	1.0	18.4	0.0	30.2	218
6-11	65.2	56.1	8.9	57.5	79.3	17.8	83.0	14.3	2.4	10.6	0.9	20.0	0.5	9.3	508
12-23	57.7	60.1	7.9	60.4	83.2	22.8	86.0	17.4	0.6	8.6	2.3	20.7	0.0	8.8	915
24-35	58.0	49.8	9.3	59.7	78.2	25.0	82.0	16.3	1.3	10.4	1.0	20.9	0.3	9.5	596
36-47	57.8	61.4	5.3	60.1	80.7	21.4	84.6	14.2	0.6	5.7	2.6	19.5	0.5	11.3	360
48-59	54.1	44.4	4.4	54.5	72.1	27.9	78.7	18.8	0.0	5.0	0.0	21.5	0.2	11.4	247
Sex															
Male	59.1	56.3	7.9	57.1	78.3	23.4	82.5	16.5	1.3	8.1	1.3	21.3	0.2	10.5	1,511
Female	55.9	51.0	6.5	57.5	77.8	19.4	80.9	15.1	0.8	8.2	1.8	19.3	0.3	12.0	1,332
Type of diarrhoea															
Non-bloody	55.7	53.0	6.9	56.8	77.7	21.7	81.3	15.8	0.9	7.8	1.4	19.1	0.1	12.0	2,487
Bloody	73.7	62.0	11.1	63.0	83.2	19.8	86.7	15.7	2.2	11.3	2.1	30.2	0.0	5.8	320
Residence															
Urban	56.7	57.5	9.9	61.7	80.9	29.5	84.6	17.5	1.5	11.0	1.4	17.5	0.2	9.0	957
Rural	58.1	51.9	5.9	55.1	76.6	17.5	80.3	15.0	0.9	6.7	1.6	21.8	0.3	12.3	1,886
Region															
Coast	64.7	63.1	12.1	56.8	80.4	32.6	85.2	16.3	0.1	12.5	5.5	17.9	0.0	8.5	341
North Eastern	44.2	55.3	7.2	39.2	72.6	10.1	74.8	11.8	0.2	8.2	3.9	14.8	0.2	15.4	49
Eastern	57.4	47.2	3.0	56.1	80.0	12.3	83.1	17.1	0.2	3.4	0.0	16.9	0.0	13.7	320
Central	63.2	50.6	8.6	65.5	80.6	27.7	85.5	17.3	1.7	9.2	0.0	25.8	0.0	5.9	180
Rift Valley	58.9	53.0	3.3	59.4	77.7	21.8	80.1	15.9	3.0	4.5	0.3	24.5	0.4	10.5	718
Western	47.3	45.6	4.7	58.8	75.5	16.8	80.8	9.8	0.0	5.1	0.8	22.5	0.2	14.1	436
Nyanza	59.7	55.3	11.7	45.9	75.3	11.8	77.2	19.7	1.0	12.7	1.1	20.2	0.5	13.9	500
Nairobi	57.4	63.4	11.1	68.9	82.0	39.3	88.0	16.3	0.0	12.8	3.6	11.8	0.0	6.9	300
Mother's education															
No education	63.3	51.6	5.7	47.9	73.7	19.9	77.6	12.8	0.0	7.9	3.2	28.6	0.0	11.1	312
Primary incomplete	57.6	51.5	4.5	56.3	77.4	17.4	81.4	15.2	0.6	4.7	1.5	18.8	0.3	13.3	975
Primary complete	53.7	53.7	5.6	59.0	77.4	19.1	80.1	14.9	1.0	6.0	1.0	19.1	0.2	12.2	734
Secondary+	59.1	57.5	12.6	60.4	81.1	29.2	85.2	18.7	2.1	14.1	1.4	20.2	0.3	7.8	823
Wealth quintile															
Lowest	60.8	52.1	5.0	51.7	75.3	18.2	79.4	13.0	0.8	6.1	3.0	23.3	0.1	13.1	767
Second	58.3	53.3	4.7	54.9	77.6	16.9	81.1	16.2	1.3	5.2	0.5	20.7	0.2	11.8	650
Middle	56.4	55.3	7.4	61.6	81.4	19.1	84.2	14.3	1.0	7.5	1.4	21.5	0.0	10.2	525
Fourth	54.8	55.0	11.5	58.9	77.5	26.9	81.6	21.0	1.1	12.2	0.1	15.8	0.3	9.9	506
Highest	55.6	54.5	10.3	64.1	80.3	31.8	84.4	16.3	1.4	12.5	2.2	18.6	0.8	9.4	396
Total	57.6	53.8	7.2	57.3	78.1	21.5	81.7	15.9	1.1	8.1	1.5	20.4	0.2	11.2	2,844

Note: ORT includes fluid prepared from oral rehydration salt (ORS) packets, homemade sugar-salt solution, and other homemade fluids. Total includes 56 children for whom information on type of diarrhoea is missing.
[1] Excludes pharmacy, shop, and traditional practitioner

Oral rehydration therapy (ORT) involves giving a child a solution prepared from oral rehydration salts (ORS) or other homemade fluids. Table 10.7 shows that 54 percent of children with diarrhoea were treated with an ORS solution and 57 percent with homemade fluids. Overall, 78 percent received some form of ORT, either ORS or other homemade fluids. Simply increasing the fluids a child receives can help prevent dehydration. Twenty-two percent of children were given increased fluids. Eighty-two percent were given ORT or increased fluids.

Table 10.7 also shows the proportions of children receiving treatments other than ORT or increased fluids. Eight percent of children with diarrhoea were given zinc supplements, while 7 percent received both zinc supplements and ORS. Sixteen percent of children with diarrhoea received antibiotic drugs, 1 percent were given anti-motility drugs, and 2 percent were treated with intravenous fluids. Twenty percent were treated with home remedies. Eleven percent of children with diarrhoea did not receive any treatment at all.

Treatment practices varied considerably across subgroups of children. For example, as Table 10.7 shows, use of ORT or increased fluids was lowest among children less than age 6 months (59 percent) and highest among children age 12-23 months (86 percent). There are also marked regional differences in use of ORT or increased fluids, from a high of 88 percent in Nairobi to a low of 75 percent in North Eastern.

Use of ORT or increased fluids is higher among children of mothers with a secondary or higher education (85 percent) than among children of mothers at other educational levels.

Mothers are encouraged to continue feeding children with diarrhoea normally and to increase the amount of fluids. These practices help to reduce dehydration and minimise the adverse consequences of diarrhoea on the child's nutritional status. To obtain information on the extent to which these feeding practices are used, mothers of children under age 5 who had diarrhoea during the two weeks before the survey were asked about the amount of fluids and food they gave during the diarrhoeal episode.

Table 10.8 shows that 37 percent of children with diarrhoea were given the same amount of fluid as usual, 22 percent were given more, 25 percent were given somewhat less, and 14 percent were given much less than the usual amount. Only 2 percent were not given any fluids. Regarding the amount of food children with diarrhoea received, 32 percent were given the same amount of food as usual, and 3 percent were offered more to eat. On the other hand, 31 percent were given somewhat less than the usual amount of food, 18 percent were given much less than the usual amount, and 7 percent ate nothing during the diarrhoeal episode. Only 15 percent of children received increased fluids with continued feeding. Fifty-three percent of children with diarrhoea continued feeding and were given ORT and/or increased fluids.

Table 10.8 Feeding practices during diarrhoea

Percent distribution of children under age five who had diarrhoea in the two weeks preceding the survey by amount of liquids and food offered compared with normal practice, the percentage of children given increased fluids and continued feeding during the diarrhoea episode, and the percentage of children who continued feeding and were given ORT and/or increased fluids during the episode of diarrhoea, by background characteristics, Kenya 2014

	Amount of liquids given							Amount of food given										
Background characteristic	More	Same as usual	Some-what less	Much less	None	Don't know/ missing	Total	More	Same as usual	Some-what less	Much less	None	Never gave food	Don't know/ missing	Total	Percent-age given in-creased fluids and con-tinued feeding[1]	Percent-age who con-tinued feeding and were given ORT and/or in-creased fluids[1]	Number of children with diar-rhoea
Age in months																		
<6	8.1	52.7	16.0	13.2	10.0	0.0	100.0	3.5	12.1	7.5	6.8	2.3	67.9	0.0	100.0	3.2	14.9	218
6-11	17.8	37.5	28.8	13.1	2.6	0.3	100.0	2.0	25.1	25.8	18.5	9.3	19.0	0.3	100.0	8.6	42.1	508
12-23	22.8	31.7	24.8	17.1	3.0	0.5	100.0	3.9	26.7	35.3	21.8	10.4	1.7	0.1	100.0	15.0	56.4	915
24-35	25.0	38.3	22.4	13.3	0.8	0.1	100.0	2.6	41.0	32.7	17.7	5.1	0.9	0.1	100.0	20.1	62.1	596
36-47	21.4	39.7	25.7	12.5	0.2	0.5	100.0	2.1	45.2	34.6	12.1	5.7	0.2	0.0	100.0	16.5	68.3	360
48-59	27.9	33.3	25.7	12.7	0.3	0.1	100.0	3.3	38.5	32.2	22.8	3.0	0.1	0.1	100.0	23.3	57.1	247
Sex																		
Male	23.4	37.9	23.1	13.4	2.0	0.2	100.0	3.7	33.8	30.1	16.8	7.3	8.3	0.0	100.0	17.0	55.5	1,511
Female	19.4	35.7	26.1	15.4	2.9	0.5	100.0	2.2	29.3	31.1	19.4	7.2	10.6	0.2	100.0	12.5	51.1	1,332
Type of diarrhoea																		
Non-bloody	21.7	37.9	23.9	13.9	2.3	0.2	100.0	3.1	32.8	30.2	17.9	6.5	9.5	0.1	100.0	15.0	53.7	2,487
Bloody	19.8	29.5	30.6	16.7	3.4	0.0	100.0	2.0	24.0	32.8	19.5	13.0	8.7	0.0	100.0	14.6	52.0	320
Residence																		
Urban	29.5	37.3	20.3	10.9	1.6	0.5	100.0	2.7	35.7	32.9	16.4	5.1	7.2	0.1	100.0	22.0	61.8	957
Rural	17.5	36.7	26.7	16.1	2.9	0.2	100.0	3.1	29.6	29.4	18.9	8.3	10.5	0.1	100.0	11.3	49.2	1,886
Region																		
Coast	32.6	27.9	23.5	10.2	5.7	0.2	100.0	2.3	25.3	29.9	19.1	9.3	13.8	0.2	100.0	17.8	47.7	341
North Eastern	10.1	6.5	40.2	41.7	1.5	0.0	100.0	0.0	8.4	34.4	33.8	11.4	12.0	0.0	100.0	1.2	31.4	49
Eastern	12.3	38.0	33.2	16.1	0.4	0.0	100.0	2.7	27.8	36.9	18.9	3.2	10.5	0.0	100.0	7.7	57.8	320
Central	27.7	36.0	19.4	12.6	4.3	0.0	100.0	1.7	29.1	28.3	31.6	4.5	4.8	0.0	100.0	13.7	48.8	180
Rift Valley	21.8	39.2	24.1	11.7	2.7	0.5	100.0	1.0	34.8	33.4	10.6	11.7	8.2	0.2	100.0	15.9	55.6	718
Western	16.8	37.0	24.5	19.5	2.0	0.2	100.0	6.5	25.5	23.6	24.3	8.2	11.6	0.2	100.0	9.9	43.2	436
Nyanza	11.8	38.6	27.7	19.4	2.3	0.1	100.0	3.3	29.7	30.9	20.4	6.1	9.6	0.1	100.0	8.9	48.8	500
Nairobi	39.3	42.6	12.7	4.2	0.0	1.2	100.0	4.4	53.2	27.9	10.0	0.0	4.6	0.0	100.0	37.2	79.0	300
Mother's education																		
No education	19.9	33.0	27.7	18.4	1.0	0.0	100.0	1.4	27.7	28.3	15.2	14.5	12.8	0.0	100.0	9.2	42.7	312
Primary incomplete	17.4	38.3	26.3	14.4	3.3	0.3	100.0	3.1	31.3	30.1	18.1	7.1	10.1	0.1	100.0	11.6	52.2	975
Primary complete	19.1	37.5	24.5	14.9	3.3	0.7	100.0	3.0	32.1	30.1	18.5	7.4	8.8	0.2	100.0	14.2	52.1	734
Secondary+	29.2	36.0	21.2	12.3	1.2	0.1	100.0	3.3	33.2	32.4	18.6	4.6	7.8	0.1	100.0	21.7	60.0	823
Wealth quintile																		
Lowest	18.2	34.5	28.6	15.0	3.5	0.2	100.0	1.7	29.2	30.5	16.8	9.8	11.7	0.2	100.0	10.6	48.2	767
Second	16.9	39.9	26.4	15.1	1.4	0.2	100.0	4.0	31.8	28.8	19.7	7.6	7.9	0.2	100.0	10.7	51.7	650
Middle	19.1	35.7	22.2	19.6	3.4	0.0	100.0	3.9	29.6	28.0	20.1	6.8	11.6	0.0	100.0	14.0	51.1	525
Fourth	26.9	37.7	21.9	11.4	1.9	0.1	100.0	3.1	30.1	35.5	17.7	5.6	7.9	0.1	100.0	20.1	58.0	506
Highest	31.8	36.9	20.1	8.5	1.4	1.4	100.0	2.2	41.0	30.7	15.6	4.5	6.1	0.0	100.0	24.8	63.6	396
Total	21.5	36.9	24.5	14.3	2.4	0.3	100.0	3.0	31.7	30.6	18.0	7.2	9.4	0.1	100.0	14.9	53.4	2,844

Note: It is recommended that children should be given more liquids to drink during diarrhoea and food should not be reduced. Total includes 56 children for whom information on type of diarrhoea is missing.
[1] Continued feeding practices includes children who were given more, same as usual, or somewhat less food during the diarrhoea episode

Feeding practices during diarrhoeal episodes varied by background characteristics. The proportion of children who were fed optimally, that is, who continued feeding and were given ORT and/or increased fluids, generally increased with age, reaching a peak of 68 percent among children age 36-47 months. The likelihood that a child was fed according to the optimal practice was greater among urban than rural children and generally increased with both mother's education and wealth quintile. Children with diarrhoea were most often fed according to the optimal practice in Nairobi (79 percent) and least often in North Eastern (31 percent). County-level data are not presented for Table 10.7 or Table 10.8 since there are insufficient cases of children with diarrhoea.

A comparison of the results from the 2008-09 and 2014 KDHS surveys with respect to the actions taken when children have diarrhoea highlights a number of improvements in treatment practices. The proportion of children with diarrhoea taken to a health facility or provider for advice or treatment increased from 49 percent at the time of the 2008-09 KDHS to 58 percent in the 2014 KDHS. The percentage of children with diarrhoea treated with a solution prepared from an ORS packet also increased from 39 percent in 2008-09 to 54 percent in 2014. Use of zinc to treat diarrhoea in children increased from less than 1 percent (0.2 percent) in 2008-09 to 8 percent in 2014. While treatment practices improved in a number of ways in the past five years, there are also a number of areas of concern. The proportion of children receiving no treatment increased from 13 percent in the 2008-09 KDHS to 18 percent in the 2014 KDHS. Also, there was no change in the proportion of children with diarrhoea given increased fluids with continued feeding.

10.6 KNOWLEDGE OF ORS PACKETS AND ZINC TABLETS

To ascertain how widespread knowledge of oral rehydration salt (ORS) is in Kenya, women age 15-49 with a live birth in the five years preceding the survey were asked whether they knew about ORS packets. Women were also asked whether they had heard of zinc tablets as a treatment for diarrhoea.

Table 10.9 shows that 93 percent of women age 15-49 with a live birth in the five years preceding the survey have heard of ORS packets. This represents a substantial increase from the 78 percent of mothers who knew about ORS packets at the time of the 2008-09 KDHS. With regard to differentials in ORS knowledge, the proportion of women who had heard about ORS packets was below 90 percent only among those age 15-19 (89 percent), those in North Eastern (81 percent), those with no education (82 percent), and those in the lowest wealth quintile (87 percent).

While most women with a birth in the five years before the survey knew about ORS packets, only around 1 in 6 women were aware of zinc tablets (17 percent). Women in urban areas (21 percent), women in Western and Nyanza (22 percent each), women with a secondary or higher education (24 percent), and women in the fourth and highest wealth quintiles (21 percent each) were more likely to have heard of zinc tablets than other women.

Table 10.9 Knowledge of ORS packets

Percentage of women age 15-49 with a live birth in the five years preceding the survey who know about ORS packets and who know about zinc tablets for treatment of diarrhoea, by background characteristics, Kenya 2014

Background characteristic	Percentage of women who know about ORS packets	Percentage of women who know about zinc tablets	Number of women
Age			
15-19	89.2	15.6	845
20-24	91.8	17.8	3,458
25-34	93.9	18.5	7,191
35-49	92.5	14.6	2,948
Residence			
Urban	94.9	20.7	5,561
Rural	91.6	15.3	8,881
Region			
Coast	89.9	15.2	1,471
North Eastern	81.2	11.3	372
Eastern	93.5	17.5	1,834
Central	93.4	17.8	1,528
Rift Valley	91.6	13.1	4,002
Western	94.7	22.3	1,590
Nyanza	94.7	22.3	1,988
Nairobi	95.8	19.7	1,657
Education			
No education	82.3	8.9	1,409
Primary incomplete	90.5	13.0	3,846
Primary complete	94.2	16.0	4,024
Secondary+	96.4	24.0	5,163
Wealth quintile			
Lowest	86.7	10.2	2,947
Second	93.1	15.9	2,782
Middle	94.4	18.6	2,660
Fourth	95.2	20.7	2,777
Highest	94.9	21.3	3,277
Total	92.8	17.4	14,442

ORS = Oral rehydration salts

10.7 DISPOSAL OF CHILDREN'S STOOLS

Unsafe disposal of human faeces spreads disease, either by direct contact or through indirect transmission. Hence, the proper disposal of children's stools is extremely important in preventing the spread of disease. Children's stools are considered to be safely disposed of if the child uses a toilet or latrine or the stools are put or rinsed into a toilet or latrine or buried.

Table 10.10 presents information on the disposal of stools of children under age 5. Overall, 83 percent of children had their last stool disposed of safely. This represents an improvement from the 78 percent reported in the 2008-09 KDHS. Children whose mothers had no education (49 percent), children in the lowest wealth quintile (57 percent), and children in the North Eastern region (62 percent) were least likely to have their last stool disposed of safely. Children in the Central and Western regions (95 percent each) were most likely to have their last stool disposed of safely.

Table 10.10 Disposal of children's stools

Percent distribution of youngest children under age five living with the mother by the manner of disposal of the child's last faecal matter, and percentage of children whose stools are disposed of safely, according to background characteristics, Kenya 2014

Background characteristic	Manner of disposal of children's stools								Total	Percentage of children whose stools are disposed of safely[1]	Number of children
	Child used toilet or latrine	Put/rinsed into toilet or latrine	Buried	Put/rinsed into drain or ditch	Thrown into garbage	Left in the open	Other	Missing			
Age in months											
<6	2.5	60.9	5.0	8.4	15.4	5.7	2.0	0.0	100.0	68.4	794
6-11	5.3	62.9	5.3	6.7	11.4	7.3	1.0	0.0	100.0	73.5	894
12-23	4.8	69.6	6.1	4.3	9.3	5.5	0.5	0.1	100.0	80.4	1,700
24-35	14.9	69.6	5.1	2.2	3.7	4.3	0.2	0.2	100.0	89.5	1,347
36-47	37.8	49.8	3.8	0.8	2.6	4.8	0.2	0.2	100.0	91.5	982
48-59	63.7	26.3	2.3	1.0	2.2	3.1	0.2	1.1	100.0	92.3	721
Toilet facility[2]											
Improved, not shared	25.5	62.5	0.8	3.6	5.2	2.0	0.2	0.2	100.0	88.8	1,405
Shared[3]	15.1	70.9	1.0	2.6	8.2	1.8	0.2	0.3	100.0	87.0	1,755
Non-improved or shared	17.0	52.5	8.6	4.5	7.8	8.3	1.0	0.2	100.0	78.1	3,272
Residence											
Urban	19.9	65.8	1.1	2.7	9.2	1.0	0.2	0.1	100.0	86.8	2,398
Rural	17.4	56.1	7.1	4.4	6.2	7.6	0.9	0.3	100.0	80.6	4,041
Region											
Coast	13.2	53.1	10.6	7.0	13.0	2.4	0.1	0.5	100.0	76.9	651
North Eastern	0.9	36.2	24.3	2.9	19.5	13.9	0.8	1.4	100.0	61.5	174
Eastern	24.5	60.8	4.1	1.3	4.4	4.0	0.8	0.0	100.0	89.4	849
Central	33.9	60.1	0.6	1.4	1.9	1.4	0.0	0.6	100.0	94.6	674
Rift Valley	13.7	59.6	2.2	4.2	7.8	11.5	1.0	0.0	100.0	75.5	1,805
Western	28.9	59.7	5.9	3.1	0.6	1.1	0.6	0.0	100.0	94.5	753
Nyanza	11.5	66.9	9.0	5.4	2.8	3.2	0.9	0.3	100.0	87.4	877
Nairobi	13.7	61.5	0.0	4.0	20.3	0.6	0.0	0.0	100.0	75.1	655
Mother's education											
No education	6.1	27.8	14.6	7.5	23.6	18.1	1.6	0.6	100.0	48.5	655
Primary incomplete	16.9	57.2	7.2	5.5	4.9	7.1	0.9	0.3	100.0	81.3	1,803
Primary complete	22.3	64.1	3.4	2.9	3.8	3.1	0.4	0.1	100.0	89.8	1,713
Secondary+	20.0	67.7	1.2	2.0	7.2	1.4	0.3	0.2	100.0	88.9	2,267
Wealth quintile											
Lowest	7.3	35.2	14.0	8.4	16.3	16.7	1.8	0.3	100.0	56.5	1,338
Second	19.0	63.3	6.1	2.6	2.5	5.5	0.7	0.1	100.0	88.5	1,267
Middle	21.6	67.4	2.7	4.2	1.6	1.9	0.3	0.4	100.0	91.7	1,207
Fourth	22.3	68.6	0.9	2.4	4.8	0.7	0.1	0.1	100.0	91.9	1,247
Highest	21.9	65.4	0.2	1.4	10.3	0.5	0.1	0.1	100.0	87.6	1,379
Total	18.3	59.7	4.9	3.8	7.3	5.2	0.6	0.2	100.0	82.9	6,438

Note: Total includes seven children for whom information on type of facility is missing.
[1] Children's stools are considered to be disposed of safely if the child used a toilet or latrine, if the faecal matter was put/rinsed into a toilet or latrine or if it was buried.
[2] See Table 2.2 for definition of categories
[3] Facilities that would be considered improved if they were not shared by two or more households

NUTRITION OF CHILDREN AND WOMEN 11

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Key Findings

- Twenty-six percent of children under age 5 are stunted, 4 percent are wasted, and 11 percent are underweight.
- Ninety-nine percent of children have ever been breastfed and 61 percent of children less than age 6 months are exclusively breastfed.
- Complementary foods are generally introduced at the recommended age; 81 percent of breastfed children age 6-9 months received complementary foods in addition to being breastfed within the 24 hours preceding the survey.
- Only 22 percent of children are fed in accordance with the three recommended infant and young child feeding practices.
- Seventy-two percent of children age 6-59 months received vitamin A supplements in the past six months.
- Fifty-one percent of children age 12-59 months received deworming medication in the past six months.
- Nine percent of women age 15-49 are thin or undernourished (BMI <18.5 kg/m^2); 33 percent of women are either overweight or obese (BMI ≥25 kg/m^2), with 10 percent being obese (BMI ≥30 kg/m^2).
- Only 8 percent of women took iron tablets daily for 90 or more days during the pregnancy of their last birth.
- Thirty-one percent of women took deworming medication during their last pregnancy.

Good nutrition is a prerequisite for the national development of countries and for the well-being of individuals. The 2010 Constitution of Kenya recognises adequate food and nutrition as a human right. It states that every person has the right to be free from hunger and the right to adequate food of acceptable quality (Article 43) and that every child has the right to basic nutrition (Article 53). Furthermore, the Government of Kenya's 2011 Food and Nutrition Security Policy states that nutrition is central to human development in the country (Government of Kenya, 2011).

Adequate nutrition is critical to children's growth and development. The period from birth to age 2 years is especially important for optimal physical, mental, and cognitive growth, health, and development. Unfortunately, this period is often marked with nutrient deficiencies that interfere with optimal growth and may cause common childhood illnesses such as diarrhoea and acute respiratory infections.

A woman's nutritional status has important implications for her health as well as for the health of her children. Malnutrition in women results in reduced productivity, increased susceptibility to infections, slowed recovery from illness, and a heightened risk of adverse pregnancy outcomes. For example, a woman with poor nutritional status, as indicated by a low body mass index (BMI), short stature, or micronutrient deficiencies, has a greater risk of obstructed labour, of having a baby with a low birth weight, of death from postpartum haemorrhage, and of morbidity for both herself and her baby.

This chapter covers the nutritional concerns for children and women. Specifically, it presents information on the nutritional status of children and women based on anthropometric measurements, infant and young child feeding practices including breastfeeding and complementary feeding, micronutrient intake among children and women, and salt iodisation.

11.1 NUTRITIONAL STATUS OF CHILDREN

The nutritional status of children under age 5 is an important measure of children's health. Anthropometric data collected in the 2014 KDHS permit estimation of the overall nutritional status of Kenyan children and analysis of nutrition status by background characteristics. This allows identification of subgroups of the child population that are at increased risk of faltered growth, disease, impaired mental development, and death.

11.1.1 Measurement of Nutritional Status among Young Children

In the 2014 KDHS, height and weight measurements were obtained for children born since January 2009. The height and weight data are used to compute three summary indices of nutritional status: height-for-age, weight-for-height, and weight-for-age.

For this report, the summary indicators of the nutritional status of children were calculated using growth standards published by the World Health Organization (WHO) in 2006. These standards were generated using data collected in the WHO Multicentre Growth Reference Study (WHO, 2006). The study, whose sample included 8,440 children in six countries, was designed to provide a description of how children should grow under optimal conditions. The WHO Child Growth Standards can therefore be used to assess children all over the world, regardless of ethnicity, social and economic influences, and feeding practices. Each of the three nutritional status indicators described below is expressed in standard deviation units from the median of the WHO Multicentre Growth Reference Study sample.

The height-for-age index provides an indicator of linear growth retardation and cumulative growth deficits. Children whose height-for-age Z-score is below minus two standard deviations (-2 SD) from the median of the WHO reference population are considered short for their age (stunted) and are chronically malnourished. Children who are below minus three standard deviations (-3 SD) are considered severely stunted. Stunting reflects failure to receive adequate nutrition over a long period of time and is affected by recurrent and chronic illness. Height-for-age, therefore, represents the long-term effects of malnutrition in a population and is not sensitive to recent, short-term changes in dietary intake.

The weight-for-height index measures body mass in relation to body height or length and describes current nutritional status. Children with Z-scores below minus two standard deviations (-2 SD) are considered thin (wasted) and are acutely malnourished. Wasting represents the failure to receive adequate nutrition in the period immediately preceding the survey and may be the result of inadequate food intake or a recent episode of illness causing loss of weight and the onset of malnutrition. Children whose weight-for-height index is below minus three standard deviations (-3 SD) are considered severely wasted. The weight-for-height index also provides data on overweight and obesity. Children more than two standard deviations (+2 SD) above the median weight-for-height are considered overweight or obese.

Weight-for-age is a composite index of height-for-age and weight-for-height. It takes into account both chronic and acute malnutrition. Children whose weight-for-age is below minus two standard deviations (-2 SD) are classified as underweight. Children whose weight-for-age is below minus three standard deviations (-3 SD) are considered severely underweight.

11.1.2 Data Collection

Measurements of height and weight were obtained for all children born since January 2009 and listed in the Household Questionnaire. The survey included children who were not biological offspring of the women interviewed. Each interviewing team carried a scale and a measuring board. The scales were electronic SECA scales with a digital screen. They were designed and manufactured under the authority of the United Nations Children's Fund (UNICEF). The scale allowed weighing of very young children through an automatic mother-child adjustment that eliminated the mother's weight while she was standing on the scale with her baby. Weight was measured to the nearest 100 grams (g). Height measurements were made using height/length (Shorr) boards, manufactured by Shorr Productions for use in survey settings.

Children younger than 24 months and those whose age was unknown and who were less than 87 centimetres were measured lying down on the board (recumbent length). Standing height was measured for older children.

A total of 21,435 children under age 5 were eligible for weight and height measurements. Of these children, 3 percent had missing values for height or weight and 1 percent had height or weight data considered to be out of range for their age and were not included in the final analysis. Thus, this chapter includes data for 96 percent of the 21,435 (unweighted) children under age 5 who were present in sampled households at the time of the survey.

11.1.3 Measures of Child Nutritional Status

Height-for-age

Table 11.1 and Figure 11.1 present the nutritional status of children under age 5 by various background characteristics. Nationally, 26 percent of children are stunted, while 8 percent are severely stunted. Analysis of this indicator by age group shows that stunting is highest in children age 18-23 months (36 percent) and 24-35 months (34 percent). Similar results are observed for children who are severely stunted; children age 18-23 months are the most affected (12 percent). Stunting levels are higher among boys (30 percent) than girls (22 percent) and higher among children whose mothers reported they were very small at birth (43 percent) than among those who were average or larger at birth (24 percent).

Stunting is higher among rural children (29 percent) than urban children (20 percent). At the regional level, Coast (31 percent), Rift Valley and Eastern (each 30 percent) have the highest proportions of stunted children, while Nairobi (17 percent) and Central (18 percent) have the lowest. Stunting in children generally decreases with education of the mother. Children of mothers who did not complete primary school (34 percent) or who have no education (31 percent) are more likely to be stunted than children of mothers with a secondary or higher education (17 percent). Table 11.1 further shows that stunting in children decreases as household wealth increases, from 36 percent to 14 percent.

Weight-for-height

Table 11.1 also shows the nutritional status of children under age 5 as measured by wasting or low weight-for-height. Nationally, 4 percent of children are wasted and 1 percent are severely wasted. Wasting levels are highest among children in the age groups 6-8 months and 9-11 months (each 7 percent). Typically during this period, children are introduced to complementary foods, which may vary in quality and quantity, and are more vulnerable to diseases. Wasting is higher (9 percent) among children whose mothers are thin (BMI <18.5 kg/m^2) than among other children. The North Eastern region (13 percent) has the highest levels of wasting, while the Western, Nyanza, and Central regions have the lowest (each 2 percent). Children whose mothers have no education have a higher chance of wasting (10 percent) than children whose mothers have some education (4 percent or less). Wasting in children generally decreases with increasing household wealth.

Weight-for-age

Table 11.1 also shows that 11 percent of Kenyan children are underweight (low weight-for-age), with 2 percent classified as severely underweight. Peak levels of low weight-for-age are found among children older than age 12 months. The percentage underweight is slightly higher among boys (12 percent) than girls (10 percent); also, it is higher among children whose mother is thin (24 percent) than children of mothers with a higher BMI (11 percent or less) and among rural children (13 percent) than urban children (7 percent). North Eastern has the highest proportion (19 percent) of underweight children, while Nairobi has the lowest (4 percent). The proportion underweight decreases as mother's educational level increases and as household wealth increases.

Table 11.1 Nutritional status of children

Percentage of children under five years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by background characteristics, Kenya 2014

Background characteristic	Height-for-age[1]			Weight-for-height				Weight-for-age				Number of children
	Percent-age below -3 SD	Percent-age below -2 SD[2]	Mean Z-score (SD)	Percent-age below -3 SD	Percent-age below -2 SD[2]	Percent-age above +2 SD	Mean Z-score (SD)	Percent-age below -3 SD	Percent-age below -2 SD[2]	Percent-age above +2 SD	Mean Z-score (SD)	
Age in months												
<6	2.8	10.0	-0.3	1.4	3.7	14.4	0.5	1.0	3.7	4.3	0.1	1,612
6-8	3.8	12.3	-0.4	2.0	6.5	6.9	0.1	1.5	8.0	2.9	-0.3	934
9-11	4.5	16.7	-0.7	1.6	6.5	4.7	-0.1	2.3	8.8	2.5	-0.5	966
12-17	8.5	26.5	-1.1	1.3	5.5	4.3	-0.1	2.6	11.1	1.9	-0.6	1,995
18-23	11.7	35.5	-1.4	1.1	4.7	3.9	-0.0	2.7	11.8	1.5	-0.7	1,786
24-35	10.4	33.6	-1.4	0.4	3.0	2.7	0.0	2.8	12.5	0.7	-0.7	3,921
36-47	8.7	28.6	-1.3	0.8	3.3	2.7	-0.0	2.2	12.2	0.8	-0.8	4,013
48-59	7.2	23.3	-1.2	0.6	3.7	1.8	-0.2	2.2	12.1	0.5	-0.8	3,759
Sex												
Male	9.7	29.7	-1.3	1.0	4.4	4.7	0.0	2.7	12.1	1.5	-0.7	9,653
Female	6.3	22.3	-1.0	0.8	3.7	3.5	-0.0	1.8	9.8	1.3	-0.6	9,334
Birth interval in months[3]												
First birth[4]	6.1	21.8	-1.0	0.7	3.6	5.7	0.1	1.5	8.2	1.6	-0.5	4,281
<24	10.9	32.6	-1.4	0.8	4.3	3.1	-0.1	3.0	13.7	1.4	-0.8	2,249
24-47	9.3	29.6	-1.3	1.4	4.7	3.4	-0.1	2.7	13.2	1.2	-0.8	6,404
48+	5.7	21.0	-0.9	0.7	3.4	4.6	0.1	1.6	8.0	1.5	-0.5	4,267
Size at birth[3]												
Very small	19.6	42.8	-1.7	1.4	7.7	1.4	-0.4	6.4	24.1	0.1	-1.3	255
Small	12.2	34.2	-1.5	0.6	6.0	4.9	-0.2	3.1	18.0	0.3	-1.0	956
Average or larger	6.7	24.0	-1.1	0.9	3.1	4.4	0.1	1.5	9.1	1.5	-0.6	6,943
Don't know/missing	13.0	31.5	-1.4	6.0	10.3	4.0	-0.4	6.5	19.4	0.0	-1.1	109
Mother's interview status												
Interviewed	7.8	25.9	-1.1	1.0	4.1	4.2	0.0	2.2	10.7	1.4	-0.6	17,201
Not interviewed but in household	7.1	20.7	-0.8	0.2	2.7	4.2	0.1	2.3	10.1	2.3	-0.4	365
Not interviewed and not in the household[5]	11.5	28.9	-1.2	0.4	4.0	2.8	-0.1	3.5	14.4	0.9	-0.7	1,420
Mother's nutritional status[6]												
Thin (BMI <18.5)	10.3	30.6	-1.5	1.4	9.0	1.8	-0.6	5.0	23.6	0.1	-1.2	644
Normal (BMI 18.5-24.9)	8.6	28.1	-1.2	0.8	3.4	3.3	-0.0	2.0	11.1	1.0	-0.7	4,507
Overweight/obese (BMI ≥25)	5.0	18.7	-0.9	0.9	2.8	6.4	0.3	1.1	5.3	2.0	-0.3	2,145
Residence												
Urban	5.7	19.8	-0.9	0.8	3.4	5.5	0.1	1.5	7.0	2.4	-0.4	6,206
Rural	9.2	29.1	-1.3	1.0	4.4	3.4	-0.1	2.7	12.9	0.9	-0.8	12,780
Region												
Coast	10.4	30.8	-1.3	0.8	4.5	3.3	-0.1	2.4	13.6	1.2	-0.8	1,926
North Eastern	10.7	24.7	-0.9	2.6	13.3	2.6	-0.7	4.5	19.0	1.2	-1.0	604
Eastern	8.2	30.1	-1.3	1.2	4.4	4.3	-0.1	2.2	12.2	0.9	-0.8	2,409
Central	4.9	18.4	-0.9	0.2	2.3	6.2	0.2	1.2	5.3	2.4	-0.3	1,694
Rift Valley	9.3	29.8	-1.3	1.3	5.7	3.7	-0.2	3.6	15.3	1.0	-0.8	5,466
Western	8.2	25.2	-1.1	0.4	1.9	3.4	0.1	1.5	9.0	1.3	-0.6	2,476
Nyanza	7.6	22.7	-1.0	0.4	2.0	4.4	0.2	1.3	7.4	2.0	-0.4	2,769
Nairobi	3.9	17.2	-0.7	0.8	2.5	5.3	0.2	1.2	3.8	1.7	-0.2	1,643
Mother's education[7]												
No education	11.0	30.6	-1.3	2.3	10.2	2.2	-0.5	4.5	20.6	0.8	-1.1	2,110
Primary incomplete	10.8	33.5	-1.4	0.9	3.9	3.5	-0.0	2.8	13.3	0.8	-0.8	5,059
Primary complete	7.7	25.5	-1.2	0.9	2.8	3.3	0.0	1.7	9.5	1.0	-0.6	4,853
Secondary+	3.9	17.2	-0.8	0.5	3.0	6.4	0.2	1.2	5.6	2.6	-0.3	5,544
Wealth quintile												
Lowest	12.3	35.9	-1.5	1.6	7.3	2.1	-0.3	4.2	19.5	0.5	-1.1	4,608
Second	9.5	30.2	-1.3	0.8	3.0	3.6	0.0	2.7	12.1	0.8	-0.8	4,096
Middle	7.4	25.4	-1.2	0.8	3.7	4.0	0.1	1.9	9.1	1.2	-0.6	3,536
Fourth	6.2	20.7	-1.0	0.6	2.7	5.4	0.1	1.1	6.9	1.7	-0.5	3,299
Highest	3.3	13.8	-0.6	0.6	2.5	6.3	0.2	0.8	4.0	3.1	-0.2	3,447
Total	8.1	26.0	-1.1	0.9	4.0	4.1	0.0	2.3	11.0	1.4	-0.6	18,986

Note: Table is based on children who stayed in the household on the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the WHO Child Growth Standards adopted in 2006. The indices in this table are NOT comparable to those based on the previously used NCHS/CDC/WHO reference.

Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight.

[1] Recumbent length is measured for children under age 2, or in the few cases when the age of the child is unknown and the child is less than 87 cm; standing height is measured for all other children.

[2] Includes children who are below -3 standard deviations (SD) from the WHO Child Growth standards population median

[3] Excludes children whose mothers were not interviewed. Data only available from respondents to the full questionnaire.

[4] First-born twins (triplets, etc.) are counted as first births because they do not have a previous birth interval

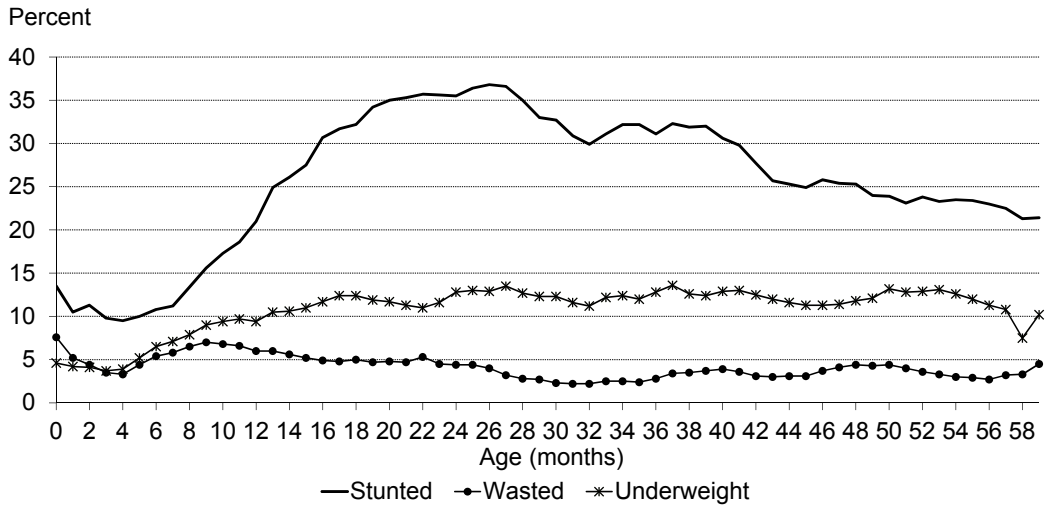
[5] Includes children whose mothers are deceased

[6] Excludes children whose mothers were not weighed and measured, children whose mothers were not interviewed, and children whose mothers are pregnant or gave birth within the preceding 2 months. Mother's nutritional status in terms of BMI (Body Mass Index) is presented in Table 11.10.

[7] For women who are not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire

Figure 11.1 shows that Kenyan children are more likely to experience stunting than to be wasted or underweight. Additionally, the risk of stunting peaks at age 18 to 28 months.

Figure 11.1 **Nutritional status of children by age**



Note: *Stunting* reflects chronic malnutrition; *wasting* reflects acute malnutrition; *underweight* reflects chronic or acute malnutrition or a combination of both. Plotted values are smoothed by a five-month moving average.

KDHS 2014

At the county level (Table 11.1C), West Pokot and Kitui have the highest proportions (46 percent each) of stunted children. Other counties reporting high proportions of stunting include Kilifi (39 percent), Mandera (36 percent), and Bomet (36 percent). Nyeri, Garissa, and Kiambu counties have the lowest proportion of stunted children, each 16 percent or less. Wasting is concentrated in the north: more than 11 percent of children in Garissa, Wajir, Mandera, Marsabit, Turkana, West Pokot, and Samburu are wasted, topping out at 23 percent in Turkana. The counties with the lowest proportion of wasted children are Siaya and Kisumu (each 1 percent or less). The table also shows that one-quarter of children or more are underweight in five counties: Mandera, Marsabit, Turkana, West Pokot, and Samburu. Four percent or less of children in Nyeri and Nairobi are underweight.

Table 11.1C Nutritional status of children

Percentage of children under five years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by county, Kenya 2014

	Height-for-age[1]			Weight-for-height				Weight-for-age				
County	Percent-age below -3 SD	Percent-age below -2 SD[2]	Mean Z-score (SD)	Percent-age below -3 SD	Percent-age below -2 SD[2]	Percent-age above +2 SD	Mean Z-score (SD)	Percent-age below -3 SD	Percent-age below -2 SD[2]	Percent-age above +2 SD	Mean Z-score (SD)	Number of children
Coast	**10.4**	**30.8**	**-1.3**	**0.8**	**4.5**	**3.3**	**-0.1**	**2.4**	**13.6**	**1.2**	**-0.8**	**1,926**
Mombasa	7.1	21.1	-1.0	0.0	4.1	4.2	0.0	1.5	9.6	1.9	-0.6	456
Kwale	10.5	29.7	-1.4	0.8	4.4	3.8	0.0	1.5	11.8	1.5	-0.8	401
Kilifi	13.6	39.1	-1.5	0.9	4.1	2.8	-0.1	3.1	16.9	0.6	-1.0	737
Tana River	9.4	28.1	-1.4	0.9	5.7	1.3	-0.3	3.1	18.6	0.6	-1.0	164
Lamu	7.1	29.2	-1.2	0.3	4.2	2.0	-0.1	2.1	11.8	2.1	-0.8	53
Taita Taveta	5.8	23.8	-0.9	3.6	7.2	4.2	-0.1	3.2	7.8	1.8	-0.6	115
North Eastern	**10.7**	**24.7**	**-0.9**	**2.6**	**13.3**	**2.6**	**-0.7**	**4.5**	**19.0**	**1.2**	**-1.0**	**604**
Garissa	5.9	15.6	-0.7	1.3	11.4	2.3	-0.6	2.9	13.1	1.3	-0.8	228
Wajir	10.3	26.4	-1.0	3.1	14.2	0.7	-0.8	3.7	21.1	0.0	-1.1	228
Mandera	19.0	36.1	-1.3	3.8	14.8	5.9	-0.5	8.2	24.9	3.0	-1.1	148
Eastern	**8.2**	**30.1**	**-1.3**	**1.2**	**4.4**	**4.3**	**-0.1**	**2.2**	**12.2**	**0.9**	**-0.8**	**2,409**
Marsabit	10.7	26.5	-1.2	5.1	16.3	1.0	-0.9	7.3	30.1	0.4	-1.3	90
Isiolo	5.1	19.1	-0.7	2.4	9.1	1.6	-0.6	3.2	12.9	1.0	-0.8	80
Meru	6.2	25.2	-1.1	1.0	2.9	4.9	0.1	1.2	8.1	0.5	-0.6	529
Tharaka-Nithi	7.6	32.9	-1.4	0.0	3.3	3.6	0.0	4.1	10.8	0.8	-0.8	151
Embu	6.5	26.8	-1.3	0.2	3.0	3.6	0.1	1.3	11.1	1.3	-0.7	202
Kitui	12.7	45.8	-1.7	0.4	3.4	3.1	-0.2	2.9	19.7	0.7	-1.1	486
Machakos	7.1	26.5	-1.1	2.5	6.5	5.5	-0.1	1.7	8.1	1.2	-0.7	502
Makueni	7.8	25.1	-1.3	1.0	2.1	5.3	0.1	1.7	10.2	1.0	-0.7	369
Central	**4.9**	**18.4**	**-0.9**	**0.2**	**2.3**	**6.2**	**0.2**	**1.2**	**5.3**	**2.4**	**-0.3**	**1,694**
Nyandarua	8.1	29.4	-1.3	0.1	2.0	6.8	0.3	1.0	6.8	0.8	-0.6	248
Nyeri	5.6	15.1	-0.9	0.0	2.4	5.9	0.2	1.2	2.5	2.1	-0.3	268
Kirinyaga	3.7	17.2	-0.9	0.8	3.9	4.5	-0.0	1.3	7.7	0.0	-0.5	185
Murang'a	4.8	19.3	-1.0	0.0	1.4	3.1	0.1	1.6	5.6	1.2	-0.5	307
Kiambu	3.8	15.7	-0.7	0.3	2.3	7.9	0.4	1.1	5.1	4.3	-0.1	686
Rift Valley	**9.3**	**29.8**	**-1.3**	**1.3**	**5.7**	**3.7**	**-0.2**	**3.6**	**15.3**	**1.0**	**-0.8**	**5,466**
Turkana	7.1	23.9	-1.1	4.4	22.9	0.2	-1.3	9.8	34.0	0.0	-1.5	359
West Pokot	19.0	45.9	-1.8	2.4	14.3	1.4	-0.8	9.6	38.5	0.3	-1.5	286
Samburu	9.8	30.1	-1.3	2.8	13.6	0.6	-0.9	8.1	28.9	0.3	-1.4	112
Trans-Nzoia	10.7	29.2	-1.3	2.0	3.9	2.4	-0.1	3.9	15.3	0.6	-0.8	556
Uasin Gishu	11.1	31.2	-1.3	1.1	3.0	5.1	-0.0	2.8	11.5	0.7	-0.7	482
Elgeyo Marakwet	7.3	29.9	-1.4	1.2	4.3	4.5	-0.2	2.5	12.6	0.7	-0.9	170
Nandi	8.3	29.9	-1.3	1.0	3.9	3.7	-0.1	1.9	11.1	0.5	-0.8	405
Baringo	8.4	29.5	-1.4	1.2	6.9	2.0	-0.5	3.6	20.2	1.2	-1.1	233
Laikipia	7.4	26.9	-1.3	0.8	4.4	3.7	-0.1	2.8	13.9	0.8	-0.8	211
Nakuru	7.2	27.6	-1.2	0.6	4.5	5.7	0.1	2.8	10.2	1.5	-0.6	840
Narok	8.7	32.9	-1.4	0.7	2.4	3.0	-0.1	1.1	11.6	0.6	-0.9	628
Kajiado	7.1	18.2	-0.7	0.8	3.0	4.3	0.1	2.5	8.1	4.0	-0.4	400
Kericho	10.5	28.7	-1.3	1.1	5.6	6.6	0.1	3.5	12.4	1.4	-0.7	311
Bomet	10.7	35.5	-1.6	0.4	1.8	3.7	0.1	2.1	12.0	0.6	-0.8	472
Western	**8.2**	**25.2**	**-1.1**	**0.4**	**1.9**	**3.4**	**0.1**	**1.5**	**9.0**	**1.3**	**-0.6**	**2,476**
Kakamega	12.3	28.4	-1.3	0.5	1.8	4.3	0.2	2.2	10.1	1.2	-0.6	845
Vihiga	6.0	23.5	-1.1	0.4	2.6	4.0	0.2	1.4	5.9	0.9	-0.5	260
Bungoma	6.4	24.4	-1.1	0.2	1.8	2.9	0.1	0.9	9.0	1.8	-0.5	938
Busia	5.4	22.0	-1.1	0.7	2.2	2.4	0.1	1.8	9.0	0.8	-0.6	433
Nyanza	**7.6**	**22.7**	**-1.0**	**0.4**	**2.0**	**4.4**	**0.2**	**1.3**	**7.4**	**2.0**	**-0.4**	**2,769**
Siaya	7.1	24.7	-1.1	0.0	0.2	4.7	0.2	1.4	7.8	1.6	-0.4	423
Kisumu	6.9	18.0	-0.7	0.0	0.8	5.7	0.2	0.4	6.6	3.8	-0.2	492
Homa Bay	4.2	18.7	-0.7	0.9	2.3	4.1	0.2	1.3	5.4	2.6	-0.3	621
Migori	10.1	26.4	-1.1	0.9	4.0	4.4	0.2	1.6	8.6	1.5	-0.5	526
Kisii	9.3	25.5	-1.3	0.0	1.7	4.0	0.2	1.8	8.4	0.9	-0.6	511
Nyamira	10.1	25.5	-1.1	0.9	4.1	2.9	-0.0	2.0	9.6	0.5	-0.6	195
Nairobi	**3.9**	**17.2**	**-0.7**	**0.8**	**2.5**	**5.3**	**0.2**	**1.2**	**3.8**	**1.7**	**-0.2**	**1,643**
Total	8.1	26.0	-1.1	0.9	4.0	4.1	0.0	2.3	11.0	1.4	-0.6	18,986

Note: Table is based on children who stayed in the household on the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the WHO Child Growth Standards adopted in 2006. The indices in this table are NOT comparable to those based on the previously used NCHS/CDC/WHO reference.

Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight.

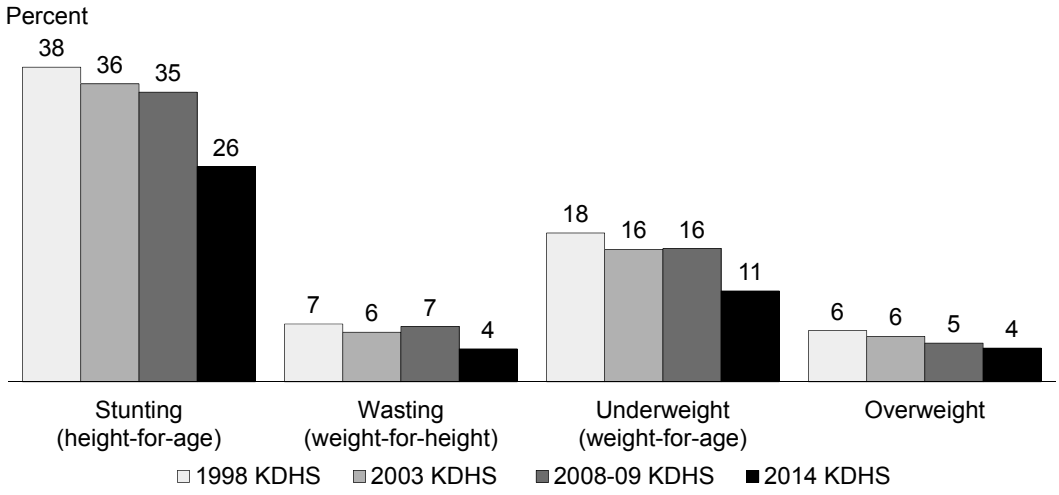
[1] Recumbent length is measured for children under age 2, or in the few cases when the age of the child is unknown and the child is less than 87 cm; standing height is measured for all other children.

[2] Includes children who are below -3 standard deviations (SD) from the WHO Child Growth standards population median

11.1.4 Trends in Children's Nutritional Status

Figure 11.2 shows trends in children's nutritional status since 1998. Comparison of KDHS data over time indicates an overall improvement in children's nutritional status in Kenya. Since 1998, stunting has declined from 38 percent to 26 percent, wasting has declined from 7 percent to 4 percent, and the proportion of underweight children has declined from 18 percent to 11 percent. Kenya has met the 2015 Millennium Development Goal (MDG) target of reducing the prevalence of underweight children under age 5 to 11 percent (Ministry of Devolution and Planning, 2013).

Figure 11.2 **Trends in nutritional status of children under 5 years**



Note: The data are based on the WHO Child Growth Standards adopted in 2006. Data for 1998 were collected only for children whose mothers were interviewed; for other surveys, data were collected for all children listed in the Household Questionnaire. Data from 1998 exclude North Eastern region and some northern districts in the Eastern and Rift Valley regions.

11.2 BREASTFEEDING AND COMPLEMENTARY FEEDING

Feeding practices play a critical role in child development. Poor feeding practices can adversely impact the health and nutritional status of children, in turn resulting in direct consequences for their mental and physical development. The duration and intensity of breastfeeding also affect a mother's period of postpartum infertility and, hence, the length of the birth interval and fertility levels.

11.2.1 Initiation of Breastfeeding

Early initiation of breastfeeding is important for both the mother and the child. Early suckling stimulates the release of prolactin, which helps in the production of milk, and oxytocin, which is responsible for the ejection of milk. It also stimulates contraction of the uterus after childbirth and reduces postpartum blood loss. The first liquid to come from the breast, known as colostrum, is produced in the first few days after delivery. Colostrum is highly nutritious and contains antibodies that provide natural immunity to the infant. It is recommended that children be fed colostrum immediately after birth (within one hour) and that they continue to be exclusively breastfed even if the regular breast milk has not yet started to flow. Prelacteal feeding, giving food to newborns before the initiation of breastfeeding, is not recommended.

Table 11.2 shows the percentage of last-born children born in the two years preceding the survey according to whether they were ever breastfed, when they began breastfeeding, and whether they were fed anything other than breast milk prior to the commencement of breastfeeding. Ninety-nine percent of children have been breastfed for some period of time, with negligible differences by background characteristics. Nearly two-thirds of children (62 percent) were breastfed within one hour of birth. The vast majority (91 percent) of children were breastfed within one day of birth.

Initiation of breastfeeding in the first hour after birth varies somewhat by background characteristics. Eighty-one percent of children in the North Eastern region were breastfed within one hour of birth, as compared with 48 percent of children in the Central region. Mothers with no education (76 percent) were more likely to initiate breastfeeding in the first hour than those with some education (65 percent or less). Mothers in the lowest wealth quintile (67 percent) were more likely to initiate early breastfeeding than those in higher wealth quintiles (64 percent or less).

Table 11.2 Initial breastfeeding

Among last-born children who were born in the two years preceding the survey, the percentage who were ever breastfed and the percentages who started breastfeeding within one hour and within one day of birth; and among last-born children born in the two years preceding the survey who were ever breastfed, the percentage who received a prelacteal feed, by background characteristics, Kenya 2014

	Among last-born children born in the past two years:				Among last-born children born in the past two years who were ever breastfed:	
Background characteristic	Percentage ever breastfed	Percentage who started breastfeeding within 1 hour of birth	Percentage who started breastfeeding within 1 day of birth[1]	Number of last-born children	Percentage who received a prelacteal feed[2]	Number of last-born children ever breastfed
Sex						
Male	98.9	62.3	90.4	1,816	15.6	1,796
Female	98.5	62.1	90.9	1,728	15.4	1,702
Assistance at delivery						
Health professional[3]	98.9	62.1	92.1	2,337	11.2	2,310
Traditional birth attendant	99.3	65.5	91.0	616	23.6	612
Other	98.2	61.2	85.7	436	24.4	428
No one	96.2	53.8	81.4	153	23.5	148
Place of delivery						
Health facility	98.8	62.1	92.2	2,314	11.1	2,287
At home	98.6	62.4	87.6	1,198	24.4	1,181
Other	(98.2)	(64.1)	(96.8)	27	(3.3)	27
Residence						
Urban	98.7	60.5	89.5	1,261	12.4	1,245
Rural	98.7	63.1	91.3	2,282	17.2	2,253
Region						
Coast	99.1	62.1	83.7	374	21.0	370
North Eastern	98.7	80.8	95.3	108	16.4	107
Eastern	98.8	64.9	95.0	429	6.4	424
Central	99.3	48.1	92.4	312	7.7	309
Rift Valley	98.9	69.4	89.5	1,057	18.6	1,045
Western	98.9	52.8	92.3	414	25.0	409
Nyanza	97.6	58.4	95.3	484	11.6	473
Nairobi	98.3	60.8	85.1	366	12.4	360
Mother's education						
No education	99.1	76.0	91.1	414	15.5	410
Primary incomplete	98.6	58.5	88.5	999	20.3	985
Primary complete	98.4	64.6	93.2	914	15.0	900
Secondary+	98.8	58.8	90.3	1,216	12.0	1,202
Wealth quintile						
Lowest	98.9	66.7	90.9	879	18.4	870
Second	98.5	61.0	89.8	698	17.2	687
Middle	97.6	58.8	90.4	631	17.3	616
Fourth	99.0	64.4	92.5	648	10.9	642
Highest	99.3	58.8	89.8	687	12.9	683
Total	98.7	62.2	90.6	3,544	15.5	3,498

Note: Table is based on last-born children born in the two years preceding the survey regardless of whether the children are living or dead at the time of interview. Total includes two children with missing information on assistance at delivery and six children with missing information on place of delivery. Figures in parentheses are based on 25-49 unweighted cases.
[1] Includes children who started breastfeeding within one hour of birth
[2] Children given something other than breast milk during the first three days of life
[3] Doctor, nurse or midwife

The practice of giving prelacteal feeds is discouraged because it limits the frequency of suckling by the infant and exposes the baby to the risk of infection. Sixteen percent of children born in the last two years were given prelacteal feeds within the first three days of life. Prelacteal feeding varies by assistance at and place of delivery, residence, and region. Children whose birth was assisted by a health professional and children who were delivered at a health facility are less likely to receive prelacteal feeds (each 11 percent) than their counterparts who were delivered without health professional assistance or who were

delivered at home (each 24 percent). Prelacteal feeding is higher among children of mothers in rural areas (17 percent) than among children of mothers in urban areas (12 percent). Among the regions, the highest proportion of children receiving a prelacteal feed is observed in Western (25 percent), while the lowest is seen in Eastern (6 percent).

The 2014 KDHS initiation of breastfeeding results are not fully comparable to those of the 2008-09 KDHS as the sample included for reporting this indicator has changed from children born in the five years to children born in the two years preceding the survey.

11.2.2 Breastfeeding Status by Age

UNICEF and WHO recommend that children be exclusively breastfed during the first six months of life and that children be given solid and semisolid complementary foods in addition to continued breastfeeding from six months until 24 months or more when the child is fully weaned. Exclusive breastfeeding is recommended because breast milk is uncontaminated and contains all of the nutrients necessary for children in the first several months of life. In addition, the mother's antibodies in breast milk provide immunity to disease. Early supplementation is discouraged for several reasons. First, it exposes infants to pathogens and increases their risk of infection, especially disease. Second, it decreases infants' intake of breast milk, and therefore suckling, which reduces breast milk production. Third, in low-resource settings, supplementary food is often nutritionally inferior.

After six months, a child requires adequate complementary foods for normal growth. Lack of appropriate complementary feeding may lead to malnutrition and illness, which in turn may lead to death. However, even with complementary feeding, the child should continue to be breastfed for two years or more.

Interviewers obtained information on complementary feeding by asking mothers about the current breastfeeding status of all children under age 5 and, for the youngest child born in the two-year period before the survey and living with the mother, foods and liquids given to the child the day and night before the survey.

Table 11.3 shows the percent distribution of youngest children under age 2 living with their mother by breastfeeding status and the percentage of children under age 2 using a bottle with a nipple, according to age in months. Exclusive breastfeeding for the first six months in Kenya is 61 percent for children under age 6 months (Table 11.3 and Figure 11.3). Among subgroups, the percentage of children exclusively breastfed decreases sharply from 84 percent of infants age 0-1 month to 63 percent of infants age 2-3 months and, further, to 42 percent of infants age 4-5 months.

In addition to receiving breast milk, 10 percent of children under age 6 months receive plain water, 10 percent receive other milk, and 15 percent are given complementary foods. Contrary to recommendations, 2 percent of children age 0-1 months, 13 percent of children age 2-3 months and 27 percent of children age 4-5 months receive complimentary foods. After age 6 months, a majority of children are receiving complementary foods in addition to breast milk, as recommended; however, 19 percent of children age 6-9 months did not receive complementary foods the day or night preceding the survey.

Eleven percent of children under age 6 months and 30 percent of children age 6-9 months used a bottle with a nipple the day or night preceding the survey. Bottle feeding is a concern because of the possible contamination due to unsafe water and lack of hygiene in its preparation; it also may reduce the child's interest in breastfeeding, with a consequential decline in the mother's milk production.

It is recommended to continue breastfeeding a child until 2 years of age. The duration of breastfeeding in Kenya is long, with at least half of children being breastfed until 2 years. The proportion of children who are currently breastfeeding decreases with increasing child age with 88 percent among children age 12-17 months and to 61 percent among children age 18-23 months.

Table 11.3 Breastfeeding status by age

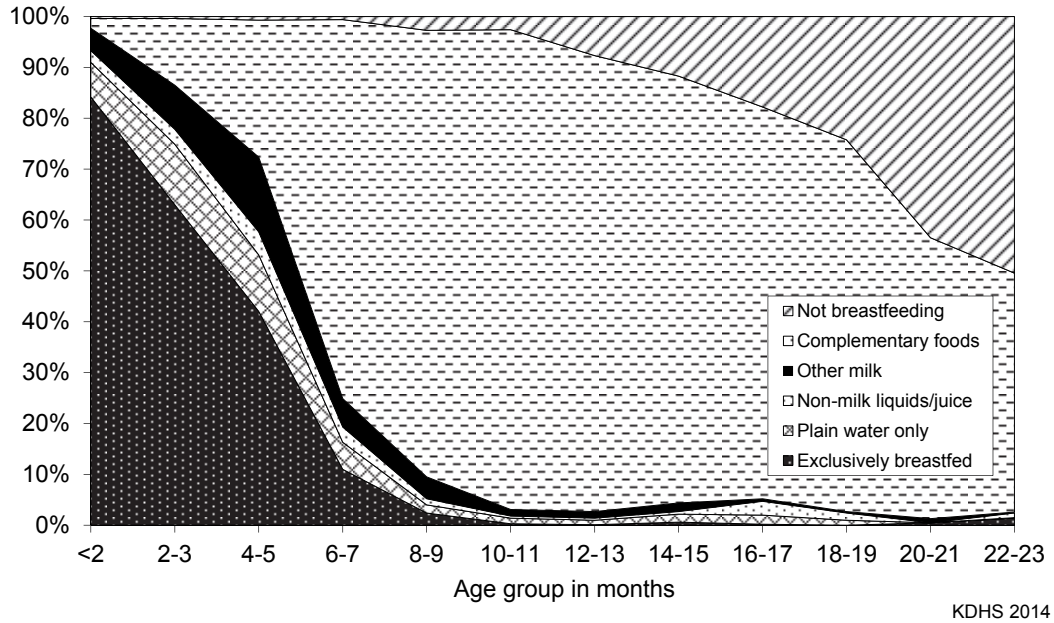
Percent distribution of youngest children under two years who are living with their mother by breastfeeding status and the percentage currently breastfeeding; and the percentage of all children under two years using a bottle with a nipple, according to age in months, Kenya 2014

		Breastfeeding status									
Age in months	Not breast-feeding	Exclusively breastfed	Breast-feeding and consuming plain water only	Breast-feeding and consuming non milk liquids[1]	Breast-feeding and consuming other milk	Breast-feeding and consuming comple-mentary foods	Total	Percentage currently breast-feeding	Number of youngest child under two years living with their mother	Percentage using a bottle with a nipple	Number of all children under two years
0-1	0.4	84.1	6.8	2.3	4.4	1.9	100.0	99.6	215	5.7	218
2-3	0.4	63.0	11.9	2.9	8.7	13.1	100.0	99.6	302	10.2	305
4-5	0.7	42.0	11.1	4.5	14.7	26.9	100.0	99.3	277	15.3	282
6-8	1.6	7.6	4.0	2.7	5.7	78.3	100.0	98.4	446	28.7	457
9-11	2.3	1.4	1.3	0.3	1.6	93.1	100.0	97.7	447	30.4	454
12-17	12.4	0.3	1.4	1.2	1.2	83.6	100.0	87.6	907	24.7	952
18-23	38.6	0.6	0.4	0.8	0.4	59.2	100.0	61.4	793	19.4	885
0-3	0.4	71.8	9.8	2.7	6.9	8.5	100.0	99.6	517	8.3	524
0-5	0.5	61.4	10.2	3.3	9.6	14.9	100.0	99.5	794	10.8	806
6-9	1.6	6.9	3.6	2.1	5.0	80.8	100.0	98.4	571	29.6	583
12-15	9.6	0.4	1.2	0.4	1.5	86.9	100.0	90.4	605	27.0	631
12-23	24.6	0.4	0.9	1.0	0.8	72.2	100.0	75.4	1,700	22.2	1,838
20-23	46.9	1.0	0.1	0.4	0.5	51.2	100.0	53.1	502	16.3	569

Note: Breastfeeding status refers to a "24-hour" period (yesterday and last night). Children who are classified as breastfeeding and consuming plain water only consumed no liquid or solid supplements. The categories of not breastfeeding, exclusively breastfed, breastfeeding and consuming plain water, non-milk liquids, other milk, and complementary foods (solids and semi-solids) are hierarchical and mutually exclusive, and their percentages add to 100 percent. Thus children who receive breast milk and non-milk liquids and who do not receive other milk and who do not receive complementary foods are classified in the non-milk liquid category even though they may also get plain water. Any children who get complementary food are classified in that category as long as they are breastfeeding as well.

[1] Non-milk liquids include juice, juice drinks, clear broth or other liquids

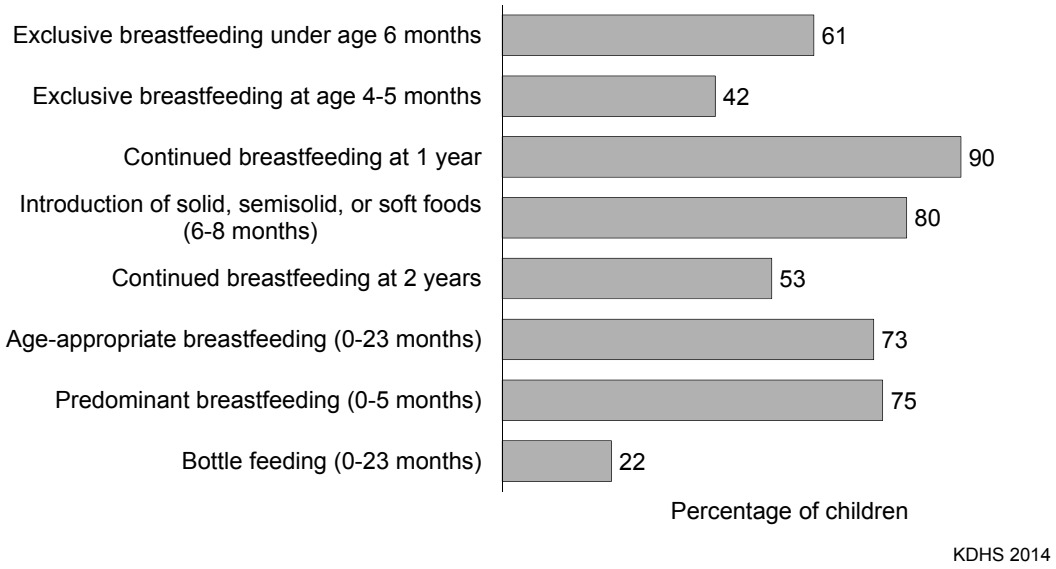
Figure 11.3 Infant feeding practices by age



KDHS 2014

Figure 11.4 shows the infant and young child feeding (IYCF) indicators of breastfeeding status. As mentioned previously, 61 percent of children under age 6 months and 42 percent of children age 4-5 months are exclusively breastfed, and 75 percent of children under age 6 months are predominantly breastfed.[1] Figure 11.4 also shows that 90 percent of children continue breastfeeding at age 1 and that 53 percent continue doing so at age 2. Eighty percent of children age 6-8 months have been introduced to solid, semisolid, or soft foods. Twenty-two percent of children age 0-23 months used a bottle with a nipple the day or night preceding the survey.

Figure 11.4 **IYCF indicators on breastfeeding status**



The proportion of children younger than age 6 months who are exclusively breastfed has markedly increased from 32 percent in the 2008-09 KDHS to the current 61 percent. The proportion of children less than age 6 months using a bottle with a nipple has also noticeably decreased, from 25 percent in 2008-09 to 11 percent in 2014. However, use of a bottle with a nipple remains of concern among children age 6-23 months. Bottle feeding remains unchanged among children age 6-9 months at 30 percent, while the proportion among children age 12-23 months has increased from 12 percent in 2008-09 to 22 percent in 2014.

11.2.3 Duration of Breastfeeding

Table 11.4 provides information on the median duration of any breastfeeding, exclusive breastfeeding, and predominant breastfeeding among children born in the three years preceding the survey. The median duration of any breastfeeding in Kenya is 21.0 months. Differences in the median duration of breastfeeding by background characteristics are small except by region. The median duration of any breastfeeding is longest in Eastern (24.5 months) and shortest in North Eastern region (19.4 months).

Table 11.4 also shows the median duration of predominant breastfeeding, which is defined as exclusive breastfeeding or breastfeeding in combination with plain water and/or non-milk liquids only. The median duration of predominant breastfeeding is 4.4 months.

Since the 2008-09 KDHS, the median duration of exclusive breastfeeding has increased from 0.7 to 3.3 months, and the median duration of predominant breastfeeding has increased from 2.2 to 4.4 months.

[1] Children who are exclusively breastfed, children who breastfeed and consume plain water, and children who are breastfed and consume non-milk liquids or juice.

Table 11.4 Median duration of breastfeeding

Median duration of any breastfeeding, exclusive breastfeeding, and predominant breastfeeding among children born in the three years preceding the survey, by background characteristics, Kenya 2014

Background characteristic	Median duration (months) of breastfeeding among children born in the past three years[1]		
	Any breast-feeding	Exclusive breastfeeding	Predominant breastfeeding[2]
Sex			
Male	21.0	3.2	4.3
Female	21.1	3.4	4.6
Residence			
Urban	20.5	3.7	4.6
Rural	21.2	3.0	4.3
Region			
Coast	21.0	3.8	4.3
North Eastern	19.4	*	6.4
Eastern	24.5	(2.5)	4.1
Central	20.9	4.3	5.2
Rift Valley	21.2	3.1	4.1
Western	20.7	3.4	4.3
Nyanza	19.9	3.4	4.9
Nairobi	(19.1)	*	*
Mother's education			
No education	21.3	2.8	5.0
Primary incomplete	20.7	3.4	4.8
Primary complete	20.9	3.3	4.4
Secondary+	21.3	3.4	4.1
Wealth quintile			
Lowest	20.9	2.9	4.6
Second	20.3	3.2	4.5
Middle	21.1	(2.4)	4.1
Fourth	21.7	4.1	4.7
Highest	21.0	3.5	4.2
Total	21.0	3.3	4.4
Mean for all children	21.3	4.3	5.5

Note: Median and mean durations are based on the distributions at the time of the survey of the proportion of births by months since birth. Includes children living and deceased at the time of the survey. Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
[1] It is assumed that non-last-born children and last-born children not currently living with the mother are not currently breastfeeding.
[2] Either exclusively breastfed or received breast milk and plain water, and/or non-milk liquids only

11.2.4 Types of Complementary Foods

UNICEF and WHO recommend the introduction of solid or semi-solid food to infants around age 6 months because by that age breast milk alone is no longer sufficient to maintain a child's optimal growth. In the transition to eating the family diet, children from age 6 months should be fed small quantities of solid and semisolid foods throughout the day while continuing to breastfeed up to age 2 or beyond. Table 11.5 presents the percentages of youngest children under age 2 who are living with their mother by types of foods consumed in the day or night preceding the interview, according to their breastfeeding status.

Table 11.5 shows that, in Kenya, 80 percent of breastfed children age 6-8 months are fed solid or semisolid foods in addition to being breastfed within the 24 hours before the survey. This is substantially higher than the percentage of breastfeeding children fed complementary foods at age 4-5 months (27 percent) or age 2-3 months (13 percent) when the introduction of complementary foods is not recommended.

Overall, 92 percent of breastfed children age 6-23 months receive solid or semisolid complementary foods. The most common foods given to breastfeeding children age 6-23 months are foods made from grains (80 percent), fruits and vegetables rich in vitamin A (64 percent), food made from roots and tubers (38 percent), and other fruits and vegetables (33 percent). Children are also fed protein-rich

foods such as legumes and nuts (25 percent); meat, fish, and poultry (21 percent); and eggs (17 percent). Thirteen percent are fed cheese, yogurt, and other milk products, and 5 percent are given fortified baby foods. Other than breast milk, liquids fed to children in this age group include other liquids such as juice or clear broth (63 percent) and other milk (49 percent). Five percent of breastfeeding children age 6-23 months are also given infant formula.

Table 11.5 also presents data on the types of complementary foods consumed by nonbreastfeeding children. Ninety-seven percent of nonbreastfeeding children age 6-23 months are fed solid or semisolid foods. The percentage of children consuming each type of complementary food or liquid is higher among nonbreastfeeding children than among breastfeeding children.

Table 11.5 Foods and liquids consumed by children in the day or night preceding the interview

Percentage of youngest children under two years of age who are living with the mother by type of foods consumed in the day or night preceding the interview, according to breastfeeding status and age, Kenya 2014

	Liquids			Solid or semisolid foods										
Age in months	Infant formula	Other milk[1]	Other liquids[2]	Fortified baby foods	Food made from grains[3]	Fruits and vege-tables rich in vitamin A[4]	Other fruits and vege-tables	Food made from roots and tubers	Food made from legumes and nuts	Meat, fish, poultry	Eggs	Cheese, yogurt, other milk product	Any solid or semi-solid food	Number of children
BREASTFEEDING CHILDREN														
0-1	1.3	3.7	2.8	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	214
2-3	0.4	11.7	9.4	0.0	8.8	3.8	1.8	0.6	0.0	0.0	0.1	0.0	13.2	301
4-5	0.3	29.6	17.1	1.7	20.4	7.7	3.1	7.3	0.2	1.8	0.7	2.3	27.1	275
6-8	4.1	43.8	50.1	7.3	64.3	41.4	25.2	27.9	14.0	7.8	9.0	6.2	79.6	439
9-11	5.5	51.2	62.0	2.8	78.6	59.9	28.2	41.4	21.9	15.4	15.4	13.4	95.2	437
12-17	6.4	51.0	66.7	3.6	84.7	70.8	36.8	36.1	28.6	26.6	18.2	13.7	95.4	795
18-23	4.8	47.8	70.0	7.7	87.8	77.3	40.0	45.8	33.2	28.4	22.7	16.7	96.4	488
0-17	4.0	38.4	44.8	3.2	56.3	42.2	22.0	24.9	15.7	12.9	10.3	8.2	66.7	2,461
6-23	5.4	48.9	63.1	5.1	80.0	64.1	33.4	37.7	25.3	20.9	16.8	12.8	92.4	2,159
Total	4.1	40.0	49.0	3.9	61.5	48.0	24.9	28.3	18.6	15.5	12.4	9.6	71.6	2,949
NONBREASTFEEDING CHILDREN														
0-17	10.6	54.8	67.8	8.0	83.5	75.0	42.5	35.9	29.1	34.4	26.3	22.0	93.4	133
6-23	6.6	54.6	73.8	6.6	86.1	77.3	40.3	44.7	32.9	31.9	24.5	19.2	96.6	435
Total	6.5	54.7	73.2	6.6	85.8	76.6	39.9	44.3	32.6	31.6	24.3	19.0	96.2	439

Note: Breastfeeding status and food consumed refer to a "24-hour" period (yesterday and last night).
[1] Other milk includes fresh, tinned, and powdered animal milk.
[2] Does not include plain water. Includes juice, juice drinks, clear broth, or other non-milk liquids.
[3] Includes fortified baby food
[4] Includes pumpkin, squash, carrots, yellow or orange sweet potatoes, dark green leafy vegetables, mangoes, papayas, and guavas.

11.2.5 Infant and Young Child Feeding (IYCF) Practices

Appropriate IYCF practices include breastfeeding through age 2 years, introduction of solid and semisolid foods at age 6 months, and gradual increases in the amount of food given and frequency of feeding as the child gets older. The minimum frequencies for feeding children in developing countries are based on the energy output of complementary foods. The energy needs of children are based on age-specific total daily energy requirements plus two standard deviations (to cover almost all children), minus the average energy intake from breast milk. Infants with low breast milk intake need to be fed more frequently than those with high breast milk intake. However, care should be taken that feeding frequencies do not exceed the recommended input from complementary foods because excessive feeding can result in displacement of breast milk (PAHO/WHO, 2003).

According to recommendations, breastfed children age 6-23 months should receive animal-source foods and vitamin A-rich fruits and vegetables daily (PAHO/WHO, 2003). Because first foods almost always include a grain- or tuber-based staple, it is unlikely that young children who eat food from less than three groups will receive both an animal-source food and a vitamin A-rich fruit or vegetable. Therefore,

three food groups are considered the minimum number appropriate for breastfed children (Arimond and Ruel, 2004). Breastfed infants age 6-8 months should receive complementary foods two to three times a day with one or two snacks; breastfed children age 9-23 months should receive meals three to four times a day with one or two snacks (PAHO/WHO, 2003; WHO, 2008; WHO, 2010a).

Nonbreastfed children age 6-23 months should receive milk or milk products two or more times a day to ensure that their calcium needs are met. In addition, they need animal-source foods and vitamin A-rich fruits and vegetables. Four food groups are considered the minimum number appropriate for nonbreastfed young children. Nonbreastfed children age 12-23 months should be fed meals four to five times each day, with one or two snacks (WHO, 2005; WHO, 2008; WHO, 2010a).

Table 11.6 presents summary indicators of IYCF practices in the 24 hours preceding the survey for the youngest children age 6-23 months living with their mother. Ninety-one percent of children received breast milk or milk products. Forty-one percent had an adequately diverse diet—that is, they had been given foods from the appropriate number of food groups—and 51 percent had been fed the minimum number of times appropriate for their age. The feeding practices of only 22 percent of children age 6-23 months meet the minimum standards with respect to all three IYCF practices. The IYCF indicators for minimum acceptable diet by breastfeeding status among Kenyan children age 6-23 months are summarised in Figure 11.5.

The likelihood of children being fed according to the recommended IYCF guidelines increases with age. Children in urban areas (31 percent) are more likely to be fed appropriately than their rural counterparts (17 percent). By region, adherence to IYCF feeding practices is highest in Nairobi (39 percent) and lowest in North Eastern (3 percent). Appropriate feeding increases with increasing mother's education and household wealth.

In the period between the 2008-09 KDHS and the 2014 KDHS, the definition of standard IYCF indicators changed to reflect more restrictive requirements. In order to compare the IYCF results presented here with results from the 2008-09 KDHS, the 2014 data were recalculated according to the definitions used in 2008-09. This comparison indicates that the percentage of children age 6-23 months fed in accordance with the three recommended IYCF practices decreased between 2008-09 and 2014, from 39 percent to 31 percent (data not shown).

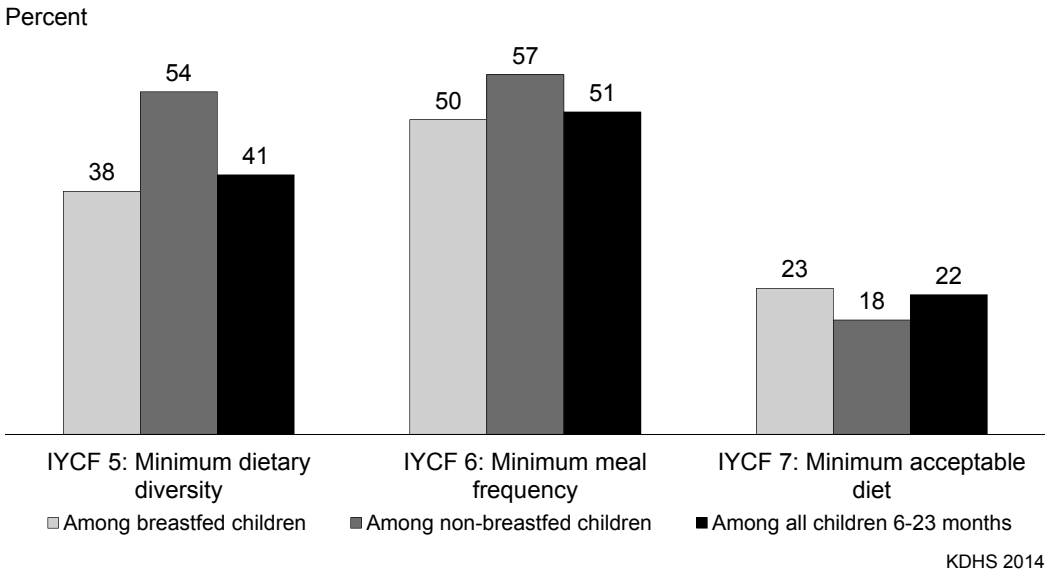
Table 11.6 Infant and young child feeding (IYCF) practices

Percentage of youngest children age 6-23 months living with their mother who are fed according to three IYCF feeding practices based on breastfeeding status, number of food groups, and times they are fed during the day or night preceding the survey, by background characteristics, Kenya 2014

	Among breastfed children 6-23 months, percentage fed:				Among non-breastfed children 6-23 months, percentage fed:					Among all children 6-23 months, percentage fed:				
Background characteristic	4+ food groups[1]	Minimum meal frequency[2]	Both 4+ food groups and minimum meal frequency	Number of breastfed children 6-23 months	Milk or milk products[3]	4+ food groups[1]	Minimum meal frequency[4]	With 3 IYCF practices[5]	Number of non-breastfed children 6-23 months	Breast milk, milk, or milk products[6]	4+ food groups[1]	Minimum meal frequency[7]	With 3 IYCF practices	Number of all children 6-23 months
Age in months														
6-8	21.1	62.0	17.0	439	*	*	*	*	7	99.3	21.3	61.9	16.8	446
9-11	32.2	40.6	17.9	437	*	*	*	*	10	98.7	32.2	41.4	17.8	447
12-17	45.5	46.7	24.9	795	52.0	63.4	58.0	17.4	112	94.1	47.7	48.1	23.9	907
18-23	47.3	51.2	28.1	488	40.3	51.7	55.6	18.9	306	77.0	49.0	52.9	24.5	793
Sex														
Male	37.9	49.5	21.8	1,093	44.5	57.8	57.9	21.1	233	90.2	41.4	51.0	21.7	1,326
Female	38.6	49.6	23.3	1,066	42.5	49.6	55.4	14.5	202	90.8	40.4	50.5	21.9	1,268
Residence														
Urban	53.8	57.1	32.2	752	54.0	67.3	66.4	26.9	185	90.9	56.5	58.9	31.2	937
Rural	29.9	45.6	17.4	1,406	35.9	44.2	49.5	11.6	251	90.3	32.1	46.2	16.5	1,657
Region														
Coast	24.8	52.5	15.8	212	(26.9)	(43.8)	(45.9)	(7.3)	41	88.1	27.9	51.4	14.4	253
North Eastern	10.7	21.0	2.4	60	(62.4)	(14.7)	(42.9)	(4.0)	18	91.3	11.6	26.1	2.7	77
Eastern	31.8	66.6	21.7	284	(38.5)	(48.0)	(63.9)	(15.2)	33	93.6	33.5	66.3	21.1	317
Central	57.5	58.6	37.4	190	(28.8)	(54.3)	(51.9)	(10.7)	49	85.4	56.9	57.3	31.9	239
Rift Valley	34.5	48.8	21.3	678	52.9	48.8	60.5	14.5	110	93.4	36.5	50.4	20.4	789
Western	26.4	24.9	10.5	248	(20.3)	(41.4)	(23.4)	(9.1)	51	86.4	29.0	24.6	10.3	298
Nyanza	40.2	51.7	25.7	274	28.2	67.9	63.5	19.8	68	85.7	45.7	54.0	24.5	342
Nairobi	74.1	52.5	37.0	213	*	*	*	*	65	95.5	75.0	58.9	39.3	278
Mother's education														
No education	16.3	33.4	7.9	278	53.8	22.8	42.3	6.1	39	94.3	17.1	34.5	7.7	316
Primary incomplete	27.2	48.7	16.7	603	31.3	40.5	51.9	11.3	117	88.8	29.4	49.2	15.9	720
Primary complete	39.3	52.5	22.0	550	34.4	49.7	43.0	8.5	105	89.5	41.0	51.0	19.8	655
Secondary+	55.0	54.3	33.4	728	55.0	72.5	71.3	30.9	175	91.3	58.4	57.6	32.9	903
Wealth quintile														
Lowest	19.2	40.8	10.7	543	42.6	33.0	50.1	8.3	93	91.6	21.2	42.2	10.3	636
Second	27.6	46.6	17.2	419	27.2	41.5	44.6	11.0	91	87.0	30.1	46.2	16.1	510
Middle	36.2	50.1	21.5	378	24.5	63.7	57.1	8.1	71	88.1	40.5	51.2	19.3	449
Fourth	51.9	54.0	29.7	409	48.3	71.1	52.0	29.5	78	91.7	54.9	53.7	29.7	487
Highest	62.7	59.4	37.8	409	68.6	64.4	76.8	31.3	103	93.7	63.0	62.8	36.5	512
Total	38.3	49.6	22.6	2,159	43.6	54.0	56.7	18.0	435	90.5	40.9	50.8	21.8	2,594

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
[1] Food groups: a. infant formula, milk other than breast milk, cheese or yogurt or other milk products; b. foods made from grains, roots, and tubers, including porridge and fortified baby food from grains; c. vitamin A-rich fruits and vegetables; d. other fruits and vegetables; e. eggs; f. meat, poultry, fish, and shellfish (and organ meats); g. legumes and nuts.
[2] For breastfed children, minimum meal frequency is receiving solid or semi-solid food at least twice a day for infants 6-8 months and at least three times a day for children 9-23 months
[3] Includes two or more feedings of commercial infant formula, fresh, tinned, and powdered animal milk, and yogurt
[4] For non-breastfed children age 6-23 months, minimum meal frequency is receiving solid or semi-solid food or milk feeds at least four times a day
[5] Non-breastfed children age 6-23 months are considered to be fed with a minimum standard of three Infant and Young Child Feeding Practices if they receive other milk or milk products at least twice a day, receive the minimum meal frequency, and receive solid or semi-solid foods from at least four food groups not including the milk or milk products food group
[6] Breastfeeding, or not breastfeeding and receiving two or more feedings of commercial infant formula, fresh, tinned and powdered animal milk, and yogurt
[7] Children are fed the minimum recommended number of times per day according to their age and breastfeeding status as described in footnotes 2 and 4.

Figure 11.5 **IYCF indicators on minimum acceptable diet**



11.3 MICRONUTRIENT INTAKE AMONG CHILDREN

Micronutrient deficiency is a major contributor to childhood morbidity and mortality. Children can receive micronutrients from foods, food fortification, and direct supplementation. Table 11.7 summarises information collected on children's intake of vitamin A and iron, and their receipt of deworming medications.

Vitamin A is an essential micronutrient for the immune system that plays an important role in maintaining the epithelial tissue in the body. Severe vitamin A deficiency (VAD) can cause eye damage. VAD can also increase the severity of infections, such as measles and diarrhoeal diseases in children, and slow recovery from illness. Vitamin A is found in breast milk, other milk, liver, eggs, fish, butter, mangoes, papayas, carrots, pumpkins, dark green leafy vegetables, and some other fruits and vegetables. The liver can store an adequate amount of the vitamin for four to six months. Periodic dosing (usually every six months) with vitamin A supplements is one method of ensuring that children at risk do not develop VAD.

Overall, 72 percent of children age 6-23 months consumed foods rich in vitamin A the day or night preceding the survey. The percentage of children consuming foods rich in vitamin A increases with age. Nonbreastfeeding children (83 percent) are more likely than breastfeeding children (70 percent) to consume vitamin A-rich foods. Urban children are more likely to consume vitamin A-rich foods (84 percent) than children in rural areas (65 percent). Nairobi has the highest proportion (97 percent) of children who consumed vitamin A-rich foods, while North Eastern has the lowest (25 percent). Consumption of vitamin A-rich foods increases with increasing mother's education and household wealth.

Iron is essential for cognitive development, and low iron intake can contribute to anaemia. Iron requirements are greatest at age 6-11 months, when growth is extremely rapid. Table 11.7 shows that 33 percent of children age 6-23 months consumed foods rich in iron the day or night preceding the survey. Consumption of iron-rich foods increases with age. Nonbreastfeeding children (43 percent) are more likely than breastfeeding children (31 percent) to consume iron-rich foods. Urban children (41 percent) are more likely to consume iron-rich foods than children in rural areas (29 percent). Nyanza (47 percent) and Nairobi (46 percent) have the highest proportions of children consuming iron-rich foods, while North Eastern and Eastern have the lowest (21 percent each). Consumption of iron-rich foods increases with increasing mother's education and household wealth.

Table 11.7 shows that only 6 percent of children age 12-59 months received iron supplements in the seven days preceding the survey. Iron supplementation does not vary much by background characteristics. Infection with helminths or intestinal worms has an adverse impact on the physical development of children and is associated with high levels of iron deficiency anaemia and other nutritional deficiencies. In Kenya, policy requires that children age 12-59 months receive deworming medication once every six months since regular treatment is a simple, cost-effective measure to address these infections. Fifty-one percent of children age 12-59 months received deworming medication in the six months

Table 11.7 Micronutrient intake among children: Vitamin A, iron, and deworming medication

Among youngest children age 6-23 months who are living with their mother, the percentages who consumed vitamin A-rich and iron-rich foods in the day or night preceding the survey, and among all children 12-59 months, percentages who were given iron supplements in the past seven days, and who were given deworming medication in the six months preceding the survey, by background characteristics, Kenya 2014

	Among youngest children age 6-23 months living with the mother:			Among all children age 12-59 months:		
Background characteristic	Percentage who consumed foods rich in vitamin A in last 24 hours[1]	Percentage who consumed foods rich in iron in last 24 hours[2]	Number of children	Percentage given iron supplements in last 7 days	Percentage given deworming medication in last 6 months[3]	Number of children
Age in months						
6-8	45.5	13.5	446	na	na	na
9-11	65.4	24.6	447	na	na	na
12-17	78.2	39.0	907	6.1	36.4	952
18-23	83.2	43.0	793	6.3	41.5	885
24-35	na	na	na	5.2	54.7	1,771
36-47	na	na	na	4.9	54.2	1,856
48-59	na	na	na	5.8	55.8	1,764
Sex						
Male	70.8	33.2	1,326	5.8	51.5	3,634
Female	73.0	33.5	1,268	5.2	50.1	3,594
Breastfeeding status						
Breastfeeding	69.6	31.3	2,159	6.8	40.2	1,588
Not breastfeeding	83.3	43.2	432	5.1	53.9	5,599
Mother's age at birth						
15-19	69.5	27.8	195	2.9	44.6	222
20-29	72.9	33.8	1,544	5.6	52.6	3,937
30-39	71.3	33.5	756	5.6	50.0	2,537
40-49	65.2	35.9	98	5.3	44.3	532
Residence						
Urban	83.7	40.9	937	5.1	56.5	2,623
Rural	65.2	29.1	1,657	5.8	47.5	4,604
Region						
Coast	66.1	28.3	253	4.3	43.7	718
North Eastern	24.5	20.7	77	9.2	19.7	240
Eastern	64.4	21.4	317	3.1	43.2	866
Central	83.7	39.6	239	7.0	70.8	672
Rift Valley	67.6	29.4	789	6.2	52.6	2,082
Western	66.2	31.8	298	5.8	48.7	869
Nyanza	80.4	46.7	342	5.2	49.2	1,006
Nairobi	96.6	46.2	278	5.2	57.6	774
Mother's education						
No education	38.2	20.4	316	8.5	25.2	861
Primary incomplete	71.4	31.1	720	5.0	46.0	2,163
Primary complete	72.8	32.2	655	5.4	54.6	1,930
Secondary+	83.4	40.5	903	5.0	61.7	2,274
Wealth quintile						
Lowest	51.6	24.1	636	6.9	34.3	1,666
Second	70.8	29.8	510	5.4	48.5	1,475
Middle	71.7	35.3	449	5.2	52.1	1,329
Fourth	84.7	37.0	487	5.0	60.6	1,322
Highest	86.1	43.2	512	4.8	61.9	1,435
Total	71.9	33.3	2,594	5.5	50.8	7,228

Note: Information on iron supplements and deworming medication is based on the mother's recall. Total for children age 6-23 months includes four children with missing information on breastfeeding status. Total for children age 12-59 months 53 children with missing information on breastfeeding status.
na = Not applicable
[1] Includes meat (and organ meat), fish, poultry, eggs, pumpkin, squash, carrots, orange or yellow sweet potatoes, dark green leafy vegetables, mango, papaya, guava, and other locally grown fruits and vegetables that are rich in vitamin A
[2] Includes meat (including organ meat), fish, poultry, and eggs
[3] Deworming for intestinal parasites is commonly done for helminths and for schistosomiasis.

before the survey. More children in urban areas (57 percent) received deworming medication than in rural areas (48 percent). Children in Central (71 percent) are more likely to receive deworming medication than those in other regions, and children in North Eastern are least likely to receive deworming medication (20 percent). The likelihood of receiving deworming medication increases with increasing mother's education and household wealth.

For the purpose of comparison with the 2008-09 KDHS, the data on receipt of deworming medication were recalculated for children age 6-59 months. The results indicate that deworming among children age 6-59 months increased from 38 percent in 2008-09 to 46 percent in 2014 (data not shown).

Table 11.8 shows that 72 percent of children age 6-59 months received vitamin A supplements in the past six months. Children who are still breastfeeding (77 percent) are more likely to be given vitamin A supplements than those who are not breastfeeding (71 percent). More children in urban areas received vitamin A supplements than in rural areas (75 percent and 70 percent, respectively). At the regional level, the proportion of children receiving vitamin A supplements is highest in Central (79 percent) and lowest in North Eastern (55 percent). The proportion of children receiving vitamin A supplements increases with increasing mother's education and household wealth.

The percentage of children receiving vitamin A supplements varies across counties (Table 11.8C). In 11 counties, more than 80 percent of children receive vitamin A supplements (Laikipia, Bungoma, Kwale, Kitui, Busia, Makueni, Mombasa, Kiambu, Nyandarua, Elgeyo Marakwet, and Isiolo). Mandera has the lowest proportion (20 percent) of children receiving vitamin A supplements.

A comparison with the 2008-09 KDHS shows that the proportion of children receiving vitamin A supplements has increased from 30 percent in 2008-09 to the current 72 percent.

Table 11.8 Micronutrient intake among children: Vitamin A and iodised salt

Among all children 6-59 months, the percentage who were given vitamin A supplements in the six months preceding the survey, and among all children age 6-59 months who live in households that were tested for iodised salt, the percentage who live in households with iodised salt, by background characteristics, Kenya 2014

Background characteristic	Among all children age 6-59 months:		Among children age 6-59 months living in households tested for iodised salt:	
	Percentage given vitamin A supplements in last 6 months	Number of children	Percentage living in households with iodised salt[1]	Number of children
Age in months				
6-8	67.9	941	99.7	900
9-11	80.2	968	99.2	918
12-17	79.5	1,983	99.4	1,911
18-23	75.0	1,794	99.3	1,734
24-35	70.2	3,760	99.5	3,622
36-47	69.7	3,889	99.6	3,738
48-59	68.5	3,672	99.4	3,537
Sex				
Male	71.6	8,618	99.4	8,326
Female	71.9	8,390	99.6	8,034
Breastfeeding status				
Breastfeeding	77.1	2,479	99.5	2,398
Not breastfeeding	70.9	14,487	99.5	13,923
Mother's age at birth				
15-19	68.1	739	98.2	698
20-29	71.5	9,387	99.5	9,061
30-39	73.1	5,713	99.5	5,487
40-49	69.0	1,168	99.7	1,113
Residence				
Urban	75.4	6,104	99.4	5,940
Rural	69.7	10,904	99.5	10,420
Region				
Coast	69.6	1,711	97.5	1,659
North Eastern	55.3	577	98.2	488
Eastern	73.9	2,051	99.5	1,997
Central	79.2	1,579	99.9	1,538
Rift Valley	67.5	4,956	99.8	4,695
Western	77.8	1,967	99.4	1,912
Nyanza	69.9	2,413	99.9	2,342
Nairobi	77.8	1,754	100.0	1,730
Mother's education				
No education	60.0	2,034	99.1	1,779
Primary incomplete	68.8	4,821	99.2	4,660
Primary complete	75.2	4,707	99.4	4,593
Secondary+	75.8	5,446	99.9	5,328
Wealth quintile				
Lowest	64.3	4,018	98.7	3,661
Second	71.3	3,476	99.5	3,385
Middle	72.5	3,063	99.8	2,987
Fourth	76.2	2,986	99.8	2,929
Highest	76.4	3,464	99.8	3,397
Total	71.7	17,008	99.5	16,360

Note: Information on vitamin A is based on both mother's recall and the immunisation card (where available). Total for children age 6-59 months includes 53 children with missing information on breastfeeding status. Total for children age 6-59 months living in households tested for iodised salt includes 47 children with missing information on breastfeeding status.
[1] Excludes children in households in which salt was not tested.

Table 11.8C Micronutrient intake among children: Vitamin A and iodised salt

Among all children 6-59 months, the percentages who were given vitamin A supplements in the six months preceding the survey, and among all children age 6-59 months who live in households that were tested for iodised salt, the percentage who live in households with iodised salt, by county, Kenya 2014

	Among all children age 6-59 months:		Among children age 6-59 months living in households tested for iodised salt:	
County	Percentage given vitamin A supplements in last 6 months	Number of children	Percentage living in households with iodised salt[1]	Number of children
Coast	**69.6**	**1,711**	**97.5**	**1,659**
Mombasa	81.7	438	100.0	423
Kwale	86.6	350	98.1	332
Kilifi	49.9	624	95.5	610
Tana River	67.6	151	99.6	148
Lamu	77.2	47	86.0	46
Taita Taveta	78.9	100	99.6	100
North Eastern	**55.1**	**579**	**98.2**	**490**
Garissa	75.5	206	96.6	180
Wajir	58.5	233	98.7	193
Mandera	19.5	140	100.0	118
Eastern	**73.9**	**2,051**	**99.5**	**1,997**
Marsabit	65.0	80	100.0	74
Isiolo	81.2	74	96.7	71
Meru	59.5	443	100.0	427
Tharaka-Nithi	74.3	125	98.7	117
Embu	78.5	179	100.0	176
Kitui	84.5	387	99.8	379
Machakos	71.6	442	99.0	442
Makueni	82.1	321	99.7	310
Central	**79.2**	**1,578**	**99.9**	**1,538**
Nyandarua	80.5	207	100.0	207
Nyeri	76.1	220	100.0	219
Kirinyaga	76.7	171	98.9	154
Murang'a	76.4	264	100.0	252
Kiambu	81.3	716	100.0	706
Rift Valley	**67.5**	**4,956**	**99.8**	**4,695**
Turkana	69.8	309	99.3	206
West Pokot	64.2	263	100.0	259
Samburu	72.6	105	99.3	98
Trans-Nzoia	70.2	452	100.0	441
Uasin Gishu	68.7	419	100.0	407
Elgeyo Marakwet	80.7	147	100.0	146
Nandi	66.6	351	100.0	349
Baringo	67.2	207	100.0	198
Laikipia	90.1	185	98.9	169
Nakuru	73.6	783	100.0	776
Narok	57.9	560	100.0	542
Kajiado	47.8	415	99.6	378
Kericho	67.1	326	98.7	309
Bomet	69.9	431	100.0	417
Western	**77.8**	**1,967**	**99.4**	**1,912**
Kakamega	65.0	674	99.3	655
Vihiga	76.3	202	98.5	198
Bungoma	87.6	746	99.4	724
Busia	82.6	346	100.0	336
Nyanza	**70.0**	**2,411**	**99.9**	**2,339**
Siaya	60.8	347	100.0	332
Kisumu	74.0	437	100.0	416
Homa Bay	79.2	561	99.7	553
Migori	73.3	466	99.8	449
Kisii	55.4	423	100.0	413
Nyamira	75.4	177	100.0	176
Nairobi	**77.7**	**1,754**	**100.0**	**1,730**
Total	71.7	17,008	99.5	16,360

Note: Information on vitamin A is based on both mother's recall and the immunisation card (where available).

[1] Excludes children in households in which salt was not tested.

Iodine deficiency, most frequently caused by inadequate iodine intake, has serious effects on body growth and mental development. Fortification of salt with iodine is the most common method of preventing iodine deficiency. To assess the use of iodised salt, the 2014 KDHS asked households to provide a teaspoon of salt used for cooking. The salt was tested for iodine using a rapid test kit. Virtually all children living in households tested for iodised salt have access to iodised salt (Table 11.8). There is no difference in the availability of iodised salt across the households and children's background characteristics.

11.4 IODISATION OF HOUSEHOLD SALT

Table 11.9 shows the percentage of households with salt tested for iodine content, the percentage of households without salt, and, among households with tested salt, the percentage with iodine present in the salt. Survey teams tested salt in 94 percent of households; the remaining 6 percent had no salt available. Virtually all households with tested salt have iodised salt. In all counties, over 95 percent of the households tested for iodised salt have iodised salt except Lamu, with 89 percent (Table 11.9C).

Table 11.9 Presence of iodised salt in household

Among all households, the percentage with salt tested for iodine content and the percentage with no salt in the household; and among households with salt tested, the percentage with iodised salt, according to background characteristics, Kenya 2014

	Among all households, the percentage			Among households with tested salt:	
Background characteristic	With salt tested	With no salt in the household	Number of households	Percentage with iodised salt	Number of households
Residence					
Urban	94.0	6.0	15,290	99.3	14,367
Rural	93.5	6.5	21,140	99.6	19,772
Region					
Coast	91.7	8.3	3,569	98.5	3,275
North Eastern	79.1	20.9	724	98.3	573
Eastern	93.2	6.8	5,262	99.6	4,905
Central	94.6	5.4	5,012	99.5	4,740
Rift Valley	93.4	6.6	9,249	99.8	8,635
Western	94.5	5.5	3,604	99.1	3,405
Nyanza	95.4	4.6	4,559	99.7	4,348
Nairobi	95.7	4.3	4,451	99.7	4,260
Wealth quintile					
Lowest	87.8	12.2	6,077	99.0	5,335
Second	94.2	5.8	6,557	99.5	6,175
Middle	94.6	5.4	6,967	99.7	6,590
Fourth	94.5	5.5	8,225	99.7	7,776
Highest	96.0	4.0	8,603	99.5	8,263
Total	93.7	6.3	36,430	99.5	34,139

Table 11.9C Presence of iodised salt in household

Among all households, the percentage with salt tested for iodine content and the percentage with no salt in the household; and among households with salt tested, the percentage with iodised salt, according to county, Kenya 2014

	Among all households, the percentage			Among households with tested salt:	
County	With salt tested	With no salt in the household	Number of households	Percentage with iodised salt	Number of households
Coast	**91.7**	**8.3**	**3,569**	**98.5**	**3,275**
Mombasa	89.4	10.6	1,245	99.9	1,113
Kwale	91.4	8.6	704	98.7	644
Kilifi	93.0	7.0	999	96.9	930
Tana River	93.4	6.6	210	99.7	196
Lamu	93.7	6.3	104	89.2	97
Taita Taveta	96.1	3.9	307	99.9	295
North Eastern	**79.1**	**20.9**	**724**	**98.3**	**573**
Garissa	87.0	13.0	265	96.9	230
Wajir	71.6	28.4	242	99.3	173
Mandera	77.9	22.1	217	99.3	169
Eastern	**93.2**	**6.8**	**5,262**	**99.6**	**4,905**
Marsabit	87.1	12.9	146	100.0	127
Isiolo	93.0	7.0	122	98.2	113
Meru	90.7	9.3	1,406	100.0	1,275
Tharaka-Nithi	87.1	12.9	379	99.4	330
Embu	96.9	3.1	548	100.0	531
Kitui	92.7	7.3	856	99.8	793
Machakos	98.2	1.8	1,088	99.1	1,068
Makueni	93.1	6.9	717	99.5	668
Central	**94.6**	**5.4**	**5,012**	**99.5**	**4,740**
Nyandarua	97.5	2.5	593	100.0	578
Nyeri	97.9	2.1	792	99.9	776
Kirinyaga	85.5	14.5	622	95.9	532
Murang'a	92.3	7.7	968	100.0	894
Kiambu	96.3	3.7	2,037	100.0	1,961
Rift Valley	**93.4**	**6.6**	**9,249**	**99.8**	**8,635**
Turkana	66.5	33.5	448	99.4	298
West Pokot	98.2	1.8	319	100.0	313
Samburu	86.9	13.1	146	99.5	127
Trans-Nzoia	94.9	5.1	814	99.7	772
Uasin Gishu	95.3	4.7	962	99.7	917
Elgeyo Marakwet	97.8	2.2	301	100.0	295
Nandi	98.8	1.2	671	99.9	663
Baringo	87.9	12.1	391	99.7	343
Laikipia	92.2	7.8	406	99.8	375
Nakuru	98.1	1.9	1,950	99.9	1,912
Narok	94.8	5.2	752	100.0	713
Kajiado	88.9	11.1	770	99.5	684
Kericho	93.0	7.0	589	99.5	548
Bomet	92.2	7.8	732	100.0	675
Western	**94.5**	**5.5**	**3,604**	**99.1**	**3,405**
Kakamega	94.6	5.4	1,350	98.6	1,276
Vihiga	97.1	2.9	446	98.5	433
Bungoma	92.8	7.2	1,180	99.6	1,096
Busia	95.4	4.6	628	99.8	599
Nyanza	**95.4**	**4.6**	**4,559**	**99.7**	**4,348**
Siaya	92.7	7.3	725	99.8	672
Kisumu	94.3	5.7	943	99.6	889
Homa Bay	97.0	3.0	877	99.5	851
Migori	94.0	6.0	701	99.8	659
Kisii	96.6	3.4	904	99.8	874
Nyamira	98.6	1.4	409	100.0	404
Nairobi	**95.7**	**4.3**	**4,451**	**99.7**	**4,260**
Total	93.7	6.3	36,430	99.5	34,139

11.5 NUTRITIONAL STATUS OF WOMEN

Measurements of height and weight were obtained from women in one-half of households selected in the 2014 KDHS in order to assess women's nutritional status. There are, however, sufficient cases to calculate county-level estimates of women's nutritional status. The nutritional status of women was assessed with two anthropometric indices: height and body mass index (BMI).

Short stature reflects poor socioeconomic conditions and inadequate nutrition during childhood and adolescence. In a woman, short stature is a risk factor for poor birth outcomes and obstetric complications. For example, short stature is associated with small pelvic size, which increases the likelihood of difficulty during delivery and the risk of bearing low birth weight babies. A woman is considered to be at risk if her height is below 145 cm.

BMI is expressed as the ratio of weight in kilograms to the square of height in metres (kg/m^2). BMI is used to measure thinness or obesity. A BMI below 18.5 kg/m^2 indicates thinness or acute undernutrition, and a BMI of 25.0 kg/m^2 or above indicates overweight or obesity. A BMI below 17 kg/m^2 indicates severe undernutrition and is associated with increased mortality. Low pre-pregnancy BMI, as with short stature, is associated with poor birth outcomes and obstetric complications.

To derive these indices, the 2014 KDHS took height and weight measurements among women age 15-49. Weight measurements were made using an electronic scale (SECA scale). Standing height measurements were made using height/length (Shorr) boards. Respondents for whom there was no information on height and/or weight and those who were pregnant or had given birth in the two months preceding the survey were excluded from the analysis.

According to Table 11.10, less than 1 percent of women age 15-49 are shorter than 145 cm. There are no apparent differences in height by background characteristics.

Table 11.10 Nutritional status of women

Among women age 15-49, the percentage with height under 145 cm, mean Body Mass Index (BMI), and the percentage with specific BMI levels, by background characteristics, Kenya 2014

	Height		Body Mass Index[1]								
Background characteristic	Percentage below 145 cm	Number of women	Mean Body Mass Index (BMI)	18.5-24.9 (Total normal)	<18.5 (Total thin)	17.0-18.4 (Mildly thin)	<17 (Moderately and severely thin)	≥25.0 (Total overweight or obese)	25.0-29.9 (Overweight)	≥30.0 (Obese)	Number of women
Age											
15-19	1.7	2,628	21.4	71.2	16.6	11.2	5.4	12.2	10.6	1.6	2,480
20-29	0.6	5,504	23.3	62.8	8.7	6.5	2.2	28.5	21.7	6.9	4,838
30-39	0.7	3,857	24.8	50.9	5.7	4.1	1.6	43.4	28.8	14.6	3,576
40-49	0.6	2,276	25.5	46.0	6.0	4.6	1.4	48.0	28.6	19.3	2,249
Residence											
Urban	0.5	5,702	24.9	51.2	5.5	4.1	1.4	43.3	28.6	14.7	5,246
Rural	1.0	8,563	23.0	63.0	11.2	7.9	3.2	25.8	18.8	7.0	7,897
Region											
Coast	2.1	1,391	23.5	56.8	11.0	8.6	2.5	32.1	20.6	11.6	1,262
North Eastern	0.1	283	21.5	52.3	28.7	17.3	11.4	19.0	14.2	4.7	239
Eastern	1.7	2,050	23.4	60.2	9.8	6.9	2.9	30.1	21.6	8.4	1,918
Central	0.7	1,810	25.3	46.7	6.2	4.1	2.1	47.1	29.4	17.6	1,697
Rift Valley	0.5	3,651	23.1	59.6	11.8	8.0	3.8	28.6	20.8	7.8	3,349
Western	0.4	1,551	23.0	67.0	8.6	6.8	1.8	24.4	18.6	5.8	1,431
Nyanza	0.5	1,865	23.3	67.2	6.3	5.0	1.3	26.5	19.8	6.8	1,729
Nairobi	0.3	1,662	25.4	49.7	2.8	2.6	0.2	47.6	31.1	16.5	1,517
Education											
No education	0.9	992	21.6	57.1	25.3	15.2	10.1	17.6	11.9	5.8	855
Primary incomplete	1.6	3,725	22.7	63.8	12.3	8.5	3.8	23.9	17.0	6.9	3,443
Primary complete	0.7	3,453	24.3	56.6	5.6	4.6	1.0	37.7	26.3	11.4	3,170
Secondary+	0.4	6,095	24.3	56.1	6.2	4.8	1.4	37.8	25.8	12.0	5,673
Wealth quintile											
Lowest	1.8	2,198	21.1	66.4	21.5	14.4	7.2	12.1	10.2	1.8	1,934
Second	1.5	2,546	22.5	67.8	11.2	8.1	3.1	21.0	16.3	4.8	2,353
Middle	0.5	2,819	23.3	65.0	7.6	5.9	1.7	27.4	21.0	6.4	2,613
Fourth	0.5	3,048	24.6	53.6	5.3	3.9	1.4	41.1	28.6	12.5	2,829
Highest	0.3	3,655	25.6	45.9	4.2	3.2	0.9	50.0	30.7	19.3	3,415
Total	0.8	14,265	23.7	58.3	8.9	6.4	2.5	32.8	22.7	10.1	13,143

Note: The Body Mass Index (BMI) is expressed as the ratio of weight in kilograms to the square of height in metres (kg/m^2).
[1] Excludes pregnant women and women with a birth in the preceding 2 months

Table 11.10C Nutritional status of women

Among women age 15-49, the percentage with height under 145 cm, mean Body Mass Index (BMI), and the percentage with specific BMI levels, by county, Kenya 2014

	Height		Body Mass Index[1]								
County	Percentage below 145 cm	Number of women	Mean Body Mass Index (BMI)	18.5-24.9 (Total normal)	<18.5 (Total thin)	17.0-18.4 (Mildly thin)	<17 (Moderate-ly and severely thin)	≥25.0 (Total over-weight or obese)	25.0-29.9 (Over-weight)	≥30.0 (Obese)	Number of women
Coast	**2.1**	**1,391**	**23.5**	**56.8**	**11.0**	**8.6**	**2.5**	**32.1**	**20.6**	**11.6**	**1,262**
Mombasa	1.0	400	25.4	47.0	4.8	4.7	0.1	48.2	26.9	21.3	362
Kwale	4.0	280	22.8	55.9	16.3	12.8	3.5	27.8	20.9	6.9	252
Kilifi	2.3	479	22.3	68.7	10.9	8.4	2.5	20.4	14.9	5.4	435
Tana River	1.1	89	21.5	51.2	29.1	20.1	9.0	19.7	15.7	4.0	81
Lamu	2.3	44	24.1	48.9	13.9	7.8	6.1	37.2	20.0	17.2	41
Taita Taveta	0.9	99	25.3	50.6	4.5	3.4	1.1	45.0	26.1	18.9	91
North Eastern	**0.1**	**283**	**21.5**	**52.3**	**28.8**	**17.4**	**11.4**	**19.0**	**14.3**	**4.7**	**239**
Garissa	0.3	116	21.1	49.0	33.3	19.2	14.1	17.7	13.2	4.5	96
Wajir	0.0	83	22.2	46.7	28.3	21.2	7.1	25.0	17.8	7.2	67
Mandera	0.0	84	21.4	61.3	23.5	11.7	11.8	15.2	12.4	2.8	76
Eastern	**1.7**	**2,051**	**23.4**	**60.2**	**9.8**	**6.9**	**2.9**	**30.1**	**21.6**	**8.4**	**1,918**
Marsabit	0.9	53	21.3	55.3	27.0	18.0	9.0	17.6	15.0	2.7	45
Isiolo	0.3	48	22.1	50.4	24.4	13.3	11.0	25.2	18.1	7.1	44
Meru	1.6	530	23.9	60.7	7.7	4.2	3.5	31.6	21.4	10.2	495
Tharaka-Nithi	0.5	130	22.9	64.6	10.9	9.4	1.5	24.5	17.5	7.0	125
Embu	0.7	209	23.7	53.7	12.8	8.8	4.0	33.5	21.4	12.1	197
Kitui	3.5	355	23.2	59.5	9.5	8.7	0.8	31.0	25.0	6.0	335
Machakos	0.8	398	23.6	64.3	6.3	4.0	2.3	29.4	20.7	8.7	371
Makueni	2.6	328	23.3	59.4	10.6	8.1	2.5	30.0	22.6	7.4	306
Central	**0.7**	**1,810**	**25.3**	**46.7**	**6.2**	**4.1**	**2.1**	**47.1**	**29.4**	**17.6**	**1,697**
Nyandarua	0.6	199	24.5	53.8	5.5	3.1	2.5	40.6	25.0	15.6	187
Nyeri	0.7	319	25.3	47.2	3.6	1.7	1.9	49.2	34.2	15.1	297
Kirinyaga	0.5	210	25.9	38.8	6.8	3.4	3.4	54.4	36.7	17.7	196
Murang'a	0.0	343	25.1	47.0	5.8	5.6	0.2	47.3	30.3	16.9	328
Kiambu	1.1	739	25.4	46.7	7.6	4.9	2.7	45.7	26.1	19.6	689
Rift Valley	**0.5**	**3,651**	**23.1**	**59.6**	**11.8**	**8.0**	**3.8**	**28.6**	**20.8**	**7.8**	**3,349**
Turkana	0.9	144	19.4	49.9	45.3	19.1	26.3	4.7	3.7	1.0	121
West Pokot	0.5	124	21.2	66.2	23.2	17.4	5.9	10.6	7.0	3.6	108
Samburu	0.6	57	19.9	50.9	41.0	22.5	18.4	8.1	5.3	2.9	51
Trans-Nzoia	0.2	343	23.0	63.9	7.4	5.9	1.5	28.7	21.5	7.2	316
Uasin Gishu	0.3	384	23.6	56.7	11.2	9.3	1.8	32.2	23.0	9.1	353
Elgeyo Marakwet	0.0	109	22.5	64.3	12.8	8.6	4.2	22.9	17.3	5.6	99
Nandi	0.3	286	22.8	67.9	8.4	6.1	2.2	23.7	16.7	7.0	269
Baringo	0.7	149	21.9	51.8	25.1	15.9	9.2	23.2	17.5	5.7	134
Laikipia	0.0	151	24.0	51.4	14.2	8.0	6.2	34.4	20.2	14.2	133
Nakuru	1.4	712	24.1	55.3	6.2	4.4	1.9	38.5	31.3	7.2	671
Narok	0.4	299	23.0	64.5	9.7	7.0	2.8	25.7	18.0	7.7	260
Kajiado	0.2	299	24.9	45.1	10.9	8.2	2.7	44.0	26.7	17.3	276
Kericho	0.0	266	23.1	69.7	6.4	4.3	2.0	23.9	16.8	7.1	249
Bomet	0.4	330	22.4	69.8	9.8	7.8	2.0	20.3	16.0	4.4	309
Western	**0.4**	**1,551**	**23.0**	**67.0**	**8.6**	**6.8**	**1.8**	**24.4**	**18.6**	**5.8**	**1,431**
Kakamega	0.8	540	23.3	65.1	7.7	6.5	1.2	27.3	19.8	7.5	500
Vihiga	1.0	175	23.4	65.4	8.3	6.9	1.4	26.4	19.3	7.0	163
Bungoma	0.0	561	22.9	66.9	9.0	6.8	2.1	24.1	19.1	5.0	513
Busia	0.3	275	22.2	72.0	9.8	7.2	2.5	18.3	14.9	3.4	256
Nyanza	**0.5**	**1,865**	**23.3**	**67.2**	**6.3**	**5.0**	**1.3**	**26.5**	**19.8**	**6.8**	**1,729**
Siaya	0.5	267	23.1	67.9	9.1	7.6	1.6	23.0	16.0	6.9	251
Kisumu	0.5	384	23.9	61.8	4.5	3.3	1.2	33.6	24.8	8.8	353
Homa Bay	0.3	353	22.6	74.1	7.1	5.4	1.7	18.8	14.7	4.1	330
Migori	0.2	291	22.9	65.0	8.1	6.3	1.8	26.9	22.4	4.5	256
Kisii	0.7	411	23.6	67.2	4.6	3.9	0.7	28.2	20.6	7.6	387
Nyamira	1.2	159	23.8	67.3	4.9	4.0	0.9	27.8	18.6	9.1	152
Nairobi	**0.3**	**1,662**	**25.4**	**49.7**	**2.8**	**2.6**	**0.2**	**47.6**	**31.1**	**16.5**	**1,517**
Total	0.8	14,265	23.7	58.3	8.9	6.4	2.5	32.8	22.7	10.1	13,143

Note: The Body Mass Index (BMI) is expressed as the ratio of weight in kilograms to the square of height in metres (kg/m^2).
[1] Excludes pregnant women and women with a birth in the preceding 2 months

The mean BMI among women age 15-49 is 23.7 kg/m^2. Nine percent of women of reproductive age are thin or undernourished (BMI <18.5 kg/m^2). The proportions of mild thinness (17.0-18.4 kg/m^2) and moderate and severe thinness (<17 kg/m^2) are 6 percent and 3 percent, respectively. Younger and rural women are more likely to be thin. The North Eastern region has the highest proportion (29 percent) of women who are thin, while Nairobi has the lowest (3 percent). Thinness is more common among women

with no education (25 percent) than among women at other educational levels (12 percent or less). Similarly, thinness is more common among women in the lowest wealth quintile (22 percent) and is inversely related to wealth. Women in the lowest wealth quintile (22 percent) are 5 times as likely to be thin as women in the highest wealth quintile (4 percent).

Overall, 33 percent of women are either overweight or obese (BMI ≥25 kg/m^2) with 10 percent of them being obese (BMI 30 kg/m^2 or above). The risk of being overweight or obese increases with age. Urban women are more likely to be overweight/obese (43 percent) than rural women (26 percent). Nairobi has the highest proportion (48 percent) of women who are overweight or obese, followed by Central (47 percent); the lowest proportion is observed in the North Eastern region (19 percent). The proportion of overweight or obese women increases steadily with increasing education and wealth. Women with no education (18 percent) and in the lowest wealth quintile (12 percent) are less likely to be overweight or obese compared to women with a secondary or higher education (38 percent) and women in the highest wealth quintile (50 percent).

A comparison of the 2008-09 KDHS and 2014 KDHS results indicates that the proportion of thin women (BMI <18.5 kg/m^2) has decreased marginally from 12 percent to 9 percent. The proportion of women who are overweight or obese, on the other hand, has increased from 25 percent to 33 percent, and the proportion of obese women has increased from 7 percent to 10 percent.

11.6 MICRONUTRIENT INTAKE AMONG MOTHERS

Adequate micronutrient intake by women has important benefits for both women and their children. Breastfeeding children benefit from micronutrient supplementation that mothers receive, especially vitamin A. Iron supplementation of women during pregnancy protects the mother and foetus against anaemia, which is considered a major cause of perinatal and maternal mortality. Anaemia also results in an increased risk of premature delivery and low birth weight. Finally, iodine deficiency is related to a number of adverse pregnancy outcomes, including foetal brain damage, congenital malformation, stillbirth, and prenatal death. Table 11.11 includes a number of measures that are useful in assessing micronutrient intake by women, especially during pregnancy and the postpartum period in the first two months after birth.

The findings show that 54 percent of women received a vitamin A dose during the postpartum period. The percentage of women receiving postpartum vitamin A is higher in urban areas (58 percent) than in rural areas (51 percent). Women in the Central region are most likely to take vitamin A during the postpartum period (65 percent), while women in the North Eastern region are least likely to do so (27 percent). The prevalence of postpartum vitamin A supplementation increases with increasing education. Women in the lowest wealth quintile are less likely to receive a postpartum vitamin A dose (38 percent) than their more wealthy counterparts (54 percent or higher).

Nutritional deficiencies such as anaemia are often exacerbated during pregnancy because of the additional nutrient demands associated with foetal growth. Iron status can be enhanced through iron supplementation, improving women's diets, and controlling parasites and malaria infection. Iron supplementation is necessary for pregnant women because their needs are usually too high to be met solely through food intake. In Kenya, pregnant women are advised to take combined folic acid and iron tablets daily from conception to delivery. Women may still access noncombined formulations of iron supplements in the market and within the health care system.

Table 11.11 shows that only 8 percent of women took iron tablets for 90 or more days during their last pregnancy. Five percent took iron supplements for 60-89 days, and 53 percent took the supplements for fewer than 60 days. Thirty percent of women did not take iron supplements at all during their last pregnancy. The proportion of women taking iron supplements for 90 or more days is slightly higher in urban areas and among those in the Coast and Nyanza regions.

Helminth infections are one of the factors contributing to anaemia among pregnant women. Deworming during pregnancy is a cost-effective intervention against intestinal worms that allows better absorption of nutrients and iron, thus reducing the prevalence of anaemia. In Kenya, the Ministry of Health has approved and implemented a policy to provide 500 mg of mebendazole once during pregnancy.

Table 11.11 shows that 31 percent of women took deworming medication during their last pregnancy. Women in the Coast region were most likely to take deworming medication (51 percent), while women in North Eastern were least likely to do so (7 percent). Women with no education (22 percent) were less likely than those with some education (30-34 percent) to take deworming medication.

Iodine deficiency has adverse effects on all population groups, but women of reproductive age are often the most affected. As mentioned, iodine deficiency is related to a number of adverse pregnancy outcomes. As a result, use of iodised salt by women of reproductive age is emphasised. Table 11.11 shows that virtually all women with a child born in the five years preceding the survey live in households with iodised salt.

A comparison with the 2008-09 KDHS data shows that the proportion of women who received vitamin A postpartum increased from 46 percent to 54 percent. The proportion of women taking iron supplements for 90 days or more during the pregnancy of their last birth increased marginally from 3 percent to 8 percent, and the proportion of women taking deworming medication increased from 17 percent to 31 percent.

Table 11.11 Micronutrient intake among mothers

Among women age 15-49 with a child born in the past five years, the percentage who received a vitamin A dose in the first two months after the birth of the last child, the percent distribution by number of days they took iron tablets, iron syrup, or iron and folic acid supplements during the pregnancy of the last child, and the percentage who took deworming medication during the pregnancy of the last child; and among women age 15-49 with a child born in the past five years and who live in households that were tested for iodised salt, the percentage who live in households with iodised salt, by background characteristics, Kenya 2014

		Number of days women took iron tablets, iron syrup, or iron and folic acid supplements during pregnancy of last birth						Percentage of women who took deworming medication during pregnancy of last birth		Among women with a child born in the last five years, who live in households that were tested for iodised salt	
Background characteristic	Percentage who received vitamin A dose postpartum[1]	None	<60	60-89	90+	Don't know/ missing	Total		Number of women	Percentage living in households with iodised salt[2]	Number of women
Age											
15-19	41.7	36.6	48.5	5.3	6.4	3.2	100.0	26.5	386	98.9	365
20-29	55.7	28.9	54.2	4.7	7.8	4.4	100.0	30.9	3,669	99.6	3,568
30-39	54.5	29.4	52.9	5.0	7.8	5.0	100.0	32.8	2,313	99.4	2,236
40-49	47.0	36.6	51.2	2.3	4.7	5.3	100.0	31.0	507	99.7	488
Residence											
Urban	57.9	24.7	54.3	6.4	9.6	4.9	100.0	31.6	2,677	99.4	2,617
Rural	51.3	33.5	52.5	3.5	6.1	4.4	100.0	31.1	4,199	99.5	4,039
Region											
Coast	45.5	17.5	59.4	7.5	12.9	2.7	100.0	50.5	698	97.5	678
North Eastern	26.5	58.9	34.6	2.3	1.2	3.0	100.0	7.4	178	98.3	155
Eastern	59.2	30.9	50.3	5.3	6.3	7.2	100.0	34.5	891	99.9	868
Central	65.4	28.3	55.5	3.1	5.6	7.5	100.0	34.2	715	99.8	692
Rift Valley	47.8	37.6	51.4	2.8	4.3	3.9	100.0	23.8	1,899	99.8	1,828
Western	60.7	38.8	50.9	1.2	6.9	2.2	100.0	33.5	790	99.1	764
Nyanza	59.0	16.4	57.0	8.8	12.6	5.2	100.0	32.9	934	99.8	910
Nairobi	52.5	24.7	55.6	6.0	9.3	4.4	100.0	27.4	771	100.0	762
Education											
No education	29.7	41.9	46.5	4.6	3.6	3.3	100.0	21.5	675	99.1	605
Primary incomplete	51.3	34.4	52.3	3.6	6.4	3.3	100.0	30.4	1,901	99.1	1,838
Primary complete	55.9	28.1	54.5	4.7	7.5	5.2	100.0	34.1	1,856	99.5	1,806
Secondary+	60.9	24.9	54.8	5.4	9.3	5.5	100.0	32.6	2,445	99.8	2,407
Wealth quintile											
Lowest	38.0	36.6	51.7	3.9	5.0	2.9	100.0	27.5	1,381	98.7	1,276
Second	54.0	33.3	52.1	4.1	7.3	3.2	100.0	30.1	1,312	99.4	1,280
Middle	57.4	33.0	52.4	3.1	6.0	5.4	100.0	34.6	1,276	99.7	1,251
Fourth	60.9	25.2	55.7	5.3	8.4	5.4	100.0	32.8	1,372	99.7	1,343
Highest	58.7	23.4	54.0	6.4	10.4	5.9	100.0	31.6	1,536	99.8	1,507
Total	53.9	30.1	53.2	4.6	7.5	4.6	100.0	31.3	6,876	99.5	6,657

[1] In the first two months after delivery of last birth
[2] Excludes women in households where salt was not tested.

MALARIA 12

Rebecca Kiptui, Abdulkadir Amin Awes, James Muttunga

Key Findings

- Six in 10 households (59 percent) own at least one insecticide-treated mosquito net (ITN), while 34 percent of households have at least one net for every two people.
- Forty-eight percent of Kenyans have access to an ITN.
- Two-fifths of the household population (42 percent) slept under an ITN the night prior to the survey, and two-thirds (67 percent) of members of households with at least one ITN slept under an ITN the night prior to the survey.
- Fifty-four percent of children under age 5 slept under an ITN the night before the survey, and, among those living in households with an ITN, 77 percent slept under an ITN the night before the survey.
- Fifty-one percent of pregnant women overall slept under an ITN the night before the survey, and, among those living in households with an ITN, 77 percent slept under an ITN the night before the survey.
- Seventeen percent of women received intermittent preventive treatment (IPTp) for malaria during pregnancy; that is, they received two or more doses of SP/Fansidar, at least one during an antenatal care visit. In malaria endemic areas, 39 percent of women received IPTp.
- Twenty-three percent of children under age 5 who had a fever took ACT, and 13 percent took ACT within 24 hours of fever onset.

12.1 INTRODUCTION

Malaria is a leading cause of morbidity and mortality in Kenya, with more than 70 percent of the population at risk of infection (MOH, 2015a). Malaria transmission varies across Kenya; the four main epidemiological zones are described below.

Endemic areas: These are areas of stable malaria transmission (with altitudes ranging from 0 to 1,300 metres) around Lake Victoria in western Kenya and in the coastal regions. Rainfall, temperature, and humidity are the determinants of perennial transmission of malaria. The vector life cycle is usually short with a high survival rate due to the suitable climatic conditions. Transmission is intense throughout the year, with annual entomological inoculation rates[1] between 30 and 100.

Seasonal malaria transmission areas: This zone, in arid and semi-arid areas of the northern and south-eastern parts of the country, experiences short periods of intense malaria transmission during the rainfall seasons. Temperatures are usually high, and water pools created during the rainy season provide the malaria vectors with breeding sites. Extreme climatic conditions such as the El Niño southern oscillation lead to flooding in these areas, resulting in epidemic outbreaks with high morbidity rates due to the population's low immune status.

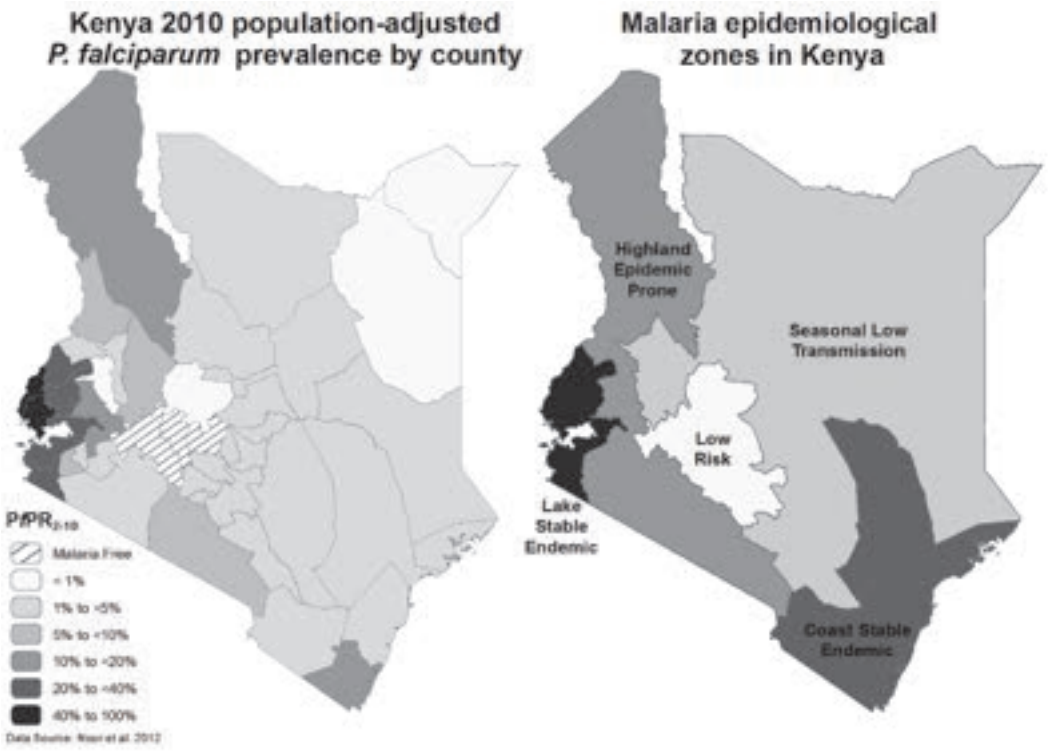
[1] The entomological inoculation rate is the average number of inoculations with malaria parasites received by a person over a period of time (usually annually). It is used to measure malaria transmission intensity and is dependent on the frequency with which people living in an area are bitten by anopheline mosquitoes carrying sporozoites (WHO, 2015a).

Highland epidemic prone areas: Malaria transmission in the western highlands of Kenya is seasonal, with considerable year-to-year variation. The epidemic phenomenon is experienced when climatic conditions favour sustainability of minimum temperatures around 18°C. This increase in minimum temperatures during periods of long rains favours and sustains vector breeding, resulting in increased intensity of malaria transmission. The whole population is vulnerable, and case fatality rates during an epidemic can be up to 10 times greater than what is experienced in regions where malaria occurs regularly.

Low risk malaria areas: This zone covers the central highlands of Kenya, including Nairobi. Temperatures are usually too low to allow completion of the sporogonic cycle of the malaria parasite in the vector. However, increasing temperatures and changes in the hydrological cycle associated with climate change are likely to increase the areas suitable for malaria vector breeding, with the introduction of malaria transmission in areas where it did not previously exist.

The highest malaria burden is in the lake endemic region, while the lowest is in the low risk and seasonal transmission areas. Map 12.1 shows the malaria burden across counties (Noor et al., 2012).

Map 12.1 **Malaria prevalence in Kenya**



The main malaria control interventions in Kenya are the following:

- Vector control via insecticide-treated nets (ITNs), indoor residual spraying (IRS), and larval source management;
- Management of malaria in pregnancy by ensuring that pregnant women receive and use ITNs and undergo intermittent preventive treatment (IPTp);
- Case management using artemisinin-based combination therapy (ACT) and improved diagnosis and treatment;
- Epidemic preparedness and response (EPR);
- Surveillance, monitoring and evaluation, and operations research;
- Advocacy, communication, and social mobilisation; and
- Cross-cutting strategies including programme management, resource mobilisation, and capacity building among counties.

Due to variation in disease patterns, not all interventions are carried out in all areas of the country. The various interventions and in what areas they are implemented should be considered in interpreting results.

Epidemiological zone	ITNs	IPTp	Case Manage-ment	EPR	Surveillance	Health Education
Endemic	•	•	•		•	•
Highland epidemic prone	•		•	•	•	•
Seasonal transmission			•	•	•	•
Low risk			•		•	•

Source: (MOH, 2010)
Note: IRS, a vector control intervention, has not been implemented since 2012 in an effort to practice insecticide resistance management. Accordingly, in this report, results for IRS are not presented.

12.2 OWNERSHIP OF MOSQUITO NETS

Nets and window screening have long been considered useful protection methods against mosquitoes and other insects (Lindsay and Gibson, 1988). Nets reduce human-vector contact by acting as a physical barrier and thus reducing the number of bites from infective vectors (Bradley et al., 1986). However, nets and screens are often not well fitted or are torn, thus allowing mosquitoes to enter or feed on the part of the body adjacent to the netting fabric during the night (Lines et al., 1987). The problem of ill-used nets and screens provides one of the motives for impregnating them with a fast-acting insecticide that will repel or kill mosquitoes (Lines et al., 1987; Hossain and Curtis, 1989).

Treatment of nets has been made possible by the availability of synthetic pyrethroids that mimic the insecticidal compounds of natural pyrethrum. Treated nets have low mammalian toxicity; are repellent, highly toxic to mosquitoes, and odourless; and have low volatility with consequent long persistence. ITNs are regarded as a promising malaria control tool that, when used by all or most members of the community, can reduce malaria transmission, morbidity, and mortality. Long-lasting insecticidal nets (LLINs) are a subset of ITNs. An LLIN is a factory-treated mosquito net made with netting material that has insecticide incorporated within or bound around the fibres. The net must retain its effective biological activity, without re-treatment for repeated washes, for three years of use under field conditions (WHO/Global Malaria Program, 2007). The current generation of LLINs last three to five years, after which the nets should be replaced.

The National Malaria Control Programme (NMCP) in Kenya distributes only LLINs; however, other varieties of treated and untreated nets may be found in markets or from other sources. In Kenya, an ITN is a net that is either an LLIN or a net treated with insecticide in the past six months.[2] The aim of the National Malaria Strategy 2009-2017 is for 80 percent of people living in endemic and epidemic prone areas to use a form of malaria prevention (MOH, 2015). Accordingly, the NMCP has undertaken efforts towards universal coverage (one net for every two people). Delivery mechanisms include mass and routine distribution of nets, social marketing, the commercial sector, and campaigns specifically targeting vulnerable groups such as young children and pregnant women.

All households interviewed in the 2014 KDHS were asked whether they owned a mosquito net and, if so, how many. Respondents were also asked to show the mosquito nets they owned to the interviewer so that the interviewer could identify the brand and type. Table 12.1 shows the percentage of households with at least one mosquito net (any net, an ITN, or an LLIN), the average number of nets per household, and the percentage of households with at least one net for every two people who slept in the household the previous night.

Sixty-five percent of households in Kenya own at least one mosquito net of any type, 59 percent own at least one ITN, and 57 percent own at least one LLIN. Thirty-four percent of households have reached universal coverage; that is, these households have at least one ITN for every two persons who

[2] This differs slightly from the international definition, which includes nets that have been soaked with insecticide within the past 12 months.

stayed in the household the night before the survey. Household ownership of at least one ITN has improved slightly since the 2008-09 KDHS (56 percent) and the 2010 Kenya Malaria Indicator Survey (KMIS) (48 percent) to the current level of 59 percent.

Slightly more urban households (67 percent) than rural households (64 percent) own at least one mosquito net of any type. However, more rural households (61 percent) than urban households (56 percent) own an ITN. There is marked regional variation in ownership of mosquito nets. The percentage of households that own an ITN is higher in the malaria prone Western (82 percent), Nyanza (81 percent), and Coast (69 percent) regions than in other regions (56 percent or less). As in the 2008-09 KDHS, the 2014 KDHS shows that ownership of at least one ITN is not directly related to household wealth. However, households in the lowest wealth quintile are less likely to own at least one ITN (51 percent) than households in the other wealth quintiles.

Table 12.1 Household possession of mosquito nets

Percentage of households with at least one mosquito net (treated or untreated), insecticide-treated net (ITN), and long-lasting insecticidal net (LLIN); average number of nets, ITNs, and LLINs per household; and percentage of households with at least one net, ITN, and LLIN per two persons[1] who stayed in the household last night, by background characteristics, Kenya 2014

Background characteristic	Percentage of households with at least one mosquito net			Average number of nets per household			Number of households	Percentage of households with at least one net for every two persons who stayed in the household last night[1]			Number of households with at least one person who stayed in the household last night
	Any mosquito net	Insecticide-treated mosquito net (ITN)[2]	Long-lasting insecticidal net (LLIN)	Any mosquito net	Insecticide-treated mosquito net (ITN)[2]	Long-lasting insecticidal net (LLIN)		Any mosquito net	Insecticide-treated mosquito net (ITN)[2]	Long-lasting insecticidal net (LLIN)	
Residence											
Urban	66.5	55.7	53.7	1.2	1.0	1.0	15,290	46.3	37.3	35.6	15,120
Rural	64.2	60.8	60.2	1.3	1.2	1.2	21,140	34.8	32.1	31.7	21,065
Region											
Coast	76.8	69.1	67.9	1.5	1.4	1.3	3,569	50.9	43.3	42.2	3,531
North Eastern	51.2	48.8	48.8	1.1	1.0	1.0	724	24.2	21.9	21.9	722
Eastern	59.6	56.2	55.5	1.1	1.1	1.0	5,262	34.6	31.1	30.5	5,227
Central	43.2	37.7	37.3	0.8	0.7	0.7	5,012	29.7	25.0	24.4	4,990
Rift Valley	59.6	55.6	54.8	1.2	1.1	1.1	9,249	34.7	31.6	31.2	9,195
Western	85.4	81.5	79.6	1.9	1.8	1.7	3,604	48.6	45.3	44.2	3,581
Nyanza	84.9	81.1	80.6	1.7	1.6	1.6	4,559	48.1	45.3	44.8	4,542
Nairobi	64.3	43.3	39.2	1.0	0.7	0.6	4,451	44.4	28.5	24.9	4,397
Wealth quintile											
Lowest	53.4	50.8	50.7	1.0	0.9	0.9	6,077	22.1	20.5	20.5	6,060
Second	64.7	61.1	60.5	1.2	1.1	1.1	6,557	31.2	28.5	28.0	6,528
Middle	67.5	63.6	62.7	1.4	1.3	1.3	6,967	39.3	36.2	35.6	6,910
Fourth	63.7	56.4	55.2	1.2	1.1	1.1	8,225	43.3	37.4	36.7	8,163
Highest	73.3	60.5	57.8	1.5	1.2	1.2	8,603	55.2	43.9	41.3	8,525
Total	65.1	58.7	57.4	1.3	1.1	1.1	36,430	39.6	34.3	33.3	36,185

[1] De facto household members
[2] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment (LLIN) or (2) a net that has been soaked with insecticide within the past six months.

Overall, the average number of ITNs per household is 1.1. The average number of ITNs per household is highest in the Western (1.8) and Nyanza (1.6) regions.

Table 12.1C shows that households in counties in the lakeside endemic zones (Nyanza and Western) are more likely to own at least one ITN than households in counties in other malaria zones. Ownership of an ITN is highest in the counties of Kisumu (88 percent), Kisii (86 percent), and Nyamira (85 percent) in the Nyanza region, followed by Busia (84 percent), Bungoma (83 percent), and Vihiga (83 percent) in the Western region. ITN ownership is lowest in counties in the low risk or seasonal transmission zone: Nyandarua, Laikipia, Samburu, Nyeri, and Elgeyo Marakwet (each less than 25 percent).

Table 12.1C Household possession of mosquito nets

Percentage of households with at least one mosquito net (treated or untreated), insecticide-treated net (ITN), and long-lasting insecticidal net (LLIN); average number of nets, ITNs, and LLINs per household; and percentage of households with at least one net, ITN, and LLIN per two persons who stayed in the household last night, by county, Kenya 2014

County	Percentage of households with at least one mosquito net			Average number of nets per household			Number of households	Percentage of households with at least one net for every two persons who stayed in the household last night[1]			Number of households with at least one person who stayed in the household last night
	Any mosquito net	Insecticide-treated mosquito net (ITN)[2]	Long-lasting insecticidal net (LLIN)	Any mosquito net	Insecticide-treated mosquito net (ITN)[2]	Long-lasting insecticidal net (LLIN)		Any mosquito net	Insecticide-treated mosquito net (ITN)[2]	Long-lasting insecticidal net (LLIN)	
Coast	**76.8**	**69.1**	**67.9**	**1.5**	**1.4**	**1.3**	**3,569**	**50.9**	**43.3**	**42.2**	**3,531**
Mombasa†‡	69.0	56.9	55.4	1.1	0.9	0.9	1,245	50.1	38.9	37.4	1,221
Kwale†‡	82.2	81.0	80.1	1.8	1.7	1.7	704	50.6	47.8	47.1	703
Kilifi†‡	81.7	73.1	71.9	1.9	1.6	1.6	999	49.8	41.5	40.7	993
Tana River†‡	72.8	65.3	65.0	1.5	1.3	1.3	210	40.0	33.0	32.8	208
Lamu†‡	79.5	71.1	70.5	1.8	1.5	1.5	104	58.6	51.2	50.4	102
Taita Taveta†‡	82.5	80.4	79.1	1.7	1.6	1.6	307	63.1	60.6	59.2	304
North Eastern	**51.2**	**48.8**	**48.8**	**1.1**	**1.0**	**1.0**	**724**	**24.2**	**21.9**	**21.9**	**722**
Garissa	64.4	61.1	61.1	1.6	1.4	1.4	265	39.5	34.4	34.4	265
Wajir	55.8	53.6	53.6	1.1	1.1	1.1	242	19.1	18.1	18.1	241
Mandera	29.8	28.7	28.4	0.5	0.5	0.5	217	11.1	10.9	10.9	217
Eastern	**59.6**	**56.2**	**55.5**	**1.1**	**1.1**	**1.0**	**5,262**	**34.6**	**31.1**	**30.5**	**5,227**
Marsabit	31.7	24.7	24.5	0.4	0.3	0.3	146	10.5	7.0	7.0	146
Isiolo†	65.4	62.7	62.5	1.2	1.1	1.1	122	34.0	31.5	31.2	121
Meru†	57.1	53.5	52.1	1.1	1.0	0.9	1,406	33.3	30.6	29.6	1,398
Tharaka-Nithi†	71.1	67.2	66.7	1.4	1.3	1.3	379	48.9	45.8	44.8	375
Embu†	62.3	55.9	54.2	1.3	1.1	1.0	548	43.3	35.3	33.3	539
Kitui†	62.9	61.1	61.1	1.2	1.1	1.1	856	31.3	29.3	29.3	849
Machakos†	59.0	56.0	55.7	1.2	1.1	1.1	1,088	35.7	31.5	31.4	1,088
Makueni†	58.2	55.3	55.0	1.2	1.1	1.1	717	30.1	27.7	27.6	711
Central	**43.2**	**37.7**	**37.3**	**0.8**	**0.7**	**0.7**	**5,012**	**29.7**	**25.0**	**24.4**	**4,990**
Nyandarua	16.4	12.5	12.4	0.3	0.2	0.2	593	9.3	7.1	7.1	589
Nyeri	25.8	19.7	19.2	0.4	0.3	0.3	792	16.1	11.9	11.6	788
Kirinyaga†‡	73.5	68.5	67.2	1.5	1.4	1.3	622	59.2	54.3	53.2	620
Murang'a†	45.4	43.7	43.7	0.9	0.8	0.8	968	28.9	27.1	27.1	965
Kiambu†	47.4	39.9	39.4	0.8	0.7	0.7	2,037	32.2	25.2	24.3	2,028
Rift Valley	**59.6**	**55.6**	**54.8**	**1.2**	**1.1**	**1.1**	**9,249**	**34.7**	**31.6**	**31.2**	**9,195**
Turkana‡	46.2	46.2	46.2	0.7	0.7	0.7	448	16.5	16.3	16.3	446
West Pokot†‡	60.3	60.2	60.2	1.1	1.1	1.1	319	21.3	21.2	21.2	319
Samburu	22.2	18.8	18.2	0.4	0.3	0.3	146	12.3	8.7	8.3	145
Trans-Nzoia†‡	72.7	70.6	69.3	1.6	1.5	1.5	814	40.4	38.4	37.7	809
Uasin Gishu†‡	72.3	72.0	71.8	1.5	1.5	1.5	962	50.2	49.7	49.5	950
Elgeyo Marakwet†	40.1	21.9	20.8	0.7	0.3	0.3	301	20.4	10.1	9.7	301
Nandi†‡	79.2	78.8	78.8	1.6	1.6	1.6	671	42.3	41.9	41.8	667
Baringo†‡	64.4	59.8	59.4	1.2	1.1	1.1	391	36.3	32.8	32.5	387
Laikipia	30.2	17.5	15.5	0.5	0.3	0.2	406	18.5	10.6	8.9	402
Nakuru	42.7	37.7	36.8	0.7	0.6	0.6	1,950	26.6	22.7	22.4	1,948
Narok†‡	53.2	52.2	52.0	1.0	1.0	1.0	752	26.4	25.4	25.4	746
Kajiado†	56.8	49.8	48.1	1.0	0.9	0.8	770	39.3	33.3	32.7	759
Kericho†‡	84.7	79.5	78.5	1.7	1.6	1.6	589	50.5	45.4	44.8	589
Bomet†‡	81.6	77.6	77.3	1.9	1.8	1.8	732	49.2	46.8	46.5	727
Western	**85.4**	**81.5**	**79.6**	**1.9**	**1.8**	**1.7**	**3,604**	**48.6**	**45.3**	**44.2**	**3,581**
Kakamega†‡	85.3	78.8	74.3	1.9	1.7	1.6	1,350	52.7	47.0	44.4	1,341
Vihiga†‡	84.7	82.9	82.7	1.8	1.7	1.7	446	46.8	44.9	44.7	446
Bungoma†‡	84.3	82.9	82.5	1.8	1.8	1.8	1,180	43.0	41.7	41.5	1,170
Busia†‡	88.3	83.9	83.2	2.0	1.9	1.9	628	51.4	48.8	48.3	624
Nyanza	**84.9**	**81.1**	**80.6**	**1.7**	**1.6**	**1.6**	**4,559**	**48.1**	**45.3**	**44.8**	**4,542**
Siaya†‡	84.8	78.8	78.2	1.6	1.5	1.5	725	45.4	41.6	40.9	720
Kisumu†‡	88.9	87.6	87.4	1.7	1.7	1.7	943	54.1	52.6	52.5	939
Homa Bay†‡	81.9	74.3	73.8	1.7	1.5	1.5	877	43.1	37.5	37.2	873
Migori†‡	78.0	74.6	73.3	1.4	1.4	1.3	701	32.2	30.3	29.0	699
Kisii†‡	87.8	86.1	85.8	2.0	1.9	1.9	904	55.8	54.4	54.1	903
Nyamira†‡	87.3	84.5	84.5	1.7	1.7	1.7	409	60.3	57.1	57.1	409
Nairobi	**64.3**	**43.3**	**39.2**	**1.0**	**0.7**	**0.6**	**4,451**	**44.4**	**28.5**	**24.9**	**4,397**
Total	65.1	58.7	57.4	1.3	1.1	1.1	36,430	39.6	34.3	33.3	36,185

[1] De facto household members
[2] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment (LLIN) or (2) a net that has been soaked with insecticide within the past six months.
† Counties in which ITNs are distributed in some or all of the sub-counties routinely by the government of Kenya.
‡ Counties in which ITNs are distributed in some or all of the sub-counties by mass net campaigns by the government of Kenya.

12.3 ACCESS TO INSECTICIDE-TREATED NETS

Use of ITNs is one of the most effective measures for preventing malaria. The government of Kenya, with support from several partners, has distributed millions of mosquito nets across the country. In addition, increasing knowledge among the populace of the importance of using mosquito nets has led to increased demand. The 2014 KDHS data can be used to show the proportion of the population that could sleep under an ITN if each ITN in the household were used by up to two people. This population is referred to as having access to an ITN. Coupled with data on actual mosquito net usage, ITN access data provide useful information on the magnitude of the behavioural gap in ITN ownership and use or, in other words, the population with access to an ITN but not using it. If the difference between these indicators is substantial, the malaria programme may need to focus on behaviour change and identify the main drivers of or barriers to ITN use to design an appropriate intervention. This analysis helps ITN programmes determine whether they need to achieve higher ITN coverage, promote ITN use, or both.

Table 12.2 presents the percent distribution of the de facto household population by the number of ITNs the household owns, according to the number of persons who stayed in the household the night before the survey. Slightly more than one-third (37 percent) of the population slept in homes without any ITNs the night before the survey and, therefore, were not able to use an ITN. About 2 in 10 individuals stayed in households that own one ITN (20 percent) or two ITNs (23 percent), and 15 percent of the population slept in homes with three ITNs. Few individuals slept in homes with more than four ITNs (4 percent or less). Overall, 48 percent of the population has access to an ITN. ITN access gradually decreases as household size increases in households with four or more persons. For example, 51 percent of households where two persons slept the night before the survey had access to an ITN, whereas 41 percent of households where more than eight people slept had access to an ITN.

Table 12.2 Access to an insecticide-treated net (ITN)

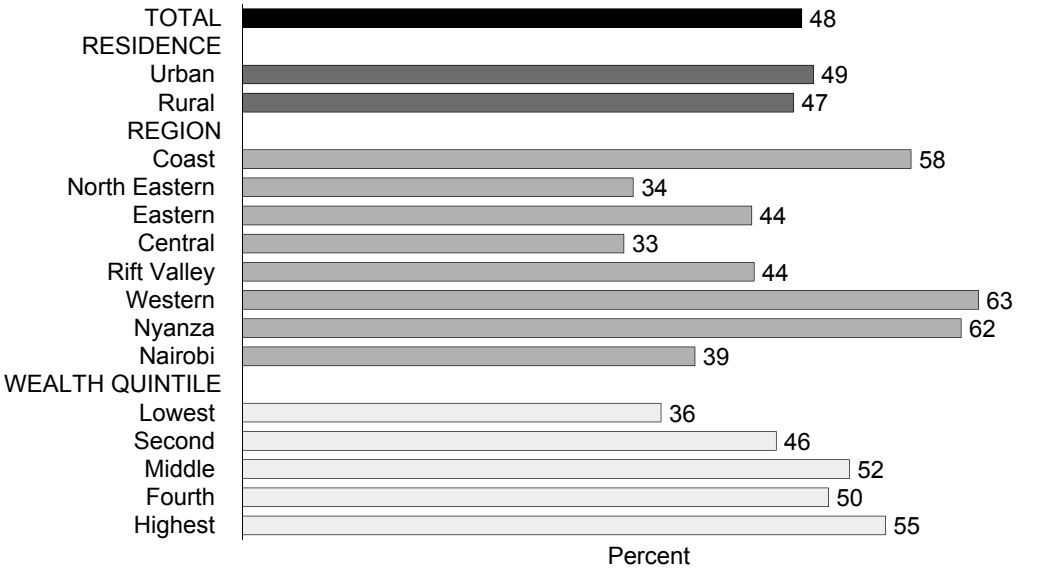
Percent distribution of the de facto household population by number of ITNs the household owns, according to number of persons who stayed in the household the night before the survey, Kenya 2014

	Number of persons who stayed in the household the night before the survey								
Number of ITNs	1	2	3	4	5	6	7	8+	Total
0	56.9	48.6	37.5	35.4	34.5	36.9	33.6	29.7	36.6
1	35.3	30.7	28.6	21.5	16.3	14.3	15.8	12.1	19.7
2	6.0	15.2	23.6	27.5	27.7	24.1	22.3	19.3	22.7
3	1.4	4.2	8.8	12.6	16.8	18.6	19.1	22.4	14.8
4	0.3	0.9	1.1	2.0	3.1	3.8	6.0	7.8	3.5
5	0.2	0.2	0.3	0.7	0.9	1.5	2.2	4.4	1.5
6	0.0	0.1	0.2	0.1	0.6	0.7	0.9	3.1	0.9
7+	0.0	0.1	0.0	0.1	0.1	0.1	0.1	1.4	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	7,049	10,100	17,382	23,872	23,297	18,496	13,806	23,778	137,780
Percent with access to an ITN[1]	43.1	51.4	53.0	53.8	50.2	45.6	42.8	41.1	48.0

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

Figure 12.1 shows the percentage of the de facto population with access to an ITN in the household by residence, region, and wealth quintile. Forty-eight percent of household members in Kenya have access to an ITN. While there is little difference in ITN access between urban and rural areas (49 percent and 47 percent, respectively), there are wide regional variations in ITN access. The majority of household members in Western and Nyanza, within the endemic zones, had access to an ITN (63 percent and 62 percent, respectively). Access to ITNs is lower in Nairobi (39 percent), North Eastern (34 percent), and Central (33 percent). Access to ITNs among household members increases with increasing household wealth, from 36 percent in the lowest wealth quintile to 55 percent in the highest quintile.

Figure 12.1 **Percentage of the de facto population with access to an ITN[1] in the household**



[1] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment (LLIN), or (2) a net that has been soaked with insecticide within the past 6 months.

KDHS 2014

12.4 USE OF MOSQUITO NETS

12.4.1 Overall Use of Mosquito Nets

Mosquito net coverage of the entire population is necessary to achieve a large reduction in the malaria burden. Although vulnerable groups, such as children under age 5 and pregnant women, should still be prioritised, the equitable and communal benefits of wide-scale ITN use by older children and adults should be promoted and evaluated by national malaria control programmes (Killeen et al., 2007). The 2014 KDHS asked about use of mosquito nets by household members during the night before the survey.

Table 12.3 presents the percentage of the de facto household population that slept under a mosquito net of any type, under an ITN, or under an LLIN the night before the survey. Two-fifths of the household population (42 percent) slept under an ITN the night prior to the survey. Two-thirds (67 percent) of members of households with at least one ITN slept under an ITN the night prior to the survey.

A higher percentage of women (45 percent) than men (40 percent) slept under an ITN the night prior to the survey. Urban residents (46 percent) are more likely to sleep under an ITN than those in rural areas (41 percent). The Nyanza region (61 percent) has the highest percentage of the household population that slept under an ITN the night prior to the survey, and the Central region (27 percent) has the lowest percentage. The percentage of the household population that slept under an ITN on the night before the survey generally increases with increasing wealth.

Net usage among the population that owns at least one ITN (the final two columns of Table 12.3) is greater than that of the general population, indicating that ITN ownership increases the likelihood of net usage. Variations in ITN use among households that own at least one ITN are similar to those within the general population, with the exception that Nairobi had the highest prevalence of ITN use (78 percent).

Table 12.3 Use of mosquito nets by persons in the household

Percentage of the de facto household population who slept the night before the survey under a mosquito net (treated or untreated), under an insecticide-treated net (ITN), and under a long-lasting insecticidal net (LLIN); and among the de facto household population in households with at least one ITN, the percentage who slept under an ITN the night before the survey, by background characteristics, Kenya 2014

	Household population				Household population in households with at least one ITN[1]	
Background characteristic	Percentage who slept under any net last night	Percentage who slept under an ITN[1] last night	Percentage who slept under an LLIN last night	Number	Percentage who slept under an ITN[1] last night	Number
Age in months						
<5	58.9	54.1	53.0	19,798	76.9	13,913
5-14	40.0	36.5	35.9	40,025	56.9	25,681
15-34	45.7	40.9	39.8	44,456	65.3	27,861
35-39	53.2	47.3	46.4	17,900	76.8	11,041
50+	46.7	41.8	40.7	15,584	73.8	8,820
Sex						
Male	44.4	40.1	39.2	67,439	64.3	42,070
Female	49.5	44.7	43.7	70,341	69.4	45,251
Residence						
Urban	54.0	45.5	43.7	47,445	74.7	28,885
Rural	43.4	40.9	40.3	90,335	63.2	58,437
Region						
Coast	61.3	54.9	54.3	13,581	74.3	10,048
North Eastern	32.9	30.1	30.1	3,976	61.3	1,957
Eastern	39.4	36.8	36.3	20,176	61.4	12,085
Central	30.5	26.8	26.2	15,922	66.8	6,385
Rift Valley	37.0	34.6	34.2	36,251	58.6	21,413
Western	60.8	57.5	56.0	16,118	68.5	13,520
Nyanza	63.7	60.5	60.0	19,231	73.2	15,908
Nairobi	55.0	37.3	33.5	12,524	77.9	6,007
Wealth quintile						
Lowest	32.4	30.6	30.5	27,438	55.8	15,034
Second	43.8	41.1	40.5	27,673	62.7	18,141
Middle	49.3	46.5	45.9	27,735	67.3	19,144
Fourth	50.2	44.9	44.0	27,562	71.9	17,232
Highest	59.5	49.1	46.6	27,372	75.6	17,770
Total	47.0	42.4	41.5	137,780	67.0	87,321

Note: Total includes 16 household members for whom age is missing.
[1] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment (LLIN), or (2) a net that has been soaked with insecticide within the past six months.

Table 12.3C presents use of mosquito nets by the household population across counties. The percentage of people who slept under an ITN the night prior to the survey ranges from 5 percent in Nyandarua to 71 percent in Kisii. Generally, individuals in the at-risk counties in Western, Nyanza, and Coast are more likely to have slept under an ITN the night before the survey than those in other counties or regions.

Table 12.3C Use of mosquito nets by persons in the household

Percentage of the de facto household population who slept the night before the survey under a mosquito net (treated or untreated), under an insecticide-treated net (ITN), and under a long-lasting insecticidal net (LLIN); and among the de facto household population in households with at least one ITN, the percentage who slept under an ITN the night before the survey, by county, Kenya 2014

	Household population				Household population in households with at least one ITN[1]	
County	Percentage who slept under any net last night	Percentage who slept under an ITN[1] last night	Percentage who slept under an LLIN last night	Number	Percentage who slept under an ITN[1] last night	Number
Coast	**61.3**	**54.9**	**54.3**	**13,581**	**74.3**	**10,048**
Mombasa	54.7	46.2	45.2	3,487	75.9	2,121
Kwale	67.2	64.0	63.5	2,953	75.6	2,499
Kilifi	63.5	55.6	55.2	4,782	72.8	3,655
Tana River	48.5	44.6	44.5	975	66.9	650
Lamu	62.4	53.1	52.6	414	77.2	285
Taita Taveta	68.8	67.0	65.6	971	77.6	838
North Eastern	**32.9**	**30.1**	**30.1**	**3,976**	**61.3**	**1,957**
Garissa	46.2	41.3	41.3	1,450	68.6	873
Wajir	32.2	30.2	30.2	1,349	54.1	753
Mandera	17.3	16.3	16.1	1,177	58.2	330
Eastern	**39.4**	**36.8**	**36.3**	**20,176**	**61.4**	**12,085**
Marsabit	8.7	7.1	7.0	636	28.2	159
Isiolo	43.3	40.8	40.7	510	64.3	324
Meru	42.9	39.1	37.9	4,924	68.7	2,806
Tharaka-Nithi	49.8	47.0	46.3	1,308	67.4	914
Embu	43.1	37.4	36.5	1,875	61.1	1,149
Kitui	31.4	30.8	30.8	3,714	47.0	2,437
Machakos	45.0	42.8	42.5	4,098	70.3	2,494
Makueni	35.0	33.1	32.8	3,111	57.1	1,802
Central	**30.5**	**26.8**	**26.2**	**15,922**	**66.8**	**6,385**
Nyandarua	6.5	5.2	5.1	2,115	41.9	260
Nyeri	13.0	9.3	9.1	2,419	43.1	521
Kirinyaga	64.0	60.7	59.5	1,853	81.5	1,379
Murang'a	32.3	31.1	31.1	3,186	65.4	1,513
Kiambu	34.6	28.6	27.7	6,350	67.0	2,711
Rift Valley	**37.0**	**34.6**	**34.2**	**36,251**	**58.6**	**21,413**
Turkana	15.3	15.3	15.3	1,835	31.3	897
West Pokot	27.9	27.7	27.7	1,594	43.0	1,027
Samburu	13.8	11.7	11.6	623	67.4	108
Trans-Nzoia	47.8	46.3	45.5	3,694	61.8	2,768
Uasin Gishu	55.7	55.5	55.2	3,496	71.6	2,707
Elgeyo Marakwet	24.0	11.5	10.6	1,195	48.6	282
Nandi	45.7	45.5	45.4	2,947	55.6	2,412
Baringo	38.7	35.7	35.6	1,556	55.6	998
Laikipia	17.6	10.3	9.0	1,470	63.0	240
Nakuru	26.1	23.5	22.9	6,490	63.3	2,405
Narok	27.6	27.0	26.8	3,218	50.9	1,711
Kajiado	38.0	33.0	31.8	2,552	67.4	1,251
Kericho	50.3	47.6	47.2	2,409	57.6	1,990
Bomet	51.6	48.5	48.1	3,172	58.7	2,616
Western	**60.8**	**57.5**	**56.0**	**16,118**	**68.5**	**13,520**
Kakamega	59.5	54.3	50.4	5,597	66.2	4,589
Vihiga	60.0	58.5	58.4	1,949	68.1	1,676
Bungoma	59.5	57.6	57.5	5,738	69.0	4,796
Busia	66.4	62.8	62.2	2,834	72.3	2,459
Nyanza	**63.7**	**60.5**	**60.0**	**19,231**	**73.2**	**15,908**
Siaya	62.0	57.4	57.0	2,890	69.5	2,387
Kisumu	71.0	70.3	70.1	3,685	78.1	3,316
Homa Bay	57.8	50.7	49.9	4,005	68.1	2,981
Migori	51.9	49.5	47.9	3,346	64.7	2,560
Kisii	72.5	71.3	71.2	3,759	80.2	3,341
Nyamira	68.6	66.5	66.5	1,548	77.8	1,322
Nairobi	**55.0**	**37.3**	**33.5**	**12,524**	**77.9**	**6,007**
Total	47.0	42.4	41.5	137,780	67.0	87,321

[1] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment (LLIN), or (2) a net that has been soaked with insecticide within the past six months.

Table 12.4 presents the percentage of ITNs used in the household by anyone the night before the survey, by background characteristics. Overall, 77 percent of ITNs were used by anyone in the household the night before the survey. Net use was higher in urban areas (80 percent) than in rural areas (76 percent). Net use is lowest in Rift Valley (69 percent) and highest in Nairobi (86 percent), Nyanza (85 percent), and North Eastern (85 percent). This finding is interesting given that Nairobi and North Eastern are in areas of decreased risk. Households in the lowest wealth quintile are least likely to use existing ITNs (71 percent).

Table 12.4C shows that use of existing ITNs by county ranges from 44 percent in Turkana to 92 percent in Mandera. The counties in the coastal and lakeside endemic zones report higher use of existing ITNs; coastal county rates range from 73 percent in Tana River to 86 percent in Kilifi, and lakeside county rates range from 72 percent in Kakamega to 88 percent in Nyamira.

Table 12.4 Use of existing ITNs

Percentage of insecticide-treated nets (ITNs) that were used by anyone the night before the survey, by background characteristics, Kenya 2014

Background characteristic	Percentage of existing ITNs[1] used last night	Number of ITNs[1]
Residence		
Urban	79.8	15,166
Rural	75.8	26,120
Region		
Coast	81.2	4,874
North Eastern	84.6	753
Eastern	72.8	5,533
Central	75.2	3,383
Rift Valley	68.8	9,912
Western	78.8	6,372
Nyanza	84.6	7,429
Nairobi	85.7	3,031
Wealth quintile		
Lowest	71.4	5,602
Second	78.2	7,394
Middle	80.0	8,838
Fourth	78.3	9,036
Highest	76.5	10,416
Total	77.3	41,286

[1] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment (LLIN), or (2) a net that has been soaked with insecticide within the past six months.

Table 12.4C Use of existing ITNs

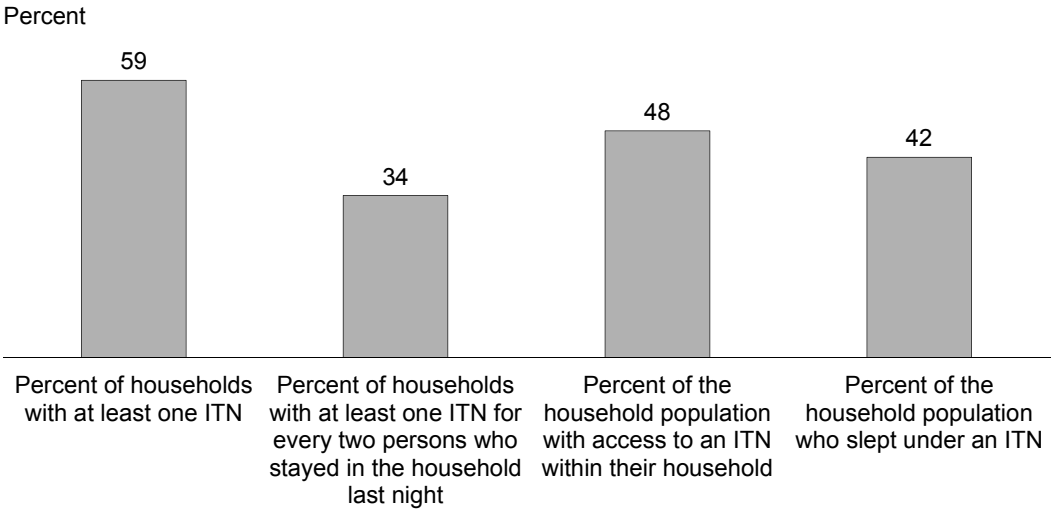
Percentage of insecticide-treated nets (ITNs) that were used by anyone the night before the survey, by county, Kenya 2014

County	Percentage of existing ITNs[1] used last night	Number of ITNs[1]
Coast	**81.2**	**4,874**
Mombasa	78.6	1,099
Kwale	82.3	1,215
Kilifi	86.0	1,619
Tana River	73.0	279
Lamu	80.0	159
Taita Taveta	74.3	503
North Eastern	**84.6**	**753**
Garissa	86.1	381
Wajir	78.9	260
Mandera	92.3	112
Eastern	**72.8**	**5,533**
Marsabit	49.0	48
Isiolo	76.1	136
Meru	79.0	1,344
Tharaka-Nithi	76.7	487
Embu	70.3	575
Kitui	60.9	983
Machakos	78.3	1,179
Makueni	69.4	780
Central	**75.2**	**3,383**
Nyandarua	50.9	123
Nyeri	51.5	257
Kirinyaga	85.3	846
Murang'a	74.5	782
Kiambu	76.0	1,374
Rift Valley	**68.8**	**9,912**
Turkana	43.9	311
West Pokot	57.8	353
Samburu	82.6	44
Trans-Nzoia	68.3	1,239
Uasin Gishu	79.3	1,426
Elgeyo Marakwet	69.6	104
Nandi	71.1	1,048
Baringo	65.8	436
Laikipia	77.0	111
Nakuru	73.9	1,153
Narok	62.2	728
Kajiado	68.9	677
Kericho	67.1	955
Bomet	65.2	1,327
Western	**78.8**	**6,372**
Kakamega	71.9	2,343
Vihiga	86.4	757
Bungoma	81.9	2,082
Busia	82.1	1,190
Nyanza	**84.6**	**7,429**
Siaya	86.9	1,089
Kisumu	86.4	1,616
Homa Bay	80.1	1,324
Migori	84.5	963
Kisii	83.6	1,754
Nyamira	88.1	683
Nairobi	**85.7**	**3,031**
Total	77.3	41,286

[1] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment (LLIN), or (2) a net that has been soaked with insecticide within the past six months.

Figure 12.2 presents data on ownership of, access to, and use of ITNs. Although more than half of households own at least one ITN (59 percent), only one-third (34 percent) own at least one ITN for every two persons. Forty-eight percent of the household population has access to an ITN, and 42 percent slept under an ITN.

Figure 12.2 **Ownership of, access to, and use of ITNs[1]**



[1] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment (LLIN), or (2) a net that has been soaked with insecticide within the past 6 months.

KDHS 2014

12.4.2 Use of Mosquito Nets by Children Under Age 5

Use of mosquito nets by vulnerable groups in highly endemic communities is one of the major malaria control and prevention strategies adopted under the National Malaria Strategy (MOH, 2015). Young children are especially vulnerable to malaria. For about six months following birth, antibodies acquired from the mother during pregnancy protect children born in areas of endemic malaria. This immunity is gradually lost, and children start to develop their own immunity to malaria. The pace at which immunity is developed depends on their exposure to malaria infection, and, in highly malaria endemic areas, children are thought to have attained a high level of immunity by their fifth birthday. Such children may experience episodes of malaria illness but usually do not suffer from severe, life-threatening malaria. Immunity in areas of low malaria transmission is acquired more slowly, and malaria illness affects all age groups of the population.

Table 12.5 shows that 54 percent of children under age 5 slept under an ITN the night before the survey. Children in urban areas are more likely to sleep under an ITN (59 percent) than those in rural areas (52 percent). In households overall, children in Nyanza and Western (69 percent) are more likely to sleep under an ITN than children in other regions; however, in households that own at least one ITN, the percentage of children in Nairobi, Coast, and Central (81-86 percent) who slept under an ITN the night before the survey is equivalent to or higher than the percentage of children in the at-risk areas of Western and Nyanza (79 percent and 81 percent, respectively). The percentage of children who slept under an ITN the night before the survey increases with increasing wealth.

Use of mosquito nets among children under age 5 by county is presented in Table 12.5C. The percentage of children under age 5 who slept under an ITN the night before the survey ranges from 12 percent in Marsabit and Nyandarau to 82 percent in Taita Taveta and Kisumu. As expected, more children sleep under an ITN in the counties in the lakeside and coastal endemic zones.

Table 12.5 Use of mosquito nets by children

Percentage of children under five years of age who, the night before the survey, slept under a mosquito net (treated or untreated), under an insecticide-treated net (ITN), and under a long-lasting insecticidal net (LLIN); and among children under five years of age in households with at least one ITN, the percentage who slept under an ITN the night before the survey, by background characteristics, Kenya 2014

	Children under age five in all households				Children under age five in households with at least one ITN[1]	
Background characteristic	Percentage who slept under any net last night	Percentage who slept under an ITN[1] last night	Percentage who slept under an LLIN last night	Number of children	Percentage who slept under an ITN[1] last night	Number of children
Age in months						
<12	67.1	62.8	62.0	3,700	82.3	2,825
12-23	62.8	57.6	56.4	3,919	81.2	2,780
24-35	58.9	54.3	53.0	4,011	77.5	2,813
36-47	54.1	48.3	47.5	4,209	71.6	2,839
48-59	52.3	48.3	46.9	3,959	71.9	2,657
Sex						
Male	59.2	54.7	53.7	10,059	77.8	7,070
Female	58.5	53.4	52.2	9,740	76.0	6,843
Residence						
Urban	68.3	58.9	56.7	6,563	84.5	4,570
Rural	54.2	51.7	51.1	13,236	73.2	9,343
Region						
Coast	70.5	65.4	64.9	2,006	82.2	1,596
North Eastern	43.8	40.2	40.1	664	77.7	343
Eastern	55.7	53.1	52.7	2,464	73.5	1,779
Central	47.4	43.0	42.2	1,792	80.8	954
Rift Valley	45.7	43.0	42.4	5,713	68.9	3,564
Western	71.8	68.8	67.2	2,526	78.9	2,203
Nyanza	71.6	68.9	68.3	2,894	80.7	2,470
Nairobi	70.7	49.5	44.4	1,738	85.8	1,003
Wealth quintile						
Lowest	42.3	40.4	40.2	4,850	66.5	2,949
Second	57.6	55.2	54.6	4,231	74.4	3,137
Middle	60.6	57.3	56.6	3,636	77.2	2,696
Fourth	66.0	59.6	58.5	3,411	83.3	2,441
Highest	73.8	62.5	59.2	3,670	85.3	2,691
Total	58.9	54.1	53.0	19,798	76.9	13,913

Note: Table is based on children who stayed in the household the night before the interview.
[1] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment (LLIN), or (2) a net that has been soaked with insecticide within the past six months.

Table 12.5C Use of mosquito nets by children

Percentage of children under five years of age who, the night before the survey, slept under a mosquito net (treated or untreated), under an insecticide-treated net (ITN), and under a long-lasting insecticidal net (LLIN); and among children under five years of age in households with at least one ITN, the percentage who slept under an ITN the night before the survey, by county, Kenya 2014

	Children under age five in all households				Children under age five in households with at least one ITN[1]	
County	Percentage who slept under any net last night	Percentage who slept under an ITN[1] last night	Percentage who slept under an LLIN last night	Number of children	Percentage who slept under an ITN[1] last night	Number of children
Coast	**70.5**	**65.4**	**64.9**	**2,006**	**82.2**	**1,596**
Mombasa	67.2	61.5	61.0	477	85.9	342
Kwale	74.6	72.4	71.9	421	83.4	365
Kilifi	70.9	63.6	63.3	759	79.1	611
Tana River	60.1	57.4	57.2	174	78.3	128
Lamu	68.8	57.7	57.6	55	81.0	39
Taita Taveta	83.2	82.0	80.0	120	88.8	111
North Eastern	**43.8**	**40.2**	**40.1**	**664**	**77.7**	**343**
Garissa	52.5	47.6	47.6	239	77.2	147
Wajir	46.1	42.8	42.8	260	76.1	146
Mandera	27.5	25.5	24.9	165	84.1	50
Eastern	**55.7**	**53.1**	**52.7**	**2,464**	**73.5**	**1,779**
Marsabit	15.0	12.1	11.8	93	43.7	26
Isiolo	60.6	57.7	57.6	83	80.9	59
Meru	64.3	59.3	58.5	541	81.8	393
Tharaka-Nithi	65.4	61.9	60.9	155	77.8	123
Embu	63.0	58.5	58.5	204	72.3	165
Kitui	39.8	39.6	39.6	494	54.2	361
Machakos	65.0	62.9	62.5	515	85.0	381
Makueni	52.5	50.8	50.6	379	70.9	272
Central	**47.4**	**43.0**	**42.2**	**1,792**	**80.8**	**954**
Nyandarua	14.8	12.3	12.0	259	69.7	46
Nyeri	24.1	17.4	17.2	268	62.6	75
Kirinyaga	81.1	78.9	78.0	196	89.6	173
Murang'a	58.0	57.0	57.0	315	81.3	221
Kiambu	53.6	47.5	45.9	755	81.3	441
Rift Valley	**45.7**	**43.0**	**42.4**	**5,713**	**68.9**	**3,564**
Turkana	21.0	21.0	21.0	372	40.8	192
West Pokot	43.4	42.9	42.9	306	61.4	214
Samburu	18.2	16.6	16.6	117	86.1	23
Trans-Nzoia	60.2	59.2	58.8	570	74.8	452
Uasin Gishu	69.8	69.3	69.2	498	84.1	410
Elgeyo Marakwet	39.1	16.9	16.5	179	56.5	53
Nandi	55.2	55.0	55.0	416	67.1	341
Baringo	52.5	49.1	49.1	235	69.2	167
Laikipia	22.2	13.6	10.9	216	78.7	37
Nakuru	34.1	30.7	29.7	880	74.6	363
Narok	31.5	31.1	30.7	640	56.1	355
Kajiado	47.7	42.8	40.9	447	81.4	235
Kericho	55.7	53.1	52.3	349	61.4	302
Bomet	63.0	60.0	59.8	487	69.7	419
Western	**71.8**	**68.8**	**67.2**	**2,526**	**78.9**	**2,203**
Kakamega	66.0	62.6	58.6	860	73.1	737
Vihiga	72.5	70.9	70.9	263	78.3	238
Bungoma	73.7	71.5	71.3	955	82.0	832
Busia	78.4	73.9	72.9	448	83.5	396
Nyanza	**71.6**	**68.9**	**68.3**	**2,894**	**80.7**	**2,470**
Siaya	71.3	67.8	67.5	428	77.1	376
Kisumu	82.2	81.7	81.4	529	88.4	489
Homa Bay	63.9	56.4	55.6	658	74.8	496
Migori	63.0	62.2	60.4	556	74.4	464
Kisii	80.4	79.5	79.5	516	88.5	464
Nyamira	70.5	69.6	69.6	207	79.8	181
Nairobi	70.7	49.5	44.4	1,738	85.8	1,003
Total	58.9	54.1	53.0	19,798	76.9	13,913

Note: Table is based on children who stayed in the household the night before the interview.
[1] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment (LLIN), or (2) a net that has been soaked with insecticide within the past six months.

12.4.3 Use of Mosquito Nets by Pregnant Women

In malaria endemic areas, adults usually have acquired some degree of immunity to severe, life-threatening malaria. However, pregnancy leads to depression of the immune system, and thus pregnant women, especially those in their first pregnancy, have a higher risk of malaria. Moreover, these infections may be asymptomatic, may lead to malaria-induced anaemia, and may interfere with the mother-foetus exchange, resulting in low birth weight births. During pregnancy, women can reduce their risk of adverse malaria effects by sleeping under ITNs. Accordingly, the goal of the National Malaria Strategy is for 80 percent of pregnant women to sleep under an ITN (MOH, 2015).

Table 12.6 shows that 51 percent of pregnant women age 15-49 slept under an ITN the night before the survey. Although there is almost no urban-rural difference, there are variations by region; pregnant women in the malaria prone Nyanza (71 percent), Western (67 percent), and Coast (63 percent) regions are more likely to have slept under an ITN than pregnant women in other regions (50 percent or less). Pregnant women with no education and those in the lowest wealth quintile were substantially less likely to have slept under an ITN than their more educated or wealthier counterparts. Not surprisingly, pregnant women in households that own at least one ITN are 1.5 times more likely than pregnant women in the general population to have used an ITN (77 percent compared with 51 percent). There are insufficient cases to evaluate these indicators at the county level, so data at this level are not presented.

Table 12.6 Use of mosquito nets by pregnant women

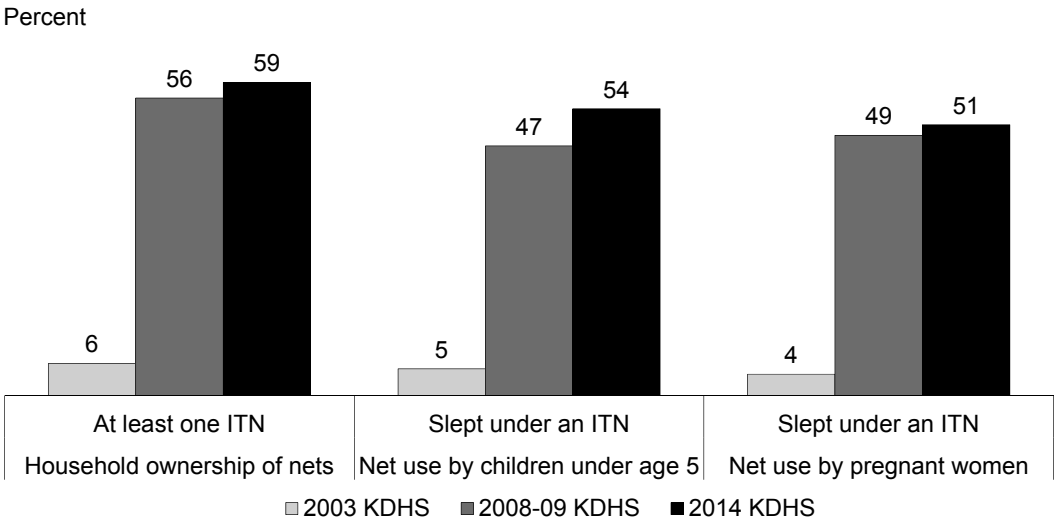
Percentages of pregnant women age 15-49 who, the night before the survey, slept under a mosquito net (treated or untreated), under an insecticide-treated net (ITN), and under a long-lasting insecticidal net (LLIN); and among pregnant women age 15-49 in households with at least one ITN, the percentage who slept under an ITN the night before the survey, by background characteristics, Kenya 2014

	Among pregnant women age 15-49 in all households				Among pregnant women age 15-49 in households with at least one ITN[1]	
Background characteristic	Percentage who slept under any net last night	Percentage who slept under an ITN[1] last night	Percentage who slept under an LLIN last night	Number of women	Percentage who slept under an ITN[1] last night	Number of women
Residence						
Urban	60.5	51.1	49.4	750	80.8	474
Rural	52.8	50.1	49.7	1,188	74.0	804
Region						
Coast	71.3	63.1	63.1	202	86.9	147
North Eastern	43.4	43.1	43.1	78	82.4	41
Eastern	52.3	49.8	49.3	204	72.3	141
Central	38.7	34.7	34.7	188	73.0	89
Rift Valley	42.1	40.4	40.1	562	67.6	336
Western	70.5	66.7	66.4	220	75.7	194
Nyanza	76.0	70.9	69.1	242	86.4	199
Nairobi	61.0	43.3	39.6	241	(78.8)	133
Education						
No education	32.3	32.1	32.1	240	70.9	109
Primary incomplete	53.2	50.5	50.0	507	73.3	349
Primary complete	60.2	51.9	50.3	482	78.4	319
Secondary+	62.5	55.8	54.8	708	78.7	501
Wealth quintile						
Lowest	39.7	38.2	37.8	459	73.0	240
Second	59.6	56.6	56.0	358	74.6	272
Middle	61.0	58.1	58.1	349	76.3	265
Fourth	59.3	51.0	49.7	368	77.7	241
Highest	62.8	52.0	50.0	403	80.9	259
Total	55.8	50.5	49.6	1,937	76.5	1,278

Notes: Table is based on women who stayed in the household the night before the interview. Figures in parentheses are based on 25-49 unweighted cases.
[1] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment (LLIN), or (2) a net that has been soaked with insecticide within the past six months.

Figure 12.3 shows that ownership and use of mosquito nets have increased in the last decade, with the largest changes from 2003 to 2008-09. The percentage of households that own at least one ITN increased from 6 percent in 2003 to 59 percent in 2014. The proportion of children under age 5 who slept under an ITN increased from 5 percent to 54 percent, and the percentage of pregnant women age 15-49 who slept under an ITN increased from 4 percent to 51 percent. It is important to note that the timing of data collection can affect net use indicators, since fieldwork for the three surveys may or may not have included the full malaria season.

Figure 12.3 **Trends in ITN[1] ownership and use**



[1] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment (LLIN), or (2) a net that has been soaked with insecticide within the past six months.

12.5 PREVENTIVE MALARIA TREATMENT DURING PREGNANCY

Intermittent preventive treatment during pregnancy (IPTp), an important component of malaria control, is intended to reduce malaria during pregnancy. The government of Kenya's IPTp policy states that all pregnant women living in malaria endemic areas should receive at least two doses of sulfadoxine-pyrimethamine (SP), an effective antimalarial drug, during routine antenatal care (ANC) visits. Areas outside of endemic zones do not implement IPTp (MOH, 2010). The first dose of SP should be given at 16 weeks of gestation, and subsequent doses should be administered at each ANC visit, a minimum of one month later (MOH, 2014).

In the 2014 KDHS, women who had a live birth in the two years preceding the survey were asked if they had taken any drugs to prevent them from getting malaria during the pregnancy for their most recent birth and, if so, which drugs. If the respondent did not know the name of the drug she took, interviewers were instructed to show her some examples of common antimalarials. If respondents had taken SP or Fansidar, they were further asked how many times they had taken it and whether they had received it during an antenatal care visit.

Table 12.7 shows the percentage of women who took various doses of SP/Fansidar, at least one during an ANC visit, by background characteristics. Nationally, 17 percent of women took the recommended two or more doses of SP/Fansidar, with at least one dose being administered during an ANC visit. This is a slight increase from 15 percent in the 2008-09 KDHS. Only 10 percent received three or more doses, with at least one dose being administered during an ANC visit. Table 12.7C presents these data by county, with attention given to areas where the government of Kenya implements IPTp. Specifically within these endemic focus areas, 39 percent of women received the recommended two or more doses.

Table 12.7 indicates that rural women are slightly more likely to receive SP/Fansidar during ANC than their urban counterparts. Eighteen percent of rural women received the recommended two or more doses, as compared with 14 percent of urban women. Receipt of two or more doses is not clearly associated with education or wealth at the national level.

Table 12.7 Use of Intermittent Preventive Treatment (IPTp) by women during pregnancy

Percentage of women age 15-49 with a live birth in the two years preceding the survey who, during the pregnancy preceding the last birth, received one or more doses of SP/Fansidar at least one of which was received during an ANC visit, received two or more doses of SP/Fansidar at least one of which was received during an ANC visit, and received three or more doses of SP/Fansidar at least one of which was received during an ANC visit, by background characteristics, Kenya 2014

Background characteristic	Percentage who received 1 or more doses of SP/Fansidar[1]	Percentage who received 2 or more doses of SP/Fansidar[1]	Percentage who received 3 or more doses of SP/Fansidar[1]	Number of women with a live birth in the two years preceding the survey
Residence				
Urban	26.8	14.1	7.8	2,618
Rural	31.0	18.4	11.4	4,739
Region				
Coast	73.7	52.5	32.7	793
North Eastern	5.2	2.1	1.1	228
Eastern	24.3	9.8	5.0	872
Central	16.4	4.5	2.4	682
Rift Valley	14.6	6.9	4.5	2,167
Western	53.4	38.4	26.2	827
Nyanza	43.3	21.8	9.7	1,035
Nairobi	6.3	1.3	0.8	753
Education				
No education	28.9	17.3	11.3	834
Primary incomplete	32.0	18.6	11.2	2,036
Primary complete	31.4	17.4	10.3	1,987
Secondary+	26.3	14.9	8.6	2,499
Wealth quintile				
Lowest	33.2	19.7	11.5	1,823
Second	29.4	16.5	10.1	1,461
Middle	32.4	20.5	13.5	1,332
Fourth	27.1	13.9	8.0	1,283
Highest	24.6	13.0	7.1	1,458
Total	29.5	16.9	10.1	7,357

[1] Received the specified number of doses of SP/Fansidar, at least one of which was received during an ANC visit

Table 12.7C shows that the areas in which the government of Kenya implements IPTp, in fact, report higher rates of IPTp than other areas. More than half of women with a live birth in the preceding two years received the recommended IPTp dosage in the Coast region (53 percent). Thirty-eight percent received two or more doses in Western, and 25 percent received two or more doses in Nyanza's focus counties. In the areas of IPTp implementation, more than half of women in Kwale (79 percent), Lamu (60 percent), and Taita Taveta (55 percent) received two or more doses. Less than one-quarter of women are receiving the recommended doses in Siaya and Homa Bay (both 23 percent).

Table 12.7C Use of Intermittent Preventive Treatment (IPTp) by women during pregnancy

Percentage of women age 15-49 with a live birth in the two years preceding the survey who, during the pregnancy preceding the last birth, received one or more doses of SP/Fansidar at least one of which was received during an ANC visit, received two or more doses of SP/Fansidar at least one of which was received during an ANC visit, and received three or more doses of SP/Fansidar at least one of which was received during an ANC visit, by county, Kenya 2014

Background characteristic	Percentage who received 1 or more doses of SP/Fansidar[1]	Percentage who received 2 or more doses of SP/Fansidar[1]	Percentage who received 3 or more doses of SP/Fansidar[1]	Number of women with a live birth in the two years preceding the survey
Areas of IPTp implementation	**58.9**	**38.7**	**23.6**	**2,396**
Coast	**73.7**	**52.5**	**32.7**	**793**
Mombasa	67.3	46.4	24.9	190
Kwale	91.8	79.1	51.9	181
Kilifi	65.2	41.8	28.5	293
Tana River	77.0	41.6	21.4	68
Lamu	81.0	60.0	35.7	19
Taita Taveta	75.0	55.1	31.9	42
Western	**53.4**	**38.4**	**26.2**	**827**
Kakamega	36.2	28.1	20.1	244
Vihiga	72.9	47.1	20.5	83
Bungoma	57.5	39.6	27.7	354
Busia	60.9	47.9	36.1	146
Nyanza (focus counties)	**49.6**	**24.7**	**11.5**	**775**
Siaya	56.9	23.4	15.0	142
Kisumu	58.2	26.9	5.9	177
Homa Bay	38.4	22.8	12.3	253
Migori	51.0	26.1	12.9	203
Areas IPTp not implemented	**15.3**	**6.3**	**3.6**	**4,961**
North Eastern	**5.2**	**2.1**	**1.1**	**228**
Garissa	2.7	1.0	0.8	86
Wajir	4.4	2.0	0.5	93
Mandera	11.3	4.3	3.0	49
Eastern	**24.3**	**9.8**	**5.0**	**872**
Marsabit	1.5	1.2	0.6	35
Isiolo	47.7	3.3	1.3	33
Meru	19.1	3.8	0.0	198
Tharaka-Nithi	25.9	10.3	7.1	56
Embu	15.0	1.1	0.0	81
Kitui	42.2	25.8	16.0	164
Machakos	16.5	8.3	2.5	190
Makueni	26.5	10.1	7.4	115
Central	**16.4**	**4.5**	**2.4**	**682**
Nyandarua	7.3	3.0	2.2	97
Nyeri	5.2	3.2	1.9	92
Kirinyaga	10.2	8.4	3.7	61
Murang'a	14.4	4.8	1.9	120
Kiambu	24.5	4.4	2.6	312
Rift Valley	**14.6**	**6.9**	**4.5**	**2,167**
Turkana	52.4	22.7	13.0	131
West Pokot	3.1	3.0	2.9	121
Samburu	6.3	2.9	2.8	46
Trans-Nzoia	10.5	3.7	3.2	218
Uasin Gishu	7.8	7.0	6.4	187
Elgeyo Marakwet	15.2	4.3	1.8	65
Nandi	11.3	3.4	1.9	153
Baringo	21.2	9.9	6.7	94
Laikipia	19.4	7.0	1.6	78
Nakuru	19.2	9.3	4.2	332
Narok	6.6	1.4	0.6	237
Kajiado	20.6	12.3	8.5	179
Kericho	7.5	4.4	3.4	139
Bomet	7.5	5.2	4.8	187
Nyanza (non-focus counties)	**24.3**	**13.0**	**4.5**	**260**
Kisii	25.5	11.3	3.7	193
Nyamira	20.7	18.1	7.0	67
Nairobi	**6.3**	**1.3**	**0.8**	**753**
Total	29.5	16.9	10.1	7,357

[1] Received the specified number of doses of SP/Fansidar, at least one of which was received during an ANC visit

12.6 FEVER AMONG CHILDREN UNDER AGE 5

The Kenya Malaria Strategy stipulates that, by 2018, 100 percent of all suspected malaria cases presented to a health care provider will be managed according to the National Malaria Treatment Guidelines (MOH, 2015a). According to these guidelines, the first line of treatment is artemisinin combination therapy (ACT) with artemether-lumefantrine (AL).[3] Following reported drug resistance to sulfadoxine-pyrimethamine (SP), the government of Kenya in 2006 rolled out the use of ACT/AL. The treatment guidelines further state that, before treatment is given, the patient should undergo testing either by a rapid diagnostic test or microscopy, so that only patients who have a positive malaria test receive malaria medication (MOH, 2014).

12.6.1 Prevalence and Treatment of Fever among Children

The 2014 KDHS asked mothers whether their children under age 5 had a fever in the two weeks preceding the survey and, if so, whether any treatment was sought. Questions were also asked about blood testing, the types of drugs given to the child, and how soon drugs were taken after onset of fever. Table 12.8 shows the percentage of children under age 5 who had a fever in the two weeks preceding the survey and, among these children, the percentage for whom advice or treatment was sought from a health facility, provider, or pharmacy; the percentage who had a drop of blood taken from a finger or heel prick (considered a proxy for malaria testing); the percentage who received antimalarial treatment; and the percentage receiving treatment the same or the next day.

Twenty-four percent of children under age 5 had a fever in the two weeks preceding the survey. Children age 12-23 months (30 percent), children in rural areas (26 percent), and children in Nyanza (37 percent) and Western (36 percent) were more likely to have suffered fever.

Among children with a fever, 72 percent were taken for advice or treatment, and 35 percent had blood taken from a finger or heel for testing. There do not appear to be differences in blood testing by age, sex, or rural-urban residency. By region, the proportion of children who had blood tested ranged from a high of 47 percent in Nyanza, a region with some malaria endemicity, to a low of 25 percent in Central. In Western and Coast, also malaria prone regions, 38 percent and 35 percent of children with a fever, respectively, had blood drawn for testing. Children whose mothers have a secondary or higher education (38 percent) and those in the highest wealth quintile (44 percent) were most likely to have blood drawn.

Twenty-seven percent of children under age 5 who had a fever took antimalarial drugs, and only 16 percent took antimalarials the same or next day. This is a slight increase from the 2008-09 KDHS, when 23 percent of children with a fever took antimalarials and 12 percent took them within the recommended time frame. Twenty-three percent of children took ACT, and 13 percent took ACT the same or the next day, an increase from 2008-09 (8 percent and 4 percent, respectively). Children in the malaria prone Western and Nyanza regions (28 percent and 25 percent, respectively) were substantially more likely to take ACT the same or the next day than those in other regions (6 percent or less). Children whose mothers have no education were less likely to take antimalarials or ACT and to take them promptly than were children whose mothers have some education. Children in the highest wealth quintile were least likely to take antimalarials or ACT and to take them promptly.

[3] ACT/AL is considered the first line of treatment for uncomplicated malaria. At the time of the 2014 KDHS, a policy change occurred for treatment of severe cases of malaria from quinine to parenteral artesunate, data for which were not collected in the survey.

Table 12.8 Prevalence, diagnosis, and prompt treatment of children with fever

Percentage of children under age five with fever in the two weeks preceding the survey; and among children under age five with fever, the percentage for whom advice or treatment was sought, the percentage who had blood taken from a finger or heel, the percentage who took any artemisinin-based combination therapy (ACT), the percentage who took ACT the same or next day following the onset of fever, the percentage who took antimalarial drugs, and the percentage who took the drugs the same or next day following the onset of fever, by background characteristics, Kenya 2014

	Among children under age five:		Among children under age five with fever:						
Background characteristic	Percentage with fever in the two weeks preceding the survey	Number of children	Percentage for whom advice or treatment was sought[1]	Percentage who had blood taken from a finger or heel for testing	Percentage who took antimalarial drugs	Percentage who took antimalarial drugs same or next day	Percentage who took any ACT	Percentage who took any ACT same or next day	Number of children
Age (in months)									
<12	24.5	3,603	73.8	28.9	16.0	10.2	13.2	8.1	883
12-23	29.9	3,777	70.5	34.2	24.3	15.7	20.5	12.6	1,131
24-35	24.8	3,760	72.6	39.3	29.5	15.7	26.1	13.5	933
36-47	21.2	3,889	71.0	35.4	32.7	18.5	28.5	16.5	826
48-59	21.5	3,672	71.0	37.0	34.0	18.7	29.0	15.6	789
Sex									
Male	24.5	9,477	71.6	35.0	27.0	16.3	22.7	13.5	2,325
Female	24.2	9,225	71.9	34.8	27.0	15.0	23.5	12.8	2,237
Residence									
Urban	21.7	6,677	72.6	38.6	20.4	11.7	16.8	9.3	1,447
Rural	25.9	12,025	71.4	33.2	30.0	17.5	26.1	14.9	3,114
Region									
Coast	27.2	1,936	78.0	34.9	11.9	4.4	10.2	3.6	526
North Eastern	8.7	625	59.3	31.4	7.3	3.9	5.0	3.9	54
Eastern	18.2	2,235	76.6	33.2	18.1	9.1	11.9	6.4	406
Central	17.9	1,725	71.5	24.7	4.8	3.2	3.7	3.0	308
Rift Valley	20.9	5,457	68.7	25.6	13.3	7.4	9.8	5.4	1,139
Western	36.1	2,166	67.5	37.9	51.8	29.8	49.5	28.3	782
Nyanza	37.4	2,638	75.6	46.9	48.7	30.1	42.2	24.9	987
Nairobi	18.7	1,920	67.4	36.0	10.6	7.5	6.9	3.8	359
Mother's education									
No education	17.7	2,218	68.3	28.7	17.5	8.8	14.7	7.0	392
Primary incomplete	29.2	5,304	67.9	33.2	32.0	18.7	27.3	15.5	1,550
Primary complete	24.2	5,164	74.1	36.0	27.7	15.5	23.7	12.8	1,250
Secondary+	22.8	6,016	74.9	37.6	23.3	14.4	20.3	12.6	1,369
Wealth quintile									
Lowest	25.1	4,457	68.2	30.4	23.1	12.9	19.3	10.5	1,119
Second	28.5	3,803	72.7	36.9	36.3	21.2	32.0	18.2	1,082
Middle	26.1	3,375	72.0	31.7	31.9	19.4	28.5	17.0	881
Fourth	24.0	3,285	71.7	34.0	26.2	14.3	22.5	11.9	788
Highest	18.3	3,782	75.7	44.2	13.2	8.2	9.4	5.9	691
Total	24.4	18,702	71.7	34.9	27.0	15.7	23.1	13.1	4,562

[1] Excludes relative/friend and traditional practitioner

Table 12.8C shows the prevalence, diagnosis, and prompt treatment of children with a fever by county. The percentage of children with a fever ranged from 5 percent in Mandera to 49 percent in Vihiga. Among counties with sufficient cases of fever for evaluation, children with a fever in Mombasa (91 percent) were most likely to be taken for treatment, children in Siaya and Isiolo (both 61 percent) were most likely to have blood taken, and children in Siaya and Busia (59 percent and 60 percent, respectively) were most likely to have taken ACT.

Table 12.8C Prevalence, diagnosis, and prompt treatment of children with fever

Percentage of children under age five with fever in the two weeks preceding the survey; and among children under age five with fever, the percentage for whom advice or treatment was sought, the percentage who had blood taken from a finger or heel, the percentage who took any artemisinin-based combination therapy (ACT), the percentage who took ACT the same or next day following the onset of fever, the percentage who took antimalarial drugs, and the percentage who took the drugs the same or next day following the onset of fever, by county, Kenya 2014

	Among children under age five:		Among children under age five with fever:						
County	Percentage with fever in the two weeks preceding the survey	Number of children	Percentage for whom advice or treatment was sought[1]	Percentage who had blood taken from a finger or heel for testing	Percentage who took antimalarial drugs	Percentage who took antimalarial drugs same or next day	Percentage who took any ACT	Percentage who took any ACT same or next day	Number of children
Coast	**27.2**	**1,936**	**78.0**	**34.9**	**11.9**	**4.4**	**10.2**	**3.6**	**526**
Mombasa	22.5	493	91.1	46.7	14.9	4.4	13.5	3.0	111
Kwale	25.7	408	69.5	42.8	33.2	14.2	30.0	11.8	105
Kilifi	31.3	705	78.6	31.0	2.1	0.0	1.0	0.0	221
Tana River	26.8	166	81.1	22.6	12.3	6.7	9.5	5.8	45
Lamu	22.2	52	61.5	11.8	5.7	2.1	1.2	0.0	12
Taita Taveta	29.5	110	58.6	21.7	1.3	1.3	1.3	1.3	33
North Eastern	**8.7**	**625**	**59.3**	**31.4**	**7.3**	**3.9**	**5.0**	**3.9**	**54**
Garissa	7.0	223	(44.0)	(52.4)	(5.6)	(5.6)	(5.6)	(5.6)	16
Wajir	12.5	252	65.3	19.9	4.3	0.0	0.4	0.0	31
Mandera	4.8	150	*	*	*	*	*	*	7
Eastern	**18.2**	**2,235**	**76.6**	**33.2**	**18.1**	**9.1**	**11.9**	**6.4**	**406**
Marsabit	19.3	88	63.1	22.3	10.6	1.8	10.1	1.8	17
Isiolo	13.2	81	78.7	60.7	51.1	51.1	43.4	43.4	11
Meru	26.0	490	73.3	54.0	23.1	11.0	14.9	7.8	128
Tharaka-Nithi	28.1	137	78.9	41.9	27.2	18.6	9.8	6.3	39
Embu	13.8	194	(72.4)	(38.4)	(21.7)	(10.9)	(21.7)	(10.9)	27
Kitui	17.0	424	72.1	9.1	7.4	3.3	3.5	2.5	72
Machakos	13.6	474	(81.6)	(18.4)	(12.8)	(6.2)	(10.8)	(6.2)	64
Makueni	14.1	346	89.7	21.7	13.7	1.1	7.8	0.0	49
Central	**17.9**	**1,725**	**71.5**	**24.7**	**4.8**	**3.2**	**3.7**	**3.0**	**308**
Nyandarua	17.2	232	70.8	22.6	6.7	4.2	5.3	2.8	40
Nyeri	14.1	240	(67.2)	(17.5)	(0.0)	(0.0)	(0.0)	(0.0)	34
Kirinyaga	21.2	188	(82.4)	(28.6)	(18.6)	(16.2)	(18.6)	(16.2)	40
Murang'a	17.7	293	(85.1)	(3.7)	(0.0)	(0.0)	(0.0)	(0.0)	52
Kiambu	18.5	772	64.8	33.6	3.2	1.2	1.2	1.2	143
Rift Valley	**20.9**	**5,457**	**68.7**	**25.6**	**13.3**	**7.4**	**9.8**	**5.4**	**1,139**
Turkana	11.4	333	63.4	49.5	29.9	26.8	21.7	18.5	38
West Pokot	9.4	294	80.4	20.6	32.2	32.2	16.1	16.1	28
Samburu	19.1	114	54.5	16.6	6.8	2.5	5.0	2.5	22
Trans-Nzoia	21.9	516	65.9	45.2	12.4	4.6	10.9	4.1	113
Uasin Gishu	19.3	463	62.8	17.0	5.8	2.9	4.7	1.8	89
Elgeyo Marakwet	29.7	164	67.1	13.5	2.0	2.0	1.5	1.5	49
Nandi	19.7	388	52.8	12.2	8.8	5.3	8.8	5.3	76
Baringo	22.9	230	71.6	39.1	27.7	14.3	22.9	11.4	53
Laikipia	21.6	206	74.9	26.0	16.8	10.7	6.2	6.2	44
Nakuru	15.5	849	67.9	27.6	11.6	6.8	11.0	6.8	132
Narok	30.7	614	78.0	20.4	13.3	5.2	9.7	3.6	188
Kajiado	25.7	452	64.7	21.8	1.4	0.8	0.0	0.0	116
Kericho	25.6	359	70.7	37.9	19.4	10.0	14.4	6.9	92
Bomet	20.8	475	73.9	14.9	21.0	11.5	12.9	8.1	99
Western	**36.1**	**2,166**	**67.5**	**37.9**	**51.8**	**29.8**	**49.5**	**28.3**	**782**
Kakamega	28.9	721	56.0	34.9	38.7	19.6	38.4	19.6	209
Vihiga	49.2	215	69.1	34.4	40.7	18.0	39.5	18.0	106
Bungoma	35.8	842	74.6	41.6	58.7	36.0	55.1	33.5	302
Busia	42.7	388	67.9	37.2	62.9	38.9	59.6	36.5	166
Nyanza	**37.4**	**2,638**	**75.6**	**46.9**	**48.7**	**30.1**	**42.2**	**24.9**	**987**
Siaya	44.9	378	80.7	61.1	59.4	38.5	59.2	38.4	170
Kisumu	30.9	478	74.9	48.8	46.0	23.1	39.5	18.8	148
Homa Bay	45.6	616	67.5	50.7	51.7	35.1	46.5	29.9	281
Migori	48.2	516	80.4	42.6	42.4	24.9	37.2	21.0	249
Kisii	28.1	463	80.2	27.1	46.9	28.1	27.2	13.4	130
Nyamira	5.7	187	*	*	*	*	*	*	11
Nairobi	**18.7**	**1,920**	**67.4**	**36.0**	**10.6**	**7.5**	**6.9**	**3.8**	**359**
Total	24.4	18,702	71.7	34.9	27.0	15.7	23.1	13.1	4,562

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 cases that has been suppressed.
[1] Excludes relative/friend and traditional practitioner

Table 12.9 presents information on the source of advice or treatment for children under age 5 with a fever. The first column refers to children with a fever in general and can give a sense of the overall coverage of various sources of advice and treatment. The second column refers to children with a fever for whom advice or treatment was sought; from this column, the relative strength of each of the treatment options can be seen. Treatment was sought from a public sector source for 50 percent of children with a fever, mostly from dispensaries (24 percent), government health centres (15 percent), and government hospitals (12 percent). Twenty-one percent went to a private sector source, mostly private hospitals or clinics (12 percent) and pharmacies (8 percent). The second column, focusing on children with a fever for whom advice or treatment was sought, shows that 69 percent of children went to a public sector source, with most visiting a dispensary (33 percent). Twenty-nine percent went to a private sector source for treatment and advice.

Table 12.9 Source of advice or treatment for children with fever

Percentage of children for whom advice or treatment was sought from specific sources among children under age five with fever in the two weeks preceding the survey and among children under age five with fever in the two weeks preceding the survey for whom advice or treatment was sought, by source, Kenya 2014

Source	Percentage for whom advice or treatment was sought from each source: Among children with fever	Among children with fever for whom advice or treatment was sought
Any public sector source	**50.1**	**69.1**
Government hospital	11.9	16.4
Government health centre	15.2	20.9
Government dispensary	23.7	32.6
Other	0.0	0.0
Any private sector source	**21.2**	**29.2**
Private hospital/clinic	11.9	16.4
Pharmacy	7.8	10.8
Mission hospital/clinic	1.4	1.9
Other private medical sector	0.2	0.2
Any other source	**3.0**	**4.1**
Mobile clinic	0.1	0.1
Community health worker	0.3	0.4
Shop	1.6	2.2
Traditional practitioner	0.5	0.6
Friend/relative	0.2	0.3
Number of children	4,562	3,310

12.6.2 Type and Timing of Antimalarial drugs

Among children under age 5 with a fever in the two weeks prior to the survey who also took antimalarial drugs, information was collected on the type of drugs taken and the timing (same or next day). Table 12.10 shows the type and timing of antimalarial drugs used and the percentage of children who took specific antimalarial drugs the same or next day after developing a fever, by background characteristics.

Among children with a fever who took antimalarial drugs, the majority took ACT (86 percent), the recommended first line of treatment for uncomplicated malaria. This is a substantial increase from 34 percent in 2008-09. Two percent to 4 percent took other antimalarial drugs, which are no longer recommended. There are marginal differences in the percentage of children taking ACT by age, sex, rural-urban residence, and mother's education. Children in the highest wealth quintile were less likely (72 percent) to take ACT than those in the lower wealth quintiles (84 percent or higher). There are insufficient cases of children with a fever in the last two weeks to allow an analysis at the county level.

Table 12.10 Type of antimalarial drugs used

Among children under age five with fever in the two weeks preceding the survey who took any antimalarial medication, the percentage who took specific antimalarial drugs, by background characteristics, Kenya 2014

Background characteristic	Percentage of children who took drug:						Number of children with fever who took antimalarial drug
	Any ACT	Quinine	SP/Fansidar	Chloroquine	Amodiaquine	Other antimalarial	
Age (in months)							
<12	82.2	4.3	1.2	1.5	7.6	4.0	141
12-23	84.3	4.7	4.7	1.9	2.7	3.2	275
24-35	88.4	1.5	3.2	1.0	4.6	2.7	275
36-47	87.3	1.2	3.4	1.4	1.8	6.1	270
48-59	85.2	3.4	4.0	2.6	1.5	5.2	268
Sex							
Male	84.3	4.0	4.1	2.2	2.7	4.5	627
Female	87.4	1.8	3.0	1.2	3.7	4.1	603
Residence							
Urban	82.0	2.8	5.1	2.9	1.8	6.9	295
Rural	87.0	3.0	3.0	1.3	3.7	3.4	934
Region							
Coast	85.3	0.7	10.2	0.5	0.0	3.3	63
North Eastern	*	*	*	*	*	*	4
Eastern	65.8	1.0	3.3	3.2	10.3	17.7	73
Central	*	*	*	*	*	*	15
Rift Valley	73.6	5.6	7.1	3.9	4.1	9.0	151
Western	95.5	2.1	0.1	0.0	1.5	1.6	405
Nyanza	86.7	2.8	3.5	1.4	4.0	3.4	481
Nairobi	*	*	*	*	*	*	38
Mother's education							
No education	84.3	2.4	6.2	0.0	5.1	2.1	69
Primary incomplete	85.4	2.3	4.5	1.5	3.3	4.0	495
Primary complete	85.5	3.8	1.5	2.6	3.4	4.4	346
Secondary+	87.1	2.9	3.6	1.4	2.5	5.1	319
Wealth quintile							
Lowest	83.5	1.9	7.0	3.0	2.6	4.2	259
Second	88.2	3.0	3.4	1.3	3.1	3.1	393
Middle	89.2	2.9	0.1	0.6	4.9	2.6	281
Fourth	85.8	2.3	3.6	0.2	2.5	6.1	207
Highest	71.5	6.9	4.5	6.6	1.8	10.8	91
Total	85.8	2.9	3.5	1.7	3.2	4.3	1,230

Note: An asterisk denotes a figure based on fewer than 25 cases that has been suppressed.
ACT = Artemisinin-based combination therapy

HIV/AIDS-RELATED KNOWLEDGE, ATTITUDES, AND BEHAVIOUR

13

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Key Findings

- Awareness of AIDS is universal in Kenya. However, only 56 percent of women and 66 percent of men have comprehensive knowledge about HIV and AIDS prevention and transmission; that is, they know that both condom use and limiting sexual intercourse to one uninfected partner can prevent HIV, they are aware that a healthy-looking person can have HIV, and they reject the two most common local misconceptions about HIV: that HIV can be transmitted by mosquitoes and by sharing food.
- Seventy-two percent of women and 62 percent of men know both that HIV can be transmitted through breastfeeding and that the risk of mother-to-child transmission can be reduced by taking special drugs during pregnancy.
- Among those who had more than one sexual partner in the past 12 months, 40 percent of women and 44 percent of men reported using a condom during their last sexual intercourse.
- Since the 2008-09 KDHS, there has been an increase in the percentage of both women (from 29 percent to 53 percent) and men (from 23 percent to 46 percent) who were tested for HIV in the past 12 months and received their results.
- Sixty-eight percent of women who gave birth in the two years before the survey received HIV counselling during antenatal care. Almost 7 in 10 women (69 percent) were tested for HIV during antenatal care and received the test results and post-test counselling, while 23 percent received results but did not receive post-test counselling.

13.1 INTRODUCTION

Acquired immune deficiency syndrome (AIDS) is caused by the human immunodeficiency virus (HIV), which weakens the immune system and makes the body susceptible to and unable to recover from other opportunistic diseases that can lead to death. The predominant modes of HIV transmission are through sexual contact; mother-to-child transmission, in which the mother passes the virus to her child during pregnancy, delivery, or breastfeeding; use of contaminated blood supplies for transfusions; and injections using contaminated needles or syringes.

The AIDS epidemic in Kenya has been severe and generalised since the mid-1980s. HIV prevalence seems to have stabilised in Kenya at 6 percent, but new HIV infections have been estimated at 88,620 annually (National AIDS Control Council [NACC] and National AIDS and STI Control Programme [NASCOP], 2014). The future course of Kenya's AIDS epidemic depends on a number of factors including levels of HIV- and AIDS-related knowledge among the general population, stigma associated with being HIV positive, risk-behaviour modification, access to quality health care services for sexually transmitted infections (STIs), and provision and uptake of HIV counselling and testing.

The principal objective of this chapter is to establish the extent of relevant knowledge, perceptions, and behaviour at the national level as well as within geographic and socioeconomic subpopulations. Prevention programmes can use these data to target groups most in need of information

and most at risk of HIV infection. In this chapter, information on indicators related to HIV and AIDS knowledge, attitudes, and behaviour is presented for the general adult population age 15-49. The chapter also focuses on HIV and AIDS knowledge and patterns of sexual activity among young people age 15-24, as young adults are the main target of many HIV prevention efforts.

13.2 HIV AND AIDS KNOWLEDGE, TRANSMISSION AND PREVENTION METHODS

13.2.1 Awareness of HIV and AIDS

The 2014 KDHS asked respondents whether they have heard of an illness called AIDS. Those who reported having heard of AIDS were asked other questions about whether and how AIDS can be avoided. Table 13.1 shows the percentage of women and men age 15-49 who have heard of AIDS, by background characteristics. In Kenya, knowledge of AIDS is virtually universal (above 99 percent among both women and men). There is no noticeable variation in awareness by respondents' background characteristics. This is consistent with the 2008-09 KDHS.

Table 13.1 Knowledge of AIDS

Percentage of women and men age 15-49 who have heard of AIDS, by background characteristics, Kenya 2014

	Women		Men	
Background characteristic	Have heard of AIDS	Number of respondents	Have heard of AIDS	Number of respondents
Age				
15-24	99.6	11,555	99.6	4,666
15-19	99.4	5,820	99.4	2,540
20-24	99.8	5,735	99.8	2,125
25-29	99.7	6,100	100.0	2,104
30-39	99.8	8,283	100.0	3,268
40-49	99.9	5,142	99.8	2,024
Marital status				
Never married	99.5	8,997	99.6	5,350
Ever had sex	99.9	4,541	99.8	3,512
Never had sex	99.2	4,456	99.1	1,838
Married/living together	99.8	18,549	100.0	6,095
Divorced/separated/ widowed	99.8	3,533	100.0	618
Residence				
Urban	99.8	12,690	100.0	5,300
Rural	99.6	18,389	99.7	6,762
Region				
Coast	99.8	3,076	99.6	1,260
North Eastern	95.9	648	99.3	227
Eastern	99.8	4,375	99.7	1,825
Central	100.0	3,994	99.8	1,564
Rift Valley	99.6	7,953	99.8	3,050
Western	99.8	3,225	99.9	1,164
Nyanza	99.9	4,038	99.9	1,405
Nairobi	99.8	3,770	100.0	1,568
Education				
No education	97.4	2,176	97.9	345
Primary incomplete	99.7	7,989	99.6	3,071
Primary complete	99.9	7,637	99.9	2,734
Secondary+	100.0	13,277	100.0	5,913
Wealth quintile				
Lowest	98.8	4,838	99.3	1,691
Second	99.9	5,457	99.8	2,145
Middle	99.9	6,032	99.8	2,370
Fourth	99.9	6,550	100.0	2,959
Highest	99.8	8,203	99.9	2,897
Total 15-49	99.7	31,079	99.8	12,063
50-54	na	na	100.0	756
Total 15-54	na	na	99.8	12,819

na = Not applicable

Table 13.1C shows county-level data on the percentage of women and men age 15-49 who have heard of AIDS. Awareness of AIDS is very high in all counties. However, awareness among women is slightly lower in Wajir (92 percent), Mandera, and West Pokot (both 95 percent); among men, there are no apparent county-level differences.

Table 13.1C Knowledge of AIDS

Percentage of women and men age 15-49 who have heard of AIDS, by county, Kenya 2014

	Women		Men	
County	Have heard of AIDS	Number of respondents	Have heard of AIDS	Number of respondents
Coast	**99.8**	**3,076**	**99.6**	**1,260**
Mombasa	100.0	912	99.7	481
Kwale	100.0	619	99.3	226
Kilifi	100.0	1,043	100.0	359
Tana River	98.5	197	97.5	65
Lamu	100.0	89	100.0	37
Taita Taveta	99.0	215	100.0	93
North Eastern	**95.9**	**648**	**99.3**	**227**
Garissa	99.7	261	100.0	94
Wajir	91.8	212	97.9	72
Mandera	95.0	175	100.0	60
Eastern	**99.8**	**4,375**	**99.7**	**1,825**
Marsabit	95.5	115	100.0	40
Isiolo	99.8	104	100.0	35
Meru	100.0	1,110	100.0	495
Tharaka-Nithi	99.5	275	99.5	102
Embu	99.8	459	99.2	164
Kitui	100.0	759	99.5	303
Machakos	99.9	873	100.0	436
Makueni	99.7	680	99.5	250
Central	**100.0**	**3,994**	**99.8**	**1,564**
Nyandarua	100.0	436	100.0	198
Nyeri	99.9	650	99.7	229
Kirinyaga	100.0	451	99.9	184
Murang'a	99.8	735	100.0	284
Kiambu	100.0	1,722	99.6	669
Rift Valley	**99.6**	**7,953**	**99.8**	**3,050**
Turkana	98.5	320	97.7	76
West Pokot	95.1	267	100.0	103
Samburu	99.7	123	99.3	35
Trans-Nzoia	99.7	768	100.0	329
Uasin Gishu	100.0	784	99.8	355
Elgeyo Marakwet	100.0	250	100.0	86
Nandi	99.6	628	100.0	264
Baringo	99.7	335	99.7	125
Laikipia	99.6	342	100.0	124
Nakuru	99.9	1,574	100.0	589
Narok	99.9	642	99.1	240
Kajiado	99.3	670	100.0	241
Kericho	100.0	563	100.0	215
Bomet	100.0	687	99.7	267
Western	**99.8**	**3,225**	**99.9**	**1,164**
Kakamega	99.7	1,108	100.0	411
Vihiga	100.0	368	100.0	140
Bungoma	99.9	1,203	99.7	413
Busia	100.0	546	100.0	199
Nyanza	**99.9**	**4,038**	**99.9**	**1,405**
Siaya	100.0	572	100.0	213
Kisumu	99.8	820	99.6	309
Homa Bay	100.0	798	100.0	243
Migori	99.8	650	100.0	211
Kisii	99.9	864	99.8	315
Nyamira	100.0	334	99.7	114
Nairobi	**99.8**	**3,770**	**100.0**	**1,568**
Total 15-49	99.7	31,079	99.8	12,063
50-54	na	na	100.0	756
Total 15-54	na	na	99.8	12,819

na = Not applicable

13.2.2 Knowledge of HIV Prevention Methods

Among adults, HIV is mainly transmitted through sexual contact between an infected partner and an uninfected partner. Accordingly, Kenya's HIV prevention programmes focus on three aspects of behaviour: consistent condom use during sexual intercourse, limiting the number of sexual partners or staying faithful to one partner, and sexual abstinence. In the 2014 KDHS, men and women age 15-49 were asked if it is possible to reduce the risk of acquiring HIV through these three prevention methods. Knowledge of each of the methods is presented in Tables 13.2, 13.2C, and 13.3.

Table 13.2 Knowledge of HIV prevention methods: condom use and limiting sexual partners

Percentage of women and men age 15-49 who, in response to prompted questions, say that people can reduce the risk of getting the AIDS virus by using condoms every time they have sexual intercourse, and by having one sex partner who is not infected and has no other partners, by background characteristics, Kenya 2014

	Women				Men			
Background characteristic	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[1,2]	Number of women	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[1,2]	Number of men
Age								
15-24	77.4	89.3	72.8	11,555	86.1	92.0	82.0	4,666
15-19	72.2	86.2	66.7	5,820	82.1	90.0	76.9	2,540
20-24	82.6	92.4	78.9	5,735	90.9	94.3	88.0	2,125
25-29	82.7	92.9	80.4	6,100	90.0	95.1	87.6	2,104
30-39	81.9	93.3	79.3	8,283	88.1	95.8	86.0	3,268
40-49	78.4	92.6	76.1	5,142	87.9	95.9	86.2	2,024
Marital status								
Never married	77.0	89.1	72.4	8,997	86.5	92.4	82.7	5,350
Ever had sex	84.6	92.5	80.7	4,541	91.1	94.7	87.8	3,512
Never had sex	69.3	85.6	63.8	4,456	77.8	88.1	72.8	1,838
Married/living together	80.7	92.7	78.0	18,549	88.7	95.7	86.6	6,095
Divorced/separated/ widowed	82.3	92.6	79.6	3,533	87.1	95.3	85.0	618
Residence								
Urban	83.7	93.3	80.7	12,690	90.4	95.0	87.8	5,300
Rural	77.1	90.4	73.7	18,389	85.5	93.6	82.4	6,762
Region								
Coast	75.3	87.5	71.9	3,076	78.0	89.6	73.7	1,260
North Eastern	27.1	55.6	21.0	648	57.0	68.1	47.6	227
Eastern	73.5	94.3	71.3	4,375	85.7	95.4	83.2	1,825
Central	77.8	89.6	74.1	3,994	89.7	96.6	87.6	1,564
Rift Valley	80.4	92.9	77.7	7,953	87.3	93.5	84.5	3,050
Western	85.9	91.4	81.2	3,225	89.9	95.4	86.9	1,164
Nyanza	87.9	94.4	84.9	4,038	94.4	97.1	92.7	1,405
Nairobi	86.8	94.7	83.5	3,770	93.1	95.9	89.9	1,568
Education								
No education	48.8	75.1	43.9	2,176	53.9	77.1	49.7	345
Primary incomplete	75.6	88.6	71.1	7,989	81.8	90.8	77.1	3,071
Primary complete	81.8	93.8	79.2	7,637	89.2	95.5	86.7	2,734
Secondary+	86.3	94.9	83.7	13,277	91.9	96.4	89.9	5,913
Wealth quintile								
Lowest	63.9	83.5	60.1	4,838	73.8	86.9	69.2	1,691
Second	78.6	91.1	75.1	5,457	87.3	94.3	83.9	2,145
Middle	82.2	92.8	79.0	6,032	89.5	94.7	86.7	2,370
Fourth	83.9	93.8	80.8	6,550	89.4	96.1	86.8	2,959
Highest	85.0	94.2	82.1	8,203	92.8	96.1	90.8	2,897
Total 15-49	79.8	91.6	76.6	31,079	87.6	94.2	84.8	12,063
50-54	na	na	na	na	84.6	94.9	82.4	756
Total 15-54	na	na	na	na	87.5	94.3	84.6	12,819

na = Not applicable
[1] Using condoms every time they have sexual intercourse
[2] Partner who has no other partners

Table 13.2 shows that knowledge about condom use and limiting sexual partners as methods of avoiding HIV transmission is generally high and widespread. Eighty percent of women and 88 percent of men know that the risk of getting HIV can be reduced by using condoms. Ninety-two percent of women and 94 percent of men know that limiting sexual intercourse to one uninfected partner can reduce the chances of contracting HIV. Seventy-seven percent of women and 85 percent of men are aware of both of these prevention methods. Young women and men age 15-19 (67 percent and 77 percent, respectively) are least likely among all age groups to be aware of both prevention methods.

As in the 2008-09 KDHS, women and men who have never had sex (64 percent and 73 percent, respectively) and those in rural areas (74 percent and 82 percent, respectively) have less knowledge of HIV prevention methods than their counterparts. Knowledge of HIV prevention methods varies by region and is lowest in North Eastern (women, 21 percent; men, 48 percent) and highest in Nyanza (women, 85 percent; men, 93 percent). Knowledge of condom use and limiting sexual partners as methods of HIV prevention increases with increasing education and wealth among both women and men.

Table 13.2C Knowledge of HIV prevention methods by county: condom use and limiting sexual partners

Percentage of women and men age 15-49 who, in response to prompted questions, say that people can reduce the risk of getting the AIDS virus by using condoms every time they have sexual intercourse, and by having one sex partner who is not infected and has no other partners, by county, Kenya 2014

	Women				Men			
County	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[1,2]	Number of women	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[1,2]	Number of men
Coast	**75.3**	**87.5**	**71.9**	**3,076**	**78.0**	**89.6**	**73.7**	**1,260**
Mombasa	85.4	94.2	82.5	912	96.9	98.9	96.4	481
Kwale	62.1	65.3	56.0	619	70.9	89.5	67.2	226
Kilifi	75.9	93.1	73.0	1,043	54.1	75.1	43.8	359
Tana River	60.0	85.0	57.9	197	73.8	92.1	70.5	65
Lamu	70.2	92.5	67.6	89	88.0	94.7	84.0	37
Taita Taveta	84.1	95.8	82.6	215	88.2	93.7	85.1	93
North Eastern	**27.1**	**55.6**	**21.0**	**648**	**57.0**	**68.1**	**47.6**	**227**
Garissa	42.9	59.7	31.2	261	69.6	94.1	68.7	94
Wajir	18.5	52.3	15.1	212	38.0	33.6	11.4	72
Mandera	14.1	53.7	13.0	175	60.1	68.7	58.1	60
Eastern	**73.5**	**94.3**	**71.3**	**4,375**	**85.7**	**95.4**	**83.2**	**1,825**
Marsabit	54.2	63.5	45.3	115	97.3	96.3	95.0	40
Isiolo	76.2	90.9	73.9	104	70.8	97.6	70.8	35
Meru	81.2	95.3	78.5	1,110	87.3	99.1	86.4	495
Tharaka-Nithi	76.1	94.1	74.2	275	82.1	98.1	81.3	102
Embu	80.4	95.2	78.2	459	71.7	81.8	62.9	164
Kitui	51.5	93.5	50.2	759	82.6	98.3	81.7	303
Machakos	76.5	96.8	74.9	873	88.1	91.4	83.2	436
Makueni	78.9	95.5	76.6	680	93.0	98.4	92.2	250
Central	**77.8**	**89.6**	**74.1**	**3,994**	**89.7**	**96.6**	**87.6**	**1,564**
Nyandarua	83.2	91.2	80.3	436	91.6	90.7	85.2	198
Nyeri	81.0	92.5	76.8	650	86.1	97.3	85.0	229
Kirinyaga	91.9	97.8	90.6	451	87.6	97.0	86.1	184
Murang'a	56.3	74.4	53.7	735	80.3	97.9	78.2	284
Kiambu	80.6	92.4	75.9	1,722	95.0	97.5	93.6	669
Rift Valley	**80.4**	**92.9**	**77.7**	**7,953**	**87.3**	**93.5**	**84.5**	**3,050**
Turkana	50.5	91.2	49.2	320	7.7	30.7	2.4	76
West Pokot	53.8	76.9	47.8	267	79.3	95.0	76.8	103
Samburu	78.4	96.8	78.1	123	82.6	95.8	79.3	35
Trans-Nzoia	86.3	97.1	84.6	768	84.9	92.2	79.7	329
Uasin Gishu	85.7	94.8	82.8	784	86.9	92.7	82.8	355
Elgeyo Marakwet	85.6	97.5	84.7	250	97.1	99.2	97.1	86
Nandi	92.0	97.1	90.7	628	98.9	98.8	98.4	264
Baringo	74.7	89.6	72.6	335	91.7	96.3	89.9	125
Laikipia	86.3	96.9	84.8	342	77.6	89.5	72.3	124
Nakuru	84.2	94.4	80.9	1,574	92.8	96.6	91.4	589
Narok	67.9	85.3	62.4	642	81.2	92.8	78.4	240
Kajiado	78.2	92.2	76.3	670	87.4	96.5	85.2	241
Kericho	76.5	87.4	72.5	563	94.0	94.9	90.3	215
Bomet	87.9	95.9	85.5	687	92.2	96.5	90.1	267
Western	**85.9**	**91.4**	**81.2**	**3,225**	**89.9**	**95.4**	**86.9**	**1,164**
Kakamega	86.4	92.2	81.9	1,108	87.3	93.4	83.1	411
Vihiga	81.4	91.0	77.9	368	83.0	83.4	72.0	140
Bungoma	88.7	91.3	84.2	1,203	91.7	99.7	91.7	413
Busia	81.8	90.0	75.5	546	96.3	99.1	95.4	199
Nyanza	**87.9**	**94.4**	**84.9**	**4,038**	**94.4**	**97.1**	**92.7**	**1,405**
Siaya	88.5	96.6	86.5	572	96.6	98.8	95.6	213
Kisumu	88.9	92.5	84.4	820	99.1	98.7	98.2	309
Homa Bay	91.5	93.8	88.3	798	97.4	98.6	96.7	243
Migori	84.8	90.0	79.8	650	86.7	89.7	80.3	211
Kisii	81.7	96.5	80.1	864	89.8	97.4	88.5	315
Nyamira	98.2	99.8	97.9	334	98.3	98.5	98.3	114
Nairobi	**86.8**	**94.7**	**83.5**	**3,770**	**93.1**	**95.9**	**89.9**	**1,568**
Total 15-49	79.8	91.6	76.6	31,079	87.6	94.2	84.8	12,063
50-54	na	na	na	na	84.6	94.9	82.4	756
Total 15-54	na	na	na	na	87.5	94.3	84.6	12,819

na = Not applicable
[1] Using condoms every time they have sexual intercourse
[2] Partner who has no other partners

Table 13.2C presents information by county about knowledge of condom use and limiting sexual partners as methods of HIV prevention. The results show that there is variation across counties in women's and men's knowledge. Women in Garissa, Wajir, and Mandera (below 60 percent) and men in Turkana and Wajir (below 40 percent) have the least knowledge of these two HIV prevention methods.

Table 13.3 presents the percentage of women and men age 15-49 who say that abstinence can reduce the risk of HIV, by background characteristics. Eighty-four percent of women and 88 percent of men know that abstaining from sex can reduce the risk of getting HIV. Women and men who have never had sex are less likely to know that abstinence is an effective way to reduce the risk of contracting HIV (78 percent and 84 percent, respectively), as are women and men in the North Eastern region (43 percent and 64 percent, respectively). In general, knowledge of this HIV prevention method increases with increasing education and wealth.

Table 13.3 Knowledge of HIV prevention methods: abstinence

Percentage of women and men age 15-49 who, in response to prompted questions, say that people can reduce the risk of getting the AIDS virus by abstaining from sexual intercourse, by background characteristics, Kenya 2014

	Women		Men	
Background characteristic	Abstaining from sexual intercourse	Number of women	Abstaining from sexual intercourse	Number of men
Age				
15-24	80.7	5,407	86.5	4,666
15-19	78.9	2,717	85.3	2,540
20-24	82.5	2,691	87.9	2,125
25-29	85.1	2,932	89.0	2,104
30-39	85.4	3,942	89.6	3,268
40-49	84.9	2,344	88.7	2,024
Marital status				
Never married	81.6	4,255	87.1	5,350
Ever had sex	85.5	2,134	88.6	3,512
Never had sex	77.6	2,122	84.3	1,838
Married/living together	84.0	8,710	88.9	6,095
Divorced/separated/ widowed	85.9	1,660	90.1	618
Residence				
Urban	83.9	5,929	87.9	5,300
Rural	83.2	8,696	88.3	6,762
Region				
Coast	81.4	1,421	77.7	1,260
North Eastern	42.7	299	63.6	227
Eastern	86.1	2,066	92.8	1,825
Central	78.9	1,905	89.4	1,564
Rift Valley	84.7	3,714	86.6	3,050
Western	85.2	1,571	92.5	1,164
Nyanza	90.3	1,908	94.2	1,405
Nairobi	82.8	1,742	87.6	1,568
Education				
No education	68.1	1,015	71.0	345
Primary incomplete	82.1	3,793	85.6	3,071
Primary complete	85.7	3,543	89.1	2,734
Secondary+	85.7	6,274	90.0	5,913
Wealth quintile				
Lowest	75.9	2,236	81.0	1,691
Second	83.5	2,590	89.3	2,145
Middle	86.0	2,859	88.8	2,370
Fourth	84.5	3,113	88.6	2,959
Highest	85.4	3,827	90.4	2,897
Total 15-49	83.5	14,625	88.1	12,063
50-54	na	na	90.0	756
Total 15-54	na	na	88.2	12,819

na = Not applicable

Figures 13.1 and 13.2 show that both women's and men's knowledge of using condoms and limiting sex as methods of HIV prevention increased from 2003 to 2014. Across time, men have consistently reported higher levels of knowledge of HIV prevention methods than women.

Figure 13.1 **Trends in knowledge of HIV prevention methods: Women**

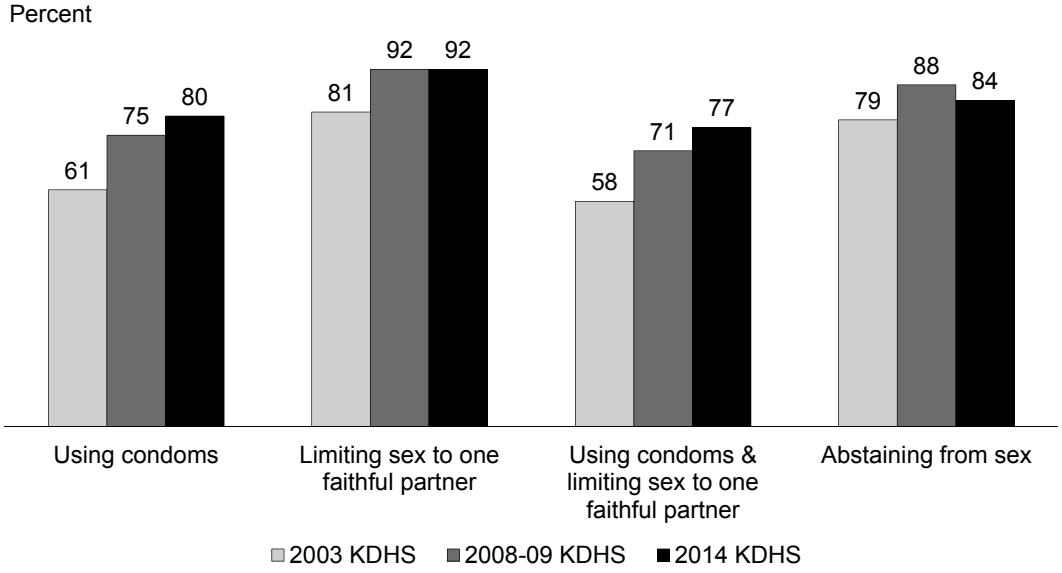
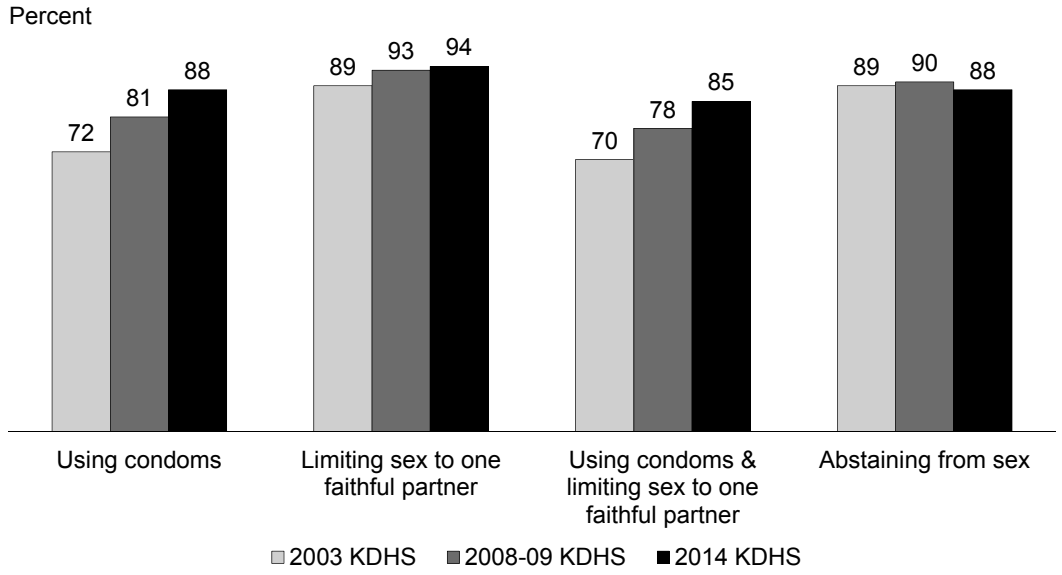


Figure 13.2 **Trends in knowledge of HIV prevention methods: Men**



13.2.3 Rejection of Misconceptions about HIV/AIDS

As part of the effort to assess HIV and AIDS knowledge, the 2014 KDHS investigated the prevalence of common misconceptions about HIV transmission. Respondents were asked whether it is possible for a healthy-looking person to have HIV and whether HIV is transmitted through mosquito bites, supernatural means, or sharing food with a person who has HIV or AIDS. Results are presented in Tables 13.4.1 and 13.4.2 by background characteristics.

Table 13.4.1 Comprehensive knowledge about AIDS: Women

Percentage of women age 15-49 who say that a healthy-looking person can have the AIDS virus and who, in response to prompted questions, correctly reject local misconceptions about transmission or prevention of the AIDS virus, and the percentage with a comprehensive knowledge about AIDS by background characteristics, Kenya 2014

Background characteristic	Percentage of respondents who say that:				Percentage who say that a healthy looking person can have the AIDS virus and who reject the two most common local misconceptions[1]	Percentage with a comprehensive knowledge about AIDS[2]	Number of women
	A healthy-looking person can have the AIDS virus	The AIDS virus cannot be transmitted by mosquito bites	The AIDS virus cannot be transmitted by supernatural means	A person cannot become infected by sharing food with a person who has the AIDS			
Age							
15-24	85.0	85.3	93.2	91.0	69.3	54.2	11,555
15-19	81.4	85.8	92.9	90.1	66.9	49.0	5,820
20-24	88.6	84.7	93.5	91.9	71.7	59.6	5,735
25-29	89.9	82.8	92.2	90.7	71.5	60.7	6,100
30-39	90.4	79.2	91.9	89.6	69.0	58.3	8,283
40-49	91.5	74.2	89.7	88.5	64.5	52.3	5,142
Marital status							
Never married	85.4	87.0	93.9	91.6	71.7	56.0	8,997
Ever had sex	88.8	87.4	95.0	93.8	75.0	63.8	4,541
Never had sex	81.9	86.5	92.7	89.3	68.2	48.2	4,456
Married/living together	89.5	79.2	91.5	89.6	67.6	56.2	18,549
Divorced/separated/ widowed	90.9	78.4	90.5	89.5	68.3	57.4	3,533
Residence							
Urban	91.8	86.5	93.5	93.0	76.4	63.8	12,690
Rural	86.2	77.7	91.1	88.2	63.6	51.1	18,389
Region							
Coast	89.9	79.2	85.9	86.1	66.3	50.3	3,076
North Eastern	50.6	67.0	64.7	60.6	27.1	10.9	648
Eastern	88.3	77.2	90.2	86.9	63.3	47.6	4,375
Central	93.5	81.4	94.1	90.6	71.4	54.9	3,994
Rift Valley	86.0	81.3	93.1	90.6	67.8	57.0	7,953
Western	89.1	80.2	96.5	93.8	69.2	59.1	3,225
Nyanza	89.4	85.6	94.9	93.5	74.5	65.4	4,038
Nairobi	92.2	86.8	93.0	94.3	77.7	66.7	3,770
Education							
No education	68.9	57.3	70.4	67.6	33.7	19.9	2,176
Primary incomplete	83.1	72.9	89.4	86.1	56.2	43.0	7,989
Primary complete	90.7	81.5	93.9	92.4	70.0	57.2	7,637
Secondary+	93.6	90.2	96.2	95.0	81.6	69.7	13,277
Wealth quintile							
Lowest	75.7	67.9	81.1	78.5	47.1	33.8	4,838
Second	87.4	77.5	93.2	89.4	63.5	50.4	5,457
Middle	89.9	82.2	94.3	92.0	70.2	58.3	6,032
Fourth	91.3	84.3	94.2	93.3	74.0	61.5	6,550
Highest	93.3	88.8	94.6	93.7	80.1	67.8	8,203
Total 15-49	88.5	81.3	92.1	90.2	68.8	56.3	31,079

[1] Two most common local misconceptions of source of disease: mosquito bites and sharing food with a person who has AIDS.
[2] Comprehensive knowledge means knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention.

The data indicate that some misconceptions regarding how AIDS is transmitted still exist in Kenya. It is encouraging that about 9 in 10 women and men know that a healthy-looking person can have the AIDS virus and know that AIDS cannot be transmitted by supernatural means or by sharing food with a person who has AIDS. However, misunderstandings about transmission through insects are slightly more widespread; about 8 in 10 respondents know that AIDS cannot be transmitted by mosquito bites.

Comprehensive knowledge about HIV is a composite measure defined as knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chance of contracting HIV, knowing that a healthy-looking person can have HIV, knowing that HIV cannot be transmitted by mosquito bites, and knowing that HIV cannot be contracted by sharing food with a person who has AIDS. Fifty-six percent of women and 66 percent of men have comprehensive knowledge about HIV and AIDS. This is a slight increase since the 2008-09 KDHS, where comprehensive knowledge was 48 percent among women and 55 percent among men.

Table 13.4.2 Comprehensive knowledge about AIDS: Men

Percentage of men age 15-49 who say that a healthy-looking person can have the AIDS virus and who, in response to prompted questions, correctly reject local misconceptions about transmission or prevention of the AIDS virus, and the percentage with a comprehensive knowledge about AIDS by background characteristics, Kenya 2014

Background characteristic	Percentage of respondents who say that:				Percentage who say that a healthy looking person can have the AIDS virus and who reject the two most common local misconceptions[1]	Percentage with a comprehensive knowledge about AIDS[2]	Number of men
	A healthy-looking person can have the AIDS virus	The AIDS virus cannot be transmitted by mosquito bites	The AIDS virus cannot be transmitted by supernatural means	A person cannot become infected by sharing food with a person who has the AIDS			
Age							
15-24	87.5	87.5	94.1	93.1	74.4	63.7	4,666
15-19	83.5	88.1	93.7	91.8	70.9	57.7	2,540
20-24	92.3	86.7	94.7	94.7	78.6	70.9	2,125
25-29	92.4	85.1	94.4	93.8	76.1	68.1	2,104
30-39	93.9	84.8	95.0	93.3	78.2	69.6	3,268
40-49	93.7	79.7	94.5	90.9	72.4	64.3	2,024
Marital status							
Never married	88.2	87.1	93.9	93.0	74.9	64.7	5,350
Ever had sex	91.3	87.0	94.8	94.1	77.8	70.0	3,512
Never had sex	82.4	87.3	92.2	90.8	69.3	54.5	1,838
Married/living together	93.5	83.6	94.8	93.2	76.3	68.1	6,095
Divorced/separated/ widowed	92.7	81.0	96.5	89.2	70.6	60.7	618
Residence							
Urban	93.2	87.3	95.2	95.1	79.5	71.3	5,300
Rural	89.5	83.3	93.9	91.2	72.2	62.2	6,762
Region							
Coast	93.0	82.7	92.1	94.3	74.8	57.2	1,260
North Eastern	68.4	78.8	79.0	62.8	43.1	25.3	227
Eastern	91.9	84.8	95.3	92.3	74.8	64.8	1,825
Central	94.5	88.2	93.6	91.9	80.3	72.4	1,564
Rift Valley	88.4	84.4	95.4	92.2	72.8	64.3	3,050
Western	90.8	84.9	95.5	94.5	74.3	65.8	1,164
Nyanza	91.0	85.3	95.9	94.2	76.5	71.7	1,405
Nairobi	94.4	86.0	94.9	97.0	81.0	73.8	1,568
Education							
No education	72.0	60.8	77.9	72.4	41.9	23.8	345
Primary incomplete	85.0	75.3	91.7	88.1	59.9	48.4	3,071
Primary complete	90.9	82.6	95.5	92.4	72.5	63.9	2,734
Secondary+	95.5	92.6	96.4	96.8	86.7	79.0	5,913
Wealth quintile							
Lowest	81.2	74.8	89.4	86.9	58.1	44.0	1,691
Second	89.0	82.2	94.6	91.7	70.8	61.4	2,145
Middle	91.2	85.0	95.0	92.3	74.6	66.7	2,370
Fourth	93.5	88.0	95.1	94.4	79.4	70.1	2,959
Highest	96.0	90.1	96.3	96.4	85.4	78.3	2,897
Total 15-49	91.1	85.0	94.5	92.9	75.4	66.2	12,063
50-54	94.1	78.2	94.6	88.0	70.1	61.2	756
Total 15-54	91.3	84.6	94.5	92.6	75.1	65.9	12,819

[1] Two most common local misconceptions of source of disease: mosquito bites and sharing food with a person who has AIDS.
[2] Comprehensive knowledge means knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention.

Women with the highest comprehensive knowledge of AIDS are found in Nyamira (89 percent), Nandi (78 percent), and Kisii (71 percent) counties (Table 13.4.1C). Women in Mandera (4 percent), Wajir (8 percent), and Garissa (19 percent) are least likely to have comprehensive knowledge. Comprehensive knowledge among men is highest in Nandi (93 percent), Nyamira (91 percent), and Kiambu (85 percent) and lowest in Turkana (2 percent), Mandera (4 percent), and Wajir (9 percent) (Table 13.4.2C).

Table 13.4.1C Comprehensive knowledge about AIDS: Women

Percentage of women age 15-49 who say that a healthy-looking person can have the AIDS virus and who, in response to prompted questions, correctly reject local misconceptions about transmission or prevention of the AIDS virus, and the percentage with a comprehensive knowledge about AIDS by county, Kenya 2014

County	Percentage of respondents who say that:				Percentage who say that a healthy looking person can have the AIDS virus and who reject the two most common local misconceptions[1]	Percentage with a comprehensive knowledge about AIDS[2]	Number of women
	A healthy-looking person can have the AIDS virus	The AIDS virus cannot be transmitted by mosquito bites	The AIDS virus cannot be transmitted by supernatural means	A person cannot become infected by sharing food with a person who has the AIDS			
Coast	**89.9**	**79.2**	**85.9**	**86.1**	**66.3**	**50.3**	**3,076**
Mombasa	90.3	84.1	91.3	91.3	72.2	61.5	912
Kwale	92.0	85.1	95.4	87.4	72.1	39.5	619
Kilifi	92.6	73.1	74.6	80.1	60.1	46.9	1,043
Tana River	67.5	66.0	81.1	85.1	46.7	36.2	197
Lamu	84.9	77.3	88.8	88.4	63.4	50.1	89
Taita Taveta	92.2	84.5	93.6	90.1	73.5	63.9	215
North Eastern	**50.6**	**67.0**	**64.7**	**60.6**	**27.1**	**10.9**	**648**
Garissa	60.5	71.5	75.8	72.9	39.5	18.5	261
Wajir	48.4	58.2	57.6	65.2	26.5	7.6	212
Mandera	38.7	70.7	56.6	36.9	9.5	3.5	175
Eastern	**88.3**	**77.2**	**90.2**	**86.9**	**63.3**	**47.6**	**4,375**
Marsabit	65.7	62.7	77.4	74.8	39.3	24.6	115
Isiolo	93.2	90.7	63.1	63.8	54.5	39.0	104
Meru	83.6	70.7	89.1	88.8	56.8	48.1	1,110
Tharaka-Nithi	91.7	74.2	88.5	84.8	61.7	49.4	275
Embu	89.2	82.7	92.6	87.5	64.4	51.4	459
Kitui	83.1	73.8	88.0	83.7	57.5	29.8	759
Machakos	94.4	86.5	94.1	90.7	76.2	57.9	873
Makueni	95.3	77.6	95.1	88.2	69.0	55.5	680
Central	**93.5**	**81.4**	**94.1**	**90.6**	**71.4**	**54.9**	**3,994**
Nyandarua	93.1	72.2	90.8	89.9	63.1	52.3	436
Nyeri	91.9	78.7	92.5	90.6	69.1	54.6	650
Kirinyaga	96.2	76.4	95.6	85.4	67.7	62.6	451
Murang'a	91.2	72.9	93.0	88.2	61.5	36.2	735
Kiambu	94.5	89.6	95.6	93.1	79.7	61.7	1,722
Rift Valley	**86.0**	**81.3**	**93.1**	**90.6**	**67.8**	**57.0**	**7,953**
Turkana	74.4	64.8	88.0	80.8	47.6	23.9	320
West Pokot	63.4	70.1	73.7	65.3	37.3	24.0	267
Samburu	87.4	58.9	80.2	82.7	51.3	45.7	123
Trans-Nzoia	91.4	82.9	95.7	90.6	71.7	61.8	768
Uasin Gishu	88.2	89.2	95.7	95.5	76.9	67.0	784
Elgeyo Marakwet	91.2	84.4	97.7	93.2	74.7	64.8	250
Nandi	89.9	92.5	97.8	94.7	81.8	77.5	628
Baringo	76.9	85.8	96.3	93.7	65.2	51.5	335
Laikipia	93.8	73.8	95.4	87.4	64.1	57.3	342
Nakuru	92.8	84.2	92.8	93.0	74.9	63.0	1,574
Narok	75.6	66.7	89.1	84.7	48.1	36.8	642
Kajiado	83.5	79.7	90.1	87.6	66.1	55.8	670
Kericho	77.1	88.0	95.6	96.5	66.6	52.5	563
Bomet	90.2	79.6	95.9	94.1	69.8	61.4	687
Western	**89.1**	**80.2**	**96.5**	**93.8**	**69.2**	**59.1**	**3,225**
Kakamega	85.6	78.9	96.9	94.3	66.4	56.4	1,108
Vihiga	91.5	82.4	97.3	94.2	72.7	59.7	368
Bungoma	92.4	80.8	96.8	93.7	71.6	64.0	1,203
Busia	87.3	80.3	94.5	92.7	67.0	53.1	546
Nyanza	**89.4**	**85.6**	**94.9**	**93.5**	**74.5**	**65.4**	**4,038**
Siaya	87.7	82.9	97.7	92.9	69.5	62.8	572
Kisumu	86.7	87.1	97.7	93.8	73.6	64.8	820
Homa Bay	83.6	86.7	94.7	93.2	70.8	64.8	798
Migori	86.3	74.0	92.1	87.9	60.0	49.4	650
Kisii	97.6	90.6	91.4	96.4	86.8	71.1	864
Nyamira	98.2	93.4	98.2	98.2	90.8	89.4	334
Nairobi	**92.2**	**86.8**	**93.0**	**94.3**	**77.7**	**66.7**	**3,770**
Total 15-49	88.5	81.3	92.1	90.2	68.8	56.3	31,079

[1] Two most common local misconceptions of source of disease: mosquito bites and sharing food with a person who has AIDS.
[2] Comprehensive knowledge means knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention.

Table 13.4.2C Comprehensive knowledge about AIDS: Men

Percentage of men age 15-49 who say that a healthy-looking person can have the AIDS virus and who, in response to prompted questions, correctly reject local misconceptions about transmission or prevention of the AIDS virus, and the percentage with a comprehensive knowledge about AIDS by county, Kenya 2014

County	Percentage of respondents who say that:				Percentage who say that a healthy looking person can have the AIDS virus and who reject the two most common local misconceptions[1]	Percentage with a comprehensive knowledge about AIDS[2]	Number of men
	A healthy-looking person can have the AIDS virus	The AIDS virus cannot be transmitted by mosquito bites	The AIDS virus cannot be transmitted by supernatural means	A person cannot become infected by sharing food with a person who has the AIDS			
Coast	**93.0**	**82.7**	**92.1**	**94.3**	**74.8**	**57.2**	**1,260**
Mombasa	98.6	81.9	93.6	95.4	77.8	75.3	481
Kwale	81.3	88.1	91.7	95.5	71.7	53.9	226
Kilifi	93.1	77.3	89.4	94.4	71.2	30.2	359
Tana River	90.0	90.1	94.8	94.4	82.1	64.1	65
Lamu	95.0	84.4	93.7	93.1	79.3	69.0	37
Taita Taveta	93.9	88.4	94.1	85.7	74.4	66.7	93
North Eastern	**68.4**	**78.8**	**79.0**	**62.8**	**43.1**	**25.3**	**227**
Garissa	79.6	90.3	99.8	92.2	71.0	51.6	94
Wajir	59.8	67.1	64.3	68.1	35.9	8.7	72
Mandera	60.9	74.7	64.1	10.2	7.8	3.9	60
Eastern	**91.9**	**84.8**	**95.3**	**92.3**	**74.8**	**64.8**	**1,825**
Marsabit	98.3	84.2	89.7	83.6	73.5	70.9	40
Isiolo	97.3	89.5	99.4	88.9	79.0	60.6	35
Meru	97.3	84.7	95.6	94.0	79.3	69.9	495
Tharaka-Nithi	93.6	83.1	91.0	91.5	73.1	60.9	102
Embu	90.0	84.1	88.7	85.9	70.2	46.2	164
Kitui	96.3	85.5	97.8	89.4	76.3	63.8	303
Machakos	80.2	81.0	96.0	95.1	64.5	57.7	436
Makueni	94.8	91.3	96.4	93.5	85.7	81.9	250
Central	**94.5**	**88.2**	**93.6**	**91.9**	**80.3**	**72.4**	**1,564**
Nyandarua	88.7	81.6	90.0	88.1	67.9	63.0	198
Nyeri	95.6	85.0	93.9	94.6	80.1	69.1	229
Kirinyaga	95.3	90.1	92.1	79.6	69.0	62.6	184
Murang'a	89.8	82.9	93.8	91.1	72.6	57.4	284
Kiambu	97.7	92.9	94.8	95.8	90.5	85.3	669
Rift Valley	**88.4**	**84.4**	**95.4**	**92.2**	**72.8**	**64.3**	**3,050**
Turkana	71.4	88.4	95.2	93.2	62.8	1.7	76
West Pokot	81.1	65.1	77.3	82.3	49.6	42.8	103
Samburu	87.1	76.8	93.1	78.1	59.7	46.5	35
Trans-Nzoia	92.9	78.1	96.7	89.4	70.1	59.8	329
Uasin Gishu	91.4	91.9	98.1	94.7	81.0	67.8	355
Elgeyo Marakwet	97.6	86.3	99.1	98.7	82.6	80.5	86
Nandi	98.3	97.8	97.8	96.0	93.4	92.5	264
Baringo	84.0	87.6	95.2	90.9	70.4	66.1	125
Laikipia	91.0	82.1	96.4	91.8	72.1	53.5	124
Nakuru	96.8	84.0	98.3	94.5	78.8	72.1	589
Narok	70.1	79.1	82.8	89.1	57.6	51.6	240
Kajiado	91.0	81.5	95.0	85.7	71.6	66.5	241
Kericho	85.9	83.6	96.5	94.5	71.3	66.6	215
Bomet	72.0	83.9	97.8	94.8	59.5	54.4	267
Western	**90.8**	**84.9**	**95.5**	**94.5**	**74.3**	**65.8**	**1,164**
Kakamega	88.1	82.7	98.5	94.4	70.6	61.0	411
Vihiga	91.6	97.7	96.0	98.3	89.2	65.9	140
Bungoma	94.6	80.5	91.3	92.0	71.7	66.8	413
Busia	88.0	89.7	97.6	96.9	77.0	73.8	199
Nyanza	**91.0**	**85.3**	**95.9**	**94.2**	**76.5**	**71.7**	**1,405**
Siaya	90.5	75.0	94.4	93.9	67.9	66.1	213
Kisumu	86.4	96.6	98.6	98.2	83.0	81.6	309
Homa Bay	93.6	76.1	98.6	91.1	68.7	66.3	243
Migori	82.7	73.0	95.3	87.2	57.0	46.2	211
Kisii	96.8	92.8	91.8	97.5	89.8	79.8	315
Nyamira	98.2	95.9	97.9	94.1	91.5	91.4	114
Nairobi	**94.4**	**86.0**	**94.9**	**97.0**	**81.0**	**73.8**	**1,568**
Total 15-49	91.1	85.0	94.5	92.9	75.4	66.2	12,063
50-54	94.1	78.2	94.6	88.0	70.1	61.2	756
Total 15-54	91.3	84.6	94.5	92.6	75.1	65.9	12,819

[1] Two most common local misconceptions of source of disease: mosquito bites and sharing food with a person who has AIDS.
[2] Comprehensive knowledge means knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention.

13.2.4 Knowledge of Mother-to-Child Transmission of HIV

Increasing the level of general knowledge of how HIV is transmitted from mother to child and reducing the risk of transmission by using antiretroviral drugs is critical to reducing mother-to-child transmission of HIV (MTCT). To assess MTCT knowledge, respondents were asked whether HIV can be transmitted from a mother to a child through breastfeeding and whether a mother with HIV can reduce the risk of transmission to her baby by taking special drugs during pregnancy.

Table 13.5 shows MTCT knowledge among women and men age 15-49 by background characteristics. Eighty-nine percent of women and 87 percent of men know that HIV can be transmitted through breastfeeding, and 76 percent of women and 68 percent of men know that the risk of MTCT

Table 13.5 Knowledge of prevention of mother to child transmission of HIV

Percentage of women and men age 15-49 who know that HIV can be transmitted from mother to child by breastfeeding and that the risk of mother to child transmission (MTCT) of HIV can be reduced by mother taking special drugs during pregnancy, by background characteristics, Kenya 2014

	Percentage of women who know that:				Percentage of men who know that:			
Background characteristic	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of women	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of men
Age								
15-24	88.1	69.1	65.0	5,407	86.4	59.9	54.6	4,666
15-19	86.8	63.0	59.4	2,717	84.9	55.2	49.9	2,540
20-24	89.5	75.3	70.7	2,691	88.2	65.7	60.3	2,125
25-29	89.7	80.8	76.0	2,932	88.5	68.9	64.0	2,104
30-39	88.5	81.0	75.7	3,942	88.2	73.4	67.6	3,268
40-49	88.2	78.7	73.8	2,344	86.0	73.8	68.0	2,024
Marital status								
Never married	87.1	67.7	63.5	4,255	86.8	60.8	55.7	5,350
Ever had sex	89.3	74.1	70.0	2,134	88.2	64.5	59.2	3,512
Never had sex	84.9	61.2	57.0	2,122	84.2	53.7	49.0	1,838
Married/living together	88.9	79.5	74.6	8,710	87.6	73.3	67.4	6,095
Divorced/separated/ widowed	90.1	80.9	75.8	1,660	86.5	68.2	63.8	618
Currently pregnant								
Pregnant	91.0	75.6	72.2	915	na	na	na	na
Not pregnant or not sure	88.4	76.2	71.5	13,711	na	na	na	na
Residence								
Urban	89.7	80.4	75.2	5,929	86.9	69.7	63.5	5,300
Rural	87.8	73.4	69.0	8,696	87.4	65.7	60.9	6,762
Region								
Coast	91.0	76.9	73.8	1,421	92.2	70.4	68.3	1,260
North Eastern	64.4	31.2	30.6	299	62.1	58.5	50.2	227
Eastern	90.1	72.3	68.9	2,066	91.4	71.2	67.4	1,825
Central	90.1	79.6	74.7	1,905	84.9	67.6	61.1	1,564
Rift Valley	86.8	70.2	66.0	3,714	86.5	59.9	55.6	3,050
Western	90.6	77.8	73.1	1,571	92.8	66.4	62.8	1,164
Nyanza	86.3	86.3	78.5	1,908	86.4	81.4	73.5	1,405
Nairobi	91.4	84.7	78.8	1,742	82.2	65.0	55.1	1,568
Education								
No education	75.4	46.2	43.4	1,015	60.9	45.4	39.8	345
Primary incomplete	86.2	73.2	68.3	3,793	85.9	61.3	57.0	3,071
Primary complete	89.7	80.3	75.1	3,543	87.5	67.5	61.8	2,734
Secondary+	91.4	80.5	76.0	6,274	89.2	71.9	66.1	5,913
Wealth quintile								
Lowest	83.1	60.8	57.6	2,236	80.3	54.6	49.7	1,691
Second	88.2	74.6	69.9	2,590	88.7	66.5	62.0	2,145
Middle	89.6	77.5	73.1	2,859	88.6	69.3	64.1	2,370
Fourth	89.0	79.5	74.4	3,113	89.2	69.9	64.3	2,959
Highest	90.7	82.6	77.2	3,827	87.1	71.7	65.2	2,897
Total 15-49	88.5	76.2	71.5	14,625	87.2	67.5	62.0	12,063
50-54	na	na	na	na	83.9	70.7	63.7	756
Total 15-54	na	na	na	na	87.0	67.7	62.1	12,819

na = Not applicable

can be reduced by the mother taking special drugs during pregnancy. Seventy-two percent of women and 62 percent of men know both that HIV can be transmitted through breastfeeding and that the risk of MTCT can be reduced by taking special drugs during pregnancy. There has been a slight increase in knowledge about HIV transmission through breastfeeding and MTCT-reducing drugs since 2008-09.

Knowledge of HIV transmission through breastfeeding and of MTCT-reducing drugs is lowest among women and men who are age 15-19 (59 percent and 50 percent, respectively), who have never had sex (57 percent and 49 percent, respectively), and who live in North Eastern region (31 percent and 50 percent, respectively). Among both women and men, knowledge of transmission through breastfeeding and MTCT-reducing drugs increases with increasing education and wealth.

Table 13.5C shows that there is some variation in MTCT knowledge across counties. Among women, the level of knowledge is highest in Bungoma (87 percent) and in Kilifi, Kitui, and Nandi counties (86 percent each) and lowest in Wajir and Marsabit (29 percent each). Among men, the highest level of knowledge is found in Mombasa (85 percent) and Machakos (84 percent) and the lowest in Wajir and West Pokot (18 percent each).

Table 13.5C Knowledge of prevention of mother to child transmission of HIV

Percentage of women and men age 15-49 who know that HIV can be transmitted from mother to child by breastfeeding and that the risk of mother to child transmission (MTCT) of HIV can be reduced by mother taking special drugs during pregnancy, by county, Kenya 2014

	Percentage of women who know that:				Percentage of men who know that:			
County	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of women	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of men
Coast	**91.0**	**76.9**	**73.8**	**1,421**	**92.2**	**70.4**	**68.3**	**1,260**
Mombasa	91.1	80.0	75.0	416	92.4	88.2	85.1	481
Kwale	93.1	62.9	61.6	282	88.5	31.9	31.7	226
Kilifi	91.5	89.2	86.4	487	95.6	71.8	69.9	359
Tana River	83.6	39.4	37.9	91	89.8	71.4	69.9	65
Lamu	89.4	66.1	63.1	45	88.4	66.4	62.7	37
Taita Taveta	89.5	81.6	79.6	99	90.4	67.3	65.2	93
North Eastern	**64.4**	**31.2**	**30.6**	**299**	**62.1**	**58.5**	**50.2**	**227**
Garissa	73.0	32.3	32.0	118	94.2	73.4	71.7	94
Wajir	61.6	30.3	29.0	93	20.6	41.6	18.0	72
Mandera	55.7	30.6	30.3	88	61.5	55.4	55.4	60
Eastern	**90.1**	**72.3**	**68.9**	**2,066**	**91.4**	**71.2**	**67.4**	**1,825**
Marsabit	71.7	30.2	29.1	54	74.1	70.2	62.4	40
Isiolo	79.0	56.2	55.1	49	93.3	31.9	31.5	35
Meru	90.2	75.9	72.4	533	95.5	80.1	78.5	495
Tharaka-Nithi	92.1	75.6	73.5	131	84.8	63.0	55.5	102
Embu	89.8	82.7	75.7	212	83.4	64.5	57.7	164
Kitui	93.7	90.5	86.2	355	89.9	34.5	31.6	303
Machakos	91.8	61.4	59.8	400	96.6	84.1	83.8	436
Makueni	88.1	61.4	58.2	333	86.2	88.7	76.9	250
Central	**90.1**	**79.6**	**74.7**	**1,905**	**84.9**	**67.6**	**61.1**	**1,564**
Nyandarua	86.1	77.7	69.0	204	86.2	52.5	49.0	198
Nyeri	91.4	78.7	75.2	320	87.6	86.5	77.0	229
Kirinyaga	96.1	84.7	82.8	218	81.9	69.5	63.1	184
Murang'a	93.9	75.4	72.9	348	86.3	68.7	64.0	284
Kiambu	87.5	80.8	74.5	815	83.9	64.6	57.5	669
Rift Valley	**86.8**	**70.2**	**66.0**	**3,714**	**86.5**	**59.9**	**55.6**	**3,050**
Turkana	77.0	31.5	31.5	146	43.3	33.1	32.2	76
West Pokot	64.9	54.1	46.2	127	82.8	21.0	17.7	103
Samburu	92.2	41.4	40.6	58	49.2	46.9	42.8	35
Trans-Nzoia	70.8	58.4	52.7	346	87.7	56.5	51.0	329
Uasin Gishu	86.4	59.1	56.0	391	89.5	44.7	42.0	355
Elgeyo Marakwet	91.5	66.2	63.3	114	96.6	58.1	56.8	86
Nandi	96.1	87.6	85.8	290	99.3	79.9	79.5	264
Baringo	94.3	70.6	67.3	155	92.8	63.8	61.5	125
Laikipia	96.9	77.5	76.7	155	86.7	68.6	62.8	124
Nakuru	91.6	84.5	79.7	719	87.8	65.1	59.4	589
Narok	88.8	64.9	61.5	302	76.9	60.7	56.3	240
Kajiado	81.0	61.3	57.2	306	81.2	62.7	53.9	241
Kericho	94.3	79.8	77.8	271	88.5	61.1	57.4	215
Bomet	84.4	80.2	70.0	335	89.5	67.8	63.5	267
Western	**90.6**	**77.8**	**73.1**	**1,571**	**92.8**	**66.4**	**62.8**	**1,164**
Kakamega	86.5	69.8	62.7	544	93.5	57.8	55.4	411
Vihiga	85.9	68.9	62.8	176	97.8	67.0	66.1	140
Bungoma	95.7	88.9	86.8	575	93.7	65.9	63.2	413
Busia	91.1	76.1	71.9	276	85.8	84.6	75.1	199
Nyanza	**86.3**	**86.3**	**78.5**	**1,908**	**86.4**	**81.4**	**73.5**	**1,405**
Siaya	75.0	91.0	71.1	277	85.5	84.6	77.2	213
Kisumu	87.7	89.5	83.2	392	85.0	80.9	71.8	309
Homa Bay	89.6	87.3	82.3	362	82.6	81.8	70.3	243
Migori	89.8	80.6	76.0	297	86.0	76.7	67.1	211
Kisii	88.0	84.0	79.6	416	89.1	80.5	75.7	315
Nyamira	84.8	85.0	73.3	163	92.8	87.3	83.4	114
Nairobi	**91.4**	**84.7**	**78.8**	**1,742**	**82.2**	**65.0**	**55.1**	**1,568**
Total 15-49	88.5	76.2	71.5	14,625	87.2	67.5	62.0	12,063
50-54	na	na	na	na	83.9	70.7	63.7	756
Total 15-54	na	na	na	na	87.0	67.7	62.1	12,819

na = Not applicable

13.3 ATTITUDES TOWARDS PEOPLE LIVING WITH HIV AND AIDS

Widespread stigma and discrimination against those living with HIV and AIDS can adversely affect people's willingness to be tested and their adherence to antiretroviral therapy. Survey respondents who had heard of AIDS were asked if they would be willing to care for a family member with AIDS in their own household, if they would buy fresh vegetables from a shopkeeper who has the AIDS virus, if they thought a female teacher who has the AIDS virus but is not sick should be allowed to continue teaching, and if they would like to keep a family member's positive HIV status secret. Table 13.6.1 and Figure 13.3 show the results for women age 15-49 by background characteristics, and Table 13.6.2 and Figure 13.4 show the results for men.

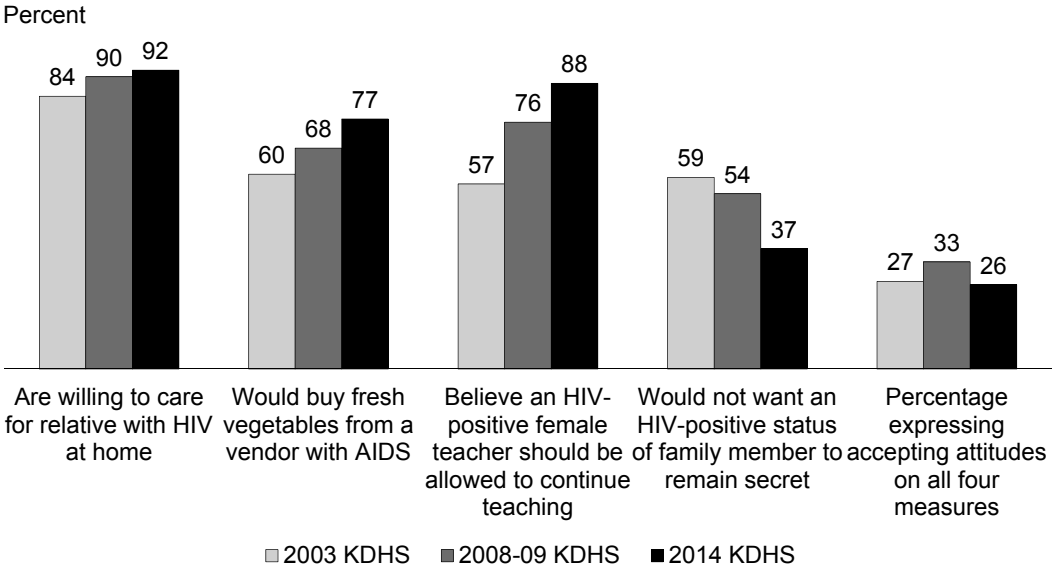
Table 13.6.1 Accepting attitudes towards those living with HIV/AIDS: Women

Among women age 15-49 who have heard of AIDS, percentage expressing specific accepting attitudes towards people with HIV/AIDS, by background characteristics, Kenya 2014

	Percentage of women who:					
Background characteristic	Are willing to care for a family member with AIDS in the respondent's home	Would buy fresh vegetables from shopkeeper who has the AIDS virus	Say that a female teacher who has the AIDS virus but is not sick should be allowed to continue teaching	Would not want to keep secret that a family member got infected with the AIDS virus	Percentage expressing accepting attitudes on all four indicators	Number of women who have heard of AIDS
Age						
15-24	91.6	75.7	88.1	33.3	23.0	5,385
15-19	90.3	73.4	86.6	30.4	20.5	2,699
20-24	92.8	78.0	89.6	36.2	25.4	2,686
25-29	91.4	76.1	87.2	35.4	24.3	2,927
30-39	92.6	79.4	88.1	40.4	29.3	3,935
40-49	93.6	78.9	87.4	43.0	30.2	2,341
Marital status						
Never married	93.2	78.6	89.9	34.4	25.5	4,238
Ever had sex	94.9	82.7	92.7	36.9	29.2	2,133
Never had sex	91.4	74.4	87.0	31.9	21.8	2,105
Married/living together	91.5	76.3	86.9	38.6	26.3	8,691
Divorced/separated/ widowed	93.0	79.5	87.5	37.0	26.5	1,659
Residence						
Urban	94.7	81.4	92.1	38.5	30.2	5,921
Rural	90.4	74.5	84.9	36.3	23.3	8,666
Region						
Coast	93.5	71.2	89.1	25.2	16.1	1,420
North Eastern	28.4	22.2	27.3	50.5	2.8	284
Eastern	92.1	71.9	84.2	30.8	18.8	2,062
Central	95.0	81.9	92.3	40.2	29.8	1,904
Rift Valley	91.3	73.1	83.4	45.2	29.8	3,701
Western	93.0	82.0	92.8	32.1	24.5	1,568
Nyanza	94.6	86.9	93.0	32.9	26.0	1,906
Nairobi	96.8	87.0	95.3	41.3	36.3	1,742
Education						
No education	66.0	41.4	54.5	38.1	6.8	989
Primary incomplete	88.8	69.5	81.7	33.7	19.2	3,784
Primary complete	95.0	78.6	91.4	36.7	26.8	3,539
Secondary+	96.7	86.9	94.8	39.4	32.9	6,274
Wealth quintile						
Lowest	79.8	58.1	70.5	33.4	12.5	2,210
Second	92.2	75.1	86.1	35.6	22.6	2,585
Middle	94.0	78.7	89.7	36.4	26.1	2,856
Fourth	94.7	82.6	93.0	39.0	30.8	3,111
Highest	95.7	84.5	93.4	39.6	32.5	3,824
Total 15-49	92.1	77.3	87.8	37.2	26.1	14,587

Ninety-two percent of women and 95 percent of men reported that they would be willing to care for a relative sick with HIV, 77 percent of women and 84 percent of men said that they would be willing to buy fresh vegetables from a vendor who has AIDS, and 88 percent of both women and men agreed that a female teacher who has the AIDS virus but is not sick should be allowed to continue teaching. Since 2003, there has been continuous improvement in these three measures of accepting attitudes.

Figure 13.3 **Accepting attitudes towards those with HIV: Women**



The proportion of respondents with accepting attitudes related to disclosure of a family member's HIV-positive status continues to decline, however. In 2014, 37 percent of women and 55 percent of men reported that if a family member became infected with the HIV virus, they would not want it to remain secret, a decrease from 54 percent of women and 69 percent of men in 2008-09 and 59 percent of women and 72 percent of men in 2003.

The percentage of women and men expressing accepting attitudes on all four measures remains low. Only one in four women (26 percent) and two in five men (44 percent) show acceptance on all four measures, a decrease from the figures reported in 2008-09 (33 percent among women and 48 percent among men).

Urban women (30 percent) are more likely than rural women (23 percent) to have accepting attitudes on all four measures; the difference between urban and rural men is minimal. Accepting attitudes remain lowest in the North Eastern region; only 3 percent of women and 31 percent of men currently express accepting attitudes on all four measures. In 2008-09, a similarly low 11 percent of women and 14 percent of men in that region expressed acceptance.

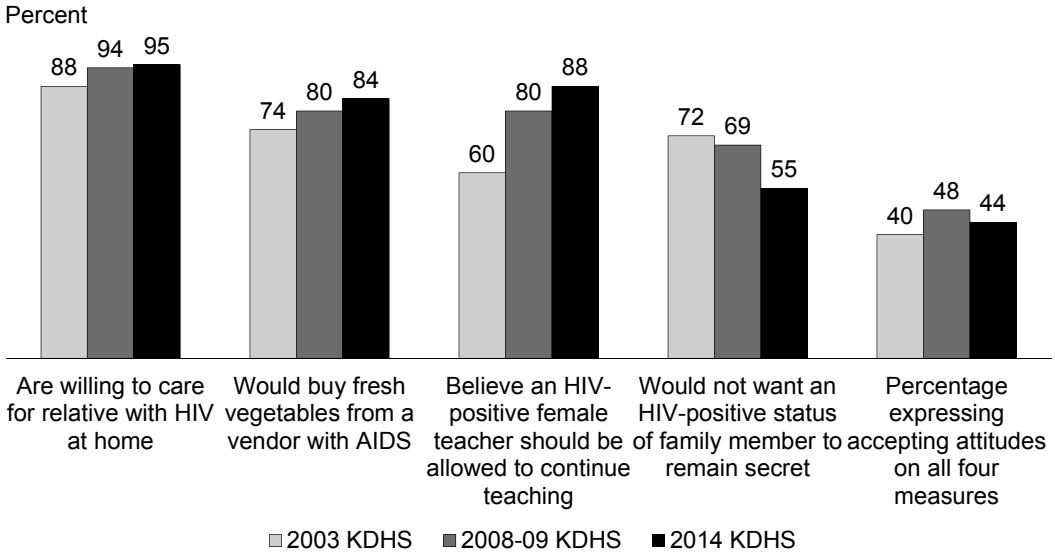
Table 13.6.2 Accepting attitudes towards those living with HIV/AIDS: Men

Among men age 15-49 who have heard of HIV/AIDS, percentage expressing specific accepting attitudes towards people with HIV/AIDS, by background characteristics, Kenya 2014

Background characteristic	Percentage of men who: Are willing to care for a family member with AIDS in the respondent's home	Would buy fresh vegetables from shopkeeper who has the AIDS virus	Say that a female teacher who has the AIDS virus but is not sick should be allowed to continue teaching	Would not want to keep secret that a family member got infected with the AIDS virus	Percentage expressing accepting attitudes on all four indicators	Number of men who have heard of AIDS
Age						
15-24	94.1	80.4	86.6	48.5	36.9	4,648
15-19	93.1	77.6	84.3	44.8	32.9	2,526
20-24	95.3	83.7	89.3	52.9	41.7	2,122
25-29	96.0	86.4	88.2	56.2	44.6	2,104
30-39	96.4	85.8	87.2	60.0	48.3	3,267
40-49	96.2	86.6	89.8	62.6	50.8	2,020
Marital status						
Never married	94.3	81.9	87.2	49.1	38.4	5,328
Ever had sex	95.7	85.4	88.8	50.4	40.7	3,507
Never had sex	91.6	75.2	84.3	46.7	33.9	1,821
Married/living together	96.6	85.8	88.3	60.0	47.9	6,093
Divorced/separated/ widowed	93.5	82.9	83.4	62.6	48.1	618
Residence						
Urban	96.3	87.2	92.3	52.8	44.3	5,298
Rural	94.7	81.4	83.8	57.3	43.2	6,741
Region						
Coast	89.8	82.3	82.8	53.8	43.8	1,256
North Eastern	75.8	50.8	66.5	75.9	31.0	225
Eastern	95.0	77.9	83.5	49.3	35.2	1,820
Central	97.8	92.2	91.7	60.2	52.5	1,560
Rift Valley	96.5	82.3	85.8	60.5	46.9	3,044
Western	97.6	84.9	88.6	55.1	43.7	1,162
Nyanza	95.8	89.9	92.1	54.3	46.0	1,403
Nairobi	96.9	85.8	93.9	46.8	38.1	1,568
Education						
No education	79.8	47.4	46.9	56.2	18.2	338
Primary incomplete	92.6	71.9	76.4	49.4	31.2	3,058
Primary complete	95.8	85.0	88.4	59.8	47.0	2,732
Secondary+	97.6	91.7	95.3	56.3	50.1	5,911
Wealth quintile						
Lowest	89.8	68.0	70.5	53.7	30.5	1,679
Second	95.3	82.0	84.1	56.0	42.7	2,140
Middle	96.6	85.0	88.4	54.3	43.5	2,366
Fourth	96.7	87.3	92.1	58.1	48.5	2,958
Highest	96.5	90.3	94.8	53.7	47.3	2,896
Total 15-49	95.4	83.9	87.6	55.3	43.7	12,039
50-54	96.3	83.0	85.4	65.6	50.8	756
Total 15-54	95.5	83.9	87.5	55.9	44.1	12,795

Education and socioeconomic status remain strongly related to positive attitudes towards those who are HIV positive. The proportion of women and men who express accepting attitudes on all four measures increases with increasing education as well as wealth. Only 7 percent of women and 18 percent of men with no education express acceptance on all four measures, as compared with 33 percent of women and 50 percent of men with a secondary or higher education. Similarly, women in the highest wealth quintile are more than twice as likely to express accepting attitudes on all four measures as those in the lowest quintile (33 percent versus 13 percent). Forty-seven percent of men in the highest wealth quintile express accepting attitudes on all four measures, compared to 31 percent of those in the lowest quintile.

Figure 13.4 **Accepting attitudes towards those with HIV: Men**



13.4 ATTITUDES TOWARDS NEGOTIATING SAFER SEXUAL RELATIONSHIPS

HIV transmission in Kenya mainly occurs through sexual intercourse. Safer sex is an important prevention strategy and can reduce individuals' risk of contracting HIV. Negotiating safer sex can be difficult, especially for married women. Table 13.7 shows the percentage of women and men age 15-49 who believe that a woman is justified in refusing to have sex with her husband if he has sex with other women or in asking that her husband use a condom if she knows he has an STI.

Seventy-nine percent of both women and men believe that a wife is justified in refusing to have sexual intercourse with her husband if he has sex with other women. Higher proportions of women (89 percent) and men (92 percent) believe that a wife is justified in asking her husband/partner to use a condom if she knows he has an STI.

Positive attitudes towards sexual negotiation follow similar patterns to other HIV-related attitudes. They are lowest among women and men age 15-19, women and men who have never had sex, and rural women and men. Women in North Eastern are much less likely than women in other regions to support either refusing sex (32 percent) or asking for condom use (19 percent). Interestingly, men in North Eastern are much more supportive than women in that region (76 percent support refusing sex and 72 percent support asking for condom use). Support for women's right to negotiate safer sex increases with increasing education and wealth among both men and women.

Table 13.7 Attitudes towards negotiating safer sexual relations with husband

Percentage of women and men age 15-49 who believe that a woman is justified in refusing to have sexual intercourse with her husband if she knows that he has sexual intercourse with other women, and percentage who believe that a woman is justified in asking that they use a condom if she knows that her husband has a sexually transmitted infection (STI), by background characteristics, Kenya 2014

Background characteristic	Percentage of women who believe that a woman is justified in:			Percentage of men who believe that a woman is justified in:		
	Refusing to have sexual intercourse with her husband if she knows he has sex with other women	Asking that they use a condom if she knows that her husband has an STI	Number of women	Refusing to have sexual intercourse with her husband if she knows he has sex with other women	Asking that they use a condom if she knows that her husband has an STI	Number of men
Age						
15-24	76.9	87.0	5,407	74.8	89.6	4,666
15-19	73.1	82.0	2,717	72.1	86.7	2,540
20-24	80.7	92.0	2,691	78.0	93.0	2,125
25-29	80.7	90.8	2,932	77.9	93.0	2,104
30-39	78.8	90.1	3,942	82.8	93.4	3,268
40-49	79.2	90.4	2,344	80.4	93.1	2,024
Marital status						
Never married	76.8	86.0	4,255	75.1	89.7	5,350
Ever had sex	80.5	92.6	2,134	77.3	93.1	3,512
Never had sex	73.1	79.3	2,122	70.8	83.2	1,838
Married/living together	78.9	90.1	8,710	80.8	93.5	6,095
Divorced/separated/ widowed	80.9	92.0	1,660	84.7	93.2	618
Residence						
Urban	81.8	92.9	5,929	80.1	94.7	5,300
Rural	76.3	86.6	8,696	77.1	89.5	6,762
Region						
Coast	74.1	87.4	1,421	78.8	87.8	1,260
North Eastern	32.1	19.0	299	76.1	71.8	227
Eastern	82.4	88.9	2,066	79.1	90.7	1,825
Central	78.6	89.6	1,905	81.5	92.1	1,564
Rift Valley	77.1	88.3	3,714	77.7	90.5	3,050
Western	80.4	91.2	1,571	77.7	94.6	1,164
Nyanza	81.2	93.8	1,908	80.4	96.0	1,405
Nairobi	83.7	97.2	1,742	75.2	95.7	1,568
Education						
No education	57.3	58.7	1,015	68.7	74.1	345
Primary incomplete	74.5	85.8	3,793	74.5	86.9	3,071
Primary complete	79.1	92.5	3,543	78.8	93.1	2,734
Secondary+	84.1	94.2	6,274	81.0	94.8	5,913
Wealth quintile						
Lowest	67.0	74.1	2,236	72.4	83.9	1,691
Second	77.0	89.2	2,590	78.4	90.0	2,145
Middle	79.4	90.5	2,859	77.0	92.1	2,370
Fourth	81.7	92.6	3,113	78.4	93.5	2,959
Highest	83.2	94.0	3,827	83.3	95.8	2,897
Total 15-49	78.5	89.1	14,625	78.5	91.8	12,063
50-54	na	na	na	80.7	90.5	756
Total 15-54	na	na	na	78.6	91.7	12,819

na = Not applicable

13.5 ATTITUDE TOWARDS CONDOM EDUCATION FOR YOUTH

Condom use is one of the most effective strategies for combating the spread of HIV. However, educating youth about condoms is sometimes controversial, with some people believing that it promotes early sexual initiation (MOH, 2015b). To gauge attitudes towards condom education for youth, respondents were asked if they thought that young people age 12-14 should be taught about using condoms to avoid HIV infection. Results are tabulated for adult respondents (those age 18 and above). Table 13.8 shows the percentage of women and men age 18-49 who agree that children age 12-14 should be taught about using a condom to avoid AIDS, by background characteristics.

Table 13.8 Adult support of education about condom use to prevent AIDS

Percentage of women and men age 18-49 who agree that children age 12-14 years should be taught about using a condom to avoid AIDS, by background characteristics, Kenya 2014

Background characteristic	Women		Men	
	Percentage who agree	Number	Percentage who agree	Number
Age				
18-24	58.5	3,727	64.3	3,134
18-19	57.1	1,037	59.6	1,009
20-24	59.1	2,691	66.6	2,125
25-29	60.5	2,932	63.1	2,104
30-39	56.1	3,942	60.6	3,268
40-49	57.8	2,344	60.6	2,024
Marital status				
Never married	59.4	2,660	62.7	3,821
Married or living together	56.9	8,634	61.9	6,094
Divorced/separated/ widowed	62.1	1,651	63.1	616
Residence				
Urban	57.4	5,478	61.5	4,916
Rural	58.6	7,468	62.8	5,615
Region				
Coast	53.0	1,271	46.3	1,106
North Eastern	8.8	260	14.4	179
Eastern	61.3	1,816	69.6	1,563
Central	54.1	1,727	52.1	1,401
Rift Valley	57.6	3,307	59.8	2,675
Western	71.4	1,305	72.0	944
Nyanza	70.3	1,620	78.2	1,164
Nairobi	49.0	1,639	67.3	1,500
Education				
No education	39.2	981	30.2	328
Primary incomplete	61.4	3,059	64.3	2,243
Primary complete	60.1	3,349	63.3	2,600
Secondary+	58.4	5,557	62.8	5,360
Wealth quintile				
Lowest	50.9	1,945	53.3	1,372
Second	63.4	2,206	65.3	1,793
Middle	61.5	2,457	66.1	1,989
Fourth	57.4	2,784	62.8	2,634
Highest	56.9	3,553	61.4	2,742
Total 18-49	58.1	12,945	62.2	10,531
50-54	na	na	56.1	756
Total 18-54	na	na	61.8	11,288

na = Not applicable

Six in 10 women (58 percent) and men (62 percent) support teaching young people about condoms for HIV prevention. Among men, this is a decline from the 2008-09 KDHS, when 72 percent supported teaching young people about condoms. There is no clear trend in opinions across age or rural-urban residence. More than 70 percent of women and men from the Nyanza and Western regions support youth condom education. Residents of North Eastern are least likely to agree that young people should be taught about condoms (9 percent of women and 14 percent of men).

Women and men with no education are less likely than their more educated counterparts to agree that youth age 12-14 should be taught about condoms. Thirty-nine percent of women with no education support condom education, as compared with 58 percent or more among those at higher educational levels. Similarly, 30 percent of men with no education support condom education, compared with 63 percent or more among those at higher levels of education. Women (51 percent) and men (53 percent) in the lowest wealth quintile are least likely to support condom education.

13.6 HIGH-RISK SEX

Information on sexual behaviour is important in designing and monitoring programmes to control the spread of HIV. The 2014 KDHS included questions on respondents' sexual partners both during their lifetime and over the 12 months preceding the survey. Men were also asked whether they paid for sex during the 12 months preceding the interview. In addition, information was collected on women's and men's use of condoms during their last sexual encounter with each type of partner. These questions are sensitive, and some respondents may have been reluctant to provide information on recent sexual behaviour.

13.6.1 Multiple Partners and Condom Use

Tables 13.9.1 and 13.9.2 show the percentage of women and men age 15-49 who had sexual intercourse with more than one partner in the past 12 months and, among those with more than one partner in the past 12 months, the percentage reporting that a condom was used during their most recent intercourse. Also shown is the mean number of lifetime sexual partners among respondents who had ever had sex. Men are much more likely than women to report having two or more sexual partners in the 12 months before the survey (13 percent and 1 percent, respectively). Among men, those in their 20s (17 percent); those who are divorced, separated, or widowed (19 percent); and those residing in Nairobi (19 percent) and Nyanza (18 percent) are most likely to have had multiple partners in the 12 months preceding the survey. Men in the Central and North Eastern regions are least likely to report multiple partners (both 6 percent). There are no clear patterns by education or wealth.

Forty percent of women and 44 percent of men who had two or more partners in the 12 months preceding the survey reported using a condom during their last sexual intercourse. Among men, this is a decrease from the 62 percent reported in the 2008-09 KDHS. Condom use decreases with age among men and is lowest among those who are married or living together with a partner (20 percent), those in the Western (27 percent) and Coast (32 percent) regions, those with no education (18 percent), and those in the lowest wealth quintile (31 percent).

Among respondents who have ever had sexual intercourse, the mean number of lifetime sexual partners is considerably higher among men (6.8) than among women (2.1). Mean number of partners increases with age among both men and women. For men, the mean number is higher among those who are divorced, separated, or widowed; those in polygynous marriages; and those living in Nairobi.

Table 13.9.1 Multiple sexual partners: Women

Among all women age 15-49, the percentage who had sexual intercourse with more than one sexual partner in the past 12 months; among those having more than one partner in the past 12 months, the percentage reporting that a condom was used at last intercourse; and the mean number of sexual partners during their lifetime for women who ever had sexual intercourse, by background characteristics, Kenya 2014

	Among all women:		Among women who had 2+ partners in the past 12 months:		Among women who ever had sexual intercourse[1]:	
Background characteristic	Percentage who had 2+ partners in the past 12 months	Number of women	Percentage who reported using a condom during last sexual intercourse	Number of women	Mean number of sexual partners in lifetime	Number of women
Age						
15-24	1.5	5,407	37.5	83	1.8	3,387
15-19	1.0	2,717	(26.1)	28	1.5	984
20-24	2.0	2,691	(43.3)	55	1.9	2,402
25-29	1.3	2,932	(43.1)	39	2.1	2,855
30-39	1.6	3,942	(48.0)	64	2.2	3,867
40-49	0.9	2,344	*	20	2.5	2,309
Marital status						
Never married	1.4	4,255	65.6	60	2.0	2,124
Married or living together	1.0	8,710	12.5	89	2.0	8,647
Divorced/separated/ widowed	3.4	1,660	56.8	56	2.9	1,648
Residence						
Urban	2.1	5,929	47.4	122	2.2	5,180
Rural	1.0	8,696	29.6	84	2.1	7,238
Region						
Coast	1.1	1,421	(26.9)	15	1.7	1,190
North Eastern	0.0	299	*	0	1.2	232
Eastern	1.0	2,066	(41.8)	20	2.6	1,716
Central	1.3	1,905	*	24	2.3	1,638
Rift Valley	0.8	3,714	(41.4)	31	1.9	3,214
Western	0.9	1,571	*	15	2.2	1,268
Nyanza	1.4	1,908	(39.6)	27	2.2	1,621
Nairobi	4.2	1,742	*	73	2.3	1,539
Education						
No education	0.7	1,015	*	8	1.7	968
Primary incomplete	1.4	3,793	33.7	52	2.3	3,092
Primary complete	1.2	3,543	(31.4)	43	2.2	3,284
Secondary+	1.6	6,274	50.0	103	2.1	5,075
Wealth quintile						
Lowest	1.0	2,236	(16.6)	22	1.9	1,927
Second	1.4	2,590	(29.7)	36	2.1	2,156
Middle	0.9	2,859	(48.2)	27	2.1	2,380
Fourth	1.8	3,113	(43.6)	55	2.3	2,678
Highest	1.7	3,827	(47.5)	65	2.1	3,278
Total 15-49	1.4	14,625	40.1	205	2.1	12,418

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
[1] Means are calculated excluding respondents who gave non-numeric responses.

Table 13.9.2 Multiple sexual partners: Men

Among all men age 15-49, the percentage who had sexual intercourse with more than one sexual partner in the past 12 months; among those having more than one partner in the past 12 months, the percentage reporting that a condom was used at last intercourse; and the mean number of sexual partners during their lifetime for men who ever had sexual intercourse, by background characteristics, Kenya 2014

Background characteristic	Among all men:		Among men who had 2+ partners in the past 12 months:		Among men who ever had sexual intercourse[1]:	
	Percentage who had 2+ partners in the past 12 months	Number of men	Percentage who reported using a condom during last sexual intercourse	Number of men	Mean number of sexual partners in lifetime	Number of men
Age						
15-24	9.6	4,666	68.9	449	4.4	2,901
15-19	3.7	2,540	64.1	95	2.8	1,028
20-24	16.7	2,125	70.2	354	5.2	1,873
25-29	17.3	2,104	50.1	365	6.3	2,012
30-39	14.6	3,268	28.2	477	7.6	3,189
40-49	11.9	2,024	22.2	241	9.8	1,962
Marital status						
Never married	11.3	5,350	72.4	605	4.6	3,498
Married or living together	13.2	6,095	20.2	807	7.7	5,961
Divorced/separated/ widowed	19.4	618	66.6	120	11.6	605
Type of union						
In polygynous union	69.0	333	13.7	230	11.7	316
In non-polygynous union	10.0	5,762	22.8	577	7.5	5,645
Not currently in union	12.1	5,968	71.4	725	5.6	4,103
Residence						
Urban	14.4	5,300	46.6	761	7.6	4,666
Rural	11.4	6,762	42.3	771	6.2	5,398
Region						
Coast	11.9	1,260	32.0	150	5.6	1,041
North Eastern	5.9	227	*	13	1.8	127
Eastern	12.5	1,825	50.3	229	6.5	1,514
Central	5.5	1,564	43.7	86	6.8	1,315
Rift Valley	11.5	3,050	51.2	351	6.5	2,579
Western	12.5	1,164	27.2	145	6.3	902
Nyanza	18.4	1,405	47.6	258	7.1	1,134
Nairobi	19.0	1,568	45.7	299	9.3	1,452
Education						
No education	13.9	345	17.9	48	6.9	300
Primary incomplete	11.4	3,071	36.0	351	7.1	2,286
Primary complete	14.3	2,734	44.9	390	6.9	2,512
Secondary+	12.6	5,913	49.8	743	6.7	4,967
Wealth quintile						
Lowest	12.2	1,691	31.0	207	6.6	1,328
Second	11.6	2,145	45.6	249	6.6	1,735
Middle	11.9	2,370	46.9	282	7.0	1,923
Fourth	13.1	2,959	46.7	389	7.1	2,488
Highest	14.0	2,897	46.6	404	6.8	2,590
Total 15-49	12.7	12,063	44.4	1,531	6.8	10,064
50-54	11.4	756	14.5	86	11.7	725
Total 15-54	12.6	12,819	42.8	1,618	7.2	10,789

Note: An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
[1] Means are calculated excluding respondents who gave non-numeric responses.

13.6.2 Point Prevalence and Cumulative Prevalence of Concurrent Sexual Partners

The 2014 KDHS provides information on concurrent relationships by presenting the point prevalence and the cumulative prevalence of concurrent sexual partners. The point prevalence of concurrent sexual partners is defined as the percentage of respondents who had two or more sexual partners concurrently at the point in time six months before the survey. The cumulative prevalence of concurrent sexual partners is defined as the percentage of respondents who had two or more partners concurrently at any time during the 12 months preceding the survey. Table 13.10 shows the point prevalence and cumulative prevalence of concurrent sexual partners among women and men age 15-49 during the 12 months before the survey. It also shows, among women and men who had multiple sexual partners in the 12 months before the survey, the percentage who had concurrent sexual partners.

Table 13.10 Point prevalence and cumulative prevalence of concurrent sexual partners

Percentage of all women and men age 15-49 who had concurrent sexual partners six months before the survey (point prevalence[1]), and percentage of all women and all men age 15-49 who had any concurrent sexual partners during the 12 months before the survey (cumulative prevalence[2]), and among women and men age 15-49 who had multiple sexual partners during the 12 months before the survey, percentage who had concurrent sexual partners, by background characteristics, Kenya 2014

Background characteristic	Among all respondents:			Among all respondents who had multiple partners during the 12 months before the survey:	
	Point prevalence of concurrent sexual partners[1]	Cumulative prevalence of concurrent sexual partners[2]	Number of respondents	Percentage who had concurrent sexual partners[2]	Number of respondents
			WOMEN		
Age					
15-24	0.2	0.6	5,407	41.3	83
15-19	0.1	0.5	2,717	(51.9)	28
20-24	0.3	0.7	2,691	(35.9)	55
25-29	0.2	0.9	2,932	(71.4)	39
30-39	0.2	0.7	3,942	(42.4)	64
40-49	0.3	0.8	2,344	*	20
Marital status					
Never married	0.2	0.9	4,255	62.9	60
Married or living together	0.2	0.5	8,710	52.7	89
Divorced/separated/ widowed	0.2	1.4	1,660	40.0	56
Residence					
Urban	0.2	0.9	5,929	44.0	122
Rural	0.2	0.6	8,696	64.2	84
Total 15-49	0.2	0.7	14,625	52.2	205
			MEN		
Age					
15-24	2.2	5.6	4,666	57.7	449
15-19	0.7	2.1	2,540	56.1	95
20-24	4.0	9.7	2,125	58.1	354
25-29	4.8	12.2	2,104	70.4	365
30-39	6.8	12.5	3,268	85.5	477
40-49	7.5	10.4	2,024	87.6	241
Marital status					
Never married	2.4	6.0	5,350	52.8	605
Married or living together	7.0	12.1	6,095	91.6	807
Divorced/separated/ widowed	3.7	12.3	618	63.3	120
Type of union					
In polygynous union	60.5	67.1	333	97.2	230
In non-polygynous union	3.9	9.0	5,762	89.4	577
Not currently in union	2.5	6.6	5,968	54.5	725
Residence					
Urban	4.8	10.7	5,300	74.5	761
Rural	4.8	8.4	6,762	73.6	771
Total 15-49	4.8	9.4	12,063	74.1	1,531
50-54	8.2	10.7	756	93.6	86
Total 15-54	5.0	9.5	12,819	75.1	1,618

Note: Two sexual partners are considered to be concurrent if the date of the most recent sexual intercourse with the earlier partner is after the date of the first sexual intercourse with the later partner. Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed..

[1] The percentage of respondents who had two (or more) sexual partners that were concurrent at the point in time six months before the survey

[2] The percentage of respondents who had two (or more) sexual partners that were concurrent anytime during the 12 months preceding the survey

Among women, both the point prevalence and the cumulative prevalence are less than 1 percent. Among men, the point prevalence is 5 percent and the cumulative prevalence is 9 percent. The point prevalence for men increases with age. The cumulative prevalence is slightly higher among men age 25 to 39 and among men in urban areas. Both the point prevalence and the cumulative prevalence among married men are equal to or higher than those of their non-married counterparts; to some extent, this is attributable to polygamy among married men.

Women with multiple sexual partners in the last 12 months are less likely than men to have concurrent partners (52 percent versus 74 percent). Women who are married (53 percent) and urban women (44 percent) are less likely to have concurrent partners than women who have never been married (63 percent) and those who reside in rural areas (64 percent). The percentage of men with recent concurrent sexual partners increases with age; the percentage is highest among married men (92 percent) and men in polygynous unions (97 percent).

13.6.3 Transactional Sex

Payment for sexual intercourse is associated with risk of contracting HIV and other sexually transmitted infections due to compromised power relations that result in inconsistent condom use. In the 2014 KDHS, men age 15-49 were asked if they had ever paid for sexual intercourse, if they had paid for sexual intercourse in the 12 months preceding the survey, and, among those who had paid for sexual intercourse in the 12 months preceding the survey, whether they used condoms the last time they paid for sexual intercourse.

Table 13.11 shows that 9 percent of men had ever paid for sex and that 3 percent had paid for sex in the 12 months before the survey. Seventy-four percent of men who reported having paid for sex in the 12 months before the survey said that they used a condom the last time they paid for sex.

Men age 30-39 are more likely than their counterparts to have ever paid for sex (13 percent), to have paid for sex in the 12 months before the survey (3 percent), and to have used a condom during their last paid sex (83 percent). A similar pattern prevails among men who are divorced, separated, or widowed (21 percent had ever paid for sex, 8 percent paid in the previous 12 months, and 83 percent used a condom during their last paid sex). Urban men are more likely than rural men to have ever paid for sex (11 percent compared with 7 percent) and to have used a condom during their last paid sex (80 percent compared with 70 percent). Men in the Coast region are most likely to have ever paid for sex (14 percent), and men in the Western and Nyanza regions are most likely to have paid for sex in the previous 12 months (both 4 percent). Men in North Eastern are least likely to report ever having paid for sex (1 percent) or having paid for sex in the previous 12 months (1 percent). There are no apparent trends by education or wealth.

By county, men in Migori (11 percent), Kakamega (6 percent), Vihiga (6 percent), and Elgeyo Marakwet (6 percent) are somewhat more likely to have paid for sex in the previous 12 months than men in other counties (Table 13.11C).

Table 13.11 Payment for sexual intercourse and condom use at last paid sexual intercourse

Percentage of men age 15-49 who ever paid for sexual intercourse and percentage reporting payment for sexual intercourse in the past 12 months, and among them, the percentage reporting that a condom was used the last time they paid for sexual intercourse, by background characteristics, Kenya 2014

	Among all men:			Among men who paid for sex in the past 12 months:	
Background characteristic	Percentage who ever paid for sexual intercourse	Percentage who paid for sexual intercourse in the past 12 months	Number of men	Percentage reporting condom use at last paid sexual intercourse	Number of men
Age					
15-24	4.0	1.9	4,666	63.5	88
15-19	2.2	1.4	2,540	(67.7)	36
20-24	6.1	2.5	2,125	60.5	52
25-29	10.3	2.5	2,104	69.3	53
30-39	12.8	3.4	3,268	83.3	112
40-49	10.9	2.4	2,024	(77.9)	48
Marital status					
Never married	5.6	2.2	5,350	73.0	117
Married or living together	10.1	2.2	6,095	72.3	136
Divorced/separated/ widowed	20.7	7.8	618	82.5	48
Residence					
Urban	10.6	2.3	5,300	79.8	121
Rural	7.1	2.6	6,762	70.4	179
Region					
Coast	13.6	2.8	1,260	(59.0)	35
North Eastern	1.1	0.7	227	*	2
Eastern	11.0	1.2	1,825	(81.4)	22
Central	5.3	1.8	1,564	*	29
Rift Valley	5.6	2.5	3,050	84.2	75
Western	10.0	3.6	1,164	(59.2)	42
Nyanza	9.1	4.3	1,405	72.2	60
Nairobi	10.7	2.3	1,568	*	36
Education					
No education	7.5	2.2	345	*	8
Primary incomplete	9.9	3.5	3,071	65.0	108
Primary complete	9.9	2.6	2,734	82.0	70
Secondary+	7.4	1.9	5,913	79.2	115
Wealth quintile					
Lowest	8.0	2.9	1,691	65.6	49
Second	7.5	2.4	2,145	68.2	52
Middle	8.1	3.3	2,370	71.8	78
Fourth	9.3	2.1	2,959	83.2	61
Highest	9.6	2.1	2,897	(80.5)	60
Total 15-49	8.6	2.5	12,063	74.2	300
50-54	12.9	2.6	756	*	20
Total 15-54	8.9	2.5	12,819	72.8	320

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

Table 13.11C Payment for sexual intercourse

Percentage of men age 15-49 who ever paid for sexual intercourse and percentage reporting payment for sexual intercourse in the past 12 months, by county, Kenya 2014

County	Percentage who ever paid for sexual intercourse	Percentage who paid for sexual intercourse in the past 12 months	Number of men
Coast	**13.6**	**2.8**	**1,260**
Mombasa	25.5	4.0	481
Kwale	4.4	2.3	226
Kilifi	7.0	2.1	359
Tana River	1.7	0.5	65
Lamu	3.3	1.9	37
Taita Taveta	11.9	1.9	93
North Eastern	**1.1**	**0.7**	**227**
Garissa	1.0	0.0	94
Wajir	1.2	1.2	72
Mandera	1.3	1.3	60
Eastern	**11.0**	**1.2**	**1,825**
Marsabit	2.0	2.0	40
Isiolo	2.3	2.3	35
Meru	0.4	0.1	495
Tharaka-Nithi	11.6	1.8	102
Embu	13.0	2.3	164
Kitui	11.9	0.3	303
Machakos	26.2	0.4	436
Makueni	5.3	4.7	250
Central	**5.3**	**1.8**	**1,564**
Nyandarua	9.3	4.3	198
Nyeri	10.3	0.7	229
Kirinyaga	4.5	2.6	184
Murang'a	3.2	1.8	284
Kiambu	3.5	1.3	669
Rift Valley	**5.6**	**2.5**	**3,050**
Turkana	0.6	0.6	76
West Pokot	12.1	4.4	103
Samburu	4.3	0.9	35
Trans-Nzoia	7.0	2.9	329
Uasin Gishu	3.5	2.5	355
Elgeyo Marakwet	12.3	6.0	86
Nandi	1.3	1.2	264
Baringo	12.7	4.5	125
Laikipia	5.6	3.4	124
Nakuru	3.2	2.2	589
Narok	2.2	0.0	240
Kajiado	10.7	3.3	241
Kericho	6.7	3.3	215
Bomet	7.7	1.9	267
Western	**10.0**	**3.6**	**1,164**
Kakamega	21.2	6.4	411
Vihiga	6.2	6.2	140
Bungoma	4.2	1.5	413
Busia	1.9	0.4	199
Nyanza	**9.1**	**4.3**	**1,405**
Siaya	8.1	2.7	213
Kisumu	0.9	0.9	309
Homa Bay	18.1	6.0	243
Migori	23.8	11.1	211
Kisii	4.4	4.4	315
Nyamira	0.0	0.0	114
Nairobi	**10.7**	**2.3**	**1,568**
Total 15-49	8.6	2.5	12,063
50-54	12.9	2.6	756
Total 15-54	8.9	2.5	12,819

13.7 COVERAGE OF HIV COUNSELLING AND TESTING

13.7.1 General HIV Testing

HIV counselling and testing is the entry point to HIV prevention, care, and support and treatment services. Knowledge of HIV status helps HIV-negative individuals make decisions that can reduce their risk. For those who are HIV positive, knowledge of their status allows them to take action to protect their sexual partners, to access treatment, and to plan for the future. To assess awareness and coverage of HIV testing services, respondents in the 2014 KDHS were asked if they knew a place where they could go to be tested and further if they have ever undergone an HIV test and received the results of the test.

Tables 13.12.1 and 13.12.2 show, among women and men age 15-49, the percentage who know where to get an HIV test, the percent distribution by testing status and by whether they received their results, the percentage ever tested, and the percentage tested in the 12 months preceding the survey who received the results of their last test, by background characteristics.

Knowledge of a place to get tested for HIV is widespread in Kenya; 91 percent of women and 97 percent of men know a place where people get tested for HIV. Knowledge generally increases with age among both women and men. Relative to their respective counterparts, knowledge is lower among women and men who have never been married and never had sex, women and men in rural areas, and women and men in North Eastern. Among both women and men, knowledge of a place to get tested for HIV generally increases with increasing education and wealth.

There has been a noticeable increase since 2008-09 in the percentage of women and men age 15-49 who have ever been tested: from 58 percent and 42 percent, respectively, to 85 percent and 72 percent. There has also been an increase, albeit less dramatic, in the percentage of women and men who were tested in the past 12 months and received their results: from 29 percent and 23 percent, respectively, to 53 percent and 46 percent. The proportion of women and men who were recently tested and received their results is higher among those who are married or have been married, urban residents, those at higher educational levels, and those who are wealthier.

By county, women in Wajir and Mandera and men in West Pokot and Mandera are least likely to have ever been tested or to have been tested in the past 12 months. The counties with the highest levels of lifetime and recent testing among women include Homa Bay, Uasin Gishu, Migori, and Kisumu, and the counties with the highest levels among men include Migori, Kisumu, and Siaya (Tables 13.12.1C and 13.12.2C).

Table 13.12.1 Coverage of prior HIV testing: Women

Percentage of women age 15-49 who know where to get an HIV test, percent distribution of women age 15-49 by testing status and by whether they received the results of the last test, the percentage of women ever tested, and the percentage of women age 15-49 who were tested in the past 12 months and received the results of the last test, according to background characteristics, Kenya 2014

Background characteristic	Percentage who know where to get an HIV test	Percent distribution of women by testing status and by whether they received the results of the last test			Total	Percentage ever tested	Percentage who have been tested for HIV in the past 12 months and received the results of the last test	Number of women
		Ever tested and received results	Ever tested, did not receive results	Never tested[1]				
Age								
15-24	82.7	70.4	1.9	27.7	100.0	72.3	49.5	11,555
15-19	71.5	52.7	1.3	46.0	100.0	54.0	35.3	5,820
20-24	94.1	88.4	2.4	9.1	100.0	90.9	64.0	5,735
25-29	96.9	93.9	1.6	4.6	100.0	95.4	63.4	6,100
30-39	96.2	92.2	2.0	5.8	100.0	94.2	54.4	8,283
40-49	91.2	83.3	2.2	14.5	100.0	85.5	45.1	5,142
Marital status								
Never married	78.5	63.3	1.4	35.3	100.0	64.7	42.3	8,997
Ever had sex	91.7	84.0	1.7	14.2	100.0	85.8	60.0	4,541
Never had sex	65.0	42.1	1.0	56.9	100.0	43.1	24.2	4,456
Married/living together	95.5	91.1	2.1	6.8	100.0	93.2	57.5	18,549
Divorced/separated/ widowed	95.1	90.4	2.1	7.5	100.0	92.5	54.9	3,533
Residence								
Urban	92.9	87.1	1.6	11.3	100.0	88.7	57.8	12,690
Rural	88.8	80.1	2.2	17.8	100.0	82.2	49.4	18,389
Region								
Coast	90.6	84.3	1.6	14.2	100.0	85.8	53.4	3,076
North Eastern	59.5	48.7	2.8	48.4	100.0	51.6	20.1	648
Eastern	90.7	83.2	1.1	15.7	100.0	84.3	51.0	4,375
Central	92.7	84.4	2.3	13.3	100.0	86.7	53.0	3,994
Rift Valley	89.9	81.4	2.4	16.1	100.0	83.9	51.8	7,953
Western	87.7	77.8	2.4	19.8	100.0	80.2	45.4	3,225
Nyanza	93.0	86.4	2.0	11.6	100.0	88.4	60.4	4,038
Nairobi	94.3	90.0	0.9	9.1	100.0	90.9	60.4	3,770
Education								
No education	79.1	71.6	2.8	25.6	100.0	74.4	37.1	2,176
Primary incomplete	86.1	75.7	2.6	21.7	100.0	78.3	46.8	7,989
Primary complete	94.6	88.8	1.8	9.4	100.0	90.6	57.1	7,637
Secondary+	92.7	85.8	1.4	12.8	100.0	87.2	56.5	13,277
Wealth quintile								
Lowest	83.9	74.8	2.7	22.5	100.0	77.5	45.0	4,838
Second	89.9	81.2	2.2	16.6	100.0	83.4	51.7	5,457
Middle	91.1	83.1	1.9	15.1	100.0	84.9	52.0	6,032
Fourth	92.3	85.1	1.7	13.2	100.0	86.8	56.1	6,550
Highest	93.0	87.1	1.5	11.4	100.0	88.6	56.2	8,203
Total 15-49	90.5	83.0	1.9	15.1	100.0	84.9	52.8	31,079

[1] Includes 'don't know/missing'

Table 13.12.2 Coverage of prior HIV testing: Men

Percentage of men age 15-49 who know where to get an HIV test, percent distribution of men age 15-49 by testing status and by whether they received the results of the last test, the percentage of men ever tested, and the percentage of men age 15-49 who were tested in the past 12 months and received the results of the last test, according to background characteristics, Kenya 2014

Background characteristic	Percentage who know where to get an HIV test	Percent distribution of men by testing status and by whether they received the results of the last test			Total	Percentage ever tested	Percentage who have been tested for HIV in the past 12 months and received the results of the last test	Number of men
		Ever tested and received results	Ever tested, did not receive results	Never tested[1]				
Age								
15-24	94.2	56.6	0.9	42.5	100.0	57.5	38.9	4,666
15-19	90.4	41.0	1.0	58.0	100.0	42.0	26.6	2,540
20-24	98.8	75.2	0.9	23.9	100.0	76.1	53.6	2,125
25-29	98.8	83.0	0.2	16.8	100.0	83.2	57.8	2,104
30-39	98.3	79.8	0.4	19.8	100.0	80.2	50.0	3,268
40-49	98.1	76.8	1.1	22.2	100.0	77.8	41.9	2,024
Marital status								
Never married	94.7	58.1	0.8	41.1	100.0	58.9	39.4	5,350
Ever had sex	97.9	69.8	0.6	29.6	100.0	70.4	49.8	3,512
Never had sex	88.4	35.6	1.3	63.1	100.0	36.9	19.7	1,838
Married/living together	98.5	81.5	0.6	17.9	100.0	82.1	51.2	6,095
Divorced/separated/ widowed	98.2	77.0	0.6	22.4	100.0	77.6	45.8	618
Residence								
Urban	98.6	77.7	0.6	21.7	100.0	78.3	51.3	5,300
Rural	95.3	65.5	0.7	33.7	100.0	66.3	41.3	6,762
Region								
Coast	96.9	64.4	0.3	35.4	100.0	64.6	40.5	1,260
North Eastern	74.4	44.0	0.0	56.0	100.0	44.0	22.8	227
Eastern	95.4	66.6	0.4	33.0	100.0	67.0	39.8	1,825
Central	97.4	70.5	0.8	28.6	100.0	71.4	40.1	1,564
Rift Valley	96.2	70.5	0.6	28.9	100.0	71.1	47.1	3,050
Western	97.0	62.0	1.0	37.0	100.0	63.0	39.8	1,164
Nyanza	98.9	81.1	0.7	18.2	100.0	81.8	56.2	1,405
Nairobi	100.0	83.4	1.2	15.4	100.0	84.6	57.9	1,568
Education								
No education	77.8	42.5	0.3	57.1	100.0	42.9	26.2	345
Primary incomplete	92.8	56.2	1.1	42.7	100.0	57.3	34.4	3,071
Primary complete	98.3	74.8	0.6	24.7	100.0	75.3	47.9	2,734
Secondary+	99.3	78.4	0.5	21.1	100.0	78.9	51.7	5,913
Wealth quintile								
Lowest	89.9	56.5	0.8	42.7	100.0	57.3	34.7	1,691
Second	96.6	65.8	1.0	33.3	100.0	66.7	41.1	2,145
Middle	97.2	69.1	0.9	30.0	100.0	70.0	45.7	2,370
Fourth	98.2	75.0	0.3	24.7	100.0	75.3	49.7	2,959
Highest	99.2	80.4	0.6	19.0	100.0	81.0	51.5	2,897
Total 15-49	96.8	70.9	0.7	28.4	100.0	71.6	45.7	12,063
50-54	97.4	72.2	0.5	27.2	100.0	72.8	37.0	756
Total 15-54	96.8	71.0	0.7	28.4	100.0	71.6	45.2	12,819

[1] Includes 'don't know/missing'

Table 13.12.1C Coverage of prior HIV testing: Women

Percentage of women age 15-49 who know where to get an HIV test, percent distribution of women age 15-49 by testing status and by whether they received the results of the last test, the percentage of women ever tested, and the percentage of women age 15-49 who were tested in the past 12 months and received the results of the last test, according to county, Kenya 2014

County	Percentage who know where to get an HIV test	Percent distribution of women by testing status and by whether they received the results of the last test			Total	Percentage ever tested	Percentage who have been tested for HIV in the past 12 months and received the results of the last test	Number of women
		Ever tested and received results	Ever tested, did not receive results	Never tested[1]				
Coast	**90.6**	**84.3**	**1.6**	**14.2**	**100.0**	**85.8**	**53.4**	**3,076**
Mombasa	91.5	86.7	0.9	12.3	100.0	87.7	57.8	912
Kwale	91.1	85.0	0.7	14.3	100.0	85.7	51.8	619
Kilifi	90.1	82.6	2.2	15.1	100.0	84.9	53.9	1,043
Tana River	85.9	77.5	4.1	18.4	100.0	81.6	41.6	197
Lamu	90.8	81.7	2.0	16.3	100.0	83.7	45.3	89
Taita Taveta	92.1	86.6	0.8	12.6	100.0	87.4	51.4	215
North Eastern	**59.5**	**48.7**	**2.8**	**48.4**	**100.0**	**51.6**	**20.1**	**648**
Garissa	62.4	53.4	1.8	44.8	100.0	55.2	27.3	261
Wajir	59.4	53.0	2.9	44.1	100.0	55.9	21.1	212
Mandera	55.4	36.6	4.4	59.1	100.0	40.9	8.1	175
Eastern	**90.7**	**83.2**	**1.1**	**15.7**	**100.0**	**84.3**	**51.0**	**4,375**
Marsabit	74.9	64.3	1.9	33.9	100.0	66.1	34.2	115
Isiolo	93.6	87.0	2.4	10.6	100.0	89.4	45.5	104
Meru	92.1	84.5	1.1	14.4	100.0	85.6	45.3	1,110
Tharaka-Nithi	90.3	82.8	3.6	13.6	100.0	86.4	51.6	275
Embu	90.0	83.6	0.1	16.3	100.0	83.7	51.4	459
Kitui	90.2	82.8	0.5	16.7	100.0	83.3	56.2	759
Machakos	92.5	86.5	0.7	12.9	100.0	87.1	55.4	873
Makueni	89.2	80.0	1.4	18.6	100.0	81.4	52.3	680
Central	**92.7**	**84.4**	**2.3**	**13.3**	**100.0**	**86.7**	**53.0**	**3,994**
Nyandarua	92.9	84.5	4.1	11.4	100.0	88.6	54.5	436
Nyeri	94.7	87.7	0.6	11.7	100.0	88.3	54.5	650
Kirinyaga	94.2	85.5	2.6	11.9	100.0	88.1	56.6	451
Murang'a	90.8	82.0	2.6	15.5	100.0	84.5	51.5	735
Kiambu	92.3	83.9	2.3	13.8	100.0	86.2	51.6	1,722
Rift Valley	**89.9**	**81.4**	**2.4**	**16.1**	**100.0**	**83.9**	**51.8**	**7,953**
Turkana	75.4	69.5	0.2	30.2	100.0	69.8	42.4	320
West Pokot	79.1	66.6	8.4	25.0	100.0	75.0	34.1	267
Samburu	84.3	67.8	5.6	26.6	100.0	73.4	45.0	123
Trans-Nzoia	85.9	72.1	5.3	22.6	100.0	77.4	43.1	768
Uasin Gishu	95.4	89.1	1.1	9.8	100.0	90.2	63.5	784
Elgeyo Marakwet	89.8	79.4	1.5	19.0	100.0	81.0	51.3	250
Nandi	88.5	81.8	0.6	17.6	100.0	82.4	53.3	628
Baringo	85.6	74.9	2.5	22.5	100.0	77.5	51.5	335
Laikipia	89.6	81.7	2.8	15.5	100.0	84.5	50.2	342
Nakuru	92.6	84.2	2.7	13.1	100.0	86.9	50.3	1,574
Narok	90.2	84.1	2.2	13.7	100.0	86.3	55.6	642
Kajiado	91.3	85.6	0.4	13.9	100.0	86.1	53.0	670
Kericho	94.4	84.8	2.8	12.4	100.0	87.6	59.1	563
Bomet	91.8	84.2	2.1	13.8	100.0	86.2	53.0	687
Western	**87.7**	**77.8**	**2.4**	**19.8**	**100.0**	**80.2**	**45.4**	**3,225**
Kakamega	87.9	77.9	2.8	19.3	100.0	80.7	44.4	1,108
Vihiga	89.6	79.7	3.0	17.4	100.0	82.6	44.8	368
Bungoma	85.6	74.6	2.0	23.4	100.0	76.6	44.4	1,203
Busia	90.9	83.3	2.2	14.6	100.0	85.4	50.0	546
Nyanza	**93.0**	**86.4**	**2.0**	**11.6**	**100.0**	**88.4**	**60.4**	**4,038**
Siaya	92.9	85.5	3.5	11.0	100.0	89.0	57.5	572
Kisumu	94.4	89.0	0.7	10.3	100.0	89.7	62.1	820
Homa Bay	96.2	93.0	1.0	6.0	100.0	94.0	70.9	798
Migori	93.6	87.7	3.1	9.2	100.0	90.8	64.5	650
Kisii	89.2	78.9	1.9	19.3	100.0	80.7	51.4	864
Nyamira	91.0	82.3	3.7	13.9	100.0	86.1	50.6	334
Nairobi	**94.3**	**90.0**	**0.9**	**9.1**	**100.0**	**90.9**	**60.4**	**3,770**
Total 15-49	90.5	83.0	1.9	15.1	100.0	84.9	52.8	31,079

[1] Includes 'don't know/missing'

Table 13.12.2C Coverage of prior HIV testing: Men

Percentage of men age 15-49 who know where to get an HIV test, percent distribution of men age 15-49 by testing status and by whether they received the results of the last test, the percentage of men ever tested, and the percentage of men age 15-49 who were tested in the past 12 months and received the results of the last test, according to county, Kenya 2014

County	Percentage who know where to get an HIV test	Percent distribution of men by testing status and by whether they received the results of the last test			Total	Percentage ever tested	Percentage who have been tested for HIV in the past 12 months and received the results of the last test	Number of men
		Ever tested and received results	Ever tested, did not receive results	Never tested[1]				
Coast	**96.9**	**64.4**	**0.3**	**35.4**	**100.0**	**64.6**	**40.5**	**1,260**
Mombasa	98.8	67.4	0.2	32.4	100.0	67.6	39.9	481
Kwale	88.8	53.9	1.0	45.1	100.0	54.9	36.9	226
Kilifi	99.2	65.0	0.0	35.0	100.0	65.0	42.3	359
Tana River	95.3	57.6	0.0	42.4	100.0	57.6	35.6	65
Lamu	94.2	59.2	0.0	40.8	100.0	59.2	40.8	37
Taita Taveta	100.0	78.4	0.0	21.6	100.0	78.4	48.1	93
North Eastern	**74.4**	**44.0**	**0.0**	**56.0**	**100.0**	**44.0**	**22.8**	**227**
Garissa	96.5	60.3	0.0	39.7	100.0	60.3	28.3	94
Wajir	73.5	55.7	0.0	44.3	100.0	55.7	32.3	72
Mandera	40.8	4.3	0.0	95.7	100.0	4.3	2.5	60
Eastern	**95.4**	**66.6**	**0.4**	**33.0**	**100.0**	**67.0**	**39.8**	**1,825**
Marsabit	96.5	59.3	0.0	40.7	100.0	59.3	51.0	40
Isiolo	99.3	76.6	0.2	23.3	100.0	76.7	40.9	35
Meru	92.2	67.0	1.0	32.0	100.0	68.0	37.9	495
Tharaka-Nithi	95.3	72.9	0.0	27.1	100.0	72.9	42.7	102
Embu	94.6	63.4	0.5	36.1	100.0	63.9	36.1	164
Kitui	96.5	59.4	0.5	40.1	100.0	59.9	33.1	303
Machakos	96.6	73.0	0.0	27.0	100.0	73.0	45.8	436
Makueni	98.0	62.8	0.0	37.2	100.0	62.8	40.2	250
Central	**97.4**	**70.5**	**0.8**	**28.6**	**100.0**	**71.4**	**40.1**	**1,564**
Nyandarua	97.4	65.8	2.3	31.9	100.0	68.1	39.9	198
Nyeri	98.0	77.0	1.1	21.9	100.0	78.1	47.0	229
Kirinyaga	97.7	69.3	1.5	29.2	100.0	70.8	35.7	184
Murang'a	97.3	69.5	1.2	29.2	100.0	70.8	45.6	284
Kiambu	97.3	70.4	0.0	29.6	100.0	70.4	36.7	669
Rift Valley	**96.2**	**70.5**	**0.6**	**28.9**	**100.0**	**71.1**	**47.1**	**3,050**
Turkana	81.8	67.5	0.0	32.5	100.0	67.5	59.9	76
West Pokot	88.1	35.4	0.0	64.6	100.0	35.4	20.3	103
Samburu	96.9	70.5	0.0	29.5	100.0	70.5	51.2	35
Trans-Nzoia	92.2	62.8	1.2	36.0	100.0	64.0	41.0	329
Uasin Gishu	98.3	83.1	0.5	16.4	100.0	83.6	54.2	355
Elgeyo Marakwet	100.0	63.4	0.0	36.6	100.0	63.4	34.4	86
Nandi	98.6	70.1	0.0	29.9	100.0	70.1	53.7	264
Baringo	96.4	66.9	0.2	32.9	100.0	67.1	44.4	125
Laikipia	98.2	76.7	1.9	21.4	100.0	78.6	43.1	124
Nakuru	97.6	73.2	0.7	26.1	100.0	73.9	48.9	589
Narok	94.2	66.3	0.0	33.7	100.0	66.3	43.1	240
Kajiado	97.9	78.7	0.8	20.5	100.0	79.5	52.6	241
Kericho	97.3	74.4	0.0	25.6	100.0	74.4	51.4	215
Bomet	97.5	66.8	1.2	32.0	100.0	68.0	43.8	267
Western	**97.0**	**62.0**	**1.0**	**37.0**	**100.0**	**63.0**	**39.8**	**1,164**
Kakamega	97.7	65.7	0.0	34.3	100.0	65.7	41.5	411
Vihiga	92.6	54.9	0.7	44.5	100.0	55.5	34.5	140
Bungoma	97.3	55.9	0.6	43.6	100.0	56.4	36.9	413
Busia	98.0	72.2	4.4	23.5	100.0	76.5	46.2	199
Nyanza	**98.9**	**81.1**	**0.7**	**18.2**	**100.0**	**81.8**	**56.2**	**1,405**
Siaya	98.8	89.9	0.0	10.1	100.0	89.9	67.7	213
Kisumu	98.3	89.7	0.0	10.3	100.0	89.7	65.3	309
Homa Bay	99.4	83.2	2.2	14.6	100.0	85.4	58.9	243
Migori	98.1	84.8	1.1	14.0	100.0	86.0	62.4	211
Kisii	99.5	64.8	0.4	34.8	100.0	65.2	38.7	315
Nyamira	99.2	75.0	1.1	23.8	100.0	76.2	41.6	114
Nairobi	**100.0**	**83.4**	**1.2**	**15.4**	**100.0**	**84.6**	**57.9**	**1,568**
Total 15-49	96.8	70.9	0.7	28.4	100.0	71.6	45.7	12,063
50-54	97.4	72.2	0.5	27.2	100.0	72.8	37.0	756
Total 15-54	96.8	71.0	0.7	28.4	100.0	71.6	45.2	12,819

[1] Includes 'don't know/missing'

13.7.2 HIV Counselling and Testing During Pregnancy

Table 13.13 presents information on HIV screening of women age 15-49 who gave birth in the two years preceding the survey. The HIV screening process is a key tool in reducing mother-to-child transmission of HIV. Sixty-eight percent of women who gave birth in the two years before the survey received HIV counselling during antenatal care (ANC). Almost 7 in 10 women (69 percent) were tested for HIV during antenatal care and received the test results and post-test counselling, while 23 percent received results but did not receive post-test counselling. Less than 1 percent of women were tested for HIV during an ANC visit but did not receive the test results.

Table 13.13 Pregnant women counselled and tested for HIV

Among all women age 15-49 who gave birth in the two years preceding the survey, the percentage who received HIV pretest counselling, the percentage who received an HIV test during antenatal care for their most recent birth by whether they received their results and post-test counselling, and percentage who received an HIV test at the time during ANC or labour for their most recent birth by whether they received their test results, according to background characteristics, Kenya 2014

Background characteristic	Percentage who received counselling on HIV during antenatal care[1]	Percentage who were tested for HIV during antenatal care and who:			Percentage who received counselling on HIV and an HIV test during ANC, and the results	Percentage who had an HIV test during ANC or labour and who:[2]		Number of women who gave birth in the past two years[3]
		Received results and received post-test counselling	Received results and did not receive post-test counselling	Did not receive results		Received results	Did not receive results	
Age								
15-24	67.2	68.7	24.3	0.6	66.6	93.8	0.6	2,864
15-19	65.1	65.7	25.9	0.8	64.2	93.8	0.8	695
20-24	67.8	69.7	23.8	0.5	67.3	93.8	0.5	2,169
25-29	68.6	72.6	20.7	0.9	67.9	93.6	0.9	2,135
30-39	67.8	68.0	23.3	0.8	67.1	91.6	0.8	2,057
40-49	62.2	62.2	25.2	0.4	61.7	88.0	0.4	301
Marital status								
Never married	67.5	68.7	22.6	0.6	67.2	93.2	0.6	674
Married or living together	67.5	69.4	23.4	0.8	66.9	93.2	0.8	6,127
Divorced/separated/ widowed	67.8	69.5	19.4	0.4	66.9	89.7	0.4	556
Residence								
Urban	75.3	78.2	18.0	0.4	74.8	96.7	0.4	2,618
Rural	63.3	64.5	25.8	0.9	62.6	90.9	0.9	4,739
Region								
Coast	69.0	71.7	23.6	0.6	69.0	95.3	0.6	793
North Eastern	28.7	33.8	26.8	0.2	27.3	61.0	0.5	228
Eastern	69.2	67.6	27.0	0.3	68.4	95.6	0.3	872
Central	61.8	70.7	26.9	0.3	61.8	97.9	0.3	682
Rift Valley	58.4	61.7	26.7	1.4	57.3	89.1	1.4	2,167
Western	74.3	75.1	19.8	0.9	73.9	95.0	0.9	827
Nyanza	78.7	73.6	21.2	0.6	77.8	95.4	0.6	1,035
Nairobi	84.5	88.6	8.6	0.0	84.5	97.7	0.0	753
Education								
No education	38.6	43.7	29.8	1.6	37.7	73.7	1.6	834
Primary incomplete	65.9	66.5	24.6	1.1	64.8	91.7	1.2	2,036
Primary complete	71.1	72.5	23.0	0.3	70.8	96.1	0.3	1,987
Secondary+	75.8	77.8	19.5	0.4	75.3	97.9	0.4	2,499
Wealth quintile								
Lowest	53.2	55.1	27.8	1.6	51.8	83.6	1.6	1,823
Second	66.3	69.4	23.6	0.6	65.7	93.5	0.6	1,461
Middle	69.3	69.4	25.8	0.3	69.3	95.6	0.3	1,332
Fourth	73.6	76.0	19.3	0.5	73.1	96.2	0.5	1,283
Highest	79.7	81.4	17.3	0.3	79.3	98.8	0.3	1,458
Total 15-49	67.5	69.4	23.0	0.7	66.9	92.9	0.7	7,357

[1] In this context, "pretest counselling" means that someone talked with the respondent about all three of the following topics: 1) babies getting the AIDS virus from their mother, 2) preventing the virus, and 3) getting tested for the virus.
[2] Women are asked whether they received an HIV test during labour only if they were not tested for HIV during ANC.
[3] Denominator for percentages includes women who did not receive antenatal care for their last birth in the past two years.

Table 13.13C Pregnant women counselled and tested for HIV

Among all women age 15-49 who gave birth in the two years preceding the survey, the percentage who received HIV pretest counselling, the percentage who received an HIV test during antenatal care for their most recent birth by whether they received their results and post-test counselling, and percentage who received an HIV test at the time during ANC or labour for their most recent birth by whether they received their test results, according to county, Kenya 2014

County	Percentage who received counselling on HIV during antenatal care[1]	Percentage who were tested for HIV during antenatal care and who:			Percentage who received counselling on HIV and an HIV test during ANC, and the results	Percentage who had an HIV test during ANC or labour and who:[2]		Number of women who gave birth in the past two years[3]
		Received results and received post-test counselling	Received results and did not receive post-test counselling	Did not receive results		Received results	Did not receive results	
Coast	**69.0**	**71.7**	**23.6**	**0.6**	**69.0**	**95.3**	**0.6**	**793**
Mombasa	84.7	84.4	13.5	0.0	84.7	97.9	0.0	190
Kwale	76.8	72.2	22.2	0.0	76.8	94.4	0.0	181
Kilifi	59.3	68.2	27.2	1.0	59.3	95.3	1.0	293
Tana River	44.7	46.9	42.2	1.5	44.5	89.1	1.5	68
Lamu	56.4	55.1	40.8	0.0	56.4	95.9	0.0	19
Taita Taveta	77.3	84.0	12.2	1.4	76.0	96.3	1.4	42
North Eastern	**28.7**	**33.8**	**26.8**	**0.2**	**27.3**	**61.0**	**0.5**	**228**
Garissa	45.9	42.6	35.6	0.0	43.3	78.3	0.5	86
Wajir	17.6	29.2	25.7	0.0	17.5	54.9	0.3	93
Mandera	19.7	27.3	13.6	0.8	18.0	42.5	0.8	49
Eastern	**69.2**	**67.6**	**27.0**	**0.3**	**68.4**	**95.6**	**0.3**	**872**
Marsabit	16.0	36.7	28.6	0.0	15.7	65.5	0.0	35
Isiolo	77.5	90.4	5.4	1.1	76.3	95.8	1.1	33
Meru	73.5	78.8	18.6	0.0	73.5	97.4	0.0	198
Tharaka-Nithi	71.4	63.3	13.7	3.3	61.0	90.1	3.3	56
Embu	72.2	78.8	21.2	0.0	72.2	100.0	0.0	81
Kitui	75.3	58.1	38.3	0.0	75.3	97.1	0.0	164
Machakos	57.8	57.6	38.6	0.0	57.8	96.2	0.0	190
Makueni	82.8	75.3	22.4	0.0	82.3	98.6	0.0	115
Central	**61.8**	**70.7**	**26.9**	**0.3**	**61.8**	**97.9**	**0.3**	**682**
Nyandarua	46.2	62.9	33.0	0.5	46.2	96.5	0.5	97
Nyeri	69.8	76.0	19.4	0.8	69.8	95.4	0.8	92
Kirinyaga	67.8	61.3	34.0	0.0	67.8	96.4	0.0	61
Murang'a	58.8	66.1	30.3	0.7	58.8	96.5	0.7	120
Kiambu	64.3	75.1	24.4	0.0	64.3	100.0	0.0	312
Rift Valley	**58.4**	**61.7**	**26.7**	**1.4**	**57.3**	**89.1**	**1.4**	**2,167**
Turkana	53.3	49.8	27.4	0.0	52.1	78.1	0.0	131
West Pokot	43.0	21.5	46.1	9.7	35.9	68.9	9.9	121
Samburu	36.7	39.0	27.4	2.1	34.9	66.9	2.1	46
Trans-Nzoia	68.4	67.8	22.0	0.2	68.0	90.3	0.2	218
Uasin Gishu	74.8	83.7	10.5	0.6	74.2	94.8	0.6	187
Elgeyo Marakwet	44.5	48.2	49.9	0.0	44.5	98.4	0.0	65
Nandi	74.6	80.1	15.6	1.5	74.6	95.7	1.5	153
Baringo	52.5	58.6	26.9	0.9	51.8	86.9	0.9	94
Laikipia	69.4	52.5	36.0	1.2	69.4	89.6	1.2	78
Nakuru	64.3	52.5	39.0	1.2	62.8	91.6	1.2	332
Narok	48.5	58.8	25.7	2.1	48.0	85.5	2.1	237
Kajiado	42.0	61.6	28.9	0.5	40.7	91.9	0.5	179
Kericho	59.8	72.0	17.9	1.4	59.1	89.9	1.4	139
Bomet	55.6	79.8	15.4	0.0	55.6	97.3	0.0	187
Western	**74.3**	**75.1**	**19.8**	**0.9**	**73.9**	**95.0**	**0.9**	**827**
Kakamega	65.0	76.4	17.8	0.0	65.0	94.2	0.0	244
Vihiga	64.3	64.9	27.6	3.0	62.9	92.5	3.0	83
Bungoma	82.2	72.2	22.6	1.4	81.7	94.8	1.4	354
Busia	76.3	86.0	12.1	0.0	76.3	98.1	0.0	146
Nyanza	**78.7**	**73.6**	**21.2**	**0.6**	**77.8**	**95.4**	**0.6**	**1,035**
Siaya	75.3	87.0	8.6	0.0	75.3	95.6	0.0	142
Kisumu	77.4	81.9	15.3	0.7	76.7	97.2	0.7	177
Homa Bay	87.6	54.3	39.5	0.3	86.2	94.1	0.3	253
Migori	67.3	67.4	24.0	0.9	66.1	92.7	0.9	203
Kisii	86.7	89.8	7.6	0.6	86.1	98.1	0.6	193
Nyamira	67.7	68.7	25.7	1.8	65.6	96.0	1.8	67
Nairobi	**84.5**	**88.6**	**8.6**	**0.0**	**84.5**	**97.7**	**0.0**	**753**
Total 15-49	67.5	69.4	23.0	0.7	66.9	92.9	0.7	7,357

[1] In this context, "pretest counselling" means that someone talked with the respondent about all three of the following topics: 1) babies getting the AIDS virus from their mother, 2) preventing the virus, and 3) getting tested for the virus
[2] Women are asked whether they received an HIV test during labour only if they were not tested for HIV during ANC
[3] Denominator for percentages includes women who did not receive antenatal care for their last birth in the past two years

Overall, 67 percent of women received HIV counselling, an HIV test, and the results during ANC for their most recent birth in the two years preceding the survey. By age, differences are marginal except for women age 40-49, who were less likely to be counselled, tested, and given their HIV result during ANC than were younger women. Women were more likely to have been counselled and tested and to have received test results if they lived in urban areas (75 percent) or in Nairobi (85 percent). The likelihood of HIV counselling and testing during ANC increases with increasing education and wealth. For example, the proportion of women who were counselled about HIV during ANC, were tested, and received their test results ranges from 38 percent among those with no education to 75 percent among those with at least some secondary education. Likewise, women in the lowest wealth quintile (52 percent) were less likely than women in the highest quintile (79 percent) to have been counselled and tested and to have received their results. By county, 85 percent or more of women in Nairobi, Mombasa, Kisii, and Homa Bay were counselled about HIV during ANC, were tested, and received their test results, as compared with less than 20 percent of women in Mandera, Wajir, and Marsabit (Table 13.13C).

13.8 MALE CIRCUMCISION

The risk of acquisition of HIV by the circumcised male is reduced by 60 percent (Bailey, 2007). Circumcision is widely practiced in Kenya, mostly as a rite of passage to adulthood. Table 13.14 shows the percentage of men age 15-49 who report having been circumcised, by background characteristics. Ninety-three percent of Kenyan men are circumcised, an increase from both 2003 (84 percent) and 2008-09 (86 percent). Young men age 15-19 are least likely to be circumcised (87 percent), although this is still an increase from 76 percent in 2008-09.

Men from Nyanza are less likely to be circumcised (72 percent) than their counterparts in other regions. However, this is a noteworthy increase from the 45 percent of men in Nyanza who were circumcised according to the 2008-09 KDHS. Muslim men are most likely to be circumcised (99 percent). Circumcision is widespread among most ethnic groups except the Luo (59 percent) and Turkana (42 percent), although circumcision among Luo men has substantially risen (from 17 percent in 2003 and 22 percent in 2008-09). The counties with the lowest percentage of circumcised men include Turkana (26 percent), Siaya (56 percent), Homa Bay (56 percent), and Kisumu (59 percent) (Table 13.14C). Circumcision is virtually universal among men in Garissa, Wajir, Mandera, Kitui, Makueni, and Nyamira.

Table 13.14 Male circumcision

Percentage of men age 15-49 who report having been circumcised, by background characteristics, Kenya 2014

Background characteristic	Percentage circumcised	Number of men
Age		
15-24	91.4	4,666
15-19	87.1	2,540
20-24	96.5	2,125
25-29	94.6	2,104
30-39	93.4	3,268
40-49	91.9	2,024
Residence		
Urban	93.7	5,300
Rural	91.7	6,762
Region		
Coast	97.6	1,260
North Eastern	100.0	227
Eastern	95.3	1,825
Central	97.0	1,564
Rift Valley	92.5	3,050
Western	96.6	1,164
Nyanza	72.1	1,405
Nairobi	95.4	1,568
Religion		
Roman Catholic	92.0	2,583
Protestant/other Christian	92.1	8,141
Muslim	98.7	784
No religion	94.1	492
Other	91.3	59
Ethnic group		
Embu	98.2	118
Kalenjin	94.4	1,467
Kamba	99.9	1,521
Kikuyu	97.4	2,523
Kisii	99.0	712
Luhya	98.5	1,927
Luo	58.5	1,311
Maasai	94.0	220
Meru	93.9	717
Mijikenda/Swahili	99.5	623
Somali	100.0	260
Taita/Taveta	100.0	134
Turkana	41.8	106
Samburu	(100.0)	12
Other	89.5	399
Total 15-49	92.6	12,063
50-54	91.3	756
Total 15-54	92.5	12,819

Note: Total includes three men for whom information on religion is missing and 16 men for whom information on ethnic group is missing. Figures in parentheses are based on 25-49 unweighted cases.

Table 13.14C Male circumcision

Percentage of men age 15-49 who report having been circumcised, by county, Kenya 2014

County	Percentage circumcised	Number of men
Coast	**97.6**	**1,260**
Mombasa	95.8	481
Kwale	97.4	226
Kilifi	99.5	359
Tana River	99.6	65
Lamu	97.8	37
Taita Taveta	97.6	93
North Eastern	**100.0**	**227**
Garissa	100.0	94
Wajir	100.0	72
Mandera	100.0	60
Eastern	**95.3**	**1,825**
Marsabit	98.1	40
Isiolo	97.8	35
Meru	92.3	495
Tharaka-Nithi	91.5	102
Embu	96.7	164
Kitui	100.0	303
Machakos	92.7	436
Makueni	100.0	250
Central	**97.0**	**1,564**
Nyandarua	93.1	198
Nyeri	99.2	229
Kirinyaga	98.1	184
Murang'a	96.6	284
Kiambu	97.2	669
Rift Valley	**92.5**	**3,050**
Turkana	26.0	76
West Pokot	97.9	103
Samburu	86.1	35
Trans-Nzoia	94.5	329
Uasin Gishu	93.4	355
Elgeyo Marakwet	91.0	86
Nandi	95.0	264
Baringo	86.5	125
Laikipia	94.6	124
Nakuru	94.0	589
Narok	91.5	240
Kajiado	96.9	241
Kericho	96.5	215
Bomet	97.1	267
Western	**96.6**	**1,164**
Kakamega	98.7	411
Vihiga	97.2	140
Bungoma	98.0	413
Busia	89.2	199
Nyanza	**72.1**	**1,405**
Siaya	55.9	213
Kisumu	58.8	309
Homa Bay	56.0	243
Migori	72.5	211
Kisii	98.1	315
Nyamira	100.0	114
Nairobi	**95.4**	**1,568**
Total 15-49	92.6	12,063
50-54	91.3	756
Total 15-54	92.5	12,819

13.9 SELF-REPORTING OF SEXUALLY TRANSMITTED INFECTIONS

Information about the prevalence of sexually transmitted infections (STIs) is useful not only as a marker of unprotected sexual intercourse, but also because STI infection is a co-factor in HIV transmission. The 2014 KDHS asked respondents who had ever had sex whether they had suffered from a disease that they acquired through sexual contact in the past 12 months. They were also asked whether, in the past 12 months, they had any genital discharge and whether they had a genital sore or ulcer. These symptoms have been shown to be useful in identifying STIs in men. For women, however, discharge is

less easily interpreted as a symptom because women experience non-STI conditions of the reproductive tract that also produce discharge. Table 13.15 shows the self-reported prevalence of STIs and STI symptoms among women and men age 15-49, by background characteristics.

Two percent of both women and men reported having had an STI in the 12 months preceding the survey. Six percent of women and 2 percent of men reported recently experiencing an STI or STI symptoms. Women who are currently married or living together with a partner (6 percent) and those who are divorced, separated, or widowed (7 percent) have a higher prevalence of STIs and STI symptoms than women who have never been married (4 percent). Women in Coast (10 percent) and Western (11 percent) are more likely to have an STI or STI symptoms than women in other regions.

The prevalence of STIs or STI symptoms is higher among divorced, separated, or widowed men (6 percent) and uncircumcised men (6 percent) than among their counterparts. The highest prevalence of STIs and STI symptoms occurs in Nyanza (6 percent).

Table 13.15 Self-reported prevalence of sexually-transmitted infections (STIs) and STIs symptoms

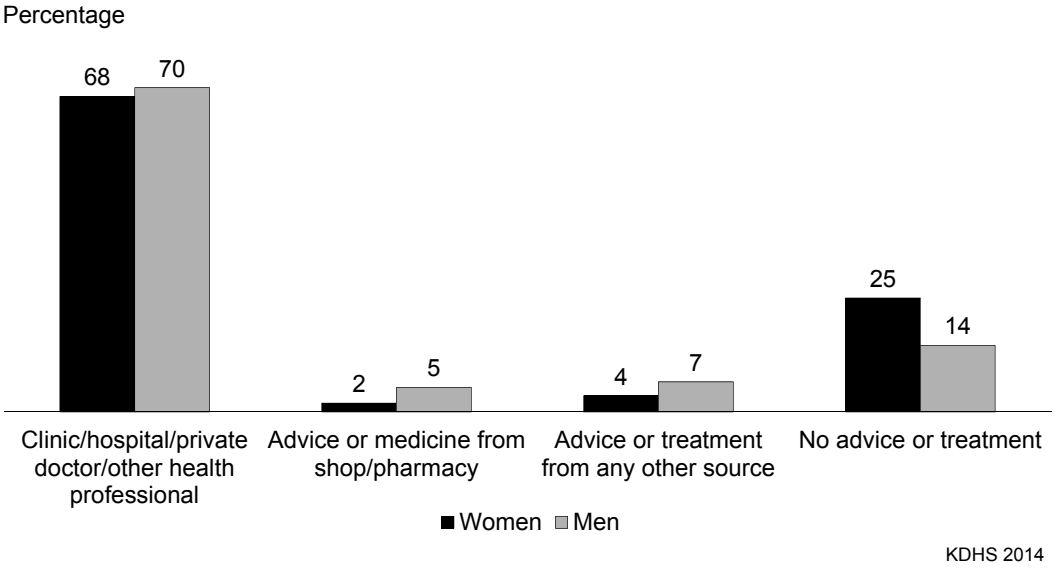
Among women and men age 15-49 who ever had sexual intercourse, the percentage reporting having an STI and/or symptoms of an STI in the past 12 months, by background characteristics, Kenya 2014

	Percentage of women who reported having in the past 12 months:					Percentage of men who reported having in the past 12 months:				
Background characteristic	STI	Bad smelling/ abnormal genital discharge	Genital sore/ulcer	STI/ genital discharge/ sore or ulcer	Number of women who ever had sexual intercourse	STI	Bad smelling/ abnormal discharge from penis	Genital sore/ulcer	STI/ abnormal discharge from penis/ sore or ulcer	Number of men who ever had sexual intercourse
Age										
15-24	1.8	4.4	2.3	6.0	3,385	1.7	2.1	1.5	2.9	2,909
15-19	1.2	3.8	2.9	6.3	982	0.8	1.3	0.9	2.0	1,029
20-24	2.0	4.6	2.1	5.8	2,403	2.3	2.6	1.8	3.4	1,880
25-29	2.4	4.7	2.3	6.3	2,870	1.7	1.7	1.2	3.0	2,040
30-39	2.3	4.5	2.5	6.0	3,906	1.6	1.1	1.0	2.1	3,245
40-49	1.3	3.4	2.4	5.2	2,333	1.0	0.9	0.4	1.6	2,016
Marital status										
Never married	1.4	2.8	1.8	4.2	2,134	0.9	1.3	0.6	1.8	3,512
Married or living together	2.1	4.5	2.3	6.2	8,701	1.7	1.4	1.1	2.4	6,079
Divorced/separated/ widowed	2.1	4.9	3.2	6.5	1,660	3.5	3.4	3.6	5.5	618
Male circumcision										
Circumcised	na	na	na	na	na	1.4	1.4	1.0	2.1	9,562
Not circumcised	na	na	na	na	na	3.9	2.2	2.6	6.0	640
Don't know/missing	na	na	na	na	na	*	*	*	*	7
Residence										
Urban	1.8	3.9	2.1	5.4	5,216	1.7	1.7	1.2	2.5	4,733
Rural	2.1	4.6	2.6	6.3	7,278	1.4	1.2	1.0	2.3	5,476
Region										
Coast	3.9	7.8	4.3	10.4	1,188	1.5	2.0	1.1	2.8	1,049
North Eastern	0.2	1.3	0.2	1.4	232	0.5	0.0	0.0	0.5	129
Eastern	1.3	4.7	2.1	6.5	1,721	0.7	0.6	0.8	1.2	1,535
Central	1.7	4.7	2.5	6.6	1,641	0.2	0.5	0.5	0.8	1,322
Rift Valley	1.3	2.7	1.1	3.5	3,220	1.0	0.8	0.5	1.5	2,612
Western	3.4	7.4	5.4	10.8	1,278	1.5	2.2	1.4	2.4	914
Nyanza	2.7	4.0	2.7	5.4	1,654	4.1	2.1	2.1	5.6	1,184
Nairobi	1.3	2.4	1.1	3.4	1,559	2.8	3.2	1.9	4.0	1,464
Education										
No education	2.0	3.7	2.9	5.7	971	1.0	1.2	0.9	2.0	307
Primary incomplete	2.9	5.8	3.4	8.1	3,110	1.8	2.3	1.4	3.1	2,328
Primary complete	1.9	4.0	2.3	5.7	3,311	2.2	1.6	1.9	3.4	2,556
Secondary+	1.5	3.7	1.7	4.8	5,102	1.1	1.0	0.5	1.6	5,019
Wealth quintile										
Lowest	2.0	4.2	2.7	5.5	1,934	1.4	1.3	1.3	2.6	1,344
Second	2.7	5.7	2.7	7.7	2,167	2.4	1.7	1.4	3.2	1,764
Middle	1.9	4.2	2.4	6.0	2,395	1.0	1.0	0.7	1.7	1,953
Fourth	2.3	4.8	2.3	6.3	2,706	1.3	1.5	1.0	2.1	2,528
Highest	1.3	3.1	2.0	4.5	3,291	1.7	1.7	1.0	2.5	2,621
Total 15-49	2.0	4.3	2.4	5.9	12,494	1.5	1.5	1.1	2.4	10,209
50-54	na	na	na	na	na	0.6	0.5	0.6	1.0	756
Total 15-54	na	na	na	na	na	1.5	1.4	1.0	2.3	10,965

Note: An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
na = Not applicable

Figure 13.5 shows that most women and men who reported having an STI or STI symptoms sought advice or treatment from a clinic, hospital, private doctor, or other health facility (68 percent and 70 percent, respectively). Twenty-five percent of women and 14 percent of men did not seek any treatment.

Figure 13.5 **Women and men seeking treatment for STIs**



13.10 PREVALENCE OF MEDICAL INJECTIONS

Table 13.16 shows the percentage of women and men age 15-49 who received at least one medical injection in the 12 months that preceded the survey, the average number of medical injections in the last 12 months, and, among those who received a medical injection, the percentage whose last injection was administered with a syringe and needle taken from a new, unopened package.

Forty-seven percent of women and 32 percent of men reported having received a medical injection in the last 12 months. Ninety-nine percent of women and 98 percent of men reported that the syringe and needle used to administer their last injection were taken from a new, unopened package. Women in North Eastern (83 percent) and women with no education (94 percent) were less likely than their counterparts to report that their most recent injection was administered with a syringe from a new, unopened package; similar results are seen for men with no education (94 percent).

Table 13.16 Prevalence of medical injections

Percentage of women and men age 15-49 who received at least one medical injection in the last 12 months, the average number of medical injections per person in the last 12 months, and among those who received a medical injection, the percentage of last medical injections for which the syringe and needle were taken from a new, unopened package, by background characteristics, Kenya 2014

	Women					Men				
Background characteristic	Percentage who received a medical injection in the last 12 months	Average number of medical injections per person in the last 12 months	Number of respondents	For last injection, syringe and needle taken from a new, unopened package	Number of respondents receiving medical injections in the last 12 months	Percentage who received a medical injection in the last 12 months	Average number of medical injections per person in the last 12 months	Number of respondents	For last injection, syringe and needle taken from a new, unopened package	Number of respondents receiving medical injections in the last 12 months
Age										
15-24	44.4	1.3	5,407	98.9	2,403	29.5	1.0	4,666	97.8	1,377
15-19	38.2	1.1	2,717	98.5	1,036	28.6	0.9	2,540	98.5	726
20-24	50.8	1.6	2,691	99.2	1,367	30.6	1.2	2,125	97.0	650
25-29	52.6	1.9	2,932	99.1	1,543	33.9	0.9	2,104	97.8	714
30-39	47.2	1.8	3,942	98.7	1,859	34.0	1.4	3,268	98.2	1,111
40-49	43.0	2.0	2,344	97.8	1,007	32.2	1.3	2,024	99.1	651
Marital status										
Never married	37.3	1.2	4,255	98.7	1,586	29.9	1.0	5,350	98.0	1,599
Ever had sex	42.7	1.3	2,134	99.0	911	31.0	1.1	3,512	97.7	1,088
Never had sex	31.8	1.0	2,122	98.2	675	27.8	0.9	1,838	98.7	511
Married/living together	51.6	1.9	8,710	98.7	4,498	33.6	1.2	6,095	98.2	2,048
Divorced/separated/ widowed	44.0	1.7	1,660	98.6	729	33.4	1.5	618	99.1	206
Residence										
Urban	45.9	1.8	5,929	99.1	2,720	32.1	1.2	5,300	98.7	1,702
Rural	47.1	1.6	8,696	98.4	4,093	31.8	1.1	6,762	97.7	2,151
Region										
Coast	51.5	1.9	1,421	99.0	732	25.8	0.9	1,260	98.2	325
North Eastern	38.8	2.4	299	83.3	116	21.1	1.1	227	98.1	48
Eastern	49.1	1.8	2,066	98.8	1,015	32.2	1.1	1,825	96.9	588
Central	46.6	1.8	1,905	98.7	889	29.4	0.8	1,564	99.4	460
Rift Valley	49.2	1.5	3,714	98.6	1,828	31.3	1.0	3,050	96.9	954
Western	49.2	1.8	1,571	99.7	773	33.4	1.3	1,164	99.6	388
Nyanza	41.9	1.4	1,908	98.9	799	37.6	1.6	1,405	98.3	529
Nairobi	38.0	1.6	1,742	100.0	661	35.7	1.4	1,568	99.3	560
Education										
No education	36.6	1.4	1,015	94.2	372	21.0	1.1	345	94.0	72
Primary incomplete	46.1	1.5	3,793	98.8	1,747	32.2	1.1	3,071	97.3	990
Primary complete	50.5	1.7	3,543	98.9	1,790	33.2	1.1	2,734	98.6	907
Secondary+	46.3	1.8	6,274	99.1	2,905	31.9	1.2	5,913	98.5	1,884
Wealth quintile										
Lowest	43.3	1.3	2,236	96.6	969	26.9	1.1	1,691	96.3	455
Second	47.7	1.6	2,590	98.8	1,234	33.2	1.1	2,145	98.4	711
Middle	48.7	1.6	2,859	99.1	1,391	30.9	1.0	2,370	97.5	731
Fourth	49.0	1.9	3,113	99.0	1,527	33.6	1.2	2,959	98.4	993
Highest	44.2	1.8	3,827	99.3	1,692	33.2	1.2	2,897	99.1	962
Total 15-49	46.6	1.7	14,625	98.7	6,813	31.9	1.1	12,063	98.1	3,853
50-54	na	na	na	na	na	27.9	1.7	756	98.6	211
Total 15-54	na	na	na	na	na	31.7	1.2	12,819	98.2	4,064

Note: Medical injections are those given by a doctor, nurse, pharmacist, dentist or other health worker.
na = Not applicable

13.11 HIV/AIDS KNOWLEDGE AND SEXUAL BEHAVIOUR AMONG YOUTH

This section addresses HIV- and AIDS-related knowledge and sexual behaviour among youth age 15-24. In addition to knowledge of HIV transmission, data are presented on age at first sex, condom use, age differences between sexual partners, sex related to alcohol use, and voluntary counselling and testing for HIV.

Younger people are often at a higher risk of contracting STIs, as they are more likely to experiment with sex before marriage. Therefore, condom use among young adults plays an important role in the prevention of transmission of HIV and other sexually transmitted infections, as well as unwanted pregnancies. Likewise, knowledge of where to get condoms is an important prerequisite to their use.

13.11.1 HIV/AIDS-Related Knowledge among Youth

Table 13.17 shows comprehensive knowledge about AIDS and knowledge of a source of condoms among women and men age 15-24 by background characteristics. Fifty-seven percent of young women and 64 percent of young men have comprehensive knowledge about AIDS. Knowledge increases with age among both women and men and is lowest among women (50 percent) and men (55 percent) who have never had sex, women (15 percent) and men (25 percent) in North Eastern, rural women (52 percent) and men (61 percent), and women (14 percent) and men (23 percent) with no education. Seventy-one percent of young women and 88 percent of young men know a place where they can get condoms; trends by background characteristics are similar to those observed for comprehensive knowledge among young people.

Table 13.17 Comprehensive knowledge about AIDS and of a source of condoms among youth

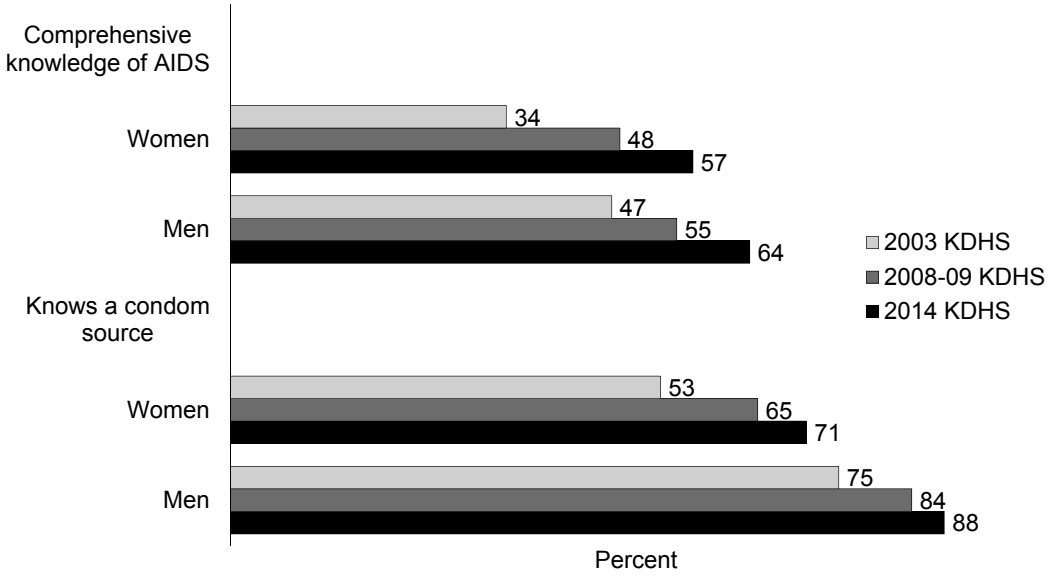
Percentage of young women and young men age 15-24 with comprehensive knowledge about AIDS and percentage with knowledge of a source of condoms, by background characteristics, Kenya 2014

	Women			Men		
Background characteristic	Percentage with comprehensive knowledge of AIDS[1]	Percentage who know a condom source[2]	Number of respondents	Percentage with comprehensive knowledge of AIDS[1]	Percentage who know a condom source[2]	Number of respondents
Age						
15-19	51.7	61.7	2,717	57.7	80.9	2,540
15-17	48.8	54.0	1,680	52.5	74.8	1,531
18-19	56.3	74.2	1,037	65.6	90.2	1,009
20-24	61.6	81.3	2,691	70.9	96.1	2,125
20-22	61.8	80.3	1,688	70.8	94.9	1,365
23-24	61.4	82.9	1,002	71.2	98.4	760
Marital status						
Never married	56.2	67.1	3,434	63.6	86.8	4,214
Ever had sex	64.5	84.3	1,417	69.8	95.3	2,457
Never had sex	50.3	55.0	2,016	54.9	75.0	1,757
Ever married	57.4	79.0	1,974	65.2	97.5	452
Region						
Coast	53.2	74.3	535	50.3	89.1	493
North Eastern	14.5	29.8	108	25.3	69.1	108
Eastern	45.4	68.3	708	64.1	85.3	724
Central	59.7	71.3	565	71.0	89.2	549
Rift Valley	56.3	68.3	1,457	61.9	86.1	1,171
Western	59.8	62.9	671	65.5	84.0	533
Nyanza	64.3	78.6	741	70.6	92.6	601
Nairobi	65.1	87.8	622	70.9	95.6	485
Residence						
Urban	63.4	80.9	2,140	68.1	93.7	1,751
Rural	52.2	65.2	3,267	61.1	84.3	2,915
Education						
No education	14.0	34.3	205	22.6	57.9	67
Primary incomplete	41.9	56.5	1,430	45.1	75.1	1,395
Primary complete	59.8	76.1	971	59.2	92.0	738
Secondary+	66.2	80.1	2,802	76.7	94.7	2,466
Total	56.6	71.4	5,407	63.7	87.9	4,666

[1] Comprehensive knowledge means knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention of the AIDS virus. The components of comprehensive knowledge are presented in Tables 13.2, 13.4.1 and 13.4.2.
[2] For this table, the following responses are not considered a source for condoms: friends, family members, and home.

Figure 13.6 shows trends in comprehensive knowledge about AIDS and knowledge of a source for condoms among women and men age 15-24. Comprehensive knowledge and knowledge of a condom source have steadily increased among young people since 2003.

Figure 13.6 **Comprehensive knowledge about AIDS and source of condoms among youth**



13.11.2 Trends in Age at First Sex

Because HIV transmission in Kenya occurs predominantly through heterosexual intercourse, age at first sexual intercourse marks the time at which individuals first risk exposure to the virus. Table 13.18 shows the percentage of women and men age 15-24 who had their sexual debut before age 15 and before age 18. Young men (21 percent) are almost twice as likely to engage in sexual intercourse before age 15 as young women (12 percent). By age 18, nearly half (47 percent) of women and more than half (55 percent) of men have had sexual intercourse.

Urban young women are less likely to initiate sexual activity before age 18 (39 percent) than rural young women (53 percent); there are no apparent rural-urban differences among young men. Among young women, the percentage who have had sexual intercourse before age 15 or before age 18 declines with increasing education. Young men who know a source of condoms are much more likely to have had sex by age 15 (23 percent) or age 18 (57 percent), although this pattern does not exist for young women. Women in Nyanza (21 percent) and men in Nyanza and Eastern (27 percent each) are more likely than their counterparts to have had sex before age 15.

Table 13.18 Age at first sexual intercourse among young people

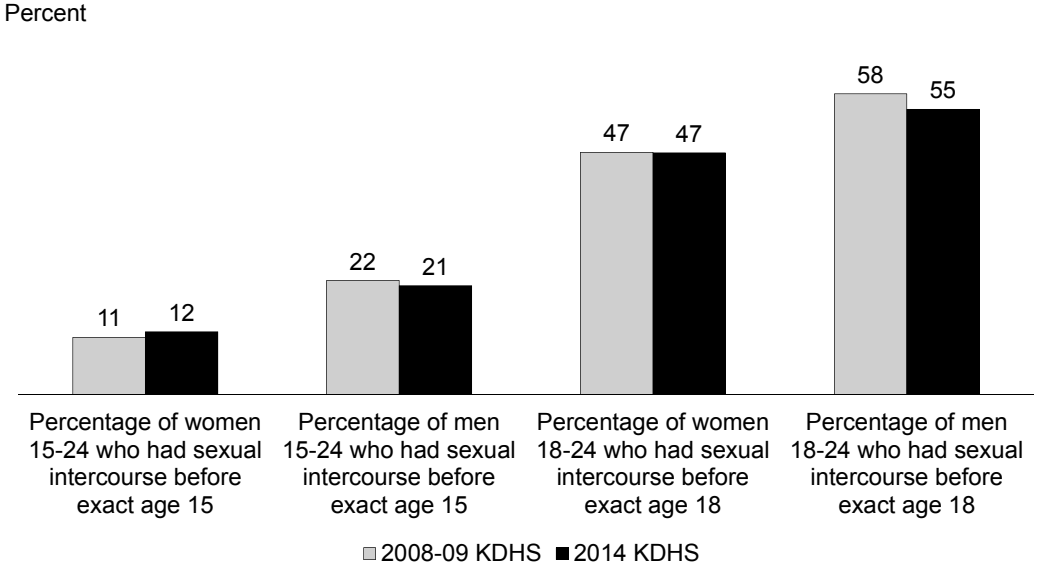
Percentage of young women and young men age 15-24 who had sexual intercourse before age 15 and percentage of young women and young men age 18-24 who had sexual intercourse before age 18, by background characteristics, Kenya 2014

	Women				Men			
Background characteristic	Percentage who had sexual intercourse before age 15	Number of respondents (15-24)	Percentage who had sexual intercourse before age 18	Number of respondents (18-24)	Percentage who had sexual intercourse before age 15	Number of respondents (15-24)	Percentage who had sexual intercourse before age 18	Number of respondents (18-24)
Age								
15-19	10.7	5,820	na	na	19.6	2,540	na	na
15-17	10.6	3,510	na	na	17.9	1,531	na	na
18-19	10.8	2,310	46.3	2,310	22.2	1,009	50.4	1,009
20-24	13.6	5,735	46.7	5,735	22.6	2,125	57.2	2,125
20-22	14.0	3,529	48.4	3,529	22.0	1,365	57.1	1,365
23-24	12.8	2,206	44.1	2,206	23.6	760	57.3	760
Marital status								
Never married	7.6	7,277	29.2	3,942	20.0	4,214	52.1	2,685
Ever married	19.8	4,278	63.3	4,103	29.9	452	72.6	450
Knows condom source[1]								
Yes	12.9	3,863	47.9	2,956	22.6	4,099	56.6	2,954
No	11.7	7,692	45.9	5,089	9.2	566	28.4	180
Region								
Coast	9.3	1,179	43.3	831	16.0	493	49.9	339
North Eastern	7.2	241	37.1	152	6.1	108	16.2	60
Eastern	11.1	1,527	45.2	1,007	27.2	724	60.4	462
Central	5.8	1,248	26.0	908	18.3	549	45.7	386
Rift Valley	13.8	3,091	52.0	2,214	22.9	1,171	58.3	796
Western	11.7	1,343	54.9	814	14.6	533	55.2	314
Nyanza	20.9	1,577	65.4	984	26.5	601	59.1	360
Nairobi	8.7	1,349	35.2	1,136	18.6	485	57.5	417
Residence								
Urban	10.3	4,628	38.8	3,654	20.4	1,751	54.5	1,367
Rural	13.3	6,927	53.1	4,391	21.3	2,915	55.4	1,768
Education								
No education	30.3	434	70.5	362	17.4	67	48.1	50
Primary incomplete	19.1	3,117	71.5	1,481	22.9	1,395	60.9	567
Primary complete	14.5	2,154	60.5	1,763	24.6	738	61.0	604
Secondary+	6.1	5,849	30.8	4,439	18.9	2,466	51.5	1,913
Total	12.1	11,555	46.6	8,045	21.0	4,666	55.0	3,134

na = Not available
[1] For this table, the following responses are not considered a source for condoms: friends, family members and home.

Figure 13.7 compares trends in age at first sex between the 2008-09 KDHS and 2014 KDHS surveys; there have been no substantial changes over time.

Figure 13.7 **Trends in age of first sexual intercourse**



13.11.3 Abstinence and Premarital Sex

Premarital sex and the interval between sexual initiation and marriage are among the factors that may increase exposure to HIV infection. Table 13.19 shows the percentage of never-married young women and men age 15-24 who have never had sex, the percentage who had sex in the 12 months preceding the survey, and, among those who had sex in the 12 months preceding the survey, the percentage who used a condom during their most recent sexual encounter.

Table 13.19 Premarital sexual intercourse and condom use during premarital sexual intercourse among youth

Among never-married women and men age 15-24, the percentage who have never had sexual intercourse, the percentage who had sexual intercourse in the past 12 months, and, among those who had premarital sexual intercourse in the past 12 months, the percentage who used a condom at the last sexual intercourse, by background characteristics, Kenya 2014

	Women					Men				
Background characteristic	Percentage who have never had sexual intercourse	Percentage who had sexual intercourse in the past 12 months	Number of never married respondents	Percentage who used a condom at last sexual intercourse	Number of respondents	Percentage who have never had sexual intercourse	Percentage who had sexual intercourse in the past 12 months	Number of never married respondents	Percentage who used a condom at last sexual intercourse	Number of respondents
Age										
15-19	72.8	17.1	2,383	55.6	407	59.9	24.8	2,522	66.3	626
15-17	82.9	10.7	1,595	48.3	170	71.9	16.3	1,529	54.3	249
18-19	52.4	30.0	787	60.9	236	41.5	38.0	993	74.2	377
20-24	26.8	47.4	1,051	64.8	498	14.5	66.3	1,692	79.0	1,122
20-22	31.5	43.2	752	62.9	325	17.1	62.7	1,198	76.0	751
23-24	14.9	58.0	299	68.2	173	8.3	75.2	494	85.3	371
Knows condom source[1]										
Yes	48.1	34.9	2,303	62.7	803	36.0	45.9	3,658	76.4	1,679
No	80.3	9.0	1,130	44.3	102	79.1	12.5	555	27.4	69
Region										
Coast	65.6	23.6	327	48.5	77	46.5	36.9	437	72.1	161
North Eastern	97.7	1.0	64	*	1	86.0	2.6	100	*	3
Eastern	68.3	18.8	480	52.0	90	42.4	36.8	663	72.5	244
Central	63.5	24.0	396	75.0	95	45.6	39.6	517	79.2	205
Rift Valley	53.8	29.6	889	51.8	263	38.6	45.3	1,058	67.9	479
Western	63.2	20.6	456	61.6	94	50.9	28.7	483	70.1	138
Nyanza	53.6	27.7	469	68.5	130	39.7	44.2	536	81.1	237
Nairobi	40.4	43.6	353	(71.1)	154	19.8	67.1	419	82.2	281
Residence										
Urban	50.6	35.1	1,261	65.0	443	33.3	50.4	1,545	78.4	779
Rural	63.4	21.2	2,172	56.5	462	46.5	36.3	2,669	71.3	970
Education										
No education	83.6	10.6	50	*	5	50.3	37.7	56	(48.7)	21
Primary incomplete	74.7	13.5	898	37.3	121	57.6	29.0	1,264	52.9	366
Primary complete	49.5	30.0	430	62.3	129	25.6	57.6	610	76.3	352
Secondary+	53.1	31.6	2,056	64.9	649	37.0	44.2	2,283	82.2	1,009
Total	58.7	26.3	3,434	60.7	905	41.7	41.5	4,214	74.5	1,748

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
[1] For this table, the following responses are not considered a source for condoms: friends, family members and home.

Twenty-six percent of young women and 42 percent of young men had sex in the 12 months before the survey. Sixty-one percent of women and 75 percent of men used a condom during their last sexual encounter. Among both women and men, the proportion who had sex in the past 12 months and used a condom during their most recent sexual encounter increases with age and knowledge of a condom source. Young women (1 percent) and men (3 percent) from North Eastern are least likely to report having had sex in the 12 months before the survey. Women and men in urban areas and those at higher educational levels are more likely than their counterparts to have had sex in the past 12 months and to have used a condom during their most recent sexual encounter.

In the last decade, the percentage of women and men age 15-24 who used a condom during their last premarital sexual intercourse has steadily increased. Among women, condom use increased from 27 percent in 2003 and 40 percent in 2008-09 to 61 percent in 2014. Similarly, condom use among men increased from 48 percent in 2003 and 64 percent in 2008-09 to 75 percent in 2014.

13.11.4 Multiple Sexual Partners among Youth

Having multiple sexual partners and having unprotected sex increase one's chances of both contracting and transmitting HIV. The percentage of women and men age 15-24 who had more than one sexual partner in the past 12 months and the percentage who reported using a condom during their last intercourse are presented in Table 13.20.1 and Table 13.20.2.

More men than women reported having two or more sexual partners (10 percent and 2 percent, respectively). Ever-married young women and men (3 percent and 15 percent, respectively) were more likely than their never-married counterparts (1 percent and 9 percent, respectively) to have had two or more partners in the past 12 months. The proportion of women (2 percent) and men (13 percent) with multiple partners is higher in urban areas.

Among respondents reporting two or more sexual partners in the past 12 months, 38 percent of women and 69 percent of men used a condom during their most recent sexual encounter. The proportion of men who used a condom during their last sexual encounter was lowest among those who had ever been married (37 percent) and highest among those residing in urban areas (71 percent).

Table 13.20.1 Multiple sexual partners in the past 12 months among young people: Women

Among all young women age 15-24, the percentage who had sexual intercourse with more than one sexual partner in the past 12 months, and among those having more than one partner in the past 12 months, the percentage reporting that a condom was used at last intercourse, by background characteristics, Kenya 2014

	Women age 15-24		Women age 15-24 who had 2+ partners in the past 12 months	
Background characteristic	Percentage who had 2+ partners in the past 12 months	Number of women	Percentage who reported using a condom at last intercourse	Number of women
Age				
15-19	1.0	2,717	(26.1)	28
15-17	0.7	1,680	*	13
18-19	1.5	1,037	*	15
20-24	2.0	2,691	(43.3)	55
20-22	1.8	1,688	(61.7)	30
23-24	2.5	1,002	*	25
Marital status				
Never married	0.9	3,434	(56.9)	32
Ever married	2.6	1,974	(25.1)	50
Knows condom source[1]				
Yes	2.0	3,863	38.4	78
No	0.3	1,545	*	5
Residence				
Urban	2.3	2,140	(39.7)	50
Rural	1.0	3,267	(34.3)	33
Education				
No education	0.7	205	*	2
Primary incomplete	1.5	1,430	(22.9)	21
Primary complete	1.3	971	*	13
Secondary+	1.7	2,802	(50.1)	48
Total 15-24	1.5	5,407	37.5	83

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
[1] For this table, the following responses are not considered a source for condoms: friends, family members and home.

Table 13.20.2 Multiple sexual partners in the past 12 months among young people: Men

Among all young men age 15-24, the percentage who had sexual intercourse with more than one sexual partner in the past 12 months, and among those having more than one partner in the past 12 months, the percentage reporting that a condom was used at last intercourse, by background characteristics, Kenya 2014

Background characteristic	Men age 15-24		Men age 15-24 who had 2+ partners in the past 12 months	
	Percentage who had 2+ partners in the past 12 months	Number of men	Percentage who reported using a condom at last intercourse	Number of men
Age				
15-19	3.7	2,540	64.1	95
15-17	1.8	1,531	(66.5)	28
18-19	6.7	1,009	63.1	67
20-24	16.7	2,125	70.2	354
20-22	16.6	1,365	65.0	226
23-24	16.8	760	79.3	128
Marital status				
Never married	9.0	4,214	74.7	379
Ever married	15.4	452	37.4	70
Knows condom source[1]				
Yes	10.7	4,099	69.8	437
No	2.1	566	*	12
Residence				
Urban	12.5	1,751	71.3	220
Rural	7.9	2,915	66.6	229
Education				
No education	13.4	67	*	9
Primary incomplete	7.3	1,395	55.9	102
Primary complete	13.2	738	81.1	98
Secondary+	9.7	2,466	70.3	240
Total 15-24	9.6	4,666	68.9	449

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
[1] For this table, the following responses are not considered a source for condoms: friends, family members and home.

13.11.5 Cross-generational Sexual Partners

To examine age differences between sexual partners, women and men age 15-19 who had sex in the 12 months preceding the survey were asked the age of their partners. If they did not know a partner's age, they were asked whether the partner was older or younger than they were and, if older, whether the partner was 10 or more years older.

As shown in Table 13.21, women are more likely (14 percent) than men (1 percent) to have had sex with a partner 10 or more years older. Among women, this is an increase from 2008-09 (4 percent). Urban women (18 percent) and women with no education (42 percent) are most likely to have had sex with a partner 10 or more years their senior.

Table 13.21 Age-mixing in sexual relationships among women and men age 15-19

Among women and men age 15-19 who had sexual intercourse in the past 12 months, percentage who had sexual intercourse with a partner who was 10 or more years older than themselves, by background characteristics, Kenya 2014

Background characteristic	Women age 15-19 who had sexual intercourse in the past 12 months		Men age 15-19 who had sexual intercourse in the past 12 months	
	Percentage who had sexual intercourse with a man 10+ years older	Number of women	Percentage who had sexual intercourse with a woman 10+ years older	Number of men
Age				
15-17	13.7	252	0.0	251
18-19	13.4	472	0.7	393
Marital status				
Never married	3.1	407	0.5	626
Ever married	26.8	317	*	19
Knows condom source[1]				
Yes	12.2	572	0.5	600
No	18.5	152	(0.0)	45
Residence				
Urban	17.7	270	1.5	193
Rural	11.0	454	0.0	452
Education				
No education	41.5	24	*	7
Primary incomplete	17.5	197	0.0	249
Primary complete	10.0	155	0.0	99
Secondary+	10.8	348	1.0	290
Total	13.5	724	0.5	644

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
[1] For this table, the following responses are not considered a source for condoms: friends, family members and home.

13.11.6 Voluntary HIV Counselling and Testing among Youth

People's knowledge of their HIV status can motivate them to practice safer sexual behaviour to avoid transmitting the virus to others. Table 13.22 shows, among women and men age 15-24 who reported having sexual intercourse in the past 12 months, the percentage who were tested for HIV and received their results in the past 12 months.

Young women are more likely (69 percent) than young men (54 percent) to have been tested for HIV and to have received the results in the 12 months preceding the survey. These figures represent a substantial increase from the 2008-09 KDHS, when 41 percent of women and 26 percent of men age 15-24 had been tested for HIV and received the results in the 12 months preceding the survey.

The likelihood of having been tested increases with age among both women and men. Ever-married men (61 percent) are more likely than never-married men to have been tested. Both women (71 percent) and men (56 percent) who know a condom source are more likely to have been tested. The prevalence of testing is highest among women and men in Nairobi (75 percent and 67 percent, respectively) and Nyanza (75 percent and 70 percent, respectively). Urban women (75 percent) and men (59 percent) are more likely to have been tested. Among both women and men, the likelihood of having been tested increases with increasing education.

Table 13.22 Recent HIV tests among youth

Among young women and young men age 15-24 who have had sexual intercourse in the past 12 months, the percentage who were tested for HIV in the past 12 months and received the results of the last test, by background characteristics, Kenya 2014

Background characteristic	Women age 15-24 who have had sexual intercourse in the past 12 months:		Men age 15-24 who have had sexual intercourse in the past 12 months:	
	Percentage who have been tested for HIV in the past 12 months and received the results of the last test	Number of women	Percentage who have been tested for HIV in the past 12 months and received the results of the last test	Number of men
Age				
15-19	64.6	724	40.1	644
15-17	60.9	252	33.3	251
18-19	66.6	472	44.5	393
20-24	70.5	2,076	60.4	1,548
20-22	69.9	1,221	57.6	915
23-24	71.2	856	64.4	633
Marital status				
Never married	67.1	905	52.8	1,748
Ever married	69.9	1,896	60.8	444
Knows condom source[1]				
Yes	70.5	2,311	55.5	2,113
No	61.5	490	25.4	79
Region				
Coast	69.0	281	42.5	216
North Eastern	35.2	38	(27.1)	9
Eastern	62.1	312	49.5	303
Central	66.7	254	52.1	236
Rift Valley	69.2	805	50.1	590
Western	65.2	300	45.2	187
Nyanza	74.7	394	69.6	303
Nairobi	75.3	416	67.3	347
Residence				
Urban	75.3	1,292	59.1	982
Rural	63.5	1,509	50.6	1,210
Education				
No education	45.2	147	19.6	30
Primary incomplete	60.2	617	38.0	495
Primary complete	72.5	652	55.3	477
Secondary+	73.7	1,383	61.7	1,191
Total	69.0	2,800	54.4	2,192

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] For this table, the following responses are not considered a source for condoms: friends, family members and home.

NONCOMMUNICABLE DISEASES AND OTHER HEALTH ISSUES

14

James Muttunga, John Anampiu, Abdulkadir Amin Awes

Key Findings

- Overall, 10 percent of women have had both a breast exam from a health provider and a breast self-exam.
- Three-quarters (76 percent) of women have heard of cervical cancer, and 14 percent have had a cervical cancer screening exam.
- Approximately two-thirds (65 percent) of men have heard of prostate cancer, and 3 percent have been examined by a doctor or health care provider for prostate cancer.
- Tobacco use is more common among Kenyan men than women (83 percent of men don't use tobacco compared with 99 percent of women). Sixteen percent of men smoke cigarettes. Among men who smoke cigarettes, 28 percent smoked more than 10 cigarettes in the past 24 hours.
- Most Kenyans do not have health insurance; 82 percent of women and 79 percent of men are not covered by any health insurance.

14.1 INTRODUCTION

A healthy population is an end in itself, along with being one of the most basic requirements for quality of life and a basic foundation for a country's economic growth and development. It is important for the population to live a healthy lifestyle, free from communicable and noncommunicable diseases and free from use of destructive substances. Around the world, the rapid increases in noncommunicable diseases such as cardiovascular diseases, diabetes, and cancer are becoming a challenge in achieving global progress. Kenya, similar to other countries that are in an epidemiological transition, is experiencing an increase in noncommunicable diseases, obesity, and other conditions associated with urbanisation and modern, less active lifestyles, combined with new and re-emerging infectious diseases such as HIV and AIDS and tuberculosis. This chapter presents information on health issues in Kenya, including screening for noncommunicable diseases (NCDs), knowledge of tuberculosis, use of tobacco and alcohol, physical activity, accidental injury, and health insurance coverage.

14.2 KNOWLEDGE OF AND SCREENING FOR CANCER

In Kenya, cancer is estimated to be the second leading cause of NCD-related deaths after cardiovascular diseases, and it accounts for 7 percent of overall national mortality (WHO, 2014a). Cancer mortality can be reduced if cases are detected and treated early. Individuals and their physicians can participate in regular screening to identify abnormalities suggestive of cancer so that prompt diagnosis, treatment, and care can be sought. In the absence of early detection or screening, patients may be diagnosed at late stages when curative treatment is no longer an option (WHO, 2015b). The 2014 KDHS asked respondents if they had heard of specific types of cancers and if they had been screened for them. Women were asked about breast and cervical cancer, while men were asked about prostate cancer.

14.2.1 Breast Cancer

Breast cancer is one of the most common forms of cancer among women and is a leading cause of death worldwide. Breast self-examinations—physical examinations of the breasts performed by women

themselves—as well as examinations by medical professionals and mammography are methods for the early detection of breast cancer. Table 14.1 presents the percentage of women age 15-49 who have completed a breast self-exam for possible cancer and the percentage who have had a doctor or health care provider examine their breasts for cancer, by background characteristics.

Table 14.1 Breast cancer screening

Percentage of women age 15-49 who have examined their breasts to detect or check for cancer and the percentage who have had a doctor or health care provider examine their breasts for cancer, by background characteristics, Kenya 2014

Background characteristic	Percentage who have performed a self-examination for breast cancer	Percentage who have had a doctor or health care provider perform an examination for breast cancer	Percentage who have had both an examination for breast cancer and a self-examination	Number of women
Age				
15-19	14.0	3.4	2.6	2,717
20-24	22.8	12.2	8.4	2,691
25-29	29.7	17.3	12.8	2,932
30-34	29.0	16.0	12.1	2,162
35-39	29.4	16.1	12.4	1,780
40-44	29.7	17.9	13.5	1,292
45-49	30.6	17.7	13.7	1,052
Residence				
Urban	34.2	18.6	14.7	5,929
Rural	19.5	10.1	6.9	8,696
Region				
Coast	18.1	9.4	7.5	1,421
North Eastern	2.2	1.4	1.3	299
Eastern	30.3	10.9	7.9	2,066
Central	40.8	24.0	16.8	1,905
Rift Valley	25.0	13.5	10.2	3,714
Western	15.3	9.2	5.9	1,571
Nyanza	12.9	7.8	5.6	1,908
Nairobi	36.7	20.8	17.4	1,742
Education				
No education	7.6	3.1	1.6	1,015
Primary incomplete	14.5	8.3	5.2	3,793
Primary complete	25.2	14.2	10.0	3,543
Secondary+	35.1	18.0	14.4	6,274
Wealth quintile				
Lowest	9.5	4.4	2.9	2,236
Second	17.8	9.1	5.8	2,590
Middle	19.5	10.6	6.9	2,859
Fourth	29.3	15.2	11.7	3,113
Highest	41.2	22.7	18.3	3,827
Total	25.4	13.5	10.1	14,625

One-quarter (25 percent) of women have performed a breast self-examination, and 14 percent have had a doctor or health provider perform a breast exam. Overall, 10 percent of women have had both a self-exam and a breast exam from a health provider. The percentage of women who have had both exams increases with age and is most common among women age 25 and above. Urban women (15 percent) are more likely to have had both exams than rural women (7 percent). By region, the proportion of women who have had both exams ranges from 1 percent in North Eastern to 17 percent in Nairobi and Central. The likelihood of having both exams increases with increasing education and wealth. Fourteen percent of women with a secondary education have had both kinds of breast exam, as compared with 2 percent of women with no education. Similarly, 18 percent of women in the highest wealth quintile have had both kinds of breast exam, compared with 3 percent of women in the lowest wealth quintile.

14.2.2 Cervical Cancer

Worldwide, cervical cancer is the fourth most frequent cancer in women. When women are regularly screened for cervical cancer, pre-cancerous lesions and cancer are often identified at stages when they can easily be treated. Early treatment prevents up to 80 percent of cervical cancers. Because pre-cancerous lesions and cancer may take many years to develop, screening is recommended for every woman

age 30 to 49 at least once in her lifetime and ideally more frequently (WHO, 2015c). Two common types of screening examinations are the pap smear test and visual inspection with acetic acid (VIA) or with Lugol's iodine (VILI).

Table 14.2 presents the percentage of women age 15-49 who have heard of cervical cancer and the percentage who have had a cervical cancer screening exam. Among women who have had an exam, Table 14.2 presents the percent distribution by examination type.

About three-quarters (76 percent) of women have heard of cervical cancer and 14 percent have had a cervical cancer screening exam. Among women who have had an exam, 62 percent have had a pap smear, 32 percent have had visual inspection, and 1 percent have had both screening tests. Knowledge of cervical cancer and likelihood of having a screening exam are lowest among young women age 15-19 (59 percent and 2 percent, respectively), rural women (71 percent and 11 percent), women in North Eastern (5 percent and less than 1 percent), women with no education (33 percent and 3 percent), and women in the lowest wealth quintile (49 percent and 4 percent).

Table 14.2 Cervical cancer knowledge and screening

Percentage of women age 15-49 who have heard of cervical cancer and the percentage who have had a cervical cancer screening exam; and among women who have had a cervical cancer screening exam, the percent distribution by examination type, according to background characteristics, Kenya 2014

Background characteristic	Percentage who have heard of cervical cancer	Percentage who have had a cervical cancer exam	Number of women	Among women who have had a cervical cancer exam:						
				Pap smear	Visual inspection[1]	Both pap smear and visual inspection[1]	Don't know / not sure	Missing	Total	Number of women
Age										
15-19	59.3	2.0	2,717	(54.7)	(21.3)	(0.9)	(23.2)	(0.0)	100.0	53
20-24	75.9	10.0	2,691	57.1	37.7	2.0	2.9	0.3	100.0	269
25-29	80.0	15.4	2,932	62.3	29.8	0.5	7.2	0.2	100.0	451
30-34	84.3	19.0	2,162	62.6	31.1	2.1	3.6	0.6	100.0	411
35-39	79.5	19.2	1,780	67.3	28.7	0.8	3.0	0.2	100.0	342
40-44	81.6	22.4	1,292	61.9	32.2	1.0	4.9	0.0	100.0	290
45-49	80.6	19.8	1,052	59.8	34.8	2.6	2.7	0.0	100.0	209
Residence										
Urban	83.7	18.6	5,929	70.7	23.0	1.7	4.5	0.1	100.0	1,100
Rural	71.0	10.6	8,696	51.6	41.8	1.0	5.2	0.4	100.0	925
Region										
Coast	64.7	7.5	1,421	53.7	33.5	0.0	12.5	0.3	100.0	107
North Eastern	5.0	0.4	299	*	*	*	*	*	100.0	1
Eastern	79.9	12.8	2,066	49.9	42.9	1.3	5.9	0.0	100.0	264
Central	86.8	21.8	1,905	56.9	40.8	0.1	2.2	0.0	100.0	415
Rift Valley	71.6	12.1	3,714	56.2	32.5	2.9	8.0	0.5	100.0	450
Western	68.2	8.1	1,571	49.2	46.4	1.2	2.7	0.6	100.0	127
Nyanza	84.5	13.1	1,908	62.6	34.0	0.2	2.5	0.6	100.0	250
Nairobi	89.5	23.6	1,742	86.8	7.6	2.2	3.5	0.0	100.0	411
Education										
No education	32.5	2.9	1,015	(40.2)	(44.3)	(0.0)	(14.7)	(0.8)	100.0	30
Primary incomplete	64.8	9.4	3,793	49.2	44.6	0.3	5.4	0.4	100.0	358
Primary complete	81.0	15.1	3,543	57.5	36.0	0.8	5.3	0.5	100.0	535
Secondary+	87.4	17.6	6,274	68.9	24.9	2.1	4.1	0.0	100.0	1,102
Wealth quintile										
Lowest	48.7	4.4	2,236	55.8	36.2	2.1	3.9	2.0	100.0	99
Second	73.5	8.9	2,590	46.3	45.1	0.0	8.0	0.5	100.0	231
Middle	76.9	10.9	2,859	44.3	49.0	0.1	6.6	0.0	100.0	312
Fourth	82.0	16.3	3,113	63.1	30.8	1.0	4.8	0.3	100.0	508
Highest	88.8	22.9	3,827	72.5	21.7	2.3	3.5	0.0	100.0	875
Total	76.2	13.8	14,625	62.0	31.6	1.4	4.8	0.2	100.0	2,025

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
[1] Visual inspection with acetic acid (VIA) or with Lugol's Iodine (VILI)

14.2.3 Prostate Cancer

Prostate cancer starts in the prostate gland, which is a small, walnut-sized structure that makes up part of a man's reproductive system. Prostate cancer can be detected through a digital rectal exam. Also, the blood level of prostate-specific antigen, a protein that is produced by the prostate, can be tested. Table

14.3 presents the percentage of men age 15-49 who have heard of prostate cancer and the percentage who have been examined for prostate cancer by a doctor or health care provider. Among men who have had an exam, Table 14.3 presents the timing of the exam and the exam results.

About two-thirds (65 percent) of men have heard of prostate cancer and 3 percent have been examined by a doctor or health care provider for prostate cancer. Among men who have had an exam, 82 percent have had the exam in the last five years, and 2 percent were told they had a problem with their prostate. Men age 15-19 (41 percent), men in rural areas (62 percent), and men in North Eastern (23 percent) were least likely to have heard of prostate cancer. Men with these characteristics were also less likely to have had a prostate exam. Knowledge of prostate cancer and the likelihood of having had a prostate exam generally increase with increasing education and wealth.

Table 14.3 Prostate cancer knowledge and screening

Percentage of men age 15-49 who have heard of prostate cancer, the percentage who have had a doctor or health care provider examine them for prostate cancer; and among men who have had a prostate cancer exam, the timing of the exam and the results, by background characteristics, Kenya 2014

Background characteristic	Percentage who have heard of prostate cancer	Percentage who have had a doctor or health care provider perform an examination for prostate cancer	Number of men	Among men who have had a prostate cancer exam:		
				Had the exam within the last 5 years	Were told they had a problem with their prostate	Number of men
Age						
15-19	41.1	0.8	2,540	(76.9)	(3.8)	21
20-24	66.7	2.1	2,125	(82.8)	(5.3)	44
25-29	70.9	3.8	2,104	91.1	0.0	79
30-34	71.6	2.8	1,785	(72.2)	(0.0)	49
35-39	70.3	3.0	1,483	(76.6)	(7.3)	45
40-44	75.1	4.3	1,224	(86.6)	(1.5)	53
45-49	78.1	2.6	800	(67.5)	(0.3)	21
Residence						
Urban	69.0	3.3	5,300	89.3	0.8	175
Rural	61.6	2.0	6,762	71.7	4.3	138
Region						
Coast	53.4	1.1	1,260	*	*	14
North Eastern	22.6	0.0	227	*	*	0
Eastern	66.0	4.0	1,825	74.6	0.0	73
Central	76.1	3.4	1,564	(62.6)	(1.5)	53
Rift Valley	65.5	1.6	3,050	85.2	2.7	50
Western	56.5	0.7	1,164	*	*	8
Nyanza	71.8	3.4	1,405	88.1	6.6	48
Nairobi	66.1	4.2	1,568	*	*	66
Education						
No education	30.5	1.6	345	*	*	5
Primary incomplete	49.3	1.8	3,071	73.0	5.7	55
Primary complete	63.0	3.1	2,734	88.3	3.5	83
Secondary+	75.7	2.8	5,913	82.9	0.7	168
Wealth quintile						
Lowest	46.2	1.5	1,691	(81.2)	(5.0)	26
Second	59.7	1.8	2,145	(69.7)	(8.2)	39
Middle	64.4	2.5	2,370	72.0	1.9	60
Fourth	68.5	2.5	2,959	85.9	2.3	75
Highest	76.1	3.9	2,897	87.9	0.0	113
Total 15-49	64.8	2.6	12,063	81.6	2.3	312
50-54	75.7	7.0	756	(78.0)	(9.2)	53
Total 15-54	65.5	2.8	12,819	81.0	3.3	365

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

14.3 SCREENING FOR HYPERTENSION AND DIABETES

Elevated blood pressure, commonly referred to as hypertension, is among the major risk factors for cardiovascular disease and stroke. Diabetes is characterised by chronic hyperglycaemia or raised blood sugar. It requires lifelong treatment and can damage the heart, blood vessels, eyes, kidneys, and nerves. The KDHS asked respondents if they had ever been told by a doctor or health worker that they had high

blood pressure or hypertension or that they had raised blood sugar or diabetes. Table 14.4 presents the percentage of women and men age 15-49 who were told they had either of these health concerns, according to background characteristics. It is important to note that these data do not represent the prevalence of hypertension or diabetes in Kenya; rather, they reflect only the proportion of people who have visited a health care provider, undergone an examination, and been informed that they have these health concerns.

Nine percent of women and 3 percent of men have been told by a health care provider that they have hypertension. The percentage of women and men who have been told they have hypertension generally increases with age, education, and wealth. Women and men in urban areas, women in Nairobi and Central regions, and men in Nairobi and Nyanza regions are more likely to have been told they have hypertension, although this pattern may reflect increased access to health care in these areas. One percent of both women and men have been told by a health care provider that they have diabetes.

Table 14.4 Hypertension and diabetes screening

Percentage of women and men age 15-49 who were told by a doctor or health worker that they have raised blood pressure or hypertension and the percentage who were told by a doctor or health worker that they have raised blood sugar or diabetes, according to background characteristics, Kenya 2014

	Women			Men		
Background characteristic	Percentage who were told by a doctor or health worker they had hypertension	Percentage who were told by a doctor or health worker they had diabetes	Number of women	Percentage who were told by a doctor or health worker they had hypertension	Percentage who were told by a doctor or health worker they had diabetes	Number of men
Age						
15-19	2.7	0.5	2,717	1.1	0.2	2,540
20-24	6.2	1.0	2,691	1.8	0.7	2,125
25-29	9.8	1.4	2,932	2.0	0.6	2,104
30-34	10.7	1.2	2,162	4.9	0.6	1,785
35-39	12.0	1.3	1,780	3.6	1.1	1,483
40-44	16.5	2.3	1,292	4.9	1.2	1,224
45-49	17.5	2.6	1,052	7.1	2.1	800
Residence						
Urban	11.6	1.6	5,929	3.9	0.9	5,300
Rural	7.8	1.0	8,696	2.3	0.7	6,762
Region						
Coast	9.4	1.2	1,421	3.4	1.0	1,260
North Eastern	5.2	2.0	299	1.3	2.2	227
Eastern	8.1	1.3	2,066	1.7	0.5	1,825
Central	12.8	1.7	1,905	2.6	0.9	1,564
Rift Valley	8.3	1.1	3,714	2.8	0.3	3,050
Western	8.0	1.2	1,571	2.2	0.7	1,164
Nyanza	7.3	0.7	1,908	4.3	1.6	1,405
Nairobi	13.5	1.5	1,742	4.7	0.8	1,568
Education						
No education	6.7	1.8	1,015	2.2	1.1	345
Primary incomplete	7.6	0.8	3,793	2.0	0.5	3,071
Primary complete	11.0	1.1	3,543	3.2	0.8	2,734
Secondary+	9.9	1.6	6,274	3.5	0.9	5,913
Wealth quintile						
Lowest	5.4	0.8	2,236	2.3	0.6	1,691
Second	7.9	1.4	2,590	2.8	0.6	2,145
Middle	8.6	1.1	2,859	2.2	0.6	2,370
Fourth	10.7	1.2	3,113	2.2	0.8	2,959
Highest	12.3	1.7	3,827	5.1	1.0	2,897
Total 15-49	9.4	1.3	14,625	3.0	0.8	12,063
50-54	na	na	na	9.8	2.4	756
Total 15-54	na	na	na	3.4	0.9	12,819

na = Not applicable

14.4 KNOWLEDGE AND ATTITUDES CONCERNING TUBERCULOSIS

The 2014 KDHS collected data on women's and men's knowledge and attitudes concerning tuberculosis (TB). Tables 14.5.1 and 14.5.2 show the percentage of women and men who have heard of TB and, among those who have heard of TB, the percentage who know that TB is spread through the air by coughing.

As in the 2008-09 KDHS, awareness of TB is almost universal in Kenya (97 percent among women and 99 percent among men). Eighty-four percent of women and 87 percent of men age 15-49 who have heard of TB know that it is spread through the air by coughing. Women and men in rural areas and those in Western region are less likely than their counterparts to know that TB is spread through the air by coughing. Correct knowledge of TB transmission increases with increasing education and wealth.

Table 14.5.1 Knowledge and attitudes concerning tuberculosis: Women

Percentage of women age 15-49 who have heard of tuberculosis (TB), and among women who have heard of TB, the percentages who know that TB is spread through the air by coughing, by background characteristics, Kenya 2014

	Among all women		Among women who have heard of TB	
Background characteristic	Percentage who have heard of TB	Number of women	Percentage who report that TB is spread through the air by coughing	Number of women
Age				
15-19	96.0	2,717	83.7	2,608
20-24	97.1	2,691	84.8	2,613
25-29	97.1	2,932	84.7	2,848
30-34	97.4	2,162	84.1	2,106
35-39	96.9	1,780	85.2	1,724
40-44	96.9	1,292	82.7	1,251
45-49	97.8	1,052	78.6	1,029
Residence				
Urban	98.3	5,929	88.9	5,830
Rural	96.0	8,696	80.4	8,349
Region				
Coast	97.9	1,421	82.3	1,391
North Eastern	72.6	299	82.2	217
Eastern	98.2	2,066	80.8	2,028
Central	99.1	1,905	84.4	1,887
Rift Valley	96.1	3,714	83.9	3,568
Western	95.9	1,571	79.6	1,506
Nyanza	97.2	1,908	85.9	1,854
Nairobi	99.2	1,742	90.0	1,729
Education				
No education	84.6	1,015	63.1	859
Primary incomplete	95.5	3,793	72.9	3,624
Primary complete	98.5	3,543	85.1	3,490
Secondary+	98.9	6,274	92.6	6,206
Wealth quintile				
Lowest	91.1	2,236	71.4	2,036
Second	97.1	2,590	79.2	2,516
Middle	97.2	2,859	84.0	2,778
Fourth	98.4	3,113	86.2	3,063
Highest	98.9	3,827	91.8	3,786
Total	97.0	14,625	83.9	14,179

Table 14.5.2 Knowledge and attitudes concerning tuberculosis: Men

Percentage of men age 15-49 who have heard of tuberculosis (TB), and among men who have heard of TB, the percentages who know that TB is spread through the air by coughing, by background characteristics, Kenya 2014

Background characteristic	Among all men		Among men who have heard of TB	
	Percentage who have heard of TB	Number of men	Percentage who report that TB is spread through the air by coughing	Number of men
Age				
15-19	97.2	2,540	83.7	2,469
20-24	99.3	2,125	88.1	2,110
25-29	98.9	2,104	87.6	2,082
30-34	98.8	1,785	86.3	1,763
35-39	99.0	1,483	86.2	1,469
40-44	98.2	1,224	89.1	1,202
45-49	99.2	800	85.7	794
Residence				
Urban	98.6	5,300	91.5	5,227
Rural	98.5	6,762	82.6	6,663
Region				
Coast	99.6	1,260	90.1	1,255
North Eastern	98.7	227	86.5	224
Eastern	98.5	1,825	87.0	1,798
Central	99.0	1,564	87.1	1,548
Rift Valley	99.0	3,050	83.9	3,020
Western	97.4	1,164	81.9	1,134
Nyanza	98.6	1,405	87.4	1,386
Nairobi	97.3	1,568	90.1	1,526
Education				
No education	96.2	345	69.5	332
Primary incomplete	97.2	3,071	73.6	2,984
Primary complete	98.9	2,734	85.5	2,704
Secondary+	99.3	5,913	94.5	5,869
Wealth quintile				
Lowest	98.1	1,691	78.8	1,659
Second	98.8	2,145	82.4	2,118
Middle	98.4	2,370	84.8	2,332
Fourth	98.7	2,959	88.5	2,922
Highest	98.7	2,897	93.4	2,859
Total 15-49	98.6	12,063	86.5	11,889
50-54	99.4	756	79.9	752
Total 15-54	98.6	12,819	86.1	12,641

14.5 USE OF TOBACCO

Smoking and using other forms of tobacco can cause a wide variety of diseases and lead to death. Smoking is a risk factor for NCDs, including cardiovascular disease, lung cancer, and other forms of cancer, and it contributes to the severity of pneumonia, emphysema, and chronic bronchitis. Further, secondhand smoke may adversely affect health and aggravate illnesses. In the 2014 KDHS, women and men age 15-49 were asked whether they currently smoke cigarettes and, if so, how many cigarettes they had smoked in the past 24 hours. Those who were not currently smoking cigarettes were asked whether they used any other forms of tobacco, such as a pipe, chewing tobacco, or snuff.

Tables 14.6.1 and 14.6.2 show that tobacco use is more common among Kenyan men than women (99 percent of women do not use tobacco compared with 83 percent of men). Sixteen percent of men age 15-49 smoke cigarettes, while a very small proportion of men chew tobacco, use snuff, or use other tobacco products (each 1 percent). Use of tobacco increases with age and is more common among men with no education and those in the lower wealth quintiles. In particular, cigarette smoking is most common among men in Eastern and Central regions (30 percent and 25 percent, respectively), men with less than a secondary education (20-21 percent), and men in the second wealth quintile (20 percent). Among men who smoke cigarettes, 18 percent smoked 1-2 cigarettes, 36 percent smoked 3-5 cigarettes, and 14 percent smoked 6-9 cigarettes in the past 24 hours. Twenty-eight percent of men who smoke cigarettes smoked more than 10 cigarettes in the past 24 hours.

Table 14.6.1 Use of tobacco: Women

Percentage of women age 15-49 who smoke cigarettes or a pipe or use other tobacco products, according to background characteristics and maternity status, Kenya 2014

Background characteristic	Uses tobacco					Does not use tobacco	Number of women
	Cigarettes	Pipe	Chewing tobacco	Snuff	Other tobacco		
Age							
15-19	0.0	0.1	0.1	0.0	0.1	99.6	2,717
20-24	0.3	0.0	0.4	0.2	0.1	99.0	2,691
25-29	0.7	0.0	0.6	0.3	0.1	98.4	2,932
30-34	0.6	0.0	0.4	0.3	0.2	98.5	2,162
35-39	0.6	0.0	1.1	0.5	0.0	97.9	1,780
40-44	0.0	0.0	1.4	0.6	0.0	98.2	1,292
45-49	0.6	0.0	1.3	1.5	0.0	96.7	1,052
Maternity status							
Pregnant	0.6	0.0	1.1	0.4	0.5	97.4	915
Breastfeeding (not pregnant)	0.2	0.0	1.1	0.6	0.0	98.3	3,220
Neither	0.5	0.0	0.4	0.3	0.1	98.8	10,491
Residence							
Urban	0.7	0.1	0.1	0.1	0.2	98.9	5,929
Rural	0.2	0.0	1.0	0.6	0.0	98.4	8,696
Region							
Coast	1.2	0.0	1.6	1.2	0.0	96.6	1,421
North Eastern	0.0	0.0	0.0	0.0	0.0	100.0	299
Eastern	0.1	0.0	0.4	0.1	0.0	99.4	2,066
Central	0.4	0.0	0.1	0.0	0.0	99.4	1,905
Rift Valley	0.2	0.1	1.5	0.9	0.0	97.3	3,714
Western	0.3	0.0	0.0	0.0	0.0	99.7	1,571
Nyanza	0.1	0.0	0.0	0.0	0.0	99.8	1,908
Nairobi	1.0	0.2	0.1	0.0	0.7	98.3	1,742
Education							
No education	0.1	0.2	7.8	4.8	0.0	87.8	1,015
Primary incomplete	0.4	0.0	0.2	0.1	0.0	99.3	3,793
Primary complete	0.3	0.0	0.0	0.0	0.1	99.5	3,543
Secondary+	0.5	0.1	0.0	0.0	0.2	99.3	6,274
Wealth quintile							
Lowest	0.1	0.1	3.7	2.2	0.0	94.3	2,236
Second	0.3	0.0	0.1	0.1	0.0	99.5	2,590
Middle	0.3	0.0	0.0	0.1	0.1	99.5	2,859
Fourth	0.4	□.0	0.0	0.0	0.1	99.4	3,113
Highest	0.8	0.1	0.1	0.0	0.2	99.0	3,827
Total	0.4	0.0	0.6	0.4	0.1	98.6	14,625

Table 14.6.2 Use of tobacco: Men

Percentage of men age 15-49 who smoke cigarettes or a pipe or use other tobacco products and the percent distribution of cigarette smokers by number of cigarettes smoked in preceding 24 hours, according to background characteristics, Kenya 2014

Background characteristic	Uses tobacco					Does not use tobacco	Number of men	Percent distribution of men who smoke cigarettes by number of cigarettes smoked in the past 24 hours							Number of cigarette smokers
	Cigar-ettes	Pipe	Chewing tobacco	Snuff	Other tobacco			0	1-2	3-5	6-9	10+	Don't know/ missing	Total	
Age															
15-19	1.5	0.0	0.1	0.1	0.6	98.0	2,540	0.0	17.7	27.6	17.2	21.6	15.9	100.0	39
20-24	9.4	0.1	0.6	0.3	1.9	88.5	2,125	4.7	23.9	31.6	10.8	26.7	2.2	100.0	200
25-29	17.3	0.1	0.7	1.1	1.2	80.9	2,104	4.7	20.4	40.6	12.8	20.8	0.6	100.0	364
30-34	23.1	0.3	1.1	2.4	1.3	74.8	1,785	1.5	14.3	36.5	19.2	27.0	1.4	100.0	412
35-39	24.7	0.2	1.6	2.2	0.6	73.1	1,483	1.5	16.3	38.0	10.8	32.5	1.0	100.0	367
40-44	24.4	0.0	1.4	1.6	0.9	73.5	1,224	2.6	20.9	32.8	10.4	32.0	1.2	100.0	299
45-49	28.1	0.4	1.1	1.7	0.9	69.9	800	1.3	14.6	35.5	15.1	32.5	1.0	100.0	225
Residence															
Urban	15.4	0.2	0.4	0.9	1.8	83.1	5,300	3.9	17.7	31.6	15.1	30.7	1.0	100.0	815
Rural	16.1	0.1	1.1	1.4	0.5	82.0	6,762	1.5	18.2	39.6	12.5	26.3	1.9	100.0	1,090
Region															
Coast	19.7	0.6	0.9	0.4	4.3	77.5	1,260	3.7	16.9	22.9	15.6	38.7	2.2	100.0	249
North Eastern	11.5	0.0	3.8	0.0	0.0	87.3	227	0.9	16.9	38.9	16.5	26.7	0.0	100.0	26
Eastern	30.0	0.3	1.4	0.8	0.7	68.7	1,825	0.0	13.6	45.2	13.2	26.6	1.3	100.0	548
Central	24.9	0.1	0.1	1.2	0.6	74.1	1,564	3.2	15.1	32.3	15.4	34.1	0.0	100.0	390
Rift Valley	10.4	0.1	□.4	2.2	0.5	86.9	3,050	1.3	18.4	38.4	11.5	28.9	1.5	100.0	317
Western	8.4	0.0	0.0	1.5	0.1	90.4	1,164	1.0	30.3	39.9	12.7	7.6	8.5	100.0	98
Nyanza	5.9	0.1	0.0	0.4	0.0	93.9	1,405	7.7	29.6	36.0	12.0	11.3	3.3	100.0	83
Nairobi	12.4	0.0	0.6	0.9	2.3	85.6	1,568	(7.6)	(25.9)	(29.8)	(12.7)	(24.0)	(0.0)	100.0	195
Education															
No education	20.6	0.5	10.0	4.6	1.8	66.3	345	1.2	20.1	29.3	15.5	34.0	0.0	100.0	71
Primary incomplete	20.2	0.3	1.2	1.7	1.5	78.1	3,071	2.3	18.4	36.7	12.1	29.3	1.2	100.0	620
Primary complete	21.0	0.1	0.5	1.5	1.3	77.0	2,734	2.7	15.6	38.6	13.2	28.7	1.2	100.0	575
Secondary+	10.8	0.1	0.2	0.6	0.7	88.3	5,913	2.9	19.5	34.3	15.1	25.9	2.2	100.0	638
Wealth quintile															
Lowest	18.1	0.3	3.3	2.7	0.9	77.1	1,691	1.5	21.5	41.7	11.5	21.9	1.9	100.0	306
Second	19.9	0.1	0.7	1.2	1.0	79.0	2,145	1.9	16.5	42.0	11.5	26.7	1.4	100.0	426
Middle	17.4	0.2	0.5	1.1	1.2	81.3	2,370	1.4	17.0	32.5	16.4	32.0	0.6	100.0	412
Fourth	14.5	0.0	0.5	1.1	0.9	84.6	2,959	3.4	17.8	36.7	14.5	25.8	1.8	100.0	430
Highest	11.5	0.2	0.1	0.4	1.3	87.1	2,897	4.8	18.2	27.5	13.6	34.1	1.9	100.0	332
Total 15-49	15.8	0.2	0.8	1.2	1.1	82.5	12,063	2.6	18.0	36.2	13.6	28.2	1.5	100.0	1,905
50-54	29.2	0.5	2.1	3.1	0.4	66.9	756	3.1	18.2	37.1	12.5	28.1	1.0	100.0	221
Total 15-54	16.6	0.2	0.9	1.3	1.0	81.6	12,819	2.6	18.0	36.3	13.5	28.2	1.4	100.0	2,126

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

14.6 ALCOHOL CONSUMPTION

Tables 14.7.1 and 14.7.2 show the percentage of women and men age 15-49 who drink alcohol and, among those who drink alcohol, the number of days at least one alcoholic drink was consumed in the past two weeks and the mean number of days on which alcohol was consumed in the past two weeks, by background characteristics. Men are more likely to consume alcohol than women (29 percent and 5 percent, respectively). Women over age 20 (5-7 percent) and men over age 25 (36-45 percent) are more likely than younger women and men to consume alcohol. Women and men in urban areas and in Nairobi are more likely to consume alcohol than their counterparts living elsewhere. Alcohol consumption among women is not clearly associated with education or wealth; among men, however, the proportion who drink alcohol generally increases with increasing education and wealth.

Among respondents who drink alcohol, 48 percent of women and 19 percent of men reported that they had not consumed alcohol in the past two weeks. Twenty-nine percent of women and 39 percent of men reported that they had consumed alcohol on 1-2 days during the last two weeks; 10 percent and 17 percent, respectively, had consumed alcohol on 3-4 days during the last two weeks, and 13 percent and 26 percent, respectively, had consumed alcohol on 5 or more days. Among women who drink alcohol, daily alcohol consumption in the past two weeks was higher among those age 45-49, those in rural areas, those in Coast and Eastern regions, those at lower educational levels, and those in lower wealth quintiles. Among men, daily alcohol consumption in the past two weeks was higher among those above age 30, those in Nyanza and Coast regions, and those with no education. Men in the highest wealth quintile were least likely to report daily consumption.

Table 14.7.1 Alcohol consumption: Women

Percentage of women age 15-49 who drink alcohol, and among those who drink alcohol, the number of days at least one alcoholic drink was consumed in the past two weeks, and the mean number of days alcohol was consumed in the past two weeks, by background characteristics, Kenya 2014

Background characteristic	Percentage who drink alcohol	Number of women	Among women who drink alcohol, the number of days at least one drink was consumed in the last two weeks								Number of women	Mean number of days
			0	1-2	3-4	5-9	10-13	14 (daily)	Missing	Total		
Age												
15-19	1.0	2,717	*	*	*	*	*	*	*	100.0	27	*
20-24	5.3	2,691	44.5	38.7	12.1	2.5	0.4	1.9	0.0	100.0	142	1.3
25-29	5.2	2,932	58.3	17.8	10.9	5.5	3.0	4.6	0.0	100.0	152	1.9
30-34	5.7	2,162	45.4	30.3	8.7	8.7	2.9	4.1	0.0	100.0	123	2.1
35-39	4.8	1,780	60.3	15.9	9.5	4.0	1.3	8.1	1.0	100.0	86	2.0
40-44	7.1	1,292	32.1	42.8	6.8	10.9	2.3	5.0	0.0	100.0	91	2.4
45-49	7.0	1,052	39.0	23.4	13.5	5.0	3.3	16.0	0.0	100.0	74	3.7
Residence												
Urban	7.0	5,929	55.2	27.4	8.7	3.7	1.1	3.9	0.0	100.0	415	1.5
Rural	3.2	8,696	37.5	30.4	11.9	8.6	3.5	7.9	0.3	100.0	281	2.8
Region												
Coast	3.6	1,421	39.2	24.6	16.1	9.1	1.7	9.2	0.0	100.0	51	2.9
North Eastern	0.0	299	*	*	*	*	*	*	*	*	0	*
Eastern	3.2	2,066	44.6	29.5	6.9	10.2	0.3	8.5	0.0	100.0	66	2.5
Central	5.6	1,905	71.3	18.3	4.1	0.5	2.3	3.5	0.0	100.0	106	1.1
Rift Valley	4.6	3,714	35.3	32.1	12.9	10.7	4.3	4.8	0.0	100.0	172	2.6
Western	5.5	1,571	40.6	36.9	10.2	2.1	2.0	7.1	1.0	100.0	86	2.1
Nyanza	1.7	1,908	(43.3)	(25.1)	(17.1)	(2.8)	(4.9)	(6.8)	(0.0)	100.0	33	(2.4)
Nairobi	10.4	1,742	(54.8)	(28.8)	(8.7)	(3.6)	(0.0)	(4.2)	(0.0)	100.0	181	(1.5)
Education												
No education	6.8	1,015	35.5	15.0	16.6	16.8	6.4	9.7	0.0	100.0	69	3.9
Primary incomplete	4.8	3,793	37.0	32.5	11.0	7.5	1.7	9.9	0.5	100.0	181	2.8
Primary complete	2.6	3,543	52.3	29.0	6.0	4.3	5.4	3.0	0.0	100.0	91	1.8
Secondary+	5.7	6,274	55.0	29.2	9.2	3.0	0.5	3.1	0.0	100.0	356	1.3
Wealth quintile												
Lowest	5.0	2,236	32.2	21.2	16.6	15.0	5.9	8.5	0.8	100.0	111	3.6
Second	2.7	2,590	34.1	27.2	15.6	11.7	3.8	7.8	0.0	100.0	70	3.2
Middle	2.5	2,859	38.0	34.3	11.7	6.3	2.3	7.4	0.0	100.0	72	2.4
Fourth	4.4	3,113	49.5	29.2	10.0	3.4	1.9	5.9	0.0	100.0	138	1.9
Highest	8.0	3,827	58.8	30.0	5.9	1.8	0.3	3.3	0.0	100.0	304	1.1
Total	4.8	14,625	48.1	28.6	10.0	5.7	2.0	5.5	0.1	100.0	696	2.0

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

Table 14.7.2 Alcohol consumption: Men

Percentage of men age 15-49 who drink alcohol, and among those who drink alcohol, the number of days at least one alcoholic drink was consumed, and the mean number of days, by background characteristics, Kenya 2014

Background characteristic	Percentage who drink alcohol	Number of men	Among men who drink alcohol, the number of days at least one drink was consumed in the last two weeks								Number of men	Mean number of days
			0	1-2	3-4	5-9	10-13	14 (daily)	Missing	Total		
Age												
15-19	5.5	2,540	38.6	47.2	5.9	1.2	3.2	3.9	0.0	100.0	141	1.9
20-24	24.0	2,125	23.7	42.3	16.3	12.0	1.4	4.3	0.0	100.0	510	2.7
25-29	35.8	2,104	22.6	41.9	17.0	10.0	3.0	5.5	0.0	100.0	754	2.9
30-34	44.7	1,785	15.3	36.5	19.1	11.7	3.5	13.7	0.3	100.0	798	4.3
35-39	39.9	1,483	13.9	34.0	17.6	14.1	4.8	15.6	0.0	100.0	591	4.8
40-44	37.8	1,224	14.7	34.8	18.2	12.5	5.0	14.3	0.5	100.0	463	4.5
45-49	36.5	800	14.9	39.6	16.4	11.5	3.5	13.9	0.1	100.0	292	4.3
Residence												
Urban	34.6	5,300	21.9	38.5	15.8	10.0	3.4	10.5	0.0	100.0	1,832	3.6
Rural	25.4	6,762	15.2	38.6	瘪8.6	13.1	3.5	10.8	0.3	100.0	1,717	3.9
Region												
Coast	26.4	1,260	20.5	33.5	15.1	11.5	4.2	15.1	0.1	100.0	332	4.3
North Eastern	2.0	227	*	*	*	*	*	*	*	100.0	5	*
Eastern	35.0	1,825	11.6	43.0	20.8	11.1	1.9	10.9	0.6	100.0	638	3.7
Central	36.7	1,564	23.5	41.5	12.8	10.7	4.4	7.2	0.0	100.0	574	3.3
Rift Valley	24.9	3,050	11.8	38.7	20.0	15.2	3.8	10.5	0.0	100.0	760	4.2
Western	25.7	1,164	14.2	37.6	21.1	12.0	6.1	9.0	0.0	100.0	299	4.1
Nyanza	21.9	1,405	18.5	29.7	15.2	14.1	4.2	18.2	0.0	100.0	307	4.9
Nairobi	40.3	1,568	30.8	38.2	14.1	6.5	1.9	8.5	0.0	100.0	633	2.9
Education												
No education	23.6	345	5.2	32.5	20.9	14.2	3.0	24.3	0.0	100.0	82	5.9
Primary incomplete	26.1	3,071	12.8	38.4	20.2	12.3	3.4	12.4	0.5	100.0	802	4.2
Primary complete	31.8	2,734	16.0	38.4	14.5	13.0	3.2	14.8	0.0	100.0	869	4.3
Secondary+	30.4	5,913	23.1	38.9	16.8	10.2	3.7	7.2	0.1	100.0	1,796	3.2
Wealth quintile												
Lowest	25.2	1,691	9.6	36.2	21.5	14.5	4.5	13.7	0.2	100.0	425	4.6
Second	26.4	2,145	11.4	39.0	20.5	13.4	3.7	11.3	0.7	100.0	567	4.2
Middle	26.6	2,370	15.8	39.0	20.0	10.0	2.2	13.0	0.0	100.0	630	3.9
Fourth	29.1	2,959	21.0	38.8	12.4	10.7	4.3	12.7	0.0	100.0	860	4.0
Highest	36.8	2,897	25.9	38.6	15.7	10.7	3.1	6.0	0.0	100.0	1,066	3.0
Total 15-49	29.4	12,063	18.6	38.5	17.1	11.5	3.5	10.6	0.1	100.0	3,549	3.8
50-54	42.5	756	13.6	39.2	19.1	8.5	5.4	14.2	0.1	100.0	322	4.3
Total 15-54	30.2	12,819	18.2	38.6	17.3	11.2	3.6	10.9	0.1	100.0	3,871	3.8

Note: An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

14.7 PHYSICAL ACTIVITY

The World Health Organization (WHO) defines physical activity as any bodily movement produced by skeletal muscles that requires energy expenditure, including activities undertaken while working, playing, carrying out household chores, travelling, and engaging in recreational pursuits. In order to be beneficial for cardiorespiratory health, physical activity should be performed in bouts of at least 10 minutes in duration. WHO recommends regular and adequate levels of physical activity to reduce the risk of NCDs, including hypertension, coronary heart disease, stroke, diabetes, and breast and colon cancer (WHO, 2010b).

In the 2014 KDHS, women and men age 15-49 were asked if they engaged in exercise that causes an increase in their heart rate for at least 10 minutes continuously at work or during other activities. Results are shown in Tables 14.8.1 and 14.8.2 for women and men, respectively. Sixty-two percent of women and 59 percent of men are not involved in exercise that causes an increase in their heart rate for at least 10 minutes continuously. Among women, 15 percent are involved in exercise at work, 12 percent are involved in exercise outside of work, and 12 percent are involved in exercise both at work and elsewhere. Among men, 18 percent are involved in exercise at work, 24 percent in exercise outside of work, and 17 percent in exercise both at work and elsewhere.

Overall, women above age 35, women in rural areas, and women in Western region were more likely to engage in 10 minutes of continuous physical activity than their counterparts. Women with no education and women in the highest wealth quintile were less likely to be physically active for 10 minutes continuously. In contrast, men age 29 and younger and those in Coast and North Eastern regions were more likely to engage in 10 minutes of continuous physical activity than their counterparts. Men with a secondary or higher education were more likely to be physically active, as were men in the highest wealth quintile.

Table 14.8.1 Physical activity: Women

Percent distribution of women age 15-49 who are involved in exercise that causes an increase in their heart rate for at least 10 minutes continuously, by background characteristics, Kenya 2014

Background characteristic	At work	During other physical activities	Both	Neither	Total	Number of women
Age						
15-19	5.7	23.6	9.7	60.9	100.0	2,717
20-24	11.8	12.1	10.9	65.1	100.0	2,691
25-29	16.2	9.2	12.0	62.5	100.0	2,932
30-34	17.4	7.9	11.5	63.1	100.0	2,162
35-39	19.8	8.7	12.1	59.4	100.0	1,780
40-44	21.8	9.1	14.4	54.6	100.0	1,292
45-49	23.8	8.3	13.0	54.9	100.0	1,052
Residence						
Urban	13.4	13.0	8.0	65.4	100.0	5,929
Rural	16.2	11.4	14.0	58.3	100.0	8,696
Region						
Coast	5.9	15.3	6.7	71.9	100.0	1,421
North Eastern	9.8	1.5	4.1	84.6	100.0	299
Eastern	12.1	9.7	8.5	69.7	100.0	2,066
Central	15.1	10.4	11.8	62.6	100.0	1,905
Rift Valley	15.6	10.3	12.9	61.0	100.0	3,714
Western	21.8	13.6	25.5	39.1	100.0	1,571
Nyanza	20.7	16.0	11.8	51.4	100.0	1,908
Nairobi	13.6	14.2	4.6	67.5	100.0	1,742
Education						
No education	12.9	8.9	11.7	66.3	100.0	1,015
Primary incomplete	17.4	11.7	12.8	57.9	100.0	3,793
Primary complete	19.0	8.0	11.7	61.3	100.0	3,543
Secondary+	11.8	15.1	10.7	62.2	100.0	6,274
Wealth quintile						
Lowest	14.2	10.6	13.8	61.4	100.0	2,236
Second	18.9	11.6	14.4	55.2	100.0	2,590
Middle	17.9	11.8	13.4	56.9	100.0	2,859
Fourth	14.2	11.8	11.3	62.5	100.0	3,113
Highest	11.6	13.7	7.3	67.2	100.0	3,827
Total 15-49	15.1	12.1	11.6	61.1	100.0	14,625

Table 14.8.2 Physical activity: Men

Percent distribution of men age 15-49 who are involved in exercise that causes an increase in their heart rate for at least 10 minutes continuously, by background characteristics, Kenya 2014

Background characteristic	At work	During other physical activities	Both	Neither	Total	Number
Age						
15-19	4.3	46.7	12.6	36.0	100.0	2,540
20-24	13.7	30.3	18.7	36.9	100.0	2,125
25-29	23.3	17.8	20.3	38.2	100.0	2,104
30-34	22.6	14.9	18.5	43.8	100.0	1,785
35-39	25.7	12.5	17.8	44.0	100.0	1,483
40-44	24.5	10.3	17.6	47.3	100.0	1,224
45-49	25.8	12.0	16.5	45.4	100.0	800
Residence						
Urban	19.4	23.6	17.0	39.6	100.0	5,300
Rural	17.1	24.1	17.5	41.1	100.0	6,762
Region						
Coast	14.4	16.4	12.7	56.2	100.0	1,260
North Eastern	15.1	23.9	2.7	58.3	100.0	227
Eastern	16.9	18.6	24.5	39.8	100.0	1,825
Central	24.7	15.7	23.0	36.4	100.0	1,564
Rift Valley	17.9	21.0	17.1	43.3	100.0	3,050
Western	9.7	36.1	8.6	45.4	100.0	1,164
Nyanza	22.4	29.0	18.3	30.2	100.0	1,405
Nairobi	19.1	36.1	14.8	30.0	100.0	1,568
Education						
No education	20.3	8.7	19.6	51.4	100.0	345
Primary incomplete	20.0	23.1	14.0	42.8	100.0	3,071
Primary complete	23.5	14.0	18.8	43.7	100.0	2,734
Secondary+	14.6	29.7	18.2	37.1	100.0	5,913
Wealth quintile						
Lowest	18.8	20.3	17.8	42.9	100.0	1,691
Second	20.7	21.1	16.3	41.7	100.0	2,145
Middle	17.5	24.5	17.7	40.0	100.0	2,370
Fourth	17.9	22.3	19.1	40.5	100.0	2,959
Highest	16.4	29.1	15.6	38.4	100.0	2,897
Total 15-49	18.1	23.9	17.3	40.5	100.0	12,063
50-54	29.0	10.5	13.0	47.5	100.0	756
Total 15-54	18.8	23.1	17.0	40.9	100.0	12,819

14.8 UNINTENTIONAL INJURY

Tables 14.9.1 and 14.9.2 present the percentage of women and men age 15-49 unintentionally injured in the past 12 months and the percentage involved in a road traffic accident in the past 12 months. Among those injured unintentionally (excluding involvement in traffic accidents), the cause of injury is presented, according to background characteristics. One in five women (20 percent) and one in three men (33 percent) experienced an unintentional injury in the past 12 months. Three percent of women and 9 percent of men were involved in a road traffic accident in the last 12 months. Excluding road traffic accidents, the most common causes of injury among women were cuts (60 percent), falls (40 percent), and burns (20 percent). Among men, the most common causes were cuts (66 percent) and falls (33 percent).

Although there are no apparent rural-urban differences, there are differences by region; overall, women in Nyanza (29 percent) were more likely to have been injured in the past 12 months than women in other regions. Also, women in Nyanza were more likely than those in other regions to have been involved in a road traffic accident (5 percent) and to report having been cut (70 percent).

Younger men age 15-19 and 20-24 (both 35 percent) were slightly more likely to have experienced an unintentional injury in the past 12 months than older men (31-34 percent). Also, men in rural areas (37 percent) were more likely to have experienced an injury than urban men. A higher proportion of men in Nyanza (46 percent) and Central regions (43 percent) reported having been injured. Men in Nyanza were more likely to report involvement in a road traffic accident (18 percent). Unintentional injury does not appear to be related to education or wealth among either women or men.

Table 14.9.1 Unintentional injury: Women

Percentage of women age 15-49 unintentionally injured in the past 12 months and percentage involved in a road traffic accident in the past 12 months; and among women injured unintentionally, the percentage by cause of injury, according to background characteristics, Kenya 2014

Background characteristic	Percentage unintentionally injured in the past 12 months	Percentage involved in a road traffic accident in the past 12 months[1]	Number of women	Cause of injury:								Number of women injured unintentionally[2]
				Fall	Burn	Poisoning	Cut	Near drowning	Animal bite	Shooting	Other	
Age												
15-19	22.5	2.3	2,717	40.8	18.1	0.3	60.1	0.0	2.9	0.0	4.1	570
20-24	20.6	4.1	2,691	38.6	26.4	0.3	58.6	0.5	2.8	0.0	2.3	485
25-29	18.4	3.1	2,932	37.4	22.6	2.3	59.7	0.2	2.5	0.0	1.2	471
30-34	17.6	2.0	2,162	35.2	17.4	1.9	61.4	0.0	1.7	0.0	3.2	352
35-39	17.4	3.7	1,780	37.5	17.8	1.0	63.9	0.1	1.8	0.0	5.2	272
40-44	20.0	3.4	1,292	47.3	16.9	0.4	56.0	0.4	2.3	0.0	6.5	229
45-49	21.3	4.9	1,052	48.8	15.0	0.9	60.1	0.0	1.6	0.3	3.1	186
Residence												
Urban	19.6	3.7	5,929	38.7	21.4	1.6	57.4	0.1	0.8	0.0	3.3	1,010
Rural	19.8	2.9	8,696	40.5	19.2	0.7	61.6	0.2	3.4	0.0	3.5	1,554
Region												
Coast	15.5	2.5	1,421	42.5	45.7	0.5	48.7	0.0	6.4	0.0	2.5	195
North Eastern	4.0	0.5	299	(48.3)	(38.1)	(0.0)	(43.4)	(0.0)	(18.2)	(0.0)	(0.0)	11
Eastern	22.3	3.0	2,066	48.9	11.0	0.4	62.0	0.2	1.2	0.0	1.7	415
Central	14.9	2.4	1,905	37.5	15.1	0.5	63.6	0.0	0.9	0.0	3.3	245
Rift Valley	18.2	2.9	3,714	40.5	17.1	1.2	56.9	0.2	2.8	0.1	3.9	607
Western	21.4	4.2	1,571	31.7	16.7	0.8	66.2	0.2	2.6	0.0	5.0	294
Nyanza	28.5	4.6	1,908	35.6	29.6	1.0	69.9	0.4	2.9	0.0	2.4	497
Nairobi	20.0	3.7	1,742	40.8	12.6	2.8	45.8	0.0	0.0	0.0	5.3	301
Education												
No education	10.2	1.3	1,015	42.0	25.2	0.3	61.8	0.0	5.4	0.5	2.6	95
Primary incomplete	19.8	3.0	3,793	40.0	18.2	0.8	57.6	0.2	3.4	0.0	6.2	676
Primary complete	19.2	3.4	3,543	43.4	21.6	0.8	58.3	0.2	1.9	0.0	3.2	599
Secondary+	21.4	3.6	6,274	37.8	19.9	1.3	62.0	0.2	1.8	0.0	1.9	1,195
Wealth quintile												
Lowest	17.9	1.9	2,236	47.6	21.8	0.6	59.7	0.0	4.8	0.1	2.8	378
Second	20.3	3.2	2,590	44.2	15.3	0.2	66.0	0.4	2.6	0.0	3.9	474
Middle	19.8	3.1	2,859	38.4	19.4	1.3	61.5	0.3	1.4	0.0	2.8	509
Fourth	20.6	4.2	3,113	37.5	23.3	0.8	55.6	0.1	3.5	0.0	4.7	549
Highest	19.5	3.3	3,827	35.2	20.3	1.7	58.1	0.2	0.6	0.0	2.7	654
Total	19.7	3.2	14,625	39.8	20.0	1.0	60.0	0.2	2.4	0.0	3.4	2,564

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] As a driver, passenger, pedestrian, or cyclist
[2] Excludes involvement in or injury caused by road traffic accidents

Table 14.9.2 Unintentional injury: Men

Percentage of men age 15-49 unintentionally injured in the past 12 months and percentage involved in a road traffic accident in the past 12 months; and among women injured unintentionally, the percentage by cause of injury, according to background characteristics, Kenya 2014

Background characteristic	Percentage unintentionally injured in the past 12 months	Percentage involved in a road traffic accident in the past 12 months[1]	Number of men	Cause of injury:								Number of men injured unintentionally[2]
				Fall	Burn	Poisoning	Cut	Near drowning	Animal bite	Shooting	Other	
Age												
15-19	35.0	6.5	2,540	41.6	1.9	0.6	58.3	0.1	1.9	0.0	8.5	792
20-24	35.0	10.2	2,125	35.8	4.2	1.2	56.4	0.2	1.1	0.0	12.6	616
25-29	32.7	11.3	2,104	27.6	2.6	0.7	71.9	0.4	0.3	0.2	10.1	561
30-34	32.8	10.4	1,785	34.5	2.8	0.9	69.1	0.0	1.2	0.2	5.2	447
35-39	30.9	7.2	1,483	22.6	2.4	0.1	76.7	0.3	0.6	0.0	7.4	397
40-44	33.5	9.3	1,224	26.3	2.4	0.4	68.4	0.4	0.6	0.0	11.8	324
45-49	32.2	8.7	800	29.3	2.8	0.6	68.9	0.0	1.3	0.0	11.2	210
Residence												
Urban	29.5	7.9	5,300	35.6	3.3	0.2	62.6	0.1	0.9	0.1	10.2	1,293
Rural	36.5	10.0	6,762	30.9	2.4	1.0	67.3	0.3	1.2	0.1	9.0	2,055
Region												
Coast	19.8	7.2	1,260	28.0	5.6	0.3	75.5	0.2	2.4	0.0	5.0	171
North Eastern	8.0	1.9	227	(50.8)	(10.3)	(0.0)	(50.7)	(0.0)	(1.8)	(0.0)	(0.0)	15
Eastern	36.2	8.5	1,825	32.0	2.2	1.9	64.9	0.2	1.2	0.0	6.2	559
Central	43.2	7.0	1,564	27.6	1.6	0.0	72.3	0.1	0.7	0.0	6.5	616
Rift Valley	37.2	8.3	3,050	30.6	3.1	0.4	66.6	0.1	1.2	0.0	12.7	983
Western	29.3	9.5	1,164	33.9	0.5	1.8	68.2	0.0	1.1	0.0	2.6	268
Nyanza	46.3	17.5	1,405	39.0	2.8	0.8	62.3	0.6	1.2	0.4	8.7	525
Nairobi	19.2	7.9	1,568	(45.0)	(5.8)	(0.0)	(39.2)	(0.0)	(0.0)	(0.0)	(26.3)	210
Education												
No education	20.5	6.1	345	30.4	4.0	2.5	52.3	0.0	6.0	0.0	16.4	53
Primary incomplete	36.7	10.6	3,071	32.9	2.2	0.8	65.9	0.3	1.4	0.2	9.1	930
Primary complete	35.6	9.4	2,734	29.6	2.2	0.4	71.0	0.2	0.9	0.0	8.5	814
Secondary+	31.5	8.3	5,913	34.4	3.3	0.8	62.8	0.1	0.9	0.1	9.9	1,551
Wealth quintile												
Lowest	31.4	9.2	1,691	34.6	1.8	0.7	62.3	0.3	1.1	0.3	12.3	424
Second	38.2	10.0	2,145	32.0	2.7	1.7	66.0	0.4	1.4	0.0	8.6	705
Middle	36.6	10.6	2,370	31.2	2.3	0.5	65.3	0.0	1.0	0.2	9.3	716
Fourth	33.3	8.9	2,959	29.9	2.7	0.1	70.8	0.2	1.1	0.0	7.7	821
Highest	28.6	7.3	2,897	37.3	3.9	0.6	60.8	0.1	0.8	0.0	10.8	681
Total 15-49	33.4	9.1	12,063	32.7	2.7	0.7	65.5	0.2	1.1	0.1	9.4	3,347
50-54	26.7	3.7	756	24.8	3.2	0.0	70.6	0.0	1.8	0.0	10.3	186
Total 15-54	33.0	8.8	12,819	32.3	2.8	0.7	65.8	0.2	1.1	0.1	9.5	3,533

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] As a driver, passenger, pedestrian, or cyclist
[2] Excludes involvement in or injury caused by road traffic accidents

14.9 HEALTH INSURANCE COVERAGE

Health insurance can be crucial in disease management and access to quality health care since insurance can reduce the costs associated with illness, treatment, and care substantially. The 2014 KDHS asked respondents if they were covered by any health insurance and, if so, what type. Table 14.10.1 and Table 14.10.2 show the percentage of women and men age 15-49 with specific types of health insurance. Most Kenyans age 15-49 do not have health insurance (82 percent of women and 79 percent of men).

Among those who do have coverage, the national insurance scheme is the most common type for both women (14 percent) and men (18 percent). Employer-based insurance is the next most common, accounting for 2 percent of insured women and 3 percent of insured men. One percent or less of women and men have some other type of insurance. Health insurance coverage is more common among women and men age 25 or above, those living in urban areas, and those residing in Nairobi and Central regions. Insurance coverage increases with increasing education and wealth.

Table 14.10.1 Health insurance coverage: Women

Percentage of women age 15-49 with specific types of health insurance coverage, according to background characteristics, Kenya 2014

Background characteristic	National insurance scheme	Employer based insurance	Mutual Health Organisation/ community based insurance	Privately purchased commercial insurance	Pre-payment scheme	Other	None	Number of women
Age								
15-19	5.6	0.6	0.1	0.7	0.0	0.4	92.6	2,717
20-24	10.8	1.5	0.1	0.7	0.3	0.0	86.8	2,691
25-29	17.9	3.4	0.7	1.5	0.0	0.0	77.3	2,932
30-34	19.0	2.6	0.4	1.5	0.0	0.2	77.2	2,162
35-39	18.1	3.3	0.4	1.4	0.0	0.3	76.7	1,780
40-44	18.0	3.8	0.5	0.9	0.3	0.4	77.1	1,292
45-49	15.2	3.4	0.3	1.0	0.1	1.2	79.7	1,052
Residence								
Urban	19.5	4.2	0.5	2.0	0.1	0.2	74.6	5,929
Rural	10.8	1.2	0.3	0.6	0.1	0.3	87.0	8,696
Region								
Coast	8.3	1.7	0.1	0.8	0.0	0.0	89.4	1,421
North Eastern	3.1	2.0	0.2	0.2	0.0	0.0	94.5	299
Eastern	15.3	1.6	0.2	0.5	0.1	0.0	82.4	2,066
Central	20.1	2.9	1.4	1.8	0.1	1.1	73.1	1,905
Rift Valley	14.1	2.6	0.3	1.5	0.0	0.2	81.6	3,714
Western	6.1	0.8	0.1	0.1	0.2	0.0	93.0	1,571
Nyanza	15.5	1.8	0.3	0.2	0.0	0.2	83.0	1,908
Nairobi	20.3	5.2	0.2	2.6	0.3	0.3	72.4	1,742
Education								
No education	1.5	0.5	0.2	0.3	0.0	0.0	97.6	1,015
Primary incomplete	5.6	0.5	0.1	0.3	0.1	0.2	93.4	3,793
Primary complete	10.6	1.4	0.4	0.7	0.1	0.4	86.4	3,543
Secondary+	23.8	4.5	0.5	2.0	0.1	0.3	70.0	6,274
Wealth quintile								
Lowest	2.1	0.3	0.2	0.2	0.1	0.0	97.2	2,236
Second	4.9	0.8	0.1	0.4	0.0	0.2	93.7	2,590
Middle	10.6	1.1	0.2	0.6	0.1	0.2	87.3	2,859
Fourth	18.1	2.0	0.5	0.4	0.3	0.5	78.6	3,113
Highest	27.5	6.1	0.7	3.2	0.0	0.3	63.8	3,827
Total	14.3	2.4	0.4	1.1	0.1	0.3	82.0	14,625

Table 14.10.2 Health insurance coverage: Men

Percentage of men age 15-49 with specific types of health insurance coverage, according to background characteristics, Kenya 2014

Background characteristic	National insurance scheme	Employer based insurance	Mutual Health Organisation/ community based insurance	Privately purchased commercial insurance	Pre-payment scheme	Other	None	Number of men
Age								
15-19	7.2	0.3	0.3	0.6	0.0	0.2	91.4	2,540
20-24	10.7	1.8	0.1	0.6	0.0	0.2	86.8	2,125
25-29	19.9	4.1	0.2	1.4	0.5	0.0	75.9	2,104
30-34	24.8	6.0	0.0	1.7	0.3	0.1	70.0	1,785
35-39	23.9	3.2	0.0	1.5	0.1	0.3	72.5	1,483
40-44	25.2	6.4	0.1	1.7	0.2	0.3	69.4	1,224
45-49	22.2	5.6	0.2	1.5	0.7	0.8	71.2	800
Residence								
Urban	24.4	6.0	0.0	1.9	0.3	0.2	69.8	5,300
Rural	12.2	1.4	0.2	0.6	0.2	0.2	85.9	6,762
Region								
Coast	6.0	5.2	0.0	2.0	0.0	0.2	86.8	1,260
North Eastern	3.2	0.3	0.0	0.1	0.2	0.0	96.3	227
Eastern	14.6	1.3	0.0	0.6	0.8	0.0	83.0	1,825
Central	21.8	2.2	0.8	1.3	0.2	0.3	74.1	1,564
Rift Valley	18.4	2.6	0.1	1.1	0.0	0.4	78.4	3,050
Western	12.5	1.2	0.0	1.1	0.1	0.1	86.7	1,164
Nyanza	15.8	3.8	0.1	1.2	0.0	0.1	80.8	1,405
Nairobi	31.7	8.8	0.0	1.4	0.5	0.2	63.2	1,568
Education								
No education	2.2	0.6	0.0	0.4	0.0	0.1	96.8	345
Primary incomplete	7.1	0.5	0.1	0.3	0.1	0.1	91.9	3,071
Primary complete	13.4	1.1	0.1	0.2	0.3	0.1	85.0	2,734
Secondary+	25.7	6.1	0.2	2.1	0.2	0.3	68.2	5,913
Wealth quintile								
Lowest	2.9	0.3	0.0	0.2	0.0	0.2	96.5	1,691
Second	8.2	0.9	0.1	0.2	0.0	0.1	90.6	2,145
Middle	12.9	1.4	0.3	0.4	0.1	0.2	85.2	2,370
Fourth	20.6	3.0	0.2	0.6	0.4	0.2	75.7	2,959
Highest	33.5	9.0	0.1	3.7	0.4	0.4	57.9	2,897
Total 15-49	17.5	3.4	0.1	1.2	0.2	0.2	78.8	12,063
50-54	19.0	6.8	1.2	3.9	0.3	0.6	70.9	756
Total 15-54	17.6	3.6	0.2	1.3	0.2	0.2	78.4	12,819

WOMEN'S EMPOWERMENT AND DEMOGRAPHIC AND HEALTH OUTCOMES 15

Robert C.B. Buluma, Rosemary Uside Kongani, Godfrey Odhiambo Otieno

Key Findings

- Nearly half (49 percent) of currently married employed women who earn cash make independent decisions about how to spend their earnings, an increase from the figure of 42 percent reported in the 2008-09 KDHS.
- Fifty-four percent of currently married women participate in four common household decisions, including decisions pertaining to their own health care, major household purchases, visits to their family or relatives, and major household purchases. Thirty-nine percent of women have the main say in their own health care.
- Contraceptive use increases with women's empowerment.
- In general, unmet need for family planning decreases with improvements in women's empowerment.
- Access to antenatal care, delivery assistance from a skilled provider, and postnatal care within the first two days of delivery increases with increasing women's empowerment.

Women's empowerment encompasses women's sense of self-worth, access to opportunities, access to and control of resources, choices and the ability to exercise them, control over their own lives, and influence over the direction of social change (United Nations Population Information Network, 1995).

Women's empowerment is supported internationally and in Kenya. The 1994 International Conference on Population and Development declared that "advancing gender equality and equity and the empowerment of women and the elimination of all kinds of violence against women, and ensuring women's ability to control their own fertility are cornerstones of population and development-related programs" (United Nations, 1994). Furthermore, Kenya is a signatory to many international conventions on human rights, women's rights, reproductive health rights, and children's rights, as well as to agreements on international goals regarding education, health, and poverty eradication. As a signatory to the United Nations Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) and as mandated by the Constitution of Kenya promulgated in 2010, the government of Kenya is committed to ensuring nondiscrimination, gender equity, and social justice.

This chapter presents data on the status of women in Kenya, including information on employment, access to and control over cash earnings, asset ownership, participation in household decision making, relative earnings of husbands and wives, and attitudes towards wife beating. The chapter also explores how demographic and health indicators are affected by women's empowerment, as measured by the number of decisions in which women participate and the number of situations in which they believe wife beating is justified. The ranking of women on these indices has been found to be associated with demographic and health outcomes, including contraceptive use, unmet need for family planning, access to reproductive health care, and child survival.

15.1 EMPLOYMENT AND FORM OF EARNINGS

Employment, especially for cash, and control over how earnings are used are important indicators of empowerment for both women and men. Table 15.1 shows the percentage of currently married women and men age 15-49 who were employed at any time in the 12 months before the survey and the percent distribution of employed women and men by the type of earnings they received (cash only, cash and in-kind, in-kind only). Only 75 percent of currently married women age 15-49 were employed in the past 12 months, as compared with virtually all currently married men. The results show an improvement over time in the proportion of employed women, from 67 percent in the 2008-09 KDHS to 75 percent in 2014. There is no difference from 2008-09 to 2014 in the proportion of men who were employed. The majority of those employed were earning cash only (women, 61 percent; men, 82 percent); 15 percent of women and 10 percent of men had cash and in-kind earnings, and 4 percent of women and 1 percent of men had in-kind earnings only. A higher proportion of women (20 percent) than men (7 percent) were not paid for their work.

Table 15.1 Employment and cash earnings of currently married women and men

Percentage of currently married women and men age 15-49 who were employed at any time in the past 12 months and the percent distribution of currently married women and men employed in the past 12 months by type of earnings, according to age, Kenya 2014

	Among currently married respondents:		Percent distribution of currently married respondents employed in the past 12 months, by type of earnings						
Age	Percentage employed in past 12 months	Number of respondents	Cash only	Cash and in-kind	In-kind only	Not paid	Missing/ don't know	Total	Number of respondents
					WOMEN				
15-19	48.0	301	60.3	9.6	9.0	21.1	0.0	100.0	145
20-24	61.8	1,465	62.5	11.1	6.1	20.2	0.1	100.0	905
25-29	72.4	2,171	65.2	12.6	4.2	18.0	0.1	100.0	1,573
30-34	78.1	1,717	63.9	14.8	3.2	18.1	0.0	100.0	1,341
35-39	80.3	1,365	60.6	15.8	3.3	19.6	0.6	100.0	1,096
40-44	85.4	923	56.7	18.3	4.7	20.3	0.0	100.0	788
45-49	86.1	768	51.3	20.7	4.0	23.7	0.3	100.0	661
Total 15-49	74.7	8,710	61.2	14.8	4.3	19.5	0.2	100.0	6,508
					MEN				
15-19	*	16	*	*	*	*	*	*	14
20-24	98.9	377	85.2	7.6	1.9	5.3	0.0	100.0	373
25-29	99.8	1,201	84.3	8.2	1.1	6.3	0.1	100.0	1,198
30-34	99.9	1,398	82.9	9.4	1.3	6.3	0.1	100.0	1,396
35-39	99.7	1,277	82.5	10.0	1.2	6.3	0.0	100.0	1,273
40-44	99.4	1,100	80.1	10.7	1.7	7.4	0.1	100.0	1,093
45-49	99.0	727	75.7	13.6	1.3	9.3	0.0	100.0	720
Total 15-49	99.5	6,095	81.9	9.9	1.4	6.8	0.1	100.0	6,067
50-54	98.5	667	73.4	13.7	1.6	11.4	0.0	100.0	656
Total 15-54	99.4	6,762	81.0	10.3	1.4	7.2	0.1	100.0	6,724

Note: An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

Employment increases with age. Younger women age 15-19 are less likely to be employed (48 percent) than older women age 45-49 (86 percent). The proportion who earn cash only is higher among women age 25-29 (65 percent) and among men age 20-24 (85 percent), while women and men age 45-49 are least likely to earn cash only (51 percent and 76 percent of men).

15.2 CONTROL OVER AND RELATIVE MAGNITUDE OF WOMEN'S AND HUSBANDS' EARNINGS

Access to and control of resources, including women's control over their earnings, is one dimension of women's empowerment. Currently married women who earn cash for their work were asked who mainly decides how the cash is used and the relative magnitude of their earnings compared with their husband's earnings. This information may provide some insight into women's empowerment within the family and the extent of their control over decision making in the household. It is expected that employment and earnings are more likely to empower women if women themselves control their own earnings and perceive their earnings as significant relative to those of their husbands or partners.

15.2.1 Control over Wife's Earnings

Table 15.2.1 shows the percent distribution of currently married women age 15-49 who received cash earnings in the 12 months preceding the survey according to the person who decides how their earnings are used and according to whether they earn more or less than their husband, by background characteristics. One-half (49 percent) of currently married women decide how their cash earnings are used, while 41 percent of women report that decisions about their earnings are made jointly with their husbands. Only a small proportion of women (9 percent) report that decisions about their earnings are made exclusively by their husbands. Seventy-two percent of currently married women age 15-49 earn less than their husbands, while 11 percent earn more and 13 percent earn about the same.

Table 15.2.1 Control over women's cash earnings and relative magnitude of women's cash earnings

Percent distribution of currently married women age 15-49 who received cash earnings for employment in the 12 months preceding the survey by person who decides how wife's cash earnings are used and by whether she earned more or less than her husband, according to background characteristics, Kenya 2014

	Person who decides how the wife's cash earnings are used:						Wife's cash earnings compared with husband's cash earnings:						
Background characteristic	Mainly wife	Wife and husband jointly	Mainly husband	Other	Missing	Total	More	Less	About the same	Husband has no earnings	Don't know/ missing	Total	Number of women
Age													
15-19	57.6	30.9	10.6	0.9	0.0	100.0	3.2	81.6	12.9	1.3	1.1	100.0	101
20-24	47.4	38.7	12.5	0.1	1.3	100.0	9.2	76.8	10.7	0.8	2.4	100.0	665
25-29	45.0	45.5	8.9	0.0	0.5	100.0	9.0	77.4	10.6	0.9	2.2	100.0	1,224
30-34	51.1	40.3	8.0	0.1	0.6	100.0	9.5	73.6	13.7	1.4	1.7	100.0	1,055
35-39	51.0	40.1	8.7	0.0	0.1	100.0	13.6	69.9	11.0	2.8	2.7	100.0	838
40-44	50.2	42.8	6.3	0.1	0.6	100.0	13.6	63.2	17.7	3.6	1.9	100.0	591
45-49	53.9	37.7	7.3	0.0	1.1	100.0	16.5	60.8	15.0	3.7	4.0	100.0	476
Number of living children													
0	43.9	48.9	6.3	0.0	0.8	100.0	8.2	76.9	9.3	3.9	1.7	100.0	262
1-2	46.6	44.1	8.8	0.1	0.4	100.0	10.8	74.4	12.0	0.9	1.8	100.0	2,009
3-4	49.9	40.5	8.6	0.0	0.9	100.0	10.7	71.6	13.2	1.8	2.6	100.0	1,634
5+	55.3	34.7	9.5	0.1	0.5	100.0	12.9	66.9	13.7	3.5	3.0	100.0	1,046
Residence													
Urban	53.8	38.3	7.2	0.1	0.6	100.0	10.9	76.5	8.9	1.2	2.4	100.0	2,184
Rural	45.9	43.4	10.0	0.1	0.6	100.0	11.2	68.5	15.6	2.5	2.3	100.0	2,767
Region													
Coast	48.8	44.4	6.0	0.0	0.8	100.0	10.2	70.3	12.0	2.3	5.2	100.0	415
North Eastern	51.0	28.1	18.4	0.0	2.4	100.0	26.7	46.5	15.1	9.3	2.4	100.0	16
Eastern	32.6	59.3	7.4	0.0	0.8	100.0	12.4	70.8	13.2	0.9	2.7	100.0	620
Central	51.8	40.3	7.8	0.0	0.1	100.0	9.2	73.6	14.2	1.4	1.6	100.0	872
Rift Valley	44.6	44.7	10.1	0.0	0.6	100.0	12.8	69.0	14.5	2.3	1.4	100.0	1,163
Western	58.0	31.5	9.7	0.0	0.7	100.0	8.1	74.3	11.7	3.7	2.2	100.0	500
Nyanza	54.7	32.1	12.1	0.5	0.7	100.0	12.9	67.9	13.8	1.9	3.5	100.0	705
Nairobi	58.5	34.7	5.9	0.0	0.9	100.0	9.7	80.9	6.7	1.1	1.5	100.0	659
Education													
No education	47.2	38.7	12.6	0.0	1.5	100.0	14.5	56.1	14.0	9.1	6.4	100.0	226
Primary incomplete	53.5	34.3	11.3	0.1	0.8	100.0	12.8	66.3	14.2	3.1	3.6	100.0	1,237
Primary complete	50.5	39.2	9.6	0.2	0.6	100.0	10.8	74.3	11.7	1.4	1.8	100.0	1,373
Secondary+	46.5	46.8	6.2	0.0	0.4	100.0	9.8	75.6	12.3	0.8	1.5	100.0	2,115
Wealth quintile													
Lowest	53.7	34.0	11.1	0.2	1.0	100.0	14.3	63.2	12.1	6.6	3.8	100.0	532
Second	49.2	38.6	11.6	0.0	0.6	100.0	11.4	69.1	15.1	1.6	2.8	100.0	816
Middle	46.1	43.5	9.4	0.0	1.0	100.0	10.9	72.0	12.9	1.7	2.5	100.0	943
Fourth	50.0	40.3	9.0	0.0	0.7	100.0	10.4	72.7	13.3	1.9	1.7	100.0	1,159
Highest	49.5	44.4	5.7	0.1	0.3	100.0	10.4	76.4	10.8	0.6	1.9	100.0	1,501
Total	49.4	41.2	8.7	0.1	0.6	100.0	11.1	72.0	12.6	1.9	2.3	100.0	4,951

The proportion of currently married women who make independent decisions on how their cash earnings are used increased from 42 percent in 2008-09 to 49 percent in 2014. The data further show that the proportion of wives who make decisions about their earnings jointly with their husbands declined from 49 percent to 41 percent over the same period.

There is no clear pattern in decision making on use of cash earnings according to the woman's age. Women age 15-19, women with more living children, urban women, and women in the lowest wealth quintile are more likely than other women to act as the main decision makers in the use of their earnings. Women in the Nairobi (59 percent) and Western (58 percent) regions are more likely to make decisions alone about their earnings than those in other regions. Women in Eastern are least likely to be the main

decision makers regarding the use of their income; however, that region reported the highest proportion of women who jointly make decisions with their husbands on the use of their earnings.

Regarding the relative magnitude of women's earnings with those of their husbands, older women, women with five or more children, and women who live in North Eastern region are more likely to earn more than their husband. The likelihood a woman earns more than her husband decreases with education and wealth.

15.2.2 Control over Husbands' Earnings

Table 15.2.2 shows the percent distributions of currently married men age 15-49 who receive cash earnings and currently married women age 15-49 whose husbands receive cash earnings, according to the person who decides how the husband's cash earnings are used. Fifty-five percent of currently married men age 15-49 who earn cash decide jointly with their wives how their earnings are used, as compared with 49 percent of women who indicated that joint decisions are made. About 4 in 10 men and women (41 percent and 42 percent, respectively) reported that the husband mainly decides how his cash earnings are used. A small proportion (4 percent of currently married men and 9 percent of currently married women) reported that the wife acts as the main decision maker in the use of the husband's earnings.

Table 15.2.2 Control over men's cash earnings

Percent distributions of currently married men age 15-49 who receive cash earnings and of currently married women age 15-49 whose husbands receive cash earnings, by person who decides how husband's cash earnings are used, according to background characteristics, Kenya 2014

	Men							Women						
	Person who decides how the husband's cash earnings are used:							Person who decides how the husband's cash earnings are used:						
Background characteristic	Mainly wife	Husband and wife jointly	Mainly husband	Other	Missing	Total	Number of men	Mainly wife	Husband and wife jointly	Mainly husband	Other	Missing	Total	Number of women
Age														
15-19	*	*	*	*	*	100.0	14	10.5	44.1	43.4	2.0	0.0	100.0	292
20-24	3.3	46.0	48.7	1.8	0.3	100.0	346	10.0	47.7	41.7	0.2	0.4	100.0	1,440
25-29	3.4	54.0	42.2	0.0	0.4	100.0	1,109	7.7	50.8	41.2	0.2	0.2	100.0	2,141
30-34	3.9	56.6	39.3	0.0	0.2	100.0	1,289	9.2	50.6	40.0	0.0	0.1	100.0	1,690
35-39	4.3	56.7	38.7	0.1	0.2	100.0	1,177	9.1	45.0	45.4	0.0	0.5	100.0	1,327
40-44	6.0	53.6	40.1	0.0	0.3	100.0	992	9.5	49.5	40.6	0.0	0.3	100.0	893
45-49	3.5	57.3	38.9	0.0	0.1	100.0	643	8.4	46.4	44.8	0.0	0.4	100.0	742
Number of living children														
0	1.2	49.6	47.5	0.6	1.1	100.0	367	11.2	58.0	30.2	0.2	0.3	100.0	469
1-2	3.9	57.7	38.0	0.2	0.2	100.0	2,410	8.4	51.6	39.5	0.3	0.2	100.0	3,408
3-4	5.4	56.3	38.1	0.1	0.2	100.0	1,751	8.4	47.4	43.6	0.1	0.4	100.0	2,732
5+	3.8	48.1	47.8	0.1	0.3	100.0	1,041	10.2	42.5	47.1	0.0	0.2	100.0	1,917
Residence														
Urban	3.7	55.0	41.1	0.0	0.2	100.0	2,816	8.5	50.0	40.9	0.1	0.5	100.0	3,406
Rural	4.6	54.9	39.8	0.3	0.4	100.0	2,754	9.2	47.6	42.8	0.2	0.2	100.0	5,120
Region														
Coast	3.5	53.2	42.7	0.1	0.4	100.0	591	5.0	54.3	40.1	0.2	0.4	100.0	830
North Eastern	8.9	4.2	85.9	0.0	1.0	100.0	63	9.1	46.6	43.9	0.0	0.4	100.0	198
Eastern	2.0	69.1	28.6	0.0	0.3	100.0	762	5.9	62.7	31.2	0.0	0.2	100.0	1,252
Central	1.9	67.0	31.0	0.0	0.1	100.0	755	6.7	48.2	45.0	0.0	0.1	100.0	1,098
Rift Valley	2.4	48.8	48.1	0.1	0.5	100.0	1,343	7.9	48.3	43.4	0.1	0.3	100.0	2,121
Western	6.1	55.3	37.5	0.3	0.8	100.0	476	14.2	36.4	48.6	0.4	0.3	100.0	884
Nyanza	9.7	46.9	42.8	0.5	0.1	100.0	670	14.6	37.4	47.5	0.5	0.1	100.0	1,186
Nairobi	5.5	52.4	42.1	0.0	0.0	100.0	910	9.2	51.7	38.2	0.0	1.0	100.0	957
Education														
No education	5.4	24.4	69.4	0.0	0.8	100.0	148	9.3	43.0	47.4	0.0	0.3	100.0	743
Primary incomplete	5.3	50.0	43.9	0.2	0.6	100.0	1,195	11.0	39.0	49.2	0.3	0.5	100.0	2,196
Primary complete	3.5	51.9	44.2	0.2	0.2	100.0	1,526	8.6	49.6	41.3	0.2	0.4	100.0	2,437
Secondary+	4.0	60.5	35.2	0.1	0.2	100.0	2,701	7.7	55.8	36.3	0.1	0.2	100.0	3,149
Wealth quintile														
Lowest	6.0	39.5	53.8	0.2	0.5	100.0	617	10.9	38.7	49.9	0.2	0.2	100.0	1,380
Second	6.6	56.4	36.2	0.3	0.5	100.0	892	10.2	46.3	43.0	0.3	0.3	100.0	1,530
Middle	3.9	51.5	44.1	0.2	0.4	100.0	989	10.8	48.3	40.3	0.0	0.5	100.0	1,638
Fourth	3.7	58.8	37.4	0.1	0.1	100.0	1,430	7.9	48.7	42.7	0.2	0.4	100.0	1,855
Highest	2.8	58.7	38.3	0.0	0.2	100.0	1,640	6.2	56.7	36.9	0.0	0.1	100.0	2,122
Total 15-49	4.2	54.9	40.5	0.1	0.3	100.0	5,570	8.9	48.6	42.0	0.2	0.3	100.0	8,526
50-54	5.1	52.9	41.8	0.0	0.3	100.0	572	na	na	na	na	na	na	na
Total 15-54	4.3	54.7	40.6	0.1	0.3	100.0	6,141	na	na	na	na	na	na	na

Note: An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
na = Not applicable

There are few distinct patterns in how decisions about the use of a husband's earnings are made. However, younger men age 20-24, men with no education, and men in the lowest wealth quintile are more likely than other men to have the main say in the use of their earnings. It follows that men with these characteristics are less likely to engage in joint decision making in use of their earnings. Among women, few patterns are discernible. The proportion of women who report that their husband mainly decides how his earnings are used increases with increasing number of living children and, in general, decreases with increasing education and with increasing wealth.

Regional variations are evident, with a much higher proportion of men in Eastern (69 percent) and Central (67 percent) than in North Eastern (4 percent) indicating that the husband and wife jointly decide how the husband's cash earnings are used. In addition, women in Eastern (63 percent) are much more likely than women in Nyanza (37 percent) and Western (36 percent) to report that they and their husbands jointly decide how the husband's cash earnings are used.

15.3 CONTROL OVER WOMEN'S EARNINGS AND RELATIVE SIZE OF HUSBAND'S AND WIFE'S EARNINGS

Table 15.3 shows who decides how the woman's cash earnings are used, according to the relative magnitude of the woman's and the husband's cash earnings. Women whose cash earnings are less than their husbands' and women whose husbands do not have cash earnings are more likely to decide for themselves how their earnings are used (53 percent and 60 percent, respectively). In contrast, women are more likely to report joint decision making on the use of their earnings when they earn the same as their husband (65 percent) or more than their husband (47 percent).

Table 15.3 Women's control over their own earnings and over those of their husbands

Percent distribution of currently married women age 15-49 with cash earnings in the last 12 months by person who decides how the wife's cash earnings are used and percent distribution of currently married women age 15-49 whose husbands have cash earnings by person who decides how the husband's cash earnings are used, according to the relation between wife's and husband's cash earnings, Kenya 2014

Women's earnings relative to husband's earnings	Person who decides how the wife's cash earnings are used:							Person who decides how the husband's cash earnings are used:						
	Mainly wife	Wife and husband jointly	Mainly husband	Other	Missing	Total	Number of women	Mainly wife	Wife and husband jointly	Mainly husband	Other	Missing	Total	Number of women
More than husband	47.6	46.7	5.5	0.3	0.0	100.0	548	12.0	50.4	36.7	0.2	0.7	100.0	548
Less than husband	52.9	37.1	10.0	0.0	0.0	100.0	3,567	9.8	45.4	44.8	0.0	0.1	100.0	3,567
Same as husband	28.3	64.9	6.7	0.1	0.0	100.0	626	7.5	67.1	25.2	0.1	0.1	100.0	626
Husband has no cash earnings or did not work	59.9	39.1	1.0	0.0	0.0	100.0	95	na	na	na	na	na	na	na
Woman worked but has no cash earnings	na	na	na	na	na	na	na	10.4	51.1	38.3	0.1	0.1	100.0	1,517
Woman did not work	na	na	na	na	na	na	na	6.2	47.6	45.8	0.4	0.1	100.0	2,153
Total[1]	49.4	41.2	8.7	0.1	0.6	100.0	4,951	8.9	48.6	42.0	0.2	0.3	100.0	8,526

na = Not applicable
[1] Includes 122 cases where a woman does not know whether she earned more or less than her husband

Table 15.3 also shows who decides how the husband's cash earnings are used, according to the relative magnitude of the woman's and the husband's cash earnings. Women who earn less than their husband are more likely to report that their husband has the main say in deciding use of his earnings. Women who earn the same as their husband and women who earn more than their husband are more likely to report joint decision making in the use of their husband's earnings (67 percent and 50 percent, respectively). Since the 2008-09 KDHS, these indicators show marginal improvements or have remained stable.

15.4 OWNERSHIP OF ASSETS

Ownership and control of assets by women and men gives an enhanced picture of their access to economic resources. Ownership of assets confers additional economic value, status, and bargaining power.

For women in particular, ownership of assets may provide protection in case of marital dissolution or abandonment, positively influence their position in the home, and decrease their vulnerability to various forms of violence or discrimination. Respondents were asked if they own a house or land alone, jointly with someone else, or both alone and jointly. Table 15.4.1 shows the percent distribution of women age 15-49 by ownership of housing and land, according to background characteristics.

Table 15.4.1 Ownership of assets: Women

Percent distribution of women age 15-49 by ownership of housing and land, according to background characteristics, Kenya 2014

Background characteristic	Percentage who own a house:					Percentage who own land:					Number of women
	Alone	Jointly	Alone and jointly	Percentage who do not own a house	Total	Alone	Jointly	Alone and jointly	Percentage who do not own land	Total	
Age											
15-19	0.8	4.9	1.1	93.2	100.0	0.7	4.3	1.2	93.7	100.0	2,717
20-24	4.2	21.4	3.1	71.3	100.0	3.4	20.0	2.7	73.9	100.0	2,691
25-29	6.3	35.2	4.4	53.9	100.0	5.5	32.5	3.7	58.2	100.0	2,932
30-34	7.1	40.8	5.4	46.7	100.0	6.6	37.3	4.9	51.1	100.0	2,162
35-39	12.8	43.0	4.8	39.3	100.0	11.3	40.1	4.2	44.4	100.0	1,780
40-44	19.0	43.6	3.6	33.7	100.0	17.6	39.9	3.3	39.2	100.0	1,292
45-49	20.2	49.1	5.6	24.9	100.0	18.4	46.1	5.3	30.2	100.0	1,052
Residence											
Urban	4.7	18.3	2.9	74.2	100.0	5.0	17.5	2.5	74.9	100.0	5,929
Rural	10.1	39.0	4.4	46.5	100.0	8.5	35.5	4.0	51.9	100.0	8,696
Region											
Coast	5.9	28.7	2.7	62.5	100.0	4.8	22.9	2.1	70.0	100.0	1,421
North Eastern	14.5	18.8	15.8	50.9	100.0	6.3	11.6	14.9	66.9	100.0	299
Eastern	6.0	47.9	2.8	43.3	100.0	5.4	44.3	2.7	47.4	100.0	2,066
Central	6.9	27.7	2.3	63.1	100.0	6.6	25.0	2.1	66.3	100.0	1,905
Rift Valley	11.1	30.2	4.3	54.3	100.0	10.9	28.8	3.6	56.6	100.0	3,714
Western	3.9	34.1	3.9	58.1	100.0	4.0	32.4	3.5	60.2	100.0	1,571
Nyanza	14.0	38.8	6.0	41.2	100.0	10.9	37.5	5.8	45.8	100.0	1,908
Nairobi	1.8	5.3	1.7	91.2	100.0	1.9	4.8	1.4	91.9	100.0	1,742
Education											
No education	18.8	38.2	10.5	32.4	100.0	14.6	33.0	8.6	43.7	100.0	1,015
Primary incomplete	9.3	34.3	4.0	52.4	100.0	8.0	32.0	3.7	56.2	100.0	3,793
Primary complete	8.2	37.9	3.6	50.2	100.0	7.0	33.7	3.2	56.0	100.0	3,543
Secondary+	5.2	22.9	2.6	69.2	100.0	5.3	22.1	2.4	70.1	100.0	6,274
Wealth quintile											
Lowest	17.0	39.5	6.5	36.9	100.0	13.4	33.5	6.0	47.0	100.0	2,236
Second	10.6	38.4	5.0	45.8	100.0	8.4	35.7	4.1	51.6	100.0	2,590
Middle	7.7	36.2	3.0	53.1	100.0	7.0	32.9	2.7	57.5	100.0	2,859
Fourth	4.8	28.8	2.9	63.5	100.0	5.4	26.6	2.5	65.5	100.0	3,113
Highest	3.5	17.3	2.6	76.6	100.0	3.9	17.9	2.6	75.6	100.0	3,827
Total	7.9	30.6	3.8	57.7	100.0	7.1	28.2	3.4	61.3	100.0	14,625

Note: Totals may not add up to 100 percent because women with missing information are not shown separately.

Forty-two percent of women own a house and 39 percent of women own land (alone, jointly, or both). Among women, joint ownership is the most common type of home or land ownership; 31 percent own a house jointly, and 28 percent own land jointly. Eight percent of women own a house alone, and 7 percent own land alone. The percentage of women who own a house or land increases with age. Ownership of either is also more likely among women in rural areas than among their counterparts in urban areas. Likelihood of ownership decreases with increasing education and with increasing wealth.

Table 15.4.2 provides details of asset ownership among men age 15-49. Forty-nine percent of men own a house and 44 percent own land (alone, jointly, or both). In contrast to women, sole ownership is more common for men; 36 percent own a house alone, and 28 percent own land alone. Eleven percent own a house jointly, and 12 percent own land jointly. Similar to women, ownership of a house or land increases with age, and men in rural areas are more likely than those in urban areas to own a house; however, the rural-urban relationship is not evident for land ownership.

Table 15.4.2 Ownership of assets: Men

Percent distribution of men age 15-49 by ownership of housing and land, according to background characteristics, Kenya 2014

Background characteristic	Percentage who own a house: Alone	Jointly	Alone and jointly	Percentage who do not own a house	Total	Percentage who own land: Alone	Jointly	Alone and jointly	Percentage who do not own land	Total	Number of men
Age											
15-19	8.8	3.2	0.6	87.4	100.0	3.2	1.1	1.0	94.8	100.0	2,540
20-24	25.3	5.6	0.5	68.7	100.0	13.8	7.0	1.6	77.6	100.0	2,125
25-29	39.1	11.1	2.5	47.4	100.0	29.1	12.5	3.6	54.8	100.0	2,104
30-34	45.3	14.9	4.1	35.7	100.0	37.0	18.3	5.8	38.9	100.0	1,785
35-39	49.8	17.0	4.2	29.0	100.0	45.4	21.1	5.7	27.7	100.0	1,483
40-44	60.8	14.4	4.4	20.4	100.0	54.0	18.3	6.0	21.7	100.0	1,224
45-49	59.5	19.6	4.2	16.7	100.0	53.9	21.3	5.5	19.3	100.0	800
Residence											
Urban	28.3	7.4	3.0	61.3	100.0	29.0	10.2	3.6	57.2	100.0	5,300
Rural	42.1	13.2	2.1	42.6	100.0	27.7	13.8	3.7	54.7	100.0	6,762
Region											
Coast	40.7	2.7	1.4	55.2	100.0	28.2	3.8	2.3	65.6	100.0	1,260
North Eastern	36.2	1.3	1.4	61.0	100.0	37.5	2.0	1.7	58.8	100.0	227
Eastern	41.7	8.8	8.2	41.3	100.0	28.4	16.3	10.0	45.3	100.0	1,825
Central	44.6	6.6	1.2	47.7	100.0	29.3	9.3	4.8	56.6	100.0	1,564
Rift Valley	37.8	13.2	2.1	46.9	100.0	25.2	10.9	3.0	61.0	100.0	3,050
Western	32.4	19.4	0.2	47.8	100.0	24.1	18.6	0.2	57.2	100.0	1,164
Nyanza	30.0	22.7	2.2	45.0	100.0	30.2	20.5	2.2	47.0	100.0	1,405
Nairobi	22.0	2.2	0.8	75.0	100.0	33.1	9.2	1.7	56.0	100.0	1,568
Education											
No education	58.8	10.0	1.6	29.6	100.0	43.4	12.2	1.0	43.2	100.0	345
Primary incomplete	36.5	11.0	1.9	50.7	100.0	26.3	12.4	3.4	57.9	100.0	3,071
Primary complete	44.2	12.8	3.8	39.2	100.0	33.4	14.3	5.1	47.2	100.0	2,734
Secondary+	30.8	9.5	2.3	57.4	100.0	26.0	11.2	3.3	59.5	100.0	5,913
Wealth quintile											
Lowest	48.4	10.3	2.0	39.3	100.0	31.8	11.0	3.7	53.4	100.0	1,691
Second	40.8	15.5	2.3	41.4	100.0	28.6	15.8	4.2	51.3	100.0	2,145
Middle	37.5	11.1	2.5	48.9	100.0	26.2	12.0	3.6	58.2	100.0	2,370
Fourth	34.2	10.6	2.7	52.6	100.0	27.9	11.0	3.3	57.7	100.0	2,959
Highest	26.2	7.0	2.7	64.2	100.0	28.0	11.7	3.5	56.8	100.0	2,897
Total 15-49	36.1	10.6	2.5	50.8	100.0	28.3	12.2	3.6	55.8	100.0	12,063
50-54	66.0	17.1	3.1	13.9	100.0	61.7	19.1	4.3	14.9	100.0	756
Total 15-54	37.8	11.0	2.5	48.6	100.0	30.2	12.6	3.7	53.4	100.0	12,819

Note: Totals may not add up to 100 percent because men with missing information are not shown separately.

15.5 WOMEN'S PARTICIPATION IN DECISION MAKING

Decision making can be a complex process, and the ability of women to make decisions that affect their personal circumstances is an essential aspect of their environment and an indicator of their autonomy and control in their daily life. The 2014 KDHS collected information on women's participation in household decision making. Currently married women were asked who usually makes decisions about four specific issues: their own health care, major household purchases, visits to their family or relatives, and what food to cook each day. Currently married men were also asked who makes decisions about two specific issues: their own health care and major household purchases.

Table 15.5 shows the percent distribution of currently married women and men age 15-49 according to the person who usually makes decisions concerning these matters. Women are considered to participate in decision making if they usually make decisions alone or jointly with their husbands. Women's involvement in decision making varies according to the type of decision. Eighty-three percent of women decide solely what food should be cooked each day, a domain commonly relegated to women. A much smaller percentage have the main say in other household decisions. Thirty-nine percent of women act as the main decision maker in their own health care, while 40 percent say this decision is made jointly with their husband and 21 percent say their husband mainly decides. Less than one-quarter of women are the main decision makers about visits to their family or relatives (23 percent) and major household purchases (20 percent). These decisions are mostly made jointly with the husband (50 percent and 53 percent, respectively) or mainly by the husband (26 percent and 27 percent, respectively).

Table 15.5 Participation in decision making

Percent distribution of currently married women and currently married men age 15-49 by person who usually makes decisions about various issues, Kenya 2014

Decision	Mainly wife	Wife and husband jointly	Mainly husband	Someone else	Other	Missing	Total	Number
			WOMEN					
Own health care	38.6	40.1	20.9	0.2	0.1	0.2	100.0	8,710
Major household purchases	19.6	52.9	27.0	0.2	0.1	0.2	100.0	8,710
Visits to her family or relatives	23.2	50.2	26.1	0.2	0.1	0.2	100.0	8,710
What food should be cooked each day	82.9	10.7	5.0	1.0	0.2	0.2	100.0	8,710
			MEN					
Own health care	5.9	42.2	51.3	0.2	0.2	0.3	100.0	6,095
Major household purchases	9.7	56.1	33.8	0.1	0.1	0.3	100.0	6,095

Men are more likely to be the main decision makers regarding their own health care (51 percent), while decisions about major household purchases are more likely to be made jointly (56 percent). Less than 10 percent of men reported that their wife was the main decision maker regarding either of these specific issues.

Table 15.6.1 shows the percentage of currently married women age 15-49 who usually make specific decisions either by themselves or jointly with their husbands, by background characteristics. In general, women's participation in decision making increases with age, education, and wealth quintile. Women who reside in urban areas and women who are employed and earning cash appear slightly more likely to be involved in decision making than their counterparts. Women in the Central and Eastern regions are generally more involved in decision making than women in other regions, while women in the Western region are least likely to have a say in household decisions.

Table 15.6.1 Women's participation in decision making by background characteristics

Percentage of currently married women age 15-49 who usually make specific decisions either by themselves or jointly with their husband, by background characteristics, Kenya 2014

Background characteristic	Specific decisions				All four decisions	None of the four decisions	Number of women
	Woman's own health care	Making major household purchases	Visits to her family or relatives	What food should be cooked each day			
Age							
15-19	67.0	55.8	60.2	79.3	33.8	7.2	301
20-24	71.9	65.2	64.5	89.1	43.5	4.4	1,465
25-29	76.4	71.2	70.9	93.9	50.8	2.1	2,171
30-34	81.6	74.9	75.8	95.5	57.4	1.7	1,717
35-39	81.8	74.3	77.2	94.4	58.5	2.2	1,365
40-44	83.4	80.6	81.8	96.7	65.5	1.1	923
45-49	85.0	79.0	80.1	97.6	65.2	1.0	768
Employment (past 12 months)							
Not employed	69.3	61.5	67.1	90.8	45.1	4.0	2,201
Employed for cash	82.3	77.6	76.9	95.0	58.8	1.5	4,951
Employed not for cash	80.3	72.3	70.8	93.3	53.4	2.8	1,546
Number of living children							
0	75.1	74.9	74.5	87.9	51.7	3.4	491
1-2	79.1	71.9	72.5	93.0	52.8	2.2	3,441
3-4	79.9	74.2	75.2	94.8	57.9	2.5	2,790
5+	77.2	70.6	72.0	94.3	52.6	2.3	1,989
Residence							
Urban	80.6	75.0	76.5	93.9	57.4	1.7	3,445
Rural	77.4	70.9	71.3	93.5	52.3	2.8	5,265
Region							
Coast	76.2	71.0	66.2	91.6	49.1	3.1	850
North Eastern	63.3	65.5	72.4	91.9	55.2	5.9	209
Eastern	85.5	83.2	76.3	96.2	62.6	0.9	1,268
Central	86.8	72.6	79.8	97.3	58.6	1.4	1,113
Rift Valley	78.2	68.6	73.6	94.0	53.0	2.4	2,171
Western	70.3	64.8	62.5	90.3	40.5	3.7	929
Nyanza	76.2	72.0	74.2	92.1	56.7	3.8	1,203
Nairobi	78.1	78.2	77.4	92.3	56.3	0.6	968
Education							
No education	67.5	62.2	63.3	91.3	47.6	4.8	795
Primary incomplete	74.1	68.2	67.7	91.9	48.2	3.8	2,274
Primary complete	79.9	72.8	72.0	94.0	53.7	2.1	2,465
Secondary+	83.9	77.9	81.0	95.1	60.9	1.0	3,177
Wealth quintile							
Lowest	70.8	63.6	62.5	90.9	44.6	5.1	1,457
Second	76.4	70.4	70.0	92.6	49.9	2.7	1,567
Middle	78.2	73.1	70.9	93.3	52.9	2.6	1,663
Fourth	80.7	74.7	77.8	95.1	57.4	1.3	1,885
Highest	84.3	77.8	81.2	95.1	62.6	1.0	2,138
Total	78.7	72.5	73.4	93.6	54.3	2.4	8,710

[1] Total includes six women for whom information on employment in the past 12 months is missing.

Figure 15.1 shows the number of decisions in which currently married women participate. More than one-half of currently married women (54 percent) participate in all four decisions, about one-fourth (23 percent) participate in three decisions, more than 1 in 10 (12 percent) participate in two decisions, and less than 1 in 10 participate in one (9 percent) or no decisions (2 percent).

Figure 15.1 **Number of decisions in which currently married women participate**

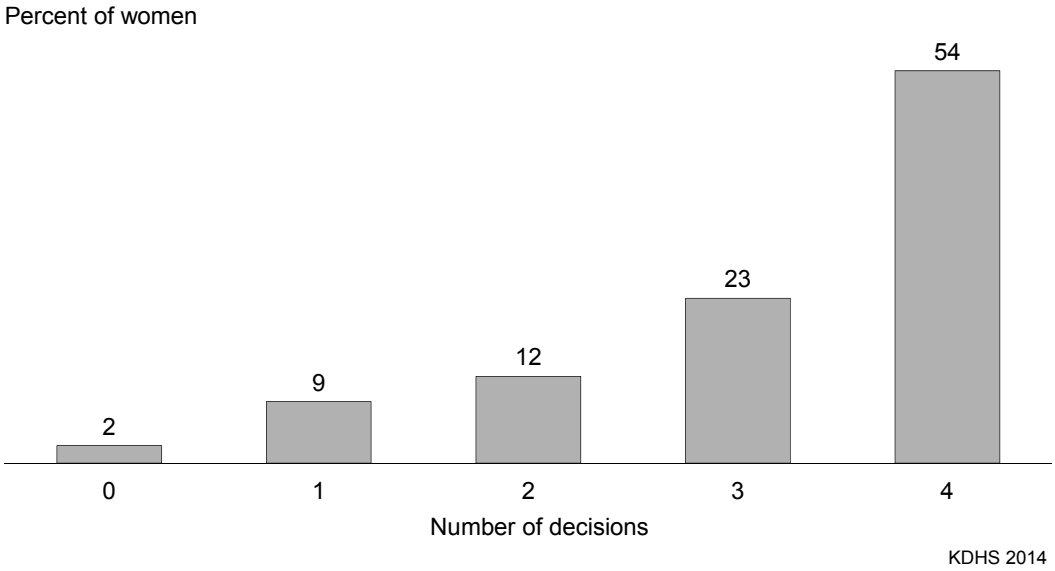


Table 15.6.2 presents the percentage of currently married men age 15-49 who usually make specific decisions either alone or jointly with their wife, by background characteristics. There are no obvious patterns evident in decision making for men by age, education, or wealth. However, unemployed men are less likely to be involved in decision making than those who are employed, and men in the Central and Eastern regions are generally more involved in decision making than men in other regions.

Table 15.6.2 Men's participation in decision making by background characteristics

Percentage of currently married men age 15-49 who usually make specific decisions either alone or jointly with their wife, by background characteristics, Kenya 2014

Background characteristic	Specific decisions				Number of men
	Man's own health	Making major household purchases	Both decisions	Neither of the two decisions	
Age					
15-19	*	*	*	*	16
20-24	92.0	86.3	84.1	5.8	377
25-29	95.0	90.6	86.8	1.1	1,201
30-34	94.0	90.7	86.7	2.1	1,398
35-39	92.5	89.4	84.4	2.5	1,277
40-44	93.2	90.2	86.6	3.3	1,100
45-49	93.6	89.8	86.0	2.7	727
Employment (past 12 months)					
Not employed	77.3	74.6	71.3	19.5	27
Employed for cash	93.5	89.7	85.8	2.5	5,570
Employed not for cash	94.0	92.0	88.3	2.3	494
Number of living children					
0	93.4	89.4	86.3	3.6	389
1-2	93.1	91.0	86.5	2.4	2,542
3-4	94.1	90.1	86.6	2.3	1,918
5+	93.5	87.2	83.7	3.0	1,247
Residence					
Urban	93.6	90.0	86.1	2.4	2,894
Rural	93.4	89.7	85.8	2.7	3,201
Region					
Coast	97.2	91.7	90.6	1.7	617
North Eastern	87.3	87.7	85.8	10.8	103
Eastern	96.2	94.0	91.3	1.1	835
Central	98.5	93.4	92.7	0.8	773
Rift Valley	93.0	89.8	84.4	1.6	1,523
Western	91.3	88.7	86.0	6.0	561
Nyanza	92.2	83.8	79.9	4.0	767
Nairobi	88.3	88.0	79.7	3.4	916
Education					
No education	92.9	86.8	85.1	5.4	234
Primary incomplete	90.9	87.9	82.7	3.9	1,370
Primary complete	95.1	91.6	88.7	1.9	1,677
Secondary+	93.8	90.0	85.9	2.0	2,814
Wealth quintile					
Lowest	92.0	87.1	83.3	4.2	813
Second	92.7	89.1	84.9	3.2	1,036
Middle	92.7	89.1	84.4	2.6	1,110
Fourth	92.6	90.8	85.3	1.9	1,481
Highest	96.1	91.3	89.4	2.1	1,655
Total 15-49	93.5	89.9	85.9	2.6	6,095
50-54	94.1	90.3	87.8	3.4	667
Total 15-54	93.6	89.9	86.1	2.7	6,762

Note: An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
[1] Total includes four men for whom information on employment in the past 12 months is missing.

15.6 ATTITUDES TOWARDS WIFE BEATING

One of the most common forms of violence against women worldwide is abuse by a husband or partner (Heise et al., 1999). The 2014 KDHS collected information on women's and men's attitudes towards wife beating. Respondents were asked whether a husband is justified in beating his wife under a series of circumstances: if the wife burns the food, argues with him, goes out without telling him, neglects the children, or refuses sexual relations. Women and men who believe that a husband is justified in hitting or beating his wife for any reason may believe women to be low in status, both absolutely and relative to men. Such a perception could act as a barrier to accessing health care for women, affect attitudes towards women's rights to contraception, and influence women's general well-being. Table 15.7.1 presents women's attitudes towards wife beating in regard to the five specific circumstances. The table also shows the percentage of women who agree that wife beating is justified for at least one of the specified reasons.

Table 15.7.1 Attitude towards wife beating: Women

Percentage of all women age 15-49 who agree that a husband is justified in hitting or beating his wife for specific reasons, by background characteristics, Kenya 2014

Background characteristic	Husband is justified in hitting or beating his wife if she:					Percentage who agree with at least one specified reason	Number of women
	Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sexual intercourse with him		
Age							
15-19	7.5	21.8	20.9	34.0	11.2	44.5	2,717
20-24	6.4	20.0	22.0	32.2	13.2	39.4	2,691
25-29	6.7	20.7	22.1	32.7	14.5	41.0	2,932
30-34	6.0	19.3	19.6	30.3	14.2	38.3	2,162
35-39	7.7	20.6	22.2	33.6	18.9	42.3	1,780
40-44	7.8	21.9	22.8	36.7	19.7	44.8	1,292
45-49	8.5	24.9	24.7	37.1	21.7	45.9	1,052
Employment (past 12 months)							
Not employed	7.6	21.0	22.0	33.9	14.1	42.0	4,912
Employed for cash	5.9	18.4	20.0	30.5	13.8	38.6	7,655
Employed not for cash	10.1	30.8	28.0	42.7	22.6	53.7	2,040
Number of living children							
0	5.8	15.9	16.4	28.1	9.1	36.1	3,890
1-2	5.6	19.2	20.1	29.4	12.0	38.1	5,000
3-4	7.5	22.7	23.9	36.6	18.7	44.6	3,381
5+	11.4	30.6	31.4	45.3	26.6	55.1	2,354
Marital status							
Never married	6.4	16.9	18.2	30.1	9.6	38.2	4,255
Married or living together	7.2	23.3	23.5	34.6	17.3	43.6	8,710
Divorced/separated/ widowed	7.9	19.3	21.8	34.6	17.5	41.5	1,660
Residence							
Urban	3.5	13.8	13.9	24.2	8.1	31.0	5,929
Rural	9.5	25.9	27.1	39.5	19.9	49.1	8,696
Region							
Coast	5.3	15.6	19.1	24.1	13.5	32.7	1,421
North Eastern	9.9	22.1	30.3	44.8	30.7	53.7	299
Eastern	4.8	23.1	20.3	31.1	16.2	41.6	2,066
Central	4.7	12.1	16.1	30.3	12.8	36.9	1,905
Rift Valley	11.0	24.2	31.6	46.0	18.2	53.6	3,714
Western	11.0	30.0	24.9	40.5	19.2	52.2	1,571
Nyanza	6.5	28.5	20.8	30.6	17.2	41.1	1,908
Nairobi	1.6	9.2	7.9	13.9	2.5	19.1	1,742
Education							
No education	16.0	36.9	38.3	49.4	36.0	59.1	1,015
Primary incomplete	11.4	30.6	31.2	42.0	22.4	53.3	3,793
Primary complete	6.1	21.4	22.0	35.8	15.4	44.5	3,543
Secondary+	3.5	12.4	13.3	24.0	7.2	30.5	6,274
Wealth quintile							
Lowest	13.7	34.0	36.4	47.3	28.8	59.1	2,236
Second	9.6	28.5	29.4	41.3	20.4	51.6	2,590
Middle	8.0	25.1	24.7	39.0	18.3	49.4	2,859
Fourth	5.3	17.1	17.5	29.9	10.7	37.0	3,113
Highest	2.1	8.5	9.4	18.2	4.7	23.4	3,827
Total	7.0	21.0	21.8	33.3	15.1	41.8	14,625

Note: Total includes 13 women for whom information on employment in the past 12 months is missing.

Forty-two percent of women believe wife beating is justified for at least one of the specified reasons. Overall, acceptance of wife beating ranges from a high of 33 percent for neglecting the children to a low of 7 percent for burning the food. Women who are employed but not paid in cash and rural women are more likely to justify wife beating than their counterparts. The proportion of women who justify wife beating increases with increasing number of living children and decreases with increasing education and wealth. Acceptance of wife beating varies by region, from 19 percent of women in Nairobi to slightly more than one-half in North Eastern, Rift Valley, and Western (52-54 percent).

Table 15.7.2 presents the percentage of men age 15-49 who agree that a husband is justified in hitting or beating his wife for specific reasons, by background characteristics. Compared with women, men are less likely to agree that wife beating is justified. Thirty-six percent of men believe wife beating is

justified for at least one of the specified reasons. Overall, men's acceptance of wife beating ranges from a high of 27 percent for neglecting the children to a low of 5 percent for burning the food. Similar to women, men who are employed but not paid in cash are more likely to say wife beating is justified. Acceptance of wife beating decreases with increases in education and wealth. By region, the proportion of men who justify wife beating ranges from 25 percent in Western to 52 percent in North Eastern.

Table 15.7.2 Attitude towards wife beating: Men

Percentage of all men age 15-49 who agree that a husband is justified in hitting or beating his wife for specific reasons, by background characteristics, Kenya 2014

Background characteristic	Husband is justified in hitting or beating his wife if she:					Percentage who agree with at least one specified reason	Number of men
	Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sexual intercourse with him		
Age							
15-19	5.3	19.3	16.8	26.8	10.8	36.7	2,540
20-24	5.1	22.3	19.7	29.2	10.4	40.9	2,125
25-29	4.9	20.6	19.7	28.8	9.6	36.8	2,104
30-34	4.1	21.3	18.1	28.3	9.6	35.5	1,785
35-39	3.4	20.9	19.5	27.9	8.7	36.3	1,483
40-44	3.7	18.4	18.5	24.0	9.8	31.8	1,224
45-49	3.7	19.9	16.9	22.4	9.3	31.3	800
Employment (past 12 months)							
Not employed	5.4	17.3	15.2	23.5	10.4	33.1	2,047
Employed for cash	4.1	20.6	18.3	27.1	9.2	35.8	8,686
Employed not for cash	6.3	25.1	25.0	35.5	13.5	45.6	1,316
Number of living children							
0	4.9	19.2	17.8	26.9	9.9	36.7	5,540
1-2	3.9	20.2	17.5	27.2	9.1	35.5	3,206
3-4	4.7	20.7	17.8	25.8	9.1	33.7	2,032
5+	4.3	26.5	25.5	32.2	12.8	41.6	1,285
Marital status							
Never married	5.4	19.6	17.6	27.0	10.1	37.0	5,350
Married or living together	3.9	21.4	19.0	27.5	9.6	35.6	6,095
Divorced/separated/ widowed	3.4	20.0	22.1	29.2	10.1	38.9	618
Residence							
Urban	3.8	19.8	16.1	26.9	8.6	35.6	5,300
Rural	5.1	21.1	20.4	27.7	10.9	37.0	6,762
Region							
Coast	3.7	21.5	12.5	16.6	9.9	27.4	1,260
North Eastern	15.5	39.6	43.3	43.9	43.5	51.8	227
Eastern	5.2	26.2	29.0	39.0	14.9	47.0	1,825
Central	2.0	10.5	18.1	23.3	5.6	31.3	1,564
Rift Valley	5.3	17.2	18.8	26.9	8.1	34.2	3,050
Western	5.6	16.6	8.4	13.0	4.2	24.5	1,164
Nyanza	2.3	24.5	15.2	25.2	8.9	38.4	1,405
Nairobi	5.2	26.0	18.1	37.5	11.8	45.4	1,568
Education							
No education	15.5	45.4	48.2	51.1	34.8	60.4	345
Primary incomplete	6.3	26.1	24.2	32.1	12.5	43.1	3,071
Primary complete	3.9	21.6	19.6	28.3	10.9	37.5	2,734
Secondary+	3.3	15.6	13.3	23.1	6.6	31.0	5,913
Wealth quintile							
Lowest	9.7	28.8	31.2	34.4	18.4	44.9	1,691
Second	5.2	22.7	19.8	29.6	11.2	39.0	2,145
Middle	4.2	19.5	17.2	27.1	8.7	36.7	2,370
Fourth	3.1	18.4	17.1	27.0	8.2	35.7	2,959
Highest	2.8	17.0	12.7	22.2	6.6	29.9	2,897
Total 15-49	4.5	20.5	18.5	27.4	9.9	36.4	12,063
50-54	4.4	18.3	18.5	26.4	9.3	33.7	756
Total 15-54	4.5	20.4	18.5	27.3	9.8	36.2	12,819

Note: Total includes 18 men for whom information on employment in the past 12 months is missing.

Women's and men's attitudes towards wife beating have improved somewhat since the 2008-09 KDHS. In 2008-09, 53 percent of women and 44 percent of men agreed with wife beating for at least one of the specified reasons, compared with 42 percent of women and 36 percent of men in 2014.

15.7 WOMEN'S EMPOWERMENT INDICES

Women's empowerment has important implications for demographic and health outcomes, including women's use of family planning, maternal health care services, and child health. Two summary indices of women's empowerment were used to assess the relationship of selected demographic and health outcomes with women's empowerment.

The first index is the number of decisions that currently married women participate in alone or jointly with their husband/partner (see Table 15.6.1 for the list of decisions). The index ranges in value from 0 (participates in none of the four specified decisions) to 4 (participates in all four decisions). It reflects the degree of decision-making control that women are able to exercise in areas that affect their own lives and environments. A high score on this index suggests that women are more empowered in this domain. The second index ranges from 0 to 5 and corresponds with the total number of reasons for which women feel that a husband is justified in beating his wife (see Table 15.7.1 for the list of reasons). A low score on this index suggests that women have a greater sense of self-worth and higher status.

The relationship between the two indices is presented in Table 15.8. It is expected that women who participate more in making decisions at the household level will be less likely to endorse wife beating. The percentage of women who disagree with wife beating under any circumstance is highest among those who participate in 3-4 household decisions (60 percent). On the other hand, women who do not participate in any decisions and those who participate in one or two decisions have similar levels of support for wife beating (43 percent and 44 percent, respectively). It is also expected that women who more strongly endorse wife beating will be less likely to be involved in household decision making; however, there is no clear pattern between the number of reasons for which women justify wife beating and their participation in all four household decisions.

Table 15.8 Indicators of women's empowerment

Percentage of currently married women age 15-49 who participate in all decision making and the percentage who disagree with all of the reasons justifying wife beating, by value on each of the indicators of women's empowerment, Kenya 2014

Empowerment indicator	Percentage who participate in all decision making	Percentage who disagree with all the reasons justifying wife beating	Number of women
Number of decisions in which women participate[1]			
0	na	42.7	206
1-2	na	43.9	1,785
3-4	na	60.1	6,719
Number of reasons for which wife beating is justified[2]			
0	21.0	na	4,911
1-2	25.3	na	2,194
3-4	26.1	na	1,280
5	21.7	na	325

na = Not applicable
[1] See Table 15.6.1 for the list of decisions
[2] See Table 15.7.1 for the list of reasons

15.8 CURRENT USE OF CONTRACEPTION BY WOMEN'S STATUS

A woman's ability to have the number of children she wants and her use and choice of contraceptive methods are likely to be affected by self-image and sense of empowerment. A woman who feels that she is unable to control other aspects of her life may be less likely to feel she can make decisions regarding her fertility. She may also feel the need to choose contraceptive methods that are less obvious or do not need the approval or knowledge of her husband. Table 15.9 shows the relationship of each of the empowerment indices with current use of contraception among currently married women age 15-49, according to selected indicators of women's status.

Table 15.9 Current use of contraception by women's empowerment

Percent distribution of currently married women age 15-49 by current contraceptive method, according to selected indicators of women's status, Kenya 2014

Empowerment indicator	Any method	Modern methods				Any traditional method	Not currently using	Total	Number of women
		Any modern method	Female sterilisation	Temporary modern female methods[1]	Male condom				
Number of decisions in which women participate[2]									
0	37.8	35.5	1.3	32.8	1.5	2.2	62.2	100.0	206
1-2	54.9	51.4	2.6	47.2	1.6	3.5	45.1	100.0	1,785
3-4	59.5	54.4	3.5	48.4	2.5	5.1	40.5	100.0	6,719
Number of reasons for which wife beating is justified[3]									
0	60.2	55.9	3.3	49.8	2.9	4.3	39.8	100.0	4,911
1-2	57.7	52.3	3.4	47.5	1.4	5.4	42.3	100.0	2,194
3-4	52.3	47.5	3.3	42.3	1.9	4.8	47.7	100.0	1,280
5	49.5	44.8	1.8	42.3	0.6	4.7	50.5	100.0	325
Total	58.0	53.4	3.3	47.8	2.3	4.7	42.0	100.0	8,710

Note: If more than one method is used, only the most effective method is considered in this tabulation.
[1] Pill, IUD, injectables, implants, female condom and lactational amenorrhoea method
[2] See Table 15.6.1 for the list of decisions
[3] See Table 15.7.1 for the list of reasons

As may be expected, contraceptive use is positively associated with participation in household decision making and negatively associated with endorsement of wife beating. For example, the proportion of currently married women using a modern method of contraception increases from 36 percent among those not involved in any decision making to 54 percent among those involved in 3-4 decisions. Similarly, the proportion of currently married women using a modern method decreases from 56 percent among those who do not endorse wife beating to 45 percent among those who justify wife beating for all five specific reasons. These same patterns are generally observed for each of the individual contraceptive methods presented in Table 15.9.

15.9 IDEAL FAMILY SIZE AND UNMET NEED BY WOMEN'S STATUS

As a woman becomes more empowered, she is more likely to have a say in the number of children (ideal family size) she desires and the time at which she has them. She has more control over her ability to access and use contraceptives and to space and limit her family size. Women who have a desire to limit or delay their births, but who are not using family planning, are considered to have an unmet need for family planning. Table 15.10 shows how a woman's ideal family size and her unmet need for family planning vary by the two women's empowerment indices.

Table 15.10 Ideal number of children and unmet need for family planning by women's empowerment

Mean ideal number of children for women 15-49 and the percentage of currently married women age 15-49 with an unmet need for family planning, by indicators of women's empowerment, Kenya 2014

Empowerment indicator	Mean ideal number of children[1]	Number of women	Percentage of currently married women with an unmet need for family planning[2]			Number of women
			For spacing	For limiting	Total	
Number of decisions in which women participate[3]						
0	4.8	199	15.9	8.8	24.8	206
1-2	4.2	1,731	12.8	7.7	20.5	1,785
3-4	3.8	6,573	8.0	8.4	16.4	6,719
Number of reasons for which wife beating is justified[4]						
0	3.4	8,348	7.9	7.5	15.4	4,911
1-2	3.6	3,627	9.9	9.3	19.2	2,194
3-4	4.1	1,873	12.3	9.5	21.8	1,280
5	4.6	463	11.3	9.3	20.6	325
Total	3.6	14,311	9.2	8.3	17.5	8,710

[1] Mean excludes respondents who gave non-numeric responses.
[2] See Table 7.12 for the definition of unmet need for family planning
[3] Restricted to currently married women. See Table 15.6.1 for the list of decisions.
[4] See Table 15.7.1 for the list of reasons

As indicated in Table 15.10, mean ideal number of children varies with both indices of women's empowerment. The ideal number of children decreases as the number of decisions in which a woman participates increases, from 4.8 children among women who do not participate in any household decision making to 3.8 among women who participate in 3-4 household decisions. Ideal number of children increases with women's justification of wife beating.

With respect to need for family planning, women who score well on the first index, household decision making, are less likely to have an unmet need for spacing. Similarly, women who do not endorse wife beating are also less likely to have an unmet need for spacing. The relationship between the empowerment indicators and unmet need for limiting is mixed.

15.10 REPRODUCTIVE HEALTH CARE AND WOMEN'S EMPOWERMENT

Women's status is less likely to affect their access to health care services in places where such services are available. In other areas, increased empowerment of women is likely to enhance their ability to seek and use health care services that better meet their own reproductive health needs. Table 15.11 shows use of antenatal, delivery, and postnatal care services according to women's scores on the two empowerment indices. It is expected that empowered women will be more likely to seek out health care services that better meet their reproductive health goals, including safe motherhood.

Table 15.11 Reproductive health care by women's empowerment

Percentage of women age 15-49 with a live birth in the five years preceding the survey who received antenatal care, delivery assistance and postnatal care from health personnel for the most recent birth, by indicators of women's empowerment, Kenya 2014

Empowerment indicator	Percentage receiving antenatal care from a skilled provider[1]	Percentage receiving delivery care from a skilled provider[1]	Percentage of women with a postnatal checkup in the first two days after birth[2]	Number of women with a child born in the last five years
Number of decisions in which women participate[3]				
0	94.4	51.4	38.1	155
1-2	95.7	59.2	47.5	1,294
3-4	97.3	68.8	55.6	4,135
Number of reasons for which wife beating is justified[4]				
0	97.3	73.5	60.2	3,823
1-2	96.0	64.2	50.4	1,741
3-4	94.2	51.2	43.2	1,027
5	92.2	46.7	36.2	285
Total	96.3	66.7	54.2	6,876

[1] 'Skilled provider' includes doctor, nurse, or midwife.
[2] Includes women who received a postnatal checkup from a doctor, nurse, midwife, community health worker or traditional birth attendant (TBA) in the first two days after the birth. Includes women who gave birth in a health facility and those who did not give birth in a health facility.
[3] Restricted to currently married women. See Table 15.6.1 for the list of decisions.
[4] See Table 15.7.1 for the list of reasons

As expected, women's empowerment is positively associated with their access to and use of maternal health services. For example, the proportion of women who received delivery care from health personnel for a live birth in the five years before the survey increases with the number of decisions in which they participate, from 51 percent among those who do not participate in any decisions to 69 percent among those who participate in 3-4 decisions. Similar trends are seen between decision making and women's receipt of antenatal and postnatal care.

Among women who do not justify wife beating for any of the specified reasons, 97 percent received antenatal care, 74 percent received delivery care, and 60 percent received postnatal care within the first two days after delivery. In contrast, the corresponding proportions among women who justify wife beating for all five specified reasons were 92 percent, 47 percent, and 36 percent.

15.11 DIFFERENTIALS IN INFANT AND CHILD MORTALITY BY WOMEN'S STATUS

The ability of women to access information, make decisions, and act effectively in their own interests or in the interests of those who depend on them is essential to their empowerment. If women, the primary caretakers of children, are empowered, the health and survival of their children will be enhanced. In fact, maternal empowerment fits into Mosley and Chen's framework on child survival as an individual-level variable that affects child survival through proximate determinants (Mosley and Chen, 1984).

Table 15.12 presents infant and child mortality rates for the 10-year period preceding the survey, by indicators of women's empowerment. The results appear mixed and do not follow any discernible trend.

Table 15.12 Early childhood mortality rates by women's status

Infant, child, and under-5 mortality rates for the 10-year period preceding the survey, by indicators of women's empowerment, Kenya 2014

Empowerment indicator	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-5 mortality ($_5q_0$)
Number of decisions in which women participate[1]			
0	39	17	55
1-2	55	19	74
3-4	39	14	52
Number of reasons for which wife beating is justified[2]			
0	41	15	56
1-2	36	15	51
3-4	44	24	66
5	40	14	53

[1] Restricted to currently married women. See Table 15.6.1 for the list of decisions.
[2] See Table 15.7.1 for the list of reasons

DOMESTIC VIOLENCE 16

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Key Findings

- Forty-five percent of women and 44 percent of men age 15-49 have experienced physical violence since age 15, and 20 percent and 12 percent, respectively, experienced physical violence within the 12 months prior to the survey. The main perpetrators of physical violence against women are husbands; whereas, the main perpetrators against men are parents, teachers, and others.
- Fourteen percent of women and 6 percent of men age 15-49 report having experienced sexual violence at least once in their lifetime.
- Overall, 39 percent of ever-married women and 9 percent of men age 15-49 report having experienced spousal physical or sexual violence.
- Among women and men who have ever experienced spousal violence (physical or sexual), 39 percent and 24 percent, respectively, reported experiencing physical injuries.
- Forty-four percent of women and 27 percent of men have sought assistance from any source to stop the violence they have experienced.

Since the 1990s, there has been an increased focus on violence against women in general, and domestic violence in particular, in both developed and developing countries. Not only has domestic violence been acknowledged worldwide as a violation of basic human rights, but an increasing amount of research continues to highlight the health burdens, intergenerational effects, and demographic consequences of such violence. Domestic violence occurs in all population subgroups. In many countries, including Kenya, women are often socialised into tolerating and rationalising a key component of domestic violence, namely violence by husbands against wives and to remain silent about it when it occurs. Violence of any kind has a detrimental impact on the economy of a country through increased disability, medical costs, and loss of labour hours; however, because women bear the brunt of domestic violence, they disproportionately bear the health and psychological burdens as well.

The Government of Kenya has enacted several laws and has policies and regulations to prevent and control various forms of violence against women and children including in the Constitution of Kenya (2010), the Sexual Offences Act (2006), the Children's Act (2001), the Penal Code (2009), the Prohibition of Female Genital Mutilation Act (2011), and the National Gender and Equality Commission Act (2011). In recognition of domestic violence as a serious problem in Kenya, the 2014 KDHS included the domestic violence module for both women and men.

16.1 MEASUREMENT OF VIOLENCE

The 2014 KDHS is the third DHS survey in Kenya to include questions on violence perpetrated against women and the first survey to include questions on violence against men. Collecting valid, reliable, and ethical data on domestic violence poses particular challenges. What constitutes violence or abuse varies across cultures and among individuals. A culture of silence usually surrounds domestic violence and can affect reporting. The sensitivity of the topic is another issue. Assuring the safety of respondents and interviewers when asking about domestic violence in a familial setting, protecting individuals who disclose

violence, and reducing the risk of double victimisation of respondents as they relive their experiences are all specific ethical concerns. The responses to these challenges in the 2014 KDHS are described in the sections that follow.

16.1.1 Use of Valid Measures of Violence

In the 2014 KDHS, information was obtained from ever-married respondents on violence committed by their current and former spouses and by others. Information was collected from never-married respondents on violence by anyone. Since international research shows that intimate partner violence is one of the most common forms of violence, especially against women, information on spousal violence was measured in more detail than violence by other perpetrators. This was done by using a shortened, modified version of the Conflict Tactics Scale (Strauss, 1990). Specifically, violence by the current spouse/partner for currently married respondents and by the most recent spouse/partner for formerly married respondents was measured by asking all ever-married women and men the following set of questions.

Does (did) your (last) spouse/partner ever:

(a) Push you, shake you, or throw something at you?

(b) Slap you?

(c) Twist your arm or pull your hair?

(d) Punch you with his/her fist or with something that could hurt you?

(e) Kick you, drag you, or beat you up?

(f) Try to choke you or burn you on purpose?

(g) Threaten or attack you with a knife, gun, or any other weapon?

(h) Physically force you to have sexual intercourse with him/her even when you did not want to?

(i) Physically force you to perform any other sexual acts you did not want to?

(j) Force you with threats or in any other way to perform sexual acts you did not want to?

For every question to which the respondent answered 'yes,' she or he was asked about the frequency of the act in the 12 months preceding the survey. An affirmative answer to one or more of items (a) to (g) above constitutes evidence of physical violence, and an affirmative answer to item (h) to (j) constitutes evidence of sexual violence.

Similarly, emotional violence among ever-married respondents was measured by the following questions.

Does (did) your (last) spouse/partner ever:

(a) Say or do something to humiliate you in front of others?

(b) Threaten to hurt or harm you or someone close to you?

(c) Insult you or make you feel bad about yourself?

This approach of asking about specific acts to measure violence has the advantage of not being affected by different understandings of what constitutes a summary term such as 'violence.' By including a wide range of acts, this approach has the additional advantage of giving the respondent multiple opportunities to disclose any experience of violence.

In addition to these questions that were asked only of ever-married respondents, all women and men were asked about physical violence from persons other than the current or most recent spouse/partner. Respondents who answered yes to this question were asked who committed violence against them and the frequency of such violence during the 12 months preceding the survey. Respondents who reported experiencing different forms of violence were asked for the perpetrators of the violence.

Although this approach to questioning is generally considered to be optimal, the possibility of underreporting of violence, particularly sexual violence, cannot be entirely ruled out in any survey, and this survey is no exception.

16.1.2 Ethical Considerations in the 2014 KDHS

In recognition of the challenges in collecting data on violence, the interviewers in the 2014 KDHS were given special training. The training focused on how to ask sensitive questions, ensure privacy, and build rapport between interviewer and respondent. Rapport with the interviewer, confidentiality, and privacy are all keys to building respondents' trust so that they can safely share their experiences with the interviewer. Also, placement of questions about violence at the end of the questionnaire provides time for the interviewer to develop a certain degree of rapport that should further encourage respondents to share their experiences of violence, if any. In addition, the following protections were built into the survey in keeping with the World Health Organization's ethical and safety recommendations for research on domestic violence (WHO, 2001).

- To maintain confidentiality, only one woman or man per household was administered the questions on violence. In the one-third of the households selected for the male survey, one man per household was randomly selected to receive the questions on domestic violence. In the remaining two-thirds of households, one woman per household was selected for the questions on violence. The random selection of one woman or man was done through a simple selection procedure based on the Kish grid, which was built into the Household Questionnaire (Kish, 1965).

- As a means of obtaining additional consent beyond the initial consent at the start of the interview, the respondent was informed at the start of the domestic violence module that the questions could be sensitive and was reassured regarding the confidentiality of her/his responses.

- The violence module was implemented only if privacy could be obtained. The interviewers were instructed to skip the module, thank the respondent, and end the interview if they could not maintain privacy.

- A brochure that included information on domestic violence and contact information for service centres across the country was provided to all eligible respondents after the interview was completed, irrespective of whether or not they were selected for the module. This was done to safeguard against identifying the respondent selected for the module and to provide information to all respondents so that they could access the services and be informed about what to do in the event of domestic violence.

16.1.3 Subsample for the Violence Module

The domestic violence module for women and the module for men were implemented in separate subsamples of households. Furthermore, in keeping with ethical requirements, only one woman or man per household was selected for the module, as mentioned above. As a result of these restrictions, a total of 5,657 women age 15-49 (4,023 ever-married women) and 4,962 men age 15-54 (2,890 ever-married men) completed the domestic violence module. In all, four women and four men eligible for the domestic violence module could not be interviewed with the module because privacy was not possible, and another 11 women and 29 men could not be interviewed with module due to other reasons.

16.2 Experience of Physical Violence

Tables 16.1.1 and 16.1.2 show the percentage of women and men age 15-49, respectively, who have experienced physical violence since age 15 and the percentage who have experienced violence during the 12 months preceding the survey, by background characteristics. Forty-five percent of women and 44 percent of men age 15-49 have experienced physical violence since age 15, and 20 percent of women and 12 percent of men experienced physical violence in the 12 months prior to the survey including 5 percent of women

and 2 percent of men, respectively, who reported that they had experienced physical violence often in the past 12 months.

Table 16.1.1 Experience of physical violence: Women

Percentage of women age 15-49 who have ever experienced physical violence since age 15 and percentage who have experienced violence during the 12 months preceding the survey, by background characteristics, Kenya 2014

Background characteristic	Percentage who have ever experienced physical violence since age 15[1]	Percentage who have experienced physical violence in the past 12 months			Number of women
		Often	Sometimes	Often or sometimes[2]	
Age					
15-19	31.6	1.4	16.4	18.1	1,009
20-24	43.9	3.8	14.2	18.1	1,065
25-29	47.7	5.3	17.2	22.5	1,176
30-39	47.5	6.6	15.7	22.2	1,492
40-49	52.0	7.2	12.0	19.2	916
Religion					
Roman Catholic	45.2	5.6	15.7	21.3	1,129
Protestant/other Christian	46.4	5.0	15.6	20.6	4,025
Muslim	27.9	2.5	8.6	11.2	354
No religion	39.5	6.8	20.3	27.1	125
Other	*	*	*	*	24
Residence					
Urban	43.9	5.7	12.6	18.4	2,251
Rural	45.3	4.5	17.0	21.6	3,406
Region					
Coast	39.4	3.3	13.3	16.6	568
North Eastern	15.0	0.9	4.7	5.6	118
Eastern	48.8	2.9	17.8	20.8	792
Central	35.3	3.5	13.5	17.0	736
Rift Valley	37.8	4.6	11.3	16.2	1,435
Western	53.3	8.5	18.2	26.8	640
Nyanza	57.1	6.3	23.7	30.0	756
Nairobi	53.9	7.3	13.5	20.8	611
Marital status					
Never married	31.7	0.6	11.0	11.6	1,634
Married or living together	47.2	5.9	17.6	23.7	3,352
Divorced/separated/ widowed	64.3	10.9	13.5	24.5	670
Number of living children					
0	31.8	1.1	13.0	14.3	1,465
1-2	45.3	4.2	14.5	18.7	1,987
3-4	53.8	7.1	18.0	25.2	1,267
5+	51.6	9.8	16.5	26.3	938
Employment					
Employed for cash	50.4	6.4	15.1	21.6	3,017
Employed not for cash	49.3	5.4	18.4	23.8	780
Not employed	33.6	2.4	14.2	16.6	1,858
Education					
No education	38.1	6.4	15.6	21.9	399
Primary incomplete	50.9	7.8	18.3	26.3	1,542
Primary complete	47.8	5.0	16.4	21.5	1,341
Secondary+	40.2	2.9	12.6	15.5	2,375
Wealth quintile					
Lowest	42.9	7.6	16.4	24.3	900
Second	51.3	5.9	20.2	26.1	1,062
Middle	49.1	4.7	17.7	22.5	1,118
Fourth	46.8	3.5	13.4	17.0	1,204
Highest	35.6	4.0	10.3	14.3	1,373
Total 15-49	44.8	5.0	15.2	20.3	5,657

Note: Total includes two women for whom information on religion is missing and two women for whom information on employment is missing. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

[1] Includes violence in the past 12 months. For women who were married before age 15 and who reported physical violence by a spouse, the violence could have occurred before age 15.

[2] Includes women for whom frequency in the past 12 months is not known.

Table 16.1.2 Experience of physical violence: Men

Percentage of men age 15-49 who have ever experienced physical violence since age 15 and percentage who have experienced violence during the 12 months preceding the survey, by background characteristics, Kenya 2014

Background characteristic	Percentage who have ever experienced physical violence since age 15[1]	Percentage who have experienced physical violence in the past 12 months			Number of men
		Often	Sometimes	Often or sometimes[2]	
Age					
15-19	42.2	3.8	20.2	24.0	950
20-24	46.1	1.0	8.2	9.2	836
25-29	42.2	0.8	7.6	8.4	837
30-39	44.2	0.6	7.1	7.7	1,242
40-49	45.0	1.2	6.9	8.2	830
Religion					
Roman Catholic	46.5	2.1	9.8	11.9	1,017
Protestant/other Christian	44.4	1.4	10.6	12.0	3,147
Muslim	38.9	0.5	6.5	7.0	302
No religion	29.9	1.5	6.9	8.4	212
Other	*	*	*	*	14
Residence					
Urban	39.3	1.4	9.1	10.5	1,981
Rural	47.3	1.5	10.7	12.2	2,713
Region					
Coast	41.9	0.5	8.5	8.9	481
North Eastern	32.0	0.7	9.4	10.1	83
Eastern	41.6	2.6	5.8	8.4	773
Central	44.1	2.1	9.7	11.9	566
Rift Valley	39.7	0.9	10.8	11.7	1,201
Western	60.9	1.1	12.3	13.3	445
Nyanza	56.3	1.8	13.5	15.2	568
Nairobi	33.5	1.6	10.4	11.9	577
Marital status					
Never married	42.5	2.0	12.6	14.6	2,070
Married or living together	43.8	0.7	7.4	8.2	2,408
Divorced/separated/ widowed	57.7	4.4	14.0	18.4	216
Number of living children					
0	42.4	2.1	12.8	14.9	2,132
1-2	43.7	1.0	6.8	7.8	1,215
3-4	45.3	0.4	7.1	7.6	812
5+	48.3	1.5	10.5	12.0	536
Employment					
Employed for cash	43.8	0.9	7.7	8.6	3,424
Employed not for cash	44.9	1.7	14.7	16.4	521
Not employed	43.5	3.9	17.3	21.2	747
Education					
No education	33.6	0.3	7.3	7.5	131
Primary incomplete	45.4	1.6	12.9	14.5	1,200
Primary complete	44.8	1.6	8.6	10.2	1,121
Secondary+	43.2	1.4	9.3	10.7	2,241
Wealth quintile					
Lowest	41.8	0.9	10.4	11.3	675
Second	49.9	2.1	13.7	15.9	853
Middle	46.3	1.3	10.6	11.9	944
Fourth	45.8	2.1	9.4	11.5	1,136
Highest	36.4	0.8	7.0	7.8	1,086
Total 15-49	43.9	1.5	10.0	11.5	4,694
50-54	46.2	0.8	3.5	4.3	268
Total 15-54	44.0	1.4	9.7	11.1	4,962

Note: Total includes one man for whom information on religion is missing and two men for whom information on employment is missing. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

[1] Includes violence in the past 12 months. For men who were married before age 15 and who reported physical violence by a spouse, the violence could have occurred before age 15.

[2] Includes men for whom frequency in the past 12 months is not known.

The experience of physical violence differs by background characteristics. It increases by age from 32 percent among women age 15-19 to 52 percent among those age 40-49. The percentage is highest among women who are Roman Catholic or Protestant/other Christian (45-46 percent), women in Nyanza region (57 percent), women with three or more children (52-54 percent), and women who are employed (49-50 percent). Currently married (47 percent) and formerly married (64 percent) women are much more likely than those

who have never been married (32 percent) to have experienced physical violence. The percentage of women who have experienced physical violence since age 15 is higher among those with an incomplete or complete primary education (48-51 percent) and lower among those with no education (38 percent). There are no clear patterns by wealth; however, women in the highest wealth quintile are less likely to have experienced physical violence since age 15 (36 percent) than women in the lower quintiles (43-51 percent).

Men who are Roman Catholic or Protestant/other Christian (44-47 percent), men with five or more children (48 percent), and formerly married men (58 percent) are more likely to have experienced physical violence since age 15 than men in most other subgroups. While women's experience of physical violence since age 15 does not differ by residence, men in rural areas (47 percent) are more likely than men in urban areas (39 percent) to have experienced physical violence. By region, the percentage of men who have experienced physical violence since age 15 is lowest among those in North Eastern region (32 percent) and highest among those in Western region (61 percent). Men with no education (34 percent) and those in the highest wealth quintile (36 percent) are less likely than their counterparts in other subgroups to have experienced physical violence since age 15.

The percentage of women who experienced physical violence in the past 12 months (often or sometimes) also varies by background characteristics. It is highest among women age 25-39 (22-23 percent), women who report having no religion (27 percent), women living in rural areas (22 percent), women in Nyanza (30 percent), currently or previously married women (24-25 percent), women with three or more children (25-26 percent), and women who are employed (22-24 percent). Women with a secondary or higher education (16 percent) and those in the highest wealth quintile (14 percent) are less likely to have experienced physical violence in the past 12 months than most other women.

Men age 15-19 (24 percent), men living in Nyanza (15 percent), formerly married men (18 percent), men with no children (15 percent), men who are not employed (21 percent), men with an incomplete primary education (15 percent), and men in the second wealth quintile (16 percent) are more likely to have experienced physical violence in the past 12 months than other subgroups of men.

16.3 PERPETRATORS OF PHYSICAL VIOLENCE

Tables 16.2.1 and 16.2.2 show perpetrators of physical violence, according to marital status, among women and men age 15-49 who have experienced physical violence since age 15. These tables show that, although the percentages of women and men who report experiencing physical violence since age 15 are very similar, the persons perpetrating the violence differs greatly by gender for ever-married respondents.

Among ever-married women, the most commonly reported perpetrator of physical violence is the current husband or partner (57 percent) followed by the former husband/partner (24 percent). By contrast, among ever-married men, the most common perpetrators are those in the "other" category (46 percent), followed by teachers (29 percent). Only about 1 in 10 men who have experienced physical violence since age 15 mention their current spouse as a perpetrator of physical violence.

Among the never-married respondents reported perpetrators are similar for women and men. Among never-married women who have experienced physical violence since age 15, the most common perpetrators are teachers (48 percent), followed by mothers or stepmothers (40 percent) and fathers or stepfathers (19 percent). Among never-married men, the most commonly reported perpetrators are also teachers (46 percent), followed by those in the "other" category (39 percent), and fathers or stepfathers (21 percent).

Table 16.2.1 Persons committing physical violence: Women

Among women age 15-49 who have experienced physical violence since age 15, percentage who report specific persons who committed the violence, according to the respondent's current marital status, Kenya 2014

	Marital status		
Person	Ever-married	Never married	Total
Current husband/partner	56.6	na	45.0
Former husband/partner	23.8	na	18.9
Current boyfriend	0.5	0.8	0.6
Former boyfriend	1.5	2.5	1.7
Father/step-father	11.1	19.2	12.8
Mother/step-mother	17.2	40.0	21.9
Sister/brother	7.1	7.9	7.2
Daughter/son	0.3	0.1	0.3
Other relative	5.1	12.5	6.6
Mother-in-law	0.3	na	0.3
Father-in-law	0.1	na	0.1
Other in-law	0.8	na	0.8
Teacher	11.9	48.2	19.3
Employer/someone at work	0.0	0.4	0.1
Police/soldier	0.1	0.0	0.1
Other	4.6	16.0	6.9
Number of women	2,015	518	2,533

Note: Women can report more than one person who committed the violence.
na = Not applicable

Table 16.2.2 Persons committing physical violence: Men

Among men age 15-49 who have experienced physical violence since age 15, percentage who report specific persons who committed the violence, according to the respondent's current marital status, Kenya 2014

	Marital status		
Person	Ever-married	Never married	Total
Current wife/partner	11.2	na	6.4
Former wife/partner	8.9	na	5.1
Current girlfriend	0.1	0.0	0.1
Former girlfriend	0.8	0.0	0.4
Father/step-father	19.3	20.8	19.9
Mother/step-mother	14.4	14.0	14.2
Sister/brother	7.6	10.0	8.6
Daughter/son	0.1	0.0	0.0
Other relative	9.1	7.3	8.3
Father-in-law	0.1	na	0.0
Other in-law	1.4	na	0.8
Teacher	29.3	46.0	36.4
Employer/someone at work	2.9	1.2	2.2
Police/soldier	6.3	5.0	5.7
Other	45.7	39.1	42.8
Number of men	1,180	880	2,061

Note: Men can report more than one person who committed the violence.
na = Not applicable

16.4 EXPERIENCE OF SEXUAL VIOLENCE

Tables 16.3.1 and 16.3.2 show the percentage of women and men age 15-49, respectively, who have experienced sexual violence ever and in the past 12 months, according to background characteristics.

Table 16.3.1 shows that 14 percent of women age 15-49 have ever experienced sexual violence and 8 percent have experienced sexual violence in the past 12 months. There are notable variations in the experience of sexual violence by age. The youngest women (age 15-19) are less likely than older women age 30-49 to report sexual violence ever and in the past 12 months (7 percent and 3 percent, compared with 17-18 percent, respectively). Women's report of sexual violence is also lowest, at 6 percent or less, among Muslim, North Eastern, and never married women. The percentages of women who have experienced sexual violence ever and in the past year is lower among those with a secondary or higher education (10 percent and 5 percent, respectively) and those in the highest wealth quintile (11 percent and 6 percent, respectively) than other women in these categories.

Table 16.3.1 Experience of sexual violence: Women

Percentage of women age 15-49 who have ever experienced sexual violence and percentage who have experienced sexual violence in the 12 months preceding the survey, by background characteristics, Kenya 2014

Background characteristic	Percentage who have experienced sexual violence: Ever[1]	In the past 12 months	Number of women
Age			
15-19	6.5	2.7	1,009
20-24	12.6	7.0	1,065
25-29	14.9	10.2	1,176
30-39	17.4	9.2	1,492
40-49	17.5	8.9	916
Religion			
Roman Catholic	14.5	7.5	1,129
Protestant/other Christian	14.9	8.3	4,025
Muslim	5.7	3.2	354
No religion	10.3	6.7	125
Other	*	*	24
Residence			
Urban	15.2	8.3	2,251
Rural	13.3	7.4	3,406
Region			
Coast	8.3	5.2	568
North Eastern	0.6	0.3	118
Eastern	12.2	6.7	792
Central	9.8	4.2	736
Rift Valley	10.5	4.7	1,435
Western	21.9	14.2	640
Nyanza	22.0	12.9	756
Nairobi	20.0	11.6	611
Marital status			
Never married	6.1	1.7	1,634
Married or living together	15.2	10.0	3,352
Divorced/separated/ widowed	28.2	11.7	670
Employment			
Employed for cash	17.4	9.7	3,017
Employed not for cash	16.2	9.5	780
Not employed	7.7	4.0	1,858
Number of living children			
0	7.5	2.9	1,465
1-2	13.7	8.3	1,987
3-4	18.9	10.4	1,267
5+	18.6	10.9	938
Education			
No education	11.7	6.7	399
Primary incomplete	17.9	10.2	1,542
Primary complete	18.1	10.5	1,341
Secondary+	9.7	4.8	2,375
Wealth quintile			
Lowest	13.7	8.1	900
Second	16.2	9.2	1,062
Middle	15.1	8.8	1,118
Fourth	15.1	7.2	1,204
Highest	11.0	6.2	1,373
Total 15-49	14.1	7.8	5,657

Note: Total includes two women for whom information on religion is missing and two women for whom information on employment is missing. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
[1] Includes violence in the past 12 months

Table 16.3.2 Experience of sexual violence: Men

Percentage of men age 15-49 who have ever experienced sexual violence and percentage who have experienced sexual violence in the 12 months preceding the survey, by background characteristics, Kenya 2014

Background characteristic	Percentage who have experienced sexual violence: Ever[1]	In the past 12 months	Number of men
Age			
15-19	2.7	0.9	950
20-24	4.1	0.9	836
25-29	8.4	3.6	837
30-39	8.0	3.5	1,242
40-49	5.5	2.1	830
Religion			
Roman Catholic	6.6	3.2	1,017
Protestant/other Christian	5.9	2.3	3,147
Muslim	2.4	0.1	302
No religion	6.3	1.7	212
Other	*	*	14
Residence			
Urban	6.4	2.6	1,981
Rural	5.5	2.1	2,713
Region			
Coast	3.6	0.9	481
North Eastern	0.0	0.0	83
Eastern	4.9	1.7	773
Central	2.9	1.2	566
Rift Valley	4.7	2.1	1,201
Western	7.2	2.8	445
Nyanza	13.4	4.9	568
Nairobi	6.9	3.0	577
Marital status			
Never married	2.5	0.5	2,070
Married or living together	7.7	3.5	2,408
Divorced/separated/ widowed	17.2	6.6	216
Employment			
Employed for cash	7.1	2.7	3,424
Employed not for cash	3.1	1.6	521
Not employed	2.1	0.9	747
Number of living children			
0	2.8	0.6	2,132
1-2	8.4	3.6	1,215
3-4	7.1	3.2	812
5+	10.3	4.6	536
Education			
No education	1.5	0.2	131
Primary incomplete	5.9	2.7	1,200
Primary complete	6.9	2.6	1,121
Secondary+	5.5	2.0	2,241
Wealth quintile			
Lowest	5.2	2.2	675
Second	7.2	3.4	853
Middle	5.6	1.7	944
Fourth	6.5	2.1	1,136
Highest	4.8	2.1	1,086
Total 15-49	5.9	2.3	4,694
50-54	6.7	2.1	268
Total 15-54	5.9	2.3	4,962

Note: Total includes one man for whom information on religion is missing and two men for whom information on employment is missing. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
[1] Includes violence in the past 12 months

Experience of sexual violence ever and in the past 12 months is highest among formerly married women (28 percent and 12 percent, respectively), women who are employed for cash (17 percent and 10 percent, respectively), Western, Nyanza and Nairobi women (20-22 percent and 12-14 percent), and women with three or more living children (19 percent and 10-11 percent, respectively).

Table 16.3.2 shows that 6 percent of men age 15-49 have ever experienced sexual violence and that 2 percent experienced sexual violence in the past 12 months. Men age 25-40 are more likely than younger or older men to report sexual violence. Sexual violence is highest at 17 percent ever and 7 percent in the past 12 months among formerly married men.

16.5 PERPETRATORS OF SEXUAL VIOLENCE

Tables 16.4.1 and 16.4.2 show perpetrators of sexual violence, according to marital status, among women and men age 15-49 who have ever experienced sexual violence.

Among ever-married women and men, the most commonly reported perpetrators of sexual violence are current spouses/partners (55 percent and 37 percent, respectively) and former spouses/partners (28 percent and 25 percent, respectively).

Among never-married women who have ever experienced sexual violence, the most common perpetrators of violence are strangers (reported by 44 percent of women), followed by friends or acquaintances (14 percent) and those in the "other" category (12 percent). Among never-married men, the most common perpetrators of sexual violence are those in the "other" category (reported by 42 percent of men), friends or acquaintances (19 percent), and strangers and other relatives (12 percent and 11 percent, respectively).

Table 16.4.1 Persons committing sexual violence: Women

Among women age 15-49 who have experienced sexual violence, percentage who report specific persons who committed the violence according to the respondent's current marital status, Kenya 2014

	Marital status		
Person	Ever-married	Never married	Total
Current husband/partner	55.2	na	48.3
Former husband/partner	28.0	na	24.5
Current/former boyfriend	3.9	8.2	4.5
Father/step-father	0.1	4.7	0.7
Brother/step-brother	0.0	1.1	0.2
Other relative	3.2	1.6	3.0
In-law	0.5	na	0.5
Own friend/acquaintance	4.3	14.4	5.5
Family friend	2.3	6.9	2.9
Teacher	0.7	5.8	1.4
Employer/someone at work	1.4	0.0	1.2
Police/soldier	0.2	1.3	0.3
Priest/religious leader	0.9	0.0	0.8
Stranger	5.6	43.8	10.4
Other	2.6	12.2	3.8
Number of women	697	99	796

Note: Women can report more than one person who committed the violence.
na = Not applicable

Table 16.4.2 Persons committing sexual violence: Men

Among men age 15-49 who have experienced sexual violence, percentage who report specific persons who committed the violence according to the respondent's current marital status, Kenya 2014

Person	Marital status		Total
	Ever-married	Never married	
Current wife/partner	36.5	na	29.7
Former wife/partner	25.4	na	20.7
Current/former girlfriend	15.5	7.5	14.0
Father/step-father	0.0	1.8	0.3
Other relative	0.8	10.8	2.7
In-law	0.5	na	0.4
Own friend/acquaintance	9.8	18.9	11.5
Family friend	3.9	0.7	3.3
Teacher	0.5	2.2	0.8
Employer/someone at work	6.1	4.0	5.7
Police/soldier	0.4	0.0	0.3
Stranger	7.5	12.3	8.4
Other	9.9	41.8	15.9
Number of men	223	52	275

Note: Men can report more than one person who committed the violence.
na = Not applicable

16.6 AGE AT FIRST EXPERIENCE OF SEXUAL VIOLENCE

Tables 16.5.1 and 16.5.2 show the percentage of women and men age 15-49, respectively, who experienced sexual violence by specific exact ages, according to current age and current marital status. Four percent of women and 2 percent of men had experienced violence by age 18, including 2 percent of women and 1 percent of men who had experienced sexual violence by age 15. Overall, of those who reported sexual violence about half of women and men had first experienced sexual violence by age 22.

Table 16.5.1 Age at first experience of sexual violence: Women

Percentage of women age 15-49 who experienced sexual violence by specific exact ages, according to current age and current marital status, Kenya 2014

Background characteristic	Percentage who first experienced sexual violence by exact age:					Percentage who have not experienced sexual violence	Number of women
	10	12	15	18	22		
Age							
15-19	0.3	1.0	4.1	na	na	93.5	1,009
20-24	0.1	0.1	1.5	4.4	na	87.4	1,065
25-29	0.2	0.5	1.0	3.2	6.7	85.1	1,176
30-39	0.2	0.3	1.9	4.7	7.6	82.6	1,492
40-49	0.2	0.2	1.1	3.7	6.9	82.5	916
Marital status							
Never married	0.3	0.7	2.8	4.2	5.6	93.9	1,634
Ever married	0.2	0.3	1.6	4.5	8.4	82.7	4,023
Total	0.2	0.4	1.9	4.4	7.6	85.9	5,657

na = Not applicable

Table 16.5.2 Age at first experience of sexual violence: Men

Percentage of men age 15-49 who experienced sexual violence by specific exact ages, according to current age and current marital status, Kenya 2014

Background characteristic	Percentage who first experienced sexual violence by exact age: 10	12	15	18	22	Percentage who have not experienced sexual violence	Number of men
Age							
15-19	0.1	0.1	1.1	na	na	97.3	950
20-24	0.3	0.6	1.0	2.1	na	95.9	836
25-29	0.3	0.5	1.0	1.6	3.4	91.6	837
30-39	0.4	0.8	1.0	1.6	3.1	92.0	1,242
40-49	0.2	0.2	0.3	0.4	1.2	94.5	830
Marital status							
Never married	0.2	0.2	0.9	1.7	2.1	97.5	2,070
Ever married	0.4	0.7	0.9	1.5	3.3	91.5	2,624
Total	0.3	0.5	0.9	1.6	2.8	94.1	4,694

na = Not applicable

16.7 EXPERIENCE OF DIFFERENT FORMS OF VIOLENCE

Tables 16.6.1 and 16.6.2 present information on the experience of various forms of violence among respondents age 15-49.

Table 16.6.1 Experience of different forms of violence: Women

Percentage of women age 15-49 who have ever experienced different forms of violence by current age, Kenya 2014

Age	Physical violence only	Sexual violence only	Physical and sexual violence	Physical or sexual violence	Number of women
15-19	28.1	3.1	3.4	34.7	1,009
15-17	29.5	2.5	2.3	34.3	639
18-19	25.8	4.2	5.4	35.4	371
20-24	34.3	3.0	9.6	46.9	1,065
25-29	34.9	2.0	12.9	49.8	1,176
30-39	32.9	2.8	14.7	50.3	1,492
40-49	36.6	2.1	15.4	54.2	916
Total	33.3	2.6	11.5	47.4	5,657

Table 16.6.2 Experience of different forms of violence: Men

Percentage of men age 15-49 who have ever experienced different forms of violence by current age, Kenya 2014

Age	Physical violence only	Sexual violence only	Physical and sexual violence	Physical or sexual violence	Number of men
15-19	40.3	0.8	1.9	43.0	950
15-17	41.7	1.0	1.8	44.5	578
18-19	38.0	0.4	2.1	40.6	371
20-24	43.2	1.2	2.9	47.3	836
25-29	36.8	3.0	5.4	45.2	837
30-39	38.1	1.9	6.1	46.0	1,242
40-49	40.0	0.6	4.9	45.6	830
Total 15-49	39.5	1.5	4.4	45.4	4,694
50-54	39.6	0.2	6.5	46.4	268
Total 15-54	39.6	1.4	4.5	45.5	4,962

Forty-seven percent of women age 15-49 reported that they have experienced either physical or sexual violence. Thirty-three percent have experienced physical violence only, 3 percent have experienced sexual violence only, and 12 percent have experienced both physical and sexual violence. The percentage of women who have experienced physical or sexual violence increases steadily with age, from 35 percent among those age 15-19 to 54 percent among those age 40-49.

Overall, 45 percent of men age 15-49 reported that they have experienced either physical or sexual violence; 40 percent have experienced physical violence only, 2 percent have experienced sexual violence only, and 4 percent have experienced both physical and sexual violence. For men there are no clear relationships between age and the various forms of violence.

16.8 VIOLENCE DURING PREGNANCY

Female respondents who had ever been pregnant were asked specifically whether they had ever experienced physical violence while pregnant. Table 16.7 presents, among women age 15-49 who have ever been pregnant, the percentage who have ever experienced physical violence during pregnancy according to background characteristics.

Nine percent of ever-pregnant women have experienced physical violence during pregnancy. By age, this percentage is lowest among women age 15-19 (6 percent) and highest among women age 25-29 (11 percent). Physical violence during pregnancy is highest among women residing in Nairobi (18 percent, and formerly married women (21 percent).

Women with three or more children (10-11 percent), those with an incomplete primary education (12 percent), and those in the second or fourth wealth quintile (11 percent each) are more likely than other women in these categories to have experienced violence during pregnancy.

16.9 MARITAL CONTROL BY SPOUSE

Wives' or husbands' close control and monitoring of the behaviour of their spouse is known to be an important warning sign and correlate of violence in a relationship. A series of questions were included in the 2014 KDHS to elicit the degree of marital control exercised by husbands or wives over their spouses. Controlling behaviours most often manifest themselves in terms of extreme possessiveness, jealousy, and attempts to isolate spouses from their family and friends.

Table 16.7 Experience of violence during pregnancy

Among women age 15-49 who have ever been pregnant, percentage who have ever experienced physical violence during pregnancy, by background characteristics, Kenya 2014

Background characteristic	Percentage who experienced violence during pregnancy	Number of women who have ever been pregnant
Age		
15-19	5.5	168
20-24	9.4	736
25-29	10.8	1,070
30-39	8.4	1,459
40-49	9.0	897
Religion		
Roman Catholic	8.6	866
Protestant/other Christian	9.8	3,060
Muslim	5.6	271
No religion	7.0	116
Other	*	17
Residence		
Urban	9.7	1,739
Rural	8.8	2,591
Region		
Coast	5.1	455
North Eastern	2.7	87
Eastern	7.0	615
Central	4.0	559
Rift Valley	7.9	1,097
Western	10.6	459
Nyanza	14.4	586
Nairobi	18.1	473
Marital status		
Never married	4.0	403
Married or living together	7.4	3,269
Divorced/separated/ widowed	20.9	659
Number of living children		
0	4.4	138
1-2	8.3	1,987
3-4	10.6	1,267
5+	9.9	938
Education		
No education	6.6	370
Primary incomplete	12.4	1,226
Primary complete	8.9	1,203
Secondary+	7.4	1,532
Wealth quintile		
Lowest	9.8	741
Second	10.8	812
Middle	8.4	837
Fourth	11.4	971
Highest	5.7	968
Total 15-49	9.2	4,331

Note: Total includes two women for whom information on religion is missing. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

To determine degree of marital control, ever-married women and men were asked whether their current or former spouse exhibited each of the following controlling behaviours: (1) is jealous or gets angry if she/he talks to other men/women, (2) frequently accuses her/him of being unfaithful, (3) does not permit meetings with female/male friends, (4) tries to limit contact with her/his family, and (5) insists on knowing where she/he is at all times. Because the concentration of such behaviours is more noteworthy than the display of any single behaviour, the proportion of respondents whose spouses display at least three of the specified behaviours is highlighted. Tables 16.8.1 and 16.8.2 present the percentage of ever-married women and men age 15-49, respectively, whose spouses have ever displayed each of the listed behaviours, by selected background characteristics.

Table 16.8.1 Marital control exercised by husbands

Percentage of ever-married women age 15-49 whose husbands/partners have ever demonstrated specific types of controlling behaviours, by background characteristics, Kenya 2014

Background characteristic	Percentage of women whose husband/partner: Is jealous or angry if she talks to other men	Frequently accuses her of being unfaithful	Does not permit her to meet her female friends	Tries to limit her contact with her family	Insists on knowing where she is at all times	Displays 3 or more of the specific behaviours	Displays none of the specific behaviours	Number of ever-married women
Age								
15-19	60.1	15.1	18.0	5.1	46.1	20.2	32.0	111
20-24	52.4	22.6	22.5	10.5	41.8	25.9	36.6	647
25-29	55.4	24.5	22.4	11.7	43.3	26.0	34.5	1,002
30-39	50.9	22.9	19.7	11.7	41.4	23.4	36.4	1,395
40-49	51.7	21.7	19.2	13.5	38.1	24.1	40.7	867
Religion								
Roman Catholic	52.3	20.5	18.6	10.8	37.9	21.7	39.0	783
Protestant/other Christian	52.3	23.3	21.0	12.4	42.3	24.8	36.0	2,853
Muslim	52.6	16.6	23.4	8.4	39.4	24.6	41.6	271
No religion	65.7	37.0	21.8	8.0	42.3	31.3	29.7	100
Other	*	*	*	*	*	*	*	15
Residence								
Urban	57.9	23.2	23.8	11.6	45.4	27.6	32.7	1,588
Rural	49.3	22.5	18.6	11.7	38.7	22.5	39.4	2,435
Region								
Coast	66.8	26.4	26.7	11.9	50.5	32.6	28.5	439
North Eastern	31.3	9.9	9.4	2.6	18.5	10.5	66.9	97
Eastern	50.9	23.6	17.7	13.1	44.1	23.6	33.7	585
Central	51.9	18.8	17.1	9.7	43.3	20.7	37.1	518
Rift Valley	48.3	18.1	17.2	8.7	33.3	18.1	41.7	983
Western	54.0	29.3	25.8	16.7	40.3	29.8	36.4	433
Nyanza	47.5	26.4	23.4	16.3	43.8	26.7	36.6	553
Nairobi	62.3	25.2	24.5	9.9	47.8	31.6	31.2	414
Marital status								
Married or living together	49.3	20.1	16.5	9.5	37.7	19.9	39.3	3,352
Divorced/separated/ widowed	69.9	36.1	41.1	22.6	59.7	47.6	24.1	670
Number of living children								
0	48.8	24.0	18.2	8.5	39.9	21.9	39.1	203
1-2	55.9	19.2	21.6	10.7	42.1	24.2	35.0	1,657
3-4	50.3	24.9	20.6	12.8	42.9	25.4	37.4	1,238
5+	51.0	26.0	19.6	12.7	38.3	24.4	38.6	925
Employment								
Employed for cash	55.2	24.8	22.7	13.6	44.4	27.3	34.2	2,427
Employed not for cash	51.5	22.0	17.0	11.0	41.0	21.0	35.0	665
Not employed	47.1	18.1	17.9	7.3	33.8	19.8	44.7	929
Education								
No education	40.7	23.7	15.4	9.4	33.2	19.1	50.3	375
Primary incomplete	54.5	27.9	21.9	13.6	42.0	27.5	35.9	1,150
Primary complete	56.3	21.3	21.3	12.0	42.1	24.4	32.9	1,120
Secondary+	51.6	19.5	20.5	10.5	42.4	23.5	37.0	1,378
Wealth quintile								
Lowest	50.4	26.8	20.9	10.7	39.4	24.4	39.0	707
Second	51.2	24.6	20.2	13.5	40.2	24.5	37.5	781
Middle	55.3	25.3	21.5	13.4	43.7	26.1	32.9	760
Fourth	53.5	20.5	21.7	10.9	41.3	25.5	37.1	894
Highest	52.9	18.1	19.1	10.2	42.0	22.1	37.3	880
Woman afraid of husband/partner								
Most of the time afraid	72.1	47.7	42.3	32.7	65.1	53.4	16.3	495
Sometimes afraid	64.1	31.7	29.6	17.6	50.8	34.9	26.6	949
Never afraid	44.9	14.7	13.1	5.5	33.3	15.1	44.3	2,571
Total	52.7	22.8	20.6	11.7	41.4	24.5	36.8	4,023

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated or widowed women. Total includes one woman for whom information on religion is missing, two women for whom information on employment is missing, and seven women for whom information on fear of husband/partner is missing. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

Table 16.8.2 Marital control exercised by wives

Percentage of ever-married men age 15-49 whose wives/partners have ever demonstrated specific types of controlling behaviours, by background characteristics, Kenya 2014

Background characteristic	Percentage of men whose wife/partner: Is jealous or angry if he talks to other women	Frequently accuses him of being unfaithful	Does not permit him to meet his male friends	Tries to limit his contact with his family	Insists on knowing where he is at all times	Displays 3 or more of the specific behaviours	Displays none of the specific behaviours	Number of ever-married men
Age								
15-19	*	*	*	*	*	*	*	9
20-24	66.4	39.1	15.7	2.7	54.9	32.9	23.0	168
25-29	57.2	26.7	12.3	4.8	43.0	20.2	29.6	534
30-39	57.9	31.3	10.3	5.7	42.6	21.5	31.0	1,115
40-49	56.6	29.4	10.8	6.5	40.8	21.2	32.8	799
Religion								
Roman Catholic	60.2	32.8	11.1	6.4	44.3	23.2	28.8	592
Protestant/other Christian	56.9	29.3	11.7	5.8	43.4	21.7	30.8	1,750
Muslim	62.0	29.8	5.9	3.7	38.1	19.4	32.9	157
No religion	53.4	32.9	12.5	1.6	35.3	21.2	38.2	115
Other	*	*	*	*	*	*	*	10
Residence								
Urban	59.3	29.8	12.0	6.6	43.4	21.5	29.0	1,192
Rural	56.5	30.5	10.6	4.7	42.5	22.1	32.4	1,432
Region								
Coast	73.2	35.1	13.0	3.5	63.6	30.3	18.0	244
North Eastern	40.1	16.5	0.0	0.0	15.5	4.9	54.8	42
Eastern	59.3	34.2	11.4	7.7	55.8	26.3	25.4	371
Central	55.5	24.8	7.0	4.5	52.9	19.7	26.4	337
Rift Valley	54.0	29.0	7.6	3.1	27.5	16.4	39.6	655
Western	51.5	27.0	11.8	7.8	25.3	16.7	40.1	253
Nyanza	56.5	35.5	19.8	8.6	53.3	29.1	24.6	345
Nairobi	61.9	28.8	13.0	6.5	39.9	21.8	30.3	377
Marital status								
Married or living together	56.5	28.1	10.3	4.7	41.6	20.0	31.9	2,408
Divorced/separated/ widowed	71.4	53.0	21.2	15.7	57.3	42.1	19.0	216
Number of living children								
0	61.9	25.8	12.6	3.9	53.5	23.2	27.6	206
1-2	58.8	28.5	11.0	5.5	45.1	21.5	29.1	1,083
3-4	55.1	30.4	11.0	5.3	39.9	21.7	33.3	800
5+	58.1	35.1	11.5	6.9	38.6	22.0	32.1	535
Employment								
Employed for cash	58.0	30.2	11.3	5.7	43.2	22.0	30.6	2,398
Employed not for cash	54.2	28.8	10.4	3.7	38.6	18.5	33.9	213
Not employed	(74.0)	(51.4)	(10.2)	(11.4)	(58.2)	(37.2)	(20.3)	13
Education								
No education	53.5	34.9	3.3	2.0	28.9	14.4	38.0	101
Primary incomplete	57.2	34.7	11.3	6.0	38.6	22.8	32.7	603
Primary complete	55.8	29.3	12.2	6.7	43.0	22.1	32.5	770
Secondary+	59.8	28.1	11.2	4.9	46.3	21.8	28.2	1,150
Wealth quintile								
Lowest	58.3	36.3	11.3	5.9	35.1	20.6	32.4	375
Second	55.0	32.7	14.0	7.6	39.7	23.3	33.6	470
Middle	60.1	31.0	11.4	3.9	47.5	24.0	27.5	496
Fourth	54.9	26.5	9.5	4.8	42.9	19.8	32.7	638
Highest	60.5	27.8	10.7	6.1	46.1	21.7	28.7	645
Man afraid of wife/partner								
Most of the time afraid	(66.2)	(48.0)	(29.8)	(11.8)	(65.5)	(45.9)	(25.4)	35
Sometimes afraid	79.0	59.2	32.8	19.5	61.7	49.9	11.5	168
Never afraid	56.2	27.9	9.5	4.5	41.4	19.6	32.2	2,411
Total 15-49	57.8	30.2	11.2	5.6	42.9	21.8	30.9	2,624
50-54	52.1	28.2	8.0	6.1	41.4	22.3	36.8	265
Total 15-54	57.2	30.0	10.9	5.6	42.7	21.9	31.4	2,890

Note: Wife/partner refers to the current wife/partner for currently married men and the most recent wife/partner for divorced, separated or widowed men. Total includes one man for whom information on religion is missing, two men for whom information on employment is missing, and nine men for whom information on fear of wife/partner is missing. Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

The main controlling behaviours women experienced from their husbands were jealousy or anger if they talked to other men (53 percent) and insisting on knowing where they are at all times (41 percent). The next most common behaviours were husbands frequently accusing them of being unfaithful (23 percent) and not permitting them to meet female friends (21 percent).

Twenty-five percent of ever-married women say that their husbands display three or more of these controlling behaviours. Notably, among women who report being afraid of their husbands most of the time, the proportion who report that their husbands display three or more of these controlling behaviours is twice as high (53 percent) as the average for all ever-married women. About half of formerly married women also report that their former husband displayed three or more of these behaviours (48 percent). Women who report having no religion (31 percent), women living in the Coast and Nairobi regions (32-33 percent), women employed for cash (27 percent), and women with primary incomplete education (28 percent) are also more likely than most other women to have husbands who display three or more controlling behaviours.

Table 16.8.2 shows that, similar to women, the main controlling behaviours men experience from their wives were jealousy or anger if they talked to other women (58 percent) and insisting on knowing where they are at all times (43 percent). Thirty percent of men reported that their wives frequently accuse them of being unfaithful, and 11 percent said that their wives do not permit them to meet male friends.

Twenty-two percent of ever-married men say that their wives display three or more of these controlling behaviours. As with women, men who are afraid of their wives are much more likely to report controlling behaviours by their wives. Further, men reporting that their wives display three or more controlling behaviours is relatively high among men age 20-24 (33 percent), Christian men (22-23 percent), men living in the Coast and in Nyanza (29-30 percent), and formerly married men (42 percent). The percentage of men whose wives display at least three controlling behaviours is lowest among those with no education compared to those with some education (14 percent compared with 22-23 percent) and varies inconsistently by wealth.

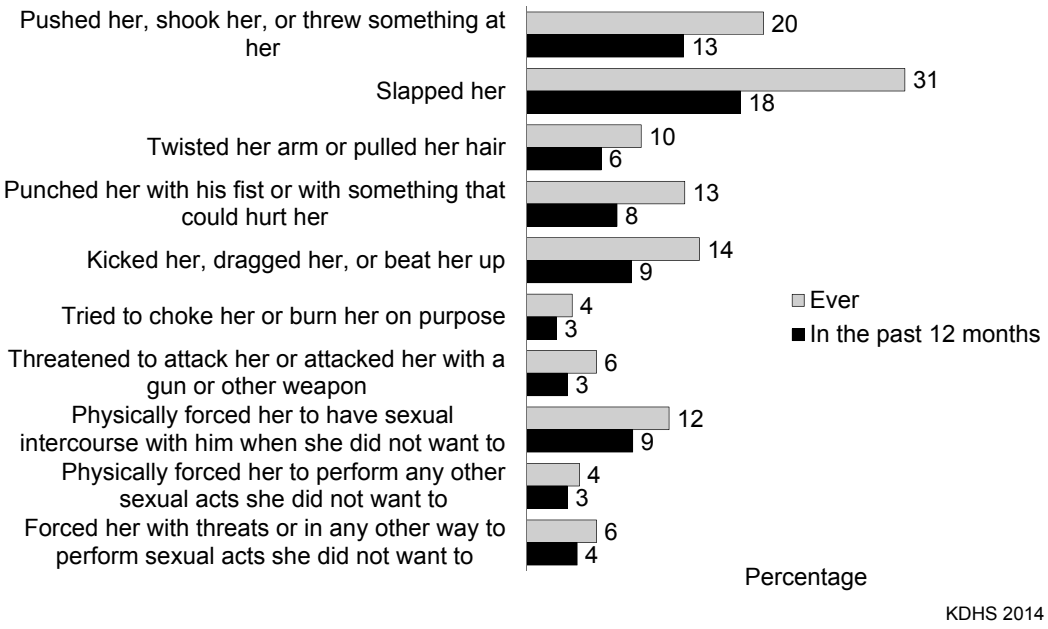
16.10 Forms of Spousal Violence

Different types of violence are not mutually exclusive, and people may report multiple forms of violence. Research suggests that physical violence in intimate relationships is often accompanied by psychological abuse and, in one-third to more than one-half of cases, by sexual abuse (Krug et al., 2002). Tables 16.9.1 and 16.9.2 show the percentage of ever-married women and ever-married men age 15-49, respectively, who have experienced various forms of violence by their spouse over the course of the marriage and in the 12 months preceding the survey. Note that respondents who are currently married reported on violence by their current spouse, and respondents who are widowed, divorced, or separated reported on violence by their most recent spouse.

Table 16.9.1 shows that 37 percent of ever-married women reported ever experiencing physical violence committed by their current or most recent husband or partner, 13 percent reported sexual violence, and 32 percent reported emotional violence. About 4 in 10 ever-married women (39 percent) have experienced physical and/or sexual violence, and slightly less than half (47 percent) have experienced at least one of the three forms of spousal violence.

Figure 6.1 shows the percentage of ever-married women reporting specific acts of physical or sexual violence perpetrated by their current or most recent husband. The most common form of spousal physical or sexual violence reported by ever-married women is being slapped (31 percent) followed by being pushed, shaken, or having something thrown at them. About equal percentages of women report experiencing being punched with his fist or something that could hurt her and being kicked dragged or beaten up (13-14 percent). The most common form of spousal sexual violence is being physically forced to have sex against her will.

Figure 16.1 **Percentage of ever-married women age 15-49 who have experienced specific types of spousal physical and sexual violence by the current or most recent husband/partner**



Specific acts of emotional violence are also quite common. Twenty-six percent of women reported that their husbands have insulted them or made them feel bad about themselves and 18 percent reported that their husband said or did something to humiliate them in front of others.

Twenty-three percent of ever-married women reported experiencing spousal physical violence in the past 12 months, with 7 percent having experienced it often during the period. Ten percent reported having experienced spousal sexual violence in the past 12 months (3 percent often). Additionally, 24 percent of women reported spousal emotional violence in the past 12 months (9 percent often). Overall, one-third (33 percent) of ever-married women experienced at least one of the three forms of violence by their current or most recent husband or partner in the past year.

Ever-married women who had been married more than once were also asked about physical or sexual violence by their earlier husband(s) or partner(s). Different forms of violence perpetrated by all husbands/partners is provided in the lower panel of Table 16.9.1. Overall, 38 percent of ever-married women have experienced physical violence by any husband ever and 14 percent have experienced sexual violence and 41 percent have experienced physical or sexual violence.

Table 16.9.1 Forms of spousal violence: Women

Percentage of ever-married women age 15-49 who have experienced various forms of violence ever or in the 12 months preceding the survey, committed by their husband/partner, Kenya 2014

Type of violence	Ever	In the past 12 months[1]		
		Often	Sometimes	Often or sometimes
SPOUSAL VIOLENCE COMMITTED BY CURRENT OR MOST RECENT HUSBAND/PARTNER				
Physical violence				
Any physical violence	36.9	6.7	15.9	22.6
Pushed her, shook her, or threw something at her	19.6	3.8	9.3	13.0
Slapped her	31.3	4.5	13.2	17.7
Twisted her arm or pulled her hair	9.5	2.2	4.0	6.2
Punched her with his fist or with something that could hurt her	13.1	2.8	4.7	7.5
Kicked her, dragged her, or beat her up	14.3	3.2	5.5	8.7
Tried to choke her or burn her on purpose	3.8	0.7	1.9	2.5
Threatened her or attacked her with a knife, gun, or other weapon	5.8	1.1	2.3	3.4
Sexual violence				
Any sexual violence	13.3	3.4	6.4	9.8
Physically forced her to have sexual intercourse with him when she did not want to	11.8	2.8	6.0	8.8
Physically forced her to perform any other sexual acts she did not want to	4.4	1.4	2.0	3.4
Forced her with threats or in any other way to perform sexual acts she did not want to	5.8	1.5	2.7	4.2
Emotional violence				
Any emotional violence	32.4	9.4	14.4	23.8
Said or did something to humiliate her in front of others	17.9	4.9	8.2	13.1
Threatened to hurt or harm her or someone she cared about	14.7	3.7	6.3	10.0
Insulted her or made her feel bad about herself	25.7	7.4	11.9	19.2
Any form of physical and/or sexual violence	39.4	7.9	17.5	25.4
Any form of emotional and/or physical and/or sexual violence	47.1	12.2	20.5	32.7
SPOUSAL VIOLENCE COMMITTED BY ANY HUSBAND/PARTNER				
Physical violence	38.4	na	na	22.7
Sexual violence	14.0	na	na	9.8
Physical and/or sexual violence	40.7	na	na	25.5
Number of ever-married women	4,023	4,023	4,023	4,023

[1] For widows, estimates of spousal violence by the current or most recent spouse in the past 12 months are not known; hence widows are excluded from the estimate of spousal violence by the current or most recent spouse in the past 12 months. However, widows are included in the estimate of spousal violence committed by any husband/partner in the past 12 months.
na = Not applicable

Table 16.9.2 shows that, among ever-married men, 7 percent reported ever experiencing physical violence by their current or most recent wife or partner, 4 percent reported sexual violence, and 21 percent reported emotional violence. About 1 in 10 men (9 percent) have ever experienced physical and/or sexual violence, and about 1 in 4 (24 percent) have experienced at least one of the three forms of spousal violence by their current or most recent wife or partner.

Table 16.9.2 Forms of spousal violence: Men

Percentage of ever-married men age 15-49 who have experienced various forms of violence ever or in the 12 months preceding the survey, committed by their wife/partner, Kenya 2014

Type of violence	Ever	In the past 12 months		
		Often	Sometimes	Often or sometimes
SPOUSAL VIOLENCE COMMITTED BY CURRENT OR MOST RECENT WIFE/PARTNER				
Physical violence				
Any physical violence	7.1	0.6	4.4	5.0
Pushed him, shook him, or threw something at him	5.0	0.4	3.1	3.5
Slapped him	2.4	0.3	1.4	1.7
Twisted his arm or pulled his hair	1.4	0.1	1.0	1.1
Punched him with her fist or with something that could hurt him	2.0	0.2	1.0	1.2
Kicked him, dragged him, or beat him up	1.0	0.1	0.7	0.8
Tried to choke him or burn him on purpose	0.7	0.0	0.5	0.6
Threatened him or attacked him with a knife, gun, or other weapon	2.8	0.3	1.6	1.9
Sexual violence				
Any sexual violence	4.0	0.8	2.4	3.2
Physically forced him to have sexual intercourse with her when he did not want to	3.4	0.6	2.1	2.7
Physically forced him to perform any other sexual acts he did not want to	1.1	0.2	0.7	1.0
Forced him with threats or in any other way to perform sexual acts he did not want to	1.3	0.2	0.9	1.1
Emotional violence				
Any emotional violence	20.9	3.6	11.7	15.3
Said or did something to humiliate him in front of others	13.2	1.9	7.5	9.5
Threatened to hurt or harm him or someone he cared about	6.5	1.1	3.3	4.3
Insulted him or made him feel bad about himself	15.4	1.9	9.0	10.9
Any form of physical and/or sexual violence	9.4	1.3	5.8	7.1
Any form of emotional and/or physical and/or sexual violence	24.1	4.2	14.0	18.2
SPOUSAL VIOLENCE COMMITTED BY ANY WIFE/PARTNER				
Physical violence	8.6	na	na	5.0
Sexual violence	4.4	na	na	3.3
Physical and/or sexual violence	11.1	na	na	7.2
Number of ever-married men	2,624	2,624	2,624	2,624

[1] For widowers, estimates of spousal violence by the current or most recent spouse in the past 12 months are not known; hence widowers are excluded from the estimate of spousal violence by the current or most recent spouse in the past 12 months. However, widowers are included in the estimate of spousal violence committed by any wife/partner in the past 12 months.
na = Not applicable

Fifteen percent of ever-married men reported that their current or most recent spouse or partner ever insulted them or made them feel bad about themselves, and 13 percent reported that their wife or partner ever said or did something to humiliate them in front of others.

Five percent of ever-married men reported experiencing spousal physical violence in the past 12 months, with 1 percent having experienced it often. Three percent reported having experienced spousal sexual violence in the past 12 months (1 percent often). In addition, 15 percent of men reported emotional violence in the past 12 months (4 percent often). Overall, 18 percent of ever-married men have experienced at least one of the three forms of spousal violence by their current or most recent wife or partner in the past year.

About 1 in 10 men (11 percent) reported having ever experienced physical and/or sexual violence by any current or former wife or partner.

16.11 SPOUSAL VIOLENCE BY BACKGROUND CHARACTERISTICS

Tables 16.10.1 and 16.10.2 show the percentage of ever-married women and men age 15-49, respectively, who have experienced spousal emotional, physical, or sexual violence by selected background characteristics.

Table 16.10.1 Spousal violence by background characteristics: Women

Percentage of ever-married women age 15-49 who have ever experienced emotional, physical or sexual violence committed by their husband/partner, by background characteristics, Kenya 2014

Background characteristic	Emotional violence	Physical violence	Sexual violence	Physical and sexual	Physical and sexual and emotional	Physical or sexual	Physical or sexual or emotional	Number of ever-married women
Age								
15-19	18.7	20.3	6.6	2.6	2.6	24.4	30.7	111
20-24	27.5	33.0	12.2	8.4	7.2	36.8	41.5	647
25-29	32.7	36.7	14.3	11.0	8.5	40.0	48.7	1,002
30-39	33.7	38.2	13.7	11.7	8.9	40.2	48.5	1,395
40-49	35.2	40.1	13.0	11.8	9.6	41.4	49.5	867
Religion								
Roman Catholic	31.0	39.9	13.3	11.8	7.9	41.4	48.3	783
Protestant/other Christian	34.6	38.0	14.2	11.3	9.3	41.0	49.1	2,853
Muslim	11.7	17.4	4.9	4.2	2.9	18.1	22.7	271
No religion	30.9	38.1	8.8	6.8	5.4	40.1	46.0	100
Other	*	*	*	*	*	*	*	15
Residence								
Urban	32.3	33.6	14.0	11.1	8.9	36.6	46.4	1,588
Rural	32.4	39.1	12.8	10.6	8.2	41.3	47.6	2,435
Region								
Coast	22.2	25.9	8.2	5.4	4.2	28.7	35.2	439
North Eastern	4.7	10.1	0.4	0.4	0.4	10.1	12.2	97
Eastern	32.0	39.6	12.3	10.2	8.1	41.6	48.3	585
Central	27.6	31.3	7.9	5.3	2.9	33.9	42.5	518
Rift Valley	28.2	31.1	9.3	7.8	5.9	32.7	41.4	983
Western	45.5	49.2	23.8	19.5	16.6	53.4	59.5	433
Nyanza	40.9	47.7	18.5	16.0	12.8	50.2	56.9	553
Nairobi	40.8	44.7	21.1	17.6	14.5	48.2	59.6	414
Marital status								
Married or living together	28.8	33.7	11.5	9.0	6.9	36.2	43.4	3,352
Divorced/separated/widowed	50.4	53.1	22.3	19.7	16.5	55.6	65.7	670
Number of living children								
0	21.9	17.1	7.7	3.1	2.4	21.7	31.9	203
1-2	28.8	31.4	12.4	9.2	7.2	34.6	43.3	1,657
3-4	36.5	42.5	14.6	12.8	10.5	44.3	51.1	1,238
5+	35.3	43.6	14.3	12.5	9.5	45.4	52.0	925
Employment								
Employed for cash	36.3	39.9	15.1	12.3	9.7	42.7	51.2	2,427
Employed not for cash	35.7	42.0	15.0	11.6	9.6	45.4	52.8	665
Not employed	19.6	25.4	7.1	6.1	4.4	26.4	32.3	929
Education								
No education	22.7	33.0	9.2	7.9	7.3	34.3	37.6	375
Primary incomplete	38.5	46.3	15.9	14.1	10.8	48.1	54.3	1,150
Primary complete	31.7	37.6	15.8	12.8	9.4	40.6	48.3	1,120
Secondary+	30.4	29.7	10.2	7.2	6.1	32.6	42.8	1,378
Wealth quintile								
Lowest	30.7	37.1	13.6	10.5	9.0	40.2	46.0	707
Second	35.6	44.4	13.7	11.5	8.4	46.6	52.7	781
Middle	36.8	40.9	15.9	13.8	11.2	43.0	50.3	760
Fourth	34.4	35.5	12.5	10.2	8.0	37.8	47.7	894
Highest	24.9	28.1	11.1	8.3	6.4	30.9	39.7	880
Total 15-49	32.4	36.9	13.3	10.8	8.5	39.4	47.1	4,023

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated or widowed women. Total includes one woman for whom information on religion is missing and two women for whom information on employment is missing. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

Forty-seven percent of ever-married women have experienced at least one form of spousal violence (emotional, physical, or sexual) and 9 percent have experienced all three forms of violence.

The percentage of women who have experienced at least one form of spousal violence generally increases with age. It is higher among Christian women (48-49 percent) and lower among Muslim women (23 percent). By region, women in Western and Nairobi report the highest levels of violence (60 percent each). Those who are divorced, separated, or widowed (66 percent) more often report violence than any other

group of women. Women with no education are less likely to experience any form of violence (38 percent) than women in the other educational categories, even women who have completed secondary education (43 percent). Experience of at least one form of violence peaks among women in the second wealth quintile (53 percent) and is lower in other wealth quintiles.

Table 16.10.2 shows that 24 percent of ever-married men have experienced at least one form of spousal violence (emotional, physical, or sexual), and just 1 percent have experienced all three forms of violence. Notably, most of the spousal violence men report is in the form of emotional violence. Only 9 percent of ever-married men report spousal physical or sexual violence compared with 39 percent of ever-married women. Muslim men, men in the North Eastern region, and men with no education are less likely than other subgroups of men to report at least one form of spousal violence.

Table 16.10.2 Spousal violence by background characteristics: Men

Percentage of ever-married men age 15-49 who have ever experienced emotional, physical or sexual violence committed by their wife/partner, by background characteristics, Kenya 2014

Background characteristic	Emotional violence	Physical violence	Sexual violence	Physical and sexual	Physical and sexual and emotional	Physical or sexual	Physical or sexual or emotional	Number of ever-married men
Age								
15-19	*	*	*	*	*	*	*	9
20-24	18.3	10.6	4.8	1.5	1.1	14.0	25.3	168
25-29	23.0	7.3	6.2	2.3	2.0	11.1	26.0	534
30-39	21.9	5.9	3.7	1.8	1.6	7.8	25.0	1,115
40-49	18.7	7.6	2.6	1.0	0.7	9.3	21.4	799
Religion								
Roman Catholic	20.5	8.2	6.4	2.7	2.4	11.9	24.7	592
Protestant/ other Christian	21.7	7.2	3.6	1.4	1.1	9.3	24.7	1,750
Muslim	13.5	3.9	0.2	0.0	0.0	4.1	16.7	157
No religion	23.6	4.5	2.4	1.9	1.9	5.0	24.5	115
Other	*	*	*	*	*	*	*	10
Residence								
Urban	19.9	7.1	4.4	2.1	1.9	9.4	23.4	1,192
Rural	21.8	7.1	3.6	1.2	0.9	9.4	24.7	1,432
Region								
Coast	22.2	3.6	1.8	0.8	0.6	4.6	23.3	244
North Eastern	5.9	3.2	0.0	0.0	0.0	3.2	9.2	42
Eastern	13.6	7.0	3.4	1.2	0.8	9.2	18.0	371
Central	19.9	5.3	3.1	1.1	0.9	7.3	20.4	337
Rift Valley	19.7	6.5	3.6	1.1	0.9	9.0	23.1	655
Western	20.3	10.4	4.3	2.0	1.8	12.6	26.1	253
Nyanza	28.7	7.5	6.0	2.7	2.3	10.8	31.6	345
Nairobi	25.4	9.8	5.6	2.9	2.9	12.6	29.5	377
Marital status								
Married or living together	18.3	5.5	3.3	1.3	1.1	7.6	21.1	2,408
Divorced/separated/widowed	50.3	24.6	10.7	5.5	4.8	29.8	58.0	216
Number of living children								
0	15.1	11.1	2.4	1.0	0.6	12.4	20.0	206
1-2	21.8	7.2	4.4	1.7	1.5	9.8	25.4	1,083
3-4	20.3	5.5	3.6	1.1	0.8	7.9	23.3	800
5+	22.2	7.8	4.3	2.4	2.3	9.7	24.5	535
Employment								
Employed for cash	21.0	7.1	4.1	1.7	1.5	9.4	24.3	2,398
Employed not for cash	19.6	5.9	2.7	0.8	0.8	7.9	21.7	213
Not employed	(27.4)	(32.1)	(0.0)	(0.0)	(0.0)	(32.1)	(32.1)	13
Education								
No education	11.9	2.5	0.8	0.0	0.0	3.4	13.0	101
Primary incomplete	22.4	7.5	4.4	1.1	0.9	10.8	26.6	603
Primary complete	19.8	7.0	4.4	1.8	1.4	9.7	22.8	770
Secondary+	21.7	7.3	3.7	1.9	1.8	9.1	24.7	1,150
Wealth quintile								
Lowest	23.6	7.2	3.7	0.9	0.9	10.0	26.1	375
Second	22.3	7.9	4.8	1.7	1.4	11.0	26.6	470
Middle	21.8	9.4	3.9	2.1	1.6	11.3	25.7	496
Fourth	21.1	6.0	3.2	1.2	0.9	8.0	23.8	638
Highest	17.5	5.7	4.2	2.1	2.0	7.8	20.4	645
Total 15-49	20.9	7.1	4.0	1.6	1.4	9.4	24.1	2,624
50-54	14.0	6.4	2.1	1.8	1.8	6.7	16.2	265
Total 15-54	20.3	7.0	3.8	1.6	1.4	9.2	23.4	2,890

Note: Wife/partner refers to the current wife/partner for currently married men and the most recent wife/partner for divorced, separated or widowed men. Total includes one man for whom information on religion is missing and two men for whom information on employment is missing. Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

16.12 VIOLENCE BY SPOUSAL CHARACTERISTICS AND WOMEN'S EMPOWERMENT INDICATORS

Tables 16.11.1 and 16.11.2 present information on ever-married women and men age 15-49, respectively, who have experienced emotional, physical, or sexual violence committed by their spouse according to spousal characteristics and empowerment indicators.

Table 16.11.1 Spousal violence by husband's characteristics and empowerment indicators

Percentage of ever-married women age15-49 who have ever experienced emotional, physical or sexual violence committed by their husband/partner, by husband's characteristics and empowerment indicators, Kenya 2014

Background characteristic	Emotional violence	Physical violence	Sexual violence	Physical and sexual	Physical and sexual and emotional	Physical or sexual	Physical or sexual or emotional	Number of ever-married women
Husband's/partner's education								
No education	21.7	36.0	8.6	7.3	5.9	37.3	40.7	297
Primary	34.7	41.6	14.5	12.1	9.6	44.0	51.1	1,879
Secondary	32.4	35.8	14.8	12.2	9.6	38.4	46.3	1,316
More than secondary	29.6	23.4	7.6	4.6	3.4	26.4	38.9	483
Husband's/partner's alcohol consumption								
Does not drink	25.7	28.0	9.6	7.3	5.5	30.3	38.4	2,541
Drinks/never gets drunk	*	*	*	*	*	*	*	13
Gets drunk sometimes	33.5	42.1	13.8	10.8	8.2	45.0	52.8	912
Gets drunk very often	61.0	69.5	29.7	27.3	22.9	71.8	78.1	551
Spousal education difference								
Husband better educated	32.8	37.8	13.6	11.4	8.8	39.9	47.6	1,877
Wife better educated	35.7	41.1	13.5	10.4	8.6	44.2	52.1	909
Both equally educated	31.7	33.4	14.0	11.3	8.9	36.2	44.8	974
Neither educated	17.1	29.8	6.2	5.9	5.4	30.1	33.5	205
Spousal age difference[1]								
Wife older	28.5	27.1	12.4	8.6	8.6	30.9	37.8	98
Wife is same age	26.6	30.5	9.6	7.0	5.7	33.0	42.7	110
Wife's 1-4 years younger	27.5	32.4	10.9	8.3	5.8	35.0	42.8	1,105
Wife's 5-9 years younger	28.8	35.6	11.1	9.1	6.9	37.6	44.8	1,200
Wife's 10+ years younger	30.0	33.4	12.9	10.1	8.5	36.3	42.7	814
Number of marital control behaviours displayed by husband/partner[2]								
0	11.7	18.4	4.3	3.2	1.1	19.5	23.7	1,479
1-2	32.2	38.6	10.5	8.4	7.2	40.7	49.5	1,558
3-4	58.3	56.1	26.9	21.0	17.2	61.9	74.9	754
5	81.2	81.5	44.5	41.4	36.1	84.6	90.8	231
Number of decisions in which women participate[3]								
0	35.3	36.8	20.4	17.7	14.5	39.5	46.3	78
1-2	29.3	39.1	11.1	7.6	5.7	42.5	47.5	696
3-4	28.4	32.2	11.3	9.1	7.0	34.3	42.2	2,578
Number of reasons for which wife-beating is justified[4]								
0	29.0	32.4	11.7	9.7	7.7	34.3	41.9	2,283
1-2	36.3	39.6	14.1	11.0	9.0	42.7	51.4	995
3-4	37.3	44.8	15.5	12.6	9.6	47.7	55.8	588
5	38.0	57.1	22.1	17.7	12.5	61.5	63.8	156
Woman's father beat mother								
Yes	39.1	46.1	18.8	15.9	12.5	49.0	57.1	1,509
No	28.2	30.6	9.7	7.8	6.1	32.5	40.4	2,262
Don't know/missing	28.8	38.7	12.3	7.2	6.0	43.8	48.0	252
Woman afraid of husband/partner								
Most of the time afraid	65.3	79.1	38.1	36.8	31.0	80.5	82.5	495
Sometimes afraid	44.9	53.8	19.9	16.3	12.2	57.4	65.3	949
Never afraid	21.4	22.5	6.1	3.8	2.8	24.8	33.6	2,571
Total 15-49	32.4	36.9	13.3	10.8	8.5	39.4	47.1	4,023

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated or widowed women. Total includes 54 women for whom information about husband's/partner's education is missing or unknown, five missing information on husband's/partner's alcohol consumption, 66 missing spousal education difference 26 missing spousal age difference, and seven missing fear of husband/partner. Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

[1] Includes only currently married women.

[2] According to the wife's report. See Table 16.8.1 for list of behaviours.

[3] According to the wife's report. Includes only currently married women. See Table 15.6.1 for list of decisions.

[4] According to the wife's report. See Table 15.7.1 for list of reasons.

Table 16.11.2 Spousal violence by wife's characteristics and empowerment indicators

Percentage of ever-married men age15-49 who have ever experienced emotional, physical or sexual violence committed by their wife/partner, by husband's characteristics and empowerment indicators, Kenya 2014

Background characteristic	Emotional violence	Physical violence	Sexual violence	Physical and sexual	Physical and sexual and emotional	Physical or sexual	Physical or sexual or emotional	Number of ever-married men
Wife's/partner's alcohol consumption								
Does not drink	20.0	6.5	3.8	1.5	1.3	8.7	23.1	2,514
Drinks/never gets drunk	*	*	*	*	*	*	*	11
Gets drunk sometimes	*	*	*	*	*	*	*	77
Gets drunk very often	*	*	*	*	*	*	*	17
Spousal age difference[1]								
Husband older	18.2	5.5	2.9	1.0	0.8	7.5	21.1	2,111
Husband is same age	15.1	5.6	3.3	3.0	3.0	5.8	16.9	79
Husband's 1-4 years younger	12.4	4.5	8.6	4.1	4.1	9.0	13.4	76
Husband's 5-9 years younger	*	*	*	*	*	*	*	14
Husband's 10+ years younger	*	*	*	*	*	*	*	4
Number of marital control behaviours displayed by wife/partner[2]								
0	5.8	2.8	0.3	0.0	0.0	3.1	8.0	810
1-2	18.8	5.0	3.1	0.7	0.6	7.3	22.2	1,242
3-4	43.8	15.0	9.2	4.2	3.9	20.0	48.1	495
5	67.0	34.6	22.4	15.9	12.9	41.1	71.6	77
Number of decisions in which he participates[3]								
0	13.8	7.7	2.2	0.0	0.0	9.8	20.9	67
1-2	18.4	5.4	3.4	1.3	1.1	7.5	21.1	2,341
Number of reasons for which wife-beating is justified[4]								
0	18.8	5.0	3.0	1.4	1.2	6.6	20.9	1,673
1-2	23.9	9.7	5.2	1.8	1.4	13.1	28.3	628
3-4	26.0	13.6	7.2	2.9	2.4	17.9	33.2	275
5	25.8	9.2	2.5	1.2	1.2	10.4	30.8	48
Man's father beat mother								
Yes	24.0	9.4	5.4	2.3	2.0	12.5	28.3	1,253
No	18.3	5.0	2.5	0.9	0.7	6.6	20.4	1,204
Don't know/missing	17.2	4.9	3.4	1.7	1.7	6.5	19.1	167
Man afraid of wife/partner								
Most of the time afraid	(43.5)	(28.1)	(19.9)	(10.7)	(9.7)	(37.2)	(44.5)	35
Sometimes afraid	58.9	33.7	14.5	7.2	6.0	41.0	70.1	168
Never afraid	18.0	5.0	3.0	1.1	1.0	6.8	20.7	2,411
Total 15-49	20.9	7.1	4.0	1.6	1.4	9.4	24.1	2,624
50-54	14.0	6.4	2.1	1.8	1.8	6.7	16.2	265
Total 15-54	20.3	7.0	3.8	1.6	1.4	9.2	23.4	2,890

Note: Wife/partner refers to the current wife/partner for currently married men and the most recent wife/partner for divorced, separated or widowed men. Total includes five men for whom information about wife's/partner's alcohol consumption is missing or unknown, one missing spousal education difference, and nine missing fear of husband/partner. Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
[1] Includes only currently married men who have only one wife.
[2] According to the husband's report. See Table 16.8.2 for list of behaviours.
[3] According to the husband's report. Includes only currently married men. See Table 15.6.2 for list of decisions.
[4] According to the husband's report. See Table 15.7.2 for list of reasons.

Table 16.11.1 shows that, among ever-married women, spousal violence is higher among those whose husband has only a primary education (51 percent) and those who are better educated than their husband (52 percent). Although women whose husbands get drunk very often are much more likely (78 percent) to experience at least one form of spousal violence than women whose husbands do not drink, it is notable that even among the latter women, 38 percent report experiencing at least one form of violence.

Spousal violence increases with the number of controlling behaviours displayed by the husband. Among women whose husbands exhibit five types of controlling behaviours, more than 9 in 10 (91 percent) have experienced one or more forms of violence. In contrast, among women whose husbands display none of the five controlling behaviours, about one in four (24 percent) have experienced any form

of spousal violence. Women's experience of violence tends to decrease as the number of decisions in which they participate increases. Women's experience of violence increases with the number of reasons they agree with for which wife beating is justified. Women whose father beat their mother are much more likely to experience any type of violence by their husband than women whose father did not beat their mother (57 percent versus 40 percent). Finally, women who are never afraid of their husband/partner are much less likely to experience spousal violence than women who are afraid of him most of the time (34 percent versus 83 percent).

Table 16.11.2 shows similar patterns in spousal violence against ever-married men according to wives' characteristics. In many cases, the numbers are too small to reach meaningful conclusions. However, similar to women, spousal violence against men increases with the number of controlling behaviours displayed by the wife, from 8 percent among men whose wives/partners display none of the controlling behaviours to 72 percent among those whose wives/partners exhibit all five types of controlling behaviours. Men's experience of spousal violence generally increases as the number of reasons they agree with for which wife beating is justified increases. Men whose father did not beat their mother are less likely to experience any type of spousal violence than men whose father beat their mother (20 percent versus 28 percent). As expected, men who are never afraid of their wife/partner are less likely to experience spousal violence than other men.

16.13 RECENT SPOUSAL VIOLENCE

Tables 16.12.1 and 16.12.2 show the percentage of ever-married women and men age 15-49, respectively, who have experienced physical or sexual violence by any spouse/partner in the past 12 months, by background characteristics. For women and men who have been married more than once, these tables include violence by any previous spouse/partner.

Overall, 26 percent of women experienced physical or sexual violence by any husband or partner in the past 12 months. The percentage of women who have experienced recent physical or sexual violence by any spouse or partner is higher among those age 20-29 (28 percent), than among younger or older women. Muslim women (10 percent) are much less likely than Christian (26-27 percent) women or women with no religion (33 percent) to report any recent spousal violence. By region, violence is most common among women living in Western region (37 percent) and least common among women in the North Eastern region (6 percent). The percentage experiencing recent violence increases with number of living children.

Table 16.12.1 Physical or sexual violence in the past 12 months by any husband/partner: Women

Percentage of ever-married women who have experienced physical or sexual violence by any husband/partner in the past 12 months, by background characteristics, Kenya 2014

Background characteristic	Percentage of women who have experienced physical or sexual violence in the past 12 months from any husband/partner	Number of ever-married women
Age		
15-19	23.0	111
20-24	28.0	647
25-29	28.1	1,002
30-39	25.3	1,395
40-49	21.3	867
Religion		
Roman Catholic	27.2	783
Protestant/other Christian	26.3	2,853
Muslim	10.3	271
No religion	33.4	100
Other	*	15
Residence		
Urban	25.1	1,588
Rural	25.8	2,435
Region		
Coast	19.2	439
North Eastern	5.8	97
Eastern	25.1	585
Central	20.5	518
Rift Valley	20.1	983
Western	36.6	433
Nyanza	33.5	553
Nairobi	34.5	414
Marital status		
Married or living together	25.6	3,352
Divorced/separated/ widowed	25.0	670
Employment		
Employed for cash	27.3	2,427
Employed not for cash	29.4	665
Not employed	17.9	929
Number of living children		
0	17.3	203
1-2	23.8	1,657
3-4	27.0	1,238
5+	28.5	925
Education		
No education	22.5	375
Primary incomplete	30.9	1,150
Primary complete	26.3	1,120
Secondary+	21.2	1,378
Wealth quintile		
Lowest	27.2	707
Second	29.5	781
Middle	28.3	760
Fourth	22.3	894
Highest	21.5	880
Woman afraid of husband/partner		
Most of the time afraid	50.4	495
Sometimes afraid	39.8	949
Never afraid	15.5	2,571
Total 15-49	25.5	4,023

Note: Any husband/partner includes all current, most recent and former husbands/partners. Total includes one woman for whom information on religion is missing, two women for whom information on employment is missing, and seven women for whom information on fear of husband/partner is missing. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

Women with an incomplete primary education (31 percent), women in the bottom three wealth quintiles (27-30 percent), and women who are afraid of their husband/partner most of the time (50 percent) are more likely than most other women to have experienced physical or sexual violence by any husband or partner in the past 12 months.

Among ever-married men, 7 percent experienced physical or sexual violence in the past 12 months by any wife or partner. Men age 20-24 (12 percent), men living in Nairobi (11 percent), previously married men (16 percent), and men with no living children (10 percent) are more likely to have experienced recent physical or sexual violence by any spouse or partner. Similarly, men with an incomplete primary education (8 percent), those in the bottom three wealth quintiles (8 percent), and those who are afraid of their wife/partner sometimes (31 percent) are more likely than other men to have experienced physical or sexual violence from any wife or partner in the past 12 months.

16.14 Onset of Spousal Violence

To obtain information on the onset of marital violence, the 2014 KDHS asked ever-married women and men who reported spousal violence when in their marriage the violence first occurred. Tables 16.13.1 and 16.13.2 show the timing of the first experience of violence by marital duration among currently married women and men age 15-49 who have been married only once, respectively.

Table 16.13.1 shows that 65 percent of currently married women married only once have never experienced spousal physical or sexual violence by their current husband, 11 percent experienced violence in the first two years of marriage, 24 percent experienced it in the first five years, and 30 percent experienced it within the first 10 years of marriage. Among women who have experienced spousal physical or sexual violence, about one-third first experienced it in the first two years of marriage.

Among currently married men who have been married only once, more than 9 in 10 (93 percent) have not experienced spousal physical or sexual violence by their current wife, 2 percent experienced violence in the first two years of marriage, 5 percent experienced it in the first five years, and 6 percent experienced it within the first 10 years of marriage (Table 16.13.2).

Table 16.12.2 Physical or sexual violence in the past 12 months by any wife/partner: Men

Percentage of ever-married men who have experienced physical or sexual violence by any wife/partner in the past 12 months, by background characteristics, Kenya 2014

Background characteristic	Percentage of men who have experienced physical or sexual violence in the past 12 months from any wife/partner	Number of ever-married men
Age		
15-19	*	9
20-24	12.3	168
25-29	9.5	534
30-39	5.8	1,115
40-49	6.3	799
Religion		
Roman Catholic	9.2	592
Protestant/other Christian	7.1	1,750
Muslim	3.9	157
No religion	3.1	115
Other	*	10
Residence		
Urban	7.7	1,192
Rural	6.8	1,432
Region		
Coast	3.5	244
North Eastern	3.2	42
Eastern	7.0	371
Central	4.2	337
Rift Valley	6.5	655
Western	8.6	253
Nyanza	9.2	345
Nairobi	11.3	377
Marital status		
Married or living together	6.4	2,408
Divorced/separated/ widowed	15.9	216
Employment		
Employed for cash	7.2	2,398
Employed not for cash	6.5	213
Not employed	(27.1)	13
Number of living children		
0	10.2	206
1-2	7.4	1,083
3-4	5.8	800
5+	7.6	535
Education		
No education	2.0	101
Primary incomplete	8.1	603
Primary complete	6.9	770
Secondary+	7.4	1,150
Wealth quintile		
Lowest	8.0	375
Second	8.2	470
Middle	8.4	496
Fourth	5.8	638
Highest	6.5	645
Man afraid of wife/partner		
Most of the time afraid	(29.0)	35
Sometimes afraid	31.2	168
Never afraid	5.2	2,411
Total 15-49	7.2	2,624
50-54	4.1	265
Total 15-54	6.9	2,890

Note: Any wife/partner includes all current, most recent and former wives/partners. Total includes one man for whom information on religion is missing, two men for whom information on employment is missing, and nine men for whom information on fear of wife/partner is missing. Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

Table 16.13.1 Experience of spousal violence by duration of marriage: Women

Among currently married women age 15-49 who have been married only once, the percentage who first experienced physical or sexual violence committed by their current husband/partner by specific exact years since marriage according to marital duration, Kenya 2014

Duration of marriage	Percentage who first experienced spousal physical or sexual violence by exact marital duration:			Percentage who have not experienced spousal sexual or physical violence	Number of currently married women who have been married only once
	2 years	5 years	10 years		
Years since marriage					
<2	na	na	na	78.4	310
2-4	15.5	na	na	71.5	440
5-9	10.5	29.7	na	63.2	676
10+	7.3	20.3	29.4	61.0	1,686
Total	10.6	23.6	30.0	64.7	3,112

na = Not applicable

Table 16.13.2 Experience of spousal violence by duration of marriage: Men

Among currently married men age 15-49 who have been married only once, the percentage who first experienced physical or sexual violence committed by their current wife/partner by specific exact years since marriage according to marital duration, Kenya 2014

Duration of marriage	Percentage who first experienced spousal physical or sexual violence by exact marital duration:			Percentage who have not experienced spousal sexual or physical violence	Number of currently married men who have been married only once
	2 years	5 years	10 years		
Years since marriage					
<2	na	na	na	92.4	212
2-4	4.4	na	na	93.5	392
5-9	0.6	4.2	na	93.9	491
10+	1.2	3.8	5.1	93.1	879
Total	2.3	4.7	5.8	93.3	1,974

na = Not applicable

16.15 PHYSICAL CONSEQUENCES OF SPOUSAL VIOLENCE

In the 2014 KDHS, ever-married women and men who reported spousal violence were asked whether they had sustained some form of injury as a result of physical or sexual violence inflicted by their spouse. Tables 16.14.1 and 16.14.2 show the percentage of ever-married women and men age 15-49 who have experienced spousal violence by the types of injuries they suffered, according to the type of violence reported and whether they experienced the violence ever and in the last 12 months.

About one-third of women (32 percent) who reported ever having experienced spousal physical or sexual violence suffered cuts, bruises, or aches; 18 percent had eye injuries, sprains, dislocations, or burns; and 10 percent had deep wounds, broken bones, broken teeth, or other serious injuries (Table 16.14.1). Overall, 39 percent of women who had ever experienced spousal physical or sexual violence suffered one or more of these injuries. The prevalence of all forms of injury is slightly higher among women who experienced violence in the past 12 months.

Table 16.14.2 shows that, among men who reported ever having experienced spousal physical or sexual violence, about one in five (21 percent) suffered cuts, bruises, or aches; 9 percent had eye injuries, sprains, dislocations, or burns; and 5 percent had deep wounds, broken bones, broken teeth, or other serious injuries. Twenty-four percent of men who had ever experienced spousal physical or sexual violence suffered one or more of these injuries. Similar percentages of men who had experienced violence in the past 12 months suffered each of the above injuries.

Table 16.14.1 Injuries to women due to spousal violence: Women

Percentage of ever-married women age 15-49 who have experienced specific types of spousal violence by types of injuries resulting from the violence, according to the type of violence and whether they experienced the violence ever and in the 12 months preceding the survey, Kenya 2014

Type of violence	Cuts, bruises, or aches	Eye injuries, sprains, dislocations, or burns	Deep wounds, broken bones, broken teeth, or any other serious injury	Any of these injuries	Number of ever-married women who have ever experienced any physical or sexual violence
Experienced physical violence[1]					
Ever[2]	33.5	19.4	10.1	40.3	1,485
In the past 12 months	38.0	23.3	12.4	45.7	908
Experienced sexual violence					
Ever[2]	40.3	25.6	12.9	47.6	534
In the past 12 months	42.6	27.1	13.3	49.3	395
Experienced physical or sexual violence[1]					
Ever[2]	32.0	18.3	9.5	38.5	1,585
In the past 12 months	35.7	21.4	11.1	42.9	1,022

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated or widowed women.
[1] Excludes women who reported violence only in response to a direct question on violence during pregnancy
[2] Includes in the past 12 months

Table 16.14.2 Injuries to men due to spousal violence: Men

Percentage of ever-married men age 15-49 who have experienced specific types of spousal violence by types of injuries resulting from the violence, according to the type of violence and whether they experienced the violence ever and in the 12 months preceding the survey, Kenya 2014

Type of violence	Cuts, bruises, or aches	Eye injuries, sprains, dislocations, or burns	Deep wounds, broken bones, broken teeth, or any other serious injury	Any of these injuries	Number of ever-married men who have ever experienced any physical or sexual violence
Experienced physical violence					
Ever[1]	25.4	10.0	5.0	29.9	186
In the past 12 months	28.5	11.1	6.2	33.5	132
Experienced sexual violence					
Ever[1]	18.5	8.5	5.8	20.8	104
In the past 12 months	19.4	10.4	7.1	22.2	84
Experienced physical or sexual violence					
Ever[1]	20.7	8.8	5.0	24.1	247
In the past 12 months	22.2	9.7	6.1	25.7	187

Note: Wife/partner refers to the current wife/partner for currently married men and the most recent wife/partner for divorced, separated or widowed men.
[1] Includes in the past 12 months

16.16 VIOLENCE BY WOMEN AND MEN AGAINST THEIR SPOUSE

In cases of domestic violence, either person (husband or wife) can be the perpetrator of violence. In the 2014 KDHS, ever-married women and men were asked about instances when they were the instigator of spousal violence. Specifically, all eligible ever-married respondents were asked whether they had ever initiated physical violence against their spouse when he or she was not already hitting or beating the respondent.

Tables 16.15.1 and 16.15.2 show the percentage of ever-married women and men age 15-49, respectively, who reported initiating physical violence against their spouses ever and in the 12 months prior to the survey, by background characteristics.

Table 16.15.1 Women's violence against their spouse by background characteristics

Percentage of ever-married women age 15-49 who have committed physical violence against their current or most recent husband/partner when he was not already beating or physically hurting her, ever and in the past 12 months, according to women's own experience of spousal violence and background characteristics, Kenya 2014

Background characteristic	Percentage who have committed physical violence against their husband/partner		Number of ever-married women
	Ever[1]	In the past 12 months	
Woman's experience of spousal physical violence			
Ever[1]	9.0	5.9	1,485
In the past 12 months	10.7	8.6	908
Never	0.8	0.6	2,537
Age			
15-19	3.6	3.6	111
20-24	4.6	3.6	647
25-29	3.7	3.0	1,002
30-39	4.0	2.1	1,395
40-49	3.1	1.9	867
Religion			
Roman Catholic	5.9	3.6	783
Protestant/other Christian	3.5	2.3	2,853
Muslim	2.2	2.0	271
No religion	2.7	2.7	100
Other	*	*	15
Residence			
Urban	5.1	3.0	1,588
Rural	3.0	2.3	2,435
Region			
Coast	3.0	2.8	439
North Eastern	0.2	0.2	97
Eastern	2.0	1.2	585
Central	3.9	1.8	518
Rift Valley	2.5	1.6	983
Western	4.3	3.6	433
Nyanza	4.6	3.8	553
Nairobi	9.6	5.2	414
Marital status			
Married or living together	3.2	2.6	3,352
Divorced/separated/ widowed	7.0	2.4	670
Employment			
Employed for cash	5.0	3.0	2,427
Employed not for cash	2.2	1.8	665
Not employed	1.9	1.8	929
Number of living children			
0	5.6	4.7	203
1-2	4.1	2.7	1,657
3-4	2.8	1.4	1,238
5+	4.3	3.4	925
Education			
No education	3.5	3.4	375
Primary incomplete	4.2	3.5	1,150
Primary complete	3.9	2.3	1,120
Secondary+	3.5	1.8	1,378
Wealth quintile			
Lowest	3.1	2.5	707
Second	4.4	3.3	781
Middle	3.8	2.5	760
Fourth	4.1	2.7	894
Highest	3.5	1.9	880
Total	3.8	2.6	4,023

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated or widowed women. Total includes one woman for whom information on religion is missing and two women for whom information on employment is missing. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

[1] Includes in the past 12 months

Table 16.15.2 Men's violence against their spouse by background characteristics

Percentage of ever-married men age 15-49 who have committed physical violence against their current or most recent wife/partner when she was not already beating or physically hurting him, ever and in the past 12 months, according to men's own experience of spousal violence and background characteristics, Kenya 2014

Background characteristic	Percentage who have committed physical violence against their wife/partner		Number of ever-married men
	Ever[1]	In the past 12 months	
Man's experience of spousal physical violence			
Ever[1]	69.2	35.3	186
In the past 12 months	69.1	45.5	132
Never	34.4	11.9	2,438
Age			
15-19	*	*	9
20-24	38.3	17.9	168
25-29	33.8	16.7	534
30-39	34.3	13.7	1,115
40-49	42.1	10.4	799
Religion			
Roman Catholic	39.0	13.4	592
Protestant/other Christian	37.3	13.8	1,750
Muslim	25.3	12.4	157
No religion	35.1	12.9	115
Other	*	*	10
Residence			
Urban	36.4	13.6	1,192
Rural	37.2	13.6	1,432
Region			
Coast	28.6	9.1	244
North Eastern	4.3	1.1	42
Eastern	38.6	11.2	371
Central	34.4	10.1	337
Rift Valley	26.6	10.9	655
Western	37.2	14.2	253
Nyanza	59.1	24.5	345
Nairobi	43.3	17.6	377
Marital status			
Married or living together	35.9	13.7	2,408
Divorced/separated/ widowed	47.7	11.7	216
Employment			
Employed for cash	37.3	13.4	2,398
Employed not for cash	30.7	13.4	213
Not employed	(50.8)	(38.7)	13
Number of living children			
0	23.1	10.5	206
1-2	30.9	12.1	1,083
3-4	40.0	14.9	800
5+	49.5	15.9	535
Education			
No education	30.7	16.9	101
Primary incomplete	43.0	13.0	603
Primary complete	38.9	15.9	770
Secondary+	32.7	12.0	1,150
Wealth quintile			
Lowest	41.3	14.7	375
Second	44.5	14.3	470
Middle	38.1	17.4	496
Fourth	35.0	11.5	638
Highest	29.4	11.5	645
Total 15-49	36.8	13.6	2,624
50-54	44.7	5.2	265
Total 15-54	37.6	12.8	2,890

Note: Wife/partner refers to the current wife/partner for currently married men and the most recent wife/partner for divorced, separated or widowed men. Total includes one man for whom information on religion is missing and two men for whom information on employment is missing. Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
[1] Includes in the past 12 months

Overall, 4 percent of ever-married women reported that they had initiated physical violence against their husbands, and 3 percent had done so in the past 12 months. Women who have been physically abused by their husband ever and in the past 12 months are more likely to have initiated spousal physical abuse (9 percent and 11 percent, respectively) than women who have never been abused (1 percent). Women's use of violence against their husbands does not vary notably by other background characteristics.

Table 16.15.2 shows that 37 percent of ever-married men age 15-49 reported having initiated physical violence against their wives, and 14 percent had done so in the past 12 months. Men who have been physically abused by their spouse ever and in the past 12 months are about twice as likely (69 percent each) as those who have never been abused (34 percent) to initiate physical violence against their wives. Men age 40-49 (42 percent), Christian men (37-39 percent), men in Nyanza (59 percent), previously married men (48 percent), men with five or more living children (50 percent), men with an incomplete primary education (43 percent), and men in the second wealth quintile (45 percent) are most likely to have initiated physical violence against their wife or partner. There are similar variations by background characteristics in the percentage of ever-married men who reported that they had initiated physical violence against their wives in the past 12 months.

16.17 Violence against Spouses by Spousal Characteristics and Women's Empowerment Indicators

Tables 16.16.1 and 16.16.2 present information on ever-married women and men age 15-49, respectively, who have committed physical violence against their spouse ever and in the past 12 months, according to spousal characteristics and empowerment indicators.

Table 16.16.1 shows that women whose husband gets drunk very often (10 percent), women whose husband displays five controlling behaviours (13 percent), and women who are afraid of their husband/partner most of the time (9 percent) are most likely to have committed physical violence against their spouse. Similar variations by background characteristics are observed in women's physical violence against their spouse in the past 12 months.

Table 16.16.2 shows that men whose wife gets drunk sometimes (52 percent) are most likely to have committed violence against their spouse. The percentage of men who have committed violence against their spouse increases steadily as the number of controlling behaviours displayed by the wife increases. Twenty-four percent of men whose wife displays none of the six controlling behaviours have initiated physical violence against their spouse, as compared with 60 percent of men whose wife exhibits five controlling behaviours. The percentage of men who initiate physical violence against their spouse is lowest among those who do not agree with any of the reasons that justify wife beating. Men whose father did not beat their mother are much less likely to commit physical violence against their spouse than men whose father beat their mother (30 percent versus 44 percent). Similar to women, men who are afraid of their wife/partner sometimes (58 percent) are much more likely than men who are not afraid to commit physical violence against their spouse.

Table 16.16.1 Women's violence against their spouse by spouse's characteristics and empowerment indicators

Percentage of ever-married women age 15-49 who have committed physical violence against their current or most recent husband/partner when he was not already beating or physically hurting her, ever and in the past 12 months, according their husband's characteristics, Kenya 2014

Background characteristic	Percentage who have committed physical violence against their husband/partner		Number of ever-married women
	Ever[1]	In the past 12 months	
Husband's/partner's education			
No education	2.2	2.1	297
Primary	3.3	2.7	1,879
Secondary	5.1	2.9	1,316
More than secondary	3.3	1.5	483
Husband's/partner's alcohol consumption			
Does not drink	2.4	1.9	2,541
Drinks/never gets drunk	*	*	13
Gets drunk sometimes	3.9	2.6	912
Gets drunk very often	10.1	5.8	551
Spousal education difference			
Husband better educated	4.2	2.8	1,877
Wife better educated	4.2	2.5	909
Both equally educated	3.2	2.5	974
Neither educated	1.2	1.2	205
Spousal age difference[2]			
Wife older	3.4	3.4	98
Wife is same age	2.0	2.0	110
Wife's 1-4 years younger	2.8	2.1	1,105
Wife's 5-9 years younger	4.2	3.4	1,200
Wife's 10+ years younger	2.5	2.1	814
Number of marital control behaviours displayed by husband/partner[3]			
0	1.1	0.6	1,479
1-2	3.3	2.4	1,558
3-4	7.4	4.5	754
5	13.0	9.5	231
Number of decisions in which women participate[4]			
0	3.5	3.5	78
1-2	4.2	3.8	696
3-4	2.9	2.2	2,578
Number of reasons for which wife-beating is justified[5]			
0	4.0	2.5	2,283
1-2	3.3	2.3	995
3-4	4.0	3.4	588
5	3.0	2.0	156
Woman's father beat mother			
Yes	4.6	3.2	1,509
No	3.2	2.1	2,262
Don't know/missing	4.2	3.1	252
Woman afraid of husband/partner			
Most of the time afraid	8.5	4.9	495
Sometimes afraid	4.9	3.8	949
Never afraid	2.5	1.7	2,571
Total	3.8	2.6	4,023

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated or widowed women. Total includes 54 women for whom information about husband's/partner's education is missing or unknown, five missing information on husband's/partner's alcohol consumption, 66 missing spousal education difference 26 missing spousal age difference, and seven missing fear of husband/partner. Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

[1] Includes in the past 12 months

[2] Includes only currently married women.

[3] According to the wife's report. See Table 16.8.1 for list of behaviours.

[4] According to the wife's report. Includes only currently married women. See Table 15.6.1 for list of decisions.

[5] According to the wife's report. See Table 15.7.1 for list of reasons.

Table 16.16.2 Men's violence against their spouse by spouse's characteristics and empowerment indicators

Percentage of ever-married men age 15-49 who have committed physical violence against their current or most recent wife/partner when she was not already beating or physically hurting him, ever and in the past 12 months, according their husband's characteristics, Kenya 2014

Background characteristic	Percentage who have committed physical violence against their wife/partner		Number of ever-married men
	Ever[1]	In the past 12 months	
Wife's/partner's alcohol consumption			
Does not drink	36.4	13.5	2,514
Drinks/never gets drunk	*	*	11
Gets drunk sometimes	51.5	16.8	77
Gets drunk very often	(52.5)	(24.7)	17
Spousal age difference[2]			
Husband older	35.3	13.1	2,111
Husband is same age	29.1	16.4	79
Husband's 1-4 years younger	38.5	20.4	76
Husband's 5-9 years younger	*	*	14
Husband's 10+ years younger	*	*	4
Number of marital control behaviours displayed by wife/partner[3]			
0	24.0	6.9	810
1-2	36.8	11.8	1,242
3-4	54.2	27.2	495
5	60.4	24.4	77
Number of decisions in which he participates[4]			
0	42.4	25.5	67
1-2	35.7	13.4	2,341
Number of reasons for which wife-beating is justified[5]			
0	31.1	9.0	1,673
1-2	44.0	18.4	628
3-4	53.5	26.5	275
5	48.0	35.0	48
Man's father beat mother			
Yes	43.5	16.0	1,253
No	30.2	11.1	1,204
Don't know/missing	34.6	13.4	167
Man afraid of wife/partner			
Most of the time afraid	(52.1)	(23.7)	35
Sometimes afraid	58.3	25.1	168
Never afraid	35.3	12.7	2,411
Total 15-49	36.8	13.6	2,624
50-54	44.7	5.2	265
Total 15-54	37.6	12.8	2,890

Note: Wife/partner refers to the current wife/partner for currently married men and the most recent wife/partner for divorced, separated or widowed men. Total includes five men for whom information about wife's/partner's alcohol consumption is missing or unknown, one missing spousal education difference, and nine missing fear of husband/partner. Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

[1] Includes in the past 12 months

[2] Includes only currently married men who have only one wife.

[3] According to the husband's report. See Table 16.8.2 for list of behaviours.

[4] According to the husband's report. Includes only currently married men. See Table 15.6.2 for list of decisions.

[5] According to the husband's report. See Table 15.7.2 for list of reasons.

16.18 HELP-SEEKING BEHAVIOUR BY WOMEN AND MEN WHO EXPERIENCE VIOLENCE

Tables 16.17.1 and 16.17.2 show the percent distribution of women and men age 15-49 who have ever experienced physical or sexual violence committed by anyone, respectively, according to whether they ever sought help to stop the violence and, among those who did not seek help, whether or not they told anyone about the violence.

Table 16.17.1 Help seeking to stop violence: Women

Percent distribution of women age 15-49 who have ever experienced physical or sexual violence by their help-seeking behaviour by type of violence and background characteristics, Kenya 2014

Background characteristic	Sought help to stop violence	Never sought help but told someone	Never sought help, never told anyone	Missing/don't know	Total	Number of women who have ever experienced any physical or sexual violence
Type of violence experienced						
Physical only	40.0	12.3	42.4	5.3	100.0	1,884
Sexual only	33.9	10.3	53.1	2.6	100.0	148
Physical and sexual	58.6	8.4	32.3	0.7	100.0	649
Age						
15-19	32.6	10.8	50.4	6.2	100.0	350
20-24	40.0	13.7	39.6	6.7	100.0	499
25-29	44.7	11.6	40.9	2.8	100.0	585
30-39	48.7	11.7	36.7	2.9	100.0	750
40-49	49.3	7.8	39.7	3.2	100.0	496
Religion						
Roman Catholic	42.9	13.3	38.8	5.0	100.0	534
Protestant/other Christian	44.3	10.9	41.3	3.5	100.0	1,988
Muslim	39.0	11.7	41.1	8.2	100.0	102
No religion	65.5	4.4	24.5	5.6	100.0	51
Other	*	*	*	*	100.0	5
Residence						
Urban	41.6	13.7	40.9	3.8	100.0	1,051
Rural	45.9	9.7	40.2	4.2	100.0	1,630
Region						
Coast	36.7	14.6	43.1	5.7	100.0	231
North Eastern	18.5	6.7	56.7	18.1	100.0	18
Eastern	53.7	8.6	34.0	3.6	100.0	400
Central	52.7	8.7	36.8	1.7	100.0	285
Rift Valley	38.8	9.8	47.4	4.0	100.0	573
Western	51.6	9.8	35.4	3.1	100.0	362
Nyanza	37.9	8.6	45.9	7.6	100.0	467
Nairobi	42.2	21.8	35.1	1.0	100.0	344
Marital status						
Never married	34.2	15.5	43.4	6.9	100.0	561
Married or living together	43.0	10.3	42.9	3.8	100.0	1,663
Divorced/separated/ widowed	60.7	9.6	28.0	1.7	100.0	456
Number of living children						
0	33.5	14.9	44.1	7.5	100.0	513
1-2	43.8	10.7	42.4	3.1	100.0	945
3-4	47.2	10.5	38.5	3.7	100.0	717
5+	51.5	9.5	36.1	3.0	100.0	505
Employment						
Employed for cash	47.3	12.0	37.6	3.1	100.0	1,611
Employed not for cash	48.4	8.9	39.9	2.8	100.0	411
Not employed	33.9	10.8	48.0	7.3	100.0	657
Education						
No education	34.3	12.2	43.9	9.6	100.0	159
Primary incomplete	47.9	11.4	37.6	3.1	100.0	838
Primary complete	49.1	9.2	37.9	3.8	100.0	686
Secondary+	39.3	12.4	44.2	4.2	100.0	997
Wealth quintile						
Lowest	39.1	12.9	43.1	4.8	100.0	411
Second	47.5	8.6	39.5	4.4	100.0	574
Middle	46.9	9.8	37.3	6.0	100.0	571
Fourth	47.9	9.2	41.2	1.6	100.0	592
Highest	37.5	16.6	42.1	3.8	100.0	532
Total	44.2	11.2	40.5	4.1	100.0	2,680

Note: Total includes one woman for whom information on religion is missing and two women for whom information on employment is missing. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

Table 16.17.2 Help seeking to stop violence: Men

Percent distribution of men age 15-49 who have ever experienced physical or sexual violence by their help-seeking behaviour by type of violence and background characteristics, Kenya 2014

Background characteristic	Sought help to stop violence	Never sought help but told someone	Never sought help, never told anyone	Missing/don't know	Total	Number of women who have ever experienced any physical or sexual violence
Type of violence experienced						
Physical only	27.0	20.2	45.8	7.0	100.0	1,856
Sexual only	6.7	15.3	61.0	17.0	100.0	71
Physical and sexual	38.2	19.6	40.8	1.4	100.0	204
Age						
15-19	19.9	24.8	50.1	5.2	100.0	408
20-24	22.7	19.8	48.0	9.6	100.0	395
25-29	29.7	22.3	40.5	7.5	100.0	378
30-39	29.9	18.4	45.2	6.4	100.0	572
40-49	34.5	14.9	45.0	5.6	100.0	378
Religion						
Roman Catholic	30.7	21.0	42.6	5.8	100.0	490
Protestant/other Christian	27.4	19.8	46.4	6.4	100.0	1,442
Muslim	16.4	13.8	60.4	9.4	100.0	118
No religion	28.0	23.7	28.8	19.5	100.0	73
Other	*	*	*	*	100.0	7
Residence						
Urban	24.4	21.3	46.1	8.2	100.0	816
Rural	29.3	19.1	45.6	5.9	100.0	1,316
Region						
Coast	21.1	17.5	56.7	4.7	100.0	206
North Eastern	6.5	5.7	73.3	14.4	100.0	27
Eastern	26.5	15.3	54.0	4.2	100.0	335
Central	33.6	25.1	38.1	3.2	100.0	250
Rift Valley	27.5	22.7	41.8	7.9	100.0	501
Western	24.6	12.2	47.3	15.9	100.0	279
Nyanza	39.5	25.1	33.2	2.2	100.0	330
Nairobi	14.7	21.0	55.2	9.1	100.0	204
Marital status						
Never married	21.1	21.4	50.0	7.5	100.0	893
Married or living together	30.8	18.4	44.0	6.8	100.0	1,105
Divorced/separated/ widowed	41.7	23.4	32.3	2.6	100.0	133
Number of living children						
0	22.0	22.1	48.3	7.5	100.0	917
1-2	26.4	19.8	46.7	7.0	100.0	563
3-4	35.7	17.8	41.5	5.1	100.0	385
5+	36.4	15.7	41.4	6.5	100.0	266
Employment						
Employed for cash	29.5	19.7	44.2	6.6	100.0	1,562
Employed not for cash	27.9	19.4	45.6	7.1	100.0	237
Not employed	17.3	21.5	53.5	7.6	100.0	330
Education						
No education	23.1	15.8	56.4	4.7	100.0	45
Primary incomplete	27.8	18.3	46.5	7.5	100.0	565
Primary complete	30.5	21.0	43.0	5.5	100.0	522
Secondary+	25.8	20.5	46.4	7.2	100.0	998
Wealth quintile						
Lowest	30.9	20.4	41.7	7.0	100.0	289
Second	31.0	21.1	42.4	5.5	100.0	439
Middle	29.1	15.6	46.7	8.5	100.0	447
Fourth	26.2	19.6	48.1	6.1	100.0	543
Highest	21.0	23.7	48.2	7.1	100.0	413
Total 15-49	27.4	20.0	45.8	6.8	100.0	2,131
50-54	37.1	15.3	42.7	4.9	100.0	124
Total 15-54	28.0	19.7	45.6	6.7	100.0	2,255

Note: Total includes one man for whom information on religion is missing and two men for whom information on employment is missing. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

Overall, more than 4 in 10 women (44 percent) who have experienced any type of physical or sexual violence from anyone sought help from any source to stop the violence. A similar proportion (41 percent) never sought help and never told anyone, and 11 percent never sought help but told someone.

Women who have experienced both physical and sexual violence (59 percent), women age 30-49 (49 percent), women who report having no religion (66 percent), women in rural areas (46 percent), and women in Eastern region (54 percent) are more likely than other women to seek help to stop violence. A much higher proportion of divorced, separated, or widowed women (61 percent) than never-married women (34 percent) and currently married women (43 percent) have ever sought help. Help seeking increases with number of living children, from 34 percent among women with no living children to 52 percent among those with five or more children. Unemployed women (34 percent), those with no education (34 percent), and those in the highest wealth quintile (38 percent) are less likely than other women to seek help from any source to stop the violence.

Among ever-married men who have experienced any type of physical or sexual violence from anyone, 27 percent sought help from any source to stop the violence. Forty-six percent never sought help and never told anyone, and 20 percent never sought help but told someone. The observed patterns in help seeking among men by background characteristics are similar to those among women.

Tables 16.18.1 and 16.18.2 show the percentage of women and men age 15-49, respectively, who experienced physical or sexual violence and sought help by the sources from which help was sought. The most common sources of help among women are their own family (65 percent), their husband's or partner's family (31 percent), others (12 percent), neighbours (9 percent), and friends (8 percent). Among men, the most common sources are their own family (49 percent), the police (19 percent), others (17 percent), friends (14 percent), and doctors/medical personnel (13 percent).

Table 16.18.1 Sources for help to stop the violence: Women

Percentage of women age 15-49 who have experienced physical or sexual violence and sought help by sources from which they sought help, according to the type of violence that women reported, Kenya 2014

	Type of violence experienced			
Person	Physical only	Sexual only	Physical and sexual	Total
Own family	66.4	(76.2)	59.3	64.6
Husband/partner's family	31.4	(14.9)	31.8	30.8
Husband/partner	0.8	(0.0)	2.5	1.3
Boyfriend	0.2	(0.0)	0.0	0.1
Friend	6.2	(4.0)	12.2	8.0
Neighbour	8.7	(2.4)	9.1	8.6
Religious leader	3.5	(3.0)	3.3	3.4
Doctor/medical personnel	1.0	(7.8)	6.1	2.9
Police	6.2	(0.0)	9.5	7.0
Lawyer	0.4	(0.0)	0.7	0.5
Social work organisation	1.0	(0.0)	3.4	1.7
Other	11.7	(14.6)	11.4	11.7
Number of women who have experienced violence and sought help	755	50	380	1,185

Note: Women can report more than one source from which they sought help. Figures in parentheses are based on 25-49 unweighted cases.

Table 16.18.2 Sources for help to stop the violence: Men

Percentage of men age 15-49 who have experienced physical or sexual violence and sought help by sources from which they sought help, according to the type of violence that women reported, Kenya 2014

	Type of violence experienced			
Person	Physical only	Sexual only	Physical and sexual	Total
Own family	46.2	*	62.7	48.6
Wife's/partner's family	4.2	*	13.6	5.4
Current/former wife/partner	1.1	*	1.5	1.2
Current/former girlfriend	0.4	*	0.0	0.4
Friend	12.3	*	22.1	13.9
Neighbour	6.0	*	6.8	6.1
Religious leader	2.2	*	1.8	2.2
Doctor/medical personnel	14.5	*	6.3	13.3
Police	20.5	*	8.2	18.7
Lawyer	0.2	*	0.0	0.2
Social service organisation	0.7	*	0.0	0.6
Other	17.5	*	11.5	16.6
Number of men who have experienced violence and sought help	502	5	78	585

Note: Men can report more than one source from which they sought help. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

ADULT AND MATERNAL MORTALITY 17

Alfred Agwanda, John Anampiu, Andrew A. Imbwaga

Key Findings

- Fourteen percent of women and 18 percent of men are likely to die between exact ages 15 and 50.
- Maternal deaths account for 14 percent of all deaths to women age 15-49.
- The maternal mortality ratio was 362 maternal deaths per 100,000 live births for the seven-year period preceding the survey.
- When comparing the estimate of an MMR of 362 with the MMR estimated in the previous KDHS (2008-09 KDHS estimate of 520 maternal deaths per 100,000 live births), the differential is not large enough to conclude whether or not there has been any change over time between the two surveys.

Adult and maternal mortality rates are key indicators of the health status of a population. They are also national development indicators. Moreover, levels and trends in overall adult mortality have important implications for health and social programmes in Kenya in their own right, especially with regard to the potential impact of the AIDS epidemic, other infectious diseases, and noncommunicable diseases. Estimation of these mortality rates requires comprehensive and accurate reporting of adult deaths. This chapter includes results based on sibling history data collected in Section 11 of the 2014 KDHS Woman's Questionnaire.

In addition to adult mortality rates for five-year age groups, this chapter includes a summary measure ($_{35}q_{15}$) that represents the probability of dying between exact ages 15 and 50. To allow for assessment of trends in adult mortality probabilities, $_{35}q_{15}$ values were also calculated from the 2003 and 2008-09 KDHS survey data.

17.1 DATA AND ASSESSMENT OF QUALITY

To obtain a sibling history, the 2014 KDHS first asked each female respondent to list all children born to her biological mother, starting with the firstborn. The survey then asked the respondent whether each of these siblings was still alive. For living siblings, the questionnaire asked the current age of each sibling. For deceased siblings, the age at death and the number of years since death were recorded. When a respondent could not provide precise information on age at death or years since death, approximate but quantitative answers were accepted. For sisters who died at age 12 or older, the KDHS asked three questions to determine whether the death was maternal: 'Was [NAME OF SISTER] pregnant when she died?' and, if the response was negative, 'Did she die during childbirth?' and, if negative again, 'Did she die within two months after the end of a pregnancy or childbirth?'

Table C.8 in Appendix C shows that, in the 2014 KDHS, a total of 84,613 siblings were recorded in the sibling histories. The survival status was not reported for 39 siblings. Among surviving siblings, current age was not reported for 305 siblings (0.4 percent). Ninety-eight percent of deceased siblings had both age at death (AD) and years since death (YSD) reported. In less than 1 percent of cases, both age at death and years since death were missing. The sex ratio of the enumerated siblings (the ratio of brothers to sisters multiplied by 100) is 100.2 (Table C.9), which is slightly lower than the expected value of 102-106. Indicators of data quality for the 2014 KDHS show some improvement compared with the 2008-09 KDHS.

17.2 ESTIMATES OF ADULT MORTALITY

One way to assess the quality of data used to estimate maternal mortality is to evaluate the plausibility and stability of overall adult mortality estimates over a given time period. If the estimated rates of overall adult mortality are implausible, rates based on a subset of deaths—maternal mortality in particular—are likely to be unreliable.

The direct estimation of adult mortality uses the reported ages at death and years since death of the respondents' brothers and sisters. Mortality rates are calculated by dividing the number of deaths in each age group of women and men by the total person-years of exposure to the risk of dying in that age group during a specified period prior to the survey. To have a sufficiently large number of adult deaths to generate a robust estimate, the rates are calculated for the seven-year period preceding the survey. It should be noted that age-specific mortality rates obtained in this manner are subject to considerable sampling variation.

Table 17.1 Adult mortality rates

Direct estimates of female and male mortality rates for the seven years preceding the survey, by five-year age groups, Kenya 2014

Age	Deaths	Exposure years	Mortality rates[1]
FEMALE			
15-19	54	32,170	1.67
20-24	85	40,528	2.10
25-29	105	39,466	2.66
30-34	158	33,397	4.73
35-39	174	25,719	6.78
40-44	119	17,486	6.83
45-49	55	10,965	5.00
15-49	750	199,731	3.72[a]
MALE			
15-19	66	32,206	2.05
20-24	93	39,368	2.36
25-29	141	38,953	3.62
30-34	175	33,478	5.23
35-39	179	25,185	7.11
40-44	165	16,990	9.71
45-49	110	10,622	10.39
15-49	929	196,802	4.78[a]

[1] Expressed per 1,000 population
[a] Age-adjusted rate

The confidence intervals for adult mortality rates are presented in Appendix Table B.13. When calculating confidence intervals (CIs), we assume the sample from which the estimate is drawn follows a normal distribution. When comparing point estimates between two surveys and calculating CIs to determine whether or not the difference is statistically significant, we assume the sample from which each estimate was calculated follows a normal distribution and that the two samples are independent. Thus when comparing mortality estimates, for example, we can refer to the CI when gauging whether the difference between two surveys estimates within sex and within an age group, but we cannot gauge statistical significance of differences across sex within the same survey, or across age groups within the same survey, because the assumption of independence within the survey is violated.

Table 17.1 shows age-specific mortality rates for women and men age 15-49 for the seven-year period preceding the survey. The age-specific rates generally show the expected pattern of increasing mortality with increasing age. Overall, the estimated level of adult mortality is slightly higher among men (4.78 deaths per 1,000 population) than among women (3.72 deaths per 1,000 population). The overall rate for ages 15-49 were standardised by the age distribution of the survey respondents to remove the effect of truncation bias (the upper boundary for eligibility for women interviewed in the KDHS was 49 years and 54 years for men).

Table 17.2 shows trends in the summary measure of the risk of dying between exact ages 15 and 50 ($_{35}q_{15}$). According to data from the 2014 KDHS, 14 percent of women and 18 percent of men are likely to die between age 15 and age 50 if the prevailing mortality probabilities continue to apply. Estimates of $_{35}q_{15}$ calculated from the 2003, 2008-09, and 2014 KDHS surveys show that the probability of dying sometime between exact ages 15 and 50 has been declining. Confidence intervals for the $_{35}q_{15}$ estimates from all three surveys can be found in Appendix Table B.13. Note that the surveys did not detect a significant change between the 2003 and 2008-09 surveys; the 2014 survey has detected a fall in the probability of dying between age 15 and 50 has occurred over the previous seven years among men and women.

Table 17.2 Adult mortality probabilities

The probability of dying between the ages of 15 and 50 for women and men for the seven years preceding the survey, Kenya 2014

Survey	Female $_{35}q_{15}$[1]	Male $_{35}q_{15}$[1]
2014 KDHS	138	183
2008-09 KDHS	214	231
2003 KDHS	235	240

[1] The probability of dying between exact ages 15 and 50, expressed per 1,000 person-years of exposure

17.3 ESTIMATES OF MATERNAL MORTALITY

Two procedures involving sisterhood data (sibling history data) are generally used to estimate maternal mortality in developing countries; these procedures employ an indirect variant (Graham et al., 1989) and a direct estimation method (Rutenberg et al., 1991). In this report, the direct estimation procedure is applied. Age-specific mortality rates are calculated by dividing the number of maternal deaths by woman-years of exposure. As was done in the calculation of adult mortality rates, the overall rate for women age 15-49 is standardised by the age distribution of the survey respondents.

Table 17.3 presents direct estimates of maternal mortality for the seven-year period preceding the survey. Maternal deaths represent about 14 percent of all deaths among women age 15-49. The percentage of female deaths that are maternal varies by age from about 5 percent among women age 45-49 to 27 percent among women age 25-29.

Table 17.3 Maternal mortality

Direct estimates of maternal mortality rates for the seven years preceding the survey, by five-year age groups, Kenya 2014

Age	Percentage of female deaths that are maternal	Maternal deaths	Exposure years	Maternal mortality rate[1]
15-19	6.8	4	32,170	0.11
20-24	21.8	19	40,528	0.46
25-29	27.4	29	39,466	0.73
30-34	13.7	22	33,397	0.65
35-39	12.8	22	25,719	0.87
40-44	7.3	9	17,486	0.50
45-49	4.5	2	10,965	0.22
15-49	14.1	106	199,731	0.51

General fertility rate (GFR)[2]	142[a]
Maternal mortality ratio (MMR)[3]	362 CI: (254, 471)
Lifetime risk of maternal death[4]	0.015

CI: Confidence interval
[1] Expressed per 1,000 woman-years of exposure
[2] Expressed per 1,000 woman age 15-49
[3] Expressed per 100,000 live births; calculated as the age-adjusted maternal mortality rate times 100 divided by the age-adjusted general fertility rate
[4] Calculated as $1-(1-MMR)^{TFR}$ where TFR represents the total fertility rate for the seven years preceding the survey
[a] Age-adjusted rate

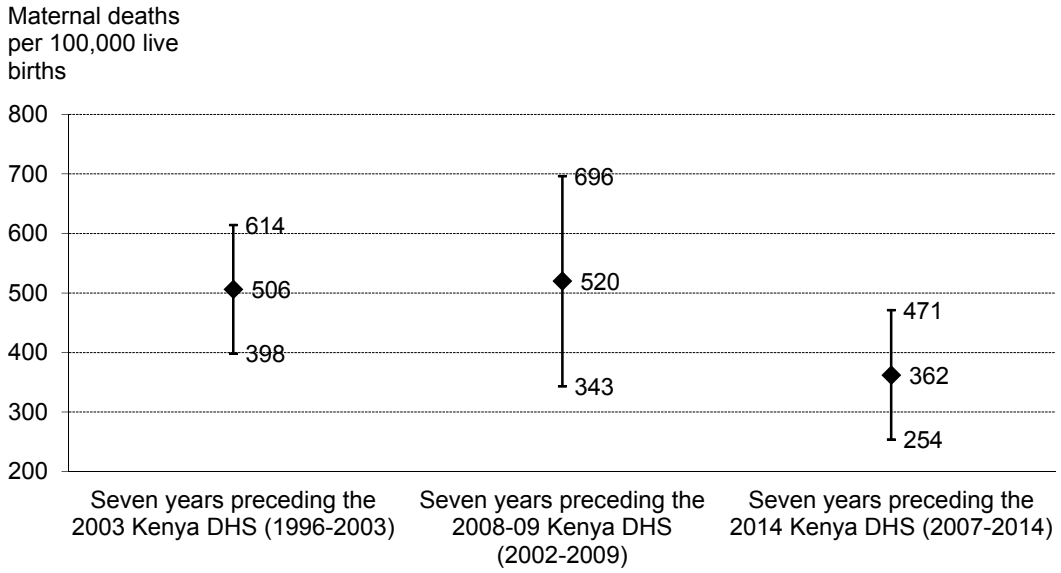
The data indicate that the rate of mortality associated with pregnancy and childbearing is 0.51 maternal deaths per 1,000 woman-years of exposure. The estimated age-specific maternal mortality rates display a generally plausible pattern, being higher at the peak childbearing ages (20s and 30s) than in the younger and older age groups. By five-year age groups, the maternal mortality rate is highest among women age 35-39 (0.87), followed by those age 25-29 (0.73).

The maternal mortality rate can be converted to a maternal mortality ratio (expressed as deaths per 100,000 live births) by dividing the maternal mortality rate by the general fertility rate (GFR) of 142 that prevailed during the same time period and multiplying the result by 100,000. This procedure produces a maternal mortality ratio (MMR) of 362 deaths per 100,000 live births during the seven-year period preceding the survey. In other words, for every 1,000 live births in Kenya in the seven years preceding the 2014 KDHS, approximately four women died during pregnancy, during childbirth, or within two months of childbirth. The lifetime risk of maternal death (0.015) indicates that approximately 2 percent of women, or about 1 in 67, will have a maternal death (i.e., they will die during pregnancy, during childbirth, or within two months of childbirth).

In order to compare maternal mortality estimates for the 2014 KDHS with previous estimates, the maternal mortality ratio for the seven years prior to the survey was re-calculated with data from the 2003 KDHS and the 2008-09 KDHS. As shown in Figure 17.1, the confidence intervals surrounding the 2003

point estimate are completely encompassed by the confidence interval surrounding the 2008-09 estimate, concluding that maternal mortality did not change significantly in the period 1996-2009. However, the confidence intervals surrounding the estimates around the 2008-09 (CI: 343, 696) and 2014 (CI:254, 471) estimates overlap, such that the estimate of 362 deaths per 1,000 population (2014 KDHS) is encompassed within the 2008-09 confidence interval, but the 2008-09 estimate (520 deaths per 1,000 population) is not encompassed within the 2014 confidence interval. Thus we conclude that the survey has not detected a change between the two surveys. However, there could be a change that was too small to be detected by the survey. Even with their large sample sizes, DHS surveys are able to detect only very large changes in the maternal mortality ratio.

Figure 17.1 **Maternal mortality ratio (MMR) with confidence intervals for the seven years preceding the KDHS**



FEMALE GENITAL CUTTING 18

Rosemary Uside Kongani, Robert C.B. Buluma, Lawrence Ikamari

Key Findings

- Twenty-one percent of women age 15-49 have been circumcised.
- There is some evidence of a trend over time to circumcise girls at younger ages. Twenty-eight percent of circumcised women age 20-24 were circumcised at age 5-9, as compared with 17 percent of circumcised women age 45-49.
- With respect to type of circumcision, 2 percent of circumcised women age 15-49 had cutting with no flesh removed, 87 percent had cutting with flesh removed, and 9 percent had their genital area sewn closed after cutting (a procedure known as infibulation).
- Girls age 0-14 are more likely to be circumcised if their mother is circumcised. Likewise, girls age 0-14 are more likely to be infibulated if their mother is also infibulated.
- Eight percent of girls age 0-14 have had their genital area sewn closed.
- Eleven percent or less of women and men believe that the practice of female genital cutting is required by their community or their religion or that the practice should continue.

Female genital cutting (FGC)—also called female circumcision and female genital mutilation—involves cutting some part of the clitoris or labia for non-therapeutic reasons, usually as part of a rite of passage into adolescence. It is practiced by some ethnic groups in Kenya as well as in other East African countries and is motivated by beliefs about what is considered proper sexual behaviour for women and what is necessary to prepare them for marriage (WHO, 2014b). However, the practice is widely acknowledged as a violation of children and women's rights, and it has the potential to cause serious medical complications. In 2011, Kenya passed a law—the Prohibition of Female Genital Mutilation Act 2011—that banned female genital mutilation nationwide. Under this law, it is illegal to practice FGC in Kenya or to take someone abroad for FGC.

The 2014 KDHS collected information about FGC in Kenya from women and men age 15-49. The topics covered included knowledge of female circumcision and attitudes towards the practice of circumcision. This is the first KDHS to collect information from men. Female respondents who had ever heard of female circumcision were asked additional questions, including whether they were circumcised and, if so, their age at circumcision, the type of circumcision, and the person who performed the procedure. They were also asked questions regarding the circumcision status of their daughters up to age 14.

18.1 KNOWLEDGE OF FEMALE CIRCUMCISION

Table 18.1 shows the percentage of women and men age 15-49 who have heard of female circumcision by background characteristics. Knowledge of FGC is virtually universal. Ninety-seven percent of women and 98 percent of men have heard of FGC. Similarly, in the 2008-09 KDHS, 96 percent of women had heard of FGC.

Women (95 percent) and men (94 percent) in the youngest age group (15-19) are least likely to have heard of FGC, as are women (79 percent) and men (94 percent) who do not identify with any religion. Women in the Mijikenda/Swahili ethnic group (83 percent) and women in the Coast region (90 percent) are less likely than other women to have heard of FGC. Among both women and men, knowledge of FGC generally increases with increasing education and wealth.

Table 18.1 Knowledge of female circumcision

Percentage of women and men 15-49 who have heard of female circumcision, according to background characteristics, Kenya 2014

Background characteristic	Women		Men	
	Have heard of female circumcision	Number of women	Have heard of female circumcision	Number of men
Age				
15-19	95.0	2,717	93.7	2,540
20-24	97.2	2,691	98.1	2,125
25-29	97.0	2,932	98.9	2,104
30-34	97.7	2,162	98.5	1,785
35-39	96.9	1,780	99.0	1,483
40-44	96.8	1,292	99.2	1,224
45-49	97.5	1,052	98.4	800
Religion				
Roman Catholic	97.5	2,920	97.9	2,583
Protestant/other Christian	97.0	10,497	97.7	8,141
Muslim	97.5	916	98.0	784
No religion	78.7	244	94.2	492
Other	(93.0)	48	99.6	59
Ethnic group				
Embu	99.4	147	98.2	118
Kalenjin	99.5	1,785	99.2	1,467
Kamba	96.3	1,649	98.2	1,521
Kikuyu	99.0	3,136	98.3	2,523
Kisii	99.9	863	99.8	712
Luhya	97.4	2,301	97.5	1,927
Luo	91.9	1,560	93.1	1,311
Maasai	100.0	280	100.0	220
Meru	99.5	826	98.9	717
Mijikenda/Swahili	83.1	767	93.4	623
Somali	99.6	354	99.9	260
Taita/Taveta	99.6	139	99.5	134
Turkana	94.1	189	97.0	106
Samburu	100.0	68	(100.0)	12
Other	94.7	558	98.0	399
Residence				
Urban	97.7	5,929	98.2	5,300
Rural	96.2	8,696	97.2	6,762
Region				
Coast	90.1	1,421	96.2	1,260
North Eastern	99.7	299	99.9	227
Eastern	97.6	2,066	98.0	1,825
Central	98.7	1,905	98.3	1,564
Rift Valley	99.1	3,714	99.1	3,050
Western	95.9	1,571	95.8	1,164
Nyanza	93.5	1,908	94.8	1,405
Nairobi	98.2	1,742	98.3	1,568
Education				
No education	92.3	1,015	96.8	345
Primary incomplete	94.7	3,793	94.7	3,071
Primary complete	97.1	3,543	97.9	2,734
Secondary+	98.6	6,274	99.0	5,913
Wealth quintile				
Lowest	92.9	2,236	95.4	1,691
Second	95.8	2,590	97.2	2,145
Middle	96.5	2,859	97.1	2,370
Fourth	98.1	3,113	97.6	2,959
Highest	99.0	3,827	99.7	2,897
Total 15-49	96.8	14,625	97.6	12,063
50-54	na	na	99.2	756
Total 15-54	na	na	97.7	12,819

Note: Totals include three women and three men for whom information on religion is missing and seven women and 16 men for whom information on ethnic group is missing. Figures in parentheses are based on 25-49 unweighted cases.
na = Not applicable

18.2 PREVALENCE OF AND AGE AT CIRCUMCISION

Table 18.2 presents the percentage of women age 15-49 who are circumcised and the percent distribution of circumcised women by type of circumcision, according to background characteristics. In the 2014 KDHS, 21 percent of women reported being circumcised, as compared with 27 percent in 2008-09 and 32 percent in 2003. The majority of circumcised women (87 percent) had a cut with flesh removed, 9 percent reported that their genital area had been sewn closed, 2 percent were cut with no flesh removed, and 2 percent did not know or did not have a response recorded.

Table 18.2 Prevalence of female circumcision

Percentage of women 15-49 circumcised, and percent distribution of circumcised women by type of circumcision according to background characteristics, Kenya 2014

Background characteristic	Percentage of women circumcised	Number of women	Type of circumcision				Total	Number of circumcised women
			Cut, no flesh removed	Cut, flesh removed	Sewn closed	Don't know/ missing		
Age								
15-19	11.4	2,717	1.4	85.8	9.8	2.9	100.0	309
20-24	14.7	2,691	1.5	88.0	8.8	1.7	100.0	395
25-29	18.0	2,932	1.3	86.4	10.8	1.6	100.0	527
30-34	22.9	2,162	2.2	86.2	8.7	2.9	100.0	495
35-39	27.8	1,780	1.5	88.1	9.0	1.4	100.0	496
40-44	32.1	1,292	1.3	87.4	9.9	1.5	100.0	415
45-49	40.9	1,052	1.6	88.4	8.2	1.7	100.0	430
Religion								
Roman Catholic	21.5	2,920	1.7	91.4	5.5	1.4	100.0	628
Protestant/other Christian	17.9	10,497	1.6	90.4	5.7	2.3	100.0	1,879
Muslim	51.1	916	1.2	67.1	30.1	1.7	100.0	468
No religion	32.9	244	0.7	95.1	4.2	0.0	100.0	80
Other	(19.7)	48	*	*	*	*	100.0	9
Ethnic group								
Embu	30.7	147	6.7	88.4	3.2	1.7	100.0	45
Kalenjin	27.9	1,785	3.6	90.3	5.2	0.9	100.0	498
Kamba	10.7	1,649	0.7	75.4	22.0	2.0	100.0	176
Kikuyu	14.6	3,136	1.5	87.7	8.4	2.4	100.0	459
Kisii	84.4	863	1.1	96.5	1.6	0.8	100.0	728
Luhya	0.4	2,301	*	*	*	*	100.0	10
Luo	0.2	1,560	*	*	*	*	100.0	3
Maasai	77.9	280	0.7	92.0	4.5	2.8	100.0	218
Meru	30.7	826	0.2	97.7	2.0	0.0	100.0	253
Mijikenda/Swahili	2.4	767	(0.0)	(93.7)	(5.1)	(1.2)	100.0	18
Somali	93.6	354	1.4	64.6	32.3	1.6	100.0	331
Taita/Taveta	22.3	139	4.4	56.7	8.5	30.4	100.0	31
Turkana	1.7	189	*	*	*	*	100.0	3
Samburu	86.0	68	0.4	95.0	4.2	0.4	100.0	58
Other	41.4	558	0.9	79.6	17.0	2.4	100.0	231
Residence								
Urban	13.8	5,929	2.8	84.1	10.1	3.0	100.0	815
Rural	25.9	8,696	1.1	88.3	9.1	1.5	100.0	2,251
Region								
Coast	10.2	1,421	3.9	61.2	26.2	8.7	100.0	145
North Eastern	97.5	299	1.1	66.1	31.3	1.5	100.0	292
Eastern	26.4	2,066	0.3	90.2	9.4	0.1	100.0	545
Central	16.5	1,905	0.9	86.9	11.6	0.6	100.0	314
Rift Valley	26.9	3,714	2.4	90.8	5.1	1.6	100.0	999
Western	0.8	1,571	*	*	*	*	100.0	13
Nyanza	32.4	1,908	0.3	97.0	1.7	1.0	100.0	618
Nairobi	8.0	1,742	(5.1)	(78.8)	(5.2)	(10.9)	100.0	140
Total	21.0	14,625	1.6	87.2	9.3	1.9	100.0	3,066

Note: Among all women, total includes three women for whom information on religion is missing and seven women for whom information on ethnic group is missing. Among circumcised women, total includes two women for whom information on religion is missing and three women for whom information on ethnic group is missing. Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

The proportion of circumcised women increases with age. Muslim women (51 percent) are more likely to have been circumcised than women from other religious groups. However, even among Protestants/other Christians, the religious group with the lowest prevalence, 18 percent of women have been circumcised. Muslim women are more likely to have had the type of circumcision in which their genital area is sewn closed (30 percent) than women from all other religious groups (4-6 percent).

The proportion of women who are circumcised varies by ethnic group (Figure 18.1), with the majority of women in the Somali (94 percent), Samburu (86 percent), Kisii (84 percent), and Maasai (78 percent) groups being circumcised. In contrast, 2 percent or less of women in the Luo, Luhya, Turkana, and Mijikenda/Swahili ethnic groups are circumcised. Rural women (26 percent) are more likely than urban women (14 percent) to be circumcised. There are large regional variations; the proportion of circumcised women ranges from 1 percent in Western to 98 percent in North Eastern.

Figure 18.1 **Percentage of women age 15-49 circumcised by ethnic group**

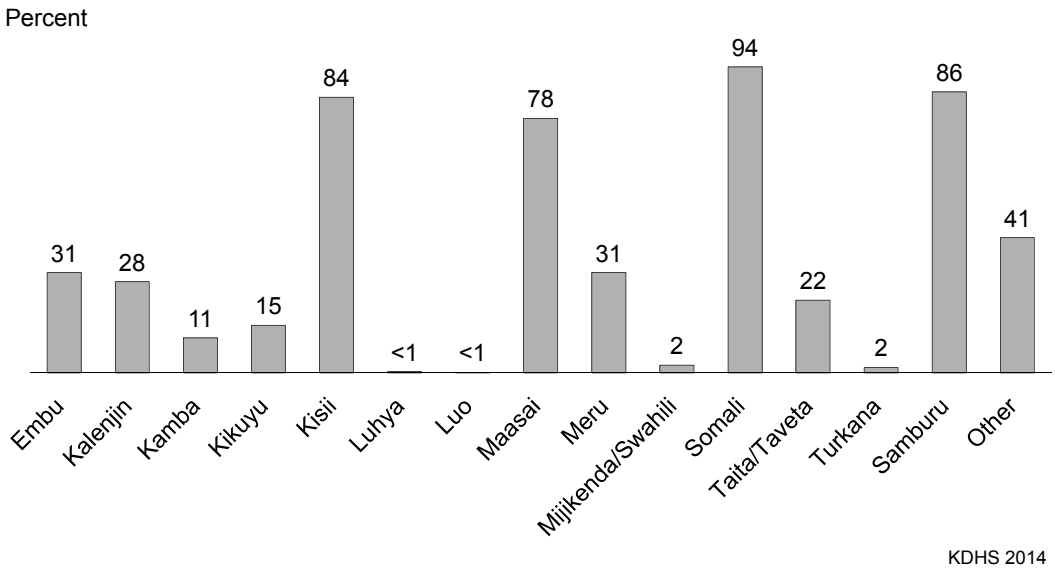


Table 18.3 shows the percent distribution of circumcised women age 15-49 by age at circumcision, according to background characteristics. It should be noted that when women are circumcised at a young age, their recollection of exactly how old they were at the time may be imperfect. A small proportion of women (2 percent) were circumcised when they were less than age 5. Twenty-seven percent were circumcised when they were age 5-9, 43 percent were circumcised when they were age 10-14, and 27 percent were circumcised at age 15 or older.

There is some evidence of a trend over time to circumcise girls at younger ages. Forty-six percent of circumcised women age 15-19 were circumcised at age 5-9, as compared with 17 percent of circumcised women age 45-49. While there is overlap in these categories, Muslim women are much more likely to be circumcised at age 5-9 (65 percent) than women from other religious groups, as are Somali women (73 percent. Urban women are more likely to be circumcised at age 5-9 (34 percent) than rural women (24 percent). About 78 percent of women in urban areas are circumcised by age 14, compared with 69 percent of those in rural areas. Women in the Coast region were most likely to have been circumcised when they were less than age 5 (22 percent).

Table 18.3 Age at circumcision

Percent distribution of circumcised women age 15-49 by age at circumcision according to background characteristics, Kenya 2014

Background characteristic	Age at circumcision					Total	Number of circumcised women
	<5[1]	5-9	10-14	15+	Don't know/ missing		
Age							
15-19	2.8	46.0	42.8	7.1	1.3	100.0	309
20-24	1.1	27.9	44.2	24.1	2.6	100.0	395
25-29	2.3	33.4	41.5	21.6	1.2	100.0	527
30-34	1.7	28.0	41.8	26.2	2.3	100.0	495
35-39	2.3	21.9	44.2	30.9	0.7	100.0	496
40-44	3.3	16.3	37.2	41.5	1.8	100.0	415
45-49	2.5	16.7	46.5	32.4	1.9	100.0	430
Religion							
Roman Catholic	1.8	25.6	43.0	27.8	1.7	100.0	628
Protestant/other Christian	1.4	18.1	46.6	32.3	1.6	100.0	1,879
Muslim	7.0	65.0	24.3	1.6	2.1	100.0	468
No religion	0.0	5.4	51.7	42.9	0.0	100.0	80
Other	*	*	*	*	*	100.0	9
Ethnic group							
Embu	0.0	9.6	77.9	10.9	1.7	100.0	45
Kalenjin	0.0	1.5	27.2	70.9	0.4	100.0	498
Kamba	5.0	47.7	41.4	2.5	3.4	100.0	176
Kikuyu	0.9	2.1	54.0	42.8	0.1	100.0	459
Kisii	0.4	48.6	47.1	1.3	2.6	100.0	728
Luhya	*	*	*	*	*	100.0	10
Luo	*	*	*	*	*	100.0	3
Maasai	0.8	10.7	59.5	26.9	2.0	100.0	218
Meru	0.4	5.0	44.0	50.4	0.2	100.0	253
Mijikenda/Swahili	27.8	35.2	33.4	2.4	1.2	100.0	18
Somali	5.2	72.7	18.9	0.2	2.9	100.0	331
Taita/Taveta	61.3	22.0	11.1	4.9	0.7	100.0	31
Turkana	*	*	*	*	*	100.0	3
Samburu	0.0	2.6	57.9	38.9	0.6	100.0	58
Other	4.2	25.6	50.9	18.6	0.6	100.0	231
Residence							
Urban	2.8	33.7	41.9	20.0	1.7	100.0	815
Rural	2.1	24.0	42.8	29.4	1.7	100.0	2,251
Region							
Coast	21.7	43.9	28.6	4.1	1.7	100.0	145
North Eastern	5.1	76.3	16.1	0.0	2.4	100.0	292
Eastern	1.6	22.1	45.6	29.4	1.3	100.0	545
Central	1.3	6.3	58.7	33.6	0.2	100.0	314
Rift Valley	0.5	7.6	41.9	49.0	1.0	100.0	999
Western	*	*	*	*	*	100.0	13
Nyanza	0.4	42.7	49.9	4.4	2.5	100.0	618
Nairobi	(1.9)	(30.8)	(37.5)	(24.8)	(5.0)	100.0	140
Total	2.3	26.6	42.6	26.9	1.7	100.0	3,066

Note: Total includes two women for whom information on religion is missing and three women for whom information on ethnic group is missing. Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
[1] Includes women who reported they were circumcised during infancy but did not provide a specific age.

Table 18.4 shows the percent distribution of girls age 0-14 by age at circumcision and the percentage of girls circumcised according to current age. Three percent of girls age 0-14 are circumcised; the likelihood of being circumcised increases with age, and 7 percent of girls age 10-14 are circumcised.

Table 18.4 Prevalence of circumcision and age at circumcision: Girls 0-14

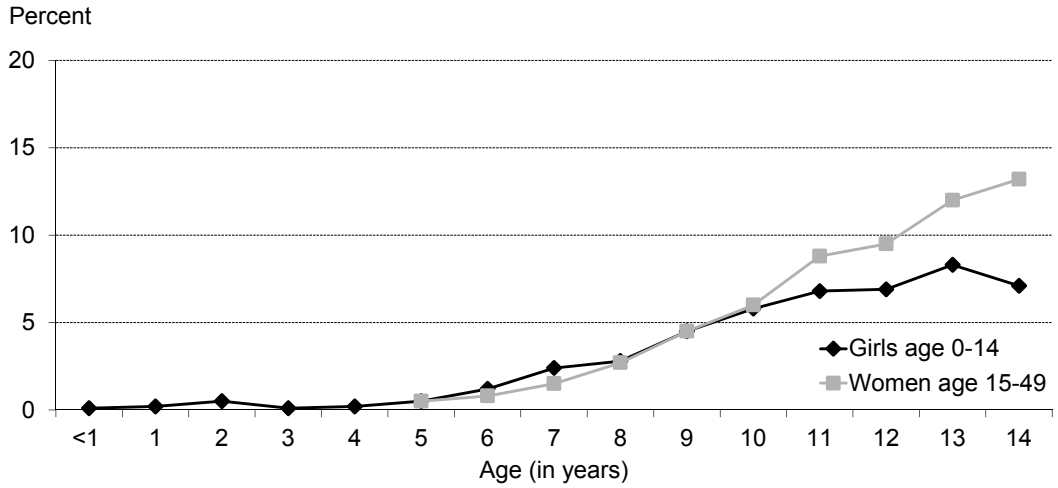
Percent distribution of girls age 0-14 by age at circumcision, and percentage of girls circumcised according to current age, Kenya 2014

Background characteristic	Age at circumcision				Percentage not circumcised	Total	Number of girls	Percentage circumcised
	<1	1-4	5-9	10-14				
Current age of girls								
0-4	0.0	0.0	na	na	99.8	100.0	4,426	0.2
5-9	0.0	0.3	1.9	na	97.8	100.0	4,453	2.2
10-14	0.0	0.2	5.0	1.7	93.1	100.0	3,508	6.9
Total	0.0	0.2	2.1	0.5	97.2	100.0	12,388	2.8

Note: The circumcision status of girls is reported by their mothers. Totals may not add up to 100 percent because girls with missing information are not shown separately.
na = Not applicable due to censoring.

A comparison of age at circumcision between girls age 0-14 and women age 15-49 is shown in Figure 18.2. A slightly higher proportion of women than girls were circumcised at each particular age. For example, girls currently age 14 are less likely to be circumcised at that age than women who are currently age 15-49.

Figure 18.2 **Percentage of women age 15-49 and girls age 0-14 circumcised by age**



Note: Data on age at circumcision for women who were circumcised before age 5 is not available in single years of age. Data for girls is based on current status. The figure shows the percentage of girls currently in each age group who have been circumcised (according to mother's report). Data for women age 15-49 is based on recall and shows the percentage who were circumcised by specific exact ages.

KDHS 2014

Table 18.5 shows the percentage of girls age 0-14 who are circumcised according to age and mother's background characteristics. Twenty percent of girls with Muslim mothers are circumcised. Thirty-six percent of girls whose mothers are Somali and 16 percent whose mothers are Kisii are circumcised, as compared with 6 percent or less among all other ethnic groups. Forty percent of girls in North Eastern are circumcised.

Table 18.5 Circumcision of girls age 0-14 by mother's background characteristics

Percentage of girls age 0-14 who are circumcised, according to age and mother's background characteristics, Kenya 2014

Background characteristic	Current age of girls			All 0-14
	0-4	5-9	10-14	
Religion				
Roman Catholic	0.0	1.2	5.9	2.1
Protestant/other Christian	0.3	0.5	3.5	1.3
Muslim	0.7	20.3	45.0	19.8
No religion	0.0	0.4	0.0	0.1
Ethnic group				
Embu	(0.0)	(3.8)	(0.0)	1.2
Kalenjin	0.5	0.3	0.7	0.5
Kamba	0.0	0.4	0.9	0.4
Kisii	0.1	5.4	46.9	16.1
Luhya	0.6	0.0	0.1	0.2
Luo	0.0	0.1	0.0	0.0
Maasai	0.4	2.4	7.6	2.8
Meru	0.0	1.9	0.0	0.7
Mijikenda/Swahili	0.0	0.1	0.1	0.1
Somali	1.5	40.0	76.4	36.0
Taita/Taveta	0.0	1.6	2.2	1.3
Turkana	0.0	0.0	0.2	0.0
Samburu	0.0	1.0	12.8	3.8
Other	0.0	3.4	14.1	5.5
Residence				
Urban	0.2	1.5	5.5	2.0
Rural	0.3	2.6	7.5	3.2
Region				
Coast	0.0	1.2	4.4	1.6
North Eastern	1.6	44.8	82.2	40.2
Eastern	0.0	1.7	3.1	1.6
Central	0.0	0.0	0.5	0.2
Rift Valley	0.4	0.4	2.0	0.8
Western	0.3	0.0	0.2	0.1
Nyanza	0.3	2.1	16.9	5.9
Nairobi	0.0	0.0	2.1	0.5
Mother's education				
No education	0.5	13.2	28.1	13.0
Primary incomplete	0.0	0.8	4.1	1.5
Primary complete	0.3	0.6	3.0	1.2
Secondary+	0.3	0.7	4.1	1.5
Mother's circumcision status				
Circumcised	0.3	7.5	20.8	9.6
Not circumcised	0.2	0.1	0.1	0.1
Wealth quintile				
Lowest	0.5	5.9	14.5	6.2
Second	0.4	1.2	5.9	2.3
Middle	0.2	1.3	6.2	2.4
Fourth	0.1	0.9	4.6	1.7
Highest	0.0	1.0	1.4	0.7
Total	0.2	2.2	6.9	2.8

Note: The circumcision status of girls is reported by their mothers. Figures in parentheses are based on 25-49 unweighted cases.

18.3 ASPECTS OF CIRCUMCISION AMONG CIRCUMCISED GIRLS AND WOMEN

Infibulation is the excision of exterior genitalia and the sewing shut of the opening to the vagina. It is the type of FGC most likely to result in severe, long-term medical complications. Table 18.6 presents the percent distribution of girls age 0-14 who are circumcised by whether or not they are infibulated, according to their mother's background characteristics.

Eight percent of circumcised girls are infibulated. Eighty-six percent of circumcised girls are not infibulated, and infibulation status is unknown for 6 percent of circumcised girls. Infibulation is most common among girls whose mothers are Muslim (13 percent), have no education (11 percent), or are themselves infibulated (25 percent).

Table 18.6 Infibulation among circumcised girls age 0-14

Percent distribution of girls age 0-14 who are circumcised by whether or not they are infibulated, according to mother's background characteristics, Kenya 2014

Background characteristic	Infibulation status			Total	Number
	Sewn closed	Not sewn closed	Don't know/ missing		
Religion					
Roman Catholic	1.1	90.7	8.2	100.0	50
Protestant/other Christian	2.5	85.0	12.5	100.0	111
Muslim	12.7	86.0	1.3	100.0	189
No religion	*	*	*	100.0	1
Ethnic group					
Embu	*	*	*	100.0	1
Kalenjin	*	*	*	100.0	8
Kamba	*	*	*	100.0	5
Kisii	2.4	92.5	5.1	100.0	117
Luhya	*	*	*	100.0	5
Luo	*	*	*	100.0	1
Maasai	*	*	*	100.0	11
Meru	*	*	*	100.0	4
Mijikenda/Swahili	*	*	*	100.0	1
Somali	11.3	87.9	0.8	100.0	163
Taita/Taveta	*	*	*	100.0	1
Turkana	*	*	*	100.0	0
Samburu	*	*	*	100.0	3
Other	17.8	78.2	4.0	100.0	32
Residence					
Urban	7.2	87.4	5.4	100.0	80
Rural	8.0	86.0	6.0	100.0	271
Region					
Coast	45.3	50.3	4.4	100.0	21
North Eastern	9.0	90.2	0.8	100.0	157
Eastern	2.6	92.9	4.5	100.0	27
Central	*	*	*	100.0	2
Rift Valley	(8.7)	(62.9)	(28.4)	100.0	29
Western	*	*	*	100.0	2
Nyanza	0.6	93.0	6.4	100.0	109
Nairobi	*	*	*	100.0	5
Mother's education					
No education	10.5	88.9	0.6	100.0	200
Primary incomplete	4.3	87.6	8.1	100.0	63
Primary complete	7.5	75.7	16.8	100.0	39
Secondary+	1.6	82.9	15.6	100.0	50
Mother's circumcision status					
Infibulated	24.7	73.9	1.4	100.0	70
Circumcised, not infibulated	3.7	93.7	2.7	100.0	269
Not circumcised	*	*	*	100.0	13
Wealth quintile					
Lowest	10.2	87.1	2.8	100.0	179
Second	3.9	84.9	11.2	100.0	59
Middle	7.0	83.4	9.7	100.0	60
Fourth	2.3	94.3	3.4	100.0	38
Highest	(12.2)	(75.0)	(12.7)	100.0	15
Total	7.8	86.3	5.9	100.0	352

Note: The circumcision status of girls is reported by their mothers. Figures in parentheses are based on 25-49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

Communities that practice FGC have people who specialise in performing the procedure, including traditional circumcisers, traditional birth attendants, and medical professionals. Table 18.7 shows the percent distribution of circumcised girls age 0-14 and women age 15-49 according to the person performing the circumcision and the type of circumcision. Seventy-three percent of girls and 81 percent of women were circumcised by a traditional circumciser. Younger girls (age 5-9) are more likely than older girls (age 10-14) to have been circumcised by a traditional circumciser (85 percent versus 70 percent). Among women age 15-49, there has been an increase in the proportion circumcised by a traditional circumciser since the 2008-09 KDHS (75 percent).

Table 18.7 Aspects of circumcision among circumcised girls age 0-14 and women age 15-49

Percent distribution of circumcised girls age 0-14 by current age and women age 15-49, according to person performing the circumcision and type of circumcision, Kenya 2014

Background characteristic	Current age of girls			Girls age 0-14	Women age 15-49
	0-4	5-9	10-14		
Person who performed the circumcision					
Traditional agent	*	86.8	72.0	74.9	83.3
Traditional circumciser	*	84.7	69.9	72.9	80.5
Traditional birth attendant	*	2.1	2.0	2.0	2.5
Other traditional agent	*	0.0	0.0	0.0	0.4
Medical professional	*	8.7	24.8	19.7	14.8
Doctor	*	1.9	4.2	3.5	6.4
Nurse/midwife	*	6.8	20.6	16.2	8.3
Other health professional	*	0.0	0.0	0.0	0.1
Don't know/missing	*	4.4	3.2	5.4	1.9
Total	100.0	100.0	100.0	100.0	100.0
Type of circumcision					
Sewn closed	*	8.2	8.0	7.8	9.3
Not sewn closed	*	86.5	88.6	86.3	89.2
Don't know/missing	*	5.3	3.5	5.9	1.5
Total	100.0	100.0	100.0	100.0	100.0
Number	11	99	242	352	3,066

Note: The circumcision status of girls is reported by their mothers. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

18.4 RELIGIOUS AND COMMUNITY ATTITUDES TOWARDS FGC

Table 18.8 shows the percent distribution of women and men age 15-49 who have heard of female circumcision according to their opinion on whether or not their religion requires female circumcision, by background characteristics. Five percent of women and 6 percent of men believe that circumcision is required by their religion. Circumcised women are more likely (18 percent) than those who have not been circumcised to say that circumcision is required by their religion (1 percent). Muslim women (44 percent) and men (36 percent) are more likely to say that circumcision is required by their religion than members of other religious groups.

Respondents' opinions about whether circumcision is required by their religion vary according to ethnic group; the majority of Somali women (82 percent) and men (83 percent) believe that circumcision is required by their religion. Residents of North Eastern are most likely to report that circumcision is required by their religion (89 percent of women and 87 percent of men). Women (36 percent) and men (37 percent) with no education are more likely to report that circumcision is required by their religion than women and men with any education. Women (15 percent) and men (14 percent) in the lowest wealth quintile are most likely to believe that circumcision is required by their religion.

Table 18.8 Opinions of women and men about whether circumcision is required by religion

Percent distribution of women and men age 15-49 who have heard of female circumcision by opinion on whether their religion requires female circumcision, according to background characteristics, Kenya 2014

Background characteristic	Women					Men				
	Required by religion	Not required by religion	Don't know/ missing	Total	Number of women	Required by religion	Not required by religion	Don't know/ missing	Total	Number of men
Female circumcision status										
Circumcised	18.2	79.0	2.8	100.0	3,066	na	na	na	na	na
Not circumcised	0.7	98.1	1.2	100.0	11,087	na	na	na	na	na
Age										
15-19	5.4	93.6	1.0	100.0	2,582	5.4	92.1	2.5	100.0	2,381
20-24	4.4	93.6	2.0	100.0	2,616	4.8	91.2	4.0	100.0	2,086
25-29	3.9	94.5	1.6	100.0	2,846	5.0	89.6	5.4	100.0	2,081
30-34	4.6	94.1	1.3	100.0	2,113	4.8	91.1	4.1	100.0	1,757
35-39	4.5	93.9	1.6	100.0	1,726	7.0	91.1	2.0	100.0	1,468
40-44	4.6	94.0	1.5	100.0	1,250	7.3	89.7	2.9	100.0	1,214
45-49	3.9	94.0	2.1	100.0	1,026	5.1	90.3	4.6	100.0	788
Religion										
Roman Catholic	2.5	96.9	0.6	100.0	2,847	5.6	93.2	1.2	100.0	2,530
Protestant/other Christian	1.6	97.5	0.9	100.0	10,181	2.6	96.3	1.1	100.0	7,952
Muslim	43.7	54.1	2.2	100.0	893	36.1	62.8	1.1	100.0	768
No religion	4.4	51.0	44.6	100.0	192	2.0	33.2	64.8	100.0	464
Other	(6.7)	(82.7)	(10.7)	100.0	45	25.8	69.7	4.4	100.0	59
Ethnic group										
Embu	3.9	95.4	0.6	100.0	146	8.2	90.0	1.8	100.0	116
Kalenjin	0.7	97.1	2.1	100.0	1,775	1.6	92.2	6.2	100.0	1,455
Kamba	1.2	97.5	1.2	100.0	1,587	2.0	95.1	2.9	100.0	1,494
Kikuyu	1.2	98.1	0.7	100.0	3,105	4.6	89.7	5.6	100.0	2,479
Kisii	3.4	94.3	2.3	100.0	863	9.8	87.6	2.7	100.0	710
Luhya	0.9	98.0	1.1	100.0	2,241	0.7	97.2	2.1	100.0	1,878
Luo	0.9	98.2	0.8	100.0	1,434	2.0	96.4	1.6	100.0	1,220
Maasai	15.1	81.0	3.9	100.0	280	14.8	79.3	6.0	100.0	220
Meru	1.4	97.7	0.9	100.0	822	2.8	95.9	1.3	100.0	708
Mijikenda/Swahili	1.2	92.4	6.4	100.0	638	0.9	93.9	5.3	100.0	582
Somali	82.3	17.1	0.5	100.0	352	83.4	16.4	0.3	100.0	259
Taita/Taveta	1.8	97.9	0.3	100.0	138	4.2	94.1	1.7	100.0	133
Turkana	0.0	95.8	4.2	100.0	178	3.7	91.7	4.5	100.0	103
Samburu	30.7	64.8	4.5	100.0	68	(67.7)	(4.7)	(27.6)	100.0	12
Other	23.5	74.4	2.1	100.0	529	19.2	78.4	2.4	100.0	391
Residence										
Urban	3.5	95.6	0.9	100.0	5,792	5.2	91.4	3.4	100.0	5,205
Rural	5.2	92.8	2.0	100.0	8,367	5.8	90.4	3.8	100.0	6,571
Region										
Coast	4.9	91.2	3.9	100.0	1,280	4.1	93.1	2.8	100.0	1,212
North Eastern	89.3	10.1	0.6	100.0	298	86.8	13.0	0.2	100.0	226
Eastern	4.9	93.9	1.2	100.0	2,017	5.1	91.6	3.3	100.0	1,788
Central	1.7	97.5	0.8	100.0	1,880	7.0	91.1	1.9	100.0	1,537
Rift Valley	2.8	95.0	2.2	100.0	3,682	2.8	90.1	7.1	100.0	3,023
Western	1.2	97.7	1.2	100.0	1,506	0.3	99.1	0.5	100.0	1,115
Nyanza	2.9	96.0	1.1	100.0	1,785	5.6	93.2	1.2	100.0	1,333
Nairobi	0.2	99.0	0.7	100.0	1,711	2.9	92.7	4.4	100.0	1,541
Education										
No education	35.5	60.0	4.5	100.0	937	37.4	55.9	6.8	100.0	334
Primary incomplete	3.9	93.6	2.6	100.0	3,593	6.4	88.5	5.1	100.0	2,907
Primary complete	2.6	96.1	1.2	100.0	3,439	5.0	90.6	4.4	100.0	2,678
Secondary+	1.2	98.1	0.7	100.0	6,189	3.5	94.1	2.4	100.0	5,857
Wealth quintile										
Lowest	15.4	80.5	4.1	100.0	2,077	13.9	80.1	6.0	100.0	1,613
Second	3.1	94.7	2.2	100.0	2,480	4.8	90.8	4.4	100.0	2,085
Middle	2.3	96.5	1.2	100.0	2,759	3.8	93.0	3.2	100.0	2,302
Fourth	3.0	96.1	0.9	100.0	3,056	4.1	93.2	2.7	100.0	2,887
Highest	2.3	97.2	0.5	100.0	3,788	4.2	92.8	3.1	100.0	2,889
Total 15-49	4.5	93.9	1.5	100.0	14,159	5.5	90.8	3.6	100.0	11,776
50-54	na	na	na	na	na	7.6	88.5	3.8	100.0	750
Total 15-54	na	na	na	na	na	5.7	90.7	3.6	100.0	12,526

Note: Figures in parentheses are based on 25-49 unweighted cases.
na = Not applicable

Table 18.9 shows the percent distribution of women and men age 15-49 who have heard of female circumcision according to their opinion on whether their community requires female circumcision, by background characteristics. Eight percent of women and 11 percent of men believe that circumcision is required by their community. The patterns seen above for opinions related to religion are repeated, although circumcised women are more likely to say that circumcision is required by their community (30 percent) than by their religion (18 percent). Also, men with no education are more likely to say that

circumcision is required by their community (50 percent) than by their religion (37 percent). Both women (23 percent) and men (22 percent) in the lowest wealth quintile are more likely to say that circumcision is required by their community than by their religion (15 percent and 14 percent, respectively).

Table 18.9 Opinions of women and men about whether circumcision is required by the community

Percent distribution of women and men age 15-49 who have heard of female circumcision by opinion on whether their community requires female circumcision, according to background characteristics, Kenya 2014

Background characteristic	Women					Men				
	Required by the community	Not required by the community	Don't know/ missing	Total	Number of women	Required by the community	Not required by the community	Don't know/ missing	Total	Number of men
Female circumcision status										
Circumcised	29.9	69.8	0.3	100.0	3,066	na	na	na	na	na
Not circumcised	1.8	97.8	0.4	100.0	11,087	na	na	na	na	na
Age										
15-19	7.7	92.0	0.4	100.0	2,582	9.4	89.9	0.8	100.0	2,381
20-24	8.0	91.6	0.4	100.0	2,616	9.2	90.2	0.6	100.0	2,086
25-29	6.9	92.6	0.6	100.0	2,846	10.6	88.6	0.8	100.0	2,081
30-34	8.8	90.8	0.3	100.0	2,113	11.1	88.6	0.3	100.0	1,757
35-39	8.4	91.1	0.6	100.0	1,726	12.5	87.1	0.3	100.0	1,468
40-44	8.6	91.2	0.2	100.0	1,250	11.8	87.7	0.4	100.0	1,214
45-49	7.3	92.0	0.6	100.0	1,026	12.0	87.4	0.7	100.0	788
Religion										
Roman Catholic	5.7	93.8	0.4	100.0	2,847	10.3	89.4	0.3	100.0	2,530
Protestant/other Christian	5.1	94.5	0.4	100.0	10,181	7.5	91.8	0.7	100.0	7,952
Muslim	43.3	55.9	0.7	100.0	893	38.5	61.3	0.2	100.0	768
No religion	17.7	81.6	0.7	100.0	192	17.9	80.9	1.2	100.0	464
Other	(28.5)	(71.5)	(0.0)	100.0	45	25.5	74.5	0.0	100.0	59
Ethnic group										
Embu	8.5	91.5	0.0	100.0	146	24.3	75.7	0.0	100.0	116
Kalenjin	4.4	95.4	0.2	100.0	1,775	8.4	91.2	0.4	100.0	1,455
Kamba	3.0	96.6	0.4	100.0	1,587	4.1	95.3	0.6	100.0	1,494
Kikuyu	3.1	96.6	0.3	100.0	3,105	9.1	89.4	1.5	100.0	2,479
Kisii	19.0	80.8	0.2	100.0	863	23.5	75.8	0.7	100.0	710
Luhya	1.0	98.2	0.8	100.0	2,241	1.6	98.3	0.1	100.0	1,878
Luo	1.9	97.6	0.5	100.0	1,434	4.0	95.7	0.3	100.0	1,220
Maasai	37.4	62.4	0.2	100.0	280	40.0	58.7	1.3	100.0	220
Meru	6.1	93.5	0.4	100.0	822	10.6	89.0	0.4	100.0	708
Mijikenda/Swahili	1.3	98.2	0.5	100.0	638	1.4	98.6	0.0	100.0	582
Somali	82.7	16.9	0.4	100.0	352	87.0	13.0	0.0	100.0	259
Taita/Taveta	4.1	95.4	0.5	100.0	138	9.9	89.8	0.3	100.0	133
Turkana	1.3	97.5	1.2	100.0	178	5.6	94.4	0.0	100.0	103
Samburu	72.0	27.4	0.5	100.0	68	(95.3)	(4.7)	(0.0)	100.0	12
Other	30.2	68.8	1.0	100.0	529	34.7	65.0	0.3	100.0	391
Residence										
Urban	6.3	93.4	0.3	100.0	5,792	9.6	89.9	0.5	100.0	5,205
Rural	9.0	90.4	0.5	100.0	8,367	11.4	87.9	0.7	100.0	6,571
Region										
Coast	6.3	93.2	0.4	100.0	1,280	6.8	93.2	0.0	100.0	1,212
North Eastern	90.4	9.2	0.4	100.0	298	90.4	9.6	0.0	100.0	226
Eastern	8.3	91.4	0.3	100.0	2,017	10.9	88.5	0.6	100.0	1,788
Central	3.6	96.0	0.4	100.0	1,880	10.8	88.3	0.8	100.0	1,537
Rift Valley	7.8	91.9	0.3	100.0	3,682	10.8	88.1	1.0	100.0	3,023
Western	2.1	96.8	1.0	100.0	1,506	1.5	98.5	0.0	100.0	1,115
Nyanza	9.1	90.4	0.6	100.0	1,785	11.8	87.8	0.4	100.0	1,333
Nairobi	3.1	96.7	0.2	100.0	1,711	6.6	92.8	0.6	100.0	1,541
Education										
No education	44.8	54.4	0.7	100.0	937	50.1	49.1	0.8	100.0	334
Primary incomplete	7.8	91.5	0.7	100.0	3,593	12.3	87.0	0.8	100.0	2,907
Primary complete	5.0	94.7	0.3	100.0	3,439	9.8	89.6	0.6	100.0	2,678
Secondary+	3.9	95.8	0.3	100.0	6,189	7.9	91.6	0.5	100.0	5,857
Wealth quintile										
Lowest	22.6	76.7	0.8	100.0	2,077	21.8	77.7	0.6	100.0	1,613
Second	7.1	92.1	0.8	100.0	2,480	10.2	89.3	0.5	100.0	2,085
Middle	4.6	95.0	0.4	100.0	2,759	9.2	89.8	1.1	100.0	2,302
Fourth	5.6	94.1	0.2	100.0	3,056	8.4	91.3	0.3	100.0	2,887
Highest	4.6	95.2	0.2	100.0	3,788	8.0	91.4	0.6	100.0	2,889
Total 15-49	7.9	91.7	0.4	100.0	14,159	10.6	88.8	0.6	100.0	11,776
50-54	na	na	na	na	na	15.6	84.1	0.3	100.0	750
Total 15-54	na	na	na	na	na	10.9	88.5	0.6	100.0	12,526

Note: Figures in parentheses are based on 25-49 unweighted cases.
na = Not applicable

18.5 SUPPORT FOR THE CONTINUATION OF FGC

Table 18.10 shows the percent distribution of women and men age 15-49 who have heard of circumcision according to their opinion on whether the practice should be continued, by background characteristics. Six percent of women and 9 percent of men believe that circumcision should continue. Among women, there has been some change since 2008-09 in the percentage who believe that the practice should continue (9 percent). The patterns seen above for respondents' opinions on whether female circumcision is required by their religion or their community are repeated. There has been a slight decrease since 2008-09 in the proportion of circumcised women who believe that the practice should continue (from 29 percent in 2008-09 to 23 percent in 2014); the proportion has also decreased among women living in Nyanza (from 17 percent to 9 percent) and Nairobi (from 6 percent to 2 percent). However, there has been a slight increase since 2008-09 in the proportion of women with no education who believe that the practice should continue (from 34 percent to 40 percent).

Table 18.10 Opinions of women and men about whether the practice of circumcision should continue

Percent distribution of women and men age 15-49 who have heard of female circumcision by opinion on whether the practice of circumcision should be continued, by background characteristics, Kenya 2014

Background characteristic	Women					Men				
	Continued	Not continued	Don't know/ missing/ depends	Total	Number of women	Continued	Not continued	Don't know/ missing/ depends	Total	Number of men
Female circumcision status										
Circumcised	23.0	75.1	1.9	100.0	3,066	na	na	na	na	na
Not circumcised	1.6	97.3	1.1	100.0	11,087	na	na	na	na	na
Age										
15-19	6.2	92.8	1.0	100.0	2,582	7.6	91.3	1.1	100.0	2,381
20-24	5.7	93.2	1.1	100.0	2,616	7.7	91.0	1.3	100.0	2,086
25-29	5.9	93.1	1.0	100.0	2,846	8.6	89.0	2.4	100.0	2,081
30-34	6.5	91.6	1.9	100.0	2,113	10.3	87.4	2.3	100.0	1,757
35-39	6.9	91.3	1.7	100.0	1,726	11.8	86.7	1.5	100.0	1,468
40-44	6.5	92.2	1.4	100.0	1,250	10.6	86.1	3.4	100.0	1,214
45-49	6.3	92.3	1.4	100.0	1,026	11.2	86.3	2.5	100.0	788
Religion										
Roman Catholic	4.3	94.3	1.4	100.0	2,847	9.4	89.1	1.5	100.0	2,530
Protestant/other Christian	3.6	95.2	1.3	100.0	10,181	6.2	91.8	2.0	100.0	7,952
Muslim	40.8	58.1	1.1	100.0	893	33.6	64.5	1.9	100.0	768
No religion	13.2	82.5	4.3	100.0	192	17.1	79.8	3.0	100.0	464
Other	(6.3)	(92.3)	(1.4)	100.0	45	32.9	64.3	2.8	100.0	59
Ethnic group										
Embu	4.6	95.4	0.0	100.0	146	12.2	87.2	0.6	100.0	116
Kalenjin	1.9	97.0	1.1	100.0	1,775	5.1	93.2	1.7	100.0	1,455
Kamba	2.2	97.1	0.7	100.0	1,587	6.9	91.5	1.6	100.0	1,494
Kikuyu	2.0	97.0	1.0	100.0	3,105	9.9	88.3	1.8	100.0	2,479
Kisii	11.1	86.8	2.1	100.0	863	17.2	79.9	2.9	100.0	710
Luhya	1.4	97.4	1.2	100.0	2,241	1.9	96.7	1.5	100.0	1,878
Luo	5.3	92.6	2.1	100.0	1,434	6.5	89.4	4.1	100.0	1,220
Maasai	22.6	76.2	1.1	100.0	280	21.3	77.0	1.7	100.0	220
Meru	3.1	96.1	0.9	100.0	822	7.8	91.4	0.7	100.0	708
Mijikenda/Swahili	0.9	97.0	2.2	100.0	638	1.6	97.0	1.4	100.0	582
Somali	81.2	17.2	1.6	100.0	352	79.8	20.1	0.1	100.0	259
Taita/Taveta	4.4	92.6	3.0	100.0	138	9.4	88.2	2.3	100.0	133
Turkana	1.5	96.7	1.9	100.0	178	1.5	97.7	0.8	100.0	103
Samburu	50.3	43.1	6.6	100.0	68	(30.7)	(39.7)	(29.6)	100.0	12
Other	22.3	76.6	1.2	100.0	529	20.3	77.2	2.5	100.0	391
Residence										
Urban	4.6	94.5	0.9	100.0	5,792	8.5	89.4	2.1	100.0	5,205
Rural	7.3	91.1	1.6	100.0	8,367	9.9	88.3	1.8	100.0	6,571
Region										
Coast	4.8	93.7	1.5	100.0	1,280	5.8	93.4	0.8	100.0	1,212
North Eastern	89.3	9.8	0.9	100.0	298	83.5	16.4	0.1	100.0	226
Eastern	5.6	93.7	0.6	100.0	2,017	10.4	88.2	1.4	100.0	1,788
Central	2.6	96.6	0.8	100.0	1,880	10.4	88.2	1.3	100.0	1,537
Rift Valley	4.7	94.0	1.3	100.0	3,682	7.2	91.0	1.9	100.0	3,023
Western	1.9	96.2	1.9	100.0	1,506	0.7	97.9	1.5	100.0	1,115
Nyanza	8.7	88.9	2.4	100.0	1,785	11.7	84.8	3.5	100.0	1,333
Nairobi	1.9	97.2	0.8	100.0	1,711	6.9	89.8	3.2	100.0	1,541
Education										
No education	39.9	57.6	2.5	100.0	937	42.8	55.0	2.3	100.0	334
Primary incomplete	6.7	91.2	2.1	100.0	3,593	12.3	85.9	1.8	100.0	2,907
Primary complete	3.8	95.1	1.1	100.0	3,439	10.2	87.4	2.4	100.0	2,678
Secondary+	2.2	97.0	0.8	100.0	6,189	5.4	92.8	1.7	100.0	5,857
Wealth quintile										
Lowest	18.8	78.7	2.4	100.0	2,077	18.8	79.6	1.6	100.0	1,613
Second	6.4	91.3	2.3	100.0	2,480	9.0	89.7	1.4	100.0	2,085
Middle	3.6	95.7	0.8	100.0	2,759	8.2	89.3	2.4	100.0	2,302
Fourth	3.5	95.6	0.9	100.0	3,056	7.5	90.5	2.0	100.0	2,887
Highest	3.3	95.9	0.7	100.0	3,788	6.8	91.2	2.0	100.0	2,889
Total 15-49	6.2	92.5	1.3	100.0	14,159	9.3	88.8	1.9	100.0	11,776
50-54	na	na	na	na	na	10.3	86.2	3.5	100.0	750
Total 15-54	na	na	na	na	na	9.3	88.6	2.0	100.0	12,526

Note: Figures in parentheses are based on 25-49 unweighted cases.
na = Not applicable

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SAMPLE IMPLEMENTATION

Appendix A

Table A.1 Enumeration Areas and households

Distribution of the enumeration areas and average size of households in the sampling frame by region and residence

	Number of EAs			Number of households		
County	Urban	Rural	Total	Urban	Rural	Total
Coast						
Mombasa	3,079	na	3,079	268,700	na	268,700
Kwale	296	969	1,265	29,088	92,959	122,047
Kilifi	884	1,459	2,343	71,974	127,790	199,764
Tana River	94	532	626	7,879	39,535	47,414
Lamu	54	211	265	4,793	17,391	22,184
Taita Taveta	180	791	971	13,877	57,213	71,090
North Eastern						
Garissa	339	522	861	24,864	73,726	98,590
Wajir	163	652	815	14,163	74,411	88,574
Mandera	254	784	1,038	22,629	102,868	125,497
Eastern						
Marsabit	156	497	653	11,922	45,019	56,941
Isiolo	171	226	397	14,618	16,708	31,326
Meru	373	2,823	3,196	33,631	285,985	319,616
Tharaka-Nithi	253	849	1,102	22,103	66,700	88,803
Embu	244	1,052	1,296	25,062	106,621	131,683
Kitui	523	3,064	3,587	33,779	171,712	205,491
Machakos	1,634	1,418	3,052	149,580	114,920	264,500
Makueni	335	2,009	2,344	26,331	160,147	186,478
Central						
Nyandarua	268	990	1,258	30,409	113,470	143,879
Nyeri	533	1,544	2,077	54,290	147,413	201,703
Kirinyaga	296	1,105	1,401	27,359	126,861	154,220
Murang'a	414	2,103	2,517	39,252	216,444	255,696
Kiambu	3,425	1,521	4,946	309,981	159,263	469,244
Rift Valley						
Turkana	285	1,235	1,520	19,364	103,827	123,191
West Pokot	121	1,286	1,407	8,893	84,884	93,777
Samburu	104	438	542	8,948	38,406	47,354
Trans-Nzoia	430	1,181	1,611	40,284	129,833	170,117
Uasin Gishu	1,016	1,096	2,112	96,901	105,390	202,291
Elgeyo Marakwet	152	955	1,107	11,448	66,107	77,555
Nandi	235	1,542	1,777	23,970	130,103	154,073
Baringo	216	1,754	1,970	16,322	94,327	110,649
Laikipia	280	743	1,023	24,708	78,406	103,114
Nakuru	2,438	2,212	4,650	211,254	198,582	409,836
Narok	199	1,653	1,852	16,446	152,774	169,220
Kajiado	1,021	934	1,955	86,771	86,693	173,464
Kericho	605	892	1,497	50,770	76,811	127,581
Bomet	239	1,780	2,019	21,102	153,812	174,914
Western						
Kakamega	620	2,723	3,343	57,578	298,101	355,679
Vihiga	415	857	1,272	39,224	84,123	123,347
Bungoma	514	2,046	2,560	47,698	223,126	270,824
Busia	247	1,486	1,733	20,851	133,201	154,052
Nyanza						
Siaya	280	1,903	2,183	22,397	176,637	199,034
Kisumu	1,272	1,135	2,407	123,811	102,908	226,719
Homa Bay	350	1,934	2,284	31,943	174,312	206,255
Migori	767	1,369	2,136	66,286	113,925	180,211
Kisii	561	2,027	2,588	52,795	192,234	245,029
Nyamira	186	1,105	1,291	17,654	113,385	131,039
Nairobi	**10,323**	**na**	**10,323**	**985,016**	**na**	**985,016**
KENYA	**36,844**	**59,407**	**96,251**	**3,338,718**	**5,429,063**	**8,767,781**

Source: 2009 Kenya Population and Housing Census
Note: Nairobi county and Mombasa county have only urban areas.
na = Not applicable

Table A.2 Population

Distribution of the population in the sampling frame by county and residence, Kenya 2014

County	Population in Frame			Percent of total population	Urban
	Urban	Rural	Total		
Coast					
Mombasa	939,370	na	939,370	2.4	100.0
Kwale	117,676	532,255	649,931	1.7	18.0
Kilifi	284,254	825,481	1,109,735	2.9	26.0
Tana River	36,065	204,010	240,075	0.6	15.0
Lamu	20,238	81,301	101,539	0.3	20.0
Taita Taveta	49,565	235,092	284,657	0.7	17.0
North Eastern					
Garissa	141,390	481,670	623,060	1.6	23.0
Wajir	91,300	570,641	661,941	1.7	14.0
Mandera	179,202	846,554	1,025,756	2.7	17.0
Eastern					
Marsabit	64,615	226,551	291,166	0.8	22.0
Isiolo	62,924	80,370	143,294	0.4	44.0
Meru	106,856	1,249,445	1,356,301	3.5	8.0
Tharaka-Nithi	80,791	284,539	365,330	0.9	22.0
Embu	83,399	432,813	516,212	1.3	16.0
Kitui	139,493	873,216	1,012,709	2.6	14.0
Machakos	568,759	529,825	1,098,584	2.8	52.0
Makueni	103,192	781,335	884,527	2.3	12.0
Central					
Nyandarua	115,051	481,217	596,268	1.5	19.0
Nyeri	169,342	524,216	693,558	1.8	24.0
Kirinyaga	82,427	445,627	528,054	1.4	16.0
Murang'a	133,794	808,787	942,581	2.4	14.0
Kiambu	1,010,991	612,291	1,623,282	4.2	62.0
Rift Valley					
Turkana	102,958	752,441	855,399	2.2	12.0
West Pokot	41,805	470,885	512,690	1.3	8.0
Samburu	38,265	185,682	223,947	0.6	17.0
Trans-Nzoia	162,623	656,134	818,757	2.1	20.0
Uasin Gishu	347,574	546,605	894,179	2.3	39.0
Elgeyo Marakwet	52,376	317,622	369,998	1.0	14.0
Nandi	103,559	649,406	752,965	2.0	14.0
Baringo	64,278	491,283	555,561	1.4	12.0
Laikipia	80,929	318,298	399,227	1.0	20.0
Nakuru	727,345	875,980	1,603,325	4.2	45.0
Narok	57,673	793,247	850,920	2.2	7.0
Kajiado	283,164	404,148	687,312	1.8	41.0
Kericho	228,318	362,372	590,690	1.5	39.0
Bomet	101,829	790,006	891,835	2.3	11.0
Western					
Kakamega	235,567	1,425,084	1,660,651	4.3	14.0
Vihiga	174,105	380,517	554,622	1.4	31.0
Bungoma	214,220	1,160,843	1,375,063	3.6	16.0
Busia	85,082	658,000	743,082	1.9	11.0
Nyanza					
Siaya	90,840	751,464	842,304	2.2	11.0
Kisumu	504,322	464,587	968,909	2.5	52.0
Homa Bay	137,156	826,638	963,794	2.5	14.0
Migori	309,832	607,338	917,170	2.4	34.0
Kisii	230,789	921,493	1,152,282	3.0	20.0
Nyamira	77,328	520,924	598,252	1.5	13.0
Nairobi	**3,138,369**	**na**	**3,138,369**	**8.1**	**100.0**
KENYA	**12,171,000**	**26,438,233**	**38,609,233**	**100.0**	**na**

Source: 2009 Kenya Population and Housing Census
Note: Nairobi county and Mombasa county have only urban areas.
na = Not applicable

Table A.3 Sample allocation of clusters and households

Sample allocation of clusters and households by region according to residence, Kenya 2014

	Allocation of clusters			Allocation of households		
County	Urban	Rural	Total	Urban	Rural	Total
Coast						
Mombasa	36	na	36	900	na	900
Kwale	11	21	32	275	525	800
Kilifi	14	20	34	350	500	850
Tana River	9	23	32	225	575	800
Lamu	14	18	32	350	450	800
Taita Taveta	10	22	32	250	550	800
North Eastern						
Garissa	12	22	34	300	550	850
Wajir	12	22	34	300	550	850
Mandera	10	24	34	250	600	850
Eastern						
Marsabit	10	22	32	250	550	800
Isiolo	14	18	32	350	450	800
Meru	9	28	37	225	700	925
Tharaka-Nithi	10	22	32	250	550	800
Embu	10	22	32	250	550	800
Kitui	10	24	34	250	600	850
Machakos	19	17	36	475	425	900
Makueni	9	25	34	225	625	850
Central						
Nyandarua	11	22	33	275	550	825
Nyeri	13	22	35	325	550	875
Kirinyaga	10	23	33	250	575	825
Murang'a	10	26	36	250	650	900
Kiambu	23	16	39	575	400	975
Rift Valley						
Turkana	9	23	32	225	575	800
West Pokot	8	24	32	200	600	800
Samburu	9	23	32	225	575	800
Trans-Nzoia	12	22	34	300	550	850
Uasin Gishu	17	18	35	425	450	875
Elgeyo Marakwet	9	23	32	225	575	800
Nandi	9	24	33	225	600	825
Baringo	9	23	32	225	575	800
Laikipia	10	22	32	250	550	800
Nakuru	19	19	38	475	475	950
Narok	8	26	34	200	650	850
Kajiado	17	17	34	425	425	850
Kericho	14	18	32	350	450	800
Bomet	8	25	33	200	625	825
Western						
Kakamega	11	27	38	275	675	950
Vihiga	13	19	32	325	475	800
Bungoma	11	25	36	275	625	900
Busia	9	24	33	225	600	825
Nyanza						
Siaya	9	25	34	225	625	850
Kisumu	18	17	35	450	425	875
Homa Bay	10	24	34	250	600	850
Migori	15	20	35	375	500	875
Kisii	12	24	36	300	600	900
Nyamira	9	24	33	225	600	825
Nairobi	**56**	**na**	**56**	**1,400**	**na**	**1,400**
KENYA	**617**	**995**	**1,612**	**15,425**	**24,875**	**40,300**

Note: Nairobi county and Mombasa county have only urban areas.
na = Not applicable

Table A.4 Sample allocation of completed interviews with women and men

Sample allocation of expected number of completed interview with women and men by county, according to residence, Kenya 2014

	Women 15-49			Men 15-54		
County	Urban	Rural	Total	Urban	Rural	Total
Coast						
Mombasa	716	na	716	303	na	303
Kwale	219	460	679	92	177	269
Kilifi	278	439	717	118	168	286
Tana River	179	503	682	76	193	269
Lamu	278	394	672	118	152	270
Taita Taveta	200	482	682	84	185	269
North Eastern						
Garissa	239	482	721	101	185	286
Wajir	239	482	721	101	185	286
Mandera	200	526	726	84	202	286
Eastern						
Marsabit	200	482	682	84	185	269
Isiolo	278	394	672	118	152	270
Meru	179	613	792	76	236	312
Tharaka-Nithi	200	482	682	84	185	269
Embu	200	482	682	84	185	269
Kitui	200	526	726	84	202	286
Machakos	379	373	752	160	143	303
Makueni	179	548	727	76	210	286
Central						
Nyandarua	219	482	701	92	185	277
Nyeri	259	482	741	109	185	294
Kirinyaga	200	503	703	84	193	277
Murang'a	200	570	770	84	219	303
Kiambu	457	351	808	193	135	328
Rift Valley						
Turkana	179	503	682	76	193	269
West Pokot	159	526	685	67	202	269
Samburu	179	503	682	76	193	269
Trans-Nzoia	239	482	721	101	185	286
Uasin Gishu	338	394	732	143	152	295
Elgeyo Marakwet	179	503	682	76	193	269
Nandi	179	526	705	76	202	278
Baringo	179	503	682	76	193	269
Laikipia	200	482	682	84	185	269
Nakuru	379	416	795	160	160	320
Narok	159	570	729	67	219	286
Kajiado	338	373	711	143	143	286
Kericho	278	394	672	118	152	270
Bomet	159	548	707	67	210	277
Western						
Kakamega	219	592	811	92	227	319
Vihiga	259	416	675	109	160	269
Bungoma	219	548	767	92	210	302
Busia	179	526	705	76	202	278
Nyanza						
Siaya	179	548	727	76	210	286
Kisumu	359	373	732	152	143	295
Homa Bay	200	526	726	84	202	286
Migori	298	439	737	126	168	294
Kisii	239	526	765	101	202	303
Nyamira	179	526	705	76	202	278
Nairobi	**1,114**	**na**	**1,114**	**472**	**na**	**472**
KENYA	**12,286**	**21,799**	**34,085**	**5,191**	**8,370**	**13,561**

Note: Nairobi county and Mombasa county have only urban areas.
na = Not applicable

Table A.5 Sample implementation: Women

Percent distribution of households and eligible women by results of the household and individual interviews, and household, eligible women and overall women response rates, according to urban-rural residence and region (unweighted), Kenya 2014

	Residence		Region								
Result	Urban	Rural	Coast	North Eastern	Eastern	Central	Rift Valley	Western	Nyanza	Nairobi	Total
Selected households											
Completed (C)	90.2	92.8	91.0	83.5	93.7	91.9	92.4	92.7	92.8	88.6	91.8
Household present but no competent respondent at home (HP)	1.3	0.4	1.0	0.5	0.3	0.6	0.7	0.3	1.0	3.1	0.7
Postponed (P)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Refused (R)	0.3	0.1	0.1	0.2	0.1	0.1	0.2	0.0	0.1	1.0	0.2
Dwelling not found (DNF)	0.1	0.1	0.0	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.1
Household absent (HA)	2.8	3.0	3.7	8.1	2.7	2.5	2.1	3.1	2.9	1.3	2.9
Dwelling vacant/address not a dwelling (DV)	4.2	2.4	3.0	3.6	2.2	4.0	3.3	2.9	2.3	5.4	3.1
Dwelling destroyed (DD)	0.5	0.9	0.7	3.2	0.4	0.5	0.9	0.5	0.4	0.2	0.8
Other (O)	0.5	0.4	0.4	0.6	0.5	0.4	0.4	0.5	0.4	0.5	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	15,419	24,260	4,920	2,224	6,682	4,399	11,406	3,475	5,173	1,400	39,679
Household response rate (HRR)[1]	98.1	99.5	98.7	98.8	99.4	99.1	99.1	99.7	98.8	95.6	99.0
Eligible women											
Completed (EWC)	95.5	97.3	96.4	95.2	97.8	95.7	96.5	98.0	97.2	91.1	96.6
Not at home (EWNH)	2.9	1.6	2.1	2.6	1.2	3.1	2.3	1.0	1.8	5.5	2.1
Postponed (EWP)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Refused (EWR)	0.5	0.1	0.2	0.7	0.2	0.2	0.3	0.0	0.1	1.3	0.3
Partly completed (EWPC)	0.3	0.1	0.2	0.1	0.1	0.3	0.1	0.2	0.1	0.9	0.2
Incapacitated (EWI)	0.4	0.7	0.7	0.6	0.4	0.7	0.6	0.6	0.7	0.1	0.6
Other (EWO)	0.4	0.2	0.3	0.7	0.2	0.0	0.3	0.2	0.1	1.1	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	12,157	20,015	4,047	1,748	5,364	3,254	9,389	2,898	4,376	1,096	32,172
Eligible women response rate (EWRR)[2]	95.5	97.3	96.4	95.2	97.8	95.7	96.5	98.0	97.2	91.1	96.6
Overall women response rate (ORR)[3]	93.8	96.7	95.2	94.1	97.2	94.8	95.6	97.7	96.0	87.1	95.6

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{100 * C}{C + HP + P + R + DNF}$$

[2] The eligible women response rate (EWRR) is equivalent to the percentage of interviews completed (EWC).
[3] The overall women response rate (OWRR) is calculated as: OWRR = HRR * EWRR/100

Table A.6 Sample implementation: Men

Percent distribution of households and eligible men by results of the household and individual interviews, and household, eligible men and overall men response rates, according to urban-rural residence and region (unweighted), Kenya 2014

	Residence		Region								
Result	Urban	Rural	Coast	North Eastern	Eastern	Central	Rift Valley	Western	Nyanza	Nairobi	Total
Selected households											
Completed (C)	89.9	92.5	90.0	83.9	93.1	91.3	92.2	92.9	93.2	86.2	91.5
Household present but no competent respondent at home (HP)	1.4	0.5	1.0	0.7	0.4	0.7	0.8	0.2	1.0	4.0	0.8
Postponed (P)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Refused (R)	0.4	0.1	0.2	0.1	0.2	0.1	0.2	0.0	0.1	1.5	0.2
Dwelling not found (DNF)	0.1	0.1	0.0	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.1
Household absent (HA)	2.9	3.0	4.2	8.2	2.8	2.8	1.9	3.1	2.7	1.3	3.0
Dwelling vacant/address not a dwelling (DV)	4.4	2.5	3.3	3.5	2.5	3.9	3.5	2.8	2.3	6.3	3.2
Dwelling destroyed (DD)	0.4	1.0	0.9	3.0	0.4	0.5	0.9	0.5	0.4	0.1	0.8
Other (O)	0.5	0.4	0.4	0.4	0.5	0.6	0.4	0.5	0.3	0.6	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	7,394	11,636	2,359	1,066	3,211	2,111	5,469	1,665	2,477	672	19,030
Household response rate (HRR)[1]	97.9	99.3	98.7	98.7	99.2	99.0	98.8	99.7	98.8	94.0	98.8
Eligible men											
Completed (EMC)	86.6	92.5	86.3	85.6	94.2	89.2	90.4	93.0	92.5	76.7	90.2
Not at home (EMNH)	10.4	5.3	11.3	10.2	3.5	9.0	6.9	4.7	5.4	19.3	7.4
Postponed (EMP)	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Refused (EMR)	0.8	0.4	0.5	1.5	0.5	0.5	0.6	0.2	0.6	1.0	0.6
Partly completed (EMPC)	0.4	0.1	0.3	0.0	0.1	0.4	0.2	0.1	0.3	0.8	0.2
Incapacitated (EMI)	0.7	1.1	1.2	1.1	0.9	0.8	0.9	1.1	0.8	0.0	0.9
Other (EMO)	1.1	0.5	0.2	1.5	0.7	0.1	0.9	1.0	0.4	2.2	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of men	5,676	8,541	1,851	729	2,443	1,536	4,063	1,309	1,783	503	14,217
Eligible men response rate (EMRR)[2]	86.6	92.5	86.3	85.6	94.2	89.2	90.4	93.0	92.5	76.7	90.2
Overall men response rate (ORR)[3]	84.7	91.9	85.2	84.5	93.4	88.3	89.3	92.7	91.4	72.1	89.1

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{100 * C}{C + HP + P + R + DNF}$$

[2] The eligible men response rate (EMRR) is equivalent to the percentage of interviews completed (EMC).
[3] The overall men response rate (OMRR) is calculated as: OMRR = HRR * EMRR/100

ESTIMATES OF SAMPLING ERRORS *Appendix* B

The estimates from a sample survey are affected by two types of errors: non-sampling errors and sampling errors. Non-sampling errors are the results of mistakes made in implementing data collection and data processing, such as failure to locate and interview the correct household, misunderstanding of the questions on the part of either the interviewer or the respondent, and data entry errors. Although numerous efforts were made during the implementation of the 2014 Kenya Demographic and Health Survey (2014 KDHS) to minimise this type of error, non-sampling errors are impossible to avoid and difficult to evaluate statistically.

Sampling errors, on the other hand, can be evaluated statistically. The sample of respondents selected in the 2014 KDHS is only one of many samples that could have been selected from the same population, using the same design and expected size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability between all possible samples. Although the degree of variability is not known exactly, it can be estimated from the survey results.

Sampling error is usually measured in terms of the *standard error* for a particular statistic (mean, percentage, etc.), which is the square root of the variance. The standard error can be used to calculate confidence intervals within which the true value for the population can reasonably be assumed to fall. For example, for any given statistic calculated from a sample survey, the value of that statistic will fall within a range of plus or minus two times the standard error of that statistic in 95 percent of all possible samples of identical size and design.

If the sample of respondents had been selected as a simple random sample, it would have been possible to use straightforward formulas for calculating sampling errors. However, the 2014 KDHS sample is the result of a multi-stage stratified design, and, consequently, it was necessary to use more complex formulae. Sampling errors are computed in either ISSA or SAS, using programs developed by ICF Macro. These programs use the Taylor linearisation method of variance estimation for survey estimates that are means, proportions or ratios. The Jackknife repeated replication method is used for variance estimation of more complex statistics such as fertility and mortality rates.

The Taylor linearisation method treats any percentage or average as a ratio estimate, $r = y/x$, where y represents the total sample value for variable y, and x represents the total number of cases in the group or subgroup under consideration. The variance of r is computed using the formula given below, with the standard error being the square root of the variance:

$$SE^2(r) = var(r) = \frac{1-f}{x^2}\sum_{h=1}^{H}\left[\frac{m_h}{m_h-1}\left(\sum_{i=1}^{m_h} z_{hi}^2 - \frac{z_h^2}{m_h}\right)\right]$$

in which

$$z_{hi} = y_{hi} - rx_{hi}\text{, and } z_h = y_h - rx_h$$

where h represents the stratum which varies from 1 to H,
m_h is the total number of clusters selected in the hth stratum,
y_{hi} is the sum of the weighted values of variable y in the ith cluster in the hth stratum,
x_{hi} is the sum of the weighted number of cases in the ith cluster in the hth stratum, and
f is the overall sampling fraction, which is so small that it is ignored.

The Jackknife repeated replication method derives estimates of complex rates from each of several replications of the parent sample, and calculates standard errors for these estimates using simple formulae. Each replication considers *all but one* cluster in the calculation of the estimates. Pseudo-independent replications are thus created. In the 2014 KDHS, there were 1,594 non-empty clusters. Hence, 1,594 replications were created. The variance of a rate *r* is calculated as follows:

$$SE^2(r) = var(r) = \frac{1}{k(k-1)} \sum_{i=1}^{k} (r_i - r)^2$$

in which

$$r_i = kr - (k-1)r_{(i)}$$

where r is the estimate computed from the full sample of 1,594 clusters,
$r_{(i)}$ is the estimate computed from the reduced sample of 1,593 clusters (i^{th} cluster excluded), and
k is the total number of clusters.

In addition to the standard error, the design effect (DEFT) for each estimate is also calculated. The design effect is defined as the ratio between the standard error using the given sample design and the standard error that would result if a simple random sample had been used. A DEFT value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a value greater than 1.0 indicates the increase in the sampling error due to the use of a more complex and less statistically efficient design. Relative standard errors and confidence limits for the estimates are also calculated.

Sampling errors for the 2014 KDHS are calculated for selected variables considered to be of primary interest. The results are presented in this appendix for the country as a whole, for urban and rural areas separately, and for each of the eight regions. For each variable, the type of statistic (mean, proportion, or rate) and the base population are given in Table B.1. Tables B.2 through B.12 present the value of the statistic (R), its standard error (SE), the number of un-weighted (N) and weighted (WN) cases, the design effect (DEFT), the relative standard error (SE/R), and the 95 percent confidence limits (R±2SE), for each variable. The sampling errors for mortality rates are presented for the five year period preceding the survey for the whole country and for the ten year period preceding the survey by residence and region. The DEFT is considered undefined when the standard error considering a simple random sample is zero (when the estimate is close to 0 or 1). In the case of the total fertility rate, the number of un-weighted cases is not relevant, as there is no known un-weighted value for woman-years of exposure to childbearing.

The confidence interval (e.g., as calculated for *children ever born to women age 40-49*) can be interpreted as follows: the overall average from the national sample is 5.036 and its standard error is 0.057. Therefore, to obtain the 95 percent confidence limits, one adds and subtracts twice the standard error to the sample estimate, i.e., 5.036±2×0.057. There is a high probability (95 percent) that the *true* average number of children ever born to all women aged 40 to 49 is between 4.923 and 5.149.

For the total sample, the value of the DEFT, averaged over all variables, is 1.568. This means that, due to multi-stage clustering of the sample, the average standard error is increased by a factor of 1.568 over that in an equivalent simple random sample.

Table B.1 List of selected variables for sampling errors, Kenya 2014

Variable	Estimate	Base population
	WOMEN	
Urban residence	Proportion	All women 15-49
Literacy	Proportion	All women 15-49
No education	Proportion	All women 15-49
Secondary or higher education	Proportion	All women 15-49
Never married/in union	Proportion	All women 15-49
Currently married/in union	Proportion	All women 15-49
Married before age 20	Proportion	All women 20-49
Had sexual intercourse before age 18	Proportion	All women 20-49
Currently pregnant	Proportion	All women 15-49
Children ever born	Mean	All women 15-49
Children surviving	Mean	All women 15-49
Children ever born to women age 40-49	Mean	All women 40-49
Know any contraceptive method	Proportion	Currently married women 15-49
Know any modern contraceptive method	Proportion	Currently married women 15-49
Currently using any method	Proportion	Currently married women 15-49
Currently using a modern method	Proportion	Currently married women 15-49
Currently using a traditional method	Proportion	Currently married women 15-49
Currently using pill	Proportion	Currently married women 15-49
Currently using IUD	Proportion	Currently married women 15-49
Currently using male condoms	Proportion	Currently married women 15-49
Currently using injectables	Proportion	Currently married women 15-49
Currently using female sterilisation	Proportion	Currently married women 15-49
Currently using implant	Proportion	Currently married women 15-49
Currently using rhythm	Proportion	Currently married women 15-49
Currently using withdrawal	Proportion	Currently married women 15-49
Used public sector source for family planning	Proportion	Current users of modern method
Want no more children	Proportion	Currently married women 15-49
Want to delay next birth at least 2 years	Proportion	Currently married women 15-49
Ideal number of children	Mean	All women 15-49
Mothers received antenatal care for last birth	Proportion	Women with a live birth in last five years
Mothers protected against tetanus for last birth	Proportion	Women with a live birth in last five years
Births with skilled attendant at delivery	Proportion	Births occurring 1-59 months before survey
Delivery in a health facility	Proportion	Births occurring 1-59 months before survey
Had diarrhoea in the past 2 weeks	Proportion	Children under 5
Treated with ORS	Proportion	Children under 5 with diarrhoea in past 2 weeks
Sought medical treatment	Proportion	Children under 5 with diarrhoea in past 2 weeks
Vaccination card seen	Proportion	Children 12-23 months
Received BCG vaccination	Proportion	Children 12-23 months
Received DPT vaccination (3 doses)	Proportion	Children 12-23 months
Received polio vaccination (3 doses)	Proportion	Children 12-23 months
Received measles vaccination	Proportion	Children 12-23 months
Fully vaccinated	Proportion	Children 12-23 months
Vitamin A supplementation in last 6 months	Proportion	Children 6-59 months
Owns at least one insecticide treated net (ITN)	Proportion	Households
Child slept under ITN last night	Proportion	Children under 5 in household
Received 2+ doses of SP/Fansidar during antenatal visit (IPTp)	Proportion	Women 15-49 with birth in last 2 years
Child has fever in last two weeks	Proportion	Children under 5 in women's birth history
Child took antimalarial	Proportion	Children under 5 in women's birth history
Height-for-age (-2SD)	Proportion	Children under 5 who are measured
Weight-for-height (-2SD)	Proportion	Children under 5 who are measured
Weight-for-age (-2SD)	Proportion	Children under 5 who are measured
Body Mass Index (BMI) <18.5	Proportion	All women 15-49 who were measured
Had 2+ sexual partners in past 12 months	Proportion	All women 15-49
Condom use at last sex	Proportion	Women 15-49 with 2+ partners in past 12 months
Abstinence among youth (never had sex)	Proportion	Never-married women 15-24
Sexually active in past 12 months among never-married youth	Proportion	Never-married women 15-24
Had an HIV test and received results in past 12 months	Proportion	All women 15-49
Accepting attitudes towards people with HIV	Proportion	All women who have heard of HIV/AIDS
Ever experienced any physical violence since age 15 by anyone	Proportion	All women 15-49
Ever experienced any sexual violence by anyone	Proportion	All women 15-49
Ever experienced physical/sexual violence by any husband/partner	Proportion	Ever-married women 15-49
Physical/sexual violence in the past 12 months by any husband/partner	Proportion	Ever-married women 15-49
Total fertility rate (3 years)	Rate	Women-years of exposure to childbearing
Neonatal mortality rate[1]	Rate	Children exposed to the risk of mortality
Post-neonatal mortality rate[1]	Rate	Children exposed to the risk of mortality
Infant mortality rate[1]	Rate	Children exposed to the risk of mortality
Child mortality rate[1]	Rate	Children exposed to the risk of mortality
Under-five mortality rate[1]	Rate	Children exposed to the risk of mortality

Continued…

Table B.1—*Continued*

Variable	Estimate	Base population
	MEN	
Urban residence	Proportion	All men 15-49
Literacy	Proportion	All men 15-49
No education	Proportion	All men 15-49
Secondary or higher education	Proportion	All men 15-49
Never married/in union	Proportion	All men 15-49
Currently married/in union	Proportion	All men 15-49
Had sexual intercourse before age 18	Proportion	All men 20-49
Know any contraceptive method	Proportion	Currently married men 15-49
Know a modern method	Proportion	Currently married men 15-49
Want no more children	Proportion	Currently married men 15-49
Want to delay next birth at least 2 years	Proportion	Currently married men 15-49
Ideal number of children	Mean	All men 15-49
Had 2+ sexual partners in past 12 months	Proportion	All men 15-49
Condom use at last sex	Proportion	Men 15-49 with 2+ partners in past 12 months
Abstinence among youth (never had sex)	Proportion	Never-married men 15-24
Sexually active in past 12 months among never-married youth	Proportion	Never-married men 15-24
Paid for sexual intercourse in past 12 months	Proportion	All men 15-49
Had an HIV test and received results in past 12 months	Proportion	All men 15-49
Accepting attitudes towards people with HIV	Proportion	All men who have heard of HIV/AIDS
Ever experienced any physical violence since age 15 by anyone	Proportion	All men 15-49
Ever experienced any sexual violence by anyone	Proportion	All men 15-49
Ever experienced physical/sexual violence by any wife/partner	Proportion	Ever-married men 15-49
Physical/sexual violence in the past 12 months by any wife/partner	Proportion	Ever-married men 15-49

[1] The mortality rates are calculated for 5 years and 10 years before the survey for the national sample and regional samples, respectively.

Table B.2 Sampling errors: Total sample, Kenya DHS 2014

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			WOMEN					
Urban residence	0.408	0.008	31,079	31,079	2.816	0.019	0.393	0.424
Literacy	0.878	0.004	31,079	31,079	1.934	0.004	0.871	0.885
No education	0.070	0.003	31,079	31,079	2.022	0.042	0.064	0.076
Secondary or higher education	0.427	0.007	31,079	31,079	2.452	0.016	0.413	0.441
Never married/in union	0.289	0.004	31,079	31,079	1.676	0.015	0.281	0.298
Currently married/in union	0.597	0.005	31,079	31,079	1.641	0.008	0.588	0.606
Married before age 20	0.463	0.006	25,001	25,259	1.841	0.013	0.452	0.475
Had sexual intercourse before age 18	0.495	0.007	25,001	25,259	2.058	0.013	0.482	0.508
Currently pregnant	0.063	0.002	31,079	31,079	1.357	0.030	0.059	0.066
Children ever born	2.482	0.024	31,079	31,079	1.726	0.009	2.434	2.529
Children surviving	2.294	0.022	31,079	31,079	1.733	0.009	2.251	2.337
Children ever born to women age 40-49	5.036	0.057	5,337	5,142	1.583	0.011	4.923	5.149
Know any contraceptive method	0.987	0.001	19,036	18,549	1.385	0.001	0.985	0.990
Know a modern method	0.987	0.001	19,036	18,549	1.460	0.001	0.984	0.989
Currently using any method	0.580	0.006	19,036	18,549	1.567	0.010	0.568	0.591
Currently using a modern method	0.532	0.006	19,036	18,549	1.563	0.011	0.521	0.544
Currently using a traditional method	0.048	0.002	19,036	18,549	1.358	0.044	0.043	0.052
Currently using pill	0.080	0.003	19,036	18,549	1.652	0.041	0.073	0.086
Currently using IUD	0.034	0.002	19,036	18,549	1.769	0.068	0.030	0.039
Currently using male condoms	0.022	0.002	19,036	18,549	1.439	0.070	0.019	0.025
Currently using injectables	0.264	0.005	19,036	18,549	1.502	0.018	0.254	0.274
Currently using female sterilisation	0.032	0.002	19,036	18,549	1.400	0.056	0.028	0.035
Currently using implant	0.099	0.003	19,036	18,549	1.478	0.032	0.092	0.105
Currently using rhythm	0.038	0.002	19,036	18,549	1.326	0.049	0.034	0.041
Currently using withdrawal	0.007	0.001	19,036	18,549	1.459	0.130	0.005	0.008
Used public sector source for family planning	0.599	0.008	10,990	12,131	1.785	0.014	0.583	0.616
Want no more children	0.502	0.007	9,016	8,710	1.398	0.015	0.487	0.517
Want to delay next birth at least 2 years	0.319	0.007	9,016	8,710	1.416	0.022	0.305	0.333
Ideal number of children	3.605	0.024	14,246	14,311	1.482	0.007	3.557	3.654
Mothers received antenatal care for last birth	0.955	0.002	14,949	14,442	1.363	0.002	0.950	0.960
Mothers protected against tetanus for last birth	0.756	0.007	7,176	6,876	1.373	0.009	0.742	0.770
Births with skilled attendant at delivery	0.618	0.008	20,964	19,564	1.843	0.012	0.603	0.634
Delivery in a health facility	0.612	0.008	20,964	19,564	1.850	0.012	0.597	0.627
Had diarrhoea in the last 2 weeks	0.152	0.004	20,093	18,702	1.513	0.027	0.144	0.160
Treated with ORS	0.538	0.013	2,953	2,844	1.321	0.024	0.512	0.564
Sought medical treatment for diarrhoea	0.576	0.013	2,953	2,844	1.375	0.023	0.550	0.603
Vaccination card seen	0.747	0.011	4,052	3,777	1.482	0.014	0.726	0.768
Received BCG vaccination	0.967	0.004	4,052	3,777	1.340	0.004	0.959	0.974
Received DPT vaccination (3 doses)	0.899	0.007	4,052	3,777	1.384	0.008	0.885	0.913
Received polio vaccination (3 doses)	0.899	0.007	4,052	3,777	1.343	0.007	0.885	0.912
Received measles vaccination	0.871	0.007	4,052	3,777	1.218	0.008	0.857	0.884
Fully vaccinated	0.792	0.009	4,052	3,777	1.282	0.011	0.775	0.809
Vitamin A supplementation in last 6 months	0.987	0.001	18,256	17,008	1.360	0.001	0.985	0.990
Owns at least one insecticide treated net (ITN)	0.589	0.006	36,430	36,430	2.194	0.010	0.578	0.601
Child slept under ITN last night	0.543	0.007	21,445	19,798	1.722	0.014	0.528	0.557
Received 2+ doses of SP/Fansidar during antenatal visit (IPTp)	0.169	0.007	7,925	7,357	1.543	0.040	0.155	0.182
Child has fever in last two weeks	0.244	0.005	20,093	18,702	1.542	0.022	0.233	0.254
Child took antimalarial	0.270	0.009	4,764	4,562	1.308	0.035	0.251	0.288
Height-for-age (-2SD)	0.260	0.005	20,524	18,986	1.459	0.019	0.250	0.270
Weight-for-height (-2SD)	0.040	0.002	20,524	18,986	1.527	0.056	0.036	0.045
Weight-for-age (-2SD)	0.110	0.004	20,524	18,986	1.535	0.034	0.102	0.117
Body Mass Index (BMI) <18.5	0.089	0.003	13,215	13,143	1.261	0.035	0.083	0.095
Had 2+ sexual partners in past 12 months	0.014	0.002	14,741	14,625	1.629	0.112	0.011	0.017
Condom use at last sex	0.401	0.064	182	205	1.746	0.159	0.273	0.529
Abstinence among youth (never had sex)	0.587	0.013	3,369	3,434	1.586	0.023	0.560	0.614
Sexually active in past 12 months among youth	0.263	0.012	3,369	3,434	1.527	0.044	0.240	0.286
Had an HIV test and received results in past 12 months	0.528	0.005	31,079	31,079	1.690	0.009	0.519	0.538
Accepting attitudes towards people with HIV	0.261	0.006	14,661	14,587	1.668	0.023	0.249	0.273
Ever experienced any physical violence since age 15 by anyone	0.448	0.010	5,657	5,657	1.548	0.023	0.427	0.468
Ever experienced any sexual violence by anyone	0.141	0.007	5,657	5,657	1.451	0.048	0.127	0.154
Ever experienced any physical/sexual violence by any husband/partner	0.407	0.011	4,519	4,023	1.494	0.027	0.386	0.429
Physical/sexual violence in the last 12 months by any husband/partner	0.255	0.010	4,519	4,023	1.524	0.039	0.235	0.275
Total fertility rate (3 years)	3.905	0.066	87,077	87,611	1.653	0.017	3.772	4.037
Neonatal mortality rate (0-4 years)	22.301	1.577	21,138	19,760	1.406	0.071	19.147	25.455
Post-neonatal mortality rate (0-4 years)	16.408	1.186	21,156	19,720	1.269	0.072	14.036	18.779
Infant mortality rate (0-4 years)	38.709	1.981	21,161	19,785	1.347	0.051	34.747	42.671
Child mortality rate (last 0-4 years)	14.197	1.186	21,187	19,821	1.278	0.084	11.825	16.569
Under-five mortality rate (last 0-4 years)	52.356	2.214	21,271	19,890	1.302	0.042	47.929	56.784

Continued…

Table B.2—*Continued*

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			MEN					
Urban residence	0.439	0.010	12,014	12,063	2.257	0.023	0.419	0.460
Literacy	0.924	0.004	12,014	12,063	1.466	0.004	0.917	0.931
No education	0.029	0.002	12,014	12,063	1.283	0.068	0.025	0.033
Secondary or higher education	0.490	0.009	12,014	12,063	1.913	0.018	0.473	0.508
Never married/in union	0.444	0.008	12,014	12,063	1.743	0.018	0.428	0.459
Currently married/in union	0.505	0.008	12,014	12,063	1.690	0.015	0.490	0.521
Had sexual intercourse before age 18	0.563	0.008	9,203	9,522	1.466	0.013	0.548	0.579
Know any contraceptive method	0.997	0.001	5,989	6,095	1.149	0.001	0.996	0.999
Know any modern contraceptive method	0.997	0.001	5,989	6,095	1.102	0.001	0.995	0.998
Want no more children	0.420	0.009	5,989	6,095	1.473	0.022	0.402	0.439
Want to delay next birth at least 2 years	0.368	0.009	5,989	6,095	1.478	0.025	0.350	0.386
Ideal number of children	3.894	0.035	11,704	11,825	1.413	0.009	3.824	3.965
Had 2+ sexual partners in past 12 months	0.127	0.004	12,014	12,063	1.442	0.035	0.118	0.136
Condom use at last sex	0.444	0.019	1,386	1,531	1.450	0.044	0.406	0.483
Abstinence among youth (never had sex)	0.417	0.012	4,332	4,214	1.582	0.028	0.393	0.441
Sexually active in past 12 months among youth	0.415	0.012	4,332	4,214	1.626	0.029	0.391	0.439
Had an HIV test and received results in past 12 months	0.457	0.007	12,014	12,063	1.516	0.015	0.443	0.471
Accepting attitudes towards people with HIV	0.437	0.008	11,985	12,039	1.660	0.017	0.422	0.452
Ever experienced any physical violence since age 15 by anyone	0.439	0.011	4,689	4,694	1.525	0.025	0.417	0.461
Ever experienced any sexual violence by anyone	0.059	0.004	4,689	4,694	1.305	0.076	0.050	0.067
Ever experienced any physical/sexual violence by any wife/partner	0.111	0.008	3,000	2,624	1.360	0.070	0.096	0.127
Physical/sexual violence in the last 12 months by any wife/partner	0.072	0.007	3,000	2,624	1.420	0.093	0.059	0.085

Table B.3 Sampling errors: Urban sample, Kenya DHS 2014

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			WOMEN					
Urban residence	1.000	0.000	11,614	12,690	na	0.000	1.000	1.000
Literacy	0.936	0.004	11,614	12,690	1.573	0.004	0.929	0.943
No education	0.036	0.003	11,614	12,690	1.710	0.082	0.030	0.042
Secondary or higher education	0.582	0.012	11,614	12,690	2.571	0.020	0.558	0.605
Never married/in union	0.301	0.008	11,614	12,690	1.949	0.028	0.285	0.318
Currently married/in union	0.574	0.009	11,614	12,690	1.869	0.015	0.557	0.591
Married before age 20	0.362	0.009	9,667	10,831	1.916	0.026	0.343	0.380
Had sexual intercourse before age 18	0.393	0.011	9,667	10,831	2.280	0.029	0.371	0.416
Currently pregnant	0.060	0.003	11,614	12,690	1.522	0.056	0.054	0.067
Children ever born	1.882	0.036	11,614	12,690	2.038	0.019	1.810	1.953
Children surviving	1.755	0.033	11,614	12,690	2.074	0.019	1.689	1.821
Children ever born to women age 40-49	3.903	0.081	1,706	1,629	1.502	0.021	3.740	4.066
Know any contraceptive method	0.996	0.001	6,806	7,285	0.917	0.001	0.994	0.997
Know a modern method	0.995	0.001	6,806	7,285	0.910	0.001	0.994	0.997
Currently using any method	0.618	0.009	6,806	7,285	1.554	0.015	0.600	0.636
Currently using a modern method	0.569	0.009	6,806	7,285	1.575	0.017	0.550	0.588
Currently using a traditional method	0.049	0.004	6,806	7,285	1.380	0.073	0.042	0.057
Currently using pill	0.107	0.007	6,806	7,285	1.764	0.062	0.094	0.120
Currently using IUD	0.047	0.005	6,806	7,285	1.806	0.099	0.037	0.056
Currently using male condoms	0.026	0.003	6,806	7,285	1.453	0.107	0.021	0.032
Currently using injectables	0.247	0.008	6,806	7,285	1.490	0.032	0.231	0.262
Currently using female sterilisation	0.021	0.002	6,806	7,285	1.442	0.121	0.016	0.026
Currently using implant	0.120	0.006	6,806	7,285	1.414	0.047	0.108	0.131
Currently using rhythm	0.038	0.003	6,806	7,285	1.380	0.084	0.032	0.045
Currently using withdrawal	0.007	0.001	6,806	7,285	1.350	0.201	0.004	0.009
Used public sector source for family planning	0.470	0.013	4,451	5,248	1.778	0.028	0.443	0.496
Want no more children	0.427	0.013	3,259	3,445	1.493	0.030	0.401	0.453
Want to delay next birth at least 2 years	0.363	0.013	3,259	3,445	1.535	0.036	0.337	0.389
Ideal number of children	3.239	0.034	5,328	5,818	1.503	0.011	3.171	3.307
Mothers received antenatal care for last birth	0.978	0.003	5,164	5,561	1.386	0.003	0.972	0.984
Mothers protected against tetanus for last birth	0.764	0.012	2,515	2,677	1.464	0.016	0.740	0.789
Births with skilled attendant at delivery	0.824	0.009	6,828	7,024	1.613	0.011	0.806	0.841
Delivery in a health facility	0.820	0.009	6,828	7,024	1.636	0.011	0.802	0.838
Had diarrhoea in the last 2 weeks	0.143	0.008	6,532	6,677	1.704	0.055	0.127	0.159
Treated with ORS	0.575	0.023	941	957	1.298	0.039	0.529	0.620
Sought medical treatment for diarrhoea	0.567	0.022	941	957	1.281	0.039	0.523	0.611
Vaccination card seen	0.672	0.022	1,261	1,330	1.605	0.032	0.628	0.715
Received BCG vaccination	0.977	0.006	1,261	1,330	1.498	0.007	0.964	0.990
Received DPT vaccination (3 doses)	0.912	0.013	1,261	1,330	1.512	0.014	0.886	0.937
Received polio vaccination (3 doses)	0.913	0.011	1,261	1,330	1.376	0.012	0.891	0.935
Received measles vaccination	0.917	0.010	1,261	1,330	1.303	0.011	0.897	0.938
Fully vaccinated	0.829	0.014	1,261	1,330	1.330	0.017	0.800	0.858
Vitamin A supplementation in last 6 months	0.985	0.002	5,942	6,104	1.339	0.002	0.980	0.989
Owns at least one insecticide treated net (ITN)	0.561	0.010	13,914	15,290	2.344	0.018	0.542	0.581
Child slept under ITN last night	0.593	0.014	6,739	6,563	1.855	0.023	0.565	0.620
Received 2+ doses of SP/Fansidar during antenatal visit (IPTp)	0.141	0.009	2,550	2,618	1.308	0.065	0.123	0.160
Child has fever in last two weeks	0.217	0.010	6,532	6,677	1.724	0.044	0.198	0.236
Child took antimalarial	0.204	0.014	1,490	1,447	1.160	0.067	0.177	0.231
Height-for-age (-2SD)	0.198	0.009	6,382	6,206	1.669	0.047	0.179	0.217
Weight-for-height (-2SD)	0.034	0.003	6,382	6,206	1.255	0.090	0.028	0.040
Weight-for-age (-2SD)	0.070	0.005	6,382	6,206	1.395	0.072	0.060	0.080
Body Mass Index (BMI) <18.5	0.055	0.004	4,887	5,246	1.284	0.077	0.046	0.063
Had 2+ sexual partners in past 12 months	0.021	0.003	5,472	5,929	1.786	0.167	0.014	0.027
Condom use at last sex	0.474	0.096	91	122	1.806	0.203	0.281	0.666
Abstinence among youth (never had sex)	0.506	0.025	1,164	1,261	1.683	0.049	0.457	0.556
Sexually active in past 12 months among youth	0.351	0.024	1,164	1,261	1.717	0.068	0.303	0.399
Had an HIV test and received results in past 12 months	0.578	0.009	11,614	12,690	1.902	0.015	0.560	0.595
Accepting attitudes towards people with HIV	0.302	0.011	5,455	5,921	1.800	0.037	0.280	0.324
Ever experienced any physical violence since age 15 by anyone	0.439	0.018	2,088	2,251	1.697	0.042	0.402	0.476
Ever experienced any sexual violence by anyone	0.152	0.012	2,088	2,251	1.569	0.081	0.127	0.177
Ever experienced any physical/sexual violence by any husband/partner	0.377	0.020	1,644	1,588	1.686	0.053	0.337	0.418
Physical/sexual violence in the last 12 months by any husband/partner	0.251	0.018	1,644	1,588	1.698	0.072	0.214	0.287
Total fertility rate (3 years)	3.074	0.085	33,169	36,603	1.736	0.028	2.903	3.244
Neonatal mortality rate (last 0-9 years)	26.287	2.607	13,438	13,285	1.656	0.099	21.074	31.501
Post-neonatal mortality rate (last 0-9 years)	16.349	1.504	13,464	13,279	1.330	0.092	13.341	19.356
Infant mortality rate (last 0-9 years)	42.636	2.925	13,445	13,293	1.516	0.069	36.785	48.487
Child mortality rate (last 0-9 years)	14.959	1.773	13,231	12,975	1.375	0.119	11.414	18.505
Under-five mortality rate (last 0-9 years)	56.958	3.276	13,479	13,327	1.430	0.058	50.405	63.510

Continued…

Table B.3—*Continued*

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			MEN					
Urban residence	1.000	0.000	4,648	5,300	na	0.000	1.000	1.000
Literacy	0.967	0.004	4,648	5,300	1.467	0.004	0.960	0.975
No education	0.012	0.002	4,648	5,300	1.127	0.151	0.008	0.015
Secondary or higher education	0.626	0.015	4,648	5,300	2.058	0.023	0.597	0.655
Never married/in union	0.408	0.015	4,648	5,300	2.047	0.036	0.378	0.437
Currently married/in union	0.546	0.014	4,648	5,300	1.947	0.026	0.518	0.574
Had sexual intercourse before age 18	0.550	0.013	3,834	4,591	1.614	0.024	0.525	0.576
Know any contraceptive method	0.998	0.001	2,440	2,894	1.791	0.001	0.995	1.001
Know any modern contraceptive method	0.998	0.001	2,440	2,894	1.791	0.001	0.995	1.001
Want no more children	0.376	0.015	2,440	2,894	1.557	0.041	0.345	0.407
Want to delay next birth at least 2 years	0.389	0.016	2,440	2,894	1.579	0.040	0.358	0.420
Ideal number of children	3.666	0.054	4,540	5,211	1.507	0.015	3.557	3.775
Had 2+ sexual partners in past 12 months	0.144	0.007	4,648	5,300	1.442	0.052	0.129	0.158
Condom use at last sex	0.466	0.032	597	761	1.559	0.068	0.403	0.530
Abstinence among youth (never had sex)	0.333	0.022	1,467	1,545	1.747	0.065	0.290	0.376
Sexually active in past 12 months among youth	0.504	0.024	1,467	1,545	1.814	0.047	0.457	0.552
Had an HIV test and received results in past 12 months	0.513	0.012	4,648	5,300	1.626	0.023	0.489	0.537
Accepting attitudes towards people with HIV	0.443	0.013	4,644	5,298	1.750	0.029	0.417	0.468
Ever experienced any physical violence since age 15 by anyone	0.393	0.019	1,853	1,981	1.688	0.049	0.355	0.431
Ever experienced any sexual violence by anyone	0.064	0.007	1,853	1,981	1.314	0.117	0.049	0.078
Ever experienced any physical/sexual violence by any wife/partner	0.112	0.013	1,239	1,192	1.458	0.117	0.085	0.138
Physical/sexual violence in the last 12 months by any wife/partner	0.077	0.012	1,239	1,192	1.555	0.153	0.053	0.100

Table B.4 Sampling errors: Rural sample, Kenya DHS 2014

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			WOMEN					
Urban residence	0.000	0.000	19,465	18,389	na	na	0.000	0.000
Literacy	0.838	0.005	19,465	18,389	2.043	0.006	0.827	0.849
No education	0.093	0.004	19,465	18,389	2.134	0.048	0.085	0.102
Secondary or higher education	0.321	0.007	19,465	18,389	1.971	0.021	0.307	0.334
Never married/in union	0.281	0.004	19,465	18,389	1.378	0.016	0.272	0.290
Currently married/in union	0.613	0.005	19,465	18,389	1.387	0.008	0.603	0.622
Married before age 20	0.539	0.007	15,334	14,428	1.616	0.012	0.526	0.552
Had sexual intercourse before age 18	0.571	0.006	15,334	14,428	1.564	0.011	0.559	0.584
Currently pregnant	0.064	0.002	19,465	18,389	1.212	0.033	0.060	0.068
Children ever born	2.896	0.026	19,465	18,389	1.374	0.009	2.844	2.947
Children surviving	2.666	0.023	19,465	18,389	1.368	0.009	2.619	2.713
Children ever born to women age 40-49	5.561	0.067	3,631	3,513	1.552	0.012	5.427	5.695
Know any contraceptive method	0.982	0.002	12,230	11,265	1.482	0.002	0.979	0.986
Know a modern method	0.981	0.002	12,230	11,265	1.567	0.002	0.977	0.985
Currently using any method	0.555	0.007	12,230	11,265	1.556	0.013	0.541	0.569
Currently using a modern method	0.509	0.007	12,230	11,265	1.531	0.014	0.495	0.522
Currently using a traditional method	0.046	0.003	12,230	11,265	1.331	0.055	0.041	0.051
Currently using pill	0.062	0.003	12,230	11,265	1.426	0.050	0.056	0.068
Currently using IUD	0.026	0.002	12,230	11,265	1.660	0.091	0.022	0.031
Currently using male condoms	0.019	0.002	12,230	11,265	1.403	0.091	0.016	0.023
Currently using injectables	0.275	0.006	12,230	11,265	1.502	0.022	0.263	0.287
Currently using female sterilisation	0.039	0.002	12,230	11,265	1.385	0.062	0.034	0.044
Currently using implant	0.086	0.004	12,230	11,265	1.477	0.044	0.078	0.093
Currently using rhythm	0.037	0.002	12,230	11,265	1.275	0.059	0.033	0.042
Currently using withdrawal	0.007	0.001	12,230	11,265	1.530	0.171	0.004	0.009
Used public sector source for family planning	0.698	0.010	6,539	6,883	1.708	0.014	0.678	0.717
Want no more children	0.551	0.009	5,757	5,265	1.330	0.016	0.534	0.568
Want to delay next birth at least 2 years	0.291	0.008	5,757	5,265	1.323	0.027	0.275	0.306
Ideal number of children	3.856	0.032	8,918	8,493	1.445	0.008	3.793	3.920
Mothers received antenatal care for last birth	0.940	0.003	9,785	8,881	1.376	0.004	0.934	0.947
Mothers protected against tetanus for last birth	0.751	0.008	4,661	4,199	1.304	0.011	0.734	0.768
Births with skilled attendant at delivery	0.504	0.010	14,136	12,540	1.904	0.019	0.484	0.523
Delivery in a health facility	0.495	0.010	14,136	12,540	1.906	0.019	0.476	0.514
Had diarrhoea in the last 2 weeks	0.157	0.005	13,561	12,025	1.383	0.030	0.148	0.166
Treated with ORS	0.519	0.016	2,012	1,886	1.331	0.030	0.488	0.551
Sought medical treatment for diarrhoea	0.581	0.017	2,012	1,886	1.431	0.029	0.548	0.614
Vaccination card seen	0.787	0.011	2,791	2,447	1.340	0.014	0.766	0.809
Received BCG vaccination	0.961	0.005	2,791	2,447	1.293	0.005	0.951	0.971
Received DPT vaccination (3 doses)	0.892	0.008	2,791	2,447	1.314	0.009	0.876	0.908
Received polio vaccination (3 doses)	0.890	0.008	2,791	2,447	1.335	0.009	0.874	0.907
Received measles vaccination	0.846	0.009	2,791	2,447	1.204	0.010	0.828	0.863
Fully vaccinated	0.772	0.010	2,791	2,447	1.263	0.014	0.752	0.793
Vitamin A supplementation in last 6 months	0.988	0.001	12,314	10,904	1.373	0.002	0.985	0.991
Owns at least one insecticide treated net (ITN)	0.610	0.007	22,516	21,140	2.040	0.011	0.596	0.623
Child slept under ITN last night	0.518	0.009	14,706	13,236	1.668	0.017	0.501	0.535
Received 2+ doses of SP/Fansidar during antenatal visit (IPTp)	0.184	0.009	5,375	4,739	1.625	0.048	0.166	0.201
Child has fever in last two weeks	0.259	0.006	13,561	12,025	1.441	0.024	0.247	0.271
Child took antimalarial	0.300	0.012	3,274	3,114	1.377	0.040	0.276	0.324
Height-for-age (-2SD)	0.291	0.006	14,142	12,780	1.375	0.020	0.279	0.302
Weight-for-height (-2SD)	0.044	0.003	14,142	12,780	1.641	0.069	0.038	0.050
Weight-for-age (-2SD)	0.129	0.005	14,142	12,780	1.573	0.037	0.119	0.139
Body Mass Index (BMI) <18.5	0.112	0.004	8,328	7,897	1.265	0.039	0.103	0.120
Had 2+ sexual partners in past 12 months	0.010	0.001	9,269	8,696	1.182	0.124	0.007	0.012
Condom use at last sex	0.296	0.062	91	84	1.280	0.209	0.173	0.420
Abstinence among youth (never had sex)	0.634	0.015	2,205	2,172	1.500	0.024	0.604	0.665
Sexually active in past 12 months among youth	0.212	0.012	2,205	2,172	1.324	0.054	0.189	0.235
Had an HIV test and received results in past 12 months	0.494	0.005	19,465	18,389	1.494	0.011	0.483	0.505
Accepting attitudes towards people with HIV	0.233	0.007	9,206	8,666	1.515	0.029	0.219	0.246
Ever experienced any physical violence since age 15 by anyone	0.453	0.012	3,569	3,406	1.424	0.026	0.430	0.477
Ever experienced any sexual violence by anyone	0.133	0.008	3,569	3,406	1.337	0.057	0.118	0.149
Ever experienced any physical/sexual violence by any husband/partner	0.427	0.012	2,875	2,435	1.347	0.029	0.402	0.452
Physical/sexual violence in the last 12 months by any husband/partner	0.258	0.011	2,875	2,435	1.380	0.044	0.236	0.281
Total fertility rate (3 years)	4.545	0.078	53,908	51,007	1.527	0.017	4.389	4.701
Neonatal mortality rate (last 0-9 years)	21.245	1.139	29,318	26,059	1.233	0.054	18.967	23.523
Post-neonatal mortality rate (last 0-9 years)	18.462	1.173	29,422	26,145	1.322	0.064	16.116	20.808
Infant mortality rate (last 0-9 years)	39.707	1.698	29,343	26,084	1.313	0.043	36.311	43.103
Child mortality rate (last 0-9 years)	16.467	1.134	29,414	26,123	1.248	0.069	14.200	18.734
Under-five mortality rate (last 0-9 years)	55.520	2.103	29,444	26,170	1.281	0.038	51.315	59.725

Continued…

Table B.4—*Continued*

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			MEN					
Urban residence	0.000	0.000	7,366	6,762	na	na	0.000	0.000
Literacy	0.890	0.005	7,366	6,762	1.459	0.006	0.880	0.901
No education	0.042	0.003	7,366	6,762	1.351	0.075	0.036	0.048
Secondary or higher education	0.384	0.009	7,366	6,762	1.598	0.024	0.366	0.402
Never married/in union	0.472	0.008	7,366	6,762	1.390	0.017	0.455	0.488
Currently married/in union	0.473	0.008	7,366	6,762	1.395	0.017	0.457	0.490
Had sexual intercourse before age 18	0.575	0.008	5,369	4,931	1.229	0.014	0.559	0.592
Know any contraceptive method	0.996	0.001	3,549	3,201	0.666	0.001	0.995	0.997
Know any modern contraceptive method	0.995	0.001	3,549	3,201	0.702	0.001	0.993	0.997
Want no more children	0.461	0.011	3,549	3,201	1.318	0.024	0.439	0.483
Want to delay next birth at least 2 years	0.349	0.010	3,549	3,201	1.296	0.030	0.329	0.370
Ideal number of children	4.075	0.045	7,164	6,614	1.323	0.011	3.985	4.164
Had 2+ sexual partners in past 12 months	0.114	0.005	7,366	6,762	1.381	0.045	0.104	0.124
Condom use at last sex	0.423	0.022	789	771	1.258	0.052	0.378	0.467
Abstinence among youth (never had sex)	0.465	0.013	2,865	2,669	1.351	0.027	0.440	0.491
Sexually active in past 12 months among youth	0.363	0.012	2,865	2,669	1.332	0.033	0.339	0.387
Had an HIV test and received results in past 12 months	0.413	0.008	7,366	6,762	1.314	0.018	0.398	0.428
Accepting attitudes towards people with HIV	0.432	0.009	7,341	6,741	1.550	0.021	0.414	0.450
Ever experienced any physical violence since age 15 by anyone	0.473	0.013	2,836	2,713	1.380	0.027	0.447	0.498
Ever experienced any sexual violence by anyone	0.055	0.005	2,836	2,713	1.284	0.100	0.044	0.066
Ever experienced any physical/sexual violence by any wife/partner	0.111	0.009	1,761	1,432	1.244	0.084	0.092	0.130
Physical/sexual violence in the last 12 months by any wife/partner	0.068	0.007	1,761	1,432	1.236	0.109	0.053	0.083

Table B.5 Sampling errors: Coast sample, Kenya DHS 2014

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			WOMEN					
Urban residence	0.490	0.022	3,902	3,076	2.718	0.044	0.446	0.533
Literacy	0.802	0.013	3,902	3,076	2.062	0.016	0.775	0.828
No education	0.163	0.012	3,902	3,076	2.067	0.075	0.139	0.188
Secondary or higher education	0.315	0.014	3,902	3,076	1.907	0.045	0.287	0.344
Never married/in union	0.280	0.010	3,902	3,076	1.358	0.035	0.260	0.299
Currently married/in union	0.592	0.010	3,902	3,076	1.313	0.017	0.571	0.613
Married before age 20	0.506	0.016	3,095	2,472	1.767	0.031	0.475	0.538
Had sexual intercourse before age 18	0.467	0.013	3,095	2,472	1.417	0.027	0.442	0.493
Currently pregnant	0.066	0.005	3,902	3,076	1.339	0.081	0.055	0.076
Children ever born	2.540	0.054	3,902	3,076	1.297	0.021	2.431	2.649
Children surviving	2.338	0.048	3,902	3,076	1.252	0.020	2.243	2.433
Children ever born to women age 40-49	5.516	0.172	639	484	1.524	0.031	5.172	5.860
Know any contraceptive method	0.994	0.002	2,364	1,821	1.298	0.002	0.989	0.998
Know a modern method	0.993	0.002	2,364	1,821	1.293	0.002	0.989	0.998
Currently using any method	0.439	0.017	2,364	1,821	1.638	0.038	0.406	0.473
Currently using a modern method	0.383	0.017	2,364	1,821	1.731	0.045	0.348	0.417
Currently using a traditional method	0.056	0.007	2,364	1,821	1.416	0.119	0.043	0.070
Currently using pill	0.047	0.006	2,364	1,821	1.396	0.129	0.035	0.060
Currently using IUD	0.022	0.004	2,364	1,821	1.401	0.193	0.013	0.030
Currently using male condoms	0.015	0.003	2,364	1,821	1.299	0.217	0.009	0.022
Currently using injectables	0.187	0.012	2,364	1,821	1.440	0.062	0.164	0.210
Currently using female sterilisation	0.016	0.004	2,364	1,821	1.671	0.266	0.008	0.025
Currently using implant	0.094	0.010	2,364	1,821	1.680	0.107	0.074	0.114
Currently using rhythm	0.042	0.005	2,364	1,821	1.292	0.128	0.031	0.052
Currently using withdrawal	0.014	0.004	2,364	1,821	1.527	0.261	0.007	0.022
Used public sector source for family planning	0.662	0.024	1,088	882	1.665	0.036	0.614	0.710
Want no more children	0.371	0.019	1,120	850	1.297	0.051	0.333	0.408
Want to delay next birth at least 2 years	0.339	0.019	1,120	850	1.349	0.056	0.301	0.377
Ideal number of children	4.197	0.082	1,647	1,336	1.571	0.020	4.034	4.361
Mothers received antenatal care for last birth	0.975	0.005	1,857	1,471	1.340	0.005	0.966	0.985
Mothers protected against tetanus for last birth	0.837	0.016	873	698	1.292	0.019	0.805	0.869
Births with skilled attendant at delivery	0.582	0.024	2,650	2,023	2.055	0.041	0.535	0.630
Delivery in a health facility	0.577	0.024	2,650	2,023	2.046	0.041	0.529	0.625
Had diarrhoea in the last 2 weeks	0.176	0.014	2,531	1,936	1.750	0.080	0.148	0.205
Treated with ORS	0.631	0.030	460	341	1.212	0.047	0.571	0.690
Sought medical treatment for diarrhoea	0.647	0.027	460	341	1.131	0.042	0.592	0.701
Vaccination card seen	0.786	0.027	517	391	1.467	0.035	0.731	0.840
Received BCG vaccination	0.971	0.013	517	391	1.687	0.013	0.946	0.997
Received DPT vaccination (3 doses)	0.919	0.016	517	391	1.275	0.017	0.887	0.950
Received polio vaccination (3 doses)	0.920	0.017	517	391	1.421	0.019	0.885	0.955
Received measles vaccination	0.866	0.020	517	391	1.303	0.023	0.826	0.906
Fully vaccinated	0.805	0.024	517	391	1.312	0.029	0.757	0.852
Vitamin A supplementation in last 6 months	0.974	0.006	2,247	1,711	1.609	0.006	0.963	0.986
Owns at least one insecticide treated net (ITN)	0.693	0.013	4,476	3,569	1.890	0.019	0.666	0.719
Child slept under ITN last night	0.656	0.017	2,652	2,006	1.431	0.025	0.622	0.689
Received 2+ doses of SP/Fansidar during antenatal visit (IPTp)	0.525	0.025	1,036	793	1.589	0.048	0.475	0.576
Child has fever in last two weeks	0.272	0.017	2,531	1,936	1.780	0.061	0.238	0.305
Child took antimalarial	0.119	0.019	672	526	1.465	0.163	0.080	0.158
Height-for-age (-2SD)	0.308	0.015	2,539	1,926	1.517	0.050	0.277	0.338
Weight-for-height (-2SD)	0.045	0.006	2,539	1,926	1.279	0.129	0.033	0.056
Weight-for-age (-2SD)	0.136	0.011	2,539	1,926	1.437	0.080	0.114	0.157
Body Mass Index (BMI) <18.5	0.110	0.009	1,644	1,262	1.213	0.086	0.091	0.129
Had 2+ sexual partners in past 12 months	0.011	0.003	1,841	1,421	1.182	0.267	0.005	0.016
Condom use at last sex	0.269	0.125	25	15	1.353	0.463	0.020	0.518
Abstinence among youth (never had sex)	0.656	0.036	421	327	1.567	0.055	0.584	0.729
Sexually active in past 12 months among youth	0.236	0.034	421	327	1.617	0.142	0.169	0.304
Had an HIV test and received results in past 12 months	0.534	0.015	3,902	3,076	1.932	0.029	0.503	0.565
Accepting attitudes towards people with HIV	0.161	0.010	1,840	1,420	1.206	0.064	0.140	0.182
Ever experienced any physical violence since age 15 by anyone	0.394	0.023	684	568	1.212	0.058	0.349	0.440
Ever experienced any sexual violence by anyone	0.083	0.012	684	568	1.126	0.143	0.059	0.107
Ever experienced any physical/sexual violence by any husband/partner	0.302	0.025	556	439	1.289	0.083	0.252	0.352
Physical/sexual violence in the last 12 months by any husband/partner	0.192	0.023	556	439	1.355	0.118	0.147	0.238
Total fertility rate (3 years)	4.302	0.225	10,909	8,647	1.929	0.052	3.852	4.753
Neonatal mortality rate (last 0-9 years)	25.117	2.535	5,383	4,055	1.051	0.101	20.047	30.187
Post-neonatal mortality rate (last 0-9 years)	18.704	2.568	5,376	4,037	1.240	0.137	13.568	23.839
Infant mortality rate (last 0-9 years)	43.821	3.415	5,386	4,056	1.056	0.078	36.991	50.650
Child mortality rate (last 0-9 years)	14.035	1.941	5,281	3,940	1.128	0.138	10.152	17.917
Under-five mortality rate (last 0-9 years)	57.240	3.827	5,401	4,065	1.087	0.067	49.586	64.894

Continued…

Table B.5—*Continued*

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			MEN					
Urban residence	0.568	0.026	1,505	1,260	2.070	0.047	0.515	0.621
Literacy	0.939	0.009	1,505	1,260	1.426	0.009	0.922	0.957
No education	0.042	0.007	1,505	1,260	1.440	0.177	0.027	0.057
Secondary or higher education	0.439	0.020	1,505	1,260	1.558	0.045	0.399	0.479
Never married/in union	0.458	0.019	1,505	1,260	1.505	0.042	0.420	0.497
Currently married/in union	0.489	0.019	1,505	1,260	1.488	0.039	0.451	0.528
Had sexual intercourse before age 18	0.480	0.018	1,190	1,005	1.235	0.037	0.444	0.516
Know any contraceptive method	1.000	0.000	754	617	na	0.000	1.000	1.000
Know any modern contraceptive method	0.998	0.001	754	617	0.803	0.001	0.996	1.001
Want no more children	0.362	0.027	754	617	1.551	0.075	0.308	0.417
Want to delay next birth at least 2 years	0.409	0.026	754	617	1.450	0.064	0.357	0.461
Ideal number of children	3.962	0.095	1,404	1,204	1.583	0.024	3.772	4.152
Had 2+ sexual partners in past 12 months	0.119	0.012	1,505	1,260	1.485	0.104	0.094	0.144
Condom use at last sex	0.320	0.049	157	150	1.305	0.153	0.222	0.417
Abstinence among youth (never had sex)	0.465	0.038	507	437	1.723	0.082	0.389	0.542
Sexually active in past 12 months among youth	0.369	0.036	507	437	1.666	0.097	0.298	0.441
Had an HIV test and received results in past 12 months	0.405	0.020	1,505	1,260	1.596	0.050	0.364	0.445
Accepting attitudes towards people with HIV	0.438	0.024	1,498	1,256	1.877	0.055	0.390	0.486
Ever experienced any physical violence since age 15 by anyone	0.419	0.032	580	481	1.581	0.078	0.354	0.484
Ever experienced any sexual violence by anyone	0.036	0.009	580	481	1.151	0.249	0.018	0.053
Ever experienced any physical/sexual violence by any wife/partner	0.072	0.016	365	244	1.165	0.219	0.041	0.104
Physical/sexual violence in the last 12 months by any wife/partner	0.035	0.011	365	244	1.098	0.301	0.014	0.057

Table B.6 Sampling errors: North Eastern sample, Kenya DHS 2014

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			WOMEN					
Urban residence	0.370	0.037	1,664	648	3.100	0.100	0.296	0.443
Literacy	0.239	0.023	1,664	648	2.200	0.096	0.193	0.285
No education	0.749	0.023	1,664	648	2.129	0.030	0.704	0.795
Secondary or higher education	0.103	0.015	1,664	648	2.014	0.146	0.073	0.133
Never married/in union	0.239	0.019	1,664	648	1.770	0.077	0.202	0.276
Currently married/in union	0.695	0.018	1,664	648	1.611	0.026	0.659	0.732
Married before age 20	0.631	0.018	1,306	505	1.343	0.028	0.595	0.667
Had sexual intercourse before age 18	0.416	0.019	1,306	505	1.387	0.046	0.378	0.454
Currently pregnant	0.120	0.010	1,664	648	1.211	0.080	0.101	0.139
Children ever born	3.526	0.097	1,664	648	1.253	0.028	3.332	3.720
Children surviving	3.300	0.097	1,664	648	1.348	0.029	3.105	3.494
Children ever born to women age 40-49	7.090	0.266	231	90	1.651	0.038	6.557	7.622
Know any contraceptive method	0.708	0.021	1,144	451	1.530	0.029	0.667	0.749
Know a modern method	0.688	0.023	1,144	451	1.680	0.033	0.642	0.734
Currently using any method	0.034	0.007	1,144	451	1.322	0.210	0.019	0.048
Currently using a modern method	0.034	0.007	1,144	451	1.322	0.210	0.019	0.048
Currently using a traditional method	0.000	0.000	1,144	451	na	na	0.000	0.000
Currently using pill	0.006	0.002	1,144	451	1.050	0.406	0.001	0.011
Currently using IUD	0.001	0.001	1,144	451	1.016	1.011	0.000	0.003
Currently using male condoms	0.001	0.001	1,144	451	0.712	0.719	0.000	0.002
Currently using injectables	0.019	0.005	1,144	451	1.123	0.240	0.010	0.028
Currently using female sterilisation	0.000	0.000	1,144	451	na	na	0.000	0.000
Currently using implant	0.006	0.003	1,144	451	1.156	0.440	0.001	0.011
Currently using rhythm	0.000	0.000	1,144	451	na	na	0.000	0.000
Currently using withdrawal	0.000	0.000	1,144	451	na	na	0.000	0.000
Used public sector source for family planning	0.724	0.065	42	16	0.934	0.090	0.594	0.854
Want no more children	0.061	0.015	538	209	1.427	0.241	0.032	0.091
Want to delay next birth at least 2 years	0.295	0.031	538	209	1.563	0.104	0.233	0.357
Ideal number of children	9.260	0.228	700	270	1.749	0.025	8.804	9.716
Mothers received antenatal care for last birth	0.665	0.028	925	372	1.859	0.043	0.609	0.722
Mothers protected against tetanus for last birth	0.599	0.046	453	178	2.002	0.077	0.507	0.691
Births with skilled attendant at delivery	0.324	0.034	1,594	650	2.221	0.105	0.256	0.392
Delivery in a health facility	0.292	0.030	1,594	650	2.027	0.104	0.232	0.353
Had diarrhoea in the last 2 weeks	0.078	0.011	1,538	625	1.592	0.146	0.055	0.100
Treated with ORS	0.553	0.047	116	49	0.976	0.085	0.459	0.647
Sought medical treatment for diarrhoea	0.442	0.093	116	49	1.943	0.211	0.256	0.629
Vaccination card seen	0.511	0.037	295	121	1.295	0.072	0.437	0.584
Received BCG vaccination	0.834	0.025	295	121	1.161	0.029	0.785	0.883
Received DPT vaccination (3 doses)	0.774	0.040	295	121	1.668	0.051	0.695	0.853
Received polio vaccination (3 doses)	0.746	0.035	295	121	1.431	0.048	0.675	0.817
Received measles vaccination	0.698	0.040	295	121	1.541	0.058	0.618	0.779
Fully vaccinated	0.556	0.038	295	121	1.339	0.068	0.481	0.632
Vitamin A supplementation in last 6 months	0.987	0.004	1,401	577	1.315	0.004	0.978	0.995
Owns at least one insecticide treated net (ITN)	0.488	0.028	1,857	724	2.378	0.057	0.433	0.544
Child slept under ITN last night	0.402	0.033	1,637	664	2.043	0.081	0.337	0.467
Received 2+ doses of SP/Fansidar during antenatal visit (IPTp)	0.021	0.008	570	228	1.262	0.355	0.006	0.036
Child has fever in last two weeks	0.087	0.010	1,538	625	1.261	0.112	0.067	0.106
Child took antimalarial	0.073	0.024	146	54	1.000	0.330	0.025	0.121
Height-for-age (-2SD)	0.247	0.020	1,485	604	1.752	0.082	0.206	0.287
Weight-for-height (-2SD)	0.133	0.011	1,485	604	1.201	0.081	0.112	0.154
Weight-for-age (-2SD)	0.190	0.014	1,485	604	1.301	0.074	0.162	0.218
Body Mass Index (BMI) <18.5	0.287	0.023	624	239	1.269	0.081	0.241	0.334
Had 2+ sexual partners in past 12 months	0.000	0.000	779	299	na	na	0.000	0.000
Condom use at last sex	0.000	0.000	0	0	na	na	0.000	0.000
Abstinence among youth (never had sex)	0.977	0.013	170	64	1.115	0.013	0.951	1.003
Sexually active in past 12 months among youth	0.010	0.008	170	64	1.032	0.780	0.000	0.026
Had an HIV test and received results in past 12 months	0.201	0.014	1,664	648	1.469	0.072	0.172	0.230
Accepting attitudes towards people with HIV	0.028	0.008	742	284	1.359	0.296	0.011	0.044
Ever experienced any physical violence since age 15 by anyone	0.150	0.026	313	118	1.273	0.172	0.099	0.202
Ever experienced any sexual violence by anyone	0.006	0.004	313	118	0.996	0.717	0.000	0.015
Ever experienced any physical/sexual violence by any husband/partner	0.121	0.024	265	97	1.198	0.199	0.073	0.169
Physical/sexual violence in the last 12 months by any husband/partner	0.058	0.016	265	97	1.101	0.272	0.027	0.090
Total fertility rate (3 years)	6.417	0.311	4,611	1,798	1.581	0.048	5.795	7.038
Neonatal mortality rate (last 0-9 years)	24.115	4.109	3,361	1,353	1.413	0.170	15.898	32.332
Post-neonatal mortality rate (last 0-9 years)	12.616	2.263	3,392	1,366	1.091	0.179	8.090	17.142
Infant mortality rate (last 0-9 years)	36.731	5.293	3,363	1,354	1.486	0.144	26.144	47.318
Child mortality rate (last 0-9 years)	7.621	1.863	3,441	1,384	1.162	0.244	3.894	11.347
Under-five mortality rate (last 0-9 years)	44.072	5.618	3,372	1,357	1.395	0.127	32.836	55.307

Continued…

Table B.6—*Continued*

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			MEN					
Urban residence	0.430	0.046	591	227	2.243	0.107	0.338	0.521
Literacy	0.672	0.027	591	227	1.391	0.040	0.618	0.726
No education	0.369	0.027	591	227	1.374	0.074	0.314	0.424
Secondary or higher education	0.284	0.028	591	227	1.487	0.097	0.229	0.339
Never married/in union	0.516	0.032	591	227	1.529	0.061	0.453	0.579
Currently married/in union	0.454	0.028	591	227	1.357	0.061	0.398	0.510
Had sexual intercourse before age 18	0.118	0.019	398	153	1.150	0.158	0.081	0.155
Know any contraceptive method	0.892	0.020	263	103	1.065	0.023	0.851	0.933
Know any modern contraceptive method	0.892	0.020	263	103	1.065	0.023	0.851	0.933
Want no more children	0.035	0.014	263	103	1.269	0.413	0.006	0.064
Want to delay next birth at least 2 years	0.386	0.050	263	103	1.645	0.129	0.287	0.485
Ideal number of children	12.915	0.406	547	209	1.503	0.031	12.103	13.727
Had 2+ sexual partners in past 12 months	0.059	0.015	591	227	1.573	0.260	0.028	0.089
Condom use at last sex	0.065	0.048	23	13	0.923	0.743	0.000	0.162
Abstinence among youth (never had sex)	0.860	0.040	272	100	1.906	0.047	0.780	0.941
Sexually active in past 12 months among youth	0.026	0.012	272	100	1.221	0.456	0.002	0.049
Had an HIV test and received results in past 12 months	0.228	0.024	591	227	1.365	0.104	0.180	0.275
Accepting attitudes towards people with HIV	0.310	0.032	590	225	1.683	0.104	0.246	0.374
Ever experienced any physical violence since age 15 by anyone	0.320	0.046	210	83	1.436	0.145	0.227	0.413
Ever experienced any sexual violence by anyone	0.000	0.000	210	83	na	na	0.000	0.000
Ever experienced any physical/sexual violence by any wife/partner	0.032	0.031	124	42	1.893	0.942	0.000	0.094
Physical/sexual violence in the last 12 months by any wife/partner	0.032	0.031	124	42	1.893	0.942	0.000	0.094

Table B.7 Sampling errors: Eastern sample, Kenya DHS 2014

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			WOMEN					
Urban residence	0.257	0.016	5,247	4,375	2.662	0.063	0.225	0.289
Literacy	0.894	0.007	5,247	4,375	1.742	0.008	0.880	0.909
No education	0.048	0.005	5,247	4,375	1.842	0.114	0.037	0.058
Secondary or higher education	0.357	0.014	5,247	4,375	2.056	0.038	0.329	0.384
Never married/in union	0.286	0.008	5,247	4,375	1.237	0.027	0.270	0.301
Currently married/in union	0.610	0.009	5,247	4,375	1.386	0.015	0.591	0.628
Married before age 20	0.429	0.011	4,215	3,526	1.409	0.025	0.407	0.450
Had sexual intercourse before age 18	0.501	0.014	4,215	3,526	1.805	0.028	0.473	0.528
Currently pregnant	0.046	0.004	5,247	4,375	1.526	0.096	0.037	0.055
Children ever born	2.426	0.045	5,247	4,375	1.460	0.018	2.337	2.516
Children surviving	2.278	0.041	5,247	4,375	1.437	0.018	2.196	2.360
Children ever born to women age 40-49	4.691	0.119	981	855	1.639	0.025	4.453	4.929
Know any contraceptive method	0.997	0.001	3,197	2,667	0.735	0.001	0.996	0.999
Know a modern method	0.997	0.001	3,197	2,667	0.766	0.001	0.996	0.998
Currently using any method	0.704	0.013	3,197	2,667	1.619	0.019	0.678	0.730
Currently using a modern method	0.639	0.014	3,197	2,667	1.620	0.022	0.611	0.666
Currently using a traditional method	0.065	0.006	3,197	2,667	1.314	0.088	0.054	0.077
Currently using pill	0.089	0.008	3,197	2,667	1.515	0.086	0.073	0.104
Currently using IUD	0.029	0.005	3,197	2,667	1.643	0.167	0.020	0.039
Currently using male condoms	0.015	0.004	3,197	2,667	1.665	0.238	0.008	0.022
Currently using injectables	0.379	0.013	3,197	2,667	1.475	0.033	0.354	0.404
Currently using female sterilisation	0.048	0.006	3,197	2,667	1.466	0.115	0.037	0.060
Currently using implant	0.078	0.007	3,197	2,667	1.485	0.090	0.064	0.092
Currently using rhythm	0.056	0.005	3,197	2,667	1.332	0.096	0.046	0.067
Currently using withdrawal	0.005	0.002	3,197	2,667	1.595	0.389	0.001	0.009
Used public sector source for family planning	0.620	0.018	2,102	2,050	1.711	0.029	0.584	0.656
Want no more children	0.603	0.019	1,514	1,268	1.477	0.031	0.566	0.640
Want to delay next birth at least 2 years	0.251	0.017	1,514	1,268	1.510	0.067	0.218	0.285
Ideal number of children	3.079	0.036	2,450	2,046	1.190	0.012	3.007	3.150
Mothers received antenatal care for last birth	0.972	0.004	2,299	1,834	1.157	0.004	0.964	0.980
Mothers protected against tetanus for last birth	0.791	0.017	1,115	891	1.342	0.021	0.758	0.825
Births with skilled attendant at delivery	0.633	0.020	3,015	2,321	1.886	0.031	0.593	0.673
Delivery in a health facility	0.627	0.020	3,015	2,321	1.873	0.032	0.587	0.666
Had diarrhoea in the last 2 weeks	0.143	0.010	2,906	2,235	1.345	0.067	0.124	0.162
Treated with ORS	0.472	0.037	381	320	1.351	0.078	0.398	0.545
Sought medical treatment for diarrhoea	0.574	0.035	381	320	1.314	0.061	0.504	0.644
Vaccination card seen	0.853	0.020	585	431	1.285	0.024	0.812	0.894
Received BCG vaccination	0.987	0.005	585	431	1.049	0.005	0.977	0.998
Received DPT vaccination (3 doses)	0.936	0.018	585	431	1.647	0.019	0.901	0.972
Received polio vaccination (3 doses)	0.913	0.020	585	431	1.567	0.021	0.874	0.952
Received measles vaccination	0.921	0.017	585	431	1.382	0.018	0.888	0.954
Fully vaccinated	0.855	0.026	585	431	1.636	0.030	0.803	0.906
Vitamin A supplementation in last 6 months	0.993	0.002	2,656	2,051	1.451	0.002	0.988	0.998
Owns at least one insecticide treated net (ITN)	0.563	0.014	6,261	5,262	2.253	0.025	0.535	0.591
Child slept under ITN last night	0.531	0.020	3,138	2,464	1.874	0.038	0.491	0.571
Received 2+ doses of SP/Fansidar during antenatal visit (IPTp)	0.098	0.012	1,144	872	1.247	0.118	0.075	0.121
Child has fever in last two weeks	0.182	0.012	2,906	2,235	1.491	0.063	0.159	0.205
Child took antimalarial	0.181	0.025	509	406	1.423	0.139	0.131	0.231
Height-for-age (-2SD)	0.301	0.013	3,058	2,409	1.482	0.044	0.274	0.328
Weight-for-height (-2SD)	0.044	0.005	3,058	2,409	1.267	0.113	0.034	0.054
Weight-for-age (-2SD)	0.122	0.010	3,058	2,409	1.501	0.081	0.102	0.141
Body Mass Index (BMI) <18.5	0.098	0.008	2,299	1,918	1.229	0.078	0.083	0.113
Had 2+ sexual partners in past 12 months	0.010	0.002	2,495	2,066	1.233	0.247	0.005	0.015
Condom use at last sex	0.418	0.110	32	20	1.228	0.262	0.199	0.638
Abstinence among youth (never had sex)	0.683	0.035	580	480	1.828	0.052	0.612	0.754
Sexually active in past 12 months among youth	0.188	0.023	580	480	1.415	0.122	0.142	0.234
Had an HIV test and received results in past 12 months	0.510	0.012	5,247	4,375	1.775	0.024	0.486	0.535
Accepting attitudes towards people with HIV	0.188	0.012	2,478	2,062	1.531	0.064	0.164	0.212
Ever experienced any physical violence since age 15 by anyone	0.488	0.023	962	792	1.404	0.046	0.443	0.533
Ever experienced any sexual violence by anyone	0.122	0.015	962	792	1.451	0.126	0.091	0.152
Ever experienced any physical/sexual violence by any husband/partner	0.423	0.027	765	585	1.499	0.063	0.369	0.477
Physical/sexual violence in the last 12 months by any husband/partner	0.251	0.022	765	585	1.428	0.089	0.206	0.296
Total fertility rate (3 years)	3.404	0.111	14,658	12,239	1.354	0.033	3.182	3.626
Neonatal mortality rate (last 0-9 years)	23.788	2.795	6,456	5,046	1.301	0.117	18.199	29.377
Post-neonatal mortality rate (last 0-9 years)	11.995	2.099	6,460	5,050	1.471	0.175	7.797	16.194
Infant mortality rate (last 0-9 years)	35.783	3.298	6,461	5,050	1.248	0.092	29.187	42.380
Child mortality rate (last 0-9 years)	9.268	1.502	6,462	5,067	1.186	0.162	6.265	12.271
Under-five mortality rate (last 0-9 years)	44.720	3.844	6,471	5,060	1.266	0.086	37.033	52.407

Continued…

Table B.7—*Continued*

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			MEN					
Urban residence	0.296	0.033	2,144	1,825	3.382	0.113	0.229	0.362
Literacy	0.916	0.011	2,144	1,825	1.798	0.012	0.895	0.938
No education	0.030	0.006	2,144	1,825	1.631	0.199	0.018	0.042
Secondary or higher education	0.389	0.021	2,144	1,825	2.035	0.055	0.347	0.432
Never married/in union	0.472	0.015	2,144	1,825	1.419	0.032	0.441	0.502
Currently married/in union	0.458	0.016	2,144	1,825	1.516	0.036	0.425	0.490
Had sexual intercourse before age 18	0.649	0.017	1,612	1,405	1.433	0.026	0.615	0.683
Know any contraceptive method	1.000	0.000	957	835	na	0.000	1.000	1.000
Know any modern contraceptive method	1.000	0.000	957	835	na	0.000	1.000	1.000
Want no more children	0.477	0.022	957	835	1.378	0.047	0.432	0.522
Want to delay next birth at least 2 years	0.348	0.027	957	835	1.739	0.077	0.294	0.402
Ideal number of children	3.339	0.045	2,128	1,805	1.302	0.013	3.250	3.429
Had 2+ sexual partners in past 12 months	0.125	0.011	2,144	1,825	1.524	0.087	0.103	0.147
Condom use at last sex	0.503	0.046	233	229	1.398	0.091	0.411	0.595
Abstinence among youth (never had sex)	0.424	0.021	806	663	1.225	0.050	0.381	0.467
Sexually active in past 12 months among youth	0.368	0.020	806	663	1.201	0.055	0.327	0.409
Had an HIV test and received results in past 12 months	0.398	0.017	2,144	1,825	1.598	0.043	0.364	0.431
Accepting attitudes towards people with HIV	0.352	0.022	2,138	1,820	2.128	0.062	0.308	0.397
Ever experienced any physical violence since age 15 by anyone	0.416	0.025	798	773	1.417	0.059	0.367	0.466
Ever experienced any sexual violence by anyone	0.049	0.009	798	773	1.194	0.187	0.030	0.067
Ever experienced any physical/sexual violence by any wife/partner	0.098	0.018	467	371	1.277	0.180	0.063	0.133
Physical/sexual violence in the last 12 months by any wife/partner	0.070	0.017	467	371	1.407	0.237	0.037	0.104

Table B.8 Sampling errors: Central sample, Kenya DHS 2014

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			WOMEN					
Urban residence	0.440	0.022	3,114	3,994	2.487	0.050	0.396	0.484
Literacy	0.949	0.005	3,114	3,994	1.188	0.005	0.940	0.958
No education	0.009	0.002	3,114	3,994	1.094	0.212	0.005	0.012
Secondary or higher education	0.547	0.017	3,114	3,994	1.868	0.030	0.514	0.581
Never married/in union	0.295	0.014	3,114	3,994	1.693	0.047	0.267	0.323
Currently married/in union	0.582	0.015	3,114	3,994	1.712	0.026	0.551	0.612
Married before age 20	0.347	0.014	2,632	3,394	1.533	0.041	0.319	0.376
Had sexual intercourse before age 18	0.352	0.014	2,632	3,394	1.542	0.041	0.323	0.380
Currently pregnant	0.048	0.004	3,114	3,994	1.087	0.086	0.040	0.057
Children ever born	2.031	0.062	3,114	3,994	1.889	0.030	1.908	2.154
Children surviving	1.921	0.057	3,114	3,994	1.882	0.030	1.806	2.036
Children ever born to women age 40-49	3.717	0.098	716	837	1.398	0.026	3.520	3.914
Know any contraceptive method	0.999	0.001	1,852	2,323	1.082	0.001	0.997	1.001
Know a modern method	0.999	0.001	1,852	2,323	1.082	0.001	0.997	1.001
Currently using any method	0.728	0.013	1,852	2,323	1.211	0.017	0.703	0.753
Currently using a modern method	0.669	0.012	1,852	2,323	1.079	0.018	0.646	0.693
Currently using a traditional method	0.059	0.008	1,852	2,323	1.380	0.129	0.044	0.074
Currently using pill	0.195	0.014	1,852	2,323	1.475	0.070	0.168	0.223
Currently using IUD	0.090	0.010	1,852	2,323	1.500	0.111	0.070	0.110
Currently using male condoms	0.024	0.005	1,852	2,323	1.398	0.209	0.014	0.034
Currently using injectables	0.216	0.013	1,852	2,323	1.347	0.060	0.191	0.242
Currently using female sterilisation	0.035	0.005	1,852	2,323	1.150	0.141	0.025	0.045
Currently using implant	0.107	0.009	1,852	2,323	1.289	0.086	0.089	0.126
Currently using rhythm	0.049	0.007	1,852	2,323	1.338	0.136	0.036	0.063
Currently using withdrawal	0.007	0.002	1,852	2,323	1.243	0.357	0.002	0.011
Used public sector source for family planning	0.524	0.022	1,483	1,873	1.664	0.041	0.480	0.567
Want no more children	0.555	0.021	903	1,113	1.261	0.038	0.514	0.597
Want to delay next birth at least 2 years	0.288	0.022	903	1,113	1.428	0.075	0.245	0.331
Ideal number of children	3.152	0.044	1,499	1,887	1.362	0.014	3.063	3.240
Mothers received antenatal care for last birth	0.973	0.006	1,197	1,528	1.195	0.006	0.962	0.984
Mothers protected against tetanus for last birth	0.797	0.020	562	715	1.192	0.025	0.757	0.837
Births with skilled attendant at delivery	0.897	0.010	1,420	1,796	1.158	0.011	0.877	0.917
Delivery in a health facility	0.902	0.009	1,420	1,796	1.114	0.010	0.883	0.921
Had diarrhoea in the last 2 weeks	0.104	0.013	1,356	1,725	1.602	0.128	0.078	0.131
Treated with ORS	0.506	0.056	137	180	1.313	0.111	0.394	0.619
Sought medical treatment for diarrhoea	0.632	0.051	137	180	1.236	0.080	0.530	0.733
Vaccination card seen	0.761	0.030	291	363	1.174	0.039	0.702	0.820
Received BCG vaccination	0.996	0.003	291	363	0.761	0.003	0.990	1.002
Received DPT vaccination (3 doses)	0.955	0.012	291	363	0.998	0.013	0.930	0.979
Received polio vaccination (3 doses)	0.960	0.012	291	363	1.090	0.013	0.935	0.985
Received measles vaccination	0.972	0.009	291	363	0.916	0.009	0.954	0.989
Fully vaccinated	0.933	0.015	291	363	0.990	0.016	0.904	0.962
Vitamin A supplementation in last 6 months	0.996	0.002	1,247	1,579	1.368	0.002	0.991	1.001
Owns at least one insecticide treated net (ITN)	0.380	0.017	4,041	5,012	2.174	0.044	0.347	0.413
Child slept under ITN last night	0.431	0.025	1,458	1,792	1.713	0.058	0.381	0.480
Received 2+ doses of SP/Fansidar during antenatal visit (IPTp)	0.045	0.012	526	682	1.372	0.271	0.021	0.069
Child has fever in last two weeks	0.179	0.017	1,356	1,725	1.586	0.097	0.144	0.213
Child took antimalarial	0.048	0.016	234	308	1.167	0.337	0.015	0.080
Height-for-age (-2SD)	0.184	0.014	1,401	1,694	1.256	0.073	0.157	0.211
Weight-for-height (-2SD)	0.023	0.004	1,401	1,694	1.089	0.196	0.014	0.032
Weight-for-age (-2SD)	0.053	0.007	1,401	1,694	1.128	0.135	0.039	0.068
Body Mass Index (BMI) <18.5	0.062	0.007	1,376	1,697	1.099	0.117	0.048	0.077
Had 2+ sexual partners in past 12 months	0.013	0.003	1,511	1,905	1.213	0.277	0.006	0.020
Condom use at last sex	0.270	0.136	18	24	1.242	0.504	0.000	0.541
Abstinence among youth (never had sex)	0.635	0.042	300	396	1.494	0.066	0.551	0.718
Sexually active in past 12 months among youth	0.240	0.031	300	396	1.253	0.129	0.178	0.302
Had an HIV test and received results in past 12 months	0.530	0.013	3,114	3,994	1.430	0.024	0.504	0.555
Accepting attitudes towards people with HIV	0.298	0.017	1,510	1,904	1.419	0.056	0.265	0.332
Ever experienced any physical violence since age 15 by anyone	0.353	0.031	595	736	1.582	0.088	0.290	0.415
Ever experienced any sexual violence by anyone	0.098	0.016	595	736	1.308	0.163	0.066	0.130
Ever experienced any physical/sexual violence by any husband/partner	0.355	0.029	458	518	1.295	0.082	0.297	0.413
Physical/sexual violence in the last 12 months by any husband/partner	0.205	0.026	458	518	1.385	0.128	0.152	0.257
Total fertility rate (3 years)	2.805	0.134	8,890	11,459	1.435	0.048	2.536	3.073
Neonatal mortality rate (last 0-9 years)	24.431	3.652	2,885	3,625	1.260	0.149	17.126	31.736
Post-neonatal mortality rate (last 0-9 years)	13.609	2.311	2,894	3,632	1.070	0.170	8.986	18.232
Infant mortality rate (last 0-9 years)	38.040	4.704	2,885	3,625	1.297	0.124	28.633	47.448
Child mortality rate (last 0-9 years)	4.266	1.181	2,928	3,644	0.948	0.277	1.904	6.629
Under-five mortality rate (last 0-9 years)	42.144	4.862	2,890	3,629	1.274	0.115	32.421	51.868

Continued…

Table B.8—*Continued*

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			MEN					
Urban residence	0.429	0.027	1,248	1,564	1.901	0.062	0.376	0.482
Literacy	0.958	0.007	1,248	1,564	1.210	0.007	0.944	0.971
No education	0.003	0.002	1,248	1,564	1.117	0.575	0.000	0.006
Secondary or higher education	0.584	0.020	1,248	1,564	1.418	0.034	0.545	0.624
Never married/in union	0.440	0.024	1,248	1,564	1.687	0.054	0.393	0.488
Currently married/in union	0.494	0.023	1,248	1,564	1.594	0.046	0.449	0.539
Had sexual intercourse before age 18	0.461	0.016	994	1,273	1.024	0.035	0.428	0.493
Know any contraceptive method	0.994	0.006	627	773	1.848	0.006	0.983	1.005
Know any modern contraceptive method	0.994	0.006	627	773	1.848	0.006	0.983	1.005
Want no more children	0.432	0.027	627	773	1.388	0.064	0.377	0.487
Want to delay next birth at least 2 years	0.352	0.030	627	773	1.585	0.086	0.291	0.413
Ideal number of children	3.411	0.059	1,230	1,545	1.469	0.017	3.294	3.528
Had 2+ sexual partners in past 12 months	0.055	0.008	1,248	1,564	1.273	0.149	0.039	0.072
Condom use at last sex	0.437	0.082	86	86	1.508	0.187	0.274	0.600
Abstinence among youth (never had sex)	0.456	0.037	414	517	1.517	0.082	0.382	0.531
Sexually active in past 12 months among youth	0.396	0.032	414	517	1.332	0.081	0.332	0.460
Had an HIV test and received results in past 12 months	0.401	0.018	1,248	1,564	1.287	0.045	0.366	0.437
Accepting attitudes towards people with HIV	0.525	0.020	1,245	1,560	1.428	0.039	0.485	0.565
Ever experienced any physical violence since age 15 by anyone	0.441	0.029	512	566	1.297	0.065	0.384	0.498
Ever experienced any sexual violence by anyone	0.029	0.009	512	566	1.269	0.324	0.010	0.048
Ever experienced any physical/sexual violence by any wife/partner	0.091	0.022	338	337	1.412	0.244	0.047	0.135
Physical/sexual violence in the last 12 months by any wife/partner	0.042	0.016	338	337	1.463	0.381	0.010	0.074

Table B.9 Sampling errors: Rift Valley sample, Kenya DHS 2014

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			WOMEN					
Urban residence	0.320	0.013	9,059	7,953	2.732	0.042	0.293	0.347
Literacy	0.845	0.009	9,059	7,953	2.339	0.011	0.827	0.862
No education	0.092	0.007	9,059	7,953	2.425	0.080	0.078	0.107
Secondary or higher education	0.403	0.012	9,059	7,953	2.357	0.030	0.379	0.428
Never married/in union	0.295	0.008	9,059	7,953	1.580	0.026	0.280	0.310
Currently married/in union	0.591	0.008	9,059	7,953	1.460	0.013	0.575	0.606
Married before age 20	0.483	0.011	7,361	6,461	1.934	0.023	0.460	0.505
Had sexual intercourse before age 18	0.531	0.011	7,361	6,461	1.838	0.020	0.510	0.552
Currently pregnant	0.070	0.003	9,059	7,953	1.241	0.047	0.064	0.077
Children ever born	2.659	0.046	9,059	7,953	1.747	0.017	2.567	2.751
Children surviving	2.509	0.043	9,059	7,953	1.734	0.017	2.424	2.595
Children ever born to women age 40-49	5.535	0.106	1,475	1,307	1.559	0.019	5.322	5.747
Know any contraceptive method	0.985	0.003	5,509	4,696	1.759	0.003	0.979	0.991
Know a modern method	0.984	0.003	5,509	4,696	1.822	0.003	0.978	0.990
Currently using any method	0.528	0.010	5,509	4,696	1.490	0.019	0.508	0.548
Currently using a modern method	0.468	0.010	5,509	4,696	1.517	0.022	0.448	0.488
Currently using a traditional method	0.060	0.004	5,509	4,696	1.369	0.073	0.051	0.068
Currently using pill	0.055	0.005	5,509	4,696	1.501	0.084	0.046	0.065
Currently using IUD	0.029	0.005	5,509	4,696	1.999	0.155	0.020	0.039
Currently using male condoms	0.019	0.003	5,509	4,696	1.373	0.132	0.014	0.024
Currently using injectables	0.268	0.008	5,509	4,696	1.372	0.031	0.251	0.284
Currently using female sterilisation	0.022	0.002	5,509	4,696	1.250	0.112	0.017	0.027
Currently using implant	0.072	0.005	5,509	4,696	1.525	0.074	0.061	0.083
Currently using rhythm	0.047	0.004	5,509	4,696	1.233	0.075	0.040	0.054
Currently using withdrawal	0.010	0.002	5,509	4,696	1.541	0.207	0.006	0.014
Used public sector source for family planning	0.609	0.015	2,931	2,760	1.685	0.025	0.579	0.640
Want no more children	0.481	0.013	2,586	2,171	1.273	0.026	0.456	0.506
Want to delay next birth at least 2 years	0.365	0.013	2,586	2,171	1.356	0.035	0.339	0.391
Ideal number of children	3.822	0.050	4,170	3,659	1.605	0.013	3.721	3.923
Mothers received antenatal care for last birth	0.939	0.005	4,760	4,002	1.368	0.005	0.929	0.948
Mothers protected against tetanus for last birth	0.743	0.011	2,305	1,899	1.222	0.015	0.721	0.766
Births with skilled attendant at delivery	0.513	0.015	6,850	5,677	2.003	0.029	0.483	0.542
Delivery in a health facility	0.502	0.015	6,850	5,677	1.996	0.029	0.473	0.531
Had diarrhoea in the last 2 weeks	0.132	0.006	6,618	5,457	1.252	0.042	0.121	0.143
Treated with ORS	0.530	0.022	881	718	1.241	0.042	0.485	0.575
Sought medical treatment for diarrhoea	0.589	0.022	881	718	1.253	0.038	0.544	0.633
Vaccination card seen	0.773	0.018	1,314	1,083	1.530	0.023	0.737	0.809
Received BCG vaccination	0.967	0.006	1,314	1,083	1.168	0.006	0.955	0.979
Received DPT vaccination (3 doses)	0.879	0.012	1,314	1,083	1.305	0.014	0.855	0.903
Received polio vaccination (3 doses)	0.867	0.013	1,314	1,083	1.376	0.015	0.841	0.834
Received measles vaccination	0.831	0.012	1,314	1,083	1.133	0.015	0.807	0.856
Fully vaccinated	0.739	0.016	1,314	1,083	1.241	0.021	0.708	0.770
Vitamin A supplementation in last 6 months	0.988	0.002	5,995	4,956	1.412	0.002	0.984	0.993
Owns at least one insecticide treated net (ITN)	0.557	0.010	10,534	9,249	2.157	0.019	0.536	0.578
Child slept under ITN last night	0.430	0.014	6,918	5,713	1.799	0.032	0.403	0.458
Received 2+ doses of SP/Fansidar during antenatal visit (IPTp)	0.069	0.007	2,641	2,167	1.428	0.104	0.055	0.084
Child has fever in last two weeks	0.209	0.008	6,618	5,457	1.426	0.039	0.192	0.225
Child took antimalarial	0.133	0.012	1,389	1,139	1.240	0.093	0.108	0.157
Height-for-age (-2SD)	0.298	0.008	6,608	5,466	1.322	0.027	0.282	0.314
Weight-for-height (-2SD)	0.057	0.006	6,608	5,466	1.989	0.106	0.045	0.069
Weight-for-age (-2SD)	0.153	0.009	6,608	5,466	1.786	0.056	0.136	0.170
Body Mass Index (BMI) <18.5	0.118	0.007	3,786	3,349	1.398	0.062	0.103	0.132
Had 2+ sexual partners in past 12 months	0.008	0.001	4,254	3,714	1.039	0.173	0.005	0.011
Condom use at last sex	0.414	0.077	49	31	1.078	0.185	0.260	0.568
Abstinence among youth (never had sex)	0.538	0.027	935	889	1.650	0.050	0.484	0.592
Sexually active in past 12 months among youth	0.296	0.022	935	889	1.503	0.076	0.252	0.341
Had an HIV test and received results in past 12 months	0.518	0.008	9,059	7,953	1.493	0.015	0.502	0.533
Accepting attitudes towards people with HIV	0.298	0.012	4,234	3,701	1.735	0.041	0.273	0.322
Ever experienced any physical violence since age 15 by anyone	0.378	0.019	1,626	1,435	1.589	0.051	0.340	0.416
Ever experienced any sexual violence by anyone	0.105	0.011	1,626	1,435	1.503	0.109	0.082	0.128
Ever experienced any physical/sexual violence by any husband/partner	0.338	0.019	1,300	983	1.441	0.056	0.300	0.375
Physical/sexual violence in the last 12 months by any husband/partner	0.201	0.015	1,300	983	1.319	0.073	0.172	0.230
Total fertility rate (3 years)	4.539	0.129	25,476	22,450	1.691	0.028	4.282	4.796
Neonatal mortality rate (last 0-9 years)	19.598	1.614	13,546	11,169	1.235	0.082	16.370	22.826
Post-neonatal mortality rate (last 0-9 years)	14.097	1.446	13,573	11,193	1.335	0.103	11.204	16.989
Infant mortality rate (last 0-9 years)	33.695	2.311	13,551	11,176	1.334	0.069	29.073	38.317
Child mortality rate (last 0-9 years)	11.576	1.561	13,341	10,969	1.451	0.135	8.454	14.699
Under-five mortality rate (last 0-9 years)	44.881	2.536	13,577	11,194	1.245	0.057	39.809	49.954

Continued…

Table B.9—*Continued*

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			MEN					
Urban residence	0.338	0.017	3,484	3,050	2.065	0.049	0.305	0.371
Literacy	0.901	0.007	3,484	3,050	1.420	0.008	0.887	0.916
No education	0.043	0.005	3,484	3,050	1.462	0.117	0.033	0.053
Secondary or higher education	0.457	0.016	3,484	3,050	1.896	0.035	0.425	0.489
Never married/in union	0.453	0.012	3,484	3,050	1.432	0.027	0.429	0.477
Currently married/in union	0.499	0.012	3,484	3,050	1.395	0.024	0.476	0.523
Had sexual intercourse before age 18	0.628	0.011	2,750	2,412	1.204	0.018	0.606	0.650
Know any contraceptive method	0.999	0.001	1,796	1,523	0.756	0.001	0.997	1.000
Know any modern contraceptive method	0.997	0.001	1,796	1,523	0.818	0.001	0.995	0.999
Want no more children	0.423	0.015	1,796	1,523	1.297	0.036	0.392	0.453
Want to delay next birth at least 2 years	0.375	0.014	1,796	1,523	1.230	0.037	0.347	0.404
Ideal number of children	4.017	0.067	3,435	3,014	1.317	0.017	3.883	4.152
Had 2+ sexual partners in past 12 months	0.115	0.008	3,484	3,050	1.427	0.067	0.100	0.131
Condom use at last sex	0.512	0.033	414	351	1.337	0.064	0.447	0.578
Abstinence among youth (never had sex)	0.386	0.019	1,189	1,058	1.350	0.049	0.348	0.425
Sexually active in past 12 months among youth	0.453	0.021	1,189	1,058	1.455	0.046	0.411	0.495
Had an HIV test and received results in past 12 months	0.471	0.013	3,484	3,050	1.485	0.027	0.446	0.496
Accepting attitudes towards people with HIV	0.469	0.013	3,476	3,044	1.492	0.027	0.444	0.495
Ever experienced any physical violence since age 15 by anyone	0.397	0.018	1,360	1,201	1.335	0.045	0.361	0.432
Ever experienced any sexual violence by anyone	0.047	0.008	1,360	1,201	1.450	0.178	0.030	0.063
Ever experienced any physical/sexual violence by any wife/partner	0.095	0.011	888	655	1.140	0.118	0.073	0.118
Physical/sexual violence in the last 12 months by any wife/partner	0.065	0.010	888	655	1.168	0.149	0.046	0.084

Table B.10 Sampling errors: Western sample, Kenya DHS 2014

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			WOMEN					
Urban residence	0.167	0.014	2,840	3,225	1.975	0.083	0.139	0.195
Literacy	0.901	0.009	2,840	3,225	1.535	0.010	0.884	0.918
No education	0.028	0.004	2,840	3,225	1.275	0.140	0.020	0.036
Secondary or higher education	0.368	0.014	2,840	3,225	1.507	0.037	0.341	0.395
Never married/in union	0.303	0.010	2,840	3,225	1.201	0.034	0.283	0.324
Currently married/in union	0.604	0.011	2,840	3,225	1.174	0.018	0.583	0.626
Married before age 20	0.551	0.016	2,164	2,436	1.520	0.030	0.518	0.583
Had sexual intercourse before age 18	0.615	0.014	2,164	2,436	1.360	0.023	0.586	0.643
Currently pregnant	0.067	0.005	2,840	3,225	1.099	0.077	0.057	0.077
Children ever born	2.890	0.059	2,840	3,225	1.145	0.021	2.771	3.009
Children surviving	2.601	0.052	2,840	3,225	1.131	0.020	2.496	2.706
Children ever born to women age 40-49	6.053	0.161	495	556	1.339	0.027	5.732	6.375
Know any contraceptive method	1.000	0.000	1,735	1,950	0.915	0.000	0.999	1.000
Know a modern method	1.000	0.000	1,735	1,950	0.915	0.000	0.999	1.000
Currently using any method	0.586	0.016	1,735	1,950	1.363	0.028	0.554	0.619
Currently using a modern method	0.569	0.016	1,735	1,950	1.337	0.028	0.538	0.601
Currently using a traditional method	0.017	0.003	1,735	1,950	1.113	0.204	0.010	0.024
Currently using pill	0.046	0.006	1,735	1,950	1.218	0.133	0.034	0.058
Currently using IUD	0.013	0.003	1,735	1,950	1.002	0.210	0.008	0.018
Currently using male condoms	0.025	0.004	1,735	1,950	1.111	0.168	0.016	0.033
Currently using injectables	0.275	0.014	1,735	1,950	1.333	0.052	0.247	0.304
Currently using female sterilisation	0.059	0.007	1,735	1,950	1.292	0.124	0.044	0.073
Currently using implant	0.152	0.013	1,735	1,950	1.539	0.087	0.125	0.178
Currently using rhythm	0.011	0.003	1,735	1,950	1.018	0.229	0.006	0.016
Currently using withdrawal	0.003	0.002	1,735	1,950	1.359	0.607	0.000	0.006
Used public sector source for family planning	0.739	0.021	1,182	1,320	1.629	0.028	0.697	0.780
Want no more children	0.564	0.020	819	929	1.153	0.035	0.524	0.604
Want to delay next birth at least 2 years	0.303	0.017	819	929	1.060	0.056	0.269	0.337
Ideal number of children	3.700	0.048	1,366	1,544	1.017	0.013	3.604	3.797
Mothers received antenatal care for last birth	0.972	0.006	1,398	1,590	1.306	0.006	0.960	0.983
Mothers protected against tetanus for last birth	0.669	0.028	688	790	1.600	0.042	0.613	0.726
Births with skilled attendant at delivery	0.478	0.019	1,977	2,255	1.487	0.039	0.441	0.515
Delivery in a health facility	0.470	0.019	1,977	2,255	1.524	0.041	0.432	0.508
Had diarrhoea in the last 2 weeks	0.201	0.013	1,889	2,166	1.390	0.065	0.175	0.227
Treated with ORS	0.456	0.035	395	436	1.294	0.078	0.385	0.527
Sought medical treatment for diarrhoea	0.473	0.037	395	436	1.369	0.079	0.399	0.548
Vaccination card seen	0.746	0.024	364	419	1.072	0.032	0.697	0.794
Received BCG vaccination	0.959	0.016	364	419	1.600	0.017	0.926	0.992
Received DPT vaccination (3 doses)	0.902	0.020	364	419	1.289	0.022	0.863	0.942
Received polio vaccination (3 doses)	0.910	0.018	364	419	1.207	0.020	0.874	0.946
Received measles vaccination	0.857	0.024	364	419	1.319	0.028	0.810	0.905
Fully vaccinated	0.813	0.025	364	419	1.228	0.030	0.763	0.863
Vitamin A supplementation in last 6 months	0.985	0.003	1,729	1,967	1.076	0.004	0.978	0.992
Owns at least one insecticide treated net (ITN)	0.819	0.009	3,220	3,604	1.337	0.011	0.800	0.837
Child slept under ITN last night	0.690	0.013	2,176	2,526	1.155	0.019	0.663	0.717
Received 2+ doses of SP/Fansidar during antenatal visit (IPTp)	0.384	0.024	719	827	1.367	0.064	0.335	0.433
Child has fever in last two weeks	0.361	0.016	1,889	2,166	1.382	0.046	0.328	0.394
Child took antimalarial	0.518	0.023	731	782	1.103	0.044	0.473	0.564
Height-for-age (-2SD)	0.252	0.014	2,124	2,476	1.397	0.056	0.224	0.281
Weight-for-height (-2SD)	0.019	0.003	2,124	2,476	1.103	0.170	0.013	0.026
Weight-for-age (-2SD)	0.090	0.008	2,124	2,476	1.249	0.090	0.074	0.107
Body Mass Index (BMI) <18.5	0.086	0.010	1,261	1,431	1.249	0.115	0.066	0.105
Had 2+ sexual partners in past 12 months	0.009	0.003	1,386	1,571	1.140	0.316	0.003	0.015
Condom use at last sex	0.216	0.128	12	15	1.032	0.595	0.000	0.473
Abstinence among youth (never had sex)	0.632	0.034	396	456	1.388	0.053	0.564	0.699
Sexually active in past 12 months among youth	0.205	0.025	396	456	1.220	0.121	0.155	0.254
Had an HIV test and received results in past 12 months	0.454	0.010	2,840	3,225	1.112	0.023	0.433	0.475
Accepting attitudes towards people with HIV	0.245	0.014	1,384	1,568	1.201	0.057	0.217	0.273
Ever experienced any physical violence since age 15 by anyone	0.533	0.026	530	640	1.185	0.048	0.482	0.585
Ever experienced any sexual violence by anyone	0.219	0.022	530	640	1.230	0.101	0.175	0.263
Ever experienced any physical/sexual violence by any husband/partner	0.556	0.029	404	433	1.176	0.052	0.498	0.615
Physical/sexual violence in the last 12 months by any husband/partner	0.366	0.031	404	433	1.297	0.085	0.304	0.428
Total fertility rate (3 years)	4.668	0.143	7,824	8,834	1.178	0.031	4.382	4.954
Neonatal mortality rate (last 0-9 years)	19.300	3.238	3,991	4,603	1.409	0.168	12.823	25.776
Post-neonatal mortality rate (last 0-9 years)	20.747	3.088	4,014	4,625	1.313	0.149	14.571	26.924
Infant mortality rate (last 0-9 years)	40.047	5.270	3,996	4,610	1.576	0.132	29.506	50.588
Child mortality rate (last 0-9 years)	24.594	2.893	4,004	4,608	1.120	0.118	18.808	30.380
Under-five mortality rate (last 0-9 years)	63.656	6.019	4,022	4,634	1.362	0.095	51.619	75.693

Continued…

Table B.10—*Continued*

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			MEN					
Urban residence	0.198	0.014	1,130	1,164	1.183	0.071	0.170	0.226
Literacy	0.869	0.014	1,130	1,164	1.378	0.016	0.841	0.896
No education	0.009	0.003	1,130	1,164	1.093	0.340	0.003	0.015
Secondary or higher education	0.388	0.020	1,130	1,164	1.381	0.052	0.348	0.429
Never married/in union	0.462	0.021	1,130	1,164	1.410	0.045	0.420	0.504
Currently married/in union	0.482	0.022	1,130	1,164	1.495	0.046	0.437	0.526
Had sexual intercourse before age 18	0.605	0.022	792	825	1.251	0.036	0.561	0.648
Know any contraceptive method	1.000	0.000	524	561	na	0.000	1.000	1.000
Know any modern contraceptive method	1.000	0.000	524	561	na	0.000	1.000	1.000
Want no more children	0.460	0.026	524	561	1.206	0.057	0.408	0.513
Want to delay next birth at least 2 years	0.388	0.024	524	561	1.126	0.062	0.340	0.436
Ideal number of children	3.901	0.072	1,128	1,161	1.303	0.018	3.757	4.045
Had 2+ sexual partners in past 12 months	0.125	0.013	1,130	1,164	1.281	0.101	0.100	0.150
Condom use at last sex	0.272	0.039	135	145	1.008	0.142	0.195	0.350
Abstinence among youth (never had sex)	0.509	0.028	475	483	1.225	0.055	0.453	0.566
Sexually active in past 12 months among youth	0.287	0.024	475	483	1.164	0.084	0.238	0.335
Had an HIV test and received results in past 12 months	0.398	0.019	1,130	1,164	1.272	0.047	0.361	0.435
Accepting attitudes towards people with HIV	0.437	0.020	1,129	1,162	1.326	0.045	0.398	0.476
Ever experienced any physical violence since age 15 by anyone	0.609	0.034	428	445	1.419	0.055	0.542	0.676
Ever experienced any sexual violence by anyone	0.072	0.015	428	445	1.201	0.209	0.042	0.102
Ever experienced any physical/sexual violence by any wife/partner	0.155	0.025	272	253	1.159	0.165	0.104	0.206
Physical/sexual violence in the last 12 months by any wife/partner	0.086	0.017	272	253	1.009	0.200	0.051	0.120

Table B.11 Sampling errors: Nyanza sample, Kenya DHS 2014

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			WOMEN					
Urban residence	0.300	0.017	4,254	4,038	2.485	0.058	0.265	0.335
Literacy	0.917	0.006	4,254	4,038	1.345	0.006	0.906	0.929
No education	0.014	0.002	4,254	4,038	1.191	0.153	0.010	0.018
Secondary or higher education	0.399	0.014	4,254	4,038	1.922	0.036	0.370	0.427
Never married/in union	0.269	0.010	4,254	4,038	1.452	0.037	0.249	0.289
Currently married/in union	0.625	0.010	4,254	4,038	1.290	0.015	0.606	0.644
Married before age 20	0.612	0.015	3,354	3,164	1.777	0.024	0.582	0.642
Had sexual intercourse before age 18	0.696	0.014	3,354	3,164	1.733	0.020	0.668	0.723
Currently pregnant	0.059	0.005	4,254	4,038	1.284	0.078	0.050	0.069
Children ever born	2.954	0.059	4,254	4,038	1.467	0.020	2.836	3.073
Children surviving	2.594	0.051	4,254	4,038	1.479	0.019	2.493	2.696
Children ever born to women age 40-49	5.807	0.121	696	643	1.248	0.021	5.564	6.049
Know any contraceptive method	0.999	0.001	2,679	2,525	0.991	0.001	0.998	1.000
Know a modern method	0.999	0.001	2,679	2,525	0.991	0.001	0.998	1.000
Currently using any method	0.564	0.012	2,679	2,525	1.252	0.021	0.540	0.588
Currently using a modern method	0.539	0.011	2,679	2,525	1.174	0.021	0.516	0.562
Currently using a traditional method	0.025	0.003	2,679	2,525	1.005	0.121	0.019	0.031
Currently using pill	0.034	0.004	2,679	2,525	1.088	0.111	0.027	0.042
Currently using IUD	0.020	0.003	2,679	2,525	1.193	0.161	0.014	0.026
Currently using male condoms	0.029	0.004	2,679	2,525	1.296	0.144	0.021	0.038
Currently using injectables	0.293	0.012	2,679	2,525	1.386	0.042	0.269	0.318
Currently using female sterilisation	0.036	0.005	2,679	2,525	1.459	0.146	0.025	0.046
Currently using implant	0.124	0.008	2,679	2,525	1.210	0.062	0.108	0.139
Currently using rhythm	0.020	0.003	2,679	2,525	1.051	0.141	0.015	0.026
Currently using withdrawal	0.003	0.001	2,679	2,525	1.000	0.339	0.001	0.005
Used public sector source for family planning	0.696	0.016	1,745	1,654	1.423	0.023	0.665	0.727
Want no more children	0.575	0.018	1,283	1,203	1.308	0.031	0.539	0.611
Want to delay next birth at least 2 years	0.277	0.015	1,283	1,203	1.181	0.053	0.247	0.306
Ideal number of children	3.431	0.036	1,963	1,856	1.139	0.011	3.358	3.503
Mothers received antenatal care for last birth	0.966	0.005	2,085	1,988	1.228	0.005	0.956	0.976
Mothers protected against tetanus for last birth	0.701	0.017	980	934	1.191	0.025	0.666	0.735
Births with skilled attendant at delivery	0.650	0.018	2,926	2,790	1.772	0.028	0.614	0.687
Delivery in a health facility	0.648	0.019	2,926	2,790	1.835	0.029	0.610	0.685
Had diarrhoea in the last 2 weeks	0.189	0.009	2,757	2,638	1.155	0.048	0.171	0.208
Treated with ORS	0.553	0.029	504	500	1.245	0.052	0.495	0.610
Sought medical treatment for diarrhoea	0.597	0.032	504	500	1.419	0.054	0.532	0.661
Vaccination card seen	0.724	0.024	580	552	1.272	0.033	0.677	0.771
Received BCG vaccination	0.956	0.010	580	552	1.239	0.011	0.935	0.977
Received DPT vaccination (3 doses)	0.897	0.018	580	552	1.374	0.020	0.862	0.932
Received polio vaccination (3 doses)	0.906	0.016	580	552	1.325	0.018	0.873	0.938
Received measles vaccination	0.853	0.018	580	552	1.244	0.021	0.816	0.889
Fully vaccinated	0.769	0.021	580	552	1.196	0.027	0.727	0.811
Vitamin A supplementation in last 6 months	0.985	0.003	2,528	2,413	1.184	0.003	0.979	0.991
Owns at least one insecticide treated net (ITN)	0.812	0.009	4,801	4,559	1.510	0.010	0.795	0.829
Child slept under ITN last night	0.692	0.015	2,992	2,894	1.411	0.021	0.663	0.721
Received 2+ doses of SP/Fansidar during antenatal visit (IPTp)	0.218	0.017	1,089	1,035	1.359	0.078	0.184	0.251
Child has fever in last two weeks	0.374	0.013	2,757	2,638	1.258	0.034	0.349	0.400
Child took antimalarial	0.487	0.021	989	987	1.226	0.044	0.444	0.530
Height-for-age (-2SD)	0.227	0.010	2,860	2,769	1.215	0.044	0.207	0.247
Weight-for-height (-2SD)	0.020	0.003	2,860	2,769	1.087	0.140	0.015	0.026
Weight-for-age (-2SD)	0.074	0.006	2,860	2,769	1.233	0.083	0.062	0.087
Body Mass Index (BMI) <18.5	0.063	0.006	1,825	1,729	1.132	0.103	0.050	0.076
Had 2+ sexual partners in past 12 months	0.014	0.003	2,015	1,908	1.040	0.194	0.009	0.020
Condom use at last sex	0.396	0.105	28	27	1.114	0.266	0.185	0.607
Abstinence among youth (never had sex)	0.536	0.027	472	469	1.167	0.050	0.482	0.590
Sexually active in past 12 months among youth	0.275	0.025	472	469	1.193	0.089	0.226	0.324
Had an HIV test and received results in past 12 months	0.604	0.010	4,254	4,038	1.336	0.017	0.584	0.624
Accepting attitudes towards people with HIV	0.260	0.014	2,013	1,906	1.456	0.055	0.232	0.289
Ever experienced any physical violence since age 15 by anyone	0.571	0.025	781	756	1.412	0.044	0.521	0.621
Ever experienced any sexual violence by anyone	0.220	0.018	781	756	1.194	0.080	0.185	0.256
Ever experienced any physical/sexual violence by any husband/partner	0.519	0.023	647	553	1.163	0.044	0.474	0.565
Physical/sexual violence in the last 12 months by any husband/partner	0.335	0.024	647	553	1.285	0.071	0.287	0.382
Total fertility rate (3 years)	4.294	0.143	11,794	11,177	1.321	0.033	4.008	4.580
Neonatal mortality rate (last 0-9 years)	18.841	2.189	6,191	5,876	1.169	0.116	14.463	23.219
Post-neonatal mortality rate (last 0-9 years)	31.244	3.079	6,237	5,917	1.284	0.099	25.086	37.403
Infant mortality rate (last 0-9 years)	50.086	3.484	6,202	5,886	1.142	0.070	43.117	57.054
Child mortality rate (last 0-9 years)	33.238	3.223	6,277	5,967	1.196	0.097	26.792	39.684
Under-five mortality rate (last 0-9 years)	81.659	4.957	6,243	5,926	1.175	0.061	71.744	91.573

Continued…

Table B.11—*Continued*

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			MEN					
Urban residence	0.318	0.021	1,542	1,405	1.753	0.065	0.276	0.359
Literacy	0.950	0.007	1,542	1,405	1.318	0.008	0.936	0.965
No education	0.005	0.002	1,542	1,405	1.123	0.418	0.001	0.009
Secondary or higher education	0.486	0.019	1,542	1,405	1.526	0.040	0.447	0.524
Never married/in union	0.425	0.016	1,542	1,405	1.255	0.037	0.394	0.457
Currently married/in union	0.546	0.017	1,542	1,405	1.308	0.030	0.513	0.579
Had sexual intercourse before age 18	0.598	0.017	1,129	1,018	1.177	0.029	0.564	0.632
Know any contraceptive method	1.000	0.000	850	767	na	0.000	1.000	1.000
Know any modern contraceptive method	1.000	0.000	850	767	na	0.000	1.000	1.000
Want no more children	0.469	0.023	850	767	1.351	0.049	0.423	0.515
Want to delay next birth at least 2 years	0.325	0.021	850	767	1.275	0.063	0.284	0.366
Ideal number of children	3.876	0.088	1,469	1,343	1.318	0.023	3.700	4.052
Had 2+ sexual partners in past 12 months	0.184	0.011	1,542	1,405	1.108	0.060	0.162	0.205
Condom use at last sex	0.476	0.036	269	258	1.176	0.075	0.404	0.548
Abstinence among youth (never had sex)	0.397	0.022	572	536	1.095	0.056	0.352	0.442
Sexually active in past 12 months among youth	0.442	0.022	572	536	1.073	0.050	0.398	0.487
Had an HIV test and received results in past 12 months	0.562	0.016	1,542	1,405	1.239	0.028	0.531	0.594
Accepting attitudes towards people with HIV	0.460	0.017	1,539	1,403	1.302	0.036	0.427	0.493
Ever experienced any physical violence since age 15 by anyone	0.563	0.027	637	568	1.360	0.048	0.509	0.617
Ever experienced any sexual violence by anyone	0.134	0.015	637	568	1.099	0.111	0.104	0.163
Ever experienced any physical/sexual violence by any wife/partner	0.139	0.021	426	345	1.235	0.149	0.098	0.181
Physical/sexual violence in the last 12 months by any wife/partner	0.092	0.016	426	345	1.147	0.175	0.060	0.124

Table B.12 Sampling errors: Nairobi sample, Kenya DHS 2014

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			WOMEN					
Urban residence	1.000	0.000	999	3,770	na	0.000	1.000	1.000
Literacy	0.965	0.006	999	3,770	1.109	0.007	0.952	0.978
No education	0.017	0.005	999	3,770	1.293	0.314	0.006	0.027
Secondary or higher education	0.661	0.029	999	3,770	1.920	0.044	0.603	0.718
Never married/in union	0.303	0.021	999	3,770	1.431	0.069	0.262	0.345
Currently married/in union	0.562	0.022	999	3,770	1.398	0.039	0.518	0.606
Married before age 20	0.315	0.022	874	3,302	1.390	0.069	0.271	0.358
Had sexual intercourse before age 18	0.318	0.028	874	3,302	1.801	0.089	0.261	0.374
Currently pregnant	0.068	0.009	999	3,770	1.080	0.127	0.050	0.085
Children ever born	1.566	0.077	999	3,770	1.581	0.049	1.411	1.721
Children surviving	1.462	0.073	999	3,770	1.610	0.050	1.315	1.609
Children ever born to women age 40-49	3.051	0.203	104	370	1.124	0.067	2.644	3.458
Know any contraceptive method	0.998	0.002	556	2,117	0.804	0.002	0.994	1.001
Know a modern method	0.998	0.002	556	2,117	0.804	0.002	0.994	1.001
Currently using any method	0.626	0.023	556	2,117	1.143	0.038	0.579	0.673
Currently using a modern method	0.583	0.025	556	2,117	1.197	0.043	0.533	0.633
Currently using a traditional method	0.044	0.007	556	2,117	0.862	0.171	0.029	0.059
Currently using pill	0.125	0.016	556	2,117	1.126	0.126	0.094	0.157
Currently using IUD	0.045	0.011	556	2,117	1.202	0.234	0.024	0.067
Currently using male condoms	0.033	0.007	556	2,117	0.920	0.211	0.019	0.047
Currently using injectables	0.236	0.020	556	2,117	1.096	0.084	0.197	0.276
Currently using female sterilisation	0.020	0.006	556	2,117	1.003	0.301	0.008	0.031
Currently using implant	0.121	0.013	556	2,117	0.903	0.103	0.096	0.146
Currently using rhythm	0.032	0.007	556	2,117	0.959	0.225	0.017	0.046
Currently using withdrawal	0.003	0.003	556	2,117	1.190	0.994	0.000	0.008
Used public sector source for family planning	0.390	0.031	417	1,575	1.302	0.080	0.328	0.452
Want no more children	0.416	0.033	253	968	1.057	0.079	0.350	0.481
Want to delay next birth at least 2 years	0.400	0.033	253	968	1.061	0.082	0.334	0.465
Ideal number of children	3.024	0.070	451	1,712	1.153	0.023	2.883	3.164
Mothers received antenatal care for last birth	0.976	0.008	428	1,657	1.029	0.008	0.961	0.991
Mothers protected against tetanus for last birth	0.830	0.030	200	771	1.132	0.036	0.770	0.889
Births with skilled attendant at delivery	0.891	0.022	532	2,051	1.355	0.025	0.847	0.935
Delivery in a health facility	0.887	0.023	532	2,051	1.390	0.026	0.841	0.932
Had diarrhoea in the last 2 weeks	0.156	0.021	498	1,920	1.266	0.137	0.113	0.199
Treated with ORS	0.634	0.047	79	300	0.834	0.075	0.539	0.729
Sought medical treatment for diarrhoea	0.574	0.051	79	300	0.872	0.088	0.473	0.675
Vaccination card seen	0.617	0.057	106	417	1.187	0.092	0.504	0.731
Received BCG vaccination	0.976	0.017	106	417	1.184	0.018	0.941	1.010
Received DPT vaccination (3 doses)	0.880	0.033	106	417	0.987	0.038	0.813	0.946
Received polio vaccination (3 doses)	0.913	0.027	106	417	0.987	0.029	0.860	0.966
Received measles vaccination	0.925	0.023	106	417	0.920	0.025	0.879	0.971
Fully vaccinated	0.812	0.035	106	417	0.888	0.043	0.743	0.882
Vitamin A supplementation in last 6 months	0.987	0.005	453	1,754	1.013	0.005	0.976	0.998
Owns at least one insecticide treated net (ITN)	0.444	0.026	1,240	4,451	1.841	0.059	0.392	0.496
Child slept under ITN last night	0.506	0.037	474	1,738	1.420	0.073	0.432	0.579
Received 2+ doses of SP/Fansidar during antenatal visit (IPTp)	0.013	0.007	200	753	0.880	0.549	0.000	0.027
Child has fever in last two weeks	0.187	0.024	498	1,920	1.370	0.130	0.138	0.236
Child took antimalarial	0.106	0.033	94	359	1.032	0.309	0.040	0.171
Height-for-age (-2SD)	0.172	0.025	449	1,643	1.335	0.144	0.123	0.222
Weight-for-height (-2SD)	0.025	0.007	449	1,643	0.951	0.278	0.011	0.039
Weight-for-age (-2SD)	0.038	0.011	449	1,643	1.142	0.280	0.017	0.059
Body Mass Index (BMI) <18.5	0.028	0.007	400	1,517	0.911	0.270	0.013	0.042
Had 2+ sexual partners in past 12 months	0.042	0.010	460	1,742	1.098	0.244	0.022	0.063
Condom use at last sex	0.500	0.151	18	73	1.228	0.302	0.198	0.802
Abstinence among youth (never had sex)	0.404	0.055	95	353	1.090	0.137	0.294	0.515
Sexually active in past 12 months among youth	0.436	0.063	95	353	1.226	0.144	0.311	0.562
Had an HIV test and received results in past 12 months	0.604	0.022	999	3,770	1.434	0.037	0.559	0.648
Accepting attitudes towards people with HIV	0.363	0.027	460	1,742	1.215	0.075	0.308	0.417
Ever experienced any physical violence since age 15 by anyone	0.539	0.048	166	611	1.229	0.089	0.443	0.634
Ever experienced any sexual violence by anyone	0.200	0.035	166	611	1.111	0.173	0.131	0.269
Ever experienced any physical/sexual violence by any husband/partner	0.490	0.058	124	414	1.277	0.118	0.375	0.606
Physical/sexual violence in the last 12 months by any husband/partner	0.345	0.053	124	414	1.230	0.153	0.239	0.450
Total fertility rate (3 years)	2.703	0.196	2,916	11,007	1.284	0.073	2.310	3.096
Neonatal mortality rate (last 0-9 years)	39.125	7.813	943	3,617	1.158	0.200	23.500	54.750
Post-neonatal mortality rate (last 0-9 years)	16.124	3.948	940	3,605	0.991	0.245	8.227	24.021
Infant mortality rate (last 0-9 years)	55.249	8.594	944	3,620	1.123	0.156	38.062	72.437
Child mortality rate (last 0-9 years)	17.262	5.241	911	3,518	1.068	0.304	6.781	27.743
Under-five mortality rate (last 0-9 years)	71.557	9.671	947	3,630	1.093	0.135	52.216	90.899

Continued…

Table B.12—*Continued*

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			MEN					
Urban residence	1.000	0.000	370	1,568	na	0.000	1.000	1.000
Literacy	0.986	0.009	370	1,568	1.491	0.009	0.968	1.004
No education	0.000	0.000	370	1,568	na	na	0.000	0.000
Secondary or higher education	0.729	0.035	370	1,568	1.528	0.049	0.658	0.800
Never married/in union	0.375	0.040	370	1,568	1.582	0.106	0.295	0.455
Currently married/in union	0.584	0.038	370	1,568	1.469	0.065	0.509	0.660
Had sexual intercourse before age 18	0.520	0.032	338	1,431	1.182	0.062	0.456	0.585
Know any contraceptive method	1.000	0.000	218	916	na	0.000	1.000	1.000
Know any modern contraceptive method	1.000	0.000	218	916	na	0.000	1.000	1.000
Want no more children	0.373	0.036	218	916	1.110	0.098	0.300	0.446
Want to delay next birth at least 2 years	0.382	0.034	218	916	1.017	0.088	0.315	0.449
Ideal number of children	3.525	0.129	363	1,543	1.292	0.037	3.266	3.784
Had 2+ sexual partners in past 12 months	0.190	0.019	370	1,568	0.918	0.099	0.153	0.228
Condom use at last sex	0.457	0.066	69	299	1.084	0.144	0.326	0.588
Abstinence among youth (never had sex)	0.198	0.048	97	419	1.178	0.243	0.102	0.293
Sexually active in past 12 months among youth	0.671	0.053	97	419	1.101	0.079	0.565	0.776
Had an HIV test and received results in past 12 months	0.579	0.027	370	1,568	1.052	0.047	0.525	0.633
Accepting attitudes towards people with HIV	0.381	0.026	370	1,568	1.017	0.067	0.330	0.433
Ever experienced any physical violence since age 15 by anyone	0.335	0.051	164	577	1.374	0.152	0.234	0.437
Ever experienced any sexual violence by anyone	0.069	0.020	164	577	1.004	0.289	0.029	0.109
Ever experienced any physical/sexual violence by any wife/partner	0.150	0.034	120	377	1.047	0.229	0.081	0.218
Physical/sexual violence in the last 12 months by any wife/partner	0.113	0.033	120	377	1.122	0.289	0.048	0.178

Table B.13 Sampling errors for adult and maternal mortality rates, Kenya 2014

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			WOMEN					
Adult mortality rates								
15-19	1.674	0.384	32,908	32,170	1.684	0.230	0.906	2.443
20-24	2.101	0.293	40,719	40,528	1.250	0.140	1.514	2.687
25-29	2.656	0.364	39,877	39,466	1.407	0.137	1.929	3.383
30-34	4.725	0.507	33,643	33,397	1.338	0.107	3.712	5.739
35-39	6.781	0.721	25,589	25,719	1.389	0.106	5.340	8.222
40-44	6.825	0.843	17,384	17,486	1.348	0.124	5.139	8.511
45-49	4.997	0.761	11,083	10,965	1.129	0.152	3.475	6.518
15-49 (age-adjusted)	3.716	0.196	201,204	199,731	1.377	0.053	3.324	4.108
Adult mortality probabilities								
$_{35}q_{15}$ 2014	138	7	201,204	199,731	1.835	0.052	124	153
$_{35}q_{15}$ 2008-09	214	17	111,333	117,126	2.268	0.078	181	248
$_{35}q_{15}$ 2003	235	12	115,690	115,971	1.382	0.053	210	259
Maternal mortality rates								
15-19	0.114	0.072	32,908	32,170	1.212	0.634	0.000	0.258
20-24	0.458	0.146	40,719	40,528	1.376	0.319	0.166	0.751
25-29	0.728	0.227	39,877	39,466	1.674	0.312	0.273	1.183
30-34	0.646	0.195	33,643	33,397	1.401	0.302	0.256	1.035
35-39	0.865	0.255	25,589	25,719	1.391	0.294	0.356	1.375
40-44	0.500	0.178	17,384	17,486	1.053	0.356	0.144	0.857
45-49	0.223	0.118	11,083	10,965	0.829	0.529	0.000	0.460
15-49 (age-adjusted)	0.512	0.076	201,204	199,731	1.443	0.149	0.360	0.665
Maternal mortality ratio (MMR) 2014	362	54	201,204	199,731	1.443	0.150	254	471
Maternal mortality ratio (MMR) 2008-09	520	88	111,333	117,126	1.717	0.170	343	696
Maternal mortality ratio (MMR) 2003	506	54	115,690	115,971	1.07	0.107	398	614
			MEN					
Adult mortality rates								
15-19	2.046	0.344	33,203	32,206	1.353	0.168	1.357	2.734
20-24	2.364	0.297	39,985	39,368	1.194	0.126	1.769	2.959
25-29	3.619	0.401	39,079	38,953	1.277	0.111	2.816	4.422
30-34	5.225	0.536	33,578	33,478	1.331	0.103	4.152	6.298
35-39	7.112	0.698	25,383	25,185	1.274	0.098	5.716	8.509
40-44	9.714	0.977	17,411	16,990	1.256	0.101	7.761	11.667
45-49	10.389	1.307	10,972	10,622	1.309	0.126	7.775	13.002
15-49 (age-adjusted)	4.784	0.242	199,611	196,802	1.295	0.050	4.301	5.267
Adult mortality probabilities								
$_{35}q_{15}$ 2014	183	9	199,611	196,802	1.648	0.050	165	202
$_{35}q_{15}$ 2008-09	231	16	112,322	116,604	1.849	0.069	199	263
$_{35}q_{15}$ 2003	240	13	116,586	116,446	1.428	0.053	214	266

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Appendix C

Table C.1 Household age distribution

Single-year age distribution of the de facto household population by sex (weighted), Kenya 2014

	Female		Male			Female		Male	
Age	Number	Percent	Number	Percent	Age	Number	Percent	Number	Percent
0	1,906	2.7	1,910	2.8	38	811	1.2	712	1.1
1	1,852	2.6	1,984	2.9	39	616	0.9	557	0.8
2	1,959	2.8	2,040	3.0	40	823	1.2	950	1.4
3	2,051	2.9	2,157	3.2	41	594	0.8	457	0.7
4	1,994	2.8	2,005	3.0	42	600	0.9	719	1.1
5	1,972	2.8	1,962	2.9	43	416	0.6	396	0.6
6	2,214	3.1	2,264	3.4	44	516	0.7	401	0.6
7	2,205	3.1	2,153	3.2	45	651	0.9	656	1.0
8	2,179	3.1	2,155	3.2	46	469	0.7	407	0.6
9	2,001	2.8	2,043	3.0	47	397	0.6	325	0.5
10	2,150	3.1	2,156	3.2	48	409	0.6	319	0.5
11	1,821	2.6	1,725	2.6	49	346	0.5	364	0.5
12	1,983	2.8	2,037	3.0	50	468	0.7	574	0.9
13	1,729	2.5	1,694	2.5	51	519	0.7	364	0.5
14	1,693	2.4	1,829	2.7	52	575	0.8	386	0.6
15	1,286	1.8	1,375	2.0	53	373	0.5	300	0.4
16	1,270	1.8	1,383	2.1	54	465	0.7	374	0.6
17	1,125	1.6	1,250	1.9	55	454	0.6	319	0.5
18	1,298	1.8	1,317	2.0	56	413	0.6	426	0.6
19	1,139	1.6	1,018	1.5	57	257	0.4	287	0.4
20	1,289	1.8	1,159	1.7	58	311	0.4	250	0.4
21	1,069	1.5	960	1.4	59	226	0.3	211	0.3
22	1,388	2.0	1,086	1.6	60	444	0.6	469	0.7
23	1,037	1.5	938	1.4	61	192	0.3	178	0.3
24	1,244	1.8	990	1.5	62	294	0.4	296	0.4
25	1,356	1.9	1,105	1.6	63	161	0.2	151	0.2
26	1,305	1.9	1,060	1.6	64	251	0.4	192	0.3
27	1,234	1.8	1,119	1.7	65	315	0.4	304	0.5
28	1,322	1.9	1,233	1.8	66	205	0.3	185	0.3
29	1,075	1.5	819	1.2	67	136	0.2	150	0.2
30	1,365	1.9	1,363	2.0	68	167	0.2	146	0.2
31	799	1.1	752	1.1	69	164	0.2	123	0.2
32	999	1.4	1,046	1.6	70+	1,991	2.8	1,514	2.2
33	691	1.0	594	0.9	Don't know/ missing	5	0.0	11	0.0
34	844	1.2	834	1.2					
35	995	1.4	1,065	1.6					
36	794	1.1	804	1.2	Total	70,341	100.0	67,439	100.0
37	671	1.0	585	0.9					

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview.

Table C.2.1 Age distribution of eligible and interviewed women

De facto household population of women age 10-54 and interviewed women age 15-49; and percent distribution and percentage of eligible women who were interviewed (weighted), by five-year age groups, Kenya 2014

Age group	Household population of women age 10-54	Interviewed women age 15-49		Percentage of eligible women interviewed
		Number	Percentage	
10-14	9,376	na	na	na
15-19	6,118	5,776	18.6	94.4
20-24	6,027	5,757	18.6	95.5
25-29	6,293	6,073	19.6	96.5
30-34	4,699	4,529	14.6	96.4
35-39	3,888	3,769	12.2	96.9
40-44	2,950	2,878	9.3	97.6
45-49	2,272	2,202	7.1	96.9
50-54	2,400	na	na	na
15-49	32,247	30,984	100.0	96.1

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. Weights for both household population of women and interviewed women are household weights. Age is based on the Household Questionnaire.
na = Not applicable

Table C.2.2 Age distribution of eligible and interviewed men

De facto household population of men age 10-64 and interviewed men age 15-59; and percent distribution and percentage of eligible men who were interviewed (weighted), by five-year age groups, Kenya 2014

Age group	Household population of men age 10-59	Interviewed men age 15-54		Percentage of eligible men interviewed
		Number	Percentage	
10-14	4,600	na	na	na
15-19	2,849	2,628	20.1	92.2
20-24	2,330	2,122	16.2	91.1
25-29	2,452	2,184	16.7	89.1
30-34	2,123	1,829	14.0	86.2
35-39	1,688	1,457	11.1	86.3
40-44	1,423	1,253	9.6	88.0
45-49	953	845	6.5	88.7
50-54	864	771	5.9	89.2
55-59	720	na	na	na
60-64	630	na	na	na
15-59	15,402	13,089	100.0	85.0

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. Weights for both household population of men and interviewed men are household weights. Age is based on the Household Questionnaire.
na = Not applicable

Table C.3 Completeness of reporting

Percentage of observations missing information for selected demographic and health questions (weighted), Kenya 2014

Subject		Percentage with information missing	Number of cases
Birth date	Births in the 15 years preceding the survey		
Month only		0.90	55,412
Month and year		0.04	55,412
Age at death	Deceased children born in the 15 years preceding the survey	0.00	3,353
Age/date at first union[1]	Ever married women age 15-49	0.26	22,082
	Ever married men age 15-54	0.26	7,457
Respondent's education	All women age 15-49	0.00	31,079
	All men age 15-54	0.00	12,819
Diarrhoea in past 2 weeks	Living children 0-59 months	0.99	18,702
Anthropometry of children	Living children age 0-59 months (from the Household Questionnaire)		
Height		2.47	19,790
Weight		2.25	19,790
Height or weight		2.51	19,790
Anthropometry of women	Women age 15-49 (from the Household Questionnaire)		
Height		5.67	15,260
Weight		5.50	15,260
Height or weight		5.68	15,260

[1] Both year and age missing

Table C.4 Births by calendar years

Number of births, percentage with complete birth date, sex ratio at birth, and calendar year ratio by calendar year, according to living, dead, and total children (weighted), Kenya 2014

	Number of births			Percentage with complete birth date[1]			Sex ratio at birth[2]			Calendar year ratio[3]		
Calendar year	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total
2014	2,111	68	2,179	100.0	100.0	100.0	99.8	134.6	100.7	na	na	na
2013	3,904	159	4,062	99.9	100.0	99.9	103.7	98.1	103.5	na	na	na
2012	3,678	172	3,849	99.8	98.5	99.8	103.0	100.9	102.9	94.9	98.9	95.1
2011	3,846	189	4,035	99.8	99.2	99.8	109.5	126.5	110.2	101.8	96.4	101.5
2010	3,879	220	4,099	99.9	97.9	99.8	98.7	119.3	99.7	106.5	117.6	107.0
2009	3,439	186	3,625	99.6	98.9	99.6	102.9	106.5	103.1	85.8	78.4	85.4
2008	4,140	253	4,393	99.2	92.2	98.8	98.0	133.6	99.8	113.4	118.0	113.7
2007	3,861	243	4,104	98.9	97.7	98.8	94.9	107.4	95.6	98.3	95.0	98.1
2006	3,715	259	3,974	99.0	92.8	98.6	96.8	87.1	96.1	103.0	109.3	103.4
2005	3,352	231	3,583	98.8	97.3	98.7	108.4	141.7	110.2	92.7	89.8	92.5
0-4	17,417	807	18,224	99.9	98.9	99.8	103.2	113.4	103.6	na	na	na
5-9	18,506	1,172	19,679	99.1	95.5	98.9	99.8	113.3	100.5	na	na	na
10-14	15,168	1,286	16,454	98.7	94.6	98.4	97.8	119.0	99.3	na	na	na
15-19	10,402	1,161	11,563	98.6	94.2	98.2	97.4	123.5	99.8	na	na	na
20+	9,809	1,396	11,206	98.5	94.6	98.0	96.9	122.3	99.7	na	na	na
All	71,303	5,822	77,125	99.1	95.3	98.8	99.4	118.7	100.8	na	na	na

na = Not applicable
[1] Both year and month of birth given
[2] $(B_m/B_f)x100$, where B_m and B_f are the numbers of male and female births, respectively
[3] $[2B_x/(B_{x-1}+B_{x+1})]x100$, where B_x is the number of births in calendar year x

Table C.5 Reporting of age at death in days

Distribution of reported deaths under age 1 month by age at death in days and the percentage of neonatal deaths reported to occur at ages 0-6 days, for five-year periods of birth preceding the survey (weighted), Kenya 2014

	Number of years preceding the survey				
Age at death (days)	0-4	5-9	10-14	15-19	Total 0-19
<1	127	168	165	135	596
1	77	89	95	51	312
2	43	47	29	17	135
3	34	35	30	12	111
4	6	10	11	3	30
5	9	12	4	3	28
6	8	2	5	4	18
7	60	51	35	35	180
8	1	5	2	0	8
9	5	1	4	3	13
10	2	4	0	1	8
12	1	6	3	1	11
13	1	0	4	0	5
14	34	18	18	9	79
15	1	0	1	0	2
16	0	0	0	0	1
17	0	0	1	0	1
18	1	0	0	0	1
20	0	2	1	2	5
21	9	7	7	8	31
22	0	0	2	0	2
23	2	1	0	0	3
25	2	0	2	3	6
28	3	1	0	0	3
Total 0-30	427	460	416	286	1,590
Percentage early neonatal[1]	71.2	79.1	81.1	78.4	77.4

[1] ≤6 days / ≤30 days

Table C.6 Reporting of age at death in months

Distribution of reported deaths under age 2 by age at death in months and the percentage of infant deaths reported to occur at age less than 1 month, for five-year periods of birth preceding the survey, Kenya 2014

	Number of years preceding the survey				
Age at death (months)	0-4	5-9	10-14	15-19	Total 0-19
<1[a]	427	460	416	286	1,590
1	42	42	39	35	158
2	44	44	49	36	174
3	49	46	47	34	176
4	14	29	46	36	126
5	33	32	28	22	115
6	18	38	53	40	148
7	18	31	21	25	96
8	16	30	53	47	147
9	41	37	33	42	153
10	10	11	21	8	51
11	8	15	17	7	46
12	37	49	93	77	256
13	4	9	11	5	30
14	6	6	13	8	33
15	2	5	11	14	31
16	2	6	7	7	22
17	11	4	3	4	22
18	5	15	20	16	55
19	5	1	5	3	14
20	4	5	8	1	18
21	1	1	0	1	4
22	5	2	2	0	8
23	0	0	2	1	4
24+	1	1	1	0	3
1 Year	7	3	0	6	16
Total 0-11	721	815	824	619	2,978
Percentage neonatal[1]	59.3	56.5	50.5	46.2	53.4

[a] Includes deaths under one month reported in days
[1] Under one month / under one year

Table C.7 Nutritional status of children based on the NCHS/CDC/WHO International Reference Population

Percentage of children under five years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by background characteristics, based on the NCHS/CDC/WHO International Reference Population, Kenya 2014

	Height-for-age[1]			Weight-for-height				Weight-for-age				
Background characteristic	Percent-age below -3 SD	Percent-age below -2 SD[2]	Mean Z-score (SD)	Percent-age below -3 SD	Percent-age below -2 SD[2]	Percent-age above +2 SD	Mean Z-score (SD)	Percent-age below -3 SD	Percent-age below -2 SD[2]	Percent-age above +2 SD	Mean Z-score (SD)	Number of children
Age in months												
<6	0.4	3.7	-0.1	0.2	0.8	12.4	0.7	0.1	0.8	10.0	0.5	1,569
6-8	1.8	8.9	-0.5	0.3	4.4	6.3	0.1	0.6	7.2	3.2	-0.3	937
9-11	2.3	14.4	-0.7	0.3	5.7	2.9	-0.2	2.8	13.7	2.3	-0.8	960
12-17	6.6	23.5	-1.1	0.9	6.7	2.7	-0.4	4.0	22.5	1.4	-1.1	1,996
18-23	8.9	31.5	-1.4	0.8	7.0	2.5	-0.4	3.2	18.2	1.9	-1.0	1,786
24-35	5.4	21.1	-1.0	0.2	3.2	0.7	-0.4	3.1	17.6	0.8	-1.0	3,934
36-47	6.4	22.7	-1.1	0.3	3.0	1.3	-0.3	1.9	15.0	0.9	-0.9	4,024
48-59	6.8	21.6	-1.1	0.1	3.0	1.0	-0.3	1.8	14.6	0.9	-0.9	3,776
Sex												
Male	6.3	22.5	-1.1	0.4	4.0	2.7	-0.2	2.7	15.8	1.7	-0.9	9,661
Female	4.8	18.2	-0.9	0.4	3.7	2.6	-0.2	1.9	14.0	2.2	-0.7	9,320
Birth interval in months[3]												
First birth[4]	4.0	16.4	-0.8	0.3	3.3	3.6	-0.1	1.5	12.4	2.1	-0.6	4,257
<24	8.3	25.7	-1.2	0.3	4.3	1.9	-0.3	3.3	18.1	1.8	-1.0	2,237
24-47	6.3	23.6	-1.1	0.7	4.4	2.3	-0.3	2.7	17.8	1.6	-0.9	6,396
48+	3.4	16.0	-0.8	0.2	3.3	3.1	-0.1	1.7	11.1	2.6	-0.6	4,271
Size at birth[3]												
Very small	14.2	34.9	-1.5	1.3	7.0	0.5	-0.6	5.2	32.8	0.1	-1.4	255
Small	8.3	28.2	-1.3	0.0	5.7	4.2	-0.4	3.7	22.6	0.6	-1.1	950
Average or larger	4.4	18.1	-0.9	0.3	3.0	3.0	-0.1	1.4	13.0	1.9	-0.7	6,919
Missing	9.5	27.2	-1.3	1.3	10.1	1.2	-0.6	8.0	22.2	0.0	-1.2	109
Mother's interview status												
Interviewed	5.3	20.2	-1.0	0.4	3.9	2.8	-0.2	2.3	14.8	2.0	-0.8	17,161
Not interviewed but in household	5.2	14.8	-1.2	0.1	3.6	1.1	-0.8	1.8	12.3	2.9	-1.1	391
Not interviewed and not in the household[5]	9.2	24.2	-1.0	0.0	3.5	1.4	-0.4	3.1	17.1	1.1	-0.9	1,429
Mother's nutritional status[6]												
Thin (BMI <18.5)	6.7	24.8	-1.3	0.5	8.9	1.7	-0.8	5.1	29.4	0.1	-1.4	644
Normal (BMI 18.5-24.9)	5.6	21.9	-1.1	0.3	3.3	2.4	-0.2	2.1	15.7	1.3	-0.9	4,499
Overweight/ obese (BMI ≥25)	3.7	13.8	-0.7	0.2	2.4	4.4	0.0	1.0	8.0	2.8	-0.5	2,141
Residence												
Urban	4.1	14.6	-0.7	0.3	3.3	3.6	-0.1	1.4	10.5	3.0	-0.6	6,209
Rural	6.3	23.2	-1.1	0.4	4.1	2.2	-0.3	2.8	17.1	1.5	-0.9	12,773
Region												
Coast	7.0	24.8	-1.2	0.3	3.9	2.3	-0.3	2.2	18.4	1.5	-1.0	1,926
North Eastern	8.4	20.3	-0.8	1.6	11.4	1.5	-0.8	4.5	25.2	1.3	-1.1	600
Eastern	5.3	24.2	-1.2	0.5	4.1	2.6	-0.3	2.3	16.9	1.2	-1.0	2,400
Central	3.2	13.0	-0.8	0.0	2.2	4.1	-0.0	1.1	8.4	3.5	-0.5	1,691
Rift Valley	6.4	23.6	-1.1	0.5	5.4	2.7	-0.4	3.6	20.1	1.7	-1.0	5,464
Western	5.8	20.2	-1.0	0.1	1.9	2.0	-0.1	1.3	12.2	2.0	-0.7	2,482
Nyanza	5.6	17.9	-0.8	0.2	2.0	2.8	-0.0	1.6	9.6	2.7	-0.6	2,778
Nairobi	2.8	10.8	-0.6	0.3	3.0	2.6	-0.1	1.2	7.3	2.2	-0.4	1,641
Mother's education[7]												
No education	7.6	24.8	-1.1	1.2	9.2	1.4	-0.7	4.5	26.8	1.1	-1.2	2,106
Primary incomplete	6.3	23.2	-1.1	0.4	3.4	2.0	-0.2	2.4	15.8	1.4	-0.9	9,901
Primary complete	2.9	14.2	-0.8	0.1	2.9	4.0	-0.1	1.3	9.7	2.8	-0.6	4,096
Secondary+	2.1	8.3	-0.4	0.1	1.9	6.1	0.2	0.8	4.6	5.5	-0.2	1,450
Wealth quintile												
Lowest	8.6	29.5	-1.3	0.8	6.9	1.2	-0.5	4.5	25.5	0.7	-1.2	4,610
Second	6.6	24.1	-1.2	0.2	2.8	2.2	-0.2	2.7	16.3	1.2	-0.9	4,092
Middle	4.9	19.3	-1.0	0.2	3.4	2.6	-0.2	1.8	12.2	2.0	-0.8	3,536
Fourth	4.0	15.7	-0.8	0.4	2.7	3.4	-0.1	1.2	10.2	2.7	-0.6	3,294
Highest	2.5	9.3	-0.5	0.1	2.4	4.4	-0.0	0.6	6.6	3.9	-0.3	3,450
Total	5.6	20.4	-1.0	0.4	3.8	2.6	-0.2	2.3	14.9	2.0	-0.8	18,982

Note: Table is based on children who slept in the household the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the NCHS/CDC/WHO International Reference Population. Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight.

[1] Recumbent length is measured for children under age 2, or in the few cases when the age of the child is unknown and the child is less than 85cm; standing height is measured for all other children to be consistent with Table 11.1.1

[2] Includes children who are below -3 standard deviations (SD) from the International Reference Population median

[3] Excludes children whose mothers were not interviewed

[4] First-born twins (triplets, etc.) are counted as first births because they do not have a previous birth interval.

[5] Includes children whose mothers are deceased

[6] Excludes children whose mothers were not interviewed, children whose mothers were not weighed and measured, and children whose mothers are pregnant or gave birth within the preceding 2 months. Mother's nutritional status in terms of BMI (Body Mass Index) is presented in Table 11.10.1

[7] For women who are not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire.

Table C.8 Completeness of information on siblings

Completeness of data on survival status of sisters and brothers reported by interviewed women, age of living siblings and age at death (AD) and years since death (YSD) of dead siblings (unweighted), Kenya 2014

	Sisters		Brothers		All siblings	
	Number	Percent	Number	Percent	Number	Percent
All siblings	42,006	100.0	42,607	100.0	84,613	100.0
Living	37,414	89.1	37,292	87.5	74,706	88.3
Dead	4,577	10.9	5,291	12.4	9,868	11.7
Survival status unknown	15	0.0	24	0.1	39	0.0
Living siblings	37,414	100.0	37,292	100.0	74,706	100.0
Age reported	37,253	99.6	37,148	99.6	74,401	99.6
Age missing	161	0.4	144	0.4	305	0.4
Dead siblings	4,577	100.0	5,291	100.0	9,868	100.0
AD and YSD reported	4,509	98.5	5,174	97.8	9,683	98.1
Missing only AD	29	0.6	45	0.9	74	0.7
Missing only YSD	16	0.3	25	0.5	41	0.4
Missing AD and YSD	23	0.5	47	0.9	70	0.7

Table C.9 Sibship size and sex ratio of siblings

Mean sibship size and sex ratio of siblings at birth, Kenya 2014

Age of respondents	Mean sibship size[1]	Sex ratio of siblings at birth[2]
15-19	5.8	98.8
20-24	6.1	95.7
25-29	6.5	101.4
30-34	6.9	102.9
35-39	7.3	103.3
40-44	7.7	98.5
45-49	7.8	101.4
Total	6.7	100.2

[1] Includes the respondent
[2] Excludes the respondent

PERSONS INVOLVED IN THE 2014 KENYA DEMOGRAPHIC AND HEALTH SURVEY *Appendix* D

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QUESTIONNAIRES

Appendix E

OVERVIEW OF DATA COLLECTED IN FULL AND SHORT QUESTIONNAIRES

Household Questionnaire

	Full	Short
Composition (e.g., headship, size, age, sex, education)	•	•
Characteristics (e.g., source of water, type of sanitation facilities; exposure to second-hand smoke inside the home)	•	•
Wealth index	•	•
Household ownership and use of mosquito nets	•	•
Household ownership of dwelling, land	•	
Household receipt of social assistance	•	
Nutritional status of women age 15-49 years[1]	•	
Nutritional status of children under age five years	•	•

Woman's Questionnaire

	Full	Short
Individual characteristics (e.g., age, sex, education, marital status, media exposure)	•	•
Fertility and reproductive history	•	•
Knowledge and use of family planning methods	•	•
Fertility preferences	•	
Antenatal and delivery care	•	•
Breastfeeding	•	
Vaccinations and childhood illnesses	•	•
Infant and child feeding practices	•	
Childhood mortality	•	•
Marriage and sexual activity	•	•
Woman's work and husband's background characteristics	•	
Awareness and behaviour about HIV and other sexually transmitted infections	•	•
Adult and maternal mortality	•	
Domestic violence	•	
Female circumcision	•	
Fistula	•	

[1] Women's nutritional status, calculated from anthropometry measurements, is an exception to the 2014 KDHS recommendations for estimation of indicators at the county level. Although anthropometry data were not collected from women in the one-half of households administered the short questionnaire, there are sufficient cases from the one-half of households administered the full questionnaire to calculate county level estimates of women's nutritional status.

1 LONG VERSION

QUESTIONNAIRE SERIAL NUMBER _____

2014 KENYA DEMOGRAPHIC AND HEALTH SURVEY
HOUSEHOLD QUESTIONNAIRE - LONG VERSION

CONFIDENTIAL

REPUBLIC OF KENYA

IDENTIFICATION

COUNTY	
DISTRICT	
LOCATION/TOWN	
SUBLOCATION	
NASSEP CLUSTER NUMBER	
KDHS CLUSTER NUMBER	
HOUSEHOLD NUMBER	
NAME OF HOUSEHOLD HEAD	
IS HOUSEHOLD SELECTED FOR WOMEN'S SECTION 14? (YES=1; NO=2)	

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE				DAY / MONTH / YEAR
INTERVIEWER'S NAME				INT. NUMBER
RESULT*				RESULT
NEXT VISIT: DATE				TOTAL NUMBER OF VISITS
TIME				

*RESULT CODES:
1 COMPLETED
2 NO HOUSEHOLD MEMBER AT HOME / NO COMPETENT RESPONDENT AT HOME AT TIME OF VISIT
3 ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD OF TIME
4 POSTPONED
5 REFUSED
6 DWELLING VACANT OR ADDRESS NOT A DWELLING
7 DWELLING DESTROYED
8 DWELLING NOT FOUND
9 OTHER

_____ (SPECIFY)

LINE NO. OF RESPONDENT TO HOUSHOLD QUESTIONNAIRE

TOTAL PERSONS IN HOUSEHOLD

TOTAL ELIGIBLE WOMEN

TOTAL ELIGIBLE MEN

LANGUAGE OF QUESTIONNAIRE** 17

LANGUAGE OF INTERVIEW:

NATIVE LANGUAGE OF RESPONDENT:

LANGUAGE OF QUESTIONNAIRE: **English**

TRANSLATOR USED (YES = 1, NO = 2)

**LANGUAGE CODES:
01 BORANA, 02 EMBU, 03 KALENJIN, 04 KAMBA, 05 KIKUYU, 06 KISII, 07 LUHYA, 08 MARAGOLI, 09 LUO, 10 MAASAI, 11 MERU, 12 MIJIKENDA, 13 POKOT, 14 SOMALI, 15 SWAHILI, 16 TURKANA, 17 ENGLISH, 18 OTHER

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		

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INTRODUCTION AND CONSENT

Hello. My name is _____. I am working with the Kenya National Bureau of Statistics. We are conducting a survey about health all over Kenya. The information we collect will help the government to plan health services. Your household was selected for the survey. I would like to ask you some questions about your household. The questions usually take about 30 to 60 minutes. All of the answers you give will be confidential and will not be shared with anyone other than members of our survey team. You don't have to be in the survey, but we hope you will agree to answer the questions since your views are important. If I ask you any question you don't want to answer, just let me know and I will go on to the next question or you can stop the interview at any time. In case you need more information about the survey, you may contact the person listed on this card.

GIVE CARD WITH CONTACT INFORMATION

Do you have any questions?
May I begin the interview now?

SIGNATURE OF INTERVIEWER: _____ DATE: _____

RESPONDENT AGREES TO BE INTERVIEWED . . . 1 ↓

RESPONDENT DOES NOT AGREE TO BE INTERVIEWED . . . 2 → END

HOUSEHOLD SCHEDULE

							IF AGE 15 OR OLDER				IF AGE 0-17 YEARS	
LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	MARITAL STATUS	ELIGIBILITY			SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS	
1	2	3	4	5	6	7	8	9	10	11	12	13
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR EACH PERSON, ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 5-20A FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)? IF 95 OR MORE, RECORD '95'.	What is (NAME)'s current marital status? 1 = MARRIED OR LIVING TOGETHER 2 = DIVORCED/ SEPARATED 3 = WIDOWED 4 = NEVER-MARRIED/LIVED TOGETHER	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49	CIRCLE LINE NUMBER OF ALL MEN AGE 15-54	CIRCLE LINE NUMBER OF ALL CHILDREN AGE 0-5	Is (NAME)'s natural mother alive?	Does (NAME)'s natural mother usually live in this household or was she a guest last night? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER. IF NO, RECORD '00'.
			M F	Y N	Y N	IN YEARS					Y N DK	
01			1 2	1 2	1 2			01	01	01	1 2 8 → GO TO 14	
02			1 2	1 2	1 2			02	02	02	1 2 8 → GO TO 14	
03			1 2	1 2	1 2			03	03	03	1 2 8 → GO TO 14	
04			1 2	1 2	1 2			04	04	04	1 2 8 → GO TO 14	
05			1 2	1 2	1 2			05	05	05	1 2 8 → GO TO 14	
06			1 2	1 2	1 2			06	06	06	1 2 8 → GO TO 14	
07			1 2	1 2	1 2			07	07	07	1 2 8 → GO TO 14	
08			1 2	1 2	1 2			08	08	08	1 2 8 → GO TO 14	
09			1 2	1 2	1 2			09	09	09	1 2 8 → GO TO 14	
10			1 2	1 2	1 2			10	10	10	1 2 8 → GO TO 14	

2A) Just to make sure that I have a complete listing: are there any other persons such as small children or infants that we have not listed? YES → ADD TO TABLE NO

2B) Are there any other people who may not be members of your family, such as domestic servants, lodgers, or friends who usually live here? YES → ADD TO TABLE NO

2C) Are there any guests or temporary visitors staying here, or anyone else who stayed here last night, who have not been listed? YES → ADD TO TABLE NO

CODES FOR Q. 3: RELATIONSHIP TO HEAD OF HOUSEHOLD

01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DAUGHTER-IN-LAW
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = OTHER RELATIVE
10 = ADOPTED/FOSTER/ STEPCHILD
11 = NOT RELATED
98 = DON'T KNOW

	IF AGE 0-17 YEARS		IF AGE 3 YEARS OR OLDER		IF AGE 3-24 YEARS				IF AGE 0-4 YEARS	
LINE NO.	SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS		EVER ATTENDED SCHOOL		CURRENT/RECENT SCHOOL ATTENDANCE				BIRTH REGISTRATION	
	14	15	16	17	18	19	19A	19B	20	20A
	Is (NAME)'s natural father alive?	Does (NAME)'s natural father usually live in this household or was he a guest last night? IF YES: What is his name? RECORD FATHER'S LINE NUMBER. IF NO, RECORD '00'.	Has (NAME) ever attended school?	What is the highest level of school (NAME) has attended? What is the highest grade (NAME) completed at that level? SEE CODES BELOW.	Did (NAME) attend school at any time during the 2014 school year?	During the 2014 school year, what level and grade [is/was] (NAME) attending? SEE CODES BELOW.	Did (NAME) attend school at any time during the 2013 school year?	During the 2013 school year, what level and grade did (NAME) attend? SEE CODES BELOW.	Has (NAME) ever been registered with the civil authority? IF YES: With a birth certificate? 1 = YES, REGISTERED WITH BIRTH CERTIFICATE 2 = YES, REGISTERED WITHOUT BIRTH CERTIFICATE 8 = DON'T KNOW 3 = NOT REGISTERED	Why was (NAME) never registered? 1=TOO FAR 2=NO MONEY 3=NOT AWARE 4=NOT NECESSARY 5=NOMADIC LIFE, DIFFICULT TERRAIN, INSECURITY 8=OTHER
	Y N DK		Y N	LEVEL GRADE	Y N	LEVEL GRADE	Y N	LEVEL GRADE	Y1 Y2 DK NO	
01	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO 20A TO NEXT LINE	
02	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO 20A TO NEXT LINE	
03	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO 20A TO NEXT LINE	
04	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO 20A TO NEXT LINE	
05	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO 20A TO NEXT LINE	
06	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO 20A TO NEXT LINE	
07	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO 20A TO NEXT LINE	
08	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO 20A TO NEXT LINE	
09	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO 20A TO NEXT LINE	
10	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO 20A TO NEXT LINE	

CODES FOR Qs. 17, 19, AND 19B: EDUCATION

LEVEL
0 = PRE-PRIMARY
1 = PRIMARY
2 = POST-PRIMARY, VOCATIONAL
3 = SECONDARY/'A' LEVEL
4 = COLLEGE (MIDDLE LEVEL)
5 = UNIVERSITY
8 = DON'T KNOW

GRADE
00 = LESS THAN 1 YEAR COMPLETED
(USE '00' FOR Q. 17 ONLY.
THIS CODE IS NOT ALLOWED
FOR Q. 19 OR 19B)
98 = DON'T KNOW

							IF AGE 15 OR OLDER				IF AGE 0-17 YEARS	
LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	MARITAL STATUS	ELIGIBILITY			SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS	
1	2	3	4	5	6	7	8	9	10	11	12	13
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR EACH PERSON, ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 5-20A FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)? IF 95 OR MORE, RECORD '95'.	What is (NAME)'s current marital status? 1 = MARRIED OR LIVING TOGETHER 2 = DIVORCED/ SEPARATED 3 = WIDOWED 4 = NEVER-MARRIED/LIVED TOGETHER	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49	CIRCLE LINE NUMBER OF ALL MEN AGE 15-54	CIRCLE LINE NUMBER OF ALL CHILDREN AGE 0-5	Is (NAME)'s natural mother alive? Y N DK	Does (NAME)'s natural mother usually live in this household or was she a guest last night? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER. IF NO, RECORD '00'.
11			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS		11	11	11	1 2 8 GO TO 14	
12			1 2	1 2	1 2			12	12	12	1 2 8 GO TO 14	
13			1 2	1 2	1 2			13	13	13	1 2 8 GO TO 14	
14			1 2	1 2	1 2			14	14	14	1 2 8 GO TO 14	
15			1 2	1 2	1 2			15	15	15	1 2 8 GO TO 14	
16			1 2	1 2	1 2			16	16	16	1 2 8 GO TO 14	
17			1 2	1 2	1 2			17	17	17	1 2 8 GO TO 14	
18			1 2	1 2	1 2			18	18	18	1 2 8 GO TO 14	
19			1 2	1 2	1 2			19	19	19	1 2 8 GO TO 14	
20			1 2	1 2	1 2			20	20	20	1 2 8 GO TO 14	

TICK HERE IF CONTINUATION SHEET USED ☐

2A) Just to make sure that I have a complete listing: are there any other persons such as small children or infants that we have not listed? YES ☐ → ADD TO TABLE NO ☐

2B) Are there any other people who may not be members of your family, such as domestic servants, lodgers, or friends who usually live here? YES ☐ → ADD TO TABLE NO ☐

2C) Are there any guests or temporary visitors staying here, or anyone else who stayed here last night, who have not been listed? YES ☐ → ADD TO TABLE NO ☐

CODES FOR Q. 3: RELATIONSHIP TO HEAD OF HOUSEHOLD

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05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = OTHER RELATIVE
10 = ADOPTED/FOSTER/ STEPCHILD
11 = NOT RELATED
98 = DON'T KNOW

	IF AGE 0-17 YEARS		IF AGE 3 YEARS OR OLDER		IF AGE 3-24 YEARS				IF AGE 0-4 YEARS	
LINE NO.	SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS		EVER ATTENDED SCHOOL		CURRENT/RECENT SCHOOL ATTENDANCE				BIRTH REGISTRATION	
	14	15	16	17	18	19	19A	19B	20	20A
	Is (NAME)'s natural father alive?	Does (NAME)'s natural father usually live in this household or was he a guest last night? IF YES: What is his name? RECORD FATHER'S LINE NUMBER. IF NO, RECORD '00'.	Has (NAME) ever attended school?	What is the highest level of school (NAME) has attended? What is the highest grade (NAME) completed at that level? SEE CODES BELOW.	Did (NAME) attend school at any time during the 2014 school year?	During the 2014 school year, what level and grade [is/was] (NAME) attending? SEE CODES BELOW.	Did (NAME) attend school at any time during the 2013 school year?	During the 2013 school year, what level and grade did (NAME) attend? SEE CODES BELOW.	Has (NAME) ever been registered with the civil authority? IF YES: With a birth certificate? 1 = YES, REGISTERED WITH BIRTH CERTIFICATE 2 = YES, REGISTERED WITHOUT BIRTH CERTIFICATE 8 = DON'T KNOW 3 = NOT REGISTERED	Why was (NAME) never registered? 1=TOO FAR 2=NO MONEY 3=NOT AWARE 4=NOT NECESSARY 5=NOMADIC LIFE, DIFFICULT TERRAIN, INSECURITY 8=OTHER
	Y N DK		Y N	LEVEL GRADE	Y N	LEVEL GRADE	Y N	LEVEL GRADE	Y1 Y2 DK NO	
11	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO TO NEXT LINE 20A	
12	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO TO NEXT LINE 20A	
13	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO TO NEXT LINE 20A	
14	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO TO NEXT LINE 20A	
15	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO TO NEXT LINE 20A	
16	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO TO NEXT LINE 20A	
17	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO TO NEXT LINE 20A	
18	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO TO NEXT LINE 20A	
19	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO TO NEXT LINE 20A	
20	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO TO NEXT LINE 20A	

CODES FOR Qs. 17, 19, AND 19B: EDUCATION

LEVEL
0 = PRE-PRIMARY
1 = PRIMARY
2 = POST-PRIMARY, VOCATIONAL
3 = SECONDARY/'A' LEVEL
4 = COLLEGE (MIDDLE LEVEL)
5 = UNIVERSITY
8 = DON'T KNOW

GRADE
00 = LESS THAN 1 YEAR COMPLETED
(USE '00' FOR Q. 17 ONLY.
THIS CODE IS NOT ALLOWED
FOR Q. 19 OR 19B)
98 = DON'T KNOW

101A

TABLE FOR SELECTION OF WOMEN FOR SECTION 14: DOMESTIC VIOLENCE QUESTIONS

ONLY ONE INDIVIDUAL (ONE WOMAN OR ONE MAN) SHOULD BE SELECTED FOR DOMESTIC VIOLENCE QUESTIONS

CHECK COVER PAGE:
HOUSEHOLD SELECTED FOR WOMEN'S SECTION 14?

YES ☐ → USE THE TABLE BELOW TO SELECT ONE WOMAN FROM THIS HH TO BE INTERVIEWED WITH THE DV QUESTIONS

NO ☐ → GO TO 101B

HOW TO USE THE TABLE FOR SELECTION OF A RESPONDENT

LAST DIGIT OF QUESTIONANIRE SERIAL NUMBER (GO TO THIS ROW NUMBER) ☐

TOTAL NUMBER OF ELIGIBLE WOMEN (COL 9) (GO TO THIS COLUMN NUMBER) ☐
IF ZERO → GO TO 102

LOOK AT THE LAST DIGIT OF THE HOUSEHOLD QUESTIONNAIRE SERIAL NUMBER ON THE COVER PAGE. THIS IS THE ROW NUMBER YOU SHOULD GO TO. CHECK THE TOTAL NUMBER OF ELIGIBLE WOMEN (COLUMN 9) IN THE HOUSEHOLD SCHEDULE. THIS IS THE COLUMN NUMBER YOU SHOULD GO TO. FOLLOW THE SELECTED ROW AND COLUMN TO THE CELL WHERE THEY MEET AND CIRCLE THE NUMBER IN THE CELL. THIS IS THE NUMBER OF THE WOMAN SELECTED FOR THE DOMESTIC VIOLENCE QUESTIONS FROM THE LIST OF ELIGIBLE WOMEN IN COLUMN 9 OF THE HOUSEHOLD SCHEDULE. WRITE THE NAME AND LINE NUMBER OF THE SELECTED WOMAN IN THE SPACE BELOW THE TABLE.

EXAMPLE: THE HOUSEHOLD QUESTIONNAIRE SERIAL NUMBER IS '716' AND THE HOUSEHOLD SCHEDULE COLUMN 9 SHOWS THAT THERE ARE THREE ELIGIBLE WOMEN AGE 15-49 IN THE HOUSEHOLD (LINE NUMBERS 02, 04, AND 05). SINCE THE LAST DIGIT OF THE HOUSEHOLD SERIAL NUMBER IS '6' GO TO ROW '6' AND SINCE THERE ARE THREE ELIGIBLE WOMEN IN THE HOUSEHOLD, GO TO COLUMN '3'. FOLLOW THE ROW AND COLUMN AND FIND THE NUMBER IN THE CELL WHERE THEY MEET ('2') AND CIRCLE THE NUMBER. NOW GO TO THE HOUSEHOLD SCHEDULE AND FIND THE SECOND WOMAN WHO IS ELIGIBLE FOR THE WOMAN'S INTERVIEW (LINE NUMBER '04' IN THIS EXAMPLE). WRITE HER NAME AND LINE NUMBER IN THE SPACE BELOW THE TABLE.

LAST DIGIT OF THE HOUSEHOLD QUESTIONNAIRE SERIAL NUMBER	TOTAL NUMBER OF ELIGIBLE WOMEN AGE 15-49 IN HOUSEHOLD SCHEDULE COLUMN 9							
	1	2	3	4	5	6	7	8
0	1	2	2	4	3	6	5	4
1	1	1	3	1	4	1	6	5
2	1	2	1	2	5	2	7	6
3	1	1	2	3	1	3	1	7
4	1	2	3	4	2	4	2	8
5	1	1	1	1	3	5	3	1
6	1	2	2	2	4	6	4	2
7	1	1	3	3	5	1	5	3
8	1	2	1	4	1	2	6	4
9	1	1	2	1	2	3	7	5

NAME OF SELECTED WOMAN: _____ **HH LINE NUMBER OF SELECTED WOMAN:** ☐☐

GO TO 102 →

101B

TABLE FOR SELECTION OF MEN FOR SECTION 10: DOMESTIC VIOLENCE QUESTIONS

ONLY ONE INDIVIDUAL (ONE WOMAN OR ONE MAN) SHOULD BE SELECTED FOR DOMESTIC VIOLENCE QUESTIONS

CHECK COVER PAGE:
HOUSEHOLD SELECTED FOR WOMEN'S SECTION 14?

NO ☐ → USE THE TABLE BELOW TO SELECT ONE MAN FROM THIS HH TO BE INTERVIEWED WITH THE DV QUESTIONS

YES ☐ → GO TO 102

HOW TO USE THE TABLE FOR SELECTION OF A RESPONDENT

LAST DIGIT OF QUESTIONNAIRE SERIAL NUMBER (GO TO THIS ROW NUMBER) ☐

TOTAL NUMBER OF ELIGIBLE MEN (COL 10) (GO TO THIS COLUMN NUMBER) ☐
IF ZERO → GO TO 102

LOOK AT THE LAST DIGIT OF THE HOUSEHOLD QUESTIONNAIRE SERIAL NUMBER ON THE COVER PAGE. THIS IS THE ROW NUMBER YOU SHOULD GO TO. CHECK THE TOTAL NUMBER OF ELIGIBLE MEN (COLUMN 10) IN THE HOUSEHOLD SCHEDULE. THIS IS THE COLUMN NUMBER YOU SHOULD GO TO. FOLLOW THE SELECTED ROW AND COLUMN TO THE CELL WHERE THEY MEET AND CIRCLE THE NUMBER IN THE CELL. THIS IS THE NUMBER OF THE MAN SELECTED FOR THE DOMESTIC VIOLENCE QUESTIONS FROM THE LIST OF ELIGIBLE MEN IN COLUMN 10 OF THE HOUSEHOLD SCHEDULE. WRITE THE NAME AND LINE NUMBER OF THE SELECTED MAN IN THE SPACE BELOW THE TABLE.

EXAMPLE: THE HOUSEHOLD QUESTIONNAIRE SERIAL NUMBER IS '716' AND THE HOUSEHOLD SCHEDULE COLUMN 10 SHOWS THAT THERE ARE THREE ELIGIBLE MEN AGE 15-54 IN THE HOUSEHOLD (LINE NUMBERS 02, 04, AND 05). SINCE THE LAST DIGIT OF THE HOUSEHOLD SERIAL NUMBER IS '6' GO TO ROW '6' AND SINCE THERE ARE THREE ELIGIBLE MEN IN THE HOUSEHOLD, GO TO COLUMN '3'. FOLLOW THE ROW AND COLUMN AND FIND THE NUMBER IN THE CELL WHERE THEY MEET ('2') AND CIRCLE THE NUMBER. NOW GO TO THE HOUSEHOLD SCHEDULE AND FIND THE SECOND MAN WHO IS ELIGIBLE FOR THE MAN'S INTERVIEW (LINE NUMBER '04' IN THIS EXAMPLE). WRITE HIS NAME AND LINE NUMBER IN THE SPACE BELOW THE TABLE.

LAST DIGIT OF THE HOUSEHOLD QUESTIONNAIRE SERIAL NUMBER	TOTAL NUMBER OF ELIGIBLE MEN AGE 15-54 IN HOUSEHOLD SCHEDULE COLUMN 10							
	1	2	3	4	5	6	7	8
0	1	2	2	4	3	6	5	4
1	1	1	3	1	4	1	6	5
2	1	2	1	2	5	2	7	6
3	1	1	2	3	1	3	1	7
4	1	2	3	4	2	4	2	8
5	1	1	1	1	3	5	3	1
6	1	2	2	2	4	6	4	2
7	1	1	3	3	5	1	5	3
8	1	2	1	4	1	2	6	4
9	1	1	2	1	2	3	7	5

NAME OF SELECTED MAN: _____ **HH LINE NUMBER OF SELECTED MAN:** ☐☐

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
102	What is the main source of drinking water for members of your household?	PIPED WATER PIPED INTO DWELLING . . . . . 11 PIPED TO YARD/PLOT . . . . . 12 PUBLIC TAP/STANDPIPE . . . . . 13 TUBE WELL OR BOREHOLE . . . . . 21 DUG WELL PROTECTED WELL . . . . . 31 UNPROTECTED WELL . . . . . 32 WATER FROM SPRING PROTECTED SPRING . . . . . 41 UNPROTECTED SPRING . . . . . 42 RAINWATER . . . . . 51 TANKER TRUCK . . . . . 61 CART WITH SMALL TANK . . . . . 71 SURFACE WATER (RIVER/DAM/ LAKE/POND/STREAM/CANAL/ IRRIGATION CHANNEL) . . . . . 81 BOTTLED WATER . . . . . 91 OTHER _____ 96 (SPECIFY)	→ 105 → 105
103	Where is that water source located?	IN OWN DWELLING . . . . . 1 IN OWN YARD/PLOT . . . . . 2 ELSEWHERE 3	→ 105
104	How long does it take to go there, get water, and come back? IF 995 OR MORE, ENTER '995'.	MINUTES . . . . . 1 ☐☐☐ DON'T KNOW 998	
104A	Who usually goes to this source to fetch the water for your household?	ADULT WOMAN . . . . . 1 ADULT MAN . . . . . 2 FEMALE CHILD UNDER 15 YEARS OLD . . . . . 3 MALE CHILD UNDER 15 YEARS OLD . . . . . 4 OTHER _____ 6 (SPECIFY)	
105	Do you do anything to the water to make it safer to drink?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 107
106	What do you usually do to make the water safer to drink? Anything else? RECORD ALL MENTIONED.	BOIL . . . . . A ADD BLEACH/CHLORINE . . . . . B STRAIN THROUGH A CLOTH . . . . . C USE WATER FILTER (CERAMIC/ SAND/COMPOSITE/ETC.) . . . . . D SOLAR DISINFECTION . . . . . E LET IT STAND AND SETTLE . . . . . F COVER THE WATER CONTAINER . . . . . G OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
107	What kind of toilet facility do members of your household usually use?	FLUSH OR POUR FLUSH TOILET FLUSH TO PIPED SEWER SYSTEM . . . . . 11 FLUSH TO SEPTIC TANK . . . . . 12 FLUSH TO PIT LATRINE . . . . . 13 FLUSH TO SOMEWHERE ELSE . . . . . 14 FLUSH, DON'T KNOW WHERE . . . . . 15 PIT LATRINE VENTILATED IMPROVED PIT LATRINE . . . . . 21 PIT LATRINE WITH SLAB . . . . . 22 PIT LATRINE WITHOUT SLAB/ OPEN PIT . . . . . 23 COMPOSTING TOILET . . . . . 31 BUCKET TOILET . . . . . 41 HANGING TOILET/HANGING LATRINE . . . . . 51 NO FACILITY/BUSH/FIELD . . . . . 61 OTHER _____ 96 (SPECIFY)	→ 110
108	Do you share this toilet facility with other households?	YES . . . . . 1 NO 2	→ 110
109	How many households use this toilet facility?	NO. OF HOUSEHOLDS IF LESS THAN 10 . . . . . [0] 10 OR MORE HOUSEHOLDS . . . . . 95 DON'T KNOW 98	
110	Does your household have:	YES NO a) ELECTRICITY . . . . . 1 2 b) RADIO . . . . . 1 2 c) TELEVISION . . . . . 1 2 d) MOBILE TELEPHONE . . . . . 1 2 e) NON-MOBILE TELEPHONE . . . 1 2 f) REFRIGERATOR . . . . . 1 2 g) SOLAR PANEL . . . . . 1 2 h) TABLE . . . . . 1 2 i) CHAIR . . . . . 1 2 j) SOFA . . . . . 1 2 k) BED . . . . . 1 2 l) CUPBOARD . . . . . 1 2 m) CLOCK . . . . . 1 2 n) MICROWAVE OVEN . . . . . 1 2 o) DVD PLAYER . . . . . 1 2 p) CASSETTE/CD PLAYER . . . . . 1 2 a) Electricity? b) A radio? c) A television? d) A mobile telephone? e) A non-mobile telephone? f) A refrigerator? g) A solar panel? h) A table? i) A chair? j) A sofa? k) A bed? l) A cupboard? m) A clock? n) A microwave oven? o) A DVD player? p) A cassette or CD player?	
110A	Does this household receive a cash transfer or any social assistance from the government?	YES . . . . . 1 NO 2	→ 111

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
110B	For what reason does the household receive a cash transfer or social assistance? Any other reason? RECORD ALL MENTIONED	ORPHANED CHILDREN 18 YEARS OR YOUNGER . . . . . A ELDERLY PERSON . . . . . B PERSON WITH SEVERE DISABILITY . . . . . C URBAN FOOD SUBSIDY . . . . . D FOOD AID FOR PERSONS IN ARID AND SEMI-ARID LANDS . . . . . E HEALTH VOUCHER . . . . . F FOOD/CASH FOR WORK . . . . . G SCHOOL FEEDING . . . . . H HUNGER SAFETY NET PROGRAMME . . . . . I OTHER _____ X (SPECIFY)	
111	What type of fuel does your household mainly use for cooking?	ELECTRICITY . . . . . 01 LPG\NATURAL GAS . . . . . 02 BIOGAS . . . . . 04 PARAFIN/KEROSENE . . . . . 05 COAL, LIGNITE . . . . . 06 CHARCOAL . . . . . 07 WOOD . . . . . 08 STRAW/SHRUBS/GRASS . . . . . 09 AGRICULTURAL CROP . . . . . 10 ANIMAL DUNG . . . . . 11 NO FOOD COOKED IN HOUSEHOLD . . . . . 95 OTHER _____ 96 (SPECIFY)	→ 114
112	Is the cooking usually done in the house, in a separate building, or outdoors?	IN THE HOUSE . . . . . 1 IN A SEPARATE BUILDING . . . . . 2 OUTDOORS . . . . . 3 OTHER _____ 6 (SPECIFY)	→ 114
113	Do you have a separate room which is used as a kitchen?	YES . . . . . 1 NO 2	
114	MAIN MATERIAL OF THE 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 _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
115	MAIN MATERIAL OF THE ROOF. RECORD OBSERVATION.	NATURAL ROOFING NO ROOF . . . . . 11 THATCH/GRASS/MAKUTI . . . . . 12 DUNG/MUD/SOD . . . . . 13 RUDIMENTARY ROOFING IRON SHEETS . . . . . 21 TIN CANS . . . . . 22 FINISHED ROOFING ASBETOS SHEET . . . . . 31 CONCRETE . . . . . 32 TILES . . . . . 33 OTHER _____ 96 (SPECIFY)	
116	MAIN MATERIAL OF THE EXTERNAL WALLS. RECORD OBSERVATION.	NATURAL WALLS NO WALLS . . . . . 11 CANE/PALM/TRUNKS . . . . . 12 DUNG/MUD/SOD . . . . . 13 RUDIMENTARY WALLS BAMBOO WITH MUD . . . . . 21 STONE WITH MUD . . . . . 22 UNCOVERED ADOBE . . . . . 23 PLYWOOD . . . . . 24 CARDBOARD . . . . . 25 REUSED WOOD . . . . . 26 IRON SHEETS . . . . . 27 FINISHED WALLS CEMENT . . . . . 31 STONE WITH LIME/CEMENT . . . . . 32 BRICKS . . . . . 33 CEMENT BLOCKS . . . . . 34 COVERED ADOBE . . . . . 35 WOOD PLANKS/SHINGLES . . . . . 36 OTHER _____ 96 (SPECIFY)	
117	How many rooms in this household are used for sleeping?	ROOMS	
118	Does any member of this household own: a) A watch? b) A bicycle? c) A motorcycle or motor scooter? d) An animal-drawn cart? e) A car or truck? f) A boat with a motor?	YES NO a) WATCH . . . . . 1 2 b) BICYCLE . . . . . 1 2 c) MOTORCYCLE/SCOOTER . 1 2 d) ANIMAL-DRAWN CART . . . 1 2 e) CAR/TRUCK . . . . . 1 2 f) BOAT WITH MOTOR 1 2	
118A	Does your household own this structure (house, flat, shack), do you pay rent, or do you live here without paying rent?	OWNS . . . . . 1 PAYS RENT/LEASE . . . . . 2 NO RENT W. CONSENT OF OWNER . . . . . 3 NO RENT, SQUATTING 4	
118B	Does your household own the land on which the structure (house, flat, shack) sits?	OWNS . . . . . 1 PAYS RENT/LEASE . . . . . 2 NO RENT W. CONSENT OF OWNER . . . . . 3 NO RENT, SQUATTING 4	
119	Does any member of this household own any agricultural land?	YES . . . . . 1 NO 2	→ 121

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
120	How many acres or hectares of agricultural land do members of this household own? ACRES / HECTARES: IF 995 OR MORE, RECORD '995.0' IN APPROPRIATE BOX. PLOT SIZE (SQ FT): IF 99995 OR MORE, RECORD '99995.0' IN APPROPRIATE BOX.	ACRES . . . . . 1 ☐☐☐.☐ HECTARES . . . . . 2 ☐☐☐.☐ PLOT SIZE (SQ FT) 3 ☐☐☐☐☐.☐ DON'T KNOW 9999998	
121	Does this household own any livestock, herds, other farm animals, or poultry?	YES . . . . . 1 NO 2	→ 123
122	How many of the following animals does this household own? IF NONE, ENTER '00'. IF 95 OR MORE, ENTER '95'. IF UNKNOWN, ENTER '98'. a) Local cattle (indigenous)? b) Exotic/grade cattle? c) Horses, donkeys, or camels? d) Goats? e) Sheep? f) Chickens?	a) LOCAL CATTLE . . . . . ☐☐ b) EXOTIC/GRADE CATTLE . . . . . ☐☐ c) HORSES/DONKEYS/CAMELS . . . ☐☐ d) GOATS . . . . . ☐☐ e) SHEEP . . . . . ☐☐ f) CHICKENS . . . . . ☐☐	
123	Does any member of this household have a bank account?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
123A	In the past 7 days were there days when your household did not have enough food or money to buy food?	YES . . . . . 1 NO 2	→ 123C
123B	How many days did your household have to: a) Rely on less preferred, less expensive food? b) Rely on borrowed food from friends or relatives? c) Reduce the number of meals eaten per day? d) Reduce the portion size of meals? e) Reduce the quantities eaten by adults in order for small children to eat?	NUMBER OF DAYS a) LESS PREFERRED FOOD . . . . . ☐ b) RELY ON BORROWED FOOD . . . . . ☐ c) REDUCE NUMBER OF MEALS . . . . . ☐ d) REDUCE SIZE OF MEALS . . . . . ☐ e) REDUCE QUANTITIES FOR ADULTS . ☐	
123C	How often does anyone smoke inside your house? Would you say daily, weekly, monthly, less than monthly, or never?	DAILY . . . . . 1 WEEKLY . . . . . 2 MONTHLY . . . . . 3 LESS THAN MONTHLY . . . . . 4 NEVER 5	
124	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 DON'T KNOW 8	→ 126
124A	How many months ago did someone spray your dwelling against mosquitos?	MONTHS AGO . . . . . ☐☐	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
125	Who sprayed the dwelling?	GOVERNMENT WORKER/PROGRAM . . . . . A PRIVATE COMPANY . . . . . B NONGOVERNMENTAL ORGANIZATION (NGO) . . . . . C OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
126	Does your household have any mosquito nets that can be used while sleeping?	YES . . . . . 1 NO 2	→ 137
127	How many mosquito nets does your household have? IF 7 OR MORE NETS, RECORD '7'.	NUMBER OF NETS . . . . . ☐	

		NET #1	NET #2	NET #3
128	ASK THE RESPONDENT TO SHOW YOU ALL THE NETS IN THE HOUSEHOLD IF MORE THAN 3 NETS, USE ADDITIONAL QUESTIONNAIRE(S).	OBSERVED . . . . . 1 NOT OBSERVED . . . 2	OBSERVED . . . . . 1 NOT OBSERVED . . . 2	OBSERVED . . . . . 1 NOT OBSERVED . . . 2
129	How many months ago did your household get the mosquito net? IF LESS THAN ONE MONTH AGO, RECORD '00'.	MONTHS AGO . . . ☐☐ MORE THAN 36 MONTHS AGO . . . 95 NOT SURE 98	MONTHS AGO . . . ☐☐ MORE THAN 36 MONTHS AGO . . . 95 NOT SURE 98	MONTHS AGO . . . ☐☐ MORE THAN 36 MONTHS AGO . . . 95 NOT SURE 98
130	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 NET OLYSET (SUPA-NET EXTRA) 11 PERMANET (SUPA-NET EXTRA) 12 NETPROTECT . . . 13 OTHER/ DK BRAND . . . 16 (SKIP TO 134) 'CONVENTIONAL' NET KINGA NET . . . 21 SUPANET . . . . . 22 UNBRANDED RURAL NET . . . 23 OTHER/ DK BRAND . . . 26 (SKIP TO 132) OTHER BRAND . . . 96 DK BRAND 98	LONG-LASTING NET OLYSET (SUPA-NET EXTRA) 11 PERMANET (SUPA-NET EXTRA) 12 NETPROTECT . . . 13 OTHER/ DK BRAND . . . 16 (SKIP TO 134) 'CONVENTIONAL' NET KINGA NET . . . 21 SUPANET . . . . . 22 UNBRANDED RURAL NET . . . 23 OTHER/ DK BRAND . . . 26 (SKIP TO 132) OTHER BRAND . . . 96 DK BRAND 98	LONG-LASTING NET OLYSET (SUPA-NET EXTRA) 11 PERMANET (SUPA-NET EXTRA) 12 NETPROTECT . . . 13 OTHER/ DK BRAND . . . 16 (SKIP TO 134) 'CONVENTIONAL' NET KINGA NET . . . 21 SUPANET . . . . . 22 UNBRANDED RURAL NET . . . 23 OTHER/ DK BRAND . . . 26 (SKIP TO 132) OTHER BRAND . . . 96 DK BRAND 98
131	When you got the net, was it already treated with an insecticide to kill or repel mosquitoes?	YES . . . . . 1 NO . . . . . 2 NOT SURE 8	YES . . . . . 1 NO . . . . . 2 NOT SURE 8	YES . . . . . 1 NO . . . . . 2 NOT SURE 8
132	Since you got the net, was it ever soaked or dipped in a liquid to kill or repel mosquitoes?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 134) NOT SURE 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 134) NOT SURE 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 134) NOT SURE 8
133	How many months ago was the net last soaked or dipped? IF LESS THAN ONE MONTH AGO, RECORD '00'.	MONTHS AGO . . . ☐☐ MORE THAN 24 MONTHS AGO . . . 95 NOT SURE 98	MONTHS AGO . . . ☐☐ MORE THAN 24 MONTHS AGO . . . 95 NOT SURE 98	MONTHS AGO . . . ☐☐ MORE THAN 24 MONTHS AGO . . . 95 NOT SURE 98
133A	The last time the net was treated, was a liquid from a packet like this added to the treatment solution? SHOW SACHET FOR K-O TAB 1-2-3 BINDING AGENT.	YES . . . . . 1 NO . . . . . 2 NOT SURE 8	YES . . . . . 1 NO . . . . . 2 NOT SURE 8	YES . . . . . 1 NO . . . . . 2 NOT SURE 8
133B	The last time the net was treated, was it treated as part of a net retreatment campaign?	YES . . . . . 1 NO . . . . . 2 NOT SURE 8	YES . . . . . 1 NO . . . . . 2 NOT SURE 8	YES . . . . . 1 NO . . . . . 2 NOT SURE 8

		NET #1	NET #2	NET #3
134	Did anyone sleep under this mosquito net last night?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 136) ← NOT SURE 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 136) ← NOT SURE 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 136) ← NOT SURE 8
135	Who slept under this mosquito net last night? RECORD THE PERSON'S NAME AND LINE NUMBER FROM THE HOUSEHOLD SCHEDULE.	NAME _____ LINE NO. . . . . [ ][ ]	NAME _____ LINE NO. . . . . [ ][ ]	NAME _____ LINE NO. . . . . [ ][ ]
		NAME _____ LINE NO. . . . . [ ][ ]	NAME _____ LINE NO. . . . . [ ][ ]	NAME _____ LINE NO. . . . . [ ][ ]
		NAME _____ LINE NO. . . . . [ ][ ]	NAME _____ LINE NO. . . . . [ ][ ]	NAME _____ LINE NO. . . . . [ ][ ]
		NAME _____ LINE NO. . . . . [ ][ ]	NAME _____ LINE NO. . . . . [ ][ ]	NAME _____ LINE NO. . . . . [ ][ ]
136		GO BACK TO 128 FOR NEXT NET; OR, IF NO MORE NETS, GO TO 137.	GO BACK TO 128 FOR NEXT NET; OR, IF NO MORE NETS, GO TO 137.	GO TO 128 IN FIRST COLUMN OF A NEW QUESTIONNAIRE; OR, IF NO MORE NETS, GO TO 137.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
137	Please show me where members of your household most often wash their hands.	OBSERVED . . . . . 1 NOT OBSERVED, NOT IN DWELLING/YARD/PLOT . . . . . 2 NOT OBSERVED, NO PERMISSION TO SEE . . . . . 3 NOT OBSERVED, OTHER REASON 4	→ 139A
138	OBSERVATION ONLY: OBSERVE PRESENCE OF WATER AT THE PLACE FOR HANDWASHING.	WATER IS AVAILABLE . . . . . 1 WATER IS NOT AVAILABLE 2	
139	OBSERVATION ONLY: OBSERVE PRESENCE OF SOAP, DETERGENT, OR OTHER CLEANSING AGENT.	SOAP OR DETERGENT (BAR, LIQUID, POWDER, PASTE) . . . A ASH, MUD, SAND . . . . . B NONE C	
139A	Do members of your household wash their hands with soap?	YES . . . . . 1 NO 2	→ 139C
139B	When do they wash their hands? Any other time? RECORD ALL MENTIONED	AFTER TOILET . . . . . A BEFORE COOKING . . . . . B BEFORE EATING . . . . . C AFTER CLEANING BABY'S BACKSIDE . . . D BEFORE FEEDING BABY . . . . . E OTHER _____ X (SPECIFY)	

139C

	A Now, I would like to talk to you about the food consumed in your household during the past 7 days. How many days during the past 7 days, did members of your household consume the following food items, prepared or eaten at home?	NUMBER OF DAYS EATEN IN PAST **7 DAYS**		**B** What was the main source of the (NAME OF FOOD ITEM)? SEE SOURCE CODES BELOW
a)	Cereals and grains such as rice, pasta, bread, sorghum, millet, or maize?	☐	ONE OR MORE → ZERO ↓	☐☐
b)	Roots and tubers such as potato, yam, cassava, normal sweet potatoes, taro, cooking banana/plantain or other tubers?	☐	ONE OR MORE → ZERO ↓	☐☐
c)	Pulses/nuts such as beans, cowpeas, peanuts, lentils, soy, pigeon peas, or other nuts?	☐	ONE OR MORE → ZERO ↓	☐☐
d)	Orange vegetables such as carrots, red peppers, pumpkin, orange sweet potato?	☐	ONE OR MORE → ZERO ↓	☐☐
e)	Green leafy vegetables such as sukumu wiki, spinach, broccoli, amaranth, cassava leaves, or other dark green leaves?	☐	ONE OR MORE → ZERO ↓	☐☐
f)	Other vegetables such as onion, tomatoes, cucumber, radishes, green beans, peas, lettuce?	☐	ONE OR MORE → ZERO ↓	☐☐
g)	Orange fruits such as mango, paw paw, tree tomato?	☐	ONE OR MORE → ZERO ↓	☐☐
h)	Other fruits such as banana, apple, lemon?	☐	ONE OR MORE → ZERO ↓	☐☐
i)	Meat such as goat, beef, chicken, pork? (meat in large quantities and not as a condiment)	☐	ONE OR MORE → ZERO ↓	☐☐
j)	Liver, kidney, heart, or other organ meats?	☐	ONE OR MORE → ZERO ↓	☐☐
k)	Fish or shellfish such as dried fish, canned tuna, or other seafood? (seafood in large quantities and not as a condiment)	☐	ONE OR MORE → ZERO ↓	☐☐
l)	Eggs?	☐	ONE OR MORE → ZERO ↓	☐☐
m)	Milk and other dairy products such as yogurt or cheese?	☐	ONE OR MORE → ZERO ↓	☐☐
n)	Oil, fat, and butter?	☐	ONE OR MORE → ZERO ↓	☐☐
o)	Sugar or sweet things such as honey, jam, cakes, candy, biscuits, pastries, sugary drinks?	☐	ONE OR MORE → ZERO ↓	☐☐
p)	Condiments and spices such as tea, coffee, cocoa, salt, garlic, spices, yeast, baking powder, tomato sauce, meat or fish in very small quantities as condiments?	☐	ONE OR MORE → ZERO ↓	☐☐

(GO TO 140)

CODES FOR Q. 139CB SOURCE OF FOOD

21 = OWN PRODUCTION (CROPS, ANIMAL)	24 = PURCHASED	27 = GIFT FROM FAMILY, FRIENDS
22 = FISHING, HUNTING, GATHERING	25 = BEGGED	28 = FOOD AID FROM CIVIL SOCIETY, NGO, GOVERNMENT
23 = LOANED, BORROWED	26 = EXCHANGED FOR LABOR	96 = OTHER

140	ASK RESPONDENT FOR A TEASPOONFUL OF COOKING SALT. TEST SALT FOR IODINE.	IODINE PRESENT . . . . . 1 NO IODINE . . . . . 2 NO SALT IN HOUSEHOLD . . . . . 3 SALT NOT TESTED _____ 6 (SPECIFY REASON)

WEIGHT AND HEIGHT MEASUREMENT FOR CHILDREN AGE 0-5

201	CHECK COLUMN 11 IN HOUSEHOLD SCHEDULE. RECORD THE LINE NUMBER AND NAME FOR ALL ELIGIBLE CHILDREN 0-5 YEARS IN QUESTION 202. IF MORE THAN SIX CHILDREN, USE ADDITIONAL QUESTIONNAIRE(S).			
		CHILD 1	CHILD 2	CHILD 3
202	LINE NUMBER FROM COLUMN 11 NAME FROM COLUMN 2	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____
203	IF MOTHER INTERVIEWED, COPY MONTH AND YEAR OF BIRTH FROM BIRTH HISTORY AND ASK DAY; IF MOTHER NOT INTERVIEWED, ASK: What is (NAME)'s birth date?	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐
204	CHECK 203: CHILD BORN IN JANUARY 2009 OR LATER?	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO 214)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO 214)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO 214)
205	WEIGHT IN KILOGRAMS	KG. ☐☐.☐☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	KG. ☐☐.☐☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	KG. ☐☐.☐☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996
206	HEIGHT IN CENTIMETERS	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996
207	MEASURED LYING DOWN OR STANDING UP?	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED . . . 3	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED . . . 3	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED . . . 3
213	GO BACK TO 203 IN NEXT COLUMN OF THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF THE NEXT PAGE; IF NO MORE CHILDREN, GO TO 214.			

		CHILD 4	CHILD 5	CHILD 6
202	LINE NUMBER FROM COLUMN 11 NAME FROM COLUMN 2	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____
203	IF MOTHER INTERVIEWED, COPY MONTH AND YEAR OF BIRTH FROM BIRTH HISTORY AND ASK DAY; IF MOTHER NOT INTERVIEWED, ASK: What is (NAME)'s birth date?	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐
204	CHECK 203: CHILD BORN IN JANUARY 2009 OR LATER?	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO 214)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO 214)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 IN FIRST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE CHILDREN, GO TO 214)
205	WEIGHT IN KILOGRAMS	KG. ☐☐.☐☐ NOT PRESENT . . . . . 9994 REFUSED . . . . . 9995 OTHER 9996	KG. ☐☐.☐☐ NOT PRESENT . . . . . 9994 REFUSED . . . . . 9995 OTHER 9996	KG. ☐☐.☐☐ NOT PRESENT . . . . . 9994 REFUSED . . . . . 9995 OTHER 9996
206	HEIGHT IN CENTIMETERS	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996
207	MEASURED LYING DOWN OR STANDING UP?	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED . . . 3	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED . . . 3	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED . . . 3
213	GO BACK TO 203 IN NEXT COLUMN OF THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF AN ADDITIONAL QUESTIONNAIRE; IF NO MORE CHILDREN, GO TO 214.			

WEIGHT AND HEIGHT MEASUREMENT FOR WOMEN AGE 15-49

214	CHECK COLUMN 9 IN HOUSEHOLD SCHEDULE. RECORD THE LINE NUMBER AND NAME FOR ALL ELIGIBLE WOMEN IN 215. IF THERE ARE MORE THAN THREE WOMEN, USE ADDITIONAL QUESTIONNAIRE(S).			
		WOMAN 1	WOMAN 2	WOMAN 3
215	LINE NUMBER FROM COLUMN 9 NAME FROM COLUMN 2	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____
216	WEIGHT IN KILOGRAMS	KG. ☐☐☐.☐☐ NOT PRESENT . . . . . 99994 REFUSED . . . . . 99995 OTHER 99996	KG. ☐☐☐.☐☐ NOT PRESENT . . . . . 99994 REFUSED . . . . . 99995 OTHER 99996	KG. ☐☐☐.☐☐ NOT PRESENT . . . . . 99994 REFUSED . . . . . 99995 OTHER 99996
217	HEIGHT IN CENTIMETERS	CM. ☐☐☐.☐ NOT PRESENT . . . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. ☐☐☐.☐ NOT PRESENT . . . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. ☐☐☐.☐ NOT PRESENT . . . . . 9994 REFUSED . . . . . 9995 OTHER 9996
242	GO BACK TO 216 IN NEXT COLUMN OF THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF AN ADDITIONAL QUESTIONNAIRE; IF NO MORE WOMEN, END INTERVIEW			

2 **SHORT VERSION** QUESTIONNAIRE SERIAL NUMBER _____

2014 KENYA DEMOGRAPHIC AND HEALTH SURVEY
HOUSEHOLD QUESTIONNAIRE - SHORT VERSION

KNBS KENYA NATIONAL BUREAU OF STATISTICS *Keeping you informed*

CONFIDENTIAL

REPUBLIC OF KENYA

IDENTIFICATION

COUNTY _____ | | | |

DISTRICT _____ | | |

LOCATION/TOWN _____

SUBLOCATION _____

NASSEP CLUSTER NUMBER . . . . . | | | | |

KDHS CLUSTER NUMBER . . . . . | | | | |

HOUSEHOLD NUMBER . . . . . | | | |

NAME OF HOUSEHOLD HEAD _____

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE				DAY / MONTH / YEAR
INTERVIEWER'S NAME				INT. NUMBER
RESULT*				RESULT
NEXT VISIT: DATE				TOTAL NUMBER OF VISITS
TIME				

*RESULT CODES:
1 COMPLETED
2 NO HOUSEHOLD MEMBER AT HOME / NO COMPETENT RESPONDENT AT HOME AT TIME OF VISIT
3 ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD OF TIME
4 POSTPONED
5 REFUSED
6 DWELLING VACANT OR ADDRESS NOT A DWELLING
7 DWELLING DESTROYED
8 DWELLING NOT FOUND
9 OTHER

_____ (SPECIFY)

LINE NO. OF RESPONDENT TO HOUSHOLD QUESTIONNAIRE

TOTAL PERSONS IN HOUSEHOLD

TOTAL ELIGIBLE WOMEN

TOTAL ELIGIBLE MEN

LANGUAGE OF QUESTIONNAIRE** 1 7 LANGUAGE OF INTERVIEW: | | NATIVE LANGUAGE OF RESPONDENT: | |

TRANSLATOR USED (YES = 1, NO = 2)

LANGUAGE OF QUESTIONNAIRE: **English**

**LANGUAGE CODES:

01 BORANA	05 KIKUYU	09 LUO	13 POKOT	17 ENGLISH
02 EMBU	06 KISII	10 MAASAI	14 SOMALI	18 OTHER
03 KALENJIN	07 LUHYA	11 MERU	15 SWAHILI	
04 KAMBA	08 MARAGOLI	12 MIJIKENDA	16 TURKANA	

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		

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INTRODUCTION AND CONSENT

Hello. My name is _____. I am working with the Kenya National Bureau of Statistics. We are conducting a survey about health all over Kenya. The information we collect will help the government to plan health services. Your household was selected for the survey. I would like to ask you some questions about your household. The questions usually take about 30 to 60 minutes. All of the answers you give will be confidential and will not be shared with anyone other than members of our survey team. You don't have to be in the survey, but we hope you will agree to answer the questions since your views are important. If I ask you any question you don't want to answer, just let me know and I will go on to the next question or you can stop the interview at any time. In case you need more information about the survey, you may contact the person listed on this card.

GIVE CARD WITH CONTACT INFORMATION

Do you have any questions?
May I begin the interview now?

SIGNATURE OF INTERVIEWER: _____ DATE: _____

RESPONDENT AGREES TO BE INTERVIEWED . . . 1 ↓

RESPONDENT DOES NOT AGREE TO BE INTERVIEWED . . . 2 → END

HOUSEHOLD SCHEDULE

							IF AGE 15 OR OLDER				IF AGE 0-17 YEARS	
LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	MARITAL STATUS	ELIGIBILITY			SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS	
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR EACH PERSON, ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 5-20A FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)? IF 95 OR MORE, RECORD '95'.	What is (NAME)'s current marital status? 1 = MARRIED OR LIVING TOGETHER 2 = DIVORCED/ SEPARATED 3 = WIDOWED 4 = NEVER-MARRIED/LIVED TOGETHER	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49		CIRCLE LINE NUMBER OF ALL CHILDREN AGE 0-5	Is (NAME)'s natural mother alive?	Does (NAME)'s natural mother usually live in this household or was she a guest last night? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER. IF NO, RECORD '00'.
			M F	Y N	Y N	IN YEARS					Y N DK	
01			1 2	1 2	1 2			01		01	1 2 8 GO TO 14	
02			1 2	1 2	1 2			02		02	1 2 8 GO TO 14	
03			1 2	1 2	1 2			03		03	1 2 8 GO TO 14	
04			1 2	1 2	1 2			04		04	1 2 8 GO TO 14	
05			1 2	1 2	1 2			05		05	1 2 8 GO TO 14	
06			1 2	1 2	1 2			06		06	1 2 8 GO TO 14	
07			1 2	1 2	1 2			07		07	1 2 8 GO TO 14	
08			1 2	1 2	1 2			08		08	1 2 8 GO TO 14	
09			1 2	1 2	1 2			09		09	1 2 8 GO TO 14	
10			1 2	1 2	1 2			10		10	1 2 8 GO TO 14	

2A) Just to make sure that I have a complete listing: are there any other persons such as small children or infants that we have not listed? YES ☐ → ADD TO TABLE NO ☐

2B) Are there any other people who may not be members of your family, such as domestic servants, lodgers, or friends who usually live here? YES ☐ → ADD TO TABLE NO ☐

2C) Are there any guests or temporary visitors staying here, or anyone else who stayed here last night, who have not been listed? YES ☐ → ADD TO TABLE NO ☐

CODES FOR Q. 3: RELATIONSHIP TO HEAD OF HOUSEHOLD

01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DAUGHTER-IN-LAW
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = OTHER RELATIVE
10 = ADOPTED/FOSTER/ STEPCHILD
11 = NOT RELATED
98 = DON'T KNOW

	IF AGE 0-17 YEARS		IF AGE 3 YEARS OR OLDER		IF AGE 3-24 YEARS				IF AGE 0-4 YEARS	
LINE NO.	SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS		EVER ATTENDED SCHOOL		CURRENT/RECENT SCHOOL ATTENDANCE				BIRTH REGISTRATION	
	14	**15**	**16**	**17**	**18**	**19**	**19A**	**19B**	**20**	**20A**
	Is (NAME)'s natural father alive?	Does (NAME)'s natural father usually live in this household or was he a guest last night? IF YES: What is his name? RECORD FATHER'S LINE NUMBER. IF NO, RECORD '00'.	Has (NAME) ever attended school?	What is the highest level of school (NAME) has attended? What is the highest grade (NAME) completed at that level? SEE CODES BELOW.	Did (NAME) attend school at any time during the 2014 school year?	During the 2014 school year, what level and grade [is/was] (NAME) attending? SEE CODES BELOW.	Did (NAME) attend school at any time during the 2013 school year?	During the 2013 school year, what level and grade did (NAME) attend? SEE CODES BELOW.	Has (NAME) ever been registered with the civil authority? IF YES: With a birth certificate? 1 = YES, REGISTERED WITH BIRTH CERTIFICATE 2 = YES, REGISTERED WITHOUT BIRTH CERTIFICATE 8 = DON'T KNOW 3 = NOT REGISTERED	Why was (NAME) never registered? 1=TOO FAR 2=NO MONEY 3=NOT AWARE 4=NOT NECESSARY 5=NOMADIC LIFE, DIFFICULT TERRAIN, INSECURITY 8=OTHER
	Y N DK		Y N	LEVEL GRADE	Y N	LEVEL GRADE	Y N	LEVEL GRADE	Y1 Y2 DK NO	
01	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO NEXT LINE TO 20A	
02	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO NEXT LINE TO 20A	
03	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO NEXT LINE TO 20A	
04	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO NEXT LINE TO 20A	
05	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO NEXT LINE TO 20A	
06	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO NEXT LINE TO 20A	
07	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO NEXT LINE TO 20A	
08	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO NEXT LINE TO 20A	
09	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO NEXT LINE TO 20A	
10	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO NEXT LINE TO 20A	

CODES FOR Qs. 17, 19, AND 19B: EDUCATION

LEVEL	GRADE
0 = PRE-PRIMARY	00 = LESS THAN 1 YEAR COMPLETED (USE '00' FOR Q. 17 ONLY. THIS CODE IS NOT ALLOWED FOR Q. 19 OR 19B)
1 = PRIMARY	
2 = POST-PRIMARY, VOCATIONAL	
3 = SECONDARY/'A' LEVEL	
4 = COLLEGE (MIDDLE LEVEL)	98 = DON'T KNOW
5 = UNIVERSITY	
8 = DON'T KNOW	

							IF AGE 15 OR OLDER				IF AGE 0-17 YEARS	
LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	MARITAL STATUS	ELIGIBILITY			SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS	
1	2	3	4	5	6	7	8	9	10	11	12	13
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR EACH PERSON, ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 5-20A FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)? IF 95 OR MORE, RECORD '95'.	What is (NAME)'s current marital status? 1 = MARRIED OR LIVING TOGETHER 2 = DIVORCED/ SEPARATED 3 = WIDOWED 4 = NEVER-MARRIED/LIVED TOGETHER	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49		CIRCLE LINE NUMBER OF ALL CHILDREN AGE 0-5	Is (NAME)'s natural mother alive?	Does (NAME)'s natural mother usually live in this household or was she a guest last night? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER. IF NO, RECORD '00'.
11			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS		11		11	Y N DK 1 2 8 GO TO 14	
12			1 2	1 2	1 2			12		12	1 2 8 GO TO 14	
13			1 2	1 2	1 2			13		13	1 2 8 GO TO 14	
14			1 2	1 2	1 2			14		14	1 2 8 GO TO 14	
15			1 2	1 2	1 2			15		15	1 2 8 GO TO 14	
16			1 2	1 2	1 2			16		16	1 2 8 GO TO 14	
17			1 2	1 2	1 2			17		17	1 2 8 GO TO 14	
18			1 2	1 2	1 2			18		18	1 2 8 GO TO 14	
19			1 2	1 2	1 2			19		19	1 2 8 GO TO 14	
20			1 2	1 2	1 2			20		20	1 2 8 GO TO 14	

TICK HERE IF CONTINUATION SHEET USED ☐

2A) Just to make sure that I have a complete listing: are there any other persons such as small children or infants that we have not listed? YES ☐ → ADD TO TABLE NO ☐

2B) Are there any other people who may not be members of your family, such as domestic servants, lodgers, or friends who usually live here? YES ☐ → ADD TO TABLE NO ☐

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	IF AGE 0-17 YEARS		IF AGE 3 YEARS OR OLDER		IF AGE 3-24 YEARS				IF AGE 0-4 YEARS	
LINE NO.	SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS		EVER ATTENDED SCHOOL		CURRENT/RECENT SCHOOL ATTENDANCE				BIRTH REGISTRATION	
	14	15	16	17	18	19	19A	19B	20	20A
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	Y N DK		Y N	LEVEL GRADE	Y N	LEVEL GRADE	Y N	LEVEL GRADE	Y1 Y2 DK NO	
11	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO TO NEXT LINE 20A	
12	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO TO NEXT LINE 20A	
13	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO TO NEXT LINE 20A	
14	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO TO NEXT LINE 20A	
15	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO TO NEXT LINE 20A	
16	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO TO NEXT LINE 20A	
17	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO TO NEXT LINE 20A	
18	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO TO NEXT LINE 20A	
19	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO TO NEXT LINE 20A	
20	1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 19A		1 2 GO TO 20		1 2 8 3 TO TO NEXT LINE 20A	

CODES FOR Qs. 17, 19, AND 19B: EDUCATION

LEVEL	GRADE
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1 = PRIMARY	
2 = POST-PRIMARY, VOCATIONAL	
3 = SECONDARY/'A' LEVEL	
4 = COLLEGE (MIDDLE LEVEL)	98 = DON'T KNOW
5 = UNIVERSITY	
8 = DON'T KNOW	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
102	What is the main source of drinking water for members of your household?	PIPED WATER PIPED INTO DWELLING . . . . . 11 PIPED TO YARD/PLOT . . . . . 12 PUBLIC TAP/STANDPIPE . . . . . 13 TUBE WELL OR BOREHOLE . . . . . 21 DUG WELL PROTECTED WELL . . . . . 31 UNPROTECTED WELL . . . . . 32 WATER FROM SPRING PROTECTED SPRING . . . . . 41 UNPROTECTED SPRING . . . . . 42 RAINWATER . . . . . 51 TANKER TRUCK . . . . . 61 CART WITH SMALL TANK . . . . . 71 SURFACE WATER (RIVER/DAM/ LAKE/POND/STREAM/CANAL/ IRRIGATION CHANNEL) . . . . . 81 BOTTLED WATER . . . . . 91 OTHER 96 (SPECIFY)	→ 105 → 105
103	Where is that water source located?	IN OWN DWELLING . . . . . 1 IN OWN YARD/PLOT . . . . . 2 ELSEWHERE 3	→ 105
104	How long does it take to go there, get water, and come back? IF 995 OR MORE, ENTER '995'.	MINUTES . . . . . ☐☐☐ DON'T KNOW 998	
105	Do you do anything to the water to make it safer to drink?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 107
106	What do you usually do to make the water safer to drink? Anything else? RECORD ALL MENTIONED.	BOIL . . . . . A ADD BLEACH/CHLORINE . . . . . B STRAIN THROUGH A CLOTH . . . . . C USE WATER FILTER (CERAMIC/ SAND/COMPOSITE/ETC.) . . . . . D SOLAR DISINFECTION . . . . . E LET IT STAND AND SETTLE . . . . . F COVER THE WATER CONTAINER . . . . . G OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
107	What kind of toilet facility do members of your household usually use?	FLUSH OR POUR FLUSH TOILET FLUSH TO PIPED SEWER SYSTEM . . . . . 11 FLUSH TO SEPTIC TANK . . . . . 12 FLUSH TO PIT LATRINE . . . . . 13 FLUSH TO SOMEWHERE ELSE . . . . . 14 FLUSH, DON'T KNOW WHERE . . . . . 15 PIT LATRINE VENTILATED IMPROVED PIT LATRINE . . . . . 21 PIT LATRINE WITH SLAB . . . . . 22 PIT LATRINE WITHOUT SLAB/ OPEN PIT . . . . . 23 COMPOSTING TOILET . . . . . 31 BUCKET TOILET . . . . . 41 HANGING TOILET/HANGING LATRINE . . . . . 51 NO FACILITY/BUSH/FIELD . . . . . 61 OTHER _____ 96 (SPECIFY)	→ 110

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
108	Do you share this toilet facility with other households?	YES . . . . . 1 NO 2	→ 110
109	How many households use this toilet facility?	NO. OF HOUSEHOLDS IF LESS THAN 10 . . . . . 0 [ ] 10 OR MORE HOUSEHOLDS . . . . . 95 DON'T KNOW 98	
110	Does your household have:	YES NO a) ELECTRICITY . . . . . 1 2 b) RADIO . . . . . 1 2 c) TELEVISION . . . . . 1 2 d) MOBILE TELEPHONE . . . . . 1 2 e) NON-MOBILE TELEPHONE . . . 1 2 f) REFRIGERATOR . . . . . 1 2 g) SOLAR PANEL . . . . . 1 2 h) TABLE . . . . . 1 2 i) CHAIR . . . . . 1 2 j) SOFA . . . . . 1 2 k) BED . . . . . 1 2 l) CUPBOARD . . . . . 1 2 m) CLOCK . . . . . 1 2 n) MICROWAVE OVEN . . . . . 1 2 o) DVD PLAYER . . . . . 1 2 p) CASSETTE/CD PLAYER 1 2	
	a) Electricity? b) A radio? c) A television? d) A mobile telephone? e) A non-mobile telephone? f) A refrigerator? g) A solar panel? h) A table? i) A chair? j) A sofa? k) A bed? l) A cupboard? m) A clock? n) A microwave oven? o) A DVD player? p) A cassette or CD player?		
111	What type of fuel does your household mainly use for cooking?	ELECTRICITY . . . . . 01 LPG\NATURAL GAS . . . . . 02 BIOGAS . . . . . 04 PARAFIN/KEROSENE . . . . . 05 COAL, LIGNITE . . . . . 06 CHARCOAL . . . . . 07 WOOD . . . . . 08 STRAW/SHRUBS/GRASS . . . . . 09 AGRICULTURAL CROP . . . . . 10 ANIMAL DUNG . . . . . 11 NO FOOD COOKED IN HOUSEHOLD . . . . . 95 OTHER _____ 96 (SPECIFY)	→ 114
112	Is the cooking usually done in the house, in a separate building, or outdoors?	IN THE HOUSE . . . . . 1 IN A SEPARATE BUILDING . . . . . 2 OUTDOORS . . . . . 3 OTHER _____ 6 (SPECIFY)	→ 114
113	Do you have a separate room which is used as a kitchen?	YES . . . . . 1 NO 2	
114	MAIN MATERIAL OF THE 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 _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
115	MAIN MATERIAL OF THE ROOF. RECORD OBSERVATION.	NATURAL ROOFING NO ROOF . . . . . 11 THATCH/GRASS/MAKUTI . . . . . 12 DUNG/MUD/SOD . . . . . 13 RUDIMENTARY ROOFING IRON SHEETS . . . . . 21 TIN CANS . . . . . 22 FINISHED ROOFING ASBETOS SHEET . . . . . 31 CONCRETE . . . . . 32 TILES . . . . . 33 OTHER _____ 96 (SPECIFY)	
116	MAIN MATERIAL OF THE EXTERNAL WALLS. RECORD OBSERVATION.	NATURAL WALLS NO WALLS . . . . . 11 CANE/PALM/TRUNKS . . . . . 12 DUNG/MUD/SOD . . . . . 13 RUDIMENTARY WALLS BAMBOO WITH MUD . . . . . 21 STONE WITH MUD . . . . . 22 UNCOVERED ADOBE . . . . . 23 PLYWOOD . . . . . 24 CARDBOARD . . . . . 25 REUSED WOOD . . . . . 26 IRON SHEETS . . . . . 27 FINISHED WALLS CEMENT . . . . . 31 STONE WITH LIME/CEMENT . . . . . 32 BRICKS . . . . . 33 CEMENT BLOCKS . . . . . 34 COVERED ADOBE . . . . . 35 WOOD PLANKS/SHINGLES . . . . . 36 OTHER _____ 96 (SPECIFY)	
117	How many rooms in this household are used for sleeping?	ROOMS	
118	Does any member of this household own: a) A watch? b) A bicycle? c) A motorcycle or motor scooter? d) An animal-drawn cart? e) A car or truck? f) A boat with a motor?	YES NO a) WATCH . . . . . 1 2 b) BICYCLE . . . . . 1 2 c) MOTORCYCLE/SCOOTER . 1 2 d) ANIMAL-DRAWN CART . . . 1 2 e) CAR/TRUCK . . . . . 1 2 f) BOAT WITH MOTOR 1 2	
119	Does any member of this household own any agricultural land?	YES . . . . . 1 NO 2	→ 121

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
120	How many acres or hectares of agricultural land do members of this household own? ACRES / HECTARES: IF 995 OR MORE, RECORD '995.0' IN APPROPRIATE BOX. PLOT SIZE (SQ FT): IF 99995 OR MORE, RECORD '99995.0' IN APPROPRIATE BOX.	ACRES . . . . . 1 ☐☐☐.☐ HECTARES . . . . . 2 ☐☐☐.☐ PLOT SIZE (SQ FT) 3 ☐☐☐☐☐.☐ DON'T KNOW 9999998	
121	Does this household own any livestock, herds, other farm animals, or poultry?	YES . . . . . 1 NO 2	→ 123
122	How many of the following animals does this household own? IF NONE, ENTER '00'. IF 95 OR MORE, ENTER '95'. IF UNKNOWN, ENTER '98'. a) Local cattle (indigenous)? b) Exotic/grade cattle? c) Horses, donkeys, or camels? d) Goats? e) Sheep? f) Chickens?	a) LOCAL CATTLE . . . . . ☐☐ b) EXOTIC/GRADE CATTLE . . . . . ☐☐ c) HORSES/DONKEYS/CAMELS . . . ☐☐ d) GOATS . . . . . ☐☐ e) SHEEP . . . . . ☐☐ f) CHICKENS . . . . . ☐☐	
123	Does any member of this household have a bank account?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
124	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 DON'T KNOW 8	
126	Does your household have any mosquito nets that can be used while sleeping?	YES . . . . . 1 NO 2	→ 140
127	How many mosquito nets does your household have? IF 7 OR MORE NETS, RECORD '7'.	NUMBER OF NETS . . . . . ☐	

		NET #1	NET #2	NET #3
128	ASK THE RESPONDENT TO SHOW YOU ALL THE NETS IN THE HOUSEHOLD IF MORE THAN 3 NETS, USE ADDITIONAL QUESTIONNAIRE(S).	OBSERVED . . . . . 1 NOT OBSERVED . . . 2	OBSERVED . . . . . 1 NOT OBSERVED . . . 2	OBSERVED . . . . . 1 NOT OBSERVED . . . 2
129	How many months ago did your household get the mosquito net? IF LESS THAN ONE MONTH AGO, RECORD '00'.	MONTHS AGO . . . ☐☐ MORE THAN 36 MONTHS AGO . . . 95 NOT SURE 98	MONTHS AGO . . . ☐☐ MORE THAN 36 MONTHS AGO . . . 95 NOT SURE 98	MONTHS AGO . . . ☐☐ MORE THAN 36 MONTHS AGO . . . 95 NOT SURE 98
130	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 NET OLYSET (SUPA-NET EXTRA) 11 PERMANET (SUPA-NET EXTRA) 12 NETPROTECT . . . 13 OTHER/ DK BRAND . . . 16 (SKIP TO 134) 'CONVENTIONAL' NET KINGA NET . . . 21 SUPANET . . . . . 22 UNBRANDED RURAL NET . . . 23 OTHER/ DK BRAND . . . 26 (SKIP TO 132) OTHER BRAND . . . 96 DK BRAND 98	LONG-LASTING NET OLYSET (SUPA-NET EXTRA) 11 PERMANET (SUPA-NET EXTRA) 12 NETPROTECT . . . 13 OTHER/ DK BRAND . . . 16 (SKIP TO 134) 'CONVENTIONAL' NET KINGA NET . . . 21 SUPANET . . . . . 22 UNBRANDED RURAL NET . . . 23 OTHER/ DK BRAND . . . 26 (SKIP TO 132) OTHER BRAND . . . 96 DK BRAND 98	LONG-LASTING NET OLYSET (SUPA-NET EXTRA) 11 PERMANET (SUPA-NET EXTRA) 12 NETPROTECT . . . 13 OTHER/ DK BRAND . . . 16 (SKIP TO 134) 'CONVENTIONAL' NET KINGA NET . . . 21 SUPANET . . . . . 22 UNBRANDED RURAL NET . . . 23 OTHER/ DK BRAND . . . 26 (SKIP TO 132) OTHER BRAND . . . 96 DK BRAND 98
131	When you got the net, was it already treated with an insecticide to kill or repel mosquitoes?	YES . . . . . 1 NO . . . . . 2 NOT SURE 8	YES . . . . . 1 NO . . . . . 2 NOT SURE 8	YES . . . . . 1 NO . . . . . 2 NOT SURE 8
132	Since you got the net, was it ever soaked or dipped in a liquid to kill or repel mosquitoes?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 134) NOT SURE 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 134) NOT SURE 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 134) NOT SURE 8
133	How many months ago was the net last soaked or dipped? IF LESS THAN ONE MONTH AGO, RECORD '00'.	MONTHS AGO . . . ☐☐ MORE THAN 24 MONTHS AGO . . . 95 NOT SURE 98	MONTHS AGO . . . ☐☐ MORE THAN 24 MONTHS AGO . . . 95 NOT SURE 98	MONTHS AGO . . . ☐☐ MORE THAN 24 MONTHS AGO . . . 95 NOT SURE 98
134	Did anyone sleep under this mosquito net last night?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 136) NOT SURE 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 136) NOT SURE 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 136) NOT SURE 8

		NET #1	NET #2	NET #3
135	Who slept under this mosquito net last night? RECORD THE PERSON'S NAME AND LINE NUMBER FROM THE HOUSEHOLD SCHEDULE.	NAME _____ LINE NO.	NAME _____ LINE NO.	NAME _____ LINE NO. . . . .
		NAME _____ LINE NO.	NAME _____ LINE NO.	NAME _____ LINE NO. . . . .
		NAME _____ LINE NO.	NAME _____ LINE NO.	NAME _____ LINE NO. . . . .
		NAME _____ LINE NO.	NAME _____ LINE NO.	NAME _____ LINE NO. . . . .
136		GO BACK TO 128 FOR NEXT NET; OR, IF NO MORE NETS, GO TO 140.	GO BACK TO 128 FOR NEXT NET; OR, IF NO MORE NETS, GO TO 140.	GO TO 128 IN FIRST COLUMN OF A NEW QUESTIONNAIRE; OR, IF NO MORE NETS, GO TO 140.

140	ASK RESPONDENT FOR A TEASPOONFUL OF COOKING SALT. TEST SALT FOR IODINE.	IODINE PRESENT . . . . . 1 NO IODINE . . . . . 2 NO SALT IN HOUSEHOLD . . . . . 3 SALT NOT TESTED _____ 6 (SPECIFY REASON)

WEIGHT AND HEIGHT MEASUREMENT FOR CHILDREN AGE 0-5

201	CHECK COLUMN 11 IN HOUSEHOLD SCHEDULE. RECORD THE LINE NUMBER AND NAME FOR ALL ELIGIBLE CHILDREN 0-5 YEARS IN QUESTION 202. IF MORE THAN SIX CHILDREN, USE ADDITIONAL QUESTIONNAIRE(S).			
		CHILD 1	CHILD 2	CHILD 3
202	LINE NUMBER FROM COLUMN 11 NAME FROM COLUMN 2	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____
203	IF MOTHER INTERVIEWED, COPY MONTH AND YEAR OF BIRTH FROM BIRTH HISTORY AND ASK DAY; IF MOTHER NOT INTERVIEWED, ASK: What is (NAME)'s birth date?	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐
204	CHECK 203: CHILD BORN IN JANUARY 2009 OR LATER?	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO 214)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO 214)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO 214)
205	WEIGHT IN KILOGRAMS	KG. ☐☐.☐☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	KG. ☐☐.☐☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	KG. ☐☐.☐☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996
206	HEIGHT IN CENTIMETERS	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996
207	MEASURED LYING DOWN OR STANDING UP?	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED . . . 3	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED . . . 3	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED . . . 3
213	GO BACK TO 203 IN NEXT COLUMN OF THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF THE NEXT PAGE; IF NO MORE CHILDREN, END INTERVIEW.			

		CHILD 4	CHILD 5	CHILD 6
202	LINE NUMBER FROM COLUMN 11 NAME FROM COLUMN 2	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____
203	IF MOTHER INTERVIEWED, COPY MONTH AND YEAR OF BIRTH FROM BIRTH HISTORY AND ASK DAY; IF MOTHER NOT INTERVIEWED, ASK: What is (NAME)'s birth date?	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐
204	CHECK 203: CHILD BORN IN JANUARY 2009 OR LATER?	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO 214)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO 214)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 IN FIRST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE CHILDREN, GO TO 214)
205	WEIGHT IN KILOGRAMS	KG. ☐☐.☐☐ NOT PRESENT . . . . . 9994 REFUSED . . . . . 9995 OTHER 9996	KG. ☐☐.☐☐ NOT PRESENT . . . . . 9994 REFUSED . . . . . 9995 OTHER 9996	KG. ☐☐.☐☐ NOT PRESENT . . . . . 9994 REFUSED . . . . . 9995 OTHER 9996
206	HEIGHT IN CENTIMETERS	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996
207	MEASURED LYING DOWN OR STANDING UP?	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED . . . 3	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED . . . 3	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED . . . 3
213	GO BACK TO 203 IN NEXT COLUMN OF THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF AN ADDITIONAL QUESTIONNAIRE; IF NO MORE CHILDREN, END INTERVIEW.			

1 LONG VERSION

2014 KENYA DEMOGRAPHIC AND HEALTH SURVEY
WOMAN'S QUESTIONNAIRE - LONG VERSION

CONFIDENTIAL

REPUBLIC OF KENYA

IDENTIFICATION

COUNTY _____

DISTRICT _____

LOCATION/TOWN _____

SUBLOCATION _____

NASSEP CLUSTER NUMBER . . . . . .

KDHS CLUSTER NUMBER . . . . . .

HOUSEHOLD NUMBER . . . . . .

NAME OF HOUSEHOLD HEAD _____

NAME AND LINE NUMBER OF WOMAN _____

CHECK 101A IN HOUSEHOLD QUESTIONNAIRE: IS WOMAN SELECTED FOR SECTION 14?

YES 1
NO 2

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE				DAY / MONTH / YEAR
INTERVIEWER'S NAME				INT. NUMBER
RESULT*				RESULT
NEXT VISIT: DATE				TOTAL NUMBER OF VISITS
TIME				

*RESULT CODES:

1	COMPLETED	4	REFUSED		
2	NOT AT HOME	5	PARTLY COMPLETED	7	OTHER _____ (SPECIFY)
3	POSTPONED	6	INCAPACITATED		

**LANGUAGE OF QUESTIONNAIRE: 17 LANGUAGE OF INTERVIEW: ___ NATIVE LANGUAGE OF RESPONDENT: ___

TRANSLATOR USED (YES = 1, NO = 2) ___

LANGUAGE OF QUESTIONNAIRE: **English**

**LANGUAGE CODES:

01 BORANA	05 KIKUYU	09 LUO	13 POKOT	17 ENGLISH
02 EMBU	06 KISII	10 MAASAI	14 SOMALI	18 OTHER
03 KALENJIN	07 LUHYA	11 MERU	15 SWAHILI	
04 KAMBA	08 MARAGOLI	12 MIJIKENDA	16 TURKANA	

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		

SECTION 1. RESPONDENT'S BACKGROUND

INTRODUCTION AND CONSENT

INFORMED CONSENT

Hello. My name is _____. I am working with the Kenya National Bureau of Statistics. We are conducting a survey about health all over Kenya. The information we collect will help the government to plan health services. Your household was selected for the survey. The questions usually take about 30 to 60 minutes. All of the answers you give will be confidential and will not be shared with anyone other than members of our survey team. You don't have to be in the survey, but we hope you will agree to answer the questions since your views are important. If I ask you any question you don't want to answer, just let me know and I will go on to the next question or you can stop the interview at any time.

In case you need more information about the survey, you may contact the person listed on the card that has already been given to your household.
Do you have any questions? May I begin the interview now?

SIGNATURE OF INTERVIEWER: _____ DATE: _____

RESPONDENT AGREES TO BE INTERVIEWED . . . . . 1 ↓ RESPONDENT DOES NOT AGREE TO BE INTERVIEWED . . . 2 → END

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOUR . . . . . ☐☐ MINUTES . . . . . ☐☐	
101A	First I would like to ask some questions about you and your household. For most of the time until you were 12 years old, did you live in Nairobi, Mombasa, Kisumu, in a town, in the countryside, or outside of Kenya?	NAIROBI/ MOMBASA/ KISUMU . . . . . 1 TOWN . . . . . 2 COUNTRYSIDE . . . . . 3 OUTSIDE KENYA 4	
101B	How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? IF LESS THAN ONE YEAR, RECORD '00' YEARS	YEARS ☐☐ ALWAYS . . . . . 95 VISITOR 96	→ 101D
101C	Just before you moved here, did you live in Nairobi, Mombasa, Kisumu, in a town, in the countryside, or outside of Kenya?	NAIROBI/ MOMBASA/ KISUMU . . . . . 1 TOWN . . . . . 2 COUNTRYSIDE . . . . . 3 OUTSIDE OF KENYA 4	
101D	What is your nationality?	KENYAN . . . . . 01 TANZANIAN . . . . . 02 UGANDAN . . . . . 03 SOMALI . . . . . 04 ETHIOPIAN . . . . . 05 SUDANESE . . . . . 06 OTHER _____ 96 (SPECIFY)	→ 102
101E	What was the main reason for moving to Kenya?	JOIN FAMILY LIVING IN KENYA . . . . . 01 MARRIAGE . . . . . 02 WORK . . . . . 03 SCHOOL . . . . . 04 ESCAPE INSECURITY/WAR . . . . . 05 ESCAPE ENVIRONMENTAL DISASTER (E.G. FLOOD, DROUGHT, ETC.) . . . 06 OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
102	In what month and year were you born?	MONTH . . . . . ☐☐ DON'T KNOW MONTH . . . . . 98 YEAR . . . . . ☐☐☐☐ DON'T KNOW YEAR 9998	
103	How old were you at your last birthday? COMPARE AND CORRECT 102 AND/OR 103 IF INCONSISTENT.	AGE IN COMPLETED YEARS ☐☐	
104	Have you ever attended school?	YES . . . . . 1 NO 2	→ 108
105	What is the highest level of school you attended: primary, vocational, secondary, or higher?	PRIMARY . . . . . 1 POST-PRIMARY/VOCATIONAL . . . . . 2 SECONDARY/ 'A' LEVEL . . . . . 3 COLLEGE (MIDDLE LEVEL) . . . . . 4 UNIVERSITY 5	
106	What is the highest (standard/form/year) you completed at that level? IF COMPLETED LESS THAN ONE YEAR AT THAT LEVEL, RECORD '00'.	STANDARD/FORM/YEAR . . . ☐☐	
107	CHECK 105: PRIMARY, POST-PRIMARY/ VOCATIONAL ☐ ↓ SECONDARY OR HIGHER ☐ → 110		
108	Now I would like you to read this sentence to me. SHOW CARD TO RESPONDENT. IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE: Can you read any 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 CARD WITH REQUIRED LANGUAGE _____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRED 5	
109	CHECK 108: CODE '2', '3' OR '4' CIRCLED ☐ ↓ CODE '1' OR '5' CIRCLED ☐ → 111		
110	Do you read a newspaper or magazine at least once a week, less than once a week or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
111	Do you listen to the radio at least once a week, less than once a week or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
112	Do you watch television at least once a week, less than once a week or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
113	What is your religion?	ROMAN CATHOLIC . . . . . 1 PROTESTANT/ OTHER CHRISTIAN . 2 MUSLIM . . . . . 3 NO RELIGION . . . . . 4 OTHER _____ 6 (SPECIFY)	
114	What is your ethnic group / tribe?	EMBU . . . . . 01 KALENJIN . . . . . 02 KAMBA . . . . . 03 KIKUYU . . . . . 04 KISII . . . . . 05 LUHYA . . . . . 06 LUO . . . . . 07 MAASAI . . . . . 08 MERU . . . . . 09 MIJIKENDA/ SWAHILI . . . . . 10 SOMALI . . . . . 11 TAITA/ TAVETA . . . . . 12 OTHER _____ 96 (SPECIFY)	
115	In the last 12 months, how many times have you been away from home for one or more nights?	NUMBER OF TIMES . . . . . ☐☐ NONE 00	→ 201
116	In the last 12 months, have you been away from home for more than one month at a time?	YES . . . . . 1 NO 2	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	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	→ 206
202	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES . . . . . 1 NO 2	→ 204
203	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME . . . . . ☐☐ DAUGHTERS AT HOME . . . . . ☐☐	
204	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	→ 206
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	SONS ELSEWHERE . . . . . ☐☐ DAUGHTERS ELSEWHERE ☐☐	
206	Have you ever given birth to a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	YES . . . . . 1 NO 2	→ 208
207	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	BOYS DEAD . . . . . ☐☐ GIRLS DEAD . . . . . ☐☐	
208	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL BIRTHS . . . . . ☐☐	
209	CHECK 208: Just to make sure that I have this right: you have had in TOTAL _____ births during your life. Is that correct? YES ☐ ↓ NO ☐ → PROBE AND CORRECT 201-208 AS NECESSARY.		
210	CHECK 208: ONE OR MORE BIRTHS ☐ ↓ NO BIRTHS ☐ →		→ 226

211 Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had.
RECORD NAMES OF ALL THE BIRTHS IN 212. RECORD TWINS AND TRIPLETS ON SEPARATE ROWS.
(IF THERE ARE MORE THAN 12 BIRTHS, USE AN ADDITIONAL QUESTIONNAIRE, STARTING WITH THE SECOND ROW).

212 What name was given to your (first/next) baby? RECORD NAME. BIRTH HISTORY NUMBER	213 Is (NAME) a boy or a girl?	214 Were any of these births twins?	215 In what month and year was (NAME) born? PROBE: What is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COMPLETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSEHOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD).	220 IF DEAD: How old was (NAME) when he/she died? IF '1 YR', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	221 Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME), including any children who died after birth?
01	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (NEXT BIRTH)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	
02	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
03	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
04	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
05	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
06	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
07	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH

212 What name was given to your (first/next) baby? RECORD NAME. BIRTH HISTORY NUMBER	213 Is (NAME) a boy or a girl?	214 Were any of these births twins?	215 In what month and year was (NAME) born? PROBE: What is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COM-PLETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSE-HOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSE-HOLD).	220 IF DEAD: How old was (NAME) when he/she died? IF '1 YR', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	221 Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME), including any children who died after birth?
08	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
09	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
10	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
11	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
12	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH

222	Have you had any live births since the birth of (NAME OF LAST BIRTH)?	YES . . . . . 1 NO 2	→ ADD BIRTH

223	COMPARE 208 WITH NUMBER OF BIRTHS IN HISTORY ABOVE AND MARK: NUMBERS ARE SAME ☐↓ NUMBERS ARE DIFFERENT ☐→ (PROBE AND RECONCILE)

224	CHECK 215: ENTER THE NUMBER OF BIRTHS IN 2009 OR LATER.	NUMBER OF BIRTHS IN 2009 OR LATER ☐ NONE 0	→ 226

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
225	**C** FOR EACH BIRTH SINCE JANUARY 2009, ENTER 'B' IN THE MONTH OF BIRTH IN THE CALENDAR. WRITE THE NAME OF THE CHILD TO THE LEFT OF THE 'B' CODE. FOR EACH BIRTH, ASK THE NUMBER OF MONTHS THE PREGNANCY LASTED AND RECORD 'P' IN EACH OF THE PRECEDING MONTHS ACCORDING TO THE DURATION OF PREGNANCY. (NOTE: THE NUMBER OF 'P's MUST BE ONE LESS THAN THE NUMBER OF MONTHS THAT THE PREGNANCY LASTED.)		
226	Are you pregnant now?	YES . . . . . 1 NO . . . . . 2 UNSURE 8	→ 230
227	How many months pregnant are you? RECORD NUMBER OF COMPLETED MONTHS. **C** ENTER 'P's IN THE CALENDAR, BEGINNING WITH THE MONTH OF INTERVIEW AND FOR THE TOTAL NUMBER OF COMPLETED MONTHS.	MONTHS . . . . . ☐☐	
228	When you got pregnant, did you want to get pregnant at that time?	YES . . . . . 1 NO 2	→ 230
229	Did you want to have a baby later on or did you not want any (more) children?	LATER . . . . . 1 NO MORE 2	
230	Have you ever had a pregnancy that miscarried, was aborted, or ended in a stillbirth?	YES . . . . . 1 NO 2	→ 238
231	When did the last such pregnancy end?	MONTH . . . . . ☐☐ YEAR . . . . . ☐☐☐☐	
232	CHECK 231: LAST PREGNANCY ENDED IN JAN. 2009 OR LATER ☐ ↓ LAST PREGNANCY ENDED BEFORE JAN. 2009 ☐ →		→ 238
233	How many months pregnant were you when the last such pregnancy ended? **C** RECORD NUMBER OF COMPLETED MONTHS. ENTER 'T' IN THE CALENDAR IN THE MONTH THAT THE PREGNANCY TERMINATED AND 'P' FOR THE REMAINING NUMBER OF COMPLETED MONTHS.	MONTHS . . . . . ☐☐	
234	Since January 2009, have you had any other pregnancies that did not result in a live birth?	YES . . . . . 1 NO 2	→ 236
235	ASK THE DATE AND THE DURATION OF PREGNANCY FOR EACH EARLIER NON-LIVE BIRTH PREGNANCY BACK TO JANUARY 2009. **C** ENTER 'T' IN THE CALENDAR IN THE MONTH THAT EACH PREGNANCY TERMINATED AND 'P' FOR THE REMAINING NUMBER OF COMPLETED MONTHS.		
236	Did you have any miscarriages, abortions or stillbirths that ended before 2009?	YES . . . . . 1 NO 2	→ 238
237	When did the last such pregnancy that terminated before 2009 end?	MONTH . . . . . ☐☐ YEAR . . . . . ☐☐☐☐	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
238	When did your last menstrual period start? _____ (DATE, IF GIVEN)	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	
239	From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 301
240	Is this time just before her period begins, during her period, right after her period has ended, or halfway between two periods?	JUST BEFORE HER PERIOD BEGINS . . . . . 1 DURING HER PERIOD . . . . . 2 RIGHT AFTER HER PERIOD HAS ENDED . . . . . 3 HALFWAY BETWEEN TWO PERIODS . . . . . 4 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	

301	Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy. Have you ever heard of (METHOD)?		
01	Female Sterilization. PROBE: Women can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	
02	Male Sterilization. PROBE: Men can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	
03	IUD. PROBE: Women can have a loop or coil placed inside them by a doctor or a nurse.	YES . . . . . 1 NO 2	
04	Injectables. PROBE: Women can have an injection by a health provider that stops them from becoming pregnant for one or more months.	YES . . . . . 1 NO 2	
05	Implants. PROBE: Women can have one or more small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years.	YES . . . . . 1 NO 2	
06	Pill. PROBE: Women can take a pill every day to avoid becoming pregnant.	YES . . . . . 1 NO 2	
07	Male Condom. PROBE: Men can put a rubber sheath on their penis before sexual intercourse.	YES . . . . . 1 NO 2	
08	Female Condom. PROBE: Women can place a sheath in their vagina before sexual intercourse.	YES . . . . . 1 NO 2	
09	Lactational Amenorrhea Method (LAM).	YES . . . . . 1 NO 2	
10	Rhythm Method. PROBE: To avoid pregnancy, women do not have sexual intercourse on the days of the month they think they can get pregnant.	YES . . . . . 1 NO 2	
11	Withdrawal. PROBE: Men can be careful and pull out before climax.	YES . . . . . 1 NO 2	
12	Emergency Contraception. PROBE: As an emergency measure, within three days after they have unprotected sexual intercourse, women can take special pills to prevent pregnancy.	YES . . . . . 1 NO 2	
13	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES . . . . . 1 _____ (SPECIFY) _____ (SPECIFY) NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
302	CHECK 226: NOT PREGNANT OR UNSURE ☐ ↓ PREGNANT ☐ → 311		
303	Are you currently doing something or using any method to delay or avoid getting pregnant?	YES . . . . . 1 NO 2	→ 311
304	Which method are you using? CIRCLE ALL MENTIONED. IF MORE THAN ONE METHOD MENTIONED, FOLLOW SKIP INSTRUCTION FOR HIGHEST METHOD IN LIST.	FEMALE STERILIZATION . . . . . A MALE STERILIZATION . . . . . B IUD . . . . . C INJECTABLES . . . . . D IMPLANTS . . . . . E PILL . . . . . F MALE CONDOM . . . . . G FEMALE CONDOM . . . . . H LACTATIONAL AMEN. METHOD . . . . . K RHYTHM METHOD . . . . . L WITHDRAWAL . . . . . M OTHER MODERN METHOD . . . . . X OTHER TRADITIONAL METHOD . . . Y	→ 307 → 307A → 308A
307	In what facility did the sterilization take place? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL . . . . . 11 GOVT. HEALTH CENTER . . . . . 12 GOVT. DISPENSARY . . . . . 13 OTHER PUBLIC SECTOR _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR FAITH-BASED, CHURCH, MISSION HOSPITAL / CLINIC . . . . . 21 FAMILY OPTIONS/FHOK CLINIC . . . 22 PRIVATE HOSPITAL/CLINIC . . . . . 23 NURSING/ MATERNITY HOME . . . 24 MOBILE CLINIC . . . . . 25 OTHER PRIVATE MEDICAL SECTOR _____ 26 (SPECIFY) OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→ 308
307A	The last time you obtained (HIGHEST METHOD ON LIST IN 304), how much did you pay in total, including the cost of the method and any consultation you may have had.	COST . . . . . ☐☐☐☐☐ FREE . . . . . 99995 DON'T KNOW 99998	→ 308A
308	In what month and year was the sterilization performed?		
308A	Since what month and year have you been using (CURRENT METHOD) without stopping? PROBE: For how long have you been using (CURRENT METHOD) now without stopping?	MONTH . . . . . ☐☐ YEAR . . . . . ☐☐☐☐	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
309	CHECK 308/308A, 215 AND 231: ANY BIRTH OR PREGNANCY TERMINATION AFTER MONTH AND YEAR OF START OF USE OF CONTRACEPTION IN 308/308A? GO BACK TO 308/308A, PROBE AND RECORD MONTH AND YEAR AT START OF CONTINUOUS USE OF CURRENT METHOD (MUST BE AFTER LAST BIRTH OR PREGNANCY TERMINATION).	YES ☐ NO ☐	
310	CHECK 308/308A: YEAR IS 2009 OR LATER ☐ **C** ENTER CODE FOR METHOD USED IN MONTH OF INTERVIEW IN THE CALENDAR AND IN EACH MONTH BACK TO THE DATE STARTED USING. YEAR IS 2008 OR EARLIER ☐ **C** ENTER CODE FOR METHOD USED IN MONTH OF INTERVIEW IN THE CALENDAR AND EACH MONTH BACK TO JANUARY 2009		THEN SKIP TO → 322
311	I would like to ask you some questions about the times you or your partner may have used a method to avoid getting pregnant during the last few years. USE CALENDAR TO PROBE FOR EARLIER PERIODS OF USE AND NONUSE, STARTING WITH MOST RECENT USE, BACK TO JANUARY 2009. USE NAMES OF CHILDREN, DATES OF BIRTH, AND PERIODS OF PREGNANCY AS REFERENCE POINTS. **C** **IN COLUMN 1**, ENTER METHOD USE CODE OR '0' FOR NONUSE IN EACH BLANK MONTH. ILLUSTRATIVE QUESTIONS: a) When was the last time you used a method? Which method was that? b) When did you start using that method? How long after the birth of (NAME)? c) How long did you use the method then? **IN COLUMN 2**, ENTER CODES FOR DISCONTINUATION NEXT TO THE LAST MONTH OF USE. NUMBER OF CODES IN COLUMN 2 MUST BE SAME AS NUMBER OF INTERRUPTIONS OF METHOD USE IN COLUMN 1. ASK WHY SHE STOPPED USING THE METHOD. IF A PREGNANCY FOLLOWED, ASK WHETHER SHE BECAME PREGNANT UNINTENTIONALLY WHILE USING THE METHOD OR DELIBERATELY STOPPED TO GET PREGNANT. ILLUSTRATIVE QUESTIONS: d) Why did you stop using the (METHOD)? Did you become pregnant while using (METHOD), or did you stop to get pregnant, or did you stop for some other reason? e) IF DELIBERATELY STOPPED TO BECOME PREGNANT, ASK: How many months did it take you to get pregnant after you stopped using (METHOD)? AND ENTER '0' IN EACH SUCH MONTH IN COLUMN 1.		
312	CHECK THE CALENDAR FOR USE OF ANY CONTRACEPTIVE METHOD IN ANY MONTH NO METHOD USED ☐ ANY METHOD USED ☐ → 314		
313	Have you ever used anything or tried in any way to delay or avoid getting pregnant?	YES . . . . . 1 NO . . . . . 2 → 324	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
314	CHECK 304: CIRCLE METHOD CODE: IF MORE THAN ONE METHOD CODE CIRCLED IN 304, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	NO CODE CIRCLED . . . . . 00 FEMALE STERILIZATION . . . . . 01 MALE STERILIZATION . . . . . 02 IUD . . . . . 03 INJECTABLES . . . . . 04 IMPLANTS . . . . . 05 PILL . . . . . 06 MALE CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 LACTATIONAL AMEN. METHOD . . . . . 11 RHYTHM METHOD . . . . . 12 WITHDRAWAL . . . . . 13 OTHER MODERN METHOD . . . . . 95 OTHER TRADITIONAL METHOD 96	→ 324 → 317A → 326 → 315A → 326
315	You first started using (CURRENT METHOD) in (DATE FROM 308/308A). Where did you get it at that time?	PUBLIC SECTOR GOVT. HOSPITAL . . . . . 11 GOVT. HEALTH CENTER . . . . . 12 GOVT. DISPENSARY . . . . . 13 OTHER PUBLIC SECTOR _____ 16 (SPECIFY)	
315A	Where did you learn how to use the rhythm/lactational amenorrhea method? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . 21 PHARMACY/CHEMIST . . . . . 22 NURSING/MATERNITY HOME . . . . . 23 FAITH-BASED, CHURCH, MISSION HOSPITAL / CLINIC . . . . . 24 FAMILY OPTIONS/FHOK CLINIC . . . 25 OTHER PRIVATE MEDICAL SECTOR _____ 26 (SPECIFY) OTHER SOURCE SHOP . . . . . 31 MOBILE CLINIC . . . . . 32 COMMUNITY-BASED DISTRIBUTOR 33 COMMUNITY HEALTH WORKER/ CHW . . . . . 34 FRIEND/RELATIVE . . . . . 35 OTHER _____ 96 (SPECIFY)	
316	CHECK 304: CIRCLE METHOD CODE: IF MORE THAN ONE METHOD CODE CIRCLED IN 304, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	IUD . . . . . 03 INJECTABLES . . . . . 04 IMPLANTS . . . . . 05 PILL . . . . . 06 MALE CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 LACTATIONAL AMEN. METHOD . . . . . 11 RHYTHM METHOD 12	 → 323 → 320 → 326 → 326
317	At that time, were you told about side effects or problems you might have with the method?	YES . . . . . 1 NO 2	→ 319
317A	When you got sterilized, were you told about side effects or problems you might have with the method?		
318	Were you ever told by a health or family planning worker about side effects or problems you might have with the method?	YES . . . . . 1 NO 2	 → 320

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
319	Were you told what to do if you experienced side effects or problems?	YES . . . . . 1 NO 2	
320	CHECK 317: CODE '1' CIRCLED a) At that time, were you told about other methods of family planning that you could use? CODE '1' NOT CIRCLED b) When you obtained (CURRENT METHOD FROM 314) from (SOURCE OF METHOD FROM 307 OR 315), were you told about other methods of family planning that you could use?	YES . . . . . 1 NO 2	→ 322
321	Were you ever told by a health or family planning worker about other methods of family planning that you could use?	YES . . . . . 1 NO 2	
322	CHECK 304: CIRCLE METHOD CODE: IF MORE THAN ONE METHOD CODE CIRCLED IN 304, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	FEMALE STERILIZATION . . . . . 01 MALE STERILIZATION . . . . . 02 IUD . . . . . 03 INJECTABLES . . . . . 04 IMPLANTS . . . . . 05 PILL . . . . . 06 MALE CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 LACTATIONAL AMEN. METHOD . . . . . 11 RHYTHM METHOD . . . . . 12 WITHDRAWAL . . . . . 13 OTHER MODERN METHOD . . . . . 95 OTHER TRADITIONAL METHOD . . . 96	→ 326 → 326
323	Where did you obtain (CURRENT METHOD) the last time? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL . . . . . 11 GOVT. HEALTH CENTER . . . . . 12 GOVT. DISPENSARY . . . . . 13 OTHER PUBLIC SECTOR _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . 21 PHARMACY/CHEMIST . . . . . 22 NURSING/MATERNITY HOME . . . . . 23 FAITH-BASED, CHURCH, MISSION HOSPITAL / CLINIC . . . . . 24 FAMILY OPTIONS/FHOK CLINIC . . . 25 OTHER PRIVATE MEDICAL SECTOR _____ 26 (SPECIFY) OTHER SOURCE SHOP . . . . . 31 MOBILE CLINIC . . . . . 32 COMMUNITY-BASED DISTRIBUTOR 33 COMMUNITY HEALTH WORKER/ CHW . . . . . 34 FRIEND/RELATIVE . . . . . 35 OTHER _____ 96 (SPECIFY)	→ 326
324	Do you know of a place where you can obtain a method of family planning?	YES . . . . . 1 NO 2	→ 326

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
325	Where is that? Any other place? 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(S))	PUBLIC SECTOR GOVT. HOSPITAL . . . . . A GOVT. HEALTH CENTER . . . . . B GOVT. DISPENSARY . . . . . C OTHER PUBLIC SECTOR _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . E PHARMACY/CHEMIST . . . . . F NURSING/MATERNITY HOME . . . . . G FAITH-BASED, CHURCH, MISSION HOSPITAL / CLINIC . . . . . H FAMILY OPTIONS/FHOK CLINIC . . . I OTHER PRIVATE MEDICAL SECTOR _____ J (SPECIFY) OTHER SOURCE SHOP . . . . . K MOBILE CLINIC . . . . . L COMMUNITY-BASED DISTRIBUTOR M COMMUNITY HEALTH WORKER/ CHW . . . . . N FRIEND/RELATIVE . . . . . O OTHER _____ X (SPECIFY)	
326	In the last 12 months, were you visited by a fieldworker who talked to you about family planning?	YES . . . . . 1 NO 2	
327	In the last 12 months, have you visited a health facility for care for yourself (or your children)?	YES . . . . . 1 NO 2	→ 401
328	Did any staff member at the health facility speak to you about family planning methods?	YES . . . . . 1 NO 2	

401	CHECK 224: ONE OR MORE BIRTHS IN 2009 OR LATER ☐ ↓ NO BIRTHS IN 2009 OR LATER ☐ → 556			
	CHECK 215: ENTER IN THE TABLE THE BIRTH HISTORY NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 2009 OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES).			
402	Now I would like to ask some questions about your children born in the last five years. (We will talk about each separately.)			
403	BIRTH HISTORY NUMBER FROM 212 IN BIRTH HISTORY	LAST BIRTH BIRTH HISTORY NUMBER ☐☐	NEXT-TO-LAST BIRTH BIRTH HISTORY NUMBER ☐☐	SECOND-FROM-LAST BIRTH BIRTH HISTORY NUMBER ☐☐
404	FROM 212 AND 216	NAME _____ LIVING ☐ ↓ DEAD ☐ ↓	NAME _____ LIVING ☐ ↓ DEAD ☐ ↓	NAME _____ LIVING ☐ ↓ DEAD ☐ ↓
405	When you got pregnant with (NAME), did you want to get pregnant at that time?	YES . . . . . 1 (SKIP TO 408) ← NO 2	YES . . . . . 1 (SKIP TO 430) ← NO 2	YES . . . . . 1 (SKIP TO 430) ← NO 2
406	Did you want to have a baby later on, or did you not want any (more) children?	LATER . . . . . 1 NO MORE . . . . . 2 (SKIP TO 408) ←	LATER . . . . . 1 NO MORE . . . . . 2 (SKIP TO 430) ←	LATER . . . . . 1 NO MORE . . . . . 2 (SKIP TO 430) ←
407	How much longer did you want to wait?	MONTHS . .1 ☐☐ YEARS . . 2 ☐☐ DON'T KNOW . . . 998	MONTHS . .1 ☐☐ YEARS . . 2 ☐☐ DON'T KNOW . . . 998	MONTHS . .1 ☐☐ YEARS . . 2 ☐☐ DON'T KNOW . . . 998
408	Did you see anyone for antenatal care for this pregnancy?	YES . . . . . 1 (SKIP TO 409) ← NO 2		
408A	What are the reasons for not receiving antenatal care for this pregnancy? RECORD ALL MENTIONED	DISTANCE . . . . . A COST . . . . . B TOO MUCH WORK . C HUSBAND REFUSED . . . . . D RELIGIOUS REASONS . . . E OTHER _____ X (SPECIFY) (SKIP TO 415) ←		
409	Whom did you see? Anyone else? PROBE TO IDENTIFY EACH TYPE OF PERSON AND RECORD ALL MENTIONED.	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE . B OTHER PERSON COMMUNITY HEALTH WORKER . . . C TRADITIONAL BIRTH ATTENDANT . D OTHER _____ X (SPECIFY)		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
410	Where did you receive antenatal care for this pregnancy? Anywhere else? 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(S))	HOME YOUR HOME . . . A OTHER HOME . . . B PUBLIC SECTOR GOVT. HOSPITAL . C GOVT. HEALTH CENTER . . . . . D GOVT. DISPENSARY . E OTHER PUBLIC SECTOR _____ F (SPECIFY) PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . G FAITH-BASED, CHURCH, HOSP. / CLINIC . . . . . H NURSING / MATERNITY HOME . . . . . I OTHER PRIVATE MED. SECTOR _____ J (SPECIFY) OTHER _____ X (SPECIFY)		
411	How many months pregnant were you when you first received antenatal care for this pregnancy?	MONTHS . . . ☐☐ DON'T KNOW 98		
412	How many times did you receive antenatal care during this pregnancy?	NUMBER OF TIMES . ☐☐ DON'T KNOW 98		
413	As part of your antenatal care during this pregnancy, were any of the following done at least once:	YES NO		
	a) Was your blood pressure measured?	a) BP 1 2		
	b) Did you give a urine sample?	b) URINE 1 2		
	c) Did you give a blood sample?	c) BLOOD . . . 1 2		
	d) Were you weighed?	d) WEIGHT . . . 1 2		
	e) Was your height measured?	e) HEIGHT . . . 1 2		
413A	Were you given any information or counselled about breastfeeding?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
413B	Were you given any information or counselled about iron tablets, iron syrup, or iron and folic acid supplementation?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
414	During (any of) your antenatal care visit(s), were you told about things to look out for that might suggest problems with the pregnancy?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
414A	During any of your antenatal care visits, were you asked about your family planning needs after delivery?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
415	During this pregnancy, were you given an injection in the arm to prevent the baby from getting tetanus, that is, convulsions after birth?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 418) DON'T KNOW 8		
416	During this pregnancy, how many times did you get a tetanus injection?	TIMES . . . . . ☐ DON'T KNOW 8		
417	CHECK 416:	2 OR MORE TIMES (SKIP TO 421) OTHER		
418	At any time before this pregnancy, did you receive any tetanus injections?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 421) DON'T KNOW . . . 8		
419	Before this pregnancy, how many times did you receive a tetanus injection? IF 7 OR MORE TIMES, RECORD '7'.	TIMES . . . . . ☐ DON'T KNOW 8		
420	How many years ago did you receive the last tetanus injection before this pregnancy?	YEARS AGO . . . . . ☐☐		
421	During this pregnancy, were you given or did you buy any iron tablets, iron syrup, or iron and folic acid supplements? SHOW TABLETS/SYRUP.	YES . . . . . 1 NO . . . . . 2 (SKIP TO 423) DON'T KNOW 8		
422	During the whole pregnancy, for how many days did you take the tablets, syrup, or supplement? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER OF DAYS.	DAYS . ☐☐☐ DON'T KNOW . . . 998		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
423	During this pregnancy, did you take any drug for intestinal worms?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
424	During this pregnancy, did you take any drugs to keep you from getting malaria?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 430) ← DON'T KNOW 8		
425	What drugs did you take? RECORD ALL MENTIONED. IF TYPE OF DRUG IS NOT DETERMINED, SHOW TYPICAL ANTIMALARIAL DRUGS TO RESPONDENT.	SP/FANSIDAR . . . . . A CHLOROQUINE . . . B OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z		
426	CHECK 425: SP/FANSIDAR TAKEN FOR MALARIA PREVENTION.	CODE 'A' CIRCLED → (SKIP TO 430) ← CODE 'A' NOT CIRCLED →		
427	How many times did you take (SP/Fansidar) during this pregnancy?	TIMES		
428	CHECK 409: ANTENATAL CARE FROM HEALTH PERSONNEL DURING THIS PREGNANCY	CODE 'A', OR 'B' CIRCLED → (SKIP TO 430) ← OTHER →		
429	Did you get the (SP/Fansidar) during any antenatal care visit, during another visit to a health facility or from another source?	ANTENATAL VISIT . 1 ANOTHER FACILITY VISIT . . . . . 2 OTHER SOURCE . . . 6		
430	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 DON'T KNOW 8	VERY LARGE . . . . . 1 LARGER THAN AVERAGE . . . . . 2 AVERAGE . . . . . 3 SMALLER THAN AVERAGE . . . . . 4 VERY SMALL . . . . . 5 DON'T KNOW 8	VERY LARGE . . . . . 1 LARGER THAN AVERAGE . . . . . 2 AVERAGE . . . . . 3 SMALLER THAN AVERAGE . . . . . 4 VERY SMALL . . . . . 5 DON'T KNOW 8
431	Was (NAME) weighed at birth?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 432A) ← DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 432A) ← DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 432A) ← DON'T KNOW 8

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
432	How much did (NAME) weigh? RECORD WEIGHT IN KILOGRAMS FROM MOTHER AND CHILD HEALTH BOOKLET, OR FROM CHILD HEALTH CARD, IF AVAILABLE.	KG FROM CARD 1 ☐☐.☐☐☐ KG FROM RECALL 2 ☐☐.☐☐☐ DON'T KNOW . 99998 (SKIP TO 433)	KG FROM CARD 1 ☐☐.☐☐☐ KG FROM RECALL 2 ☐☐.☐☐☐ DON'T KNOW . 99998 (SKIP TO 433)	KG FROM CARD 1 ☐☐.☐☐☐ KG FROM RECALL 2 ☐☐.☐☐☐ DON'T KNOW . 99998 (SKIP TO 433)
432A	Was (NAME) weighed within two weeks after birth?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
433	Who assisted with the delivery of (NAME)? Anyone else? PROBE FOR THE TYPE(S) OF PERSON(S) AND RECORD ALL MENTIONED. IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY.	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE . B (SKIP TO 434) OTHER PERSON COMMUNITY HLTH WORKER . . . C (SKIP TO 434) TRADITIONAL BIRTH ATTENDANT . . D RELATIVE/FRIEND E OTHER _____ X (SPECIFY) NO ONE ASSISTED Y (SKIP TO 434)	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE . B (SKIP TO 434) OTHER PERSON COMMUNITY HLTH WORKER . . . C (SKIP TO 434) TRADITIONAL BIRTH ATTENDANT . . D RELATIVE/FRIEND E OTHER _____ X (SPECIFY) NO ONE ASSISTED Y (SKIP TO 434)	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE . B (SKIP TO 434) OTHER PERSON COMMUNITY HLTH WORKER . . . D (SKIP TO 434) TRADITIONAL BIRTH ATTENDANT . . D RELATIVE/FRIEND E OTHER _____ X (SPECIFY) NO ONE ASSISTED Y (SKIP TO 434)
433A	What are the reasons you preferred a (Traditional Birth Attendant/relative) in the birth of (NAME)? RECORD ALL MENTIONED	DISTANCE . . . . . A BETTER CARE THAN FACILITY . . . . . B RELIGIOUS REASONS . . . . . C HUSBAND PREFERENCE . . . D OTHER_____ X (SPECIFY)		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
434	Where did you give birth to (NAME)? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	HOME YOUR HOME . . . 11 (SKIP TO 438) OTHER HOME . . . 12 PUBLIC SECTOR GOVT. HOSPITAL . 21 GOVT. HEALTH CENTER . . . . . 22 GOVT. DISPENSARY . 23 OTHER PUBLIC SECTOR _____ 26 (SPECIFY) PRIVATE MED. SECTOR MISSION HOSPITAL/ CLINIC . . . . . 31 PVT. HOSPITAL/ CLINIC . . . . . 32 NURSING/MATERNITY HOME . . . . . 33 OTHER PRIVATE MED. SECTOR _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY) (SKIP TO 438)	HOME YOUR HOME . . . 11 (SKIP TO 448) OTHER HOME . . . 12 PUBLIC SECTOR GOVT. HOSPITAL . 21 GOVT. HEALTH CENTER . . . . . 22 GOVT. DISPENSARY . 23 OTHER PUBLIC SECTOR _____ 26 (SPECIFY) PRIVATE MED. SECTOR MISSION HOSPITAL/ CLINIC . . . . . 31 PVT. HOSPITAL/ CLINIC . . . . . 32 NURSING/MATERNITY HOME . . . . . 33 OTHER PRIVATE MED. SECTOR _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY) (SKIP TO 448)	HOME YOUR HOME . . . 11 (SKIP TO 448) OTHER HOME . . . 12 PUBLIC SECTOR GOVT. HOSPITAL . 21 GOVT. HEALTH CENTER . . . . . 22 GOVT. DISPENSARY . 23 OTHER PUBLIC SECTOR _____ 26 (SPECIFY) PRIVATE MED. SECTOR MISSION HOSPITAL/ CLINIC . . . . . 31 PVT. HOSPITAL/ CLINIC . . . . . 32 NURSING/MATERNITY HOME . . . . . 33 OTHER PRIVATE MED. SECTOR _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY) (SKIP TO 448)
434A	How long after (NAME) was delivered did you stay there? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS . 1 ☐☐ DAYS . 2 ☐☐ WEEKS . 3 ☐☐ DON'T KNOW . . . 998		
435	Was (NAME) delivered by caesarean, that is, did they cut your belly open to take the baby out?	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
436	I would like to talk to you about checks on your health after delivery, for example, someone asking you questions about your health or examining you. Did anyone check on your health while you were still in the facility?	YES . . . . . 1 (SKIP TO 439) NO 2		
437	Did anyone check on your health after you left the facility?	YES . . . . . 1 (SKIP TO 439) NO . . . . . 2 (SKIP TO 442)		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
438	I would like to talk to you about checks on your health after delivery, for example, someone asking you questions about your health or examining you. Did anyone check on your health after you gave birth to (NAME)?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 442)		
439	Who checked on your health at that time? PROBE FOR MOST QUALIFIED PERSON.	HEALTH PERSONNEL DOCTOR . . . . . 11 NURSE/MIDWIFE . 12 OTHER PERSON COMMUNITY HLTH WORKER . . . 21 TRADITIONAL BIRTH ATTENDANT . 22 OTHER_____ 96 (SPECIFY)		
440	How long after delivery did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS . 1 ☐☐ DAYS . 2 ☐☐ WEEKS . 3 ☐☐ DON'T KNOW . . . 998		
440A	Did the person who checked your health after you gave birth discuss with you about family planning?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
442	In the two months after (NAME) was born, did any health care provider or a traditional birth attendant check on his/her health?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 446) DON'T KNOW 8		
443	How many hours, days or weeks after the birth of (NAME) did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HRS AFTER BIRTH . . 1 ☐☐ DAYS AFTER BIRTH . . 2 ☐☐ WKS AFTER BIRTH . . 3 ☐☐ DON'T KNOW . . . 998		
444	Who checked on (NAME)'s health at that time? PROBE FOR MOST QUALIFIED PERSON.	HEALTH PERSONNEL DOCTOR . . . . . 11 NURSE/MIDWIFE . 12 OTHER PERSON COMMUNITY HLTH WORKER . . . 21 TRADITIONAL BIRTH ATTENDANT . 22 OTHER_____ 96 (SPECIFY)		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
445	Where did this first check of (NAME) take place? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	HOME YOUR HOME . . . 11 OTHER HOME . . . 12 PUBLIC SECTOR GOVT. HOSPITAL . 21 GOVT. HEALTH CENTER . . . . . 22 GOVT. DISPENSARY . 23 OTHER PUBLIC _____ 26 (SPECIFY) PRIVATE MED. SECTOR MISSION HOSPITAL / CLINIC . . . . . 31 PVT. HOSPITAL/ CLINIC . . . . . 32 NURSING/MATERNITY HOME . . . . . 33 OTHER PRIVATE MED. _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)		
446	In the first two months after delivery, did you receive a vitamin A dose like (this/any of these)? SHOW COMMON TYPES OF AMPULES/CAPSULES/SYRUPS.	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
447	Has your menstrual period returned since the birth of (NAME)?	YES . . . . . 1 (SKIP TO 449) NO . . . . . 2 (SKIP TO 450)		
448	Did your period return between the birth of (NAME) and your next pregnancy?		YES . . . . . 1 NO . . . . . 2 (SKIP TO 452)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 452)
449	For how many months after the birth of (NAME) did you not have a period?	MONTHS . . . ☐☐ DON'T KNOW 98	MONTHS . . . ☐☐ DON'T KNOW 98	MONTHS . . . ☐☐ DON'T KNOW 98
450	CHECK 226: IS RESPONDENT PREGNANT?	NOT PREG-NANT ☐ PREGNANT OR UNSURE ☐ (SKIP TO 452)		
451	Have you had sexual intercourse since the birth of (NAME)?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 453)		
452	For how many months after the birth of (NAME) did you not have sexual intercourse?	MONTHS . . . ☐☐ DON'T KNOW 98	MONTHS . . . ☐☐ DON'T KNOW 98	MONTHS . . . ☐☐ DON'T KNOW 98

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
453	Did you ever breastfeed (NAME)?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 459B)◄	YES . . . . . 1 NO . . . . . 2 (SKIP TO 459B)◄	YES . . . . . 1 NO . . . . . 2 (SKIP TO 459B)◄
455	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 ☐☐		
456	In the first three days after delivery, was (NAME) given anything to drink other than breast milk?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 458)◄		
457	What was (NAME) given to drink? Anything else? RECORD ALL LIQUIDS MENTIONED.	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 COFFEE . . . . . I HONEY . . . . . J OTHER _____ X (SPECIFY)		
457A	What are the reasons (NAME) was given drinks other than breast milk? Anything else? RECORD ALL MENTIONED	NOT ENOUCH BREAST MILK . . . A BABY CRIED TOO MUCH . . . . . B CULTURAL REASONS . . . . . C WORK-RELATED OBLIGATIONS . . . D WEATHER TOO HOT . . . . . E FIRST MILK NOT GOOD FOR BABIES . . . F OTHER _____ X (SPECIFY)		
458	CHECK 404: IS CHILD LIVING?	LIVING ☐ DEAD ☐ (SKIP TO 459A)◄		
459	Are you still breastfeeding (NAME)?	YES . . . . . 1 (SKIP TO 459C)◄ NO 2		
459A	For how many months did you breastfeed (NAME)?	MONTHS . . . ☐☐ DON'T KNOW . . . 98	MONTHS . . . ☐☐ DON'T KNOW . . . 98	MONTHS . . . ☐☐ DON'T KNOW . . . 98

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
459B	CHECK 404: IS CHILD LIVING?	LIVING ☐ → (SKIP TO 460) DEAD ☐ → (GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501)	LIVING ☐ DEAD ☐ → (GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501)	LIVING ☐ DEAD ☐ → (GO BACK TO 405 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 501)
459C	Was (NAME) breastfed yesterday during the day or at night?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
460	Did (NAME) drink anything from a bottle with a nipple yesterday or last night?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
461		GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501.	GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501.	GO BACK TO 405 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 501.

501 ENTER IN THE TABLE THE BIRTH HISTORY NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 2009 OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES).

		LAST BIRTH	NEXT-TO-LAST BIRTH	SECOND-FROM-LAST BIRTH
502	BIRTH HISTORY NUMBER FROM 212 IN BIRTH HISTORY	BIRTH HISTORY NUMBER	BIRTH HISTORY NUMBER	BIRTH HISTORY NUMBER . . . . .
503	FROM 212 AND 216	NAME _____ LIVING ☐ DEAD ☐ (GO TO 503 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 553)	NAME _____ LIVING ☐ DEAD ☐ (GO TO 503 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 553)	NAME _____ LIVING ☐ DEAD ☐ (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW Q'NNAIRE, OR IF NO MORE BIRTHS, GO TO 553)
504	Do you have a card / child health book where (NAME)'s vaccinations are written down? IF YES: May I see it please?	YES, SEEN . . . . . 1 (SKIP TO 506) ← YES, NOT SEEN . . . . . 2 (SKIP TO 509) ← NO CARD 3	YES, SEEN . . . . . 1 (SKIP TO 506) ← YES, NOT SEEN . . . . . 2 (SKIP TO 509) ← NO CARD 3	YES, SEEN . . . . . 1 (SKIP TO 506) ← YES, NOT SEEN . . . . . 2 (SKIP TO 509) ← NO CARD 3
505	Did you ever have a vaccination card or child health book for (NAME)?	YES . . . . . 1 (SKIP TO 509) ← NO 2	YES . . . . . 1 (SKIP TO 509) ← NO 2	YES . . . . . 1 (SKIP TO 509) ← NO 2

506
(1) COPY DATES FROM THE CARD.
(2) WRITE '44' IN 'DAY' COLUMN IF CARD SHOWS THAT A DOSE WAS GIVEN, BUT NO DATE IS RECORDED.
(3) IF MORE THAN TWO VITAMIN 'A' DOSES, RECORD DATES FOR MOST RECENT AND SECOND MOST RECENT DOSES.

	LAST BIRTH DAY MONTH YEAR		NEXT-TO-LAST BIRTH DAY MONTH YEAR		SECOND-FROM-LAST BIRTH DAY MONTH YEAR	
BCG (AT BIRTH)		BCG		BCG		
POLIO 0 (POLIO GIVEN AT BIRTH)		P0		P0		
OPV 1		P1		P1		
OPV 2		P2		P2		
OPV 3		P3		P3		
DPT, HEPATITIS, HIB, 1st DOSE		D1		D1		
DPT, HEPATITIS, HIB, 2nd DOSE		D2		D2		
DPT, HEPATITIS, HIB, 3rd DOSE		D3		D3		
PNEUMOCOCCAL VACCINE 1		PN1		PN1		
PNEUMOCOCCAL VACCINE 2		PN2		PN2		
PNEUMOCOCCAL VACCINE 3		PN3		PN3		
ROTA VIRUS VACCINE 1		R1		R1		
ROTA VIRUS VACCINE 2		R2		R2		
MEASLES		MEA		MEA		
YELLOW FEVER		YF		YF		
VITAMIN A (MOST RECENT)		VITA1		VITA1		
VITAMIN A (2nd MOST RECENT)		VITA2		VITA2		
AL/MEBENDAZOLE (MOST RECENT)		A/M		A/M		

507	CHECK 506:	BCG TO YELLOW FEVER ALL RECORDED ☐ (GO TO 511) OTHER ☐	BCG TO YELLOW FEVER ALL RECORDED ☐ (GO TO 511) OTHER ☐	BCG TO YELLOW FEVER ALL RECORDED ☐ (GO TO 511) OTHER ☐

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
508	Has (NAME) had any vaccinations that are not recorded on this card, including vaccinations given in a national immunization day campaign? RECORD 'YES' ONLY IF THE RESPONDENT MENTIONS AT LEAST ONE OF THE VACCINATIONS IN 506 THAT ARE NOT RECORDED AS HAVING BEEN GIVEN.	YES . . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 506) (SKIP TO 511) NO . . . . . 2 (SKIP TO 511) DON'T KNOW 8	YES . . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 506) (SKIP TO 511) NO . . . . . 2 (SKIP TO 511) DON'T KNOW 8	YES . . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 506) (SKIP TO 511) NO . . . . . 2 (SKIP TO 511) DON'T KNOW 8
509	Did (NAME) ever have any vaccinations to prevent him/her from getting diseases, including vaccinations received in a national immunization day campaign?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 511) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 511) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 511) DON'T KNOW 8
510	Please tell me if (NAME) had any of the following vaccinations:			
510A	A BCG vaccination against tuberculosis, that is, an injection in the arm or shoulder that usually causes a scar?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
510B	Polio vaccine, that is, drops in the mouth?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510E) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510E) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510E) DON'T KNOW 8
510C	Was the first polio vaccine given in the first two weeks after birth or later?	FIRST 2 WEEKS . . . 1 LATER 2	FIRST 2 WEEKS . . . 1 LATER 2	FIRST 2 WEEKS . . . 1 LATER 2
510D	How many times was the polio vaccine given?	NUMBER OF TIMES . . . . . ☐	NUMBER OF TIMES . . . . . ☐	NUMBER OF TIMES . . . . . ☐
510E	A Pentavalent vaccination, that is, an injection given in the left outer thigh, sometimes at the same time as polio drops?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510F1) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510F1) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510F1) DON'T KNOW 8
510F	How many times was the Pentavalent vaccination given?	NUMBER OF TIMES . . . . . ☐	NUMBER OF TIMES . . . . . ☐	NUMBER OF TIMES . . . . . ☐
510F1	A Pneumococcal vaccination, that is, an injection given in the right outer thigh, sometimes at the same time as polio drops or the Pentavalent vaccination?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510F3) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510F3) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510F3) DON'T KNOW 8
510F2	How many times was the Pneumococcal vaccination given?	NUMBER OF TIMES . . . . . ☐	NUMBER OF TIMES . . . . . ☐	NUMBER OF TIMES . . . . . ☐

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
510F3	A Rota virus vaccination given orally?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510G) ← DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510G) ← DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510G) ← DON'T KNOW 8
510F4	How many times was the Rota virus vaccination given?	NUMBER OF TIMES . . . . . ☐	NUMBER OF TIMES . . . . . ☐	NUMBER OF TIMES . . . . . ☐
510G	A measles injection - that is, a shot in the arm at the age of 9 months or older - to prevent him/her from getting measles?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
510H	A yellow fever injection - that is, a shot in the arm or shoulder at the age of 9 months or older - to prevent him/her from getting yellow fever?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
511	Within the last six months, was (NAME) given a vitamin A dose like (this/any of these)? SHOW COMMON TYPES OF AMPULES/CAPSULES/SYRUPS.	YES . . . . . 1 NO . . . . . 2 (SKIP TO 512) ← DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 512) ← DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 512) ← DON'T KNOW 8
511A	How many times was Vitamin A given in the last six months?	NUMBER OF TIMES . . . . . ☐	NUMBER OF TIMES . . . . . ☐	NUMBER OF TIMES . . . . . ☐
512	In the last seven days, was (NAME) given iron pills, sprinkles with iron, or iron syrup like (this/any of these)? SHOW COMMON TYPES OF PILLS/SPRINKLES/ SYRUPS.	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
513	Was (NAME) given any drug for intestinal worms in the last six months?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
514	Has (NAME) had diarrhoea in the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 525) ← DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 525) ← DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 525) ← DON'T KNOW 8
515	Was there any blood in the stools?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
516	Now I would like to know how much (NAME) was given to drink during the diarrhoea (including breast milk). Was he/she given less than usual to drink, about the same amount, or more than usual to drink? 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 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK . 5 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK . 5 DON'T KNOW 8
517	When (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 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 STOPPED FOOD . . . 5 NEVER GAVE FOOD . 6 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 STOPPED FOOD . . . 5 NEVER GAVE FOOD . 6 DON'T KNOW 8
518	Did you seek advice or treatment for the diarrhoea from any source?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 521B)◄┘	YES . . . . . 1 NO . . . . . 2 (SKIP TO 521B)◄┘	YES . . . . . 1 NO . . . . . 2 (SKIP TO 521B)◄┘
519	Where did you seek advice or treatment? Anywhere else? 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(S))	PUBLIC SECTOR GOVT HOSPITAL A GOVT HEALTH CENTER . . . . . B GOVT DISPENSARY . C OTHER PUBLIC SECTOR _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC . . . . . E PHARMACY . . . F MISSION HOSP./ CLINIC . . . . . G OTHER PRIVATE SECTOR _____ H (SPECIFY) OTHER SOURCE MOBILE CLINIC . I COMMUNITY HLTH WORKER J SHOP . . . . . K TRADITIONAL PRACTITIONER L RELATIVE/FRIEND M OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT HOSPITAL A GOVT HEALTH CENTER . . . . . B GOVT DISPENSARY . C OTHER PUBLIC SECTOR _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC . . . . . E PHARMACY . . . F MISSION HOSP./ CLINIC . . . . . G OTHER PRIVATE SECTOR _____ H (SPECIFY) OTHER SOURCE MOBILE CLINIC . I COMMUNITY HLTH WORKER J SHOP . . . . . K TRADITIONAL PRACTITIONER L RELATIVE/FRIEND M OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT HOSPITAL A GOVT HEALTH CENTER . . . . . B GOVT DISPENSARY . C OTHER PUBLIC SECTOR _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC . . . . . E PHARMACY . . . F MISSION HOSP./ CLINIC . . . . . G OTHER PRIVATE SECTOR _____ H (SPECIFY) OTHER SOURCE MOBILE CLINIC . I COMMUNITY HLTH WORKER J SHOP . . . . . K TRADITIONAL PRACTITIONER L RELATIVE/FRIEND M OTHER _____ X (SPECIFY)

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
520	CHECK 519:	TWO OR MORE CODES CIRCLED ☐ / ONLY ONE CODE CIRCLED ☐ (SKIP TO 521A)	TWO OR MORE CODES CIRCLED ☐ / ONLY ONE CODE CIRCLED ☐ (SKIP TO 521A)	TWO OR MORE CODES CIRCLED ☐ / ONLY ONE CODE CIRCLED ☐ (SKIP TO 521A)
521	Where did you first seek advice or treatment? USE LETTER CODE FROM 519.	FIRST PLACE . . . ☐	FIRST PLACE . . . ☐	FIRST PLACE . . . ☐
521A	How many days after the diarrhoea began did you first seek advice or treatment for (NAME)? IF SAME DAY, RECORD '00'	DAYS . . . . . ☐☐ SKIP TO 521C	DAYS . . . . . ☐☐ SKIP TO 521C	DAYS . . . . . ☐☐ SKIP TO 521C
521B	Why did you not seek advice or treatment? RECORD ALL MENTIONED	EPISODE WAS NOT SERIOUS . . . . . A TOO FAR/NO TRANSPORT . . . B TOO EXPENSIVE . . . C BELIEVE HOME REMEDIES ARE EFFECTIVE . . . . . D NO REASON . . . . . E OTHER _____ X (SPECIFY)	EPISODE WAS NOT SERIOUS . . . . . A TOO FAR/NO TRANSPORT . . . B TOO EXPENSIVE . . . C BELIEVE HOME REMEDIES ARE EFFECTIVE . . . . . D NO REASON . . . . . E OTHER _____ X (SPECIFY)	EPISODE WAS NOT SERIOUS . . . . . A TOO FAR/NO TRANSPORT . . . B TOO EXPENSIVE . . . C BELIEVE HOME REMEDIES ARE EFFECTIVE . . . . . D NO REASON . . . . . E OTHER _____ X (SPECIFY)
521C	Does (NAME) still have diarrhoea?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
522	Was he/she given any of the following to drink at any time since he/she started having the diarrhoea:	YES NO DK	YES NO DK	YES NO DK
	a) A fluid made from a special packet called ORS?	a) FLUID FROM ORS PKT 1 2 8	a) FLUID FROM ORS PKT 1 2 8	a) FLUID FROM ORS PKT 1 2 8
	b) A home-made sugar-salt solution?	b) SUGAR-SALT SOL. 1 2 8	b) SUGAR-SALT SOL. 1 2 8	b) SUGAR-SALT SOL. 1 2 8
	c) Other home-made liquid such as porridge, soup, yoghurt, coconut water, fresh fruit juice, tea, milk, or rice water?	c) HOMEMADE FLUID . . . 1 2 8	c) HOMEMADE FLUID . . . 1 2 8	c) HOMEMADE FLUID . . . 1 2 8
523	Was anything (else) given to treat the diarrhoea?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 525) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 525) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 525) DON'T KNOW 8

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
524	What (else) was given to treat the diarrhoea? Anything else? RECORD ALL TREATMENTS GIVEN.	PILL OR SYRUP ANTIBIOTIC . . . . . A ANTIMOTILITY . . . B ZINC TABLET . . . C OTHER (NOT ANTI-BIOTIC, ANTI-MOTILITY, OR ZINC TABLET) . D UNKNOWN PILL OR SYRUP . . . E INJECTION ANTIBIOTIC . . . . . F NON-ANTIBIOTIC . G UNKNOWN INJECTION . . . H (IV) INTRAVENOUS FLUID . . . . . I HOME REMEDY/ HERBAL MED-ICINE . . . . . J OTHER _____ X (SPECIFY)	PILL OR SYRUP ANTIBIOTIC . . . . . A ANTIMOTILITY . . . B ZINC TABLET . . . C OTHER (NOT ANTI-BIOTIC, ANTI-MOTILITY, OR ZINC TABLET) . D UNKNOWN PILL OR SYRUP . . . E INJECTION ANTIBIOTIC . . . . . F NON-ANTIBIOTIC . G UNKNOWN INJECTION . . . H (IV) INTRAVENOUS FLUID . . . . . I HOME REMEDY/ HERBAL MED-ICINE . . . . . J OTHER _____ X (SPECIFY)	PILL OR SYRUP ANTIBIOTIC . . . . . A ANTIMOTILITY . . . B ZINC TABLET . . . C OTHER (NOT ANTI-BIOTIC, ANTI-MOTILITY, OR ZINC TABLET) . D UNKNOWN PILL OR SYRUP . . . E INJECTION ANTIBIOTIC . . . . . F NON-ANTIBIOTIC . G UNKNOWN INJECTION . . . H (IV) INTRAVENOUS FLUID . . . . . I HOME REMEDY/ HERBAL MED-ICINE . . . . . J OTHER _____ X (SPECIFY)
524A	CHECK 524 GIVEN ZINC TABLETS?	CODE "C" CIRCLED CODE "C" NOT CIRCLED (SKIP TO 525)	CODE "C" CIRCLED CODE "C" NOT CIRCLED (SKIP TO 525)	CODE "C" CIRCLED CODE "C" NOT CIRCLED (SKIP TO 525)
524B	How many days was (NAME) given zinc tablets?	DAYS . . . . . ☐☐ DON'T KNOW 8	DAYS . . . . . ☐☐ DON'T KNOW 8	DAYS . . . . . ☐☐ DON'T KNOW 8
525	Has (NAME) been ill with a fever at any time in the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 527) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 527) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 527) DON'T KNOW 8
526	At any time during the illness, did (NAME) have blood taken from his/her finger or heel for testing?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
527	Has (NAME) had an illness with a cough at any time in the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 530) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 530) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 530) DON'T KNOW 8
528	When (NAME) had an illness with a cough, did he/she breathe faster than usual with short, rapid breaths or have difficulty breathing?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 531) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 531) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 531) DON'T KNOW 8
529	Was the fast or difficult breathing due to a problem in the chest or to a blocked or runny nose?	CHEST ONLY . . . 1 NOSE ONLY . . . . . 2 BOTH . . . . . 3 OTHER _____ 6 (SPECIFY) DON'T KNOW . . . . . 8 (SKIP TO 531)	CHEST ONLY . . . 1 NOSE ONLY . . . . . 2 BOTH . . . . . 3 OTHER _____ 6 (SPECIFY) DON'T KNOW . . . . . 8 (SKIP TO 531)	CHEST ONLY . . . 1 NOSE ONLY . . . . . 2 BOTH . . . . . 3 OTHER _____ 6 (SPECIFY) DON'T KNOW . . . . . 8 (SKIP TO 531)

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
530	CHECK 525: HAD FEVER?	YES ☐ NO OR DK ☐ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 553)	YES ☐ NO OR DK ☐ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 553)	YES ☐ NO OR DK ☐ (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 553)
531	Now I would like to know how much (NAME) was given to drink (including breast milk) during the illness with a (fever/cough). Was he/she given less than usual to drink, about the same amount, or more than usual to drink? 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 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK . 5 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK . 5 DON'T KNOW 8
532	When (NAME) had a (fever/cough), 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 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 STOPPED FOOD . . . 5 NEVER GAVE FOOD . 6 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 STOPPED FOOD . . . 5 NEVER GAVE FOOD . 6 DON'T KNOW 8
533	Did you seek advice or treatment for the illness from any source?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 537)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 537)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 537)

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
534	Where did you seek advice or treatment? Anywhere else? 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(S))	PUBLIC SECTOR GOVT HOSPITAL A GOVT HEALTH CENTER . . . . . B GOVT DISPENSARY . C OTHER PUBLIC SECTOR _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC . . . . . E PHARMACY . . . F MISSION HOSP./ CLINIC . . . . . G OTHER PRIVATE SECTOR _____ H (SPECIFY) OTHER SOURCE MOBILE CLINIC . I COMMUNITY HLTH WORKER J SHOP . . . . . K TRADITIONAL PRACTITIONER L RELATIVE/FRIEND M OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT HOSPITAL A GOVT HEALTH CENTER . . . . . B GOVT DISPENSARY . C OTHER PUBLIC SECTOR _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC . . . . . E PHARMACY . . . F MISSION HOSP./ CLINIC . . . . . G OTHER PRIVATE SECTOR _____ H (SPECIFY) OTHER SOURCE MOBILE CLINIC . I COMMUNITY HLTH WORKER J SHOP . . . . . K TRADITIONAL PRACTITIONER L RELATIVE/FRIEND M OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT HOSPITAL A GOVT HEALTH CENTER . . . . . B GOVT DISPENSARY . C OTHER PUBLIC SECTOR _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC . . . . . E PHARMACY . . . F MISSION HOSP./ CLINIC . . . . . G OTHER PRIVATE SECTOR _____ H (SPECIFY) OTHER SOURCE MOBILE CLINIC . I COMMUNITY HLTH WORKER J SHOP . . . . . K TRADITIONAL PRACTITIONER L RELATIVE/FRIEND M OTHER _____ X (SPECIFY)
535	CHECK 534:	TWO OR MORE CODES CIRCLED ONLY ONE CODE CIRCLED (SKIP TO 536A)	TWO OR MORE CODES CIRCLED ONLY ONE CODE CIRCLED (SKIP TO 536A)	TWO OR MORE CODES CIRCLED ONLY ONE CODE CIRCLED (SKIP TO 536A)
536	Where did you first seek advice or treatment? USE LETTER CODE FROM 534.	FIRST PLACE . . .	FIRST PLACE . . .	FIRST PLACE . . .
536A	How many days after the illness did you first seek advice or treatment for (NAME)? IF THE SAME DAY, RECORD '00'	DAYS	DAYS	DAYS . . . . .
536B	Is (NAME) still sick with a (fever/cough)?	FEVER ONLY . . . . . 1 COUGH ONLY . . . . . 2 BOTH FEVER AND COUGH . . . . . 3 NO, NEITHER . . . . . 4 DON'T KNOW 8	FEVER ONLY . . . . . 1 COUGH ONLY . . . . . 2 BOTH FEVER AND COUGH . . . . . 3 NO, NEITHER . . . . . 4 DON'T KNOW 8	FEVER ONLY . . . . . 1 COUGH ONLY . . . . . 2 BOTH FEVER AND COUGH . . . . . 3 NO, NEITHER . . . . . 4 DON'T KNOW 8

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
537	At any time during the illness, did (NAME) take any drugs for the illness?	YES . . . . . 1 NO . . . . . 2 (GO TO 551A) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (GO TO 551A) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (GO TO 551A) DON'T KNOW 8
538	What drugs did (NAME) take? Any other drugs? RECORD ALL MENTIONED.	ANTIMALARIAL DRUGS SP/FANSIDAR . . . A CHLOROQUINE . B AMODIAQUINE . C QUININE . . . . . D AL/COARTEM . . . E OTHER ANTI-MALARIAL _____ F (SPECIFY) ANTIBIOTIC DRUGS PILL/SYRUP . . . G INJECTION . . . H OTHER DRUGS ASPIRIN . . . . . I ACETAMINOPHEN/ PARACETAMOL J IBUPROFEN . . . K OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	ANTIMALARIAL DRUGS SP/FANSIDAR . . . A CHLOROQUINE . B AMODIAQUINE . C QUININE . . . . . D AL/COARTEM . . . E OTHER ANTI-MALARIAL _____ F (SPECIFY) ANTIBIOTIC DRUGS PILL/SYRUP . . . G INJECTION . . . H OTHER DRUGS ASPIRIN . . . . . I ACETAMINOPHEN/ PARACETAMOL J IBUPROFEN . . . K OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	ANTIMALARIAL DRUGS SP/FANSIDAR . . . A CHLOROQUINE . B AMODIAQUINE . C QUININE . . . . . D AL/COARTEM . . . E OTHER ANTI-MALARIAL _____ F (SPECIFY) ANTIBIOTIC DRUGS PILL/SYRUP . . . G INJECTION . . . H OTHER DRUGS ASPIRIN . . . . . I ACETAMINOPHEN/ PARACETAMOL J IBUPROFEN . . . K OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z
539	CHECK 538: ANY CODE A-G CIRCLED?	YES NO (GO TO 551A)	YES NO (GO TO 551A)	YES NO (GO TO 551A)
539A	Did you already have (NAME OF DRUG FROM 538) at home when the child became ill? ASK SEPARATELY FOR EACH OF THE DRUGS 'A' THROUGH 'G' THAT THE CHILD IS RECORDED AS HAVING TAKEN IN 538 IF YES FOR ANY DRUG, CIRCLE CODE FOR THAT DRUG IF NO FOR ALL DRUGS, CIRCLE 'Y'	ANTIMALARIAL DRUGS SP/FANSIDAR . . . A CHLOROQUINE . B AMODIAQUINE . C QUININE . . . . . D AL/COARTEM . . . E OTHER ANTI-MALARIAL _____ . . . F (SPECIFY) ANTIBIOTIC DRUGS PILL/SYRUP . . . G NO DRUG AT HOME Y	ANTIMALARIAL DRUGS SP/FANSIDAR . . . A CHLOROQUINE . B AMODIAQUINE . C QUININE . . . . . D AL/COARTEM . . . E OTHER ANTI-MALARIAL _____ . . . F (SPECIFY) ANTIBIOTIC DRUGS PILL/SYRUP . . . G NO DRUG AT HOME Y	ANTIMALARIAL DRUGS SP/FANSIDAR . . . A CHLOROQUINE . B AMODIAQUINE . C QUININE . . . . . D AL/COARTEM . . . E OTHER ANTI-MALARIAL _____ . . . F (SPECIFY) ANTIBIOTIC DRUGS PILL/SYRUP . . . G NO DRUG AT HOME Y
540	CHECK 538: SP/FANSIDAR ('A') GIVEN	CODE 'A' CIRCLED CODE 'A' NOT CIRCLED (SKIP TO 542)	CODE 'A' CIRCLED CODE 'A' NOT CIRCLED (SKIP TO 542)	CODE 'A' CIRCLED CODE 'A' NOT CIRCLED (SKIP TO 542)

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
541	How long after the fever started did (NAME) first take (SP/Fansidar)?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8
541A	For how many days did (NAME) take the (SP/Fansidar)? IF 7 DAYS OR MORE, WRITE 7.	DAYS . . . . . ☐ DON'T KNOW 8	DAYS . . . . . ☐ DON'T KNOW 8	DAYS . . . . . ☐ DON'T KNOW 8
542	CHECK 538: CHLOROQUINE ('B') GIVEN	CODE 'B' CIRCLED ☐ → (SKIP TO 544) CODE 'B' NOT CIRCLED ☐ → (SKIP TO 544)	CODE 'B' CIRCLED ☐ → (SKIP TO 544) CODE 'B' NOT CIRCLED ☐ → (SKIP TO 544)	CODE 'B' CIRCLED ☐ → (SKIP TO 544) CODE 'B' NOT CIRCLED ☐ → (SKIP TO 544)
543	How long after the fever started did (NAME) first take chloroquine?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8
543A	For how many days did (NAME) take the chloroquine? IF 7 DAYS OR MORE, WRITE 7.	DAYS . . . . . ☐ DON'T KNOW 8	DAYS . . . . . ☐ DON'T KNOW 8	DAYS . . . . . ☐ DON'T KNOW 8
544	CHECK 538: AMODIAQUINE ('C') GIVEN	CODE 'C' CIRCLED ☐ → (SKIP TO 546) CODE 'C' NOT CIRCLED ☐ → (SKIP TO 546)	CODE 'C' CIRCLED ☐ → (SKIP TO 546) CODE 'C' NOT CIRCLED ☐ → (SKIP TO 546)	CODE 'C' CIRCLED ☐ → (SKIP TO 546) CODE 'C' NOT CIRCLED ☐ → (SKIP TO 546)
545	How long after the fever started did (NAME) first take amodiaquine?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8
545A	For how many days did (NAME) take the amodiaquine? IF 7 DAYS OR MORE, WRITE 7.	DAYS . . . . . ☐ DON'T KNOW 8	DAYS . . . . . ☐ DON'T KNOW 8	DAYS . . . . . ☐ DON'T KNOW 8
546	CHECK 538: QUININE ('D') GIVEN	CODE 'D' CIRCLED ☐ → (SKIP TO 548) CODE 'D' NOT CIRCLED ☐ → (SKIP TO 548)	CODE 'D' CIRCLED ☐ → (SKIP TO 548) CODE 'D' NOT CIRCLED ☐ → (SKIP TO 548)	CODE 'D' CIRCLED ☐ → (SKIP TO 548) CODE 'D' NOT CIRCLED ☐ → (SKIP TO 548)

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
547	How long after the fever started did (NAME) first take quinine?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8
547A	For how many days did (NAME) take the quinine? IF 7 DAYS OR MORE, WRITE 7.	DAYS . . . . . ☐ DON'T KNOW 8	DAYS . . . . . ☐ DON'T KNOW 8	DAYS . . . . . ☐ DON'T KNOW 8
548	CHECK 538: ARTEMISININ+LUMEFANTRINE (AL/COARTEM) ('E') GIVEN	CODE 'E' CIRCLED / CODE 'E' NOT CIRCLED (SKIP TO 550)	CODE 'E' CIRCLED / CODE 'E' NOT CIRCLED (SKIP TO 550)	CODE 'E' CIRCLED / CODE 'E' NOT CIRCLED (SKIP TO 550)
549	How long after the fever started did (NAME) first take AL/Coartem?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8
549A	For how many days did (NAME) take AL/Coartem? IF 7 DAYS OR MORE, WRITE 7.	DAYS . . . . . ☐ DON'T KNOW 8	DAYS . . . . . ☐ DON'T KNOW 8	DAYS . . . . . ☐ DON'T KNOW 8
550	CHECK 538: OTHER ANTIMALARIAL ('F') GIVEN	CODE 'F' CIRCLED / CODE 'F' NOT CIRCLED (GO TO 551A)	CODE 'F' CIRCLED / CODE 'F' NOT CIRCLED (GO TO 551A)	CODE 'F' CIRCLED / CODE 'F' NOT CIRCLED (GO TO 551A)
551	How long after the fever started did (NAME) first take (OTHER ANTIMALARIAL)?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
551A	CHECK 525: HAD FEVER?	YES / NO OR DK (GO TO 552)	YES / NO OR DK (GO TO 552)	YES / NO OR DK (GO TO 552)
551B	Was anything else done about (NAME'S) fever?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 552) DON'T KNOW . . . 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 552) DON'T KNOW . . . 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 552) DON'T KNOW . . . 8
551C	What was done about (NAME'S) fever?	CONSULTED TRAD'L HEALER . A GAVE WARM SPONGING . . . . . B GAVE HERBS . . . . . C OTHER X	CONSULTED TRAD'L HEALER . A GAVE WARM SPONGING . . . . . B GAVE HERBS . . . . . C OTHER X	CONSULTED TRAD'L HEALER . A GAVE WARM SPONGING . . . . . B GAVE HERBS . . . . . C OTHER X
552		GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 553.	GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 553.	GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 553.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
553	CHECK 215 AND 218, ALL ROWS: NUMBER OF CHILDREN BORN IN 2009 OR LATER LIVING WITH THE RESPONDENT ONE OR MORE ☐ NONE ☐ → 556 RECORD NAME OF YOUNGEST CHILD LIVING WITH HER AND CONTINUE WITH 554 _____ (NAME)		
554	The last time (NAME FROM 553) passed stools, what was done to dispose of the stools?	CHILD USED TOILET OR LATRINE . . . 01 PUT/RINSED INTO TOILET OR LATRINE . . . . . 02 PUT/RINSED INTO DRAIN OR DITCH . . . . . 03 THROWN INTO GARBAGE . . . . . 04 BURIED . . . . . 05 LEFT IN THE OPEN . . . . . 06 OTHER _____ 96 (SPECIFY)	
554A	When a child is ill, what signs of illness would tell you that he or she should be taken to a health facility or health worker? RECORD ALL MENTIONED	NOT ABLE TO DRINK/BREASTFEED . A FEVER, SHIVERING . . . . . B REPEATED VOMITING . . . . . C DIARRHOEA . . . . . D BLOOD IN STOOLS . . . . . E FAST BREATHING . . . . . F CONVULSIONS . . . . . G WEAKNESS . . . . . H GETTING SICKER . . . . . I OTHER _____ X (SPECIFY)	
555	CHECK 522(a), ALL COLUMNS: NO CHILD RECEIVED FLUID FROM ORS PACKET ☐ ANY CHILD RECEIVED FLUID FROM ORS PACKET ☐ → 556B		
556	Have you ever heard of a special product called ORS you can get for the treatment of diarrhoea?	YES . . . . . 1 NO . . . . . 2 → 556B	
556A	Where did you get this information? RECORD ALL MENTIONED	HEALTH WORKERS IN A PUBLIC HOSPITAL . . . . . A HEALTH WORKERS IN A PRIVATE HOSPITAL . . . . . B MINISTRY OF HEALTH THROUGH RADIO, TV, POSTERS . . . . . C COMMUNITY HEALTH WORKER/CHW D FRIENDS OR RELATIVES . . . . . E OTHER _____ X (SPECIFY)	
556B	CHECK 524 ALL COLUMNS: 524 ALL COLUMNS BLANK, OR CODE "C" NOT CIRCLED ZINC TABLETS NOT GIVEN ☐ CODE "C" CIRCLED ANY CHILD RECEIVED ZINC TABLETS ☐ → 557		
556C	Have you ever heard of zinc tablets which you can get for the treatment of diarrhoea?	YES . . . . . 1 NO . . . . . 2 → 557	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
556D	Where did you get this information? RECORD ALL MENTIONED	HEALTH WORKERS IN A PUBLIC HOSPITAL . . . . . A HEALTH WORKERS IN A PRIVATE HOSPITAL . . . . . B MINISTRY OF HEALTH THROUGH RADIO, TV, POSTERS . . . . . C COMMUNITY HEALTH WORKER/CHW D FRIENDS OR RELATIVES . . . . . E OTHER _____ X (SPECIFY)	
557	CHECK 215 AND 218, ALL ROWS: NUMBER OF CHILDREN BORN IN 2012 OR LATER LIVING WITH THE RESPONDENT ONE OR MORE ☐ NONE ☐ → 601 RECORD NAME OF YOUNGEST CHILD LIVING WITH HER AND CONTINUE WITH 558 _____ (NAME)		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
558	Now I would like to ask you about liquids or foods that (NAME FROM 557) had yesterday during the day or at night. I am interested in whether your child had the item I mention even if it was combined with other foods. Did (NAME FROM 557) (drink/eat):		
	a) Plain water?	**a)** YES 1 NO 2 DK 8	
	b) Juice or juice drinks?	**b)** 1 2 8	
	c) Clear broth?	**c)** 1 2 8	
	d) Milk such as tinned, powdered, or fresh animal milk? IF YES: How many times did (NAME) drink milk? IF 7 OR MORE TIMES, RECORD '7'.	**d)** 1 2 8 NUMBER OF TIMES DRANK MILK ☐	
	e) Infant formula? IF YES: How many times did (NAME) drink infant formula? IF 7 OR MORE TIMES, RECORD '7'.	**e)** 1 2 8 NUMBER OF TIMES DRANK FORMULA ☐	
	f) Any other liquids?	**f)** 1 2 8	
	g) Yogurt? IF YES: How many times did (NAME) eat yogurt? IF 7 OR MORE TIMES, RECORD '7'.	**g)** 1 2 8 NUMBER OF TIMES ATE YOGURT ☐	
	h) Any fortified baby food like Cerelac?	**h)** 1 2 8	
	i) Maize, rice, wheat, porridge, sorghum, bread, or other foods made from grains?	**i)** 1 2 8	
	j) Pumpkin, carrots, squash or yellow sweet potatoes that are yellow or orange inside?	**j)** 1 2 8	
	k) Irish potatoes, yams, cassava, white sweet potatoes, or any other foods made from roots?	**k)** 1 2 8	
	l) Sukumu wiki or any dark green, leafy vegetables?	**l)** 1 2 8	
	m) Ripe mangoes, pawpaw, guava?	**m)** 1 2 8	
	n) Any other fruits or vegetables?	**n)** 1 2 8	
	o) Liver, kidney, heart or other organ meats?	**o)** 1 2 8	
	p) Any meat, such as beef, pork, lamb, goat, chicken, or duck?	**p)** 1 2 8	
	q) Eggs?	**q)** 1 2 8	
	r) Fresh or dried fish or shellfish?	**r)** 1 2 8	
	s) Any foods made from beans, peas, lentils, or nuts?	**s)** 1 2 8	
	t) Cheese or other food made from milk?	**t)** 1 2 8	
	u) Any other solid, semi-solid, or soft food?	**u)** 1 2 8	
559	CHECK 558 (CATEGORIES "g" THROUGH "u"): NOT A SINGLE "YES" ☐ ↓ AT LEAST ONE "YES" ☐ → 561		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
560	Did (NAME) eat any solid, semi-solid, or soft foods yesterday during the day or at night? IF 'YES' PROBE: What kind of solid, semi-solid or soft foods did (NAME) eat?	YES . . . . . 1 (GO BACK TO 558 TO RECORD FOOD EATEN YESTERDAY) NO 2	→ 601
561	How many times did (NAME FROM 557) eat solid, semi-solid, or soft foods yesterday during the day or at night? IF 7 OR MORE TIMES, RECORD '7'.	NUMBER OF TIMES . . . . . ☐ DON'T KNOW 8	

SECTION 6. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	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	→ 604
602	Have you ever been married or lived together with a man as if married?	YES, FORMERLY MARRIED . . . . . 1 YES, LIVED WITH A MAN . . . . . 2 NO 3	→ 612
603	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED . . . . . 1 DIVORCED . . . . . 2 SEPARATED 3	→ 609
604	Is your (husband/partner) living with you now or is he staying elsewhere?	LIVING WITH HER . . . . . 1 STAYING ELSEWHERE 2	
605	RECORD THE HUSBAND'S/PARTNER'S NAME AND LINE NUMBER FROM THE HOUSEHOLD QUESTIONNAIRE. IF HE IS NOT LISTED IN THE HOUSEHOLD, RECORD '00'.	NAME _____ LINE NO.	
606	Does your (husband/partner) have other wives or does he live with other women as if married?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 609
607	Including yourself, in total, how many wives or live-in partners does he have?	TOTAL NUMBER OF WIVES AND LIVE-IN PARTNERS . . . . . DON'T KNOW 98	
608	Are you the first, second, … wife?	RANK	
609	Have you been married or lived with a man only once or more than once?	ONLY ONCE . . . . . 1 MORE THAN ONCE 2	
610	CHECK 609: MARRIED/ LIVED WITH A MAN ONLY ONCE → a) In what month and year did you start living with your (husband/partner)? MARRIED/ LIVED WITH A MAN MORE THAN ONCE → b) Now I would like to ask about your first (husband/partner). In what month and year did you start living with him?	MONTH . . . . . DON'T KNOW MONTH . . . . . 98 YEAR . . . . . DON'T KNOW YEAR 9998	→ 611A
611	How old were you when you first started living with him?	AGE	
611A	When you got married or lived with a man, was it your choice or was it arranged?	OWN CHOICE . . . . . 1 ARRANGED 2	
611B	When you first got married or lived with a man, was the man older than you, younger than you, or the same age as you?	OLDER . . . . . 1 YOUNGER . . . . . 2 ABOUT THE SAME AGE . . . . . 3 DON'T KNOW/DON'T REMEMBER . . . 8	
612	CHECK FOR THE PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		
613	Now I would like to ask some questions about sexual activity in order to gain a better understanding of some important life issues. How old were you when you had sexual intercourse for the very first time?	NEVER HAD SEXUAL INTERCOURSE . . . . . 00 AGE IN YEARS . . . . . FIRST TIME WHEN STARTED LIVING WITH (FIRST) HUSBAND/PARTNER 95	→ 628

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
613A	CHECK 103: AGE 15-24 ☐ ↓ AGE 25-49 ☐ →		614
613B	The first time you had sexual intercourse, was a condom used?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/DON'T REMEMBER . . . 8	
613C	How old was the person you first had sexual intercourse with?	AGE OF PARTNER ☐☐ DON'T KNOW 98	
614	Now I would like to ask you some questions about your recent sexual activity. Let me assure you again that your answers are completely confidential and will not be told to anyone. If we should come to any question that you don't want to answer, just let me know and we will go to the next question.		
615	When was the last time you had sexual intercourse? IF LESS THAN 12 MONTHS, ANSWER MUST BE RECORDED IN DAYS, WEEKS OR MONTHS. 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 ☐☐	→ 627

		LAST SEXUAL PARTNER	SECOND-TO-LAST SEXUAL PARTNER	THIRD-TO-LAST SEXUAL PARTNER
616	When was the last time you had sexual intercourse with this person?		DAYS AGO . 1 WEEKS AGO . 2 MONTHS AGO . 3	DAYS AGO . 1 WEEKS AGO . 2 MONTHS AGO . 3
617	The last time you had sexual intercourse (with this second/third person), was a condom used?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 619)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 619)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 619)
617A	What is the main reason you used a condom on that occasion?	PREVENT STD/HIV . 1 AVOID PREGNANCY 2 BOTH PREVENT STD/HIV AND PREGNANCY 3 DID NOT TRUST PARTNER /HE MAY HAVE OTHER PARTNERS . . . . . 4 PARTNER WANTED TO USE . . . . . 5 OTHER_____ 6 (SPECIFY)	PREVENT STD/HIV . 1 AVOID PREGNANCY 2 BOTH PREVENT STD/HIV AND PREGNANCY 3 DID NOT TRUST PARTNER /HE MAY HAVE OTHER PARTNERS . . . . . 4 PARTNER WANTED TO USE . . . . . 5 OTHER_____ 6 (SPECIFY)	PREVENT STD/HIV . 1 AVOID PREGNANCY 2 BOTH PREVENT STD/HIV AND PREGNANCY 3 DID NOT TRUST PARTNER /HE MAY HAVE OTHER PARTNERS . . . . . 4 PARTNER WANTED TO USE . . . . . 5 OTHER_____ 6 (SPECIFY)
618	Was a condom used every time you had sexual intercourse with this person in the last 12 months?	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
619	What was your relationship to this person with whom you had sexual intercourse? IF BOYFRIEND: Were you living together as if married? IF YES, CIRCLE '2'. IF NO, CIRCLE '3'.	HUSBAND . . . . . 1 LIVE-IN PARTNER . 2 BOYFRIEND NOT LIVING WITH RESPONDENT . . . 3 CASUAL ACQUAINTANCE . 4 CLIENT/PROSTITUTE 5 OTHER_____ 6 (SPECIFY) (SKIP TO 622)	HUSBAND . . . . . 1 LIVE-IN PARTNER . 2 BOYFRIEND NOT LIVING WITH RESPONDENT . . . 3 CASUAL ACQUAINTANCE . 4 CLIENT/PROSTITUTE 5 OTHER_____ 6 (SPECIFY) (SKIP TO 622)	HUSBAND . . . . . 1 LIVE-IN PARTNER . 2 BOYFRIEND NOT LIVING WITH RESPONDENT . . . 3 CASUAL ACQUAINTANCE . 4 CLIENT/PROSTITUTE 5 OTHER_____ 6 (SPECIFY) (SKIP TO 622)
620	CHECK 609:	MARRIED ONLY ONCE MARRIED MORE THAN ONCE (SKIP TO 622)	MARRIED ONLY ONCE MARRIED MORE THAN ONCE (SKIP TO 622)	MARRIED ONLY ONCE MARRIED MORE THAN ONCE (SKIP TO 622)
621	CHECK 613: FIRST TIME WHEN STARTED LIVING WITH FIRST HUSBAND (CODE 95)	FIRST TIME WHEN STARTED LIVING WITH FIRST HUSBAND OTHER (SKIP TO 623)	FIRST TIME WHEN STARTED LIVING WITH FIRST HUSBAND OTHER (SKIP TO 623)	FIRST TIME WHEN STARTED LIVING WITH FIRST HUSBAND OTHER (SKIP TO 623)
622	How long ago did you first have sexual intercourse with this (second/third) person?	DAYS AGO . 1 WEEKS AGO . 2 MONTHS AGO . 3 YEARS AGO . 4	DAYS AGO . 1 WEEKS AGO . 2 MONTHS AGO . 3 YEARS AGO . 4	DAYS AGO . 1 WEEKS AGO . 2 MONTHS AGO . 3 YEARS AGO . 4

		LAST SEXUAL PARTNER	SECOND-TO-LAST SEXUAL PARTNER	THIRD-TO-LAST SEXUAL PARTNER
623	How many times during the last 12 months did you have sexual intercourse with this person? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF TIMES IS 95 OR MORE, WRITE '95'.	NUMBER OF TIMES . . . . . ☐☐	NUMBER OF TIMES . . . . . ☐☐	NUMBER OF TIMES . . . . . ☐☐
624	How old is this person?	AGE OF PARTNER . ☐☐ DON'T KNOW 98	AGE OF PARTNER . ☐☐ DON'T KNOW 98	AGE OF PARTNER . ☐☐ DON'T KNOW 98
625	Apart from (this person/these two people), have you had sexual intercourse with any other person in the last 12 months?	YES . . . . . 1 (GO BACK TO 616 IN NEXT COLUMN) NO . . . . . 2 (SKIP TO 626A)	YES . . . . . 1 (GO BACK TO 616 IN NEXT COLUMN) NO . . . . . 2 (SKIP TO 626A)	
626	In total, with how many different people have you had sexual intercourse in the last 12 months? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS 95 OR MORE, WRITE '95'.			NUMBER OF PARTNERS LAST 12 MONTHS . . . ☐☐ DON'T KNOW . . . 98

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
626A	In the last 12 months, have you ever given or received money, gifts, or favors in return for sex?	YES . . . . . 1 NO 2	
627	In total, with how many different people have you had sexual intercourse in your lifetime? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS 95 OR MORE, WRITE '95'.	NUMBER OF PARTNERS IN LIFETIME . . . . . [ ][ ] DON'T KNOW 98	
628	PRESENCE OF OTHERS DURING THIS SECTION	YES NO CHILDREN <10 . . . . . 1 2 MALE ADULTS . . . . . 1 2 FEMALE ADULTS 1 2	
629	Do you know of a place where a person can get male condoms?	YES . . . . . 1 NO 2	→ 632
630	Where is that? Any other place? 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(S))	PUBLIC SECTOR GOVERNMENT HOSPITAL . . . . . A GOVT. HEALTH CENTER . . . . . B GOVT. DISPENSARY . . . . . C OTHER PUBLIC SECTOR _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . E PHARMACY/CHEMIST . . . . . F NURSING/MATERNITY HOME . . . . . G FAITH-BASED, CHURCH, MISSION HOSPITAL / CLINIC . . . . . H FAMILY OPTIONS/FHOK CLINIC . . . I OTHER PRIVATE MEDICAL SECTOR _____ J (SPECIFY) OTHER SOURCE SHOP . . . . . K MOBILE CLINIC . . . . . L COMMUNITY-BASED DISTRIBUTOR M COMMUNITY HEALTH WORKER/ CHW . . . . . N FRIEND/RELATIVE . . . . . O DISPENSER . . . . . P OTHER _____ X (SPECIFY)	
631	If you wanted to, could you yourself get a male condom?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/UNSURE 8	
632	Do you know of a place where a person can get female condoms?	YES . . . . . 1 NO 2	→ 701

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
633	Where is that? Any other place? 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(S))	PUBLIC SECTOR GOVERNMENT HOSPITAL . . . . . A GOVT. HEALTH CENTER . . . . . B GOVT. DISPENSARY . . . . . C OTHER PUBLIC SECTOR _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . E PHARMACY/CHEMIST . . . . . F NURSING/MATERNITY HOME . . . . . G FAITH-BASED, CHURCH, MISSION HOSPITAL / CLINIC . . . . . H FAMILY OPTIONS/FHOK CLINIC . . . I OTHER PRIVATE MEDICAL SECTOR _____ J (SPECIFY) OTHER SOURCE SHOP . . . . . K MOBILE CLINIC . . . . . L COMMUNITY-BASED DISTRIBUTOR M COMMUNITY HEALTH WORKER/ CHW . . . . . N FRIEND/RELATIVE . . . . . O OTHER _____ X (SPECIFY)	
634	If you wanted to, could you yourself get a female condom?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/UNSURE 8	

SECTION 7. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	CHECK 304: NEITHER STERILIZED ☐ HE OR SHE STERILIZED ☐ → 712		
702	CHECK 226: PREGNANT ☐ NOT PREGNANT OR UNSURE ☐ → 704		
703	Now I have some questions about the future. After the child you are expecting now, would you like to have another child, or would you prefer not to have any more children?	HAVE ANOTHER CHILD . . . . . 1 NO MORE . . . . . 2 UNDECIDED/DON'T KNOW 8	→ 705 → 711
704	Now I have 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 CAN'T GET PREGNANT . 3 UNDECIDED/DON'T KNOW 8	→ 707 → 712 → 710
705	CHECK 226: NOT PREGNANT OR UNSURE ☐ a) How long would you like to wait from now before the birth of (a/another) child? PREGNANT ☐ b) After the birth of the child you are expecting now, how long would you like to wait before the birth of another child?	MONTHS . . . . . 1 ☐☐ YEARS . . . . . 2 ☐☐ SOON/NOW . . . . . 993 SAYS SHE CAN'T GET PREGNANT . 994 AFTER MARRIAGE . . . . . 995 OTHER _____ (SPECIFY) 996 DON'T KNOW 998	→ 710 → 712 → 710
706	CHECK 226: NOT PREGNANT OR UNSURE ☐ PREGNANT ☐ → 711		
707	CHECK 303: USING A CONTRACEPTIVE METHOD? NOT CURRENTLY USING ☐ CURRENTLY USING ☐ → 712		
708	CHECK 705: NOT ASKED ☐ 24 OR MORE MONTHS OR 02 OR MORE YEARS ☐ 00-23 MONTHS OR 00-01 YEAR ☐ → 711		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
709	CHECK 704: WANTS TO HAVE A/ANOTHER CHILD ☐ a) You have said that you do not want (a/another) child soon. Can you tell me why you are not using a method to prevent pregnancy? Any other reason? WANTS NO MORE/ NONE ☐ b) You have said that you do not want any (more) children. Can you tell me why you are not using a method to prevent pregnancy? Any other reason? RECORD ALL REASONS MENTIONED.	NOT MARRIED . . . . . A FERTILITY-RELATED REASONS NOT HAVING SEX . . . . . B INFREQUENT SEX . . . . . C MENOPAUSAL/HYSTERECTOMY . D CAN'T GET PREGNANT . . . . . E NOT MENSTRUATED SINCE LAST BIRTH . . . . . F BREASTFEEDING . . . . . G UP TO GOD/FATALISTIC . . . . . H OPPOSITION TO USE RESPONDENT OPPOSED . . . . . I HUSBAND/PARTNER OPPOSED . . . J OTHERS OPPOSED . . . . . K RELIGIOUS PROHIBITION . . . . . L LACK OF KNOWLEDGE KNOWS NO METHOD . . . . . M KNOWS NO SOURCE . . . . . N METHOD-RELATED REASONS SIDE EFFECTS/HEALTH CONCERNS . . . . . O LACK OF ACCESS/TOO FAR . . . . . P COSTS TOO MUCH . . . . . Q PREFERRED METHOD NOT AVAILABLE . . . . . R NO METHOD AVAILABLE . . . . . S INCONVENIENT TO USE . . . . . T INTERFERES WITH BODY'S NORMAL PROCESSES . . . . . U OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
710	CHECK 303: USING A CONTRACEPTIVE METHOD? NOT ASKED ☐ NO, NOT CURRENTLY USING ☐ YES, CURRENTLY USING ☐ → 712		
711	Do you think you will use a contraceptive method to delay or avoid pregnancy at any time in the future?	YES . . . . . 1 NO . . . . . 2 → 711B DON'T KNOW . . . . . 8 → 712	
711A	What contraceptive method would you prefer to use?	FEMALE STERILIZATION . . . . . 01 MALE STERILIZATION . . . . . 02 IUD . . . . . 03 INJECTABLES . . . . . 04 IMPLANTS . . . . . 05 PILL . . . . . 06 CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 LACTATIONAL AMEN. METHOD . . . . . 09 RHYTHM METHOD . . . . . 10 WITHDRAWAL . . . . . 11 OTHER _____ 96 (SPECIFY) UNSURE 98	→ 712

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
711B	What is the main reason that you think you will not use a contraceptive method at any time in the future?	NOT MARRIED . . . . . 11 FERTILITY-RELATED REASONS INFREQUENT SEX/NO SEX . . . . . 12 MENOPAUSAL/HYSTERECTOMY . 13 SUBFECUND/INFECUND . . . . . 14 WANTS AS MANY CHILDREN AS POSSIBLE . . . . . 15 OPPOSITION TO USE RESPONDENT OPPOSED . . . . . 16 HUSBAND/PARTNER OPPOSED . . . 17 OTHERS OPPOSED . . . . . 18 RELIGIOUS PROHIBITION . . . . . 19 LACK OF KNOWLEDGE KNOWS NO METHOD . . . . . 20 KNOWS NO SOURCE . . . . . 21 METHOD-RELATED REASONS HEALTH CONCERNS . . . . . 22 FEAR OF SIDE EFFECTS . . . . . 23 LACK OF ACCESS/TOO FAR . . . 24 COSTS TOO MUCH . . . . . 25 INCONVENIENT TO USE . . . . . 26 INTERFERES WITH BODY'S NORMAL PROCESSES . . . . . 27 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	
712	CHECK 216: HAS LIVING CHILDREN ☐ → a) If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? NO LIVING CHILDREN ☐ → b) If you could choose exactly the number of children to have in your whole life, how many would that be? PROBE FOR A NUMERIC RESPONSE.	NONE . . . . . 00 → 714 NUMBER . . . . . ☐☐ OTHER _____ 96 → 714 (SPECIFY)	
713	How many of these children would you like to be boys, how many would you like to be girls and for how many would it not matter if it's a boy or a girl?	BOYS GIRLS EITHER NUMBER ☐☐ ☐☐ ☐☐ OTHER _____ 96 (SPECIFY)	
714	In the last few months have you:	YES NO	
	a) Heard about family planning on the radio?	a) RADIO 1 2	
	b) Seen anything about family planning on the television?	b) TELEVISION 1 2	
	c) Read about family planning in a newspaper or magazine?	c) NEWSPAPER OR MAGAZINE . 1 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
715A	In the last 12 months have you:	YES NO	
	a) Heard family planning at public forums, such as Barazas or public gatherings?	a) PUBLIC FORUMS 1 2	
	b) Seen family planning informational material, such as posters, brochures, or stickers?	b) INFORMATIONAL MATERIAL . 1 2	
	c) Been visited by a health worker or health professional to discuss family planning issues?	c) VISITED BY HEALTH WRKER . 1 2	
	d) Received family planning messages through social media platforms, such as Facebook or twitter?	d) SOCIAL MEDIA 1 2	
	e) Received family planning messages through a mobile phone via text or email?	e) MOBILE PHONE 1 2	
	f) Heard political / religious / community leaders talk favorably about family planning?	f) COMMUNITY LEADERS 1 2	
716	CHECK 601: YES, CURRENTLY MARRIED ☐ ↓ YES, LIVING WITH A MAN ☐ ↓ NO, NOT IN UNION ☐ → 801		
716A	Now I want to ask you about your husband's / partner's views on family planning. Do you think that your husband / partner approves or disapproves of couples using a method to avoid pregnancy?	APPROVES . . . . . 1 DISAPPROVES . . . . . 2 DON'T KNOW 8	
716B	How often have you talked to your husband / partner about family planning in the past year?	NEVER . . . . . 1 ONCE OR TWICE . . . . . 2 MORE OFTEN 3	
717	CHECK 303: USING A CONTRACEPTIVE METHOD? CURRENTLY USING ☐ ↓ NOT CURRENTLY USING OR NOT ASKED ☐ → 720		
717A	CHECK 304: CURRENT CONTRACEPTIVE METHOD USED OTHER CODE ☐ ↓ CODE B, G, OR M CIRCLED ☐ → 718		
717B	Does your husband / partner know you are using a method of family planning?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
718	Would you say that using contraception is mainly your decision, mainly your (husband's/partner's) decision, or did you both decide together?	MAINLY RESPONDENT . . . . . 1 MAINLY HUSBAND/PARTNER . . . . . 2 JOINT DECISION . . . . . 3 OTHER _____ 6 (SPECIFY)	
719	CHECK 304: NEITHER STERILIZED ☐ ↓ HE OR SHE STERILIZED ☐ → 801		
720	Does your (husband/partner) want the same number of children that you want, or does he want more or fewer than you want?	SAME NUMBER . . . . . 1 MORE CHILDREN . . . . . 2 FEWER CHILDREN . . . . . 3 DON'T KNOW 8	

SECTION 8. HUSBAND'S BACKGROUND AND WOMAN'S WORK

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	CHECK 601 AND 602: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ ↓ FORMERLY MARRIED/ LIVED WITH A MAN ☐ → 803 NEVER MARRIED AND NEVER LIVED WITH A MAN ☐ → 807		
802	How old was your (husband/partner) on his last birthday?	AGE IN COMPLETED YEARS . ☐☐	
803	Did your (last) (husband/partner) ever attend school?	YES . . . . . 1 NO 2	→ 806
804	What was the highest level of school he attended: primary, vocational, secondary, or higher?	PRIMARY . . . . . 1 POST-PRIMARY/VOCATIONAL . . . . . 2 SECONDARY/ 'A' LEVEL . . . . . 3 COLLEGE (MIDDLE LEVEL) . . . . . 4 UNIVERSITY . . . . . 5 DON'T KNOW 8	→ 806
805	What was the highest (standard/form/year) he completed at that level? IF COMPLETED LESS THAN ONE YEAR AT THAT LEVEL, RECORD '00'.	STANDARD/FORM/YEAR . . . ☐☐ DON'T KNOW 98	
806	CHECK 801: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ ↓ a) What is your (husband's/ partner's) occupation? That is, what kind of work does he mainly do? FORMERLY MARRIED/ LIVED WITH A MAN ☐ ↓ b) What was your (last) (husband's/ partner's) occupation? That is, what kind of work does he mainly do?	☐☐ _____ _____ _____	
807	Aside from your own housework, have you done any work in the last seven days?	YES . . . . . 1 NO 2	→ 811
808	As you know, some women take up jobs for which they are paid in cash or kind. Others sell things, have a small business or work on the family farm or in the family business. In the last seven days, have you done any of these things or any other work?	YES . . . . . 1 NO 2	→ 811
809	Although you did not work in the last seven days, do you have any job or business from which you were absent for leave, illness, vacation, maternity leave, or any other such reason?	YES . . . . . 1 NO 2	→ 811
810	Have you done any work in the last 12 months?	YES . . . . . 1 NO 2	→ 815
811	What is your occupation, that is, what kind of work do you mainly do?	☐☐ _____ _____ _____	
811A	CHECK 811: WORKS IN AGRICULTURE ☐ ↓ DOES NOT WORK IN AGRICULTURE ☐ → 812		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
811B	Do you work mainly on your own land or on family land, or do you work on land that you rent from someone else, or do you work on someone else's land?	OWN LAND . . . . . 1 FAMILY LAND . . . . . 2 RENTED LAND . . . . . 3 SOMEONE ELSE'S LAND . . . . . 4 OTHER _____ 6 (SPECIFY)	
812	Do you do this work for a member of your family, for someone else, or are you self-employed?	FOR FAMILY MEMBER . . . . . 1 FOR SOMEONE ELSE . . . . . 2 SELF-EMPLOYED 3	
813	Do you usually work throughout the year, or do you work seasonally, or only once in a while?	THROUGHOUT THE YEAR . . . . . 1 SEASONALLY/PART OF THE YEAR . 2 ONCE IN A WHILE 3	
814	Are you paid in cash or kind for this work or are you not paid at all?	CASH ONLY . . . . . 1 CASH AND KIND . . . . . 2 IN KIND ONLY . . . . . 3 NOT PAID 4	
815	CHECK 601: CURRENTLY MARRIED/LIVING WITH A MAN ☐ NOT IN UNION ☐		→ 823
816	CHECK 814: CODE 1 OR 2 CIRCLED ☐ OTHER ☐		→ 819
817	Who usually decides how the money you earn will be used: you, your (husband/partner), or you and your (husband/partner) jointly?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . 3 OTHER _____ 6 (SPECIFY)	
818	Would you say that the money that you earn is more than what your (husband/partner) earns, less than what he earns, or about the same?	MORE THAN HIM . . . . . 1 LESS THAN HIM . . . . . 2 ABOUT THE SAME . . . . . 3 HUSBAND/PARTNER HAS NO EARNINGS . . . . . 4 DON'T KNOW 8	→ 820
819	Who usually decides how your (husband's/partner's) earnings will be used: you, your (husband/partner), or you and your (husband/partner) jointly?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . 3 HUSBAND/PARTNER HAS NO EARNINGS . . . . . 4 OTHER _____ 6 (SPECIFY)	
820	Who usually makes decisions about health care for yourself: you, your (husband/partner), you and your (husband/partner) jointly, or someone else?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . 3 SOMEONE ELSE . . . . . 4 OTHER 6	
821	Who usually makes decisions about making major household purchases?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . 3 SOMEONE ELSE . . . . . 4 OTHER 6	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
822	Who usually makes decisions about visits to your family or relatives?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . 3 SOMEONE ELSE . . . . . 4 OTHER 6	
822A	Who usually makes decisions about what food should be cooked each day?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . 3 SOMEONE ELSE . . . . . 4 OTHER 6	
823	Do you own this or any other house either alone or jointly with someone else?	ALONE ONLY . . . . . 1 JOINTLY ONLY . . . . . 2 BOTH ALONE AND JOINTLY . . . . . 3 DOES NOT OWN 4	
824	Do you own any land either alone or jointly with someone else?	ALONE ONLY . . . . . 1 JOINTLY ONLY . . . . . 2 BOTH ALONE AND JOINTLY . . . . . 3 DOES NOT OWN 4	
825	PRESENCE OF OTHERS AT THIS POINT (PRESENT AND LISTENING, PRESENT BUT NOT LISTENING, OR NOT PRESENT)	PRES./ LISTEN. / PRES./ NOT LISTEN. / NOT PRES. CHILDREN < 10 . . . . . 1 2 3 HUSBAND . . . . . 1 2 3 OTHER MALES . . . . . 1 2 3 OTHER FEMALES . . . 1 2 3	
826	In your opinion, is a husband justified in hitting or beating his wife in the following situations: a) If she goes out without telling him? b) If she neglects the children? c) If she argues with him? d) If she refuses to have sex with him? e) If she burns the food?	YES / NO / DK a) GOES OUT . . . . . 1 2 8 b) NEGL. CHILDREN . . . 1 2 8 c) ARGUES . . . . . 1 2 8 d) REFUSES SEX . . . . . 1 2 8 e) BURNS FOOD 1 2 8	

SECTION 9. HIV/AIDS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
901	Now I would like to talk about something else. Have you ever heard of an illness called AIDS?	YES . . . . . 1 NO 2	→ 937
902	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 DON'T KNOW 8	
903	Can people get the AIDS virus from mosquito bites?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
904	Can people reduce their chance of getting the AIDS virus by using a condom every time they have sex?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
904A	Can people reduce their chance of getting the AIDS virus by not having sexual intercourse at all?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
905	Can people get the AIDS virus by sharing food with a person who has AIDS?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
906	Can people get the AIDS virus because of witchcraft or other supernatural means?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
907	Is it possible for a healthy-looking person to have the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
907A	Do you know someone personally who has the virus that causes AIDS or someone who died of AIDS?	YES . . . . . 1 NO 2	
908	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 a) DURING PREGNANCY . 1 2 8 b) DURING DELIVERY . . . 1 2 8 c) BREASTFEEDING . . . 1 2 8	
909	CHECK 908: AT LEAST ONE 'YES' ☐ OTHER ☐		→ 911
910	Are there any special drugs that a doctor or a nurse can give to a woman infected with the AIDS virus to reduce the risk of transmission to the baby?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
911	CHECK 208 AND 215: NO BIRTHS ☐ LAST BIRTH SINCE JANUARY 2012 ☐ LAST BIRTH BEFORE JANUARY 2012 ☐		→ 926 → 926
912	CHECK 408 FOR LAST BIRTH: HAD ANTENATAL CARE ☐ NO ANTENATAL CARE ☐		→ 920
913	CHECK FOR PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
914	During any of the antenatal visits for your last birth were you given any information about:	YES NO DK	
	a) Babies getting the AIDS virus from their mother?	a) AIDS FROM MOTHER . 1 2 8	
	b) Things that you can do to prevent getting the AIDS virus?	b) THINGS TO DO 1 2 8	
	c) Getting tested for the AIDS virus?	c) TESTED FOR AIDS . . . 1 2 8	
915	Were you offered a test for the AIDS virus as part of your antenatal care?	YES . . . . . 1 NO 2	
916	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	→ 920
917	Where was the test done? PROBE TO IDENTIFY THE 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 . . . . . 11 GOVT. HEALTH CENTER\CLINIC . 12 GOVERNMENT DISPENSARY . . . . 13 OTHER PUBLIC SECTOR _____ 18 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . 21 MISSIONARY/CHURCH HOSP./ CLINIC . . . . . 22 FAMILY OPTIONS/FHOK CLINIC . . 23 VCT CENTRE . . . . . 24 NURSING/MATERNITY HOMES . . 25 BLOOD TRANSFUSION SERVICES 26 OTHER PRIVATE MEDICAL SECTOR _____ 27 (SPECIFY) OTHER SOURCE HOME . . . . . 31 CORRECTIONAL FACILITY . . . . . 32 OTHER _____ 96 (SPECIFY)	
918	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	→ 924
919	All women are supposed to receive counseling after being tested. After you were tested, did you receive counseling?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 924
920	CHECK 434 FOR LAST BIRTH: ANY CODE 21-36 CIRCLED ☐ OTHER ☐		→ 926
921	Between the time you went for delivery but before the baby was born, were you offered a test for the AIDS virus?	YES . . . . . 1 NO 2	
922	I don't want to know the results, but were you tested for the AIDS virus at that time?	YES . . . . . 1 NO 2	→ 926
923	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	
924	Have you been tested for the AIDS virus since that time you were tested during your pregnancy?	YES . . . . . 1 NO 2	→ 927
925	How many months ago was your most recent HIV test?	MONTHS AGO . . . . . ☐☐ TWO OR MORE YEARS 95	→ 931A

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
926	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	→ 930
927	How many months ago was your most recent HIV test?	MONTHS AGO . . . . . [ ][ ] TWO OR MORE YEARS 95	
928	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	
929	Where was the test done? PROBE TO IDENTIFY THE 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 . . . . . 11 GOVT. HEALTH CENTER\CLINIC . 12 GOVERNMENT DISPENSARY . . . . 13 OTHER PUBLIC SECTOR _____ 18 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ . . . . 21 MISSIONARY/CHURCH HOSP./ CLINIC . . . . . 22 FAMILY OPTIONS/FHOK CLINIC . . 23 VCT CENTRE . . . . . 24 NURSING/MATERNITY HOMES . . 25 BLOOD TRANSFUSION SERVICES . 26 OTHER PRIVATE MEDICAL SECTOR _____ 27 (SPECIFY) OTHER SOURCE HOME . . . . . 31 CORRECTIONAL FACILITY . . . . . 32 OTHER _____ 96 (SPECIFY)	→ 931A
930	Do you know of a place where people can go to get tested for the AIDS virus?	YES . . . . . 1 NO 2	→ 931A
931	Where is that? Any other place? 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(S))	PUBLIC SECTOR GOVERNMENT HOSPITAL . . . . . A GOVT. HEALTH CENTER\CLINIC . B GOVERNMENT DISPENSARY . . . . C OTHER PUBLIC SECTOR _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ . . . . . E MISSIONARY/CHURCH HOSP./ CLINIC . . . . . F FAMILY OPTIONS/FHOK CLINIC . . G VCT CENTRE . . . . . H NURSING/MATERNITY HOMES . . I BLOOD TRANSFUSION SERVICES . J OTHER PRIVATE MEDICAL SECTOR _____ K (SPECIFY) OTHER _____ X (SPECIFY)	
931A	CHECK 601: CURRENTLY MARRIED/LIVING WITH A MAN ☐ ↓ NOT IN UNION ☐		→ 932

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
931B	Have you ever talked with your (husband / partner) about ways to prevent getting the virus that causes AIDS?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
932	Would you buy fresh vegetables from a shopkeeper or vendor if you knew that this person had the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
933	If a member of your family got infected with the AIDS virus, would you want it to remain a secret or not?	YES, REMAIN A SECRET . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
934	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	
935	In your opinion, if a female teacher has the AIDS virus but is not sick, should she be allowed to continue teaching in the school?	SHOULD BE ALLOWED . . . . . 1 SHOULD NOT BE ALLOWED . . . . . 2 DK/NOT SURE/DEPENDS 8	
936	Should children age 12-14 be taught about using a condom to avoid getting AIDS?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
937	CHECK 901: HEARD ABOUT AIDS ☐ → a) Apart from AIDS, have you heard about other infections that can be transmitted through sexual contact? NOT HEARD ABOUT AIDS ☐ → b) Have you heard about infections that can be transmitted through sexual contact?	YES . . . . . 1 NO 2	→ 938
937A	If a man has a sexually transmitted disease, what symptoms might he have? Any others? RECORD ALL MENTIONED	ABDOMINAL PAIN . . . . . A GENITAL DISCHARGE/DRIPPING . . . B FOUL SMELL/DISCHARGE . . . . . C BURNING PAIN ON URINATION . . . . . D REDNESS/INFLAMATION IN GENITAL AREA . . . . . E SWELLING IN GENITAL AREA . . . . . F GENITAL SORES/ULCERS . . . . . G GENITAL WARTS . . . . . H GENITAL ITCHING . . . . . I BLOOD IN URINE . . . . . J LOSS OF WEIGHT . . . . . K IMPOTENCE/NO ERECTION . . . . . L OTHER _____ (SPECIFY) W OTHER _____ (SPECIFY) X NO SYMPTOMS . . . . . Y DOES NOT KNOW . . . . . Z	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
937B	If a woman has a sexually transmitted disease, what symptoms might she have? Any others? RECORD ALL MENTIONED	ABDOMINAL PAIN . . . . . A GENITAL DISCHARGE/DRIPPING . . . B FOUL SMELL/DISCHARGE . . . . . C BURNING PAIN ON URINATION . . . . . D REDNESS/INFLAMATION IN GENITAL AREA . . . . . E SWELLING IN GENITAL AREA . . . . . F GENITAL SORES/ULCERS . . . . . G GENITAL WARTS . . . . . H GENITAL ITCHING . . . . . I BLOOD IN URINE . . . . . J LOSS OF WEIGHT . . . . . K HARD TO GET PREGNANT . . . . . L OTHER _____ (SPECIFY) W OTHER _____ (SPECIFY) X NO SYMPTOMS . . . . . Y DOES NOT KNOW . . . . . Z	
938	CHECK 613: HAS HAD SEXUAL INTERCOURSE ↓ NEVER HAD SEXUAL INTERCOURSE →		946
939	CHECK 937: HEARD ABOUT OTHER SEXUALLY TRANSMITTED INFECTIONS? YES ↓ NO →		941
940	Now I would like to ask you some questions about your health in the last 12 months. During the last 12 months, have you had a disease which you got through sexual contact?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
941	Sometimes women experience a bad-smelling abnormal genital discharge. During the last 12 months, have you had a bad-smelling abnormal genital discharge?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
942	Sometimes women have a genital sore or ulcer. During the last 12 months, have you had a genital sore or ulcer?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
943	CHECK 940, 941, AND 942: HAS HAD AN INFECTION (ANY 'YES') ↓ HAS NOT HAD AN INFECTION OR DOES NOT KNOW →		946
944	The last time you had (PROBLEM FROM 940/941/942), did you seek any kind of advice or treatment?	YES . . . . . 1 NO 2	→ 945A

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
945	Where did you go? Any other place? 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(S))	PUBLIC SECTOR GOVERNMENT HOSPITAL . . . . . A GOVT. HEALTH CENTRE/CLINIC . . . B GOVT. DISPENSARY . . . . . C OTHER PUBLIC SECTOR _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . E MISSIONARY/CHURCH HOSP/ CLINIC . . . . . F FAMILY OPTIONS/FHOK CLINIC . . . G VCT CENTRE . . . . . H NURSING/MATERNITY HOMES . . . I BLOOD TRANSFUSION SERVICES . J OTHER PRIVATE MEDICAL . . . . . SECTOR _____ K (SPECIFY) OTHER SOURCE SHOP/PHARMACY . . . . . L TRADITIONAL HEALER . . . . . M COMMUNITY HEALTH WORKER/ CHW . . . . . N FRIENDS/RELATIVES . . . . . O OTHER _____ X (SPECIFY)	
945A	When you had (PROBLEM(S) FROM 940/941/942), did you inform the persons with whom you were having sex?	YES, INFORMED ALL PARTNERS . . . 1 INFORMED SOME, NOT ALL . . . . . 2 NO, INFORMED NONE . . . . . 3 DID NOT HAVE A PARTNER 4	→ 946
945B	When you had (PROBLEM(S) FROM 940/941/942), did you do anything to avoid infecting your sexual partner(s)?	YES . . . . . 1 NO 2	→ 946
945C	What did you do to avoid infecting your partner(s)? Did you: a) Use medicine? b) Stop sex? c) Use a condom when having sex?	YES NO a) USE MEDICINE . . . . . 1 2 b) STOP HAVING SEX . . . . . 1 2 c) USE CONDOM 1 2	
946	If a wife knows her husband has a disease that she can get during sexual intercourse, is she justified in asking that they use a condom when they have sex?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
947	Is a wife justified in refusing to have sex with her husband when she knows he has sex with women other than his wives?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
948	CHECK 601: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ ↓ NOT IN UNION ☐		→ 1001
949	Can you say no to your (husband/partner) if you do not want to have sexual intercourse?	YES . . . . . 1 NO . . . . . 2 DEPENDS/NOT SURE 8	
950	Could you ask your (husband/partner) to use a condom if you wanted him to?	YES . . . . . 1 NO . . . . . 2 DEPENDS/NOT SURE 8	

SECTION 10. OTHER HEALTH ISSUES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1001	Now I would like to ask you some other questions relating to health matters. Have you had an injection for any reason in the last 12 months? IF YES: How many injections have you had? IF NUMBER OF INJECTIONS IS 90 OR MORE, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . ☐☐ NONE 00	→ 1003A
1002	Among these injections, how many were administered by a doctor, a nurse, a pharmacist, a dentist, or any other health worker? IF NUMBER OF INJECTIONS IS 90 OR MORE, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . ☐☐ NONE 00	→ 1003A
1003	The last time you got an injection from a health worker, did he/she take the syringe and needle from a new, unopened package?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1003A	Have you ever been told by a doctor or health worker that you have raised blood pressure or hypertension?	YES . . . . . 1 NO 2	
1003B	Have you ever been told by a doctor or health worker that you have raised blood sugar or diabetes?	YES . . . . . 1 NO 2	
1003C	In the past 12 months, have you been involved in a road traffic accident as a driver, passenger, pedestrian, or cyclist?	YES . . . . . 1 NO 2	
1003D	In the past 12 months, were you injured accidentally, not related to a traffic accident?	YES . . . . . 1 NO 2	→ 1003F
1003E	How did the injury happen? RECORD ALL MENTIONED	FALL . . . . . A BURN . . . . . B POISONING . . . . . C CUT . . . . . D NEAR-DROWNING . . . . . E ANIMAL BITE . . . . . F SHOOTING . . . . . G OTHER _____ X (SPECIFY)	
1003F	Have you ever heard of an illness called tuberculosis or TB?	YES . . . . . 1 NO 2	→ 1004
1003G	How does tuberculosis spread from one person to another? PROBE: Any other ways? RECORD ALL MENTIONED	THROUGH THE AIR WHEN COUGHING OR SNEEZING . . . . . A THROUGH SHARING UTENSILS . . . . . B THROUGH TOUCHING A PERSON WITH TB . . . . . C THROUGH FOOD . . . . . D THROUGH SEXUAL CONTACT . . . . . E THROUGH MOSQUITO BITES . . . . . F OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
1004	Do you currently smoke cigarettes?	YES . . . . . 1 NO 2	→ 1006
1005	In the last 24 hours, how many cigarettes did you smoke?	NUMBER OF CIGARETTES . . . . . ☐☐	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1006	Do you currently smoke or use any (other) type of tobacco?	YES . . . . . 1 NO 2	→ 1007A
1007	What (other) type of tobacco do you currently smoke or use? RECORD ALL MENTIONED.	PIPE . . . . . A CHEWING TOBACCO . . . . . B SNUFF . . . . . C WATER PIPE / SHISHA . . . . . D OTHER _____ X (SPECIFY)	
1007A	Do you drink alcohol?	YES . . . . . 1 NO 2	→ 1007C
1007B	During the last two weeks, on how many days did you have at least one alcoholic drink?	NUMBER OF DAYS	
1007C	Are you involved in exercise that causes an increase in your heart rate for at least 10 minutes continuously…: a) At work? b) During other physical activities?	YES NO a) AT WORK . . . . . 1 2 b) OTHER PHYSICAL ACTIVITIES 1 2	
1008	Many different factors can prevent women from getting medical advice or treatment for themselves. When you are sick and want to get medical advice or treatment, is each of the following a big problem or not: a) Getting permission to go to the doctor? b) Getting money needed for advice or treatment? c) The distance to the health facility? d) Not wanting to go alone?	BIG PROB-LEM / NOT A BIG PROB-LEM a) PERMISSION TO GO . 1 2 b) GETTING MONEY . . . 1 2 c) DISTANCE . . . . . 1 2 d) GO ALONE 1 2	
1008A	Now I would like to ask you about women's health. Have you ever heard of cervical cancer?	YES . . . . . 1 NO 2	→1008D
1008B	Have you ever had a test or exam to see if you had cervical cancer?	YES . . . . . 1 NO 2	→1008D
1008C	What type of exam did you have to see if you have cervical cancer?	PAP SMEAR . . . . . A VISUAL INSPECTION (WITH ACETIC ACID (VIA)/ LUGOL'S IODINE (VILI)) . . . . . B DON'T KNOW / NOT SURE X	
1008D	Have you ever examined your breasts to detect or check for breast cancer?	YES . . . . . 1 NO 2	
1008E	Has a doctor or other health professional examined your breasts to detect or check for breast cancer?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1009	Are you covered by any health insurance?	YES . . . . . 1 NO 2	→ 1101
1010	What type of health insurance are you covered by? RECORD ALL MENTIONED.	MUTUAL HEALTH ORGANIZATION/ COMMUNITY-BASED HEALTH INSURANCE . . . . . A HEALTH INSURANCE THROUGH EMPLOYER . . . . . B NATIONAL HEATLH INSURANCE SCHEME . . . . . C PRIVATELY PURCHASED COMMERCIAL HEALTH INSURANCE D PRE-PAYMENT SCHEME . . . . . E OTHER _____ X (SPECIFY)	

NO.		CODING CATEGORIES	SKIP
1101	Now I would like to ask you some questions about your brothers and sisters, that is, all of the children born to your natural mother, including those who are living with you, those living elsewhere and those who have died. How many children did your mother give birth to, including you?	NUMBER OF BIRTHS TO NATURAL MOTHER	
1102	CHECK 1101: TWO OR MORE BIRTHS ↓ / ONLY ONE BIRTH (RESPONDENT ONLY) → 1201		
1103	How many births did your mother have before you were born?	NUMBER OF PRECEDING BIRTHS	

1104	What was the name given to your oldest (next oldest) brother or sister?	(1)	(2)	(3)	(4)	(5)	(6)
		_____	_____	_____	_____	_____	_____
1105	Is (NAME) male or female?	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2
1106	Is (NAME) still alive?	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (2)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (3)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (4)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (5)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (6)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (7)
1107	How old is (NAME)?	GO TO (2)	GO TO (3)	GO TO (4)	GO TO (5)	GO TO (6)	GO TO (7)
1108	How many years ago did (NAME) die?						
1109	How old was (NAME) when he/she died?	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (2)	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (3)	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (4)	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (5)	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (6)	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (7)
1110	Was (NAME) pregnant when she died?	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2
1111	Did (NAME) die during childbirth?	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2
1112	Did (NAME) die within two months after the end of a pregnancy or childbirth?	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2
1113	How many live born children did (NAME) give birth to during her lifetime?						

IF NO MORE BROTHERS OR SISTERS, GO TO 1201.

1104	What was the name given to your oldest (next oldest) brother or sister?	(7) _____	(8) _____	(9) _____	(10) _____	(11) _____	(12) _____
1105	Is (NAME) male or female?	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2
1106	Is (NAME) still alive?	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (8)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (9)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (10)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (11)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (12)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (13)
1107	How old is (NAME)?	GO TO (8)	GO TO (9)	GO TO (10)	GO TO (11)	GO TO (12)	GO TO (13)
1108	How many years ago did (NAME) die?						
1109	How old was (NAME) when he/she died?	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (8)	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (9)	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (10)	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (11)	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (12)	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (13)
1110	Was (NAME) pregnant when she died?	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2
1111	Did (NAME) die during childbirth?	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2
1112	Did (NAME) die within two months after the end of a pregnancy or childbirth?	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2
1113	How many live born children did (NAME) give birth to during her lifetime?						

IF NO MORE BROTHERS OR SISTERS, GO TO NEXT SECTION.

SECTION 12: FISTULA

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1201	Sometimes a woman can have a problem of constant leakage of urine or stool from her vagina during the day and night. This problem usually occurs after a difficult childbirth, but may also occur after a sexual assault or after pelvic surgery. Have you ever experienced a constant leakage of urine or stool from your vagina during the day and night?	YES . . . . . 1 NO 2	→ 1203
1202	Have you ever heard of this problem?	YES . . . . . 1 NO 2	→ 1301
1203	Did this problem start after you delivered a baby or had a stillbirth?	AFTER DELIVERED BABY . . . . . 1 AFTER HAD STILLBIRTH . . . . . 2 NEITHER 3	→ 1205
1204	Did this problem start after a normal labor and delivery, or after a very difficult labor and delivery?	NORMAL LABOR/DELIVERY . . . . . 1 VERY DIFFICULT LABOR/DELIVERY . 2	→ 1206
1205	What do you think caused this problem?	SEXUAL ASSAULT . . . . . 1 PELVIC SURGERY . . . . . 2 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	→ 1207
1206	How many days after (CAUSE OF PROBLEM FROM 1203 OR 1205) did the leakage start?	NUMBER OF DAYS AFTER DELIVERY/OTHER EVENT [ ][ ] (ENTER 90 IF 90 DAYS OR MORE)	
1207	Have you sought treatment for this condition?	YES . . . . . 1 NO 2	→ 1209
1208	Why have you not sought treatment? PROBE AND RECORD ALL MENTIONED.	DO NOT KNOW CAN BE FIXED . . . . . A DO NOT KNOW WHERE TO GO . . . . . B TOO EXPENSIVE . . . . . C TOO FAR . . . . . D POOR QUALITY OF CARE . . . . . E COULD NOT GET PERMISSION . . . . F EMBARRASSMENT . . . . . G PROBLEM DISAPPEARED . . . . . H OTHER _____ X (SPECIFY)	→ 1301
1209	From whom did you last seek treatment?	HEALTH PROFESSIONAL DOCTOR . . . . . 1 NURSE/MIDWIFE . . . . . 2 OTHER PERSON COMMUNITY/VILLAGE HEALTH WORKER . . . . . 3 OTHER _____ 6 (SPECIFY)	
1210	Did you have an operation to fix the problem?	YES . . . . . 1 NO 2	
1211	Did the treatment stop the leakage completely? IF NO: Did the treatment reduce the leakage?	YES, STOPPED COMPLETELY . . . . . 1 NOT STOPPED BUT REDUCED . . . . . 2 NOT STOPPED AT ALL . . . . . 3 DID NOT RECEIVE TREATMENT 4	

SECTION 13: FEMALE GENITAL CUTTING

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1301	Have you ever heard of female circumcision?	YES . . . . . 1 NO 2	→ 1303
1302	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	→ 1401
1303	Have you yourself ever been circumcised?	YES . . . . . 1 NO 2	→ 1309
1304	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 DON'T KNOW 8	→ 1306
1305	Was the genital area just nicked without removing any flesh?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1306	Was your genital area sewn closed?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1307	How old were you when you were circumcised? IF THE RESPONDENT DOES NOT KNOW THE EXACT AGE, PROBE TO GET AN ESTIMATE.	AGE IN COMPLETED YEARS ☐☐ AS A BABY/DURING INFANCY . . . . . 95 DON'T KNOW 98	
1308	Who performed the circumcision?	TRADITIONAL TRAD. CIRCUMCISER . . . . . 11 TRAD. BIRTH ATTENDANT . . . . . 12 OTHER TRAD. _____ (SPECIFY) 16 HEALTH PROFESSIONAL DOCTOR . . . . . 21 NURSE/MIDWIFE . . . . . 22 OTHER HEALTH PROFESSIONAL _____ (SPECIFY) 26 DON'T KNOW 98	
1309	CHECK 213, 215 AND 216: HAS ONE OR MORE LIVING DAUGHTERS BORN IN 1999 OR LATER ☐ ↓ HAS NO LIVING DAUGHTERS BORN IN 1999 OR LATER ☐		→ 1315A

	CHECK 213, 215 AND 216: ENTER IN THE TABLE THE BIRTH HISTORY NUMBER AND NAME OF EACH LIVING DAUGHTER BORN IN 1999 OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE DAUGHTERS. BEGIN WITH THE YOUNGEST DAUGHTER. (IF THERE ARE MORE THAN 3 DAUGHTERS, USE ADDITIONAL QUESTIONNAIRES). READ TO RESPONDENT Now I would like to ask you some questions about your (daughter/daughters).			
1310	BIRTH HISTORY NUMBER AND NAME OF EACH LIVING DAUGHTER BORN IN 1999 OR LATER	YOUNGEST LIVING DAUGHTER BIRTH HISTORY NUMBER ☐☐ NAME _____	NEXT-TO-YOUNGEST LIVING DAUGHTER BIRTH HISTORY NUMBER ☐☐ NAME _____	SECOND-TO-YOUNGEST LIVING DAUGHTER BIRTH HISTORY NUMBER ☐☐ NAME _____
1311	Is (NAME OF DAUGHTER) circumcised?	YES . . . . . 1 NO . . . . . 2 (GO TO 1311 IN NEXT COLUMN; OR IF NO MORE DAUGHTERS, GO TO 1315A)	YES . . . . . 1 NO . . . . . 2 (GO TO 1311 IN NEXT COLUMN; OR IF NO MORE DAUGHTERS, GO TO 1315A)	YES . . . . . 1 NO . . . . . 2 (GO TO 1311 IN FIRST COLUMN OF NEW QUESTIONNAIRE; OR IF NO MORE DAUGHTERS, GO TO 1315A)
1312	How old was (NAME OF DAUGHTER) when she was circumcised? IF THE RESPONDENT DOES NOT KNOW THE AGE, PROBE TO GET AN ESTIMATE.	AGE IN COMPLETED YEARS . . . ☐☐ DON'T KNOW 98	AGE IN COMPLETED YEARS . . . ☐☐ DON'T KNOW 98	AGE IN COMPLETED YEARS . . . ☐☐ DON'T KNOW 98
1313	Was her genital area sewn closed?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
1314	Who performed the circumcision?	TRADITIONAL TRADITIONAL CIRCUMCISER 11 TRAD. BIRTH ATTENDANT 12 OTHER TRAD. _____ 16 (SPECIFY) HEALTH PROFESSIONAL DOCTOR . . . . . 21 NURSE/MIDWIFE 22 OTHER HEALTH PROFESSIONAL _____ 26 (SPECIFY) DON'T KNOW 98	TRADITIONAL TRADITIONAL CIRCUMCISER 11 TRAD. BIRTH ATTENDANT 12 OTHER TRAD. _____ 16 (SPECIFY) HEALTH PROFESSIONAL DOCTOR . . . . . 21 NURSE/MIDWIFE 22 OTHER HEALTH PROFESSIONAL _____ 26 (SPECIFY) DON'T KNOW 98	TRADITIONAL TRADITIONAL CIRCUMCISER 11 TRAD. BIRTH ATTENDANT 12 OTHER TRAD. _____ 16 (SPECIFY) HEALTH PROFESSIONAL DOCTOR . . . . . 21 NURSE/MIDWIFE 22 OTHER HEALTH PROFESSIONAL _____ 26 (SPECIFY) DON'T KNOW 98
1315		GO BACK TO 1311 IN NEXT COLUMN; OR, IF NO MORE DAUGHTERS, GO TO 1315A.	GO BACK TO 1311 IN NEXT COLUMN; OR, IF NO MORE DAUGHTERS, GO TO 1315A.	GO TO 1311 IN FIRST COLUMN OF NEW QUESTIONNAIRE; OR IF NO MORE DAUGHTERS, GO TO 1315A.
1315A	Do you believe that this practice is required by your community?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
1316	Do you believe that this practice is required by your religion?	YES . . . . . 1 NO . . . . . 2 NO RELIGION . . . . . 3 DON'T KNOW 8		
1317	Do you think that female circumcision should be continued, or should it be stopped?	CONTINUED . . . . . 1 STOPPED . . . . . 2 DEPENDS . . . . . 3 DON'T KNOW 8		

SECTION 14: DOMESTIC VIOLENCE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1401	CHECK COVER PAGE: IS WOMAN SELECTED FOR SECTION 14? WOMAN SELECTED FOR THIS SECTION ☐ ↓ WOMAN NOT SELECTED ☐ →		1433
1401A	CHECK FOR PRESENCE OF OTHERS: DO NOT CONTINUE UNTIL PRIVACY IS ENSURED. PRIVACY OBTAINED . . . . . 1 ↓ PRIVACY NOT POSSIBLE . . . . . 2 →		1432
	READ TO THE RESPONDENT Now I would like to ask you questions about some other important aspects of a woman's life. You may find some of these questions very personal. However, your answers are crucial for helping to understand the condition of women in Kenya. Let me assure you that your answers are completely confidential and will not be told to anyone and no one else in your household will know that you were asked these questions.		
1402	CHECK 601 AND 602: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ ↓ FORMERLY MARRIED/ LIVED WITH A MAN (READ IN PAST TENSE AND USE 'LAST' WITH HUSBAND/PARTNER') ☐ ↓ NEVER MARRIED/ NEVER LIVED WITH A MAN ☐ →		1416
1403	First, I am going to ask you about some situations which happen to some women. Please tell me if these apply to your relationship with your (last) (husband/partner)?		
	a) He (is/was) jealous or angry if you (talk/talked) to other men?	a) JEALOUS . . . . . YES 1 NO 2 DK 8	
	b) He frequently (accuses/accused) you of being unfaithful?	b) ACCUSES . . . . . YES 1 NO 2 DK 8	
	c) He (does/did) not permit you to meet your female friends?	c) NOT MEET FRIENDS . YES 1 NO 2 DK 8	
	d) He (tries/tried) to limit your contact with your family?	d) NO FAMILY . . . . . YES 1 NO 2 DK 8	
	e) He (insists/insisted) on knowing where you (are/were) at all times?	e) WHERE YOU ARE . YES 1 NO 2 DK 8	
1404	Now I need to ask some more questions about your relationship with your (last) (husband/partner).		
	A Did your (last) (husband/partner) ever:	**B** How often did this happen during the last 12 months: often, only sometimes, or not at all?	

	EVER	OFTEN	SOMETIMES	NOT IN LAST 12 MONTHS
a) say or do something to humiliate you in front of others?	a) YES 1 → / NO 2 ↓	1	2	3
b) threaten to hurt or harm you or someone you care about?	b) YES 1 → / NO 2 ↓	1	2	3
c) insult you or make you feel bad about yourself?	c) YES 1 → / NO 2 ↓	1	2	3

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1405	A Did your (last) (husband/partner) ever do any of the following things to you: B How often did this happen during the last 12 months: often, only sometimes, or not at all?		

	EVER		OFTEN	SOME-TIMES	NOT IN LAST 12 MONTHS
a) push you, shake you, or throw something at you?	a) YES	1 →	1	2	3
	NO	2 ↓			
b) slap you?	b) YES	1 →	1	2	3
	NO	2 ↓			
c) twist your arm or pull your hair?	c) YES	1 →	1	2	3
	NO	2 ↓			
d) punch you with his fist or with something that could hurt you?	d) YES	1 →	1	2	3
	NO	2 ↓			
e) kick you, drag you, or beat you up?	e) YES	1 →	1	2	3
	NO	2 ↓			
f) try to choke you or burn you on purpose?	f) YES	1 →	1	2	3
	NO	2 ↓			
g) threaten or attack you with a knife, gun, or other weapon?	g) YES	1 →	1	2	3
	NO	2 ↓			
h) physically force you to have sexual intercourse with him when you did not want to?	h) YES	1 →	1	2	3
	NO	2 ↓			
i) physically force you to perform any other sexual acts you did not want to?	i) YES	1 →	1	2	3
	NO	2 ↓			
j) force you with threats or in any other way to perform sexual acts you did not want to?	j) YES	1 →	1	2	3
	NO	2 ↓			

1406	CHECK 1405A (a-j): AT LEAST ONE 'YES' ☐ ↓ NOT A SINGLE 'YES' ☐ →		1409
1407	How long after you first (got married/started living together) with your (last) (husband/partner) did (this/any of these things) first happen? IF LESS THAN ONE YEAR, RECORD '00'.	NUMBER OF YEARS . . . . . ☐☐ BEFORE MARRIAGE/BEFORE LIVING TOGETHER 95	
1408	Did the following ever happen as a result of what your (last) (husband/partner) did to you:		
	a) You had cuts, bruises, or aches?	a) YES . . . . . 1 NO 2	
	b) You had eye injuries, sprains, dislocations, or burns?	b) YES . . . . . 1 NO 2	
	c) You had deep wounds, broken bones, broken teeth, or any other serious injury?	c) YES . . . . . 1 NO 2	
1409	Have you ever hit, slapped, kicked, or done anything else to physically hurt your (last) (husband/partner) at times when he was not already beating or physically hurting you?	YES . . . . . 1 NO . . . . . 2 →	1411

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1410	In the last 12 months, how often have you done this to your (last) (husband/partner): often, only sometimes, or not at all?	OFTEN . . . . . 1 SOMETIMES . . . . . 2 NOT AT ALL 3	
1411	Does (did) your (last) (husband/partner) drink alcohol?	YES . . . . . 1 NO 2	→ 1413
1412	How often does (did) he get drunk: often, only sometimes, or never?	OFTEN . . . . . 1 SOMETIMES . . . . . 2 NEVER 3	
1413	Are (Were) you afraid of your (last) (husband/partner): most of the time, sometimes, or never?	MOST OF THE TIME AFRAID . . . . . 1 SOMETIMES AFRAID . . . . . 2 NEVER AFRAID 3	
1414	CHECK 609: MARRIED MORE THAN ONCE ☐ ↓ MARRIED ONLY ONCE ☐ →		1416
1415	**A.** So far we have been talking about the behavior of your (current/last) (husband/partner). Now I want to ask you about the behavior of any previous (husband/partner).	**B.** How long ago did this last happen?	

	EVER	0 - 11 MONTHS AGO	12+ MONTHS AGO	DON'T REMEMBER
a) Did any previous (husband/partner) ever hit, slap, kick, or do anything else to hurt you physically?	a) YES 1 → / NO 2 ↓	1	2	3
b) Did any previous (husband/partner) physically force you to have intercourse or perform any other sexual acts against your will?	b) YES 1 → / NO 2 ↓	1	2	3

1416	CHECK 601 AND 602: EVER MARRIED/EVER LIVED WITH A MAN ☐ ↓ a) From the time you were 15 years old has anyone other than (your/any) (husband/partner) hit you, slapped you, kicked you, or done anything else to hurt you physically?	NEVER MARRIED/NEVER LIVED WITH A MAN ☐ ↓ b) From the time you were 15 years old has anyone hit you, slapped you, kicked you, or done anything else to hurt you physically?	YES . . . . . 1 NO . . . . . 2 REFUSED TO ANSWER/ NO ANSWER . . . . . 3 → 1419
1417	Who has hurt you in this way? Anyone else? RECORD ALL MENTIONED.		MOTHER/STEP-MOTHER . . . . . A FATHER/STEP-FATHER . . . . . B SISTER/BROTHER . . . . . C DAUGHTER/SON . . . . . D OTHER RELATIVE . . . . . E CURRENT BOYFRIEND . . . . . F FORMER BOYFRIEND . . . . . G MOTHER-IN-LAW . . . . . H FATHER-IN-LAW . . . . . I OTHER IN-LAW . . . . . J TEACHER . . . . . K EMPLOYER/SOMEONE AT WORK . . . L POLICE/SOLDIER . . . . . M OTHER _____ X (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1418	In the last 12 months, how often has (this person/have these persons) physically hurt you: often, only sometimes, or not at all?	OFTEN . . . . . 1 SOMETIMES . . . . . 2 NOT AT ALL 3	
1419	CHECK 201, 226, AND 230: EVER BEEN PREGNANT (YES ON 201 OR 226 OR 230) ☐ NEVER BEEN PREGNANT ☐ → 1422		
1420	Has any one ever hit, slapped, kicked, or done anything else to hurt you physically while you were pregnant?	YES . . . . . 1 NO . . . . . 2 → 1422	
1421	Who has done any of these things to physically hurt you while you were pregnant? Anyone else? RECORD ALL MENTIONED.	CURRENT HUSBAND/PARTNER . . . . . A MOTHER/STEP-MOTHER . . . . . B FATHER/STEP-FATHER . . . . . C SISTER/BROTHER . . . . . D DAUGHTER/SON . . . . . E OTHER RELATIVE . . . . . F FORMER HUSBAND/PARTNER . . . . . G CURRENT BOYFRIEND . . . . . H FORMER BOYFRIEND . . . . . I MOTHER-IN-LAW . . . . . J FATHER-IN-LAW . . . . . K OTHER IN-LAW . . . . . L TEACHER . . . . . M EMPLOYER/SOMEONE AT WORK . . . N POLICE/SOLDIER . . . . . O OTHER _____ X (SPECIFY)	
1422	CHECK 601 AND 602: EVER MARRIED/EVER LIVED WITH A MAN ☐ NEVER MARRIED/NEVER LIVED WITH A MAN ☐ → 1422B		
1422A	Now I want to ask you about things that may have been done to you by someone other than (your/any) (husband/partner). At any time in your life, as a child or as an adult, has anyone ever forced you in any way to have sexual intercourse or perform any other sexual acts when you did not want to?	YES . . . . . 1 → 1423 NO . . . . . 2 REFUSED TO ANSWER/ NO ANSWER . . . . . 3 → 1424A	
1422B	At any time in your life, as a child or as an adult, has anyone ever forced you in any way to have sexual intercourse or perform any other sexual acts when you did not want to?	YES . . . . . 1 NO . . . . . 2 REFUSED TO ANSWER/ NO ANSWER . . . . . 3 → 1426	
1423	Who was the person who was forcing you the very first time this happened?	CURRENT HUSBAND/PARTNER . . . . . 01 FORMER HUSBAND/PARTNER . . . . . 02 CURRENT/FORMER BOYFRIEND . . . 03 FATHER/STEP-FATHER . . . . . 04 BROTHER/STEP-BROTHER . . . . . 05 OTHER RELATIVE . . . . . 06 IN-LAW . . . . . 07 OWN FRIEND/ACQUAINTANCE . . . . . 08 FAMILY FRIEND . . . . . 09 TEACHER . . . . . 10 EMPLOYER/SOMEONE AT WORK . . . 11 POLICE/SOLDIER . . . . . 12 PRIEST/RELIGIOUS LEADER . . . . . 13 STRANGER . . . . . 14 OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1424	CHECK 601 AND 602: EVER MARRIED/EVER LIVED WITH A MAN → a) In the last 12 months, has anyone other than (your/any) (husband/partner) physically forced you to have sexual intercourse when you did not want to? NEVER MARRIED/NEVER LIVED WITH A MAN → b) In the last 12 months has anyone physically forced you to have sexual intercourse when you did not want to?	YES . . . . . 1 NO 2	→ 1425
1424A	CHECK 1405A(h-j) and 1415A(b) AT LEAST ONE 'YES' ↓ NOT A SINGLE 'YES' →		→ 1426
1425	CHECK 601 AND 602: EVER MARRIED/EVER LIVED WITH A MAN → a) How old were you the first time you were forced to have sexual intercourse or perform any other sexual acts by anyone, including (your/any) husband/partner? NEVER MARRIED/NEVER LIVED WITH A MAN → b) How old were you the first time you were forced to have sexual intercourse or perform any other sexual acts?	AGE IN COMPLETED YEARS . ☐☐ DON'T KNOW 98	
1426	CHECK 1405A (a-j), 1415A (a,b), 1416, 1420, 1422A, AND 1422B: AT LEAST ONE 'YES' ↓ NOT A SINGLE 'YES' →		→ 1430
1427	Thinking about what you yourself have experienced among the different things we have been talking about, have you ever tried to seek help?	YES . . . . . 1 NO 2	→ 1429
1428	From whom have you sought help? Anyone else? RECORD ALL MENTIONED.	OWN FAMILY . . . . . A HUSBAND'S/PARTNER'S FAMILY . . . B CURRENT/FORMER HUSBAND/PARTNER . . . . . C CURRENT/FORMER BOYFRIEND . . . D FRIEND . . . . . E NEIGHBOR . . . . . F RELIGIOUS LEADER . . . . . G DOCTOR/MEDICAL PERSONNEL . . . H POLICE . . . . . I LAWYER . . . . . J SOCIAL SERVICE ORGANIZATION . K OTHER _____ X (SPECIFY)	→ 1430
1429	Have you ever told any one about this?	YES . . . . . 1 NO 2	
1430	As far as you know, did your father ever beat your mother?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
	THANK THE RESPONDENT FOR HER COOPERATION AND REASSURE HER ABOUT THE CONFIDENTIALITY OF HER ANSWERS. FILL OUT THE QUESTIONS BELOW WITH REFERENCE TO THE DOMESTIC VIOLENCE MODULE ONLY.		
1431	DID YOU HAVE TO INTERRUPT THE INTERVIEW BECAUSE SOME ADULT WAS TRYING TO LISTEN, OR CAME INTO THE ROOM, OR INTERFERED IN ANY OTHER WAY?	YES ONCE / YES, MORE THAN ONCE / NO HUSBAND . . . . . 1 2 3 OTHER MALE ADULT . . . 1 2 3 FEMALE ADULT 1 2 3	
1432	INTERVIEWER'S COMMENTS / EXPLANATION FOR NOT COMPLETING THE DOMESTIC VIOLENCE MODULE		
1433	RECORD THE TIME.	HOUR . . . . . [ ][ ] MINUTES . . . . . [ ][ ]	

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

NAME OF SUPERVISOR: _____ DATE: _____

EDITOR'S OBSERVATIONS

NAME OF EDITOR: _____ DATE: _____

INSTRUCTIONS:
ONLY ONE CODE SHOULD APPEAR IN ANY BOX.
COLUMN 1 REQUIRES A CODE IN EVERY MONTH.

INFORMATION TO BE CODED FOR EACH COLUMN

COLUMN 1: <u>BIRTHS, PREGNANCIES, CONTRACEPTIVE USE</u>

- B BIRTHS
- P PREGNANCIES
- T TERMINATIONS

- 0 NO METHOD
- 1 FEMALE STERILIZATION
- 2 MALE STERILIZATION
- 3 IUD
- 4 INJECTABLES
- 5 IMPLANTS
- 6 PILL
- 7 CONDOM
- 8 FEMALE CONDOM
- K LACTATIONAL AMENORRHEA METHOD
- L RHYTHM METHOD
- M WITHDRAWAL
- X OTHER MODERN METHOD
- Y OTHER TRADITIONAL METHOD

COLUMN 2: <u>DISCONTINUATION OF CONTRACEPTIVE USE</u>

- 0 INFREQUENT SEX/HUSBAND AWAY
- 1 BECAME PREGNANT WHILE USING
- 2 WANTED TO BECOME PREGNANT
- 3 HUSBAND/PARTNER DISAPPROVED
- 4 WANTED MORE EFFECTIVE METHOD
- 5 SIDE EFFECTS/HEALTH CONCERNS
- 6 LACK OF ACCESS/TOO FAR
- 7 COSTS TOO MUCH
- 8 INCONVENIENT TO USE
- F UP TO GOD/FATALISTIC
- A DIFFICULT TO GET PREGNANT/MENOPAUSAL
- D MARITAL DISSOLUTION/SEPARATION
- X OTHER _____ (SPECIFY)
- Z DON'T KNOW

				1	2	
	12	DEC	01			
	11	NOV	02			
	10	OCT	03			
2	09	SEP	04			2
0	08	AUG	05			0
1	07	JUL	06			1
4	06	JUN	07			4
	05	MAY	08			
	04	APR	09			
	03	MAR	10			
	02	FEB	11			
	01	JAN	12			
	12	DEC	13			
	11	NOV	14			
	10	OCT	15			
	09	SEP	16			
2	08	AUG	17			2
0	07	JUL	18			0
1	06	JUN	19			1
3	05	MAY	20			3
	04	APR	21			
	03	MAR	22			
	02	FEB	23			
	01	JAN	24			
	12	DEC	25			
	11	NOV	26			
	10	OCT	27			
	09	SEP	28			
2	08	AUG	29			2
0	07	JUL	30			0
1	06	JUN	31			1
2	05	MAY	32			2
	04	APR	33			
	03	MAR	34			
	02	FEB	35			
	01	JAN	36			
	12	DEC	37			
	11	NOV	38			
	10	OCT	39			
	09	SEP	40			
2	08	AUG	41			2
0	07	JUL	42			0
1	06	JUN	43			1
1	05	MAY	44			1
	04	APR	45			
	03	MAR	46			
	02	FEB	47			
	01	JAN	48			
	12	DEC	49			
	11	NOV	50			
	10	OCT	51			
	09	SEP	52			
2	08	AUG	53			2
0	07	JUL	54			0
1	06	JUN	55			1
0	05	MAY	56			0
	04	APR	57			
	03	MAR	58			
	02	FEB	59			
	01	JAN	60			
	12	DEC	61			
	11	NOV	62			
	10	OCT	63			
	09	SEP	64			
2	08	AUG	65			2
0	07	JUL	66			0
0	06	JUN	67			0
9	05	MAY	68			9
	04	APR	69			
	03	MAR	70			
	02	FEB	71			
	01	JAN	72			

2 SHORT

2014 KENYA DEMOGRAPHIC AND HEALTH SURVEY
WOMAN'S QUESTIONNAIRE - SHORT VERSION

CONFIDENTIAL

REPUBLIC OF KENYA

IDENTIFICATION

COUNTY _____

DISTRICT _____

LOCATION/TOWN _____

SUBLOCATION _____

NASSEP CLUSTER NUMBER . . . . . .

KDHS CLUSTER NUMBER . . . . . .

HOUSEHOLD NUMBER . . . . . .

NAME OF HOUSEHOLD HEAD _____

NAME AND LINE NUMBER OF WOMAN _____

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE				DAY
				MONTH
				YEAR
INTERVIEWER'S NAME				INT. NUMBER
RESULT*				RESULT
NEXT VISIT: DATE				TOTAL NUMBER OF VISITS
TIME				

*RESULT CODES:

1 COMPLETED
2 NOT AT HOME
3 POSTPONED
4 REFUSED
5 PARTLY COMPLETED
6 INCAPACITATED
7 OTHER _____ (SPECIFY)

**LANGUAGE OF QUESTIONNAIRE: 1 7

LANGUAGE OF INTERVIEW:

NATIVE LANGUAGE OF RESPONDENT:

TRANSLATOR USED (YES = 1, NO = 2)

LANGUAGE OF QUESTIONNAIRE: **English**

**LANGUAGE CODES:

01 BORANA	05 KIKUYU	09 LUO	13 POKOT	17 ENGLISH
02 EMBU	06 KISII	10 MAASAI	14 SOMALI	18 OTHER
03 KALENJIN	07 LUHYA	11 MERU	15 SWAHILI	
04 KAMBA	08 MARAGOLI	12 MIJIKENDA	16 TURKANA	

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		

W-1

SECTION 1. RESPONDENT'S BACKGROUND

INTRODUCTION AND CONSENT

INFORMED CONSENT

Hello. My name is _____. I am working with the Kenya National Bureau of Statistics. We are conducting a survey about health all over Kenya. The information we collect will help the government to plan health services. Your household was selected for the survey. The questions usually take about 30 to 60 minutes. All of the answers you give will be confidential and will not be shared with anyone other than members of our survey team. You don't have to be in the survey, but we hope you will agree to answer the questions since your views are important. If I ask you any question you don't want to answer, just let me know and I will go on to the next question or you can stop the interview at any time.

In case you need more information about the survey, you may contact the person listed on the card that has already been given to your household.
Do you have any questions? May I begin the interview now?

SIGNATURE OF INTERVIEWER: _____ DATE: _____

RESPONDENT AGREES TO BE INTERVIEWED . . . . . 1 ↓ RESPONDENT DOES NOT AGREE TO BE INTERVIEWED . . . 2 → END

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOUR . . . . . ☐☐ MINUTES . . . . . ☐☐	
102	In what month and year were you born?	MONTH . . . . . ☐☐ DON'T KNOW MONTH . . . . . 98 YEAR . . . . . ☐☐☐☐ DON'T KNOW YEAR 9998	
103	How old were you at your last birthday? COMPARE AND CORRECT 102 AND/OR 103 IF INCONSISTENT.	AGE IN COMPLETED YEARS ☐☐	
104	Have you ever attended school?	YES . . . . . 1 NO 2	→ 108
105	What is the highest level of school you attended: primary, vocational, secondary, or higher?	PRIMARY . . . . . 1 POST-PRIMARY/VOCATIONAL . . . . . 2 SECONDARY/ 'A' LEVEL . . . . . 3 COLLEGE (MIDDLE LEVEL) . . . . . 4 UNIVERSITY 5	
106	What is the highest (standard/form/year) you completed at that level? IF COMPLETED LESS THAN ONE YEAR AT THAT LEVEL, RECORD '00'.	STANDARD/FORM/YEAR . . . ☐☐	
107	CHECK 105: PRIMARY, POST-PRIMARY/ VOCATIONAL ☐ ↓ SECONDARY OR HIGHER ☐ →		110

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
108	Now I would like you to read this sentence to me. SHOW CARD TO RESPONDENT. IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE: Can you read any 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 CARD WITH REQUIRED LANGUAGE _____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRE[. 5	
109	CHECK 108: CODE '2', '3' OR '4' CIRCLED ☐ CODE '1' OR '5' CIRCLED ☐ → 111		
110	Do you read a newspaper or magazine at least once a week, less than once a week or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
111	Do you listen to the radio at least once a week, less than once a week or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
112	Do you watch television at least once a week, less than once a week or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
113	What is your religion?	ROMAN CATHOLIC . . . . . 1 PROTESTANT/ OTHER CHRISTIAN . 2 MUSLIM . . . . . 3 NO RELIGION . . . . . 4 OTHER _____ 6 (SPECIFY)	
114	What is your ethnic group / tribe?	EMBU . . . . . 01 KALENJIN . . . . . 02 KAMBA . . . . . 03 KIKUYU . . . . . 04 KISII . . . . . 05 LUHYA . . . . . 06 LUO . . . . . 07 MAASAI . . . . . 08 MERU . . . . . 09 MIJIKENDA/ SWAHILI . . . . . 10 SOMALI . . . . . 11 TAITA/ TAVETA . . . . . 12 OTHER _____ 96 (SPECIFY)	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	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	→ 206
202	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES . . . . . 1 NO 2	→ 204
203	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME . . . . . ☐☐ DAUGHTERS AT HOME . . . . . ☐☐	
204	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	→ 206
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	SONS ELSEWHERE . . . . . ☐☐ DAUGHTERS ELSEWHERE ☐☐	
206	Have you ever given birth to a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	YES . . . . . 1 NO 2	→ 208
207	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	BOYS DEAD . . . . . ☐☐ GIRLS DEAD . . . . . ☐☐	
208	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL BIRTHS . . . . . ☐☐	
209	CHECK 208: Just to make sure that I have this right: you have had in TOTAL _____ births during your life. Is that correct? YES ☐ ↓ NO ☐ → PROBE AND CORRECT 201-208 AS NECESSARY.		
210	CHECK 208: ONE OR MORE BIRTHS ☐ ↓ NO BIRTHS ☐ →		226

211 Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had.

RECORD NAMES OF ALL THE BIRTHS IN 212. RECORD TWINS AND TRIPLETS ON SEPARATE ROWS.
(IF THERE ARE MORE THAN 12 BIRTHS, USE AN ADDITIONAL QUESTIONNAIRE, STARTING WITH THE SECOND ROW).

212 What name was given to your (first/next) baby? RECORD NAME. BIRTH HISTORY NUMBER	213 Is (NAME) a boy or a girl?	214 Were any of these births twins?	215 In what month and year was (NAME) born? PROBE: What is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COM-PLETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSE-HOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSE-HOLD).	220 IF DEAD: How old was (NAME) when he/she died? IF '1 YR', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	221 Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME), including any children who died after birth?
01	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (NEXT BIRTH)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	
02	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
03	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
04	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
05	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
06	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
07	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH

212 What name was given to your (first/next) baby? RECORD NAME. BIRTH HISTORY NUMBER	213 Is (NAME) a boy or a girl?	214 Were any of these births twins?	215 In what month and year was (NAME) born? PROBE: What is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COM-PLETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSE-HOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSE-HOLD).	220 IF DEAD: How old was (NAME) when he/she died? IF '1 YR', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	221 Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME), including any children who died after birth?
08	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
09	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
10	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
11	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
12	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH

222	Have you had any live births since the birth of (NAME OF LAST BIRTH)?	YES . . . . . 1 NO 2	→ ADD BIRTH
223	COMPARE 208 WITH NUMBER OF BIRTHS IN HISTORY ABOVE AND MARK: NUMBERS ARE SAME ☐↓ NUMBERS ARE DIFFERENT ☐→ (PROBE AND RECONCILE)		
224	CHECK 215: ENTER THE NUMBER OF BIRTHS IN 2009 OR LATER.	NUMBER OF BIRTHS IN 2009 OR LATER ☐ NONE 0	
226	Are you pregnant now?	YES . . . . . 1 NO . . . . . 2 UNSURE 8	

301	Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy. Have you ever heard of (METHOD)?		
01	Female Sterilization. PROBE: Women can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	
02	Male Sterilization. PROBE: Men can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	
03	IUD. PROBE: Women can have a loop or coil placed inside them by a doctor or a nurse.	YES . . . . . 1 NO 2	
04	Injectables. PROBE: Women can have an injection by a health provider that stops them from becoming pregnant for one or more months.	YES . . . . . 1 NO 2	
05	Implants. PROBE: Women can have one or more small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years.	YES . . . . . 1 NO 2	
06	Pill. PROBE: Women can take a pill every day to avoid becoming pregnant.	YES . . . . . 1 NO 2	
07	Male Condom. PROBE: Men can put a rubber sheath on their penis before sexual intercourse.	YES . . . . . 1 NO 2	
08	Female Condom. PROBE: Women can place a sheath in their vagina before sexual intercourse.	YES . . . . . 1 NO 2	
09	Lactational Amenorrhea Method (LAM).	YES . . . . . 1 NO 2	
10	Rhythm Method. PROBE: To avoid pregnancy, women do not have sexual intercourse on the days of the month they think they can get pregnant.	YES . . . . . 1 NO 2	
11	Withdrawal. PROBE: Men can be careful and pull out before climax.	YES . . . . . 1 NO 2	
12	Emergency Contraception. PROBE: As an emergency measure, within three days after they have unprotected sexual intercourse, women can take special pills to prevent pregnancy.	YES . . . . . 1 NO 2	
13	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES . . . . . 1 _____ (SPECIFY) _____ (SPECIFY) NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
302	CHECK 226: NOT PREGNANT OR UNSURE ☐ PREGNANT ☐		→ 401
303	Are you currently doing something or using any method to delay or avoid getting pregnant?	YES . . . . . 1 NO 2	→ 313
304	Which method are you using? CIRCLE ALL MENTIONED. IF MORE THAN ONE METHOD MENTIONED, FOLLOW SKIP INSTRUCTION FOR HIGHEST METHOD IN LIST.	FEMALE STERILIZATION . . . . . A MALE STERILIZATION . . . . . B IUD . . . . . C INJECTABLES . . . . . D IMPLANTS . . . . . E PILL . . . . . F MALE CONDOM . . . . . G FEMALE CONDOM . . . . . H LACTATIONAL AMEN. METHOD . . . . . K RHYTHM METHOD . . . . . L WITHDRAWAL . . . . . M OTHER MODERN METHOD . . . . . X OTHER TRADITIONAL METHOD . . . Y	→ 307 → 323 → 315A → 401
307	In what facility did the sterilization take place? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL . . . . . 11 GOVT. HEALTH CENTER . . . . . 12 GOVT. DISPENSARY . . . . . 13 OTHER PUBLIC SECTOR _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR FAITH-BASED, CHURCH, MISSION HOSPITAL / CLINIC . . . . . 21 FAMILY OPTIONS/FHOK CLINIC . . . 22 PRIVATE HOSPITAL/CLINIC . . . . . 23 NURSING/ MATERNITY HOME . . . . . 24 MOBILE CLINIC . . . . . 25 OTHER PRIVATE MEDICAL SECTOR _____ 26 (SPECIFY) OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→ 401
313	Have you ever used anything or tried in any way to delay or avoid getting pregnant?	YES . . . . . 1 NO 2	→ 401

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
315A	Where did you learn how to use the rhythm/lactational amenorrhea method? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL . . . . . 11 GOVT. HEALTH CENTER . . . . . 12 GOVT. DISPENSARY . . . . . 13 OTHER PUBLIC SECTOR _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . 21 PHARMACY/CHEMIST . . . . . 22 NURSING/MATERNITY HOME . . . . . 23 FAITH-BASED, CHURCH, MISSION HOSPITAL / CLINIC . . . . . 24 FAMILY OPTIONS/FHOK CLINIC . . . 25 OTHER PRIVATE MEDICAL SECTOR _____ 26 (SPECIFY) OTHER SOURCE SHOP . . . . . 31 MOBILE CLINIC . . . . . 32 COMMUNITY-BASED DISTRIBUTOR 33 COMMUNITY HEALTH WORKER/ CHW . . . . . 34 FRIEND/RELATIVE . . . . . 35 OTHER _____ 96 (SPECIFY)	→ 401
323	Where did you obtain (CURRENT METHOD) the last time? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL . . . . . 11 GOVT. HEALTH CENTER . . . . . 12 GOVT. DISPENSARY . . . . . 13 OTHER PUBLIC SECTOR _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . 21 PHARMACY/CHEMIST . . . . . 22 NURSING/MATERNITY HOME . . . . . 23 FAITH-BASED, CHURCH, MISSION HOSPITAL / CLINIC . . . . . 24 FAMILY OPTIONS/FHOK CLINIC . . . 25 OTHER PRIVATE MEDICAL SECTOR _____ 26 (SPECIFY) OTHER SOURCE SHOP . . . . . 31 MOBILE CLINIC . . . . . 32 COMMUNITY-BASED DISTRIBUTOR 33 COMMUNITY HEALTH WORKER/ CHW . . . . . 34 FRIEND/RELATIVE . . . . . 35 OTHER _____ 96 (SPECIFY)	→ 401

401	CHECK 224: ONE OR MORE BIRTHS IN 2009 OR LATER ☐ ↓ NO BIRTHS IN 2009 OR LATER ☐ → 601	

CHECK 215: ENTER IN THE TABLE THE BIRTH HISTORY NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 2009 OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES).

402 Now I would like to ask some questions about your children born in the last five years. (We will talk about each separately.)

		LAST BIRTH	NEXT-TO-LAST BIRTH	SECOND-FROM-LAST BIRTH
403	BIRTH HISTORY NUMBER FROM 212 IN BIRTH HISTORY	BIRTH HISTORY NUMBER ☐☐	BIRTH HISTORY NUMBER ☐☐	BIRTH HISTORY NUMBER ☐☐
404	FROM 212 AND 216	NAME _____ LIVING ☐ ↓ DEAD ☐ ↓	NAME _____ LIVING ☐ ↓ DEAD ☐ ↓	NAME _____ LIVING ☐ ↓ DEAD ☐ ↓
408	Did you see anyone for antenatal care for this pregnancy?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 424) ←		
409	Whom did you see? Anyone else? PROBE TO IDENTIFY EACH TYPE OF PERSON AND RECORD ALL MENTIONED.	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE . B OTHER PERSON COMMUNITY HEALTH WORKER . . . C TRADITIONAL BIRTH ATTENDANT . D OTHER _____ X (SPECIFY)		
411	How many months pregnant were you when you first received antenatal care for this pregnancy?	MONTHS . . . ☐☐ DON'T KNOW 98		
412	How many times did you receive antenatal care during this pregnancy?	NUMBER OF TIMES . ☐☐ DON'T KNOW 98		
424	During this pregnancy, did you take any drugs to keep you from getting malaria?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 433) ← DON'T KNOW 8		
425	What drugs did you take? RECORD ALL MENTIONED. IF TYPE OF DRUG IS NOT DETERMINED, SHOW TYPICAL ANTIMALARIAL DRUGS TO RESPONDENT.	SP/FANSIDAR . . . . . A CHLOROQUINE . . . B OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z		
426	CHECK 425: SP/FANSIDAR TAKEN FOR MALARIA PREVENTION.	CODE 'A' CIRCLED ☐ ↓ CODE 'A' NOT CIRCLED ☐ → (SKIP TO 433) ←		
427	How many times did you take (SP/Fansidar) during this pregnancy?	TIMES . . . . . ☐☐		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
428	CHECK 409: ANTENATAL CARE FROM HEALTH PERSONNEL DURING THIS PREGNANCY	CODE 'A', OR 'B' CIRCLED → (SKIP TO 433) OTHER →		
429	Did you get the (SP/Fansidar) during any antenatal care visit, during another visit to a health facility or from another source?	ANTENATAL VISIT . 1 ANOTHER FACILITY VISIT . . . . . 2 OTHER SOURCE . . . 6		
433	Who assisted with the delivery of (NAME)? Anyone else? PROBE FOR THE TYPE(S) OF PERSON(S) AND RECORD ALL MENTIONED. IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY.	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE . B OTHER PERSON COMMUNITY HLTH WORKER . . . C TRADITIONAL BIRTH ATTENDANT . . D RELATIVE/FRIEND E OTHER _____ X (SPECIFY) NO ONE ASSISTED Y	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE . B OTHER PERSON COMMUNITY HLTH WORKER . . . C TRADITIONAL BIRTH ATTENDANT . . D RELATIVE/FRIEND E OTHER _____ X (SPECIFY) NO ONE ASSISTED Y	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE B OTHER PERSON COMMUNITY HLTH WORKER . . . C TRADITIONAL BIRTH ATTENDANT . . D RELATIVE/FRIEND E OTHER _____ X (SPECIFY) NO ONE ASSISTED Y
434	Where did you give birth to (NAME)? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	HOME YOUR HOME . . . 11 (SKIP TO 461) OTHER HOME . . . 12 PUBLIC SECTOR GOVT. HOSPITAL . 21 GOVT. HEALTH CENTER . . . . . 22 GOVT. DISPENSARY . 23 OTHER PUBLIC SECTOR _____ 26 (SPECIFY) PRIVATE MED. SECTOR MISSION HOSPITAL/ CLINIC . . . . . 31 PVT. HOSPITAL/ CLINIC . . . . . 32 NURSING/MATERNITY HOME . . . . . 33 OTHER PRIVATE MED. SECTOR _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY) (SKIP TO 461)	HOME YOUR HOME . . . 11 (SKIP TO 461) OTHER HOME . . . 12 PUBLIC SECTOR GOVT. HOSPITAL . 21 GOVT. HEALTH CENTER . . . . . 22 GOVT. DISPENSARY . 23 OTHER PUBLIC SECTOR _____ 26 (SPECIFY) PRIVATE MED. SECTOR MISSION HOSPITAL/ CLINIC . . . . . 31 PVT. HOSPITAL/ CLINIC . . . . . 32 NURSING/MATERNITY HOME . . . . . 33 OTHER PRIVATE MED. SECTOR _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY) (SKIP TO 461)	HOME YOUR HOME . . . 11 (SKIP TO 461) OTHER HOME . . . 12 PUBLIC SECTOR GOVT. HOSPITAL . 21 GOVT. HEALTH CENTER . . . . . 22 GOVT. DISPENSARY . 23 OTHER PUBLIC SECTOR _____ 26 (SPECIFY) PRIVATE MED. SECTOR MISSION HOSPITAL/ CLINIC . . . . . 31 PVT. HOSPITAL/ CLINIC . . . . . 32 NURSING/MATERNITY HOME . . . . . 33 OTHER PRIVATE MED. SECTOR _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY) (SKIP TO 461)
435	Was (NAME) delivered by caesarean, that is, did they cut your belly open to take the baby out?	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
461		GO BACK TO 433 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501.	GO BACK TO 433 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501.	GO BACK TO 433 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 501.

501	ENTER IN THE TABLE THE BIRTH HISTORY NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 2009 OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES).			
502	BIRTH HISTORY NUMBER FROM 212 IN BIRTH HISTORY	LAST BIRTH BIRTH HISTORY NUMBER ..... ☐☐	NEXT-TO-LAST BIRTH BIRTH HISTORY NUMBER ..... ☐☐	SECOND-FROM-LAST BIRTH BIRTH HISTORY NUMBER ..... ☐☐
503	FROM 212 AND 216	NAME _____ LIVING ☐ DEAD ☐ (GO TO 503 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 601)	NAME _____ LIVING ☐ DEAD ☐ (GO TO 503 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 601)	NAME _____ LIVING ☐ DEAD ☐ (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW Q'NNAIRE, OR IF NO MORE BIRTHS, GO TO 601)
504	Do you have a card / child health book where (NAME)'s vaccinations are written down? IF YES: May I see it please?	YES, SEEN ..... 1 (SKIP TO 506) YES, NOT SEEN ..... 2 (SKIP TO 509) NO CARD 3	YES, SEEN ..... 1 (SKIP TO 506) YES, NOT SEEN ..... 2 (SKIP TO 509) NO CARD 3	YES, SEEN ..... 1 (SKIP TO 506) YES, NOT SEEN ..... 2 (SKIP TO 509) NO CARD 3
505	Did you ever have a vaccination card or child health book for (NAME)?	YES ..... 1 (SKIP TO 509) NO 2	YES ..... 1 (SKIP TO 509) NO 2	YES ..... 1 (SKIP TO 509) NO 2

506 (1) COPY DATES FROM THE CARD.
(2) WRITE '44' IN 'DAY' COLUMN IF CARD SHOWS THAT A DOSE WAS GIVEN, BUT NO DATE IS RECORDED.
(3) IF MORE THAN TWO VITAMIN 'A' DOSES, RECORD DATES FOR MOST RECENT AND SECOND MOST RECENT DOSES.

	LAST BIRTH DAY	LAST BIRTH MONTH	LAST BIRTH YEAR		NEXT-TO-LAST BIRTH DAY	NEXT-TO-LAST BIRTH MONTH	NEXT-TO-LAST BIRTH YEAR		SECOND-FROM-LAST BIRTH DAY	SECOND-FROM-LAST BIRTH MONTH	SECOND-FROM-LAST BIRTH YEAR	
BCG (AT BIRTH)				BCG				BCG				
POLIO 0 (POLIO GIVEN AT BIRTH)				P0				P0				
OPV 1				P1				P1				
OPV 2				P2				P2				
OPV 3				P3				P3				
DPT, HEPATITIS, HIB, 1st DOSE				D1				D1				
DPT, HEPATITIS, HIB, 2nd DOSE				D2				D2				
DPT, HEPATITIS, HIB, 3rd DOSE				D3				D3				
PNEUMOCOCCAL VACCINE 1				PN1				PN1				
PNEUMOCOCCAL VACCINE 2				PN2				PN2				
PNEUMOCOCCAL VACCINE 3				PN3				PN3				
ROTA VIRUS VACCINE 1				R1				R1				
ROTA VIRUS VACCINE 2				R2				R2				
MEASLES				MEA				MEA				
YELLOW FEVER				YF				YF				
VITAMIN A (MOST RECENT)				VITA1				VITA1				
VITAMIN A (2nd MOST RECENT)				VITA2				VITA2				
AL/MEBENDAZOLE (MOST RECENT)				A/M				A/M				

507	CHECK 506:	BCG TO YELLOW FEVER ALL RECORDED ☐ OTHER ☐ (GO TO 511)	BCG TO YELLOW FEVER ALL RECORDED ☐ OTHER ☐ (GO TO 511)	BCG TO YELLOW FEVER ALL RECORDED ☐ OTHER ☐ (GO TO 511)

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
508	Has (NAME) had any vaccinations that are not recorded on this card, including vaccinations given in a national immunization day campaign? RECORD 'YES' ONLY IF THE RESPONDENT MENTIONS AT LEAST ONE OF THE VACCINATIONS IN 506 THAT ARE NOT RECORDED AS HAVING BEEN GIVEN.	YES . . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 506) (SKIP TO 511) NO . . . . . 2 (SKIP TO 511) DON'T KNOW 8	YES . . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 506) (SKIP TO 511) NO . . . . . 2 (SKIP TO 511) DON'T KNOW 8	YES . . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 506) (SKIP TO 511) NO . . . . . 2 (SKIP TO 511) DON'T KNOW 8
509	Did (NAME) ever have any vaccinations to prevent him/her from getting diseases, including vaccinations received in a national immunization day campaign?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 511) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 511) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 511) DON'T KNOW 8
510	Please tell me if (NAME) had any of the following vaccinations:			
510A	A BCG vaccination against tuberculosis, that is, an injection in the arm or shoulder that usually causes a scar?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
510B	Polio vaccine, that is, drops in the mouth?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510E) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510E) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510E) DON'T KNOW 8
510C	Was the first polio vaccine given in the first two weeks after birth or later?	FIRST 2 WEEKS . . . 1 LATER 2	FIRST 2 WEEKS . . . 1 LATER 2	FIRST 2 WEEKS . . . 1 LATER 2
510D	How many times was the polio vaccine given?	NUMBER OF TIMES	NUMBER OF TIMES	NUMBER OF TIMES . . . . .
510E	A Pentavalent vaccination, that is, an injection given in the left outer thigh, sometimes at the same time as polio drops?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510F1) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510F1) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510F1) DON'T KNOW 8
510F	How many times was the Pentavalent vaccination given?	NUMBER OF TIMES	NUMBER OF TIMES	NUMBER OF TIMES . . . . .
510F1	A Pneumococcal vaccination, that is, an injection given in the right outer thigh, sometimes at the same time as polio drops or the Pentavalent vaccination?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510F3) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510F3) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510F3) DON'T KNOW 8
510F2	How many times was the Pneumococcal vaccination given?	NUMBER OF TIMES	NUMBER OF TIMES	NUMBER OF TIMES . . . . .
510F3	A Rota virus vaccination given orally?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510G) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510G) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510G) DON'T KNOW 8

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
510F4	How many times was the Rota virus vaccination given?	NUMBER OF TIMES . . . . . [ ]	NUMBER OF TIMES . . . . . [ ]	NUMBER OF TIMES . . . . . [ ]
510G	A measles injection - that is, a shot in the arm at the age of 9 months or older - to prevent him/her from getting measles?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
510H	A yellow fever injection - that is, a shot in the arm or shoulder at the age of 9 months or older - to prevent him/her from getting yellow fever?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
511	Within the last six months, was (NAME) given a vitamin A dose like (this/any of these)? SHOW COMMON TYPES OF AMPULES/CAPSULES/SYRUPS.	YES . . . . . 1 NO . . . . . 2 (SKIP TO 514) ← DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 514) ← DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 514) ← DON'T KNOW 8
511A	How many times was Vitamin A given in the last six months?	NUMBER OF TIMES . . . . . [ ]	NUMBER OF TIMES . . . . . [ ]	NUMBER OF TIMES . . . . . [ ]
514	Has (NAME) had diarrhoea in the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 525) ← DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 525) ← DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 525) ← DON'T KNOW 8
515	Was there any blood in the stools?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
516	Now I would like to know how much (NAME) was given to drink during the diarrhoea (including breast milk). Was he/she given less than usual to drink, about the same amount, or more than usual to drink? 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 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK . 5 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK . 5 DON'T KNOW 8
517	When (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 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 STOPPED FOOD . . . 5 NEVER GAVE FOOD . 6 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 STOPPED FOOD . . . 5 NEVER GAVE FOOD . 6 DON'T KNOW 8
518	Did you seek advice or treatment for the diarrhoea from any source?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 522) ←	YES . . . . . 1 NO . . . . . 2 (SKIP TO 522) ←	YES . . . . . 1 NO . . . . . 2 (SKIP TO 522) ←

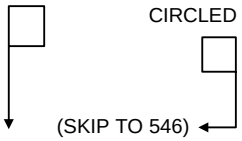
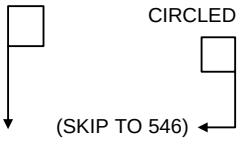
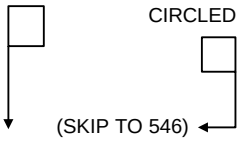
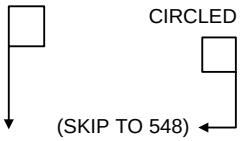
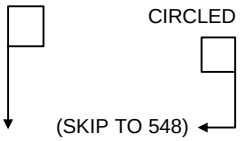
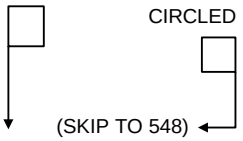
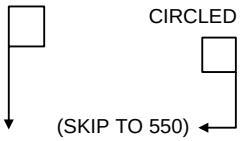
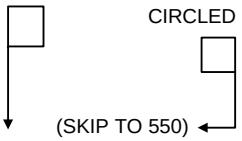
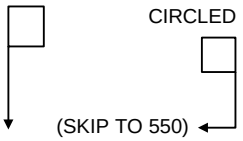
NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
519	Where did you seek advice or treatment? Anywhere else? PROBE TO IDENTIFY EACH TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC SECTOR GOVT HOSPITAL A GOVT HEALTH CENTER . . . . . B GOVT DISPENSARY . C OTHER PUBLIC SECTOR _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC . . . . . E PHARMACY . . . F MISSION HOSP./ CLINIC . . . . . G OTHER PRIVATE SECTOR _____ H (SPECIFY) OTHER SOURCE MOBILE CLINIC . I COMMUNITY HLTH WORKER J SHOP . . . . . K TRADITIONAL PRACTITIONER L RELATIVE/FRIEND M OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT HOSPITAL A GOVT HEALTH CENTER . . . . . B GOVT DISPENSARY . C OTHER PUBLIC SECTOR _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC . . . . . E PHARMACY . . . F MISSION HOSP./ CLINIC . . . . . G OTHER PRIVATE SECTOR _____ H (SPECIFY) OTHER SOURCE MOBILE CLINIC . I COMMUNITY HLTH WORKER J SHOP . . . . . K TRADITIONAL PRACTITIONER L RELATIVE/FRIEND M OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT HOSPITAL A GOVT HEALTH CENTER . . . . . B GOVT DISPENSARY . C OTHER PUBLIC SECTOR _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC . . . . . E PHARMACY . . . F MISSION HOSP./ CLINIC . . . . . G OTHER PRIVATE SECTOR _____ H (SPECIFY) OTHER SOURCE MOBILE CLINIC . I COMMUNITY HLTH WORKER J SHOP . . . . . K TRADITIONAL PRACTITIONER L RELATIVE/FRIEND M OTHER _____ X (SPECIFY)
520	CHECK 519:	TWO OR MORE CODES CIRCLED / ONLY ONE CODE CIRCLED (SKIP TO 522)	TWO OR MORE CODES CIRCLED / ONLY ONE CODE CIRCLED (SKIP TO 522)	TWO OR MORE CODES CIRCLED / ONLY ONE CODE CIRCLED (SKIP TO 522)
521	Where did you first seek advice or treatment? USE LETTER CODE FROM 519.	FIRST PLACE . . . ☐	FIRST PLACE . . . ☐	FIRST PLACE . . . ☐
522	Was he/she given any of the following to drink at any time since he/she started having the diarrhoea: a) A fluid made from a special packet called ORS? b) A home-made sugar-salt solution? c) Other home-made liquid such as porridge, soup, yoghurt, coconut water, fresh fruit juice, tea, milk, or rice water?	YES NO DK a) FLUID FROM ORS PKT 1 2 8 b) SUGAR-SALT SOL. 1 2 8 c) HOMEMADE FLUID . . . 1 2 8	YES NO DK a) FLUID FROM ORS PKT 1 2 8 b) SUGAR-SALT SOL. 1 2 8 c) HOMEMADE FLUID . . . 1 2 8	YES NO DK a) FLUID FROM ORS PKT 1 2 8 b) SUGAR-SALT SOL. 1 2 8 c) HOMEMADE FLUID . . . 1 2 8

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
523	Was anything (else) given to treat the diarrhoea?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 525) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 525) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 525) DON'T KNOW 8
524	What (else) was given to treat the diarrhoea? Anything else? RECORD ALL TREATMENTS GIVEN.	PILL OR SYRUP ANTIBIOTIC . . . . . A ANTIMOTILITY . . . B ZINC TABLET . . . C OTHER (NOT ANTI-BIOTIC, ANTI-MOTILITY, OR ZINC TABLET) . D UNKNOWN PILL OR SYRUP . . . E INJECTION ANTIBIOTIC . . . . . F NON-ANTIBIOTIC . G UNKNOWN INJECTION . . . H (IV) INTRAVENOUS FLUID . . . . . I HOME REMEDY/ HERBAL MED-ICINE . . . . . J OTHER _____ X (SPECIFY)	PILL OR SYRUP ANTIBIOTIC . . . . . A ANTIMOTILITY . . . B ZINC TABLET . . . C OTHER (NOT ANTI-BIOTIC, ANTI-MOTILITY, OR ZINC TABLET) . D UNKNOWN PILL OR SYRUP . . . E INJECTION ANTIBIOTIC . . . . . F NON-ANTIBIOTIC . G UNKNOWN INJECTION . . . H (IV) INTRAVENOUS FLUID . . . . . I HOME REMEDY/ HERBAL MED-ICINE . . . . . J OTHER _____ X (SPECIFY)	PILL OR SYRUP ANTIBIOTIC . . . . . A ANTIMOTILITY . . . B ZINC TABLET . . . C OTHER (NOT ANTI-BIOTIC, ANTI-MOTILITY, OR ZINC TABLET) . D UNKNOWN PILL OR SYRUP . . . E INJECTION ANTIBIOTIC . . . . . F NON-ANTIBIOTIC . G UNKNOWN INJECTION . . . H (IV) INTRAVENOUS FLUID . . . . . I HOME REMEDY/ HERBAL MED-ICINE . . . . . J OTHER _____ X (SPECIFY)
525	Has (NAME) been ill with a fever at any time in the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 527) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 527) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 527) DON'T KNOW 8
526	At any time during the illness, did (NAME) have blood taken from his/her finger or heel for testing?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
527	Has (NAME) had an illness with a cough at any time in the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 530) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 530) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 530) DON'T KNOW 8
528	When (NAME) had an illness with a cough, did he/she breathe faster than usual with short, rapid breaths or have difficulty breathing?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 531) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 531) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 531) DON'T KNOW 8
529	Was the fast or difficult breathing due to a problem in the chest or to a blocked or runny nose?	CHEST ONLY . . . 1 NOSE ONLY . . . . . 2 BOTH . . . . . 3 OTHER _____ 6 (SPECIFY) DON'T KNOW . . . . . 8 (SKIP TO 531)	CHEST ONLY . . . 1 NOSE ONLY . . . . . 2 BOTH . . . . . 3 OTHER _____ 6 (SPECIFY) DON'T KNOW . . . . . 8 (SKIP TO 531)	CHEST ONLY . . . 1 NOSE ONLY . . . . . 2 BOTH . . . . . 3 OTHER _____ 6 (SPECIFY) DON'T KNOW . . . . . 8 (SKIP TO 531)

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
530	CHECK 525: HAD FEVER?	YES ☐ NO OR DK ☐ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 601)	YES ☐ NO OR DK ☐ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 601)	YES ☐ NO OR DK ☐ (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, TO 601)
531	Now I would like to know how much (NAME) was given to drink (including breast milk) during the illness with a (fever/cough). Was he/she given less than usual to drink, about the same amount, or more than usual to drink? 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 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK . 5 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK . 5 DON'T KNOW 8
532	When (NAME) had a (fever/cough), 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 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 STOPPED FOOD . . . 5 NEVER GAVE FOOD . 6 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 STOPPED FOOD . . . 5 NEVER GAVE FOOD . 6 DON'T KNOW 8
533	Did you seek advice or treatment for the illness from any source?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 537)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 537)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 537)

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
534	Where did you seek advice or treatment? Anywhere else? 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(S))	PUBLIC SECTOR GOVT HOSPITAL A GOVT HEALTH CENTER . . . . . B GOVT DISPENSARY . C OTHER PUBLIC SECTOR _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC . . . . . E PHARMACY . . . F MISSION HOSP./ CLINIC . . . . . G OTHER PRIVATE SECTOR _____ H (SPECIFY) OTHER SOURCE MOBILE CLINIC . I COMMUNITY HLTH WORKER J SHOP . . . . . K TRADITIONAL PRACTITIONER L RELATIVE/FRIEND M OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT HOSPITAL A GOVT HEALTH CENTER . . . . . B GOVT DISPENSARY . C OTHER PUBLIC SECTOR _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC . . . . . E PHARMACY . . . F MISSION HOSP./ CLINIC . . . . . G OTHER PRIVATE SECTOR _____ H (SPECIFY) OTHER SOURCE MOBILE CLINIC . I COMMUNITY HLTH WORKER J SHOP . . . . . K TRADITIONAL PRACTITIONER L RELATIVE/FRIEND M OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT HOSPITAL A GOVT HEALTH CENTER . . . . . B GOVT DISPENSARY . C OTHER PUBLIC SECTOR _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC . . . . . E PHARMACY . . . F MISSION HOSP./ CLINIC . . . . . G OTHER PRIVATE SECTOR _____ H (SPECIFY) OTHER SOURCE MOBILE CLINIC . I COMMUNITY HLTH WORKER J SHOP . . . . . K TRADITIONAL PRACTITIONER L RELATIVE/FRIEND M OTHER _____ X (SPECIFY)
535	CHECK 534:	TWO OR MORE CODES CIRCLED ONLY ONE CODE CIRCLED (SKIP TO 537)	TWO OR MORE CODES CIRCLED ONLY ONE CODE CIRCLED (SKIP TO 537)	TWO OR MORE CODES CIRCLED ONLY ONE CODE CIRCLED (SKIP TO 537)
536	Where did you first seek advice or treatment? USE LETTER CODE FROM 534.	FIRST PLACE . . .	FIRST PLACE . . .	FIRST PLACE . . .
537	At any time during the illness, did (NAME) take any drugs for the illness?	YES . . . . . 1 NO . . . . . 2 (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 601) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 601) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 601) DON'T KNOW 8

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
538	What drugs did (NAME) take? Any other drugs? RECORD ALL MENTIONED.	ANTIMALARIAL DRUGS SP/FANSIDAR . . . A CHLOROQUINE . B AMODIAQUINE . C QUININE . . . . . D AL/COARTEM . . . E OTHER ANTI-MALARIAL _____ . . . F (SPECIFY) ANTIBIOTIC DRUGS PILL/SYRUP . . . G INJECTION . . . H OTHER DRUGS ASPIRIN . . . . . I ACETAMINOPHEN/ PARACETAMOL J IBUPROFEN . . . K OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	ANTIMALARIAL DRUGS SP/FANSIDAR . . . A CHLOROQUINE . B AMODIAQUINE . C QUININE . . . . . D AL/COARTEM . . . E OTHER ANTI-MALARIAL _____ . . . F (SPECIFY) ANTIBIOTIC DRUGS PILL/SYRUP . . . G INJECTION . . . H OTHER DRUGS ASPIRIN . . . . . I ACETAMINOPHEN/ PARACETAMOL J IBUPROFEN . . . K OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	ANTIMALARIAL DRUGS SP/FANSIDAR . . . A CHLOROQUINE . B AMODIAQUINE . C QUININE . . . . . D AL/COARTEM . . . E OTHER ANTI-MALARIAL _____ . . . F (SPECIFY) ANTIBIOTIC DRUGS PILL/SYRUP . . . G INJECTION . . . H OTHER DRUGS ASPIRIN . . . . . I ACETAMINOPHEN/ PARACETAMOL J IBUPROFEN . . . K OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z
539	CHECK 538: ANY CODE A-F CIRCLED?	YES → NO → (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 601)	YES → NO → (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 601)	YES → NO → (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 601)
540	CHECK 538: SP/FANSIDAR ('A') GIVEN	CODE 'A' CIRCLED → CODE 'A' NOT CIRCLED → (SKIP TO 542)	CODE 'A' CIRCLED → CODE 'A' NOT CIRCLED → (SKIP TO 542)	CODE 'A' CIRCLED → CODE 'A' NOT CIRCLED → (SKIP TO 542)
541	How long after the fever started did (NAME) first take (SP/Fansidar)?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8
542	CHECK 538: CHLOROQUINE ('B') GIVEN	CODE 'B' CIRCLED → CODE 'B' NOT CIRCLED → (SKIP TO 544)	CODE 'B' CIRCLED → CODE 'B' NOT CIRCLED → (SKIP TO 544)	CODE 'B' CIRCLED → CODE 'B' NOT CIRCLED → (SKIP TO 544)

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
543	How long after the fever started did (NAME) first take chloroquine?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8
544	CHECK 538: AMODIAQUINE ('C') GIVEN	CODE 'C' CIRCLED / CODE 'C' NOT CIRCLED  (SKIP TO 546)	CODE 'C' CIRCLED / CODE 'C' NOT CIRCLED  (SKIP TO 546)	CODE 'C' CIRCLED / CODE 'C' NOT CIRCLED  (SKIP TO 546)
545	How long after the fever started did (NAME) first take amodiaquine?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8
546	CHECK 538: QUININE ('D') GIVEN	CODE 'D' CIRCLED / CODE 'D' NOT CIRCLED  (SKIP TO 548)	CODE 'D' CIRCLED / CODE 'D' NOT CIRCLED  (SKIP TO 548)	CODE 'D' CIRCLED / CODE 'D' NOT CIRCLED  (SKIP TO 548)
547	How long after the fever started did (NAME) first take quinine?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8
548	CHECK 538: ARTEMISININ+LUMEFANTRINE (AL/COARTEM) ('E') GIVEN	CODE 'E' CIRCLED / CODE 'E' NOT CIRCLED  (SKIP TO 550)	CODE 'E' CIRCLED / CODE 'E' NOT CIRCLED  (SKIP TO 550)	CODE 'E' CIRCLED / CODE 'E' NOT CIRCLED  (SKIP TO 550)
549	How long after the fever started did (NAME) first take AL/Coartem?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
550	CHECK 538: OTHER ANTIMALARIAL ('F') GIVEN	CODE 'F' CIRCLED ☐ ↓ CODE 'F' NOT CIRCLED ☐ → (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 601)	CODE 'F' CIRCLED ☐ ↓ CODE 'F' NOT CIRCLED ☐ → (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 601)	CODE 'F' CIRCLED ☐ ↓ CODE 'F' NOT CIRCLED ☐ → (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 601)
551	How long after the fever started did (NAME) first take (OTHER ANTIMALARIAL)?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . . 4 DON'T KNOW . . . 8
552		GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 601.	GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 601.	GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 601.

SECTION 6. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	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	→ 605
602	Have you ever been married or lived together with a man as if married?	YES, FORMERLY MARRIED . . . . . 1 YES, LIVED WITH A MAN . . . . . 2 NO 3	→ 612
603	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED . . . . . 1 DIVORCED . . . . . 2 SEPARATED 3	→ 609
605	RECORD THE HUSBAND'S/PARTNER'S NAME AND LINE NUMBER FROM THE HOUSEHOLD QUESTIONNAIRE. IF HE IS NOT LISTED IN THE HOUSEHOLD, RECORD '00'.	NAME _____ LINE NO.	
609	Have you been married or lived with a man only once or more than once?	ONLY ONCE . . . . . 1 MORE THAN ONCE 2	
610	CHECK 609: MARRIED/ LIVED WITH A MAN ONLY ONCE → a) In what month and year did you start living with your (husband/partner)? MARRIED/ LIVED WITH A MAN MORE THAN ONCE → b) Now I would like to ask about your first (husband/partner). In what month and year did you start living with him?	MONTH . . . . . DON'T KNOW MONTH . . . . . 98 YEAR . . . . . DON'T KNOW YEAR 9998	→ 612
611	How old were you when you first started living with him?	AGE	
612	CHECK FOR THE PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		
613	Now I would like to ask some questions about sexual activity in order to gain a better understanding of some important life issues. How old were you when you had sexual intercourse for the very first time?	NEVER HAD SEXUAL INTERCOURSE . . . . . 00 AGE IN YEARS . . . . . FIRST TIME WHEN STARTED LIVING WITH (FIRST) HUSBAND/PARTNER 95	

SECTION 9. HIV/AIDS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
901	Now I would like to talk about something else. Have you ever heard of an illness called AIDS?	YES . . . . . 1 NO 2	→ 1433
902	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 DON'T KNOW 8	
903	Can people get the AIDS virus from mosquito bites?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
904	Can people reduce their chance of getting the AIDS virus by using a condom every time they have sex?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
905	Can people get the AIDS virus by sharing food with a person who has AIDS?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
906	Can people get the AIDS virus because of witchcraft or other supernatural means?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
907	Is it possible for a healthy-looking person to have the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
908	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 a) DURING PREG. . . . . 1 2 8 b) DURING DELIVERY . . . 1 2 8 c) BREASTFEEDING . . . 1 2 8	
911	CHECK 208 AND 215: LAST BIRTH SINCE JANUARY 2012 NO BIRTHS LAST BIRTH BEFORE JANUARY 2012	→ 926 → 926	
912	CHECK 408 FOR LAST BIRTH: HAD ANTENATAL CARE NO ANTENATAL CARE	→ 920	
913	CHECK FOR PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		
914	During any of the antenatal visits for your last birth were you given any information about: a) Babies getting the AIDS virus from their mother? b) Things that you can do to prevent getting the AIDS virus? c) Getting tested for the AIDS virus?	YES NO DK a) AIDS FROM MOTHER . 1 2 8 b) THINGS TO DO . . . . . 1 2 8 c) TESTED FOR AIDS . . . 1 2 8	
915	Were you offered a test for the AIDS virus as part of your antenatal care?	YES . . . . . 1 NO 2	
916	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	→ 920

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
917	Where was the test done? PROBE TO IDENTIFY THE 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 . . . . . 11 GOVT. HEALTH CENTER\CLINIC . 12 GOVERNMENT DISPENSARY . . . . 13 OTHER PUBLIC SECTOR _____ 18 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . 21 MISSIONARY/CHURCH HOSP./ CLINIC . . . . . 22 FAMILY OPTIONS/FHOK CLINIC . . 23 VCT CENTRE . . . . . 24 NURSING/MATERNITY HOMES . . 25 BLOOD TRANSFUSION SERVICES . 26 OTHER PRIVATE MEDICAL SECTOR _____ 27 (SPECIFY) OTHER SOURCE HOME . . . . . 31 CORRECTIONAL FACILITY . . . . . 32 OTHER _____ 96 (SPECIFY)	
918	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	→ 924
919	All women are supposed to receive counseling after being tested. After you were tested, did you receive counseling?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 924
920	CHECK 434 FOR LAST BIRTH: ANY CODE 21-36 CIRCLED ☐ OTHER ☐		→ 926
921	Between the time you went for delivery but before the baby was born, were you offered a test for the AIDS virus?	YES . . . . . 1 NO 2	
922	I don't want to know the results, but were you tested for the AIDS virus at that time?	YES . . . . . 1 NO 2	→ 926
923	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	
924	Have you been tested for the AIDS virus since that time you were tested during your pregnancy?	YES . . . . . 1 NO 2	→ 927
925	How many months ago was your most recent HIV test?	MONTHS AGO . . . . . ☐☐ TWO OR MORE YEARS 95	→ 1433
926	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	→ 1433
927	How many months ago was your most recent HIV test?	MONTHS AGO . . . . . ☐☐ TWO OR MORE YEARS 95	
928	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	
1433	RECORD THE TIME.	HOUR . . . . . ☐☐ MINUTES . . . . . ☐☐	

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

NAME OF SUPERVISOR: _____ DATE: _____

EDITOR'S OBSERVATIONS

NAME OF EDITOR: _____ DATE: _____

2014 KENYA DEMOGRAPHIC AND HEALTH SURVEY
MAN'S QUESTIONNAIRE

CONFIDENTIAL

REPUBLIC OF KENYA

IDENTIFICATION

COUNTY _____

DISTRICT _____

LOCATION/TOWN _____

SUBLOCATION _____

NASSEP CLUSTER NUMBER . . . . . |__|__|__|__|

KDHS CLUSTER NUMBER . . . . . |__|__|__|__|

HOUSEHOLD NUMBER . . . . . |__|__|__|

NAME OF HOUSEHOLD HEAD _____

NAME AND LINE NUMBER OF MAN _____ |__|__|

CHECK 101B IN HOUSEHOLD QUESTIONNAIRE: IS MAN SELECTED FOR SECTION 10?

YES 1
NO 2

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY
				MONTH
				YEAR
INTERVIEWER'S NAME	_____	_____	_____	INT. NUMBER
RESULT*	_____	_____	_____	RESULT
NEXT VISIT: DATE	_____	_____		TOTAL NUMBER OF VISITS
TIME	_____	_____		

*RESULT CODES:

1	COMPLETED	4	REFUSED		
2	NOT AT HOME	5	PARTLY COMPLETED	7	OTHER _____ (SPECIFY)
3	POSTPONED	6	INCAPACITATED		

LANGUAGE OF QUESTIONNAIRE**: 1 7 LANGUAGE OF INTERVIEW: |__|__| NATIVE LANGUAGE OF RESPONDENT: |__|__|

TRANSLATOR USED (YES = 1, NO = 2) |__|

LANGUAGE OF QUESTIONNAIRE: **English**

**LANGUAGE CODES:

01 BORANA	05 KIKUYU	09 LUO	13 POKOT	17 ENGLISH
02 EMBU	06 KISII	10 MAASAI	14 SOMALI	18 OTHER
03 KALENJIN	07 LUHYA	11 MERU	15 SWAHILI	
04 KAMBA	08 MARAGOLI	12 MIJIKENDA	16 TURKANA	

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____ |__|__|__|	NAME _____ |__|__|__|	|__|__|	|__|__|

SECTION 1. RESPONDENT'S BACKGROUND

INTRODUCTION AND CONSENT

INFORMED CONSENT

Hello. My name is _____. I am working with the Kenya National Bureau of Statistics. We are conducting a survey about health all over Kenya. The information we collect will help the government to plan health services. Your household was selected for the survey. The questions usually take about 20 minutes. All of the answers you give will be confidential and will not be shared with anyone other than members of our survey team. You don't have to be in the survey, but we hope you will agree to answer the questions since your views are important. If I ask you any question you don't want to answer, just let me know and I will go on to the next question or you can stop the interview at any time.

In case you need more information about the survey, you may contact the person listed on the card that has already been given to your household.
Do you have any questions?
May I begin the interview now?

SIGNATURE OF INTERVIEWER: _____ DATE: _____

RESPONDENT AGREES TO BE INTERVIEWED . . . . . 1 ↓ RESPONDENT DOES NOT AGREE TO BE INTERVIEWED . . . 2 → END

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOUR . . . . . ☐☐ MINUTES . . . . . ☐☐	
101A	First I would like to ask some questions about you and your household. For most of the time until you were 12 years old, did you live in Nairobi, Mombasa, Kisumu, in a town, in the countryside, or outside of Kenya?	NAIROBI/ MOMBASA/ KISUMU . . . . . 1 OTHER CITY/ TOWN . . . . . 2 COUNTRYSIDE . . . . . 3 OUTSIDE KENYA 4	
101B	How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? IF LESS THAN ONE YEAR, RECORD '00' YEARS	YEARS ☐☐ ALWAYS . . . . . 95 VISITOR 96	→ 101D
101C	Just before you moved here, did you live in Nairobi, Mombasa, Kisumu, in a town, in the countryside, or outside of Kenya?	NAIROBI/ MOMBASA/ KISUMU . . . . . 1 TOWN . . . . . 2 COUNTRYSIDE . . . . . 3 OUTSIDE OF KENYA 4	
101D	What is your nationality?	KENYAN . . . . . 01 TANZANIAN . . . . . 02 UGANDAN . . . . . 03 SOMALI . . . . . 04 ETHIOPIAN . . . . . 05 SUDANESE . . . . . 06 OTHER _____ 96 (SPECIFY)	→ 102
101E	What was the main reason for moving to Kenya?	JOIN FAMILY LIVING IN KENYA . . . . . 01 MARRIAGE . . . . . 02 WORK . . . . . 03 SCHOOL . . . . . 04 ESCAPE INSECURITY/WAR . . . . . 05 ESCAPE ENVIRONMENTAL DISASTER (E.G. FLOOD, DROUGHT, ETC.) . . . 06 OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
102	In what month and year were you born?	MONTH . . . . . ☐☐ DON'T KNOW MONTH . . . . . 98 YEAR . . . . . ☐☐☐☐ DON'T KNOW YEAR 9998	
103	How old were you at your last birthday? COMPARE AND CORRECT 102 AND/OR 103 IF INCONSISTENT.	AGE IN COMPLETED YEARS ☐☐	
104	Have you ever attended school?	YES . . . . . 1 NO 2	→ 108
105	What is the highest level of school you attended: primary, vocational, secondary, or higher?	PRIMARY . . . . . 1 POST-PRIMARY/VOCATIONAL . . . . . 2 SECONDARY/ 'A' LEVEL . . . . . 3 COLLEGE (MIDDLE LEVEL) . . . . . 4 UNIVERSITY 5	
106	What is the highest (standard/form/year) you completed at that level? IF COMPLETED LESS THAN ONE YEAR AT THAT LEVEL, RECORD '00'.	STANDARD/FORM/YEAR . . . ☐☐	
107	CHECK 105: PRIMARY POST-PRIMARY/ VOCATIONAL ☐ ↓ SECONDARY OR HIGHER ☐ →		110
108	Now I would like you to read this sentence to me. SHOW CARD TO RESPONDENT. IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE: Can you read any 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 CARD WITH REQUIRED LANGUAGE _____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRED 5	
109	CHECK 108: CODE '2', '3' OR '4' CIRCLED ☐ ↓ CODE '1' OR '5' CIRCLED ☐ →		111
110	Do you read a newspaper or magazine, at least once a week, less than once a week, or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
111	Do you listen to the radio, at least once a week, less than once a week, or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
112	Do you watch television, at least once a week, less than once a week, or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
113	What is your religion?	ROMAN CATHOLIC . . . . . 1 PROTESTANT/ OTHER CHRISTIAN . 2 MUSLIM . . . . . 3 NO RELIGION . . . . . 4 OTHER _____ 6 (SPECIFY)	
114	What is your ethnic group / tribe?	EMBU . . . . . 01 KALENJIN . . . . . 02 KAMBA . . . . . 03 KIKUYU . . . . . 04 KISII . . . . . 05 LUHYA . . . . . 06 LUO . . . . . 07 MAASAI . . . . . 08 MERU . . . . . 09 MIJIKENDA/ SWAHILI . . . . . 10 SOMALI . . . . . 11 TAITA/ TAVETA . . . . . 12 OTHER _____ 96 (SPECIFY)	
115	In the last 12 months, how many times have you been away from home for one or more nights?	NUMBER OF TIMES . . . . . ☐☐ NONE 00	→ 201
116	In the last 12 months, have you been away from home for more than one month at a time?	YES . . . . . 1 NO 2	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about any children you have had during your life. I am interested in all of the children that are biologically yours, even if they are not legally yours or do not have your last name. Have you ever fathered any children with any woman?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 206
202	Do you have any sons or daughters that you have fathered who are now living with you?	YES . . . . . 1 NO 2	→ 204
203	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME . . . . . [ ][ ] DAUGHTERS AT HOME . . . . . [ ][ ]	
204	Do you have any sons or daughters that you have fathered who are alive but do not live with you?	YES . . . . . 1 NO 2	→ 206
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	SONS ELSEWHERE . . . . . [ ][ ] DAUGHTERS ELSEWHERE . . . [ ][ ]	
206	Have you ever fathered a son or a daughter who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 208
207	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	BOYS DEAD . . . . . [ ][ ] GIRLS DEAD . . . . . [ ][ ]	
208	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL CHILDREN . . . . . [ ][ ]	
209	CHECK 208: HAS HAD MORE THAN ONE CHILD ↓ HAS HAD ONLY ONE CHILD → 212 HAS NOT HAD ANY CHILDREN → 301		
210	Did all of the children you have fathered have the same biological mother?	YES . . . . . 1 NO 2	→ 212
211	In all, how many women have you fathered children with?	NUMBER OF WOMEN . . . . . [ ][ ]	
212	How old were you when your (first) child was born?	AGE IN YEARS . . . . . [ ][ ]	
213	CHECK 203 AND 205: AT LEAST ONE LIVING CHILD ↓ NO LIVING CHILDREN → 301		
214	How old is your (youngest) child?	AGE IN YEARS . . . . . [ ][ ]	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
215	CHECK 214: (YOUNGEST) CHILD IS AGE 0-2 YEARS ☐ OTHER ☐		→ 301
216	What is the name of your (youngest) child? WRITE NAME OF (YOUNGEST) CHILD _____ (NAME OF (YOUNGEST) CHILD)		
217	When (NAME)'s mother was pregnant with (NAME), did she have any antenatal check-ups?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 219
218	Were you ever present during any of those antenatal check-ups?	PRESENT . . . . . 1 NOT PRESENT 2	
219	Was (NAME) born in a hospital or health facility?	HOSPITAL/HEALTH FACILITY . . . . . 1 OTHER 2	
220	When a child has diarrhoea, how much should he or she be given to drink: more than usual, about the same as usual, less than usual, or nothing to drink at all?	MORE THAN USUAL . . . . . 1 ABOUT THE SAME . . . . . 2 LESS THAN USUAL . . . . . 3 NOTHING TO DRINK . . . . . 4 DON'T KNOW 8	

301	Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy. Have you ever heard of (METHOD)?		
01	Female Sterilization. PROBE: Women can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	
02	Male Sterilization. PROBE: Men can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	
03	IUD. PROBE: Women can have a loop or coil placed inside them by a doctor or a nurse.	YES . . . . . 1 NO 2	
04	Injectables. PROBE: Women can have an injection by a health provider that stops them from becoming pregnant for one or more months.	YES . . . . . 1 NO 2	
05	Implants. PROBE: Women can have one or more small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years.	YES . . . . . 1 NO 2	
06	Pill. PROBE: Women can take a pill every day to avoid becoming pregnant.	YES . . . . . 1 NO 2	
07	Male Condom. PROBE: Men can put a rubber sheath on their penis before sexual intercourse.	YES . . . . . 1 NO 2	
08	Female Condom. PROBE: Women can place a sheath in their vagina before sexual intercourse.	YES . . . . . 1 NO 2	
09	Lactational Amenorrhea Method (LAM).	YES . . . . . 1 NO 2	
10	Rhythm Method. PROBE: To avoid pregnancy, women do not have sexual intercourse on the days of the month they think they can get pregnant.	YES . . . . . 1 NO 2	
11	Withdrawal. PROBE: Men can be careful and pull out before climax.	YES . . . . . 1 NO 2	
12	Emergency Contraception. PROBE: As an emergency measure, within three days after they have unprotected sexual intercourse, women can take special pills to prevent pregnancy.	YES . . . . . 1 NO 2	
13	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES . . . . . 1 _____ (SPECIFY) _____ (SPECIFY) NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
302	In the last few months have you: a) Heard about family planning on the radio? b) Seen anything about family planning on the television? c) Read about family planning in a newspaper or magazine?	YES NO a) RADIO . . . . . 1 2 b) TELEVISION . . . . . 1 2 c) NEWSPAPER OR MAGAZINE . 1 2	
303	In the last few months, have you discussed family planning with a health worker or health professional?	YES . . . . . 1 NO 2	
304	Now I would like to ask you about a woman's risk of pregnancy. From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant when she has sexual relations?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 306
305	Is this time just before her period begins, during her period, right after her period has ended, or halfway between two periods?	JUST BEFORE HER PERIOD BEGINS . . . . . 1 DURING HER PERIOD . . . . . 2 RIGHT AFTER HER PERIOD HAS ENDED . . . . . 3 HALFWAY BETWEEN TWO PERIODS . . . . . 4 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	
306	I will now read you some statements about contraception. Please tell me if you agree or disagree with each one. a) Contraception is a woman's business and a man should not have to worry about it. b) Women who use contraception may become promiscuous.	AGREE / DISAGREE / DK a) CONTRACEPTION WOMAN'S BUSINESS 1 2 8 b) WOMEN MAY BECOME PROMISCUOUS 1 2 8	
307	CHECK 301 (07): KNOWS MALE CONDOM YES ↓ NO →		→ 311
308	Do you know of a place where a person can get male condoms?	YES . . . . . 1 NO 2	→ 311

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
309	Where is that? Any other place? 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(S))	PUBLIC SECTOR GOVT. HOSPITAL . . . . . A GOVT. HEALTH CENTER . . . . . B GOVT. DISPENSARY . . . . . C OTHER PUBLIC SECTOR _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . E PHARMACY/CHEMIST . . . . . F NURSING/MATERNITY HOME . . . . . G FAITH-BASED, CHURCH, MISSION HOSPITAL / CLINIC . . . . . H FAMILY OPTIONS/FHOK CLINIC . . . I OTHER PRIVATE MEDICAL SECTOR _____ J (SPECIFY) OTHER SOURCE SHOP . . . . . K MOBILE CLINIC . . . . . L COMMUNITY-BASED DISTRIBUTOR M COMMUNITY HEALTH WORKER/ CHW . . . . . N FRIEND/RELATIVE . . . . . O DISPENSER . . . . . P OTHER _____ X (SPECIFY)	
310	If you wanted to, could you yourself get a male condom?	YES . . . . . 1 NO 2	
311	CHECK 301 (08): KNOWS FEMALE CONDOM YES ☐ NO ☐ → 401		
312	Do you know of a place where a person can get female condoms?	YES . . . . . 1 NO 2	→ 401

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
313	Where is that? Any other place? 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(S))	PUBLIC SECTOR GOVT. HOSPITAL . . . . . A GOVT. HEALTH CENTER . . . . . B GOVT. DISPENSARY . . . . . C OTHER PUBLIC SECTOR _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . E PHARMACY/CHEMIST . . . . . F NURSING/MATERNITY HOME . . . . . G FAITH-BASED, CHURCH, MISSION HOSPITAL / CLINIC . . . . . H FAMILY OPTIONS/FHOK CLINIC CLINIC . . . . . I OTHER PRIVATE MEDICAL SECTOR _____ J (SPECIFY) OTHER SOURCE SHOP . . . . . K MOBILE CLINIC . . . . . L COMMUNITY-BASED DISTRIBUTOR M COMMUNITY HEALTH WORKER/ CHW . . . . . N FRIEND/RELATIVE . . . . . O OTHER _____ X (SPECIFY)	
314	If you wanted to, could you yourself get a female condom?	YES . . . . . 1 NO 2	

SECTION 4. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
401	Are you currently married or living together with a woman as if married?	YES, CURRENTLY MARRIED . . . . . 1 YES, LIVING WITH A WOMAN . . . . . 2 NO, NOT IN UNION 3	→ 404
402	Have you ever been married or lived together with a woman as if married?	YES, FORMERLY MARRIED . . . . . 1 YES, LIVED WITH A WOMAN . . . . . 2 NO 3	→ 413
403	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED . . . . . 1 DIVORCED . . . . . 2 SEPARATED 3	→ 410
404	Is your (wife/partner) living with you now or is she staying elsewhere?	LIVING WITH HIM . . . . . 1 STAYING ELSEWHERE 2	
405	Do you have other wives or do you live with other women as if married?	YES (MORE THAN ONE) . . . . . 1 NO (ONLY ONE) 2	→ 407
406	Altogether, how many wives or live-in partners do you have?	TOTAL NUMBER OF WIVES AND LIVE-IN PARTNERS . . . ☐☐	
407	CHECK 405: ONE WIFE/ PARTNER ☐ → a) Please tell me the name of (your wife/the woman you are living with as if married). MORE THAN ONE WIFE/ PARTNER ☐ → b) Please tell me the name of each of your wives or each woman you are living with as if married. RECORD THE NAME AND THE LINE NUMBER FROM THE HOUSEHOLD QUESTIONNAIRE FOR EACH WIFE AND LIVE-IN PARTNER. IF A WOMAN IS NOT LISTED IN THE HOUSEHOLD, RECORD '00'. ASK 408 FOR EACH PERSON.	NAME / LINE NUMBER / 408 How old was (NAME) on her last birthday? AGE _____ ☐☐ ☐☐ _____ ☐☐ ☐☐ _____ ☐☐ ☐☐ _____ ☐☐ ☐☐	
409	CHECK 407: ONE WIFE/ PARTNER ☐ MORE THAN ONE WIFE/ PARTNER ☐		→ 411A
410	Have you been married or lived with a woman only once or more than once?	ONLY ONCE . . . . . 1 MORE THAN ONCE 2	→ 411A

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
411	In what month and year did you start living with your (wife/partner)?	MONTH . . . . . ☐☐	
411A	Now I would like to ask about your first (wife/partner). In what month and year did you start living with her?	DON'T KNOW MONTH . . . . . 98 YEAR . . . . . ☐☐☐☐ DON'T KNOW YEAR 9998	→ 413
412	How old were you when you first started living with her?	AGE . . . . . ☐☐	
413	CHECK FOR THE PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		
414	Now I would like to ask some questions about sexual activity in order to gain a better understanding of some important life issues. How old were you when you had sexual intercourse for the very first time?	NEVER HAD SEXUAL INTERCOURSE . . . . . 00 AGE IN YEARS . . . . . ☐☐ FIRST TIME WHEN STARTED LIVING WITH (FIRST) WIFE/PARTNER 95	→ 501
414A	CHECK 103: AGE 15-24 ☐ ↓ AGE 25-54 ☐ →		→ 415
414B	The first time you had sexual intercourse, was a condom used?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/DON'T REMEMBER . . . 8	
414C	How old was the person you first had sexual intercourse with?	AGE OF PARTNER ☐☐ DON'T KNOW . . . 98	
415	Now I would like to ask you some questions about your recent sexual activity. Let me assure you again that your answers are completely confidential and will not be told to anyone. If we should come to any question that you don't want to answer, just let me know and we will go to the next question.		
416	When was the last time you had sexual intercourse? IF LESS THAN 12 MONTHS, ANSWER MUST BE RECORDED IN DAYS, WEEKS OR MONTHS. 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 ☐☐	→ 430

		LAST SEXUAL PARTNER	SECOND-TO-LAST SEXUAL PARTNER	THIRD-TO-LAST SEXUAL PARTNER
417	When was the last time you had sexual intercourse with this person?		DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3
418	The last time you had sexual intercourse (with this second/third person), was a condom used?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 420)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 420)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 420)
418A	What is the main reason you used a condom on that occasion?	PREVENT STD/HIV . 1 AVOID PREGNANCY 2 BOTH PREVENT STD/HIV AND PREGNANCY 3 DID NOT TRUST PARTNER /SHE MAY HAVE OTHER PARTNERS . . . . . 4 PARTNER WANTED TO USE . . . . . 5 OTHER _____ 6 (SPECIFY)	PREVENT STD/HIV . 1 AVOID PREGNANCY 2 BOTH PREVENT STD/HIV AND PREGNANCY 3 DID NOT TRUST PARTNER /SHE MAY HAVE OTHER PARTNERS . . . . . 4 PARTNER WANTED TO USE . . . . . 5 OTHER _____ 6 (SPECIFY)	PREVENT STD/HIV . 1 AVOID PREGNANCY 2 BOTH PREVENT STD/HIV AND PREGNANCY 3 DID NOT TRUST PARTNER /SHE MAY HAVE OTHER PARTNERS . . . . . 4 PARTNER WANTED TO USE . . . . . 5 OTHER _____ 6 (SPECIFY)
419	Was a condom used every time you had sexual intercourse with this person in the last 12 months?	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
420	What was your relationship to this person with whom you had sexual intercourse? IF GIRLFRIEND: Were you living together as if married? IF YES, CIRCLE '2'. IF NO, CIRCLE '3'.	WIFE . . . . . 1 LIVE-IN PARTNER . 2 GIRLFRIEND NOT LIVING WITH RESPONDENT . . . 3 CASUAL ACQUAINTANCE . . 4 CLIENT/PROSTITUTE 5 OTHER _____ 6 (SPECIFY) (SKIP TO 423)	WIFE . . . . . 1 LIVE-IN PARTNER . 2 GIRLFRIEND NOT LIVING WITH RESPONDENT . . . 3 CASUAL ACQUAINTANCE . . 4 CLIENT/PROSTITUTE 5 OTHER _____ 6 (SPECIFY) (SKIP TO 423)	WIFE . . . . . 1 LIVE-IN PARTNER . 2 GIRLFRIEND NOT LIVING WITH RESPONDENT . . . 3 CASUAL ACQUAINTANCE . . 4 CLIENT/PROSTITUTE 5 OTHER _____ 6 (SPECIFY) (SKIP TO 423)
421	CHECK 410:	MARRIED ONLY ONCE MARRIED MORE THAN ONCE OR BLANK (SKIP TO 423)	MARRIED ONLY ONCE MARRIED MORE THAN ONCE OR BLANK (SKIP TO 423)	MARRIED ONLY ONCE MARRIED MORE THAN ONCE OR BLANK (SKIP TO 423)
422	CHECK 414: FIRST TIME WHEN STARTED LIVING WITH FIRST WIFE (CODE 95)	FIRST TIME WHEN STARTED LIVING WITH FIRST WIFE OTHER (SKIP TO 424)	FIRST TIME WHEN STARTED LIVING WITH FIRST WIFE OTHER (SKIP TO 424)	FIRST TIME WHEN STARTED LIVING WITH FIRST WIFE OTHER (SKIP TO 424)
423	How long ago did you first have sexual intercourse with this (second/third) person?	DAYS AGO . 1 WEEKS AGO . 2 MONTHS AGO . 3 YEARS AGO . 4	DAYS AGO . 1 WEEKS AGO . 2 MONTHS AGO . 3 YEARS AGO . 4	DAYS AGO . 1 WEEKS AGO . 2 MONTHS AGO . 3 YEARS AGO . 4

		LAST SEXUAL PARTNER	SECOND-TO-LAST SEXUAL PARTNER	THIRD-TO-LAST SEXUAL PARTNER
424	How many times during the last 12 months did you have sexual intercourse with this person? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF TIMES IS 95 OR MORE, WRITE '95'.	NUMBER OF TIMES . . . . . ☐☐	NUMBER OF TIMES . . . . . ☐☐	NUMBER OF TIMES . . . . . ☐☐
425	How old is this person?	AGE OF PARTNER . ☐☐ DON'T KNOW 98	AGE OF PARTNER . ☐☐ DON'T KNOW 98	AGE OF PARTNER . ☐☐ DON'T KNOW 98
426	Apart from (this person/these two people), have you had sexual intercourse with any other person in the last 12 months?	YES . . . . . 1 (GO BACK TO 417 IN NEXT COLUMN) NO . . . . . 2 (SKIP TO 428)	YES . . . . . 1 (GO BACK TO 417 IN NEXT COLUMN) NO . . . . . 2 (SKIP TO 428)	
427	In total, with how many different people have you had sexual intercourse in the last 12 months? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS 95 OR MORE, WRITE '95'.			NUMBER OF PARTNERS LAST 12 MONTHS . . . ☐☐ DON'T KNOW . . . 98

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
428	CHECK 420 (ALL COLUMNS): AT LEAST ONE PARTNER IS PROSTITUTE ☐ NO PARTNERS ARE PROSTITUTES ☐ → 430		
429	CHECK 420 AND 418 (ALL COLUMNS): CONDOM USED WITH EVERY PROSTITUTE ☐ → 433 OTHER ☐ → 434		
430	In the last 12 months, did you pay anyone in exchange for having sexual intercourse?	YES . . . . . 1 NO 2	→ 432
431	Have you ever paid anyone in exchange for having sexual intercourse?	YES . . . . . 1 NO 2	→ 434
432	The last time you paid someone in exchange for having sexual intercourse, was a condom used?	YES . . . . . 1 NO 2	→ 434
433	Was a condom used during sexual intercourse every time you paid someone in exchange for having sexual intercourse in the last 12 months?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
434	In total, with how many different people have you had sexual intercourse in your lifetime? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS 95 OR MORE, WRITE '95'.	NUMBER OF PARTNERS IN LIFETIME . . . . . ☐☐ DON'T KNOW 98	
435	CHECK 418, MOST RECENT PARTNER (FIRST COLUMN): NOT ASKED ☐ → 438 CONDOM USED ☐ NO CONDOM USED ☐ → 438		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
437	From where did you obtain the condom the last time? PROBE TO IDENTIFY TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL . . . . . 11 GOVT. HEALTH CENTER . . . . . 12 GOVT. DISPENSARY . . . . . 13 OTHER PUBLIC SECTOR _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . 21 PHARMACY/CHEMIST . . . . . 22 NURSING/MATERNITY HOME . . . . . 23 FAITH-BASED, CHURCH, MISSION HOSPITAL / CLINIC . . . . . 24 FAMILY OPTIONS/FHOK CLINIC . . . 25 OTHER PRIVATE MEDICAL SECTOR _____ 26 (SPECIFY) OTHER SOURCE SHOP . . . . . 31 MOBILE CLINIC . . . . . 32 COMMUNITY-BASED DISTRIBUTOR 33 COMMUNITY HEALTH WORKER/ CHW . . . . . 34 FRIEND/RELATIVE . . . . . 35 OTHER _____ 96 (SPECIFY)	
438	The last time you had sex did you or your partner use any method (other than a condom) to avoid or prevent a pregnancy?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 501
439	What method did you or your partner use? PROBE: Did you or your partner use any other method to prevent pregnancy? RECORD ALL MENTIONED.	FEMALE STERILIZATION . . . . . A MALE STERILIZATION . . . . . B IUD . . . . . C INJECTABLES . . . . . D IMPLANTS . . . . . E PILL . . . . . F FEMALE CONDOM . . . . . G LAM . . . . . J RHYTHM METHOD . . . . . K WITHDRAWAL . . . . . L OTHER MODERN METHOD . . . . . X OTHER TRADITIONAL METHOD . . . . . Y	

SECTION 5. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	CHECK 401: CURRENTLY MARRIED OR LIVING WITH A PARTNER ☐↓ NOT CURRENTLY MARRIED AND NOT LIVING WITH A PARTNER ☐		→ 509
502	CHECK 439: MAN NOT STERILIZED OR 439 IS BLANK ☐↓ MAN STERILIZED ☐		→ 509
503	(Is your (wife/partner)/Are any of your (wives/partners)) currently pregnant?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 505
504	Now I have some questions about the future. After the (child/children) you and your (wife(wives)/partner(s)) are expecting now, would you like to have another child, or would you prefer not have any more children?	HAVE ANOTHER CHILD . . . . . 1 NO MORE . . . . . 2 UNDECIDED/DON'T KNOW 8	→ 506 → 509
505	Now I have 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 COUPLE CAN'T GET PREGNANT . . . . . 3 WIFE (WIVES)/PARTNER(S) STERILIZED . . . . . 4 UNDECIDED/DON'T KNOW 8	→ 509
506	CHECK 407: ONE WIFE/ PARTNER ☐↓ MORE THAN ONE WIFE/ PARTNER ☐		→ 508
507	CHECK 503: WIFE/PARTNER NOT PREGNANT OR DON'T KNOW ☐↓ a) How long would you like to wait from now before the birth of (a/another) child? WIFE/PARTNER PREGNANT ☐↓ b) After the birth of the child you are expecting now, how long would you like to wait before the birth of another child?	MONTHS . . . . . 1 ☐☐ YEARS . . . . . 2 ☐☐ SOON/NOW . . . . . 993 COUPLE INFECUND . . . . . 994 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	→ 509
508	How long would you like to wait from now before the birth of (a/another) child?	MONTHS . . . . . 1 ☐☐ YEARS . . . . . 2 ☐☐ SOON/NOW . . . . . 993 HE/ALL HIS WIVES/PARTNERS ARE INFECUND . . . . . 994 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
509	CHECK 203 AND 205: HAS LIVING CHILDREN ☐ → a) If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? NO LIVING CHILDREN ☐ → b) If you could choose exactly the number of children to have in your whole life, how many would that be? PROBE FOR A NUMERIC RESPONSE.	NONE . . . . . 00 NUMBER . . . . . ☐☐ OTHER _____ 96 (SPECIFY)	→ 601 → 601
510	How many of these children would you like to be boys, how many would you like to be girls and for how many would it not matter if it's a boy or a girl?	BOYS GIRLS EITHER NUMBER ☐☐ ☐☐ ☐☐ OTHER _____ 96 (SPECIFY)	

SECTION 6. EMPLOYMENT AND GENDER ROLES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	Have you done any work in the last seven days?	YES . . . . . 1 NO 2	→ 604
602	Although you did not work in the last seven days, do you have any job or business from which you were absent for leave, illness, vacation, or any other such reason?	YES . . . . . 1 NO 2	→ 604
603	Have you done any work in the last 12 months?	YES . . . . . 1 NO 2	→ 607
604	What is your occupation, that is, what kind of work do you mainly do?	_____ ☐☐ _____ _____	
604A	CHECK 604: WORKS IN AGRICULTURE ☐ ↓ DOES NOT WORK IN AGRICULTURE ☐ →		605
604B	Do you work mainly on your own land or on family land, or do you work on land that you rent from someone else, or do you work on someone else's land?	OWN LAND . . . . . 1 FAMILY LAND . . . . . 2 RENTED LAND . . . . . 3 SOMEONE ELSE'S LAND . . . . . 4 OTHER _____ 6 (SPECIFY)	
605	Do you usually work throughout the year, or do you work seasonally, or only once in a while?	THROUGHOUT THE YEAR . . . . . 1 SEASONALLY/PART OF THE YEAR . 2 ONCE IN A WHILE 3	
606	Are you paid in cash or kind for this work or are you not paid at all?	CASH ONLY . . . . . 1 CASH AND KIND . . . . . 2 IN KIND ONLY . . . . . 3 NOT PAID 4	
607	CHECK 401: CURRENTLY MARRIED OR LIVING WITH A PARTNER ☐ ↓ NOT CURRENTLY MARRIED AND NOT LIVING WITH A PARTNER ☐ →		612
608	CHECK 606: CODE 1 OR 2 CIRCLED ☐ ↓ OTHER ☐ →		610
609	Who usually decides how the money you earn will be used: you, your (wife/partner), or you and your (wife/partner) jointly?	RESPONDENT . . . . . 1 WIFE/PARTNER . . . . . 2 RESPONDENT AND WIFE/ PARTNER JOINTLY . . . . . 3 OTHER _____ 6 (SPECIFY)	
610	Who usually makes decisions about health care for yourself: you, your (wife/partner), you and your (wife/partner) jointly, or someone else?	RESPONDENT . . . . . 1 WIFE/PARTNER . . . . . 2 RESPONDENT AND WIFE/ PARTNER JOINTLY . . . . . 3 SOMEONE ELSE . . . . . 4 OTHER _____ 6 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
611	Who usually makes decisions about making major household purchases?	RESPONDENT . . . . . 1 WIFE/PARTNER . . . . . 2 RESPONDENT AND WIFE/ PARTNER JOINTLY . . . . . 3 SOMEONE ELSE . . . . . 4 OTHER _____ 6 (SPECIFY)	
612	Do you own this or any other house either alone or jointly with someone else?	ALONE ONLY . . . . . 1 JOINTLY ONLY . . . . . 2 BOTH ALONE AND JOINTLY . . . . . 3 DOES NOT OWN 4	
613	Do you own any land either alone or jointly with someone else?	ALONE ONLY . . . . . 1 JOINTLY ONLY . . . . . 2 BOTH ALONE AND JOINTLY . . . . . 3 DOES NOT OWN 4	
614	In your opinion, is a husband justified in hitting or beating his wife in the following situations: a) If she goes out without telling him? b) If she neglects the children? c) If she argues with him? d) If she refuses to have sex with him? e) If she burns the food?	YES NO DK a) GOES OUT . . . . . 1 2 8 b) NEGL. CHILDREN . . . 1 2 8 c) ARGUES . . . . . 1 2 8 d) REFUSES SEX . . . . . 1 2 8 e) BURNS FOOD 1 2 8	

SECTION 7. HIV/AIDS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	Now I would like to talk about something else. Have you ever heard of an illness called AIDS?	YES . . . . . 1 NO 2	→ 723
702	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 DON'T KNOW 8	
703	Can people get the AIDS virus from mosquito bites?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
704	Can people reduce their chance of getting the AIDS virus by using a condom every time they have sex?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
705	Can people get the AIDS virus by sharing food with a person who has AIDS?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
705A	Can people reduce their chance of getting the AIDS virus by not having sexual intercourse at all?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
706	Can people get the AIDS virus because of witchcraft or other supernatural means?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
707	Is it possible for a healthy-looking person to have the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
707A	Do you know someone personally who has the virus that causes AIDS or someone who has died of AIDS?	YES . . . . . 1 NO 2	
708	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 a) DURING PREG. . . . . 1 2 8 b) DURING DELIVERY . . . 1 2 8 c) BREASTFEEDING . . . 1 2 8	
709	CHECK 708: AT LEAST ONE 'YES' ☐ OTHER ☐		→ 711
710	Are there any special drugs that a doctor or a nurse can give to a woman infected with the AIDS virus to reduce the risk of transmission to the baby?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
711	CHECK FOR PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		
712	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	→ 716
713	How many months ago was your most recent HIV test?	MONTHS AGO . . . . . ☐☐ TWO OR MORE YEARS 95	
714	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
715	Where was the test done? PROBE TO IDENTIFY THE 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 . . . . . 11 GOVT. HEALTH CENTER\CLINIC . . . 12 GOVERNMENT DISPENSARY . . . . 13 OTHER PUBLIC SECTOR _____ 18 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ . . . . . 21 MISSIONARY/CHURCH HOSP./ CLINIC . . . . . 22 FAMILY OPTIONS/FHOK CLINIC . . 23 VCT CENTRE . . . . . 24 NURSING/MATERNITY HOMES . . 25 BLOOD TRANSFUSION SERVICES 26 OTHER PRIVATE MEDICAL SECTOR _____ 27 (SPECIFY) OTHER SOURCE HOME . . . . . 31 CORRECTIONAL FACILITY . . . . . 32 OTHER _____ 96 (SPECIFY)	→ 717A
716	Do you know of a place where people can go to get tested for the AIDS virus?	YES . . . . . 1 NO 2	→ 717A
717	Where is that? Any other place? 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 GOVT. HEALTH CENTER\CLINIC . . . B GOVERNMENT DISPENSARY . . . . C OTHER PUBLIC SECTOR _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ . . . . . E MISSIONARY/CHURCH HOSP./ CLINIC . . . . . F FAMILY OPTIONS/FHOK CLINIC . . G VCT CENTRE . . . . . H NURSING/MATERNITY HOMES . . I BLOOD TRANSFUSION SERVICES . J OTHER PRIVATE MEDICAL SECTOR _____ K (SPECIFY) OTHER _____ X (SPECIFY)	
717A	CHECK 401: CURRENTLY MARRIED OR LIVING WITH A PARTNER ↓ NOT CURRENTLY MARRIED AND NOT LIVING WITH A PARTNER →		→ 718
717B	Have you ever talked with your wife / partner about ways to prevent getting the virus that causes AIDS?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
718	Would you buy fresh vegetables from a shopkeeper or vendor if you knew that this person had the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
719	If a member of your family got infected with the AIDS virus, would you want it to remain a secret or not?	YES, REMAIN A SECRET . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
720	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	
721	In your opinion, if a female teacher has the AIDS virus but is not sick, should she be allowed to continue teaching in the school?	SHOULD BE ALLOWED . . . . . 1 SHOULD NOT BE ALLOWED . . . . . 2 DK/NOT SURE/DEPENDS 8	
722	Should children age 12-14 be taught about using a condom to avoid getting AIDS?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
723	CHECK 701: HEARD ABOUT AIDS ☐ → a) Apart from AIDS, have you heard about other infections that can be transmitted through sexual contact? NOT HEARD ABOUT AIDS ☐ → b) Have you heard about infections that can be transmitted through sexual contact?	YES . . . . . 1 NO 2	→ 724
723A	If a man has a sexually transmitted disease, what symptoms might he have? Any others? RECORD ALL MENTIONED	ABDOMINAL PAIN . . . . . A GENITAL DISCHARGE/DRIPPING . . . B FOUL SMELL/DISCHARGE . . . . . C BURNING PAIN ON URINATION . . . . . D REDNESS/INFLAMATION IN GENITAL AREA . . . . . E SWELLING IN GENITAL AREA . . . . . F GENITAL SORES/ULCERS . . . . . G GENITAL WARTS . . . . . H GENITAL ITCHING . . . . . I BLOOD IN URINE . . . . . J LOSS OF WEIGHT . . . . . K IMPOTENCE/NO ERECTION . . . . . L OTHER _____ (SPECIFY) W OTHER _____ (SPECIFY) X NO SYMPTOMS . . . . . Y DOES NOT KNOW . . . . . Z	
723B	If a woman has a sexually transmitted disease, what symptoms might she have? Any others? RECORD ALL MENTIONED	ABDOMINAL PAIN . . . . . A GENITAL DISCHARGE/DRIPPING . . . B FOUL SMELL/DISCHARGE . . . . . C BURNING PAIN ON URINATION . . . . . D REDNESS/INFLAMATION IN GENITAL AREA . . . . . E SWELLING IN GENITAL AREA . . . . . F GENITAL SORES/ULCERS . . . . . G GENITAL WARTS . . . . . H GENITAL ITCHING . . . . . I BLOOD IN URINE . . . . . J LOSS OF WEIGHT . . . . . K HARD TO GET PREGNANT . . . . . L OTHER _____ (SPECIFY) W OTHER _____ (SPECIFY) X NO SYMPTOMS . . . . . Y DOES NOT KNOW . . . . . Z	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
724	CHECK 414: HAS HAD SEXUAL INTERCOURSE ☐↓ HAS NOT HAD SEXUAL INTERCOURSE ☐ → 732		
725	CHECK 723: HEARD ABOUT OTHER SEXUALLY TRANSMITTED INFECTIONS? YES ☐↓ NO ☐ → 727		
726	Now I would like to ask you some questions about your health in the last 12 months. During the last 12 months, have you had a disease which you got through sexual contact?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
727	Sometimes men experience an abnormal discharge from their penis. During the last 12 months, have you had an abnormal discharge from your penis?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
728	Sometimes men have a sore or ulcer near their penis. During the last 12 months, have you had a sore or ulcer near your penis?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
729	CHECK 726, 727, AND 728: HAS HAD AN INFECTION (ANY 'YES') ☐↓ HAS NOT HAD AN INFECTION OR DOES NOT KNOW ☐ → 732		
730	The last time you had (PROBLEM FROM 726/727/728), did you seek any kind of advice or treatment?	YES . . . . . 1 NO 2	→ 731A
731	Where did you go? Any other place? 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(S))	PUBLIC SECTOR GOVERNMENT HOSPITAL . . . . . A GOVT. HEALTH CENTRE/CLINIC . B GOVT. DISPENSARY . . . . . C OTHER PUBLIC SECTOR _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . E MISSIONARY/CHURCH HOSP/CLINIC F FAMILY OPTIONS/FHOK CLINIC . . . G VCT CENTRE . . . . . H NURSING/MATERNITY HOMES . . . I BLOOD TRANSFUSION SERVICES . J OTHER PRIVATE MEDICAL . . . . . SECTOR _____ K (SPECIFY) OTHER SOURCE SHOP/PHARMACY . . . . . M TRADITIONAL HEALER . . . . . N FRIENDS/RELATIVES . . . . . O OTHER _____ X (SPECIFY)	
731A	When you had (PROBLEM(S) FROM 726/727/728), did you inform the persons with whom you were having sex?	YES, INFORMED ALL PARTNERS . . . 1 INFORMED SOME, NOT ALL . . . . . 2 NO, INFORMED NONE . . . . . 3 DID NOT HAVE A PARTNER 4	→ 732
731B	When you had (PROBLEM(S) FROM 726/727/728), did you do anything to avoid infecting your sexual partner(s)?	YES . . . . . 1 NO 2	→ 732

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
731C	What did you do to avoid infecting your partner(s)? Did you: a) Use medicine? b) Stop sex? c) Use a condom when having sex?	YES NO a) USE MEDICINE . . . . . 1 2 b) STOP HAVING SEX . . . . . 1 2 c) USE CONDOM 1 2	
732	If a wife knows her husband has a disease that she can get during sexual intercourse, is she justified in asking that they use a condom when they have sex?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
733	Is a wife justified in refusing to have sex with her husband when she knows her husband has sex with women other than his wives?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

SECTION 8. OTHER HEALTH ISSUES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	Some men are circumcised, that is, the foreskin is completely removed from the penis. Are you circumcised?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 805
802	How old were you when you got circumcised?	AGE IN COMPLETED YEARS . . . . . [ ][ ] DURING CHILDHOOD (<5 YEARS) . 95 DON'T KNOW 98	
803	Who did the circumcision?	TRADITIONAL PRACTITIONER/ FAMILY/FRIEND . . . . . 1 HEALTH WORKER/PROFESSIONAL 2 OTHER . . . . . 3 DON'T KNOW 8	
804	Where was it done?	HEALTH FACILITY . . . . . 1 HOME OF A HEALTH WORKER/ PROFESSIONAL . . . . . 2 CIRCUMCISION DONE AT HOME . . . 3 RITUAL SITE . . . . . 4 OTHER HOME/PLACE . . . . . 5 DON'T KNOW 8	
805	Now I would like to ask you some other questions relating to health matters. Have you had an injection for any reason in the last 12 months? IF YES: How many injections have you had? IF NUMBER OF INJECTIONS IS 90 OR MORE, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . [ ][ ] NONE 00	→ 807A
806	Among these injections, how many were administered by a doctor, a nurse, a pharmacist, a dentist, or any other health worker? IF NUMBER OF INJECTIONS IS 90 OR MORE, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . [ ][ ] NONE 00	→ 807A
807	The last time you got an injection from a health worker, did he/she take the syringe and needle from a new, unopened package?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
807A	Have you ever been told by a doctor or health worker that you have raised blood pressure or hypertension?	YES . . . . . 1 NO 2	
807B	Have you ever been told by a doctor or health worker that you have raised blood sugar or diabetes?	YES . . . . . 1 NO 2	
807C	In the past 12 months, have you been involved in a road traffic accident as a driver, passenger, pedestrian, or cyclist?	YES . . . . . 1 NO 2	
807D	In the past 12 months, were you injured accidentally, not related to a traffic accident?	YES . . . . . 1 NO 2	→ 807F

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
807E	How did the injury happen? RECORD ALL MENTIONED	FALL . . . . . A BURN . . . . . B POISONING . . . . . C CUT . . . . . D NEAR-DROWNING . . . . . E ANIMAL BITE . . . . . F SHOOTING . . . . . G OTHER _____ X (SPECIFY)	
807F	Have you ever heard of an illness called tuberculosis or TB?	YES . . . . . 1 NO 2	→ 808
807G	How does tuberculosis spread from one person to another? PROBE: Any other ways? RECORD ALL MENTIONED	THROUGH THE AIR WHEN COUGHING OR SNEEZING . . . . . A THROUGH SHARING UTENSILS . . . . . B THROUGH TOUCHING A PERSON WITH TB . . . . . C THROUGH FOOD . . . . . D THROUGH SEXUAL CONTACT . . . . . E THROUGH MOSQUITO BITES . . . . . F OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
808	Do you currently smoke cigarettes?	YES . . . . . 1 NO 2	→ 810
809	In the last 24 hours, how many cigarettes did you smoke?	NUMBER OF CIGARETTES	
810	Do you currently smoke or use any (other) type of tobacco?	YES . . . . . 1 NO 2	→ 811A
811	What (other) type of tobacco do you currently smoke or use? RECORD ALL MENTIONED.	PIPE . . . . . A CHEWING TOBACCO . . . . . B SNUFF . . . . . C WATER PIPE / SHISHA . . . . . D OTHER _____ X (SPECIFY)	
811A	Do you drink alcohol?	YES . . . . . 1 NO 2	→ 811C
811B	During the last two weeks, on how many days did you have at least one alcoholic drink?	NUMBER OF DAYS	
811C	Are you involved in exercise that causes an increase in your heart rate for at least 10 minutes continuously? a) At work? b) During other physical activities?	YES NO a) AT WORK . . . . . 1 2 b) OTHER PHYSICAL ACTIVITIES 1 2	
811D	Now I would like to ask you about men's health. Have you ever heard of prostate cancer?	YES . . . . . 1 NO 2	→ 811I
811E	Has a doctor or health care professional ever examined you to detect or test for prostate cancer?	YES . . . . . 1 NO 2	→ 811I
811F	Did this prostate exam happen within the last 5 years?	YES . . . . . 1 NO 2	
811G	Did the doctor or health care professional who examined you tell you that you have a problem with your prostate?	YES . . . . . 1 NO 2	→ 811I

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
811H	Were you treated or referred for treatment for the prostate problem?	YES . . . . . 1 NO 2	
811I	Sometimes a woman can have a problem of constant leakage of urine or stool from her vagina during the day and night. This problem usually occurs after a difficult childbirth, but may also occur after a sexual assault or after pelvic surgery. Have you ever heard of this problem?	YES . . . . . 1 NO 2	
812	Are you covered by any health insurance?	YES . . . . . 1 NO 2	→ 901
813	What type of health insurance are you covered by? RECORD ALL MENTIONED.	MUTUAL HEALTH ORGANIZATION/ COMMUNITY-BASED HEALTH INSURANCE . . . . . A HEALTH INSURANCE THROUGH EMPLOYER . . . . . B NATIONAL HEATLH INSURANCE SCHEME . . . . . C PRIVATELY PURCHASED COMMERCIAL HEALTH INSURANCE . D PRE-PAYMENT SCHEME . . . . . E OTHER _____ X (SPECIFY)	

SECTION 9. FEMALE GENITAL CUTTING

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
901	Have you ever heard of female circumcision?	YES . . . . . 1 NO 2	→ 902A
902	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	→ 1001
902A	Do you believe that female circumcision is required by your community?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
903	Do you believe that female circumcision is required by your religion?	YES . . . . . 1 NO . . . . . 2 NO RELIGION . . . . . 3 DON'T KNOW 8	
904	Do you think that female circumcision should be continued, or should it be stopped?	CONTINUED . . . . . 1 STOPPED . . . . . 2 DEPENDS . . . . . 3 DON'T KNOW 8	

SECTION 10: DOMESTIC VIOLENCE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1001	CHECK COVER PAGE: IS MAN SELECTED FOR SECTION 10? MAN SELECTED FOR THIS SECTION ☐ MAN NOT SELECTED OR HH QUESTION 101B IS BLANK ☐ →		1033
1001A	CHECK FOR PRESENCE OF OTHERS: DO NOT CONTINUE UNTIL PRIVACY IS ENSURED. PRIVACY OBTAINED . . . . . 1 PRIVACY NOT POSSIBLE . . . . . 2 →		1032
	READ TO THE RESPONDENT Now I would like to ask you questions about some other important aspects of a man's life. You may find some of these questions very personal. However, your answers are crucial for helping to understand the condition of men in Kenya. Let me assure you that your answers are completely confidential and will not be told to anyone and no one else in your household will know that you were asked these questions.		
1002	CHECK 401 AND 402: CURRENTLY MARRIED/ LIVING WITH A WOMAN ☐ FORMERLY MARRIED/ LIVED WITH A WOMAN (READ IN PAST TENSE AND USE 'LAST' WITH WIFE/PARTNER') ☐ NEVER MARRIED/ NEVER LIVED WITH A WOMAN ☐ →		1016
1003	First, I am going to ask you about some situations which happen to some men. Please tell me if these apply to your relationship with your (last) (wife/partner)?		
	a) She (is/was) jealous or angry if you (talk/talked) to other women?	a) JEALOUS . . . . . YES 1 NO 2 DK 8	
	b) She frequently (accuses/accused) you of being unfaithful?	b) ACCUSES . . . . . YES 1 NO 2 DK 8	
	c) She (does/did) not permit you to meet your male friends?	c) NOT MEET FRIENDS . YES 1 NO 2 DK 8	
	d) She (tries/tried) to limit your contact with your family?	d) NO FAMILY . . . . . YES 1 NO 2 DK 8	
	e) She (insists/insisted) on knowing where you (are/were) at all times?	e) WHERE YOU ARE . YES 1 NO 2 DK 8	
1004	Now I need to ask some more questions about your relationship with your (last) (wife/partner).		
	A Did your (last) (wife/partner) ever:	**B** How often did this happen during the last 12 months: often, only sometimes, or not at all?	
		EVER / OFTEN / SOME-TIMES / NOT IN LAST 12 MONTHS	
	a) Say or do something to humiliate you in front of others?	a) YES 1 → / NO 2 ↓ — 1 — 2 — 3	
	b) Threaten to hurt or harm you or someone you care about?	b) YES 1 → / NO 2 ↓ — 1 — 2 — 3	
	c) Insult you or make you feel bad about yourself?	c) YES 1 → / NO 2 ↓ — 1 — 2 — 3	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1005	A Did your (last) (wife/partner) ever do any of the following things to you: B How often did this happen during the last 12 months: often, only sometimes, or not at all?		

	EVER		OFTEN	SOME-TIMES	NOT IN LAST 12 MONTHS
a) Push you, shake you, or throw something at you?	a) YES	1 →	1	2	3
	NO	2 ↓			
b) Slap you?	b) YES	1 →	1	2	3
	NO	2 ↓			
c) Twist your arm or pull your hair?	c) YES	1 →	1	2	3
	NO	2 ↓			
d) Punch you with her fist or with something that could hurt you?	d) YES	1 →	1	2	3
	NO	2 ↓			
e) Kick you, drag you, or beat you up?	e) YES	1 →	1	2	3
	NO	2 ↓			
f) Try to choke you or burn you on purpose?	f) YES	1 →	1	2	3
	NO	2 ↓			
g) Threaten or attack you with a knife, gun, or other weapon?	g) YES	1 →	1	2	3
	NO	2 ↓			
h) Physically force you to have sexual intercourse with her when you did not want to?	h) YES	1 →	1	2	3
	NO	2 ↓			
i) Physically force you to perform any other sexual acts you did not want to?	i) YES	1 →	1	2	3
	NO	2 ↓			
j) Force you with threats or in any other way to perform sexual acts you did not want to?	j) YES	1 →	1	2	3
	NO	2 ↓			

1006	CHECK 1005A (a-j): AT LEAST ONE 'YES' ☐ ↓ NOT A SINGLE 'YES' ☐ →		1009
1007	How long after you first (got married/started living together) with your (last) (wife/partner) did (this/any of these things) first happen? IF LESS THAN ONE YEAR, RECORD '00'.	NUMBER OF YEARS . . . . . ☐☐ BEFORE MARRIAGE/BEFORE LIVING TOGETHER 95	
1008	Did the following ever happen as a result of what your (last) (wife/partner) did to you: a) You had cuts, bruises, or aches? b) You had eye injuries, sprains, dislocations, or burns? c) You had deep wounds, broken bones, broken teeth, or any other serious injury?	a) YES . . . . . 1 NO . . . . . 2 b) YES . . . . . 1 NO . . . . . 2 c) YES . . . . . 1 NO 2	
1009	Have you ever hit, slapped, kicked, or done anything else to physically hurt your (last) (wife/partner) at times when she was not already beating or physically hurting you?	YES . . . . . 1 NO . . . . . 2 →	1011

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1010	In the last 12 months, how often have you done this to your (last) (wife/partner): often, only sometimes, or not at all?	OFTEN . . . . . 1 SOMETIMES . . . . . 2 NOT AT ALL 3	
1011	Does (did) your (last) (wife/partner) drink alcohol?	YES . . . . . 1 NO 2	→ 1013
1012	How often does (did) she get drunk: often, only sometimes, or never?	OFTEN . . . . . 1 SOMETIMES . . . . . 2 NEVER 3	
1013	Are (Were) you afraid of your (last) (wife/partner): most of the time, sometimes, or never?	MOST OF THE TIME AFRAID . . . . . 1 SOMETIMES AFRAID . . . . . 2 NEVER AFRAID 3	
1014	CHECK 410: MARRIED MORE THAN ONCE OR 410 IS BLANK ↓ MARRIED ONLY ONCE →		→ 1016
1015	A So far we have been talking about the behavior of your (current/last) (wife/partner). Now I want to ask you about the behavior of any previous (wife/partner). a) Did any previous (wife/partner) ever hit, slap, kick, or do anything else to hurt you physically? b) Did any previous (wife/partner) physically force you to have intercourse or perform any other sexual acts against your will?	B How long ago did this last happen? EVER / 0 - 11 MONTHS AGO / 12+ MONTHS AGO / DON'T REMEMBER a) YES 1 → 1 / 2 / 3 NO 2 ↓ b) YES 1 → 1 / 2 / 3 NO 2 ↓	
1016	CHECK 401 AND 402: EVER MARRIED/EVER LIVED WITH A WOMAN ↓ a) From the time you were 15 years old has anyone other than (your/any) (wife/partner) hit you, slapped you, kicked you, or done anything else to hurt you physically? NEVER MARRIED/NEVER LIVED WITH A WOMAN ↓ b) From the time you were 15 years old has anyone hit you, slapped you, kicked you, or done anything else to hurt you physically?	YES . . . . . 1 NO . . . . . 2 REFUSED TO ANSWER/ NO ANSWER 3	→ 1022
1017	Who has hurt you in this way? Anyone else? RECORD ALL MENTIONED.	MOTHER/STEP-MOTHER . . . . . A FATHER/STEP-FATHER . . . . . B SISTER/BROTHER . . . . . C DAUGHTER/SON . . . . . D OTHER RELATIVE . . . . . E CURRENT GIRLFRIEND . . . . . F FORMER GIRLFRIEND . . . . . G MOTHER-IN-LAW . . . . . H FATHER-IN-LAW . . . . . I OTHER IN-LAW . . . . . J TEACHER . . . . . K EMPLOYER/SOMEONE AT WORK . . . L POLICE/SOLDIER . . . . . M OTHER _____ X (SPECIFY)	
1018	In the last 12 months, how often has (this person/have these persons) physically hurt you: often, only sometimes, or not at all?	OFTEN . . . . . 1 SOMETIMES . . . . . 2 NOT AT ALL 3	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1022	CHECK 401 AND 402: EVER MARRIED/EVER LIVED WITH A WOMAN ☐ ↓ NEVER MARRIED/NEVER LIVED WITH A WOMAN ☐ →		1022B
1022A	Now I want to ask you about things that may have been done to you by someone other than (your/any) (wife/partner). At any time in your life, as a child or as an adult, has anyone ever forced you in any way to have sexual intercourse or perform any other sexual acts when you did not want to?	YES . . . . . 1 NO . . . . . 2 REFUSED TO ANSWER/ NO ANSWER 3	1 → 1023 2, 3 → 1024A
1022B	At any time in your life, as a child or as an adult, has anyone ever forced you in any way to have sexual intercourse or perform any other sexual acts when you did not want to?	YES . . . . . 1 NO . . . . . 2 REFUSED TO ANSWER/ NO ANSWER 3	1, 2, 3 → 1026
1023	Who was the person who was forcing you the very first time this happened?	CURRENT WIFE/PARTNER . . . . . 01 FORMER WIFE/PARTNER . . . . . 02 CURRENT/FORMER GIRLFRIEND . . . 03 FATHER/STEP-FATHER . . . . . 04 BROTHER/STEP-BROTHER . . . . . 05 OTHER RELATIVE . . . . . 06 IN-LAW . . . . . 07 OWN FRIEND/ACQUAINTANCE . . . . . 08 FAMILY FRIEND . . . . . 09 TEACHER . . . . . 10 EMPLOYER/SOMEONE AT WORK . . . 11 POLICE/SOLDIER . . . . . 12 PRIEST/RELIGIOUS LEADER . . . . . 13 STRANGER . . . . . 14 OTHER _____ 96 (SPECIFY)	
1024	CHECK 401 AND 402: EVER MARRIED/EVER LIVED WITH A WOMAN ☐ ↓ a) In the last 12 months, has anyone other than (your/any) (wife/partner) physically forced you to have sexual intercourse when you did not want to? NEVER MARRIED/NEVER LIVED WITH A WOMAN ☐ ↓ b) In the last 12 months has anyone physically forced you to have sexual intercourse when you did not want to?	YES . . . . . 1 NO 2	1 → 1025 2 →
1024A	CHECK 1005A (h-j) and 1015A(b) AT LEAST ONE 'YES' ☐ ↓ NOT A SINGLE 'YES' ☐ →		1026
1025	CHECK 401 AND 402: EVER MARRIED/EVER LIVED WITH A WOMAN ☐ ↓ a) How old were you the first time you were forced to have sexual intercourse or perform any other sexual acts by anyone, including (your/any) wife/partner? NEVER MARRIED/NEVER LIVED WITH A WOMAN ☐ ↓ b) How old were you the first time you were forced to have sexual intercourse or perform any other sexual acts?	AGE IN COMPLETED YEARS . ☐☐ DON'T KNOW 98	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1026	CHECK 1005A (a-j), 1015A (a,b), 1016, 1022A, AND 1022B: AT LEAST ONE 'YES' ☐ ↓ NOT A SINGLE 'YES' ☐ → 1030		
1027	Thinking about what you yourself have experienced among the different things we have been talking about, have you ever tried to seek help?	YES . . . . . 1 NO . . . . . 2 → 1029	
1028	From whom have you sought help? Anyone else? RECORD ALL MENTIONED.	OWN FAMILY . . . . . A WIFE'S/PARTNER'S FAMILY . . . . . B CURRENT/FORMER WIFE/PARTNER . . . . . C CURRENT/FORMER GIRLFRIEND . . . D FRIEND . . . . . E NEIGHBOR . . . . . F RELIGIOUS LEADER . . . . . G DOCTOR/MEDICAL PERSONNEL . . . H POLICE . . . . . I LAWYER . . . . . J SOCIAL SERVICE ORGANIZATION . K OTHER _____ X (SPECIFY)	→ 1030
1029	Have you ever told any one about this?	YES . . . . . 1 NO 2	
1030	As far as you know, did your father ever beat your mother?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

THANK THE RESPONDENT FOR HIS COOPERATION AND REASSURE HIM ABOUT THE CONFIDENTIALITY OF HIS ANSWERS. FILL OUT THE QUESTIONS BELOW WITH REFERENCE TO THE DOMESTIC VIOLENCE MODULE ONLY.

1031	DID YOU HAVE TO INTERRUPT THE INTERVIEW BECAUSE SOME ADULT WAS TRYING TO LISTEN, OR CAME INTO THE ROOM, OR INTERFERED IN ANY OTHER WAY?		YES ONCE	YES, MORE THAN ONCE	NO
		WIFE	1	2	3
		OTHER FEMALE ADULT .	1	2	3
		MALE ADULT	1	2	3
1032	INTERVIEWER'S COMMENTS / EXPLANATION FOR NOT COMPLETING THE DOMESTIC VIOLENCE MODULE _____ _____ _____				
1033	RECORD THE TIME.	HOUR . . . . . ☐☐ MINUTES . . . . . ☐☐			

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

NAME OF SUPERVISOR: _____ DATE: _____

EDITOR'S OBSERVATIONS

NAME OF EDITOR: _____ DATE: _____