

# Kenya



## Demographic and Health Survey

Key Indicators  
2014



Republic of Kenya



# Kenya Demographic and Health Survey 2014

## Key Indicators

**Kenya National Bureau of Statistics**  
Nairobi, Kenya

**Ministry of Health**  
Nairobi, Kenya

**National AIDS Control Council**  
Nairobi, Kenya

**Kenya Medical Research Institute**  
Nairobi, Kenya

**National Council for Population and Development**  
Nairobi, Kenya

March 2015



**The following individuals are acknowledged for their contributions as authors to this Key Indicators report:**

| <b>Name</b>            | <b>Institution</b>                                               |
|------------------------|------------------------------------------------------------------|
| Mr. Zachary Mwangi     | Kenya National Bureau of Statistics                              |
| Mr. Macdonald Obudho   | Kenya National Bureau of Statistics                              |
| Mr. Andrew Imbwaga     | Kenya National Bureau of Statistics                              |
| Mr. Michael Musyoka    | Kenya National Bureau of Statistics                              |
| Mr. Samuel Ogola       | Kenya National Bureau of Statistics                              |
| Mr. Robert Buluma      | Kenya National Bureau of Statistics                              |
| Mr. James Munguti      | Kenya National Bureau of Statistics                              |
| Mr. Henry Osoro        | Kenya National Bureau of Statistics                              |
| Ms. Rosemary Kong'ani  | Kenya National Bureau of Statistics                              |
| Mr. Abdulkadir A. Awes | Kenya National Bureau of Statistics                              |
| Mr. Godfrey Otieno     | Kenya National Bureau of Statistics                              |
| Mr. John Bore          | Kenya National Bureau of Statistics                              |
| Mr. Dickson Makuba     | Kenya National Bureau of Statistics                              |
| Dr. Sara K. Head       | ICF International                                                |
| Ms. Kimberly Peven     | ICF International                                                |
| Ms. Yodit Bekele       | ICF International                                                |
| Prof. Alfred Agwanda   | Population Studies and Research Institute, University of Nairobi |
| Mr. Ben Obonyo         | Population Studies and Research Institute, University of Nairobi |
| Prof. Lawrence Ikamari | Population Studies and Research Institute, University of Nairobi |
| Mr. George Kichamu     | National Council for Population and Development                  |
| Dr. Annah Wamae        | Ministry of Health                                               |
| Mr. Andolo Miheso      | Ministry of Health                                               |
| Ms. Ruth Muia          | Ministry of Health                                               |
| Dr. Rebecca Kiptui     | Ministry of Health                                               |
| Ms. Lucy Gathigi       | Ministry of Health                                               |
| Dr. Patrick Mureithi   | Ministry of Health (National AIDS Control Council)               |
| Mr. John Wanyungu      | Ministry of Health (National AIDS and STI Control Programme)     |

The 2014 Kenya Demographic and Health Survey (2014 KDHS) was implemented by the Kenya National Bureau of Statistics from May 2014 to October 2014 in partnership with the Ministry of Health, the National AIDS Control Council (NACC), the National Council for Population and Development (NCPD), and the Kenya Medical Research Institute (KEMRI). Funding for the KDHS was provided by the Government of Kenya with support from the United States Agency for International Development (USAID), the United Nations Population Fund (UNFPA), the United Kingdom Department for International Development (DfID), the World Bank, the Danish International Development Agency (DANIDA), the United Nations Children's Fund (UNICEF), the German Development Bank (KfW), the Clinton Health Access Initiative (CHAI), the World Food Programme (WFP), and the Micronutrient Initiative (MI). ICF International provided technical assistance as well as funding to the project through The DHS Program, a USAID-funded project providing support and technical assistance in the implementation of population and health surveys in countries worldwide.

Additional information about the 2014 KDHS may be obtained from the Kenya National Bureau of Statistics (KNBS), P.O. Box 30266-00100 GPO Nairobi, Kenya; telephone (Nairobi): 3317586/8, 3317612/22, 3317623, 3317651; fax: 3315977; e-mail: [directorgeneral@knbs.or.ke](mailto:directorgeneral@knbs.or.ke), [info@knbs.or.ke](mailto:info@knbs.or.ke); website: [www.knbs.or.ke](http://www.knbs.or.ke).

Information on The DHS Program may be obtained from ICF International, 530 Gaither Road, Suite 500, Rockville MD, 20850, USA; telephone: 301-407-6500; fax: 301.407.6501; e-mail: [info@DHSprogram.com](mailto:info@DHSprogram.com); website: [www.DHSprogram.com](http://www.DHSprogram.com).

# CONTENTS

---

|                                                                                        |            |
|----------------------------------------------------------------------------------------|------------|
| <b>TABLES AND FIGURES .....</b>                                                        | <b>v</b>   |
| <b>ABBREVIATIONS.....</b>                                                              | <b>vii</b> |
| <b>1 INTRODUCTION .....</b>                                                            | <b>1</b>   |
| 1.1 Background.....                                                                    | 1          |
| 1.2 Survey Objectives .....                                                            | 2          |
| <b>2 SURVEY IMPLEMENTATION.....</b>                                                    | <b>3</b>   |
| 2.1 Survey Organisation.....                                                           | 3          |
| 2.2 Sample Design and Implementation .....                                             | 3          |
| 2.3 Questionnaires.....                                                                | 4          |
| 2.4 Training and Data Collection .....                                                 | 6          |
| 2.4.1 Training of Trainers.....                                                        | 6          |
| 2.4.2 Pre-test.....                                                                    | 6          |
| 2.4.3 Main Training .....                                                              | 6          |
| 2.4.4 Data Collection .....                                                            | 7          |
| 2.5 Data Processing.....                                                               | 7          |
| <b>3 SURVEY RESULTS .....</b>                                                          | <b>9</b>   |
| 3.1 General Survey Results.....                                                        | 9          |
| 3.1.1 Response Rates .....                                                             | 9          |
| 3.1.2 Characteristics of Respondents .....                                             | 10         |
| 3.2 Fertility.....                                                                     | 11         |
| 3.2.1 Fertility Levels and Trends.....                                                 | 11         |
| 3.2.2 Fertility Differentials .....                                                    | 13         |
| 3.2.3 Teenage Pregnancy.....                                                           | 14         |
| 3.2.4 Fertility Preferences.....                                                       | 15         |
| 3.3 Contraception .....                                                                | 16         |
| 3.4 Infant and Child Mortality .....                                                   | 22         |
| 3.5 Maternal Health .....                                                              | 23         |
| 3.5.1 Antenatal Care .....                                                             | 23         |
| 3.5.2 Delivery Care.....                                                               | 24         |
| 3.5.3 Trends in Antenatal and Delivery Care .....                                      | 26         |
| 3.5.4 Protection against Neonatal Tetanus.....                                         | 26         |
| 3.5.5 Postnatal Care .....                                                             | 27         |
| 3.6 Child Health .....                                                                 | 27         |
| 3.6.1 Vaccination Coverage.....                                                        | 27         |
| 3.6.2 Treatment of Childhood Illnesses .....                                           | 32         |
| 3.6.3 Nutritional Status of Children.....                                              | 35         |
| 3.6.4 Breastfeeding and Complementary Feeding.....                                     | 38         |
| 3.7 Malaria .....                                                                      | 40         |
| 3.7.1 Ownership and Use of Mosquito Nets .....                                         | 40         |
| 3.7.2 Intermittent Preventive Treatment of Pregnant Women .....                        | 45         |
| 3.7.3 Treatment of Children with Fever.....                                            | 47         |
| 3.8 HIV .....                                                                          | 49         |
| 3.8.1 Knowledge of HIV Prevention Methods .....                                        | 49         |
| 3.8.2 Knowledge of HIV Prevention among Young People.....                              | 51         |
| 3.8.3 Multiple Sexual Partners.....                                                    | 52         |
| 3.8.4 Coverage of Prior HIV Testing.....                                               | 54         |
| 3.9 Domestic Violence.....                                                             | 58         |
| 3.10 Female Circumcision .....                                                         | 61         |
| 3.11 Fistula.....                                                                      | 62         |
| <b>APPENDIX A OVERVIEW OF DATA COLLECTED IN FULL AND SHORT<br/>QUESTIONNAIRES.....</b> | <b>63</b>  |
| <b>REFERENCES .....</b>                                                                | <b>65</b>  |



## TABLES AND FIGURES

---

|            |                                                                                                                  |    |
|------------|------------------------------------------------------------------------------------------------------------------|----|
| Table 3.1  | Results of the household and individual interviews .....                                                         | 9  |
| Table 3.2  | Background characteristics of respondents .....                                                                  | 10 |
| Table 3.3  | Respondents by county .....                                                                                      | 11 |
| Table 3.4  | Current fertility .....                                                                                          | 12 |
| Table 3.5  | Fertility by background characteristics .....                                                                    | 13 |
| Table 3.6  | Fertility by county .....                                                                                        | 13 |
| Table 3.7  | Teenage pregnancy and motherhood.....                                                                            | 15 |
| Table 3.8  | Fertility preferences by number of living children.....                                                          | 16 |
| Table 3.9  | Current use of contraception by background characteristics.....                                                  | 17 |
| Table 3.10 | Current use of contraception by county .....                                                                     | 18 |
| Table 3.11 | Need and demand for family planning among currently married women and<br>sexually active unmarried women .....   | 21 |
| Table 3.12 | Early childhood mortality rates .....                                                                            | 22 |
| Table 3.13 | Maternal care indicators by background characteristics .....                                                     | 24 |
| Table 3.14 | Maternal care indicators by county .....                                                                         | 25 |
| Table 3.15 | Protection against tetanus and postnatal care .....                                                              | 27 |
| Table 3.16 | Vaccinations by background characteristics .....                                                                 | 29 |
| Table 3.17 | Vaccinations by county .....                                                                                     | 30 |
| Table 3.18 | Treatment for acute respiratory infection symptoms, fever, and diarrhoea by background<br>characteristics.....   | 33 |
| Table 3.19 | Treatment for acute respiratory infection symptoms, fever, and diarrhoea by county .....                         | 34 |
| Table 3.20 | Nutritional status of children by background characteristics .....                                               | 36 |
| Table 3.21 | Nutritional status of children by county .....                                                                   | 37 |
| Table 3.22 | Breastfeeding status by age.....                                                                                 | 39 |
| Table 3.23 | Household possession of insecticide-treated nets by background characteristics .....                             | 40 |
| Table 3.24 | Household possession of insecticide-treated nets by county .....                                                 | 41 |
| Table 3.25 | Use of insecticide-treated nets by children and pregnant women by background<br>characteristics.....             | 43 |
| Table 3.26 | Use of insecticide-treated nets by children and pregnant women by county .....                                   | 44 |
| Table 3.27 | Use of intermittent preventive treatment (IPTp) by women during pregnancy<br>by background characteristics ..... | 45 |
| Table 3.28 | Use of intermittent preventive treatment (IPTp) by women during pregnancy by county .....                        | 46 |
| Table 3.29 | Prevalence, diagnosis, and prompt treatment of children with fever by<br>background characteristics .....        | 47 |
| Table 3.30 | Prevalence, diagnosis, and prompt treatment of children with fever by county.....                                | 48 |
| Table 3.31 | Knowledge of HIV prevention methods by background characteristics .....                                          | 49 |
| Table 3.32 | Knowledge of HIV prevention methods by county.....                                                               | 50 |
| Table 3.33 | Knowledge of HIV prevention among young people.....                                                              | 51 |
| Table 3.34 | Multiple sexual partners in the past 12 months: Women .....                                                      | 53 |
| Table 3.35 | Multiple sexual partners in the past 12 months: Men .....                                                        | 54 |
| Table 3.36 | Coverage of prior HIV testing by background characteristics: Women.....                                          | 55 |
| Table 3.37 | Coverage of prior HIV testing by county: Women .....                                                             | 56 |
| Table 3.38 | Coverage of prior HIV testing by background characteristics: Men.....                                            | 57 |
| Table 3.39 | Coverage of prior HIV testing by county: Men .....                                                               | 58 |
| Table 3.40 | Experience of domestic violence: Ever-married women.....                                                         | 59 |
| Table 3.41 | Experience of domestic violence: Ever-married men .....                                                          | 60 |
| Table 3.42 | Knowledge and prevalence of female circumcision.....                                                             | 61 |
| Table 3.43 | Fistula.....                                                                                                     | 62 |

|            |                                                                                                                           |    |
|------------|---------------------------------------------------------------------------------------------------------------------------|----|
| Figure 3.1 | Trends in total fertility rate, 1978-2014 .....                                                                           | 12 |
| Figure 3.2 | Trends in percentage of currently married women using any contraceptive method,<br>1989-2014 .....                        | 20 |
| Figure 3.3 | Trends in unmet need, modern contraceptive use, and percentage of demand satisfied<br>with modern methods, 1993-2014..... | 22 |
| Figure 3.4 | Trends in childhood mortality, 1984-2014.....                                                                             | 23 |
| Figure 3.5 | Trends in maternal health care, 2003-2014 .....                                                                           | 26 |
| Figure 3.6 | Nutritional status of children by age .....                                                                               | 38 |
| Figure 3.7 | Minimum acceptable diet by age (months) .....                                                                             | 40 |
| Figure 3.8 | Percentage of the de facto population with access to an ITN* in the household .....                                       | 42 |

## ABBREVIATIONS

---

|               |                                                                                                              |
|---------------|--------------------------------------------------------------------------------------------------------------|
| AIDS          | Acquired Immune Deficiency Syndrome                                                                          |
| ANC           | Antenatal Care                                                                                               |
| ARI           | Acute Respiratory Infection                                                                                  |
| BCG           | Bacille Calmette-Guerin                                                                                      |
| CBR           | Crude Birth Rate                                                                                             |
| CPR           | Contraceptive Prevalence Rate                                                                                |
| DHS           | Demographic and Health Survey                                                                                |
| DPT           | Diphtheria, Pertussis, and Tetanus                                                                           |
| ENA for SMART | Emergency Nutrition Assessment software for Standardized Monitoring and Assessment of Relief and Transitions |
| FGC           | Female Genital Cutting                                                                                       |
| FGM           | Female Genital Mutilation                                                                                    |
| GFR           | General Fertility Rate                                                                                       |
| HIV           | Human Immunodeficiency Virus                                                                                 |
| IPTp          | Intermittent Preventive Treatment during Pregnancy                                                           |
| IRS           | Indoor Residual Spraying                                                                                     |
| ITN           | Insecticide-Treated Net                                                                                      |
| IUD           | Intra-Uterine Device                                                                                         |
| KDHS          | Kenya Demographic and Health Survey                                                                          |
| KFS           | Kenya Fertility Survey                                                                                       |
| KHPF          | Kenya Health Policy Framework                                                                                |
| LAM           | Lactational Amenorrhoea Method                                                                               |
| NASSEP        | National Survey Sample and Evaluation Programme                                                              |
| ORS           | Oral Rehydration Salts                                                                                       |
| ORT           | Oral Rehydration Therapy                                                                                     |
| PNC           | Postnatal Care                                                                                               |
| RBM           | Roll Back Malaria                                                                                            |
| SD            | Standard Deviation                                                                                           |
| SP            | Sulphadoxine-Pyrimethamine                                                                                   |
| STI           | Sexually Transmitted Infection                                                                               |
| TFR           | Total Fertility Rate                                                                                         |
| WHO           | World Health Organization                                                                                    |



# INTRODUCTION

---

## 1.1 BACKGROUND

The Government of Kenya is committed to the improvement of the health and welfare of its citizens. Over the years, the government has taken important steps towards this goal, emphasizing that the provision of health services should meet the basic needs of the population and be geared towards providing health services within easy reach of Kenyans. It has also placed considerable emphasis on preventive, promotive and rehabilitative health services without ignoring curative services. Among the actions taken—the development of the Kenya Health Policy Framework (KHPF 1994-2010), the launch of Vision 2030, and the enactment of a new constitution in 2010— have greatly influenced the health status of Kenyans and the structure in which health services are provided. In particular, the new constitution creates a devolved system of governance with 47 counties, each of which is responsible for providing and delivering health care services to its citizens. The devolved system is intended to make the realisation of the right to health by all Kenyans a reality (Government of Kenya, 2010).

The 2014 Kenya Demographic and Health Survey (KDHS) is a national sample survey that targeted 40,300 households designed to provide detailed information on aspects of health across Kenya and in each of the 47 counties. The KDHS is conducted every five years. The 2014 KDHS was the sixth survey of its kind to be conducted in Kenya, following those carried out in 1989, 1993, 1998, 2003, and 2008-09, and it is the first KDHS to provide information at the county level. In the 2014 KDHS, information was collected on household characteristics, education and employment, marriage and sexual activity, fertility levels and preferences, awareness and use of family planning methods, maternal and child health and survival, nutritional status, ownership and use of mosquito nets, knowledge and behaviours regarding HIV, domestic violence, female circumcision, and fistula.

The 2014 KDHS data collection was undertaken from May 2014 to October 2014 to provide information to address the planning, programme implementation, monitoring, and evaluation needs of health, family planning, and HIV/AIDS programmes. It provides programme managers and policy makers involved in these programmes with the information that they need to effectively plan and implement future interventions.

Financial support for the 2014 KDHS was provided by the Government of Kenya through the Kenya National Bureau of Statistics (KNBS), the U.S. Agency for International Development (USAID), the United Nations Children's Fund (UNICEF), the United Nations Population Fund (UNFPA), the World Bank, the UK Department for International Development (DfID), the Danish International Development Agency (DANIDA), the German Development Bank (KfW), World Food Programme (WFP), Clinton Health Access Initiative (CHAI), and Micronutrient Initiative (MI). The Demographic and Health Surveys (DHS) Program of ICF International provided technical assistance during all phases of the survey.

This Key Indicators report presents major findings from the survey. A more detailed report will be published later in the year. While considered preliminary, the findings presented here are not expected to differ significantly from those to be presented in the final report.

## **1.2 SURVEY OBJECTIVES**

The 2014 Kenya Demographic and Health Survey (KDHS) was designed to provide information to monitor and evaluate population and health status in Kenya and to be a follow-up to the previous KDHS surveys. In addition, it provides new information on indicators previously not collected in KDHS surveys, such as fistula and men's experience of domestic violence. The survey also aims 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
- Ascertain the extent and pattern of domestic violence and female circumcision

## SURVEY IMPLEMENTATION

---

### 2.1 SURVEY ORGANISATION

The 2014 Kenya Demographic and Health Survey (KDHS) was a joint effort of many organisations, including:

- 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 Fund for Population Activities (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)
- US 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 for 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 Bureau and other partners were responsible for overseeing the day-to-day technical operations including recruitment and training of field and data processing staff and the supervision of the office and field operations. The Bureau was also responsible for organizing the writing of this report. With funding from USAID/Kenya, ICF International staff provided technical assistance. USAID/Kenya provided funding for the survey field transport in addition to other logistical support. The Ministry of Health (MOH) assisted in the review of the survey instruments and in report writing.

### 2.2 SAMPLE DESIGN AND IMPLEMENTATION

The sample for the 2014 KDHS was drawn from a master sampling frame, the Fifth National Sample Survey and Evaluation Program (NASSEP V). This is a frame that the Bureau currently operates to conduct household-based surveys throughout Kenya. The frame contains a total of 5,360 clusters split into four equal sub-samples. These clusters were drawn using 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 sub-samples of the NASSEP V frame that were developed in 2013. Approximately half of the clusters in these two sub-samples were updated between November 2013 and September 2014. Kenya is divided into 47 counties, which serves as devolved units of administration, created in the new constitution of 2010. In the NASSEP V frame, each of the 47 counties was stratified into urban and rural strata; in total, 92 sampling strata were created since Nairobi County and Mombasa County have only urban areas.

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<sup>1</sup>) 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 whole 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 households was allowed during data collection. The household and woman's questionnaires were administered in all households, while the man's questionnaire was administered in every second household. Due to the non-proportional sample allocation to the sampling strata and the fixed sample take per cluster, the survey is not self-weighting. The resulting data have, therefore, been weighted to be representative at the national level and as well as at domain levels.

## **2.3 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 are based on the model questionnaires developed for The DHS Program as well as 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 approximately 10,000 households in the 2008-09 KDHS to 40,300 households in 2014. A survey of this magnitude introduces concerns for data quality and for overall management. To address these concerns, reduce the length of fieldwork, and limit interviewer and respondent fatigue, a decision was made not to 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 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.

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 received the full Household Questionnaire, the full Woman's Questionnaire, and the Man's Questionnaire. In the other half, households received the short Household Questionnaire and the short Woman's Questionnaire. The selection for these subsamples was done at

---

<sup>1</sup> Former provinces were Coast, North Eastern, Eastern, Central, Rift Valley, Western, Nyanza and Nairobi.

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.<sup>2</sup>

It is important to note that the priority data collected in the short questionnaires came from all households and from all women since the short questionnaires are 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 in the full questionnaires only are not recommended for estimation at the county level. A list of indicators included in both questionnaires is presented in Appendix A. In this report, county level data is tabulated for all indicators for which it is available. For indicators not collected at the county level, the tables presented include data at the regional level only.

The Household Questionnaire was used to list all the usual members of the household and visitors who stayed in the household the night before the survey. The main purpose 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 five.

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

- 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
- Woman's work and husband's background characteristics
- Childhood mortality
- Awareness and behaviour about 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

---

<sup>2</sup> Note, during training and fieldwork, KDHS field staff referred to the "full" questionnaires as the "long" questionnaires.

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, full Woman's Questionnaire, and 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 with 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, Maragoli, Maasai, Meru, Mijikenda, Pokot, Somali, Swahili, and Turkana. The translated questionnaires were pretested to detect any possible problems in the translation or flow, as well as to gauge the length of time required for interviews.

## **2.4 TRAINING AND DATA COLLECTION**

### **2.4.1 Training of Trainers**

A training of trainers was conducted by ICF International from January 20–25, 2014 with 18 trainers drawn from the Kenya National Bureau of Statistics (KNBS) and the Ministry of Health. The objectives of the training were to harmonize concepts on survey design and questionnaire content, to review effective adult teaching techniques, and to familiarize trainers with the training materials and equipment. The trainers participated as trainers in the pretest and the main training and later served as fieldwork coordinators during data collection.

### **2.4.2 Pre-test**

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

### **2.4.3 Main Training**

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 field personnel took place from March 24–April 17, 2014, at a central venue 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 discussion and in-class practice interviewing in pairs. A number of 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 with children intended to gauge and improve measurement accuracy and precision. This exercise invited 175 children age 0-59 months and their caregivers to the training site in groups of 50 child-caregiver pairs assigned throughout the day to one of three classrooms. Fifteen trained nutrition specialists measured each of the children assigned to their classroom and thereby provided a reference measurement. Each of the 336 trainees served both the roles of measurer and assistant and measured the same ten children twice. Results were recorded and analysed using Software for Emergency Nutrition Assessment (ENA for SMART). A debriefing session was held 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 pre-test trainees. Team leaders assisted with logistics, guided trainees through the fieldwork, monitored trainee performance, edited trainee 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.

#### **2.4.4 Data Collection**

Field staff were divided into 48 teams—one in each county with Nairobi having two teams. Each team had one supervisor, one field editor, three female interviewers, one male interviewer, and a driver. Data collection was overseen by coordinators who had also served as trainers 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 the quality of data collection, ensuring uniformity in data collection procedures and fidelity to survey protocol, providing moral support to the field teams, and replenishing field team supplies. Quality control staff fulfilled similar responsibilities. Fieldwork for the main survey took place from May 7–October 20, 2014.

### **2.5 DATA PROCESSING**

Data editing was first done in the field by field editors and supervisors before the completed questionnaires were sent to the KNBS data processing centre in Nairobi. These questionnaires were further reviewed and verified before data entry received by questionnaire administrators who verified cluster and household numbers to establish if the received questionnaires were consistent with the sampled list.

Data entry was carried out from June 3–November 21, 2014. All data were double entered (100 percent verification) using CSPro software. Thereafter, secondary editing, which included further data cleaning and validation, was done before tabulation of the results by KNBS in collaboration with ICF International.



## SURVEY RESULTS

### 3.1 GENERAL SURVEY RESULTS

#### 3.1.1 Response Rates

Table 3.1 presents the summary response rates for the 2014 KDHS. A total of 39,679 households were selected in the sample, of which 36,812 were found occupied at the time of the fieldwork. Of these, 36,430 households 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.

The 2014 KDHS sample was divided into halves. In one half, households received the full Household Questionnaire, the full Woman's Questionnaire, and the Man's Questionnaire. In the other half, households received 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.

Among the households selected for and interviewed using the full questionnaires, a total of 15,317 women were identified as eligible for the full women'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.

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

The 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 the failure to find them at home despite repeated visits to the households. The substantially lower response rates for men reflect the more frequent and longer absences of men from the households.

Table 3.1 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 <sup>1</sup>         | 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 <sup>2</sup>    | 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 <sup>1</sup>         | 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 <sup>2</sup>    | 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 <sup>2</sup>      | 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 <sup>1</sup>         | 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 <sup>2</sup>    | 96.2      | 97.4   | 96.9   |

<sup>1</sup> Households interviewed/households occupied.

<sup>2</sup> Respondents interviewed/eligible respondents.

### 3.1.2 Characteristics of Respondents

The weighted and unweighted distribution of women age 15-49 and men age 15-54 by background characteristics is shown in Table 3.2. The proportions of both women and men tend to decline with increasing age, reflecting the comparatively young age structure of the Kenyan population. About 60 percent of women are married or living in an informal union with a man, compared with only 51 percent of men. Almost half of the interviewed men (44 percent) have never married, compared with less than one-third (29 percent) of the women. On the other hand, women are more likely than men to be widowed, divorced, or separated.

The survey shows that 59 percent of women and 56 percent of men live in rural areas. The percentages of women and men with primary school education are similar, although more men have a secondary or higher level of education (49 percent of men compared with 43 percent of women). About 70 percent of respondents are Protestant, about 20 percent are Roman Catholic, and about 7 percent are Muslim.

Table 3.3 presents the weighted and unweighted distribution of women and men respondents by county. More respondents live in Nairobi, Kiambu, and Nakuru counties (between 5 and 13 percent), while each of the other 44 counties contains a smaller proportion of respondents. Most respondents live in the 14 counties within the Rift Valley region (26 percent of women and 25 percent of men).

**Table 3.2 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 |
| <b>Age</b>                 |                  |                 |                   |                  |                 |                   |
| 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               |
| <b>Religion</b>            |                  |                 |                   |                  |                 |                   |
| 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                |
| Missing                    | 0.1              | 36              | 38                | 0.0              | 3               | 3                 |
| <b>Marital status</b>      |                  |                 |                   |                  |                 |                   |
| 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                |
| <b>Residence</b>           |                  |                 |                   |                  |                 |                   |
| 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             |
| <b>Education</b>           |                  |                 |                   |                  |                 |                   |
| 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+                 | 42.7             | 13,277          | 11,283            | 49.0             | 5,913           | 5,165             |
| <b>Wealth quintile</b>     |                  |                 |                   |                  |                 |                   |
| 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            |
| Men 50-54                  | na               | 0               | 0                 | na               | 756             | 805               |
| Total 15-54                | na               | 0               | 0                 | na               | 12,819          | 12,819            |

na = Not applicable

Table 3.3 Respondents by county

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

| County               | Women            |                 |                   | Men              |                 |                   |
|----------------------|------------------|-----------------|-------------------|------------------|-----------------|-------------------|
|                      | Weighted percent | Weighted number | Unweighted number | Weighted percent | Weighted number | Unweighted number |
| <b>Coast</b>         | <b>9.9</b>       | <b>3,076</b>    | <b>3,902</b>      | <b>10.4</b>      | <b>1,260</b>    | <b>1,505</b>      |
| 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               |
| <b>North Eastern</b> | <b>2.1</b>       | <b>648</b>      | <b>1,664</b>      | <b>1.9</b>       | <b>227</b>      | <b>591</b>        |
| 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               |
| <b>Eastern</b>       | <b>14.1</b>      | <b>4,375</b>    | <b>5,247</b>      | <b>15.1</b>      | <b>1,825</b>    | <b>2,144</b>      |
| 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               |
| <b>Central</b>       | <b>12.9</b>      | <b>3,994</b>    | <b>3,114</b>      | <b>13.0</b>      | <b>1,564</b>    | <b>1,248</b>      |
| 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               |
| <b>Rift Valley</b>   | <b>25.6</b>      | <b>7,953</b>    | <b>9,059</b>      | <b>25.3</b>      | <b>3,050</b>    | <b>3,484</b>      |
| 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               |
| <b>Western</b>       | <b>10.4</b>      | <b>3,225</b>    | <b>2,840</b>      | <b>9.6</b>       | <b>1,164</b>    | <b>1,130</b>      |
| 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               |
| <b>Nyanza</b>        | <b>13.0</b>      | <b>4,038</b>    | <b>4,254</b>      | <b>11.6</b>      | <b>1,405</b>    | <b>1,542</b>      |
| 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               |
| <b>Nairobi</b>       | <b>12.1</b>      | <b>3,770</b>    | <b>999</b>        | <b>13.0</b>      | <b>1,568</b>    | <b>370</b>        |
| Total 15-49          | 100.0            | 31,079          | 31,079            | 100.0            | 12,063          | 12,014            |
| Men 50-54            | na               | 0               | 0                 | na               | 756             | 805               |
| Total 15-54          | na               | 0               | 0                 | na               | 12,819          | 12,819            |

na = Not applicable

## 3.2 FERTILITY

### 3.2.1 Fertility Levels and Trends

Fertility data were collected in the survey by asking each woman interviewed for a history of her births. The information obtained on each of the woman's births included the month and year of the birth. These data are used to calculate two of the most widely used measures of current fertility, the total fertility rate (TFR) and its component, age-specific fertility rates.

According to the survey findings, the total fertility rate is 3.9 births per woman (Table 3.4). This means that on average, a Kenyan woman who is at the beginning of her childbearing years will give birth to about four children by the end of her reproductive period if fertility levels remain constant at the level observed in the three-year period preceding the survey.

Table 3.4 also shows differentials in current fertility for urban and rural areas in Kenya. The TFR in rural areas is 4.5 and is significantly higher than the rate in urban areas (3.1 births per woman). The results also show that the fertility rate by age is higher in rural areas across all age groups. The 20-24 year age cohort has the largest absolute difference. The rate among rural women in this age cohort is 248 births per thousand women, compared with an urban rate of 164 births per thousand. Despite these differences, the rural-urban fertility differences are narrowing compared with previous surveys.

**Table 3.4 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

| Age group   | Residence |       | Total |
|-------------|-----------|-------|-------|
|             | Urban     | Rural |       |
| 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.

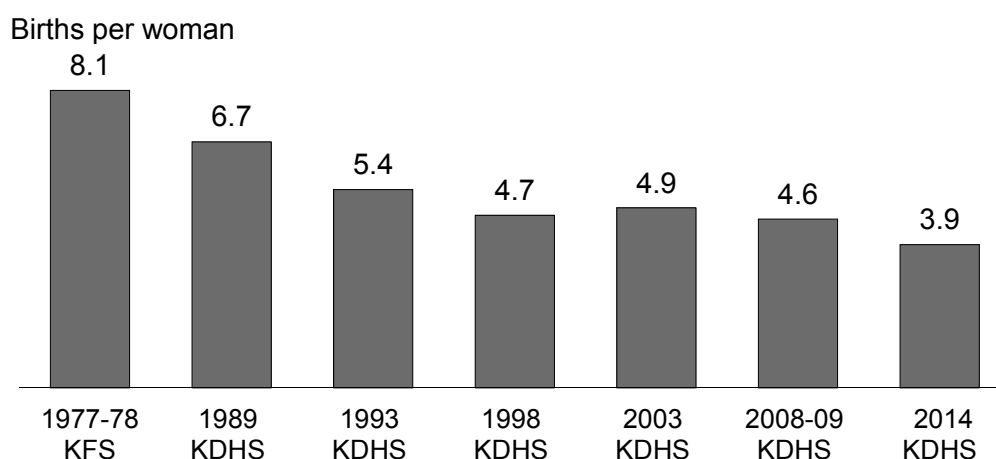
TFR: Total fertility rate expressed per woman

GFR: General fertility rate expressed per 1,000 women age 15-44

CBR: Crude birth rate expressed per 1,000 population

Figure 3.1 shows trends in total fertility rates since the mid-1970s. There is an overall decline from the 8.1 births per woman in the mid-1970s with a sharp decrease measured between the 1977-78 Kenya Fertility Survey (KFS) and the 1993 KDHS. The decline slowed in the 1990s, but the decrease in TFR from 4.6 in the 2008-09 KDHS to the current 3.9 may indicate that Kenya's fertility is returning to the decline observed from the mid-1970s through the 1990s. The TFR of 3.9 for the whole country is the lowest ever recorded.

**Figure 3.1 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.

### 3.2.2 Fertility Differentials

Table 3.5 shows the differentials in fertility levels by urban-rural residence, education, and wealth quintile. Kenyan women living in rural areas bear more children than those living in urban areas. Women in lower socio-economic strata bear more children than their wealthier counterparts; women from households in the lowest wealth quintile have a TFR that is more than twice that of women from the highest quintile. Similarly, women with no education have a TFR more than twice that of women with a secondary or higher level of education.

Table 3.6 shows fertility levels by county. The counties with the lowest TFR are Kirinyaga (2.3) followed by Nyeri, Kiambu, and Nairobi, all with a TFR of 2.7. The counties with the highest TFR are Wajir (7.8), West Pokot (7.2), Turkana (6.9), and Samburu (6.3). Counties with the higher TFRs tend to come from arid and semi-arid parts of northern Kenya.

Table 3.5 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 |
|---------------------------|----------------------|--------------------------------------------------|------------------------------------------------------|
| <b>Residence</b>          |                      |                                                  |                                                      |
| Urban                     | 3.1                  | 6.0                                              | 3.9                                                  |
| Rural                     | 4.5                  | 6.4                                              | 5.6                                                  |
| <b>Education</b>          |                      |                                                  |                                                      |
| 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                                                  |
| <b>Wealth quintile</b>    |                      |                                                  |                                                      |
| 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 preceding the interview.

Table 3.6 Fertility by county

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 |
|----------------------|----------------------|--------------------------------------------------|------------------------------------------------------|
| <b>Coast</b>         | <b>4.3</b>           | <b>6.6</b>                                       | <b>5.5</b>                                           |
| 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                                                  |
| <b>North Eastern</b> | <b>6.4</b>           | <b>12.0</b>                                      | <b>7.1</b>                                           |
| Garissa              | 6.1                  | 11.7                                             | 6.8                                                  |
| Wajir                | 7.8                  | 13.6                                             | 7.9                                                  |
| Mandera              | 5.2                  | 10.6                                             | 6.4                                                  |
| <b>Eastern</b>       | <b>3.4</b>           | <b>4.6</b>                                       | <b>4.7</b>                                           |
| 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                                                  |
| <b>Central</b>       | <b>2.8</b>           | <b>4.8</b>                                       | <b>3.7</b>                                           |
| 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                                                  |
| <b>Rift Valley</b>   | <b>4.5</b>           | <b>7.0</b>                                       | <b>5.5</b>                                           |
| 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                                                  |

Continued...

Table 3.6—Continued

| County         | Total fertility rate | Percentage of women age 15-49 currently pregnant | Mean number of children ever born to women age 40-49 |
|----------------|----------------------|--------------------------------------------------|------------------------------------------------------|
| 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                                                  |
| <b>Western</b> | <b>4.7</b>           | <b>6.7</b>                                       | <b>6.1</b>                                           |
| 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                                                  |
| <b>Nyanza</b>  | <b>4.3</b>           | <b>5.9</b>                                       | <b>5.8</b>                                           |
| 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                                                  |
| <b>Nairobi</b> | <b>2.7</b>           | <b>6.8</b>                                       | <b>3.1</b>                                           |
| Total          | 3.9                  | 6.3                                              | 5.0                                                  |

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

### 3.2.3 Teenage Pregnancy

Evidence of the extent of teenage fertility is given in Table 3.7, which 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 while 18 percent have begun childbearing (had a live birth or are pregnant with their first child). The percentage of women who have begun childbearing increases rapidly with age, from about 3 percent among women age 15 to 40 percent among women age 19.

The rural-urban differences are small, indicating that early childbearing is nearly the same across place of residence. Prevalence of early childbearing is highest in the Nyanza region followed by Rift Valley and Coast; it is lowest in Central and North Eastern region. Slightly more than 3 in 10 women age 15-19 with no education have begun child bearing compared with only 12 percent among those who have a secondary or higher level of education. Similarly, teenagers from poorer households are more likely to have begun childbearing (26 percent) than are teenagers from wealthier households (10 percent). The proportion of teenagers who have begun childbearing has not changed since the 2008-09 KDHS.

**Table 3.7 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 |                                        |                 |
| <b>Age</b>                |                                    |                               |                                        |                 |
| 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           |
| <b>Residence</b>          |                                    |                               |                                        |                 |
| Urban                     | 14.0                               | 3.3                           | 17.3                                   | 1,859           |
| Rural                     | 15.0                               | 3.5                           | 18.5                                   | 3,961           |
| <b>Region</b>             |                                    |                               |                                        |                 |
| 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             |
| <b>Education</b>          |                                    |                               |                                        |                 |
| 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           |
| <b>Wealth quintile</b>    |                                    |                               |                                        |                 |
| 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           |
| <b>Total</b>              | <b>14.7</b>                        | <b>3.4</b>                    | <b>18.1</b>                            | <b>5,820</b>    |

### 3.2.4 Fertility Preferences

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. Several questions were asked in the survey concerning women's fertility preferences, including: (1) whether the respondent wanted another child; and (2) if so, when she would like to have the next child. The answers to these questions allow estimation of potential demand for family planning services, either to limit or space births.

Table 3.8 shows that there is considerable desire among Kenyan women to control the timing and number of births. Among currently married women, 32 percent would like to delay their next birth for two years or more, and 47 percent do not want to have any more children. About 13 percent of married women would like to have a child soon (within two years). Three percent of women are completely undecided, while 1 percent of women want to have another child but are undecided as to when.

Fertility preferences are closely related to the number of living children a woman has. In general, as the number of living children increases, the desire to have another child decreases and vice versa. The majority of currently married women with no living child (73 percent) would like to have a child soon, while a majority of those with one child (65 percent) would prefer to have a second child after some delay. Interest in controlling the number of births grows rapidly as the number of children increases; for instance, more than half of currently married women with three or more children want no more children or are sterilised, but only 3 percent of women with no children want no more. These numbers are consistent with the decrease seen in the total fertility rate.

Table 3.8 Fertility preferences by number of living children

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

| Desire for children             | Number of living children <sup>1</sup> |       |       |       |       |       |       | Total |
|---------------------------------|----------------------------------------|-------|-------|-------|-------|-------|-------|-------|
|                                 | 0                                      | 1     | 2     | 3     | 4     | 5     | 6+    |       |
| Have another soon <sup>2</sup>  | 72.6                                   | 25.2  | 12.8  | 7.5   | 4.6   | 4.5   | 4.3   | 12.9  |
| Have another later <sup>3</sup> | 18.2                                   | 64.8  | 47.0  | 27.4  | 16.0  | 12.3  | 7.2   | 31.9  |
| Have another, undecided when    | 1.5                                    | 1.4   | 1.1   | 0.5   | 0.2   | 0.1   | 0.5   | 0.7   |
| Undecided                       | 2.1                                    | 1.3   | 2.8   | 3.4   | 4.1   | 2.6   | 4.7   | 3.1   |
| Want no more                    | 2.7                                    | 6.2   | 34.7  | 57.3  | 69.2  | 72.7  | 72.7  | 47.0  |
| Sterilised <sup>4</sup>         | 0.0                                    | 0.0   | 0.6   | 2.8   | 5.0   | 6.9   | 8.7   | 3.3   |
| Declare infecund                | 2.4                                    | 0.7   | 0.8   | 0.7   | 0.6   | 0.9   | 1.4   | 0.9   |
| Missing                         | 0.6                                    | 0.3   | 0.2   | 0.3   | 0.3   | 0.0   | 0.5   | 0.3   |
| Total                           | 100.0                                  | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of women                 | 312                                    | 1,439 | 2,020 | 1,676 | 1,225 | 825   | 1,214 | 8,710 |

<sup>1</sup> The number of living children includes current pregnancy<sup>2</sup> Wants next birth within two years<sup>3</sup> Wants to delay next birth for two or more years<sup>4</sup> Includes both female and male sterilisation

### 3.3 CONTRACEPTION

Level of current use of contraception 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 3.9 shows the level and key differentials in the CPR by method as reported by currently married and sexually active unmarried women. Contraceptive methods are grouped into two types in the table, namely modern and traditional methods. Modern methods include female and male sterilisation, IUD, implants, injectables, pill, male and female condoms, and lactational amenorrhoea method (LAM). Traditional methods include the rhythm method (periodic abstinence), withdrawal, and other folk methods.

Slightly more than half of currently married women (58 percent) are currently using some method of contraception; 65 percent of sexually active unmarried women currently use some method of contraception. Among currently married women, 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). Rhythm method is the most popular traditional method used (4 percent).

Contraceptive prevalence peaks among married women in the 30-34 age-group and is lowest for women age 15-19. A higher percentage of urban women (62 percent) use some method of contraception, compared with their rural counterparts (56 percent). Contraceptive prevalence increases dramatically with education. Only 18 percent of currently married women with no education use a method, while more than half of women with at least some primary school level of education use contraception. Women with 3-4 children are the most likely to be using contraception (66 percent).

Table 3.10 shows currently married women in Central region have the highest contraceptive prevalence rate (73 percent) followed by Eastern region (70 percent). Contraceptive use is lowest in the North Eastern region (3 percent). Twenty-two counties have a CPR above the national average (58 percent). In six of these counties, nearly three-quarters of currently married women use a method: Kirinyaga (81 percent), Makueni (80 percent), Meru (78 percent), Machakos (76 percent), Tharaka-Nithi and Kiambu (74 percent each). Counties with the lowest contraceptive prevalence rates are predominantly from northern Kenya and include: Mandera and Wajir (2 percent each), Garissa (6 percent), Turkana (10 percent), and Marsabit (12 percent).

Table 3.9. Current use of contraception by background characteristics

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

| Background characteristic       | Modern method |                   |                      |                    |     |          |             |      |             |               | Traditional method |       |                        |        | Not currently using | Total | Number of women |            |       |
|---------------------------------|---------------|-------------------|----------------------|--------------------|-----|----------|-------------|------|-------------|---------------|--------------------|-------|------------------------|--------|---------------------|-------|-----------------|------------|-------|
|                                 | Any method    | Any modern method | Female sterilisation | Male sterilisation | IUD | Implants | Injectables | Pill | Male condom | Female condom | LAM                | Other | Any traditional method | Rhythm |                     |       |                 | Withdrawal | Other |
|                                 |               |                   |                      |                    |     |          |             |      |             |               |                    |       |                        |        |                     |       |                 |            |       |
| CURRENTLY MARRIED WOMEN         |               |                   |                      |                    |     |          |             |      |             |               |                    |       |                        |        |                     |       |                 |            |       |
| Age                             |               |                   |                      |                    |     |          |             |      |             |               |                    |       |                        |        |                     |       |                 |            |       |
| 15-19                           | 40.2          | 36.8              | 0.0                  | 0.0                | 0.2 | 5.4      | 27.1        | 1.9  | 2.1         | 0.0           | 0.0                | 0.0   | 3.4                    | 2.0    | 0.1                 | 59.8  | 100.0           |            |       |
| 20-24                           | 53.5          | 49.8              | 0.1                  | 0.0                | 1.4 | 9.6      | 30.2        | 6.3  | 2.2         | 0.0           | 0.0                | 0.0   | 3.7                    | 2.9    | 0.3                 | 46.5  | 100.0           |            |       |
| 25-29                           | 60.8          | 57.3              | 0.4                  | 0.0                | 3.1 | 12.9     | 31.4        | 7.2  | 2.1         | 0.0           | 0.1                | 0.0   | 3.6                    | 2.9    | 0.4                 | 39.2  | 100.0           |            |       |
| 30-34                           | 63.5          | 59.1              | 2.3                  | 0.0                | 4.0 | 11.9     | 29.7        | 9.1  | 1.9         | 0.0           | 0.2                | 0.0   | 4.5                    | 3.2    | 0.7                 | 36.5  | 100.0           |            |       |
| 35-39                           | 63.0          | 57.7              | 4.8                  | 0.1                | 4.5 | 10.4     | 24.5        | 10.8 | 2.6         | 0.0           | 0.1                | 0.0   | 5.3                    | 4.4    | 0.8                 | 37.0  | 100.0           |            |       |
| 40-44                           | 57.7          | 51.1              | 8.1                  | 0.1                | 6.7 | 6.5      | 18.0        | 9.1  | 2.6         | 0.0           | 0.0                | 0.1   | 6.6                    | 5.3    | 0.8                 | 42.3  | 100.0           |            |       |
| 45-49                           | 45.2          | 37.2              | 11.0                 | 0.0                | 2.3 | 2.9      | 11.6        | 7.5  | 1.9         | 0.0           | 0.0                | 0.0   | 8.0                    | 6.7    | 0.7                 | 54.8  | 100.0           |            |       |
| Residence                       |               |                   |                      |                    |     |          |             |      |             |               |                    |       |                        |        |                     |       |                 |            |       |
| Urban                           | 61.8          | 56.9              | 2.1                  | 0.0                | 4.7 | 12.0     | 24.7        | 10.7 | 2.6         | 0.0           | 0.1                | 0.0   | 4.9                    | 3.8    | 0.7                 | 38.2  | 100.0           |            |       |
| Rural                           | 55.5          | 50.9              | 3.9                  | 0.0                | 2.6 | 8.6      | 27.5        | 6.2  | 1.9         | 0.0           | 0.1                | 0.0   | 4.6                    | 3.7    | 0.7                 | 44.5  | 100.0           |            |       |
| Education                       |               |                   |                      |                    |     |          |             |      |             |               |                    |       |                        |        |                     |       |                 |            |       |
| No education                    | 17.7          | 15.3              | 1.2                  | 0.0                | 0.2 | 3.7      | 8.3         | 1.3  | 0.5         | 0.0           | 0.0                | 0.0   | 2.4                    | 1.5    | 0.7                 | 82.3  | 100.0           |            |       |
| Primary incomplete              | 54.6          | 51.1              | 3.9                  | 0.1                | 1.8 | 10.4     | 28.5        | 4.5  | 1.9         | 0.0           | 0.1                | 0.0   | 3.4                    | 2.7    | 0.4                 | 45.4  | 100.0           |            |       |
| Primary complete                | 64.3          | 59.6              | 4.2                  | 0.0                | 3.6 | 9.9      | 30.7        | 9.7  | 1.6         | 0.0           | 0.1                | 0.0   | 4.7                    | 3.7    | 0.7                 | 35.7  | 100.0           |            |       |
| Secondary+                      | 65.3          | 59.0              | 2.4                  | 0.0                | 5.3 | 11.1     | 26.1        | 10.7 | 3.3         | 0.0           | 0.1                | 0.0   | 6.3                    | 5.1    | 0.8                 | 34.7  | 100.0           |            |       |
| Wealth quintile                 |               |                   |                      |                    |     |          |             |      |             |               |                    |       |                        |        |                     |       |                 |            |       |
| Lowest                          | 32.3          | 29.2              | 1.9                  | 0.0                | 0.5 | 5.7      | 19.0        | 1.4  | 0.8         | 0.0           | 0.0                | 0.0   | 3.1                    | 2.2    | 0.8                 | 67.7  | 100.0           |            |       |
| Second                          | 58.2          | 54.1              | 3.6                  | 0.0                | 1.5 | 10.1     | 31.4        | 5.6  | 1.8         | 0.0           | 0.0                | 0.0   | 4.1                    | 3.4    | 0.5                 | 41.8  | 100.0           |            |       |
| Middle                          | 64.2          | 59.5              | 4.8                  | 0.0                | 3.0 | 9.8      | 32.4        | 7.3  | 2.1         | 0.0           | 0.1                | 0.1   | 4.7                    | 3.8    | 0.6                 | 35.8  | 100.0           |            |       |
| Fourth                          | 65.9          | 60.9              | 3.1                  | 0.1                | 3.7 | 11.1     | 30.4        | 9.5  | 2.9         | 0.0           | 0.1                | 0.0   | 5.0                    | 4.0    | 0.7                 | 34.1  | 100.0           |            |       |
| Highest                         | 63.9          | 57.7              | 2.7                  | 0.0                | 7.0 | 11.7     | 19.9        | 13.4 | 2.9         | 0.0           | 0.1                | 0.0   | 6.2                    | 4.9    | 0.7                 | 36.1  | 100.0           |            |       |
| Number of living children       |               |                   |                      |                    |     |          |             |      |             |               |                    |       |                        |        |                     |       |                 |            |       |
| 0                               | 15.4          | 12.3              | 0.0                  | 0.0                | 0.4 | 0.4      | 3.0         | 3.7  | 4.8         | 0.0           | 0.0                | 0.0   | 3.1                    | 2.5    | 0.6                 | 84.6  | 100.0           |            |       |
| 1-2                             | 61.4          | 56.5              | 0.4                  | 0.0                | 3.9 | 10.8     | 29.7        | 9.5  | 2.2         | 0.0           | 0.1                | 0.0   | 4.8                    | 3.8    | 0.6                 | 38.6  | 100.0           |            |       |
| 3-4                             | 65.9          | 61.3              | 4.0                  | 0.0                | 4.3 | 11.2     | 30.3        | 9.4  | 2.0         | 0.0           | 0.1                | 0.0   | 4.6                    | 3.7    | 0.6                 | 34.1  | 100.0           |            |       |
| 5+                              | 51.9          | 46.6              | 7.7                  | 0.1                | 2.2 | 8.9      | 21.3        | 4.4  | 1.8         | 0.0           | 0.1                | 0.1   | 5.3                    | 4.1    | 0.8                 | 48.1  | 100.0           |            |       |
| Total                           | 58.0          | 53.2              | 3.2                  | 0.0                | 3.4 | 9.9      | 26.4        | 8.0  | 2.2         | 0.0           | 0.1                | 0.0   | 4.8                    | 3.8    | 0.7                 | 42.0  | 100.0           |            |       |
| SEXUALLY ACTIVE UNMARRIED WOMEN |               |                   |                      |                    |     |          |             |      |             |               |                    |       |                        |        |                     |       |                 |            |       |
| Residence                       |               |                   |                      |                    |     |          |             |      |             |               |                    |       |                        |        |                     |       |                 |            |       |
| Urban                           | 70.3          | 66.2              | 0.5                  | 0.0                | 1.4 | 8.6      | 18.3        | 7.0  | 29.6        | 1.0           | 0.0                | 0.0   | 4.1                    | 2.7    | 1.2                 | 29.7  | 100.0           |            |       |
| Rural                           | 58.8          | 53.9              | 3.9                  | 0.0                | 0.9 | 4.4      | 27.7        | 6.2  | 10.6        | 0.0           | 0.0                | 0.3   | 4.9                    | 4.0    | 0.9                 | 41.2  | 100.0           |            |       |
| Total                           | 65.4          | 60.9              | 1.9                  | 0.0                | 1.1 | 6.8      | 22.3        | 6.6  | 21.4        | 0.6           | 0.0                | 0.1   | 4.5                    | 3.3    | 1.1                 | 34.6  | 100.0           |            |       |

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

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

LAM = Lactational amenorrhoea method

Table 3.10 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

| County          | Modern method |                   |                      |                    |      |          |             |      |             |               | Traditional method |       |                        |                    |            | Not currently using | Total | Number of women |       |
|-----------------|---------------|-------------------|----------------------|--------------------|------|----------|-------------|------|-------------|---------------|--------------------|-------|------------------------|--------------------|------------|---------------------|-------|-----------------|-------|
|                 | Any method    | Any modern method | Female sterilisation | Male sterilisation | IUD  | Implants | Injectables | Pill | Male condom | Female condom | LAM                | Other | Any traditional method | Traditional method |            |                     |       |                 |       |
|                 |               |                   |                      |                    |      |          |             |      |             |               |                    |       |                        | Rhythm             | Withdrawal |                     |       |                 | Other |
| Coast           | 43.9          | 38.3              | 1.6                  | 0.0                | 2.2  | 9.4      | 18.7        | 4.7  | 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                | 3.2  | 12.6     | 17.7        | 6.5  | 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                | 1.6  | 6.8      | 21.6        | 4.3  | 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                | 1.1  | 10.0     | 15.9        | 2.7  | 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                | 0.4  | 2.7      | 13.1        | 1.1  | 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                | 1.0  | 6.4      | 19.0        | 10.2 | 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                | 6.9  | 8.6      | 34.1        | 10.0 | 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                | 0.1  | 0.6      | 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                | 0.2  | 1.5      | 2.4         | 1.1  | 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                | 0.0  | 0.2      | 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                | 0.0  | 0.0      | 1.5         | 0.4  | 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                | 2.9  | 7.8      | 37.9        | 8.9  | 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                | 0.3  | 2.7      | 6.3         | 1.1  | 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                | 1.4  | 3.3      | 13.2        | 7.2  | 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                | 5.4  | 3.5      | 44.8        | 12.3 | 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                | 7.2  | 5.5      | 44.1        | 7.0  | 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                | 4.6  | 11.0     | 31.2        | 15.2 | 1.5         | 0.0           | 0.0                | 0.0   | 3.2                    | 3.2                | 0.2        | 0.0                 | 29.4  | 100.0           | 266   |
| Kitui           | 57.3          | 55.1              | 3.0                  | 0.0                | 1.1  | 9.5      | 36.9        | 4.5  | 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                | 0.5  | 10.4     | 41.6        | 9.1  | 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                | 1.8  | 10.3     | 33.8        | 5.9  | 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                | 9.0  | 10.7     | 21.6        | 19.5 | 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                | 8.0  | 10.8     | 22.9        | 13.8 | 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                | 10.0 | 9.2      | 22.3        | 16.7 | 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                | 13.2 | 13.0     | 20.4        | 26.0 | 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                | 6.3  | 7.8      | 20.6        | 22.1 | 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                | 8.9  | 12.0     | 21.9        | 19.2 | 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                | 2.9  | 7.2      | 26.8        | 5.5  | 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  | 3.0      | 5.7         | 0.5  | 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                | 0.2  | 3.1      | 9.0         | 0.7  | 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                | 0.6  | 4.4      | 10.9        | 2.9  | 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                | 0.7  | 4.6      | 38.7        | 4.9  | 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                | 2.7  | 12.9     | 28.7        | 7.4  | 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                | 1.3  | 8.7      | 28.5        | 1.6  | 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                | 0.9  | 9.1      | 40.3        | 5.5  | 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                | 3.2  | 5.5      | 16.2        | 4.6  | 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                | 5.1  | 4.5      | 20.8        | 12.5 | 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                | 6.7  | 7.6      | 25.4        | 10.4 | 1.4         | 0.0           | 0.0                | 0.0   | 3.2                    | 2.6                | 0.4        | 0.2                 | 43.2  | 100.0           | 851   |
| Narok           | 47.8          | 38.1              | 1.9                  | 0.0                | 1.1  | 3.8      | 25.3        | 3.7  | 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                | 5.9  | 8.9      | 20.0        | 6.5  | 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                | 2.1  | 9.9      | 35.8        | 3.2  | 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                | 1.7  | 7.5      | 33.9        | 0.4  | 2.0         | 0.0           | 0.0                | 0.0   | 4.4                    | 3.5                | 0.6        | 0.4                 | 45.2  | 100.0           | 394   |

Continued...

Table 3.10—Continued

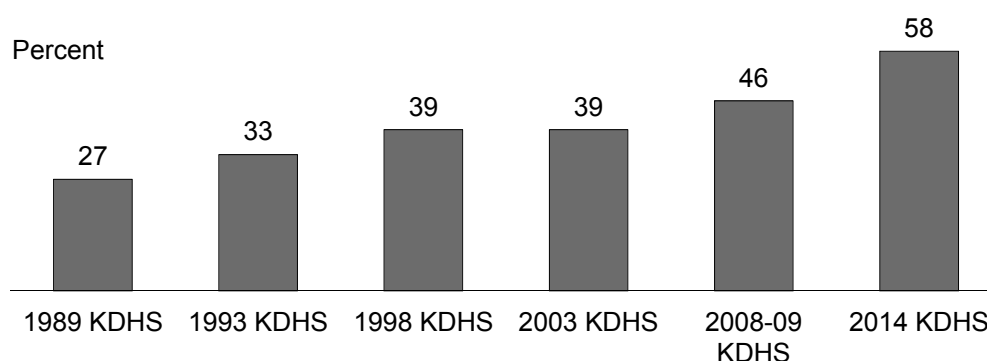
| County   | Modern method |                         |                              |                            |     |          |                  |      |                |                  | Any tradi-<br>tional method |       |                    | Not<br>currently<br>using | Total | Number<br>of<br>women |        |       |        |
|----------|---------------|-------------------------|------------------------------|----------------------------|-----|----------|------------------|------|----------------|------------------|-----------------------------|-------|--------------------|---------------------------|-------|-----------------------|--------|-------|--------|
|          | Any<br>method | Any<br>modern<br>method | Female<br>sterili-<br>sation | Male<br>sterili-<br>sation | IUD | Implants | Inject-<br>ables | Pill | Male<br>condom | Female<br>condom | LAM                         | Other | Traditional method |                           |       |                       |        |       |        |
|          |               |                         |                              |                            |     |          |                  |      |                |                  |                             |       | With-<br>drawal    |                           |       |                       | Rhythm | Other |        |
| Western  | 58.6          | 56.9                    | 5.9                          | 0.0                        | 1.3 | 15.2     | 27.5             | 4.6  | 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                        | 1.0 | 14.1     | 30.4             | 5.4  | 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                        | 3.3 | 16.2     | 25.3             | 4.8  | 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                        | 0.8 | 11.8     | 29.0             | 4.4  | 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                        | 1.8 | 23.6     | 20.2             | 3.5  | 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                        | 2.0 | 12.4     | 29.3             | 3.4  | 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                        | 1.8 | 15.3     | 19.3             | 5.8  | 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                        | 1.5 | 21.1     | 24.3             | 3.7  | 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                        | 1.1 | 8.6      | 26.1             | 2.1  | 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                        | 1.1 | 10.6     | 24.6             | 2.3  | 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                        | 3.5 | 9.2      | 41.8             | 4.0  | 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                        | 3.9 | 8.2      | 42.6             | 3.5  | 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                        | 4.5 | 12.1     | 23.6             | 12.5 | 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                        | 3.4 | 9.9      | 26.4             | 8.0  | 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

Figure 3.2 shows trends in contraceptive use from 1989-2014. CPR increased steadily between the 1989 KDHS where the CPR was 27 percent and the 2008-09 KDHS where CPR was 46 percent. A larger jump is noted between the 2008-09 KDHS and the 2014 KDHS where CPR increased to 58 percent.

**Figure 3.2 Trends in percentage of currently married women using any contraceptive method, 1989-2014\***



\*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.

Kenya 2014

### *Need for Family Planning Services*

The proportion of women who want to stop childbearing or who want to space their next birth is a crude measure of the extent of the need for family planning, given that not all of these women are exposed to the risk of pregnancy and some of them may already be using contraception. Women who want to postpone their next birth for two or more years or who want to stop childbearing altogether but are not using a contraceptive method are considered to have an unmet need for family planning. Pregnant women are considered to have an unmet need for family planning if their pregnancy was mistimed or unwanted. Similarly, amenorrhoeic women who are not using family planning and whose last birth was mistimed or unwanted have an unmet need. Women who are currently using a family planning method are said to have a met need for family planning. Total demand for family planning services comprises those who fall in the met need and unmet need categories.

Table 3.11 presents data on unmet need, met need, and total demand for family planning services for currently married and sexually active unmarried women. Overall, 18 percent of currently married women have an unmet need for family planning. Fifty-eight percent of married women have a met need for family planning—that is, they are currently using a contraceptive method. At present, the total potential demand for family planning among currently married women is 76 percent, a slight increase from 71 percent in 2008-09. Seventy-seven percent of the total demand for family planning methods is satisfied, mostly by a modern contraceptive method (71 percent).

The level of unmet need varies by background characteristics. Unmet need is higher in rural areas (20 percent) than in urban areas (13 percent). Married women with no education have the highest unmet need for family planning (28 percent) compared with 12 percent among women with secondary or higher education. Unmet need declines steadily as wealth increases, from 29 percent in the lowest wealth quintile to 11 percent in the highest quintile.

Total demand for family planning also varies by background characteristics. Total demand increases with age, peaking at 35-39 years, after which it declines. Demand for family planning is lowest among women with no education and women in the lowest wealth quintile. The three regions with the

highest total demand for family planning services are Eastern region (83 percent), Central (82 percent) and Western (80 percent). The percentage of demand satisfied with modern methods peaks at age 25-29 (77 percent), and it increases with education and wealth. Although the total demand is similar in urban and rural areas, the proportion of demand satisfied is higher in urban areas. North Eastern region has the lowest total demand (33 percent); however, it also has the lowest percentage of demand satisfied.

Sexually active unmarried women reported a higher demand for family planning and a higher unmet need than currently married women. The total demand is 92 percent, while the level of unmet need is 27 percent.

Table 3.11 Need and demand for family planning among currently married women and sexually active unmarried women

Percentage of currently married women and sexually active unmarried women age 15-49 with unmet need for family planning, percentage with met need for family planning, percentage with met need for family planning who are using modern methods, percentage with demand for family planning, percentage of the demand for family planning that is satisfied, and percentage of the demand for family planning that is satisfied with modern methods, by background characteristics, Kenya 2014

| Background characteristic       | Unmet need | Met need for family planning (currently using) |                             | Total demand for family planning <sup>3</sup> | Percentage of demand satisfied <sup>1</sup> |                             | Number of women |
|---------------------------------|------------|------------------------------------------------|-----------------------------|-----------------------------------------------|---------------------------------------------|-----------------------------|-----------------|
|                                 |            | All methods                                    | Modern methods <sup>2</sup> |                                               | All methods                                 | Modern methods <sup>2</sup> |                 |
| CURRENTLY MARRIED WOMEN         |            |                                                |                             |                                               |                                             |                             |                 |
| Age                             |            |                                                |                             |                                               |                                             |                             |                 |
| 15-19                           | 23.0       | 38.4                                           | 34.5                        | 61.4                                          | 62.5                                        | 56.2                        | 301             |
| 20-24                           | 18.9       | 53.1                                           | 49.2                        | 71.9                                          | 73.8                                        | 68.3                        | 1,465           |
| 25-29                           | 14.9       | 60.7                                           | 57.8                        | 75.6                                          | 80.3                                        | 76.5                        | 2,171           |
| 30-34                           | 15.9       | 63.7                                           | 59.2                        | 79.6                                          | 80.0                                        | 74.4                        | 1,717           |
| 35-39                           | 18.5       | 63.2                                           | 57.4                        | 81.7                                          | 77.3                                        | 70.3                        | 1,365           |
| 40-44                           | 21.9       | 59.0                                           | 52.8                        | 80.9                                          | 73.0                                        | 65.3                        | 923             |
| 45-49                           | 16.8       | 44.5                                           | 36.5                        | 61.4                                          | 72.6                                        | 59.4                        | 768             |
| Residence                       |            |                                                |                             |                                               |                                             |                             |                 |
| Urban                           | 13.4       | 62.5                                           | 58.2                        | 75.9                                          | 82.4                                        | 76.7                        | 3,445           |
| Rural                           | 20.2       | 55.1                                           | 50.2                        | 75.3                                          | 73.2                                        | 66.6                        | 5,265           |
| Region                          |            |                                                |                             |                                               |                                             |                             |                 |
| Coast                           | 20.7       | 44.4                                           | 37.9                        | 65.0                                          | 68.2                                        | 58.3                        | 850             |
| North Eastern                   | 29.9       | 3.4                                            | 3.4                         | 33.3                                          | 10.2                                        | 10.2                        | 209             |
| Eastern                         | 12.4       | 70.5                                           | 63.9                        | 82.9                                          | 85.1                                        | 77.2                        | 1,268           |
| Central                         | 8.8        | 73.0                                           | 68.6                        | 81.9                                          | 89.2                                        | 83.8                        | 1,113           |
| Rift Valley                     | 20.8       | 52.6                                           | 45.7                        | 73.4                                          | 71.6                                        | 62.3                        | 2,171           |
| Western                         | 20.7       | 59.6                                           | 57.7                        | 80.3                                          | 74.2                                        | 71.8                        | 929             |
| Nyanza                          | 23.3       | 55.3                                           | 52.9                        | 78.6                                          | 70.4                                        | 67.3                        | 1,203           |
| Nairobi                         | 11.1       | 62.3                                           | 59.8                        | 73.4                                          | 84.9                                        | 81.5                        | 968             |
| Education                       |            |                                                |                             |                                               |                                             |                             |                 |
| No education                    | 27.9       | 19.0                                           | 16.8                        | 46.9                                          | 40.5                                        | 35.7                        | 795             |
| Primary incomplete              | 23.4       | 54.1                                           | 50.1                        | 77.4                                          | 69.8                                        | 64.7                        | 2,274           |
| Primary complete                | 15.3       | 64.7                                           | 59.9                        | 80.0                                          | 80.8                                        | 74.9                        | 2,465           |
| Secondary+                      | 12.4       | 65.5                                           | 59.8                        | 77.9                                          | 84.1                                        | 76.7                        | 3,177           |
| Wealth quintile                 |            |                                                |                             |                                               |                                             |                             |                 |
| Lowest                          | 28.7       | 31.1                                           | 27.2                        | 59.8                                          | 52.0                                        | 45.5                        | 1,457           |
| Second                          | 23.2       | 58.3                                           | 54.0                        | 81.4                                          | 71.5                                        | 66.4                        | 1,567           |
| Middle                          | 17.1       | 63.4                                           | 58.6                        | 80.5                                          | 78.7                                        | 72.8                        | 1,663           |
| Fourth                          | 12.0       | 66.3                                           | 61.2                        | 78.3                                          | 84.7                                        | 78.2                        | 1,885           |
| Highest                         | 11.0       | 64.8                                           | 59.7                        | 75.7                                          | 85.5                                        | 78.8                        | 2,138           |
| Total                           | 17.5       | 58.0                                           | 53.4                        | 75.5                                          | 76.8                                        | 70.6                        | 8,710           |
| SEXUALLY ACTIVE UNMARRIED WOMEN |            |                                                |                             |                                               |                                             |                             |                 |
| Residence                       |            |                                                |                             |                                               |                                             |                             |                 |
| Urban                           | 25.6       | 70.3                                           | 66.2                        | 95.9                                          | 73.3                                        | 69.1                        | 332             |
| Rural                           | 27.5       | 58.8                                           | 53.9                        | 86.4                                          | 68.1                                        | 62.4                        | 251             |
| Total                           | 26.4       | 65.4                                           | 60.9                        | 91.8                                          | 71.2                                        | 66.4                        | 583             |

Note: Numbers in this table correspond to the revised definition of unmet need described in Bradley et al., 2012.

<sup>1</sup> Percentage of demand satisfied is met need divided by total demand.

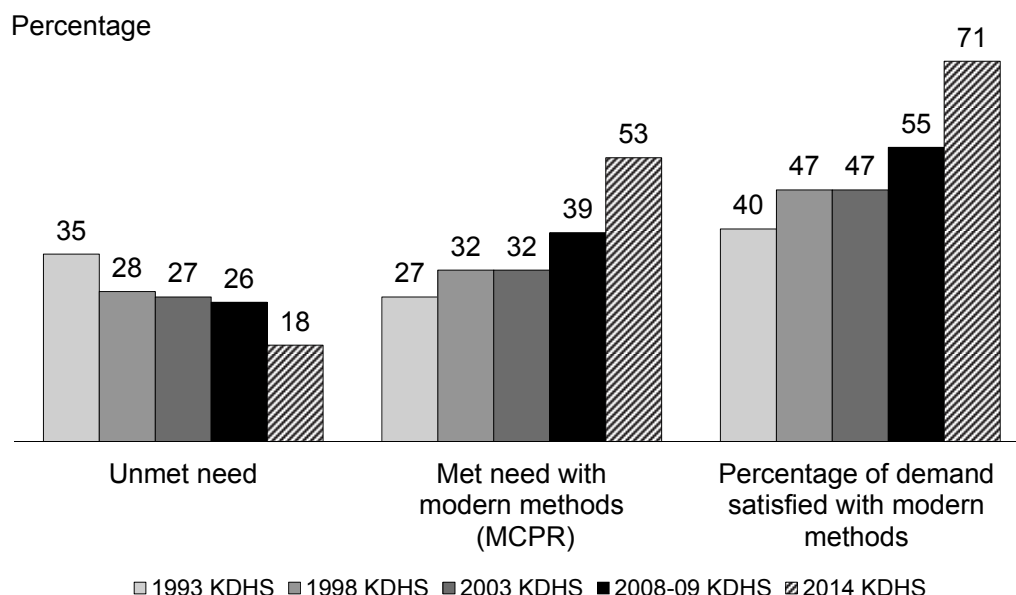
<sup>2</sup> Modern methods include female sterilisation, male sterilisation, IUD, implants, injectables, pill, male condom, female condom, emergency contraception, and lactational amenorrhoea method (LAM).

<sup>3</sup> Total demand is the sum of unmet need and met need (with all methods).

Unmet need among Kenyan women has declined slightly from the plateau experienced in the last decade and a half. Eighteen percent of currently married women reported an unmet need for contraception in the 2014 KDHS compared with roughly one-quarter reported in surveys since 1998

(Figure 3.3). Corresponding to the increase seen in contraceptive prevalence, there is an increase in need met with modern methods, from 39 percent in 2008-09 to 53 percent in 2014.

**Figure 3.3 Trends in unmet need, modern contraceptive use, and percentage of demand satisfied with modern methods, 1993-2014\***



\*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.

### 3.4 INFANT AND CHILD MORTALITY

Information on infant and child mortality is useful in identifying segments of the population that are at high risk so that programmes can be targeted to reduce it. Childhood mortality rates are also basic indicators of a country's socio-economic level and quality of life.

Table 3.12 presents data on early childhood mortality rates from the 2014 KDHS. The level of under-five mortality is 52 deaths per 1,000 births during the five-year period before the survey, implying that at least 1 in every 19 children born in Kenya during this period died before reaching their fifth birthday. The infant mortality rate is 39 deaths per 1,000 live births.

**Table 3.12 Early childhood mortality rates**

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

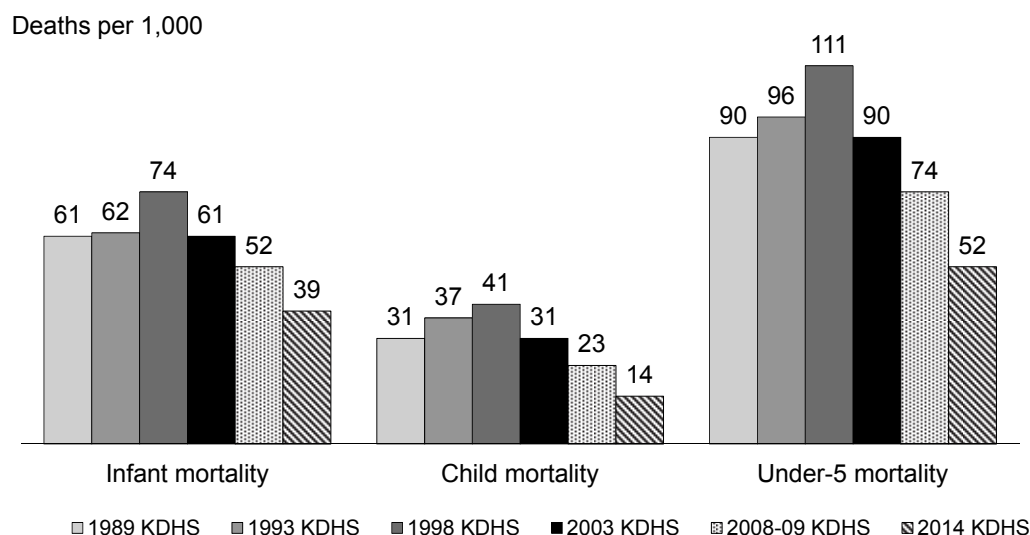
| Years preceding the survey | Neonatal mortality (NN) | Post-neonatal mortality (PNN) <sup>1</sup> | Infant mortality ( ${}_1Q_0$ ) | Child mortality ( ${}_4Q_1$ ) | Under-five mortality ( ${}_5Q_0$ ) |
|----------------------------|-------------------------|--------------------------------------------|--------------------------------|-------------------------------|------------------------------------|
| 0-4                        | 22                      | 16                                         | 39                             | 14                            | 52                                 |
| 5-9                        | 24                      | 19                                         | 43                             | 18                            | 60                                 |
| 10-14                      | 26                      | 26                                         | 51                             | 30                            | 80                                 |

<sup>1</sup> Computed as the difference between the infant and neonatal mortality rates

The rates observed in this survey show a decline in levels of childhood deaths compared with the rates observed in the 2008-09, 2003, and 1998 KDHS surveys (Figure 3.4). For example, the infant mortality rate decreased to 39 deaths per 1,000 live births in 2014 from 52 in 2008-09. Similarly, the under-five mortality rate decreased to 52 deaths per 1,000 live births in 2014 from 74 in 2008-09. The trend implies that the increase in mortality seen in the surveys conducted in the 1990s is indeed reversing. The improvement in child survival could be attributed to increases in mosquito net use among

children and by improvements in maternal health including, increases in the proportion of births assisted by a skilled provider and delivered in a health facility and increases in postnatal care (see later sections). Each of these has been shown to reduce child mortality. The downward trend in childhood mortality mirrors trends seen in other countries, for example: Ethiopia, Rwanda, and Uganda (UNICEF, 2013).

**Figure 3.4 Trends in childhood mortality, 1984-2014\***



\*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.

## 3.5 MATERNAL HEALTH

Proper care during pregnancy and delivery is important for the health of both the mother and the baby. In the KDHS, women who had a live birth in the five years preceding the survey were asked a number of questions about maternal and child health care. For the last live birth in that period, mothers were asked about antenatal care (ANC) during the pregnancy, assistance during and the location of the delivery, and timing of postnatal care. Tables 3.13 and 3.14 present the results of these key maternity care indicators.

### 3.5.1 Antenatal Care

Nine in ten mothers reported seeing a skilled provider at least once for ANC for their most recent birth in the five-year period before the survey (Table 3.13). Antenatal care is slightly more common among mothers age 20-34 compared with those outside this age group. Coverage is also slightly higher in urban areas than in rural areas (98 percent and 94 percent, respectively), among women with at least some primary education (95 percent or higher), and among women in the higher wealth quintiles (95 percent or higher).

The World Health Organization recommends at least four ANC visits during a woman's pregnancy. Table 3.13 shows that 58 percent of women reported having four or more antenatal visits for their most recent birth. Urban women are more likely to have four or more ANC visits compared with women in rural areas (68 percent and 51 percent, respectively). Both education and wealth are positively associated with receiving the recommended number of ANC visits. Forty-three percent of women with no education attended four or more ANC visits compared with 69 percent of women with secondary or higher education, and 44 percent of women in the lowest wealth quintile attended four or more ANC visits compared with 75 percent in the highest quintile.

Table 3.14 presents these indicators at the regional and county level. In Mombasa, Embu, Machakos, and Nandi counties, ANC from a skilled provider is virtually universal (99 percent), and there are only six counties with less than 90 percent coverage (Mandera, Wajir, Samburu, Marsabit, West Pokot, and Garissa). The percentage of women attending four or more ANC visits ranges from a low of 18 percent in West Pokot to 73 percent in Nairobi; in 12 counties, less than 50 percent of women attend the recommended number of ANC visits (Garissa, Wajir, Mandera, Meru, Bomet, Marsabit, Turkana, West Pokot, Trans-Nzoia, Elgeyo Marakwet, Narok, Bomet, and Kakamega).

### 3.5.2 Delivery Care

Proper medical attention and hygienic conditions during delivery reduce the risk of complications, infections, or death of the mother and the baby. Table 3.13 shows that 62 percent of births in Kenya are delivered by a skilled provider. A similar proportion of deliveries (61 percent) take place in health facilities.

Differentials in delivery care by background characteristics of the mother are generally similar to those for antenatal care, in that the mother's urban residency, education, and wealth are all associated with the likelihood of skilled assistance at delivery and delivery in a health facility. The disparity, however, is more substantial. For example, only half of births to rural mothers receive skilled care or are delivered in a facility compared with 82 percent of their urban counterparts. About one-quarter of births to mothers with no education receive skilled care compared with 85 percent of births to mothers with secondary or higher education. Thirty-one percent of births to women in the lowest wealth quintile get the recommended delivery assistance compared with 93 percent of those in the highest wealth quintile.

Table 3.13 Maternal care indicators by background characteristics

Among women age 15-49 who had a live birth in the five years preceding the survey, percentage who received antenatal care from a skilled provider for the last live birth and percentage with four or more ANC visits for the last live birth; among all live births in the five years before the survey, percentage delivered by a skilled provider and percentage delivered in a health facility, by background characteristics, Kenya 2014

| Background characteristic    | Women who had a live birth in the five years preceding the survey   |                               |                 | Live births in the five years preceding the survey      |                                           |                  |
|------------------------------|---------------------------------------------------------------------|-------------------------------|-----------------|---------------------------------------------------------|-------------------------------------------|------------------|
|                              | Percentage with antenatal care from a skilled provider <sup>1</sup> | Percentage with 4+ ANC visits | Number of women | Percentage delivered by a skilled provider <sup>1</sup> | Percentage delivered in a health facility | Number of births |
| <b>Mother's age at birth</b> |                                                                     |                               |                 |                                                         |                                           |                  |
| <20                          | 94.9                                                                | 48.9                          | 1,871           | 62.1                                                    | 61.7                                      | 2,924            |
| 20-34                        | 96.0                                                                | 59.9                          | 10,641          | 63.1                                                    | 62.5                                      | 14,342           |
| 35-49                        | 93.2                                                                | 53.2                          | 1,930           | 53.9                                                    | 52.5                                      | 2,298            |
| <b>Residence</b>             |                                                                     |                               |                 |                                                         |                                           |                  |
| Urban                        | 97.8                                                                | 67.7                          | 5,561           | 82.4                                                    | 82.0                                      | 7,024            |
| Rural                        | 94.0                                                                | 51.3                          | 8,881           | 50.4                                                    | 49.5                                      | 12,540           |
| <b>Mother's education</b>    |                                                                     |                               |                 |                                                         |                                           |                  |
| No education                 | 82.1                                                                | 43.1                          | 1,409           | 26.4                                                    | 24.9                                      | 2,307            |
| Primary incomplete           | 94.7                                                                | 48.1                          | 3,846           | 45.1                                                    | 44.6                                      | 5,582            |
| Primary complete             | 96.8                                                                | 56.8                          | 4,024           | 67.4                                                    | 66.8                                      | 5,397            |
| Secondary+                   | 98.6                                                                | 69.2                          | 5,163           | 85.1                                                    | 84.4                                      | 6,277            |
| <b>Wealth quintile</b>       |                                                                     |                               |                 |                                                         |                                           |                  |
| Lowest                       | 88.5                                                                | 44.0                          | 2,947           | 31.1                                                    | 30.1                                      | 4,657            |
| Second                       | 95.5                                                                | 49.2                          | 2,782           | 49.9                                                    | 49.1                                      | 3,987            |
| Middle                       | 97.1                                                                | 55.2                          | 2,660           | 63.0                                                    | 62.3                                      | 3,525            |
| Fourth                       | 97.4                                                                | 62.3                          | 2,777           | 80.6                                                    | 79.9                                      | 3,453            |
| Highest                      | 98.8                                                                | 75.0                          | 3,277           | 92.7                                                    | 92.7                                      | 3,942            |
| Total                        | 95.5                                                                | 57.6                          | 14,442          | 61.8                                                    | 61.2                                      | 19,564           |

<sup>1</sup> Skilled provider includes doctor, nurse, and midwife.

Across counties (Table 3.14), skilled delivery attendance and delivery in a health facility varies considerably. All counties within the Central region achieved a level of at least 85 percent on both of these indicators, while the counties in Nyanza region all achieved at least 53 percent. In contrast, in six counties, less than one-third of live births in the past five years were attended by a skilled provider or were delivered in a health facility (Tana River, Wajir, Marsabit, Turkana, West Pokot, and Samburu).

**Table 3.14 Maternal care indicators by county**

Among women age 15-49 who had a live birth in the five years preceding the survey, percentage who received antenatal care from a skilled provider for the last live birth and percentage with four or more ANC visits for the last live birth; among all live births in the five years before the survey, percentage delivered by a skilled provider and percentage delivered in a health facility, by county, Kenya 2014

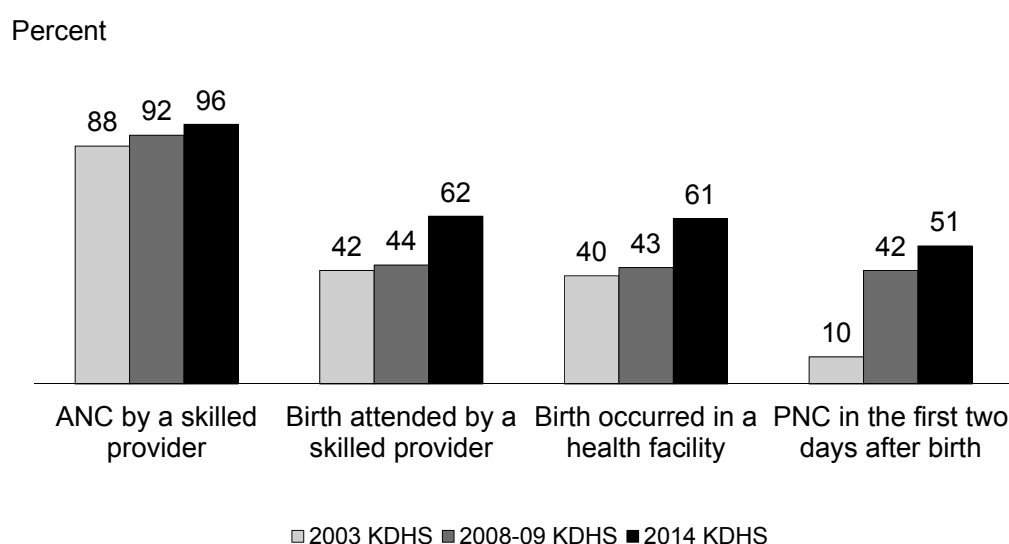
| County               | Women who had a live birth in the five years preceding the survey   |                               |                 | Live births in the five years preceding the survey      |                                           |                  |
|----------------------|---------------------------------------------------------------------|-------------------------------|-----------------|---------------------------------------------------------|-------------------------------------------|------------------|
|                      | Percentage with antenatal care from a skilled provider <sup>1</sup> | Percentage with 4+ ANC visits | Number of women | Percentage delivered by a skilled provider <sup>1</sup> | Percentage delivered in a health facility | Number of births |
| <b>Coast</b>         | <b>97.5</b>                                                         | <b>62.3</b>                   | <b>1,471</b>    | <b>58.2</b>                                             | <b>57.7</b>                               | <b>2,023</b>     |
| Mombasa              | 99.2                                                                | 65.0                          | 422             | 82.8                                                    | 81.8                                      | 512              |
| Kwale                | 95.7                                                                | 60.3                          | 304             | 50.1                                                    | 49.0                                      | 427              |
| Kilifi               | 98.2                                                                | 64.6                          | 503             | 52.3                                                    | 52.6                                      | 739              |
| Tana River           | 93.6                                                                | 50.8                          | 115             | 32.2                                                    | 31.6                                      | 175              |
| Lamu                 | 95.7                                                                | 62.2                          | 36              | 47.3                                                    | 43.9                                      | 56               |
| Taita Taveta         | 97.9                                                                | 58.9                          | 90              | 62.5                                                    | 61.9                                      | 113              |
| <b>North Eastern</b> | <b>66.5</b>                                                         | <b>36.8</b>                   | <b>372</b>      | <b>32.4</b>                                             | <b>29.2</b>                               | <b>650</b>       |
| Garissa              | 87.3                                                                | 47.7                          | 135             | 39.8                                                    | 36.7                                      | 237              |
| Wajir                | 57.6                                                                | 37.7                          | 141             | 21.7                                                    | 18.3                                      | 258              |
| Mandera              | 50.5                                                                | 20.2                          | 96              | 38.7                                                    | 36.0                                      | 155              |
| <b>Eastern</b>       | <b>97.2</b>                                                         | <b>56.3</b>                   | <b>1,834</b>    | <b>63.3</b>                                             | <b>62.7</b>                               | <b>2,321</b>     |
| Marsabit             | 75.6                                                                | 42.8                          | 64              | 25.8                                                    | 25.8                                      | 91               |
| Isiolo               | 96.0                                                                | 50.2                          | 58              | 43.8                                                    | 42.1                                      | 85               |
| Meru                 | 97.3                                                                | 45.3                          | 442             | 82.8                                                    | 81.8                                      | 517              |
| Tharaka-Nithi        | 98.3                                                                | 56.1                          | 121             | 76.6                                                    | 77.7                                      | 141              |
| Embu                 | 99.2                                                                | 56.2                          | 167             | 81.5                                                    | 81.5                                      | 201              |
| Kitui                | 97.5                                                                | 62.2                          | 313             | 46.2                                                    | 45.6                                      | 438              |
| Machakos             | 98.8                                                                | 60.8                          | 396             | 63.4                                                    | 62.9                                      | 493              |
| Makueni              | 98.0                                                                | 65.8                          | 274             | 54.6                                                    | 53.3                                      | 355              |
| <b>Central</b>       | <b>97.3</b>                                                         | <b>63.4</b>                   | <b>1,528</b>    | <b>89.7</b>                                             | <b>90.2</b>                               | <b>1,796</b>     |
| Nyandarua            | 96.7                                                                | 58.4                          | 195             | 85.3                                                    | 86.1                                      | 248              |
| Nyeri                | 96.7                                                                | 61.1                          | 216             | 88.1                                                    | 89.0                                      | 249              |
| Kirinyaga            | 96.4                                                                | 60.0                          | 174             | 92.3                                                    | 92.5                                      | 197              |
| Murang'a             | 97.4                                                                | 61.4                          | 255             | 85.5                                                    | 85.0                                      | 308              |
| Kiambu               | 97.9                                                                | 67.1                          | 688             | 92.6                                                    | 93.4                                      | 794              |
| <b>Rift Valley</b>   | <b>93.9</b>                                                         | <b>51.7</b>                   | <b>4,002</b>    | <b>51.3</b>                                             | <b>50.2</b>                               | <b>5,677</b>     |
| Turkana              | 91.0                                                                | 48.9                          | 214             | 22.8                                                    | 23.1                                      | 347              |
| West Pokot           | 85.2                                                                | 18.2                          | 180             | 27.0                                                    | 25.8                                      | 302              |
| Samburu              | 73.8                                                                | 51.9                          | 79              | 29.0                                                    | 24.5                                      | 117              |
| Trans-Nzoia          | 92.0                                                                | 40.6                          | 382             | 41.8                                                    | 41.5                                      | 528              |
| Uasin Gishu          | 96.1                                                                | 63.0                          | 363             | 59.0                                                    | 57.4                                      | 483              |
| Elgeyo Marakwet      | 98.1                                                                | 46.8                          | 114             | 65.0                                                    | 64.7                                      | 168              |
| Nandi                | 98.5                                                                | 56.8                          | 302             | 46.8                                                    | 46.5                                      | 402              |
| Baringo              | 92.8                                                                | 54.5                          | 160             | 53.8                                                    | 53.5                                      | 238              |
| Laikipia             | 93.7                                                                | 56.2                          | 165             | 49.5                                                    | 48.1                                      | 209              |
| Nakuru               | 95.6                                                                | 61.4                          | 674             | 69.5                                                    | 69.7                                      | 909              |
| Narok                | 91.6                                                                | 46.0                          | 403             | 40.3                                                    | 38.6                                      | 638              |
| Kajiado              | 96.7                                                                | 66.9                          | 335             | 63.2                                                    | 62.4                                      | 461              |
| Kericho              | 97.1                                                                | 53.7                          | 277             | 64.4                                                    | 62.2                                      | 373              |
| Bomet                | 93.5                                                                | 37.2                          | 354             | 52.2                                                    | 49.0                                      | 502              |
| <b>Western</b>       | <b>97.2</b>                                                         | <b>51.3</b>                   | <b>1,590</b>    | <b>47.8</b>                                             | <b>47.0</b>                               | <b>2,255</b>     |
| Kakamega             | 96.4                                                                | 45.0                          | 532             | 48.6                                                    | 47.0                                      | 747              |
| Vihiga               | 97.1                                                                | 61.3                          | 164             | 50.3                                                    | 50.2                                      | 229              |
| Bungoma              | 97.6                                                                | 50.0                          | 607             | 41.4                                                    | 40.8                                      | 870              |
| Busia                | 97.6                                                                | 59.9                          | 287             | 58.5                                                    | 58.4                                      | 409              |
| <b>Nyanza</b>        | <b>96.6</b>                                                         | <b>58.7</b>                   | <b>1,988</b>    | <b>65.0</b>                                             | <b>64.8</b>                               | <b>2,790</b>     |
| Siaya                | 97.8                                                                | 61.1                          | 268             | 70.4                                                    | 69.6                                      | 391              |
| Kisumu               | 98.4                                                                | 68.1                          | 378             | 69.2                                                    | 69.5                                      | 500              |
| Homa Bay             | 93.5                                                                | 61.4                          | 447             | 60.4                                                    | 61.9                                      | 658              |
| Migori               | 96.4                                                                | 56.4                          | 360             | 53.4                                                    | 53.3                                      | 565              |
| Kisii                | 97.7                                                                | 50.0                          | 384             | 72.8                                                    | 69.3                                      | 482              |
| Nyamira              | 96.4                                                                | 50.3                          | 152             | 74.1                                                    | 74.3                                      | 195              |
| <b>Nairobi</b>       | <b>97.6</b>                                                         | <b>73.1</b>                   | <b>1,657</b>    | <b>89.1</b>                                             | <b>88.7</b>                               | <b>2,051</b>     |
| <b>Total</b>         | <b>95.5</b>                                                         | <b>57.6</b>                   | <b>14,442</b>   | <b>61.8</b>                                             | <b>61.2</b>                               | <b>19,564</b>    |

<sup>1</sup> Skilled provider includes doctor, nurse, and midwife.

### 3.5.3 Trends in Antenatal and Delivery Care

Figure 3.5 shows the trends in key maternity care indicators between the 2003 and the 2014 KDHS. The proportion of mothers reporting ANC from a health professional increased between 2003 and 2014, from 88 percent to 96 percent. The percentage of births attended by a skilled provider and the percentage occurring in health facilities each increased by similar magnitude, about 20 percentage points from 2003 to 2014.

**Figure 3.5 Trends in maternal health care, 2003-2014**



### 3.5.4 Protection against Neonatal Tetanus

Tetanus toxoid injections are given during pregnancy to prevent neonatal tetanus, which can be a major cause of infant deaths. Table 3.15 indicates that tetanus toxoid coverage is widespread though not universal among pregnant women in Kenya. About three-quarters (76 percent) of women reported their last live birth was protected against neonatal tetanus. Protection against neonatal tetanus increases with education and with wealth. Sixty-seven percent of women with no education received protection compared with more than 74 percent of women with at least some education. Seventy percent of the women in the lowest wealth quintile received tetanus toxoid protection for their last live birth compared with 81 percent of those in the highest quintile.

Table 3.15 Protection against tetanus and postnatal care

Among women age 15-49 who had a live birth in the five years preceding the survey, percentage whose last live birth was protected against neonatal tetanus; and among women age 15-49 who had a live birth in the two years preceding the survey, percentage who received a postnatal checkup in the first two days after the last live birth, by background characteristics, Kenya 2014

| Background characteristic    | Women who had a live birth in the five years preceding the survey                    |                 | Women who had a live birth in the two years preceding the survey                  |                 |
|------------------------------|--------------------------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------|-----------------|
|                              | Percentage whose last live birth was protected against neonatal tetanus <sup>1</sup> | Number of women | Percentage of women who had a postnatal checkup in the first two days after birth | Number of women |
| <b>Mother's age at birth</b> |                                                                                      |                 |                                                                                   |                 |
| <20                          | 73.4                                                                                 | 867             | 51.7                                                                              | 536             |
| 20-34                        | 76.2                                                                                 | 5,074           | 51.4                                                                              | 2,737           |
| 35-49                        | 74.4                                                                                 | 935             | 44.4                                                                              | 428             |
| <b>Residence</b>             |                                                                                      |                 |                                                                                   |                 |
| Urban                        | 76.4                                                                                 | 2,677           | 65.0                                                                              | 1,311           |
| Rural                        | 75.1                                                                                 | 4,199           | 42.7                                                                              | 2,390           |
| <b>Mother's education</b>    |                                                                                      |                 |                                                                                   |                 |
| No education                 | 66.9                                                                                 | 675             | 20.0                                                                              | 440             |
| Primary incomplete           | 74.0                                                                                 | 1,901           | 38.9                                                                              | 1,044           |
| Primary complete             | 76.6                                                                                 | 1,856           | 54.8                                                                              | 959             |
| Secondary+                   | 78.6                                                                                 | 2,445           | 67.8                                                                              | 1,258           |
| <b>Wealth quintile</b>       |                                                                                      |                 |                                                                                   |                 |
| Lowest                       | 69.5                                                                                 | 1,381           | 29.2                                                                              | 934             |
| Second                       | 75.3                                                                                 | 1,312           | 46.2                                                                              | 728             |
| Middle                       | 74.5                                                                                 | 1,276           | 50.1                                                                              | 660             |
| Fourth                       | 77.0                                                                                 | 1,372           | 63.7                                                                              | 664             |
| Highest                      | 81.1                                                                                 | 1,536           | 71.4                                                                              | 716             |
| <b>Total</b>                 | <b>75.6</b>                                                                          | <b>6,876</b>    | <b>50.6</b>                                                                       | <b>3,701</b>    |

<sup>1</sup> Includes mothers with two injections during the pregnancy of her last live 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 live 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 live birth.

### 3.5.5 Postnatal Care

Among women age 15-49 who had a live birth in the two years preceding the survey, 51 percent received a postnatal checkup in the first two days after their last live birth (Table 3.15). Women age 35-49 were less likely to receive postnatal care (PNC) within two days compared with women in younger age groups. Forty-three percent of rural women received a postnatal checkup compared with 65 percent of urban women. Education and wealth were strongly associated with PNC. One in five women with no education received PNC within two days compared with 68 percent of women with secondary or higher education. Thirty percent of women in the lowest wealth quintile received PNC compared with 71 percent in the highest wealth quintile.

Figure 3.5 shows an increase in PNC in Kenya. In the 2003 KDHS, just 10 percent of women who had a live birth in the two years preceding the survey received a postnatal check up in the first two days after their last live birth. This proportion increased to 42 percent in the 2008-09 KDHS and to 51 percent in the 2014 KDHS.

## 3.6 CHILD HEALTH

### 3.6.1 Vaccination Coverage

According to the World Health Organisation, a child is considered to have received all basic vaccinations if he or she has received: a BCG vaccination against tuberculosis; three doses of DPT vaccine to prevent diphtheria, pertussis, and tetanus (or three doses of pentavalent, which includes DPT and vaccinations against both hepatitis B and haemophilus influenza type B); at least three doses of polio vaccine; and one dose of measles vaccine. These vaccinations should be received during the first year of life. The 2014 KDHS collected information on the coverage of these vaccinations among all children born in the five years preceding the survey. Additionally, the 2014 KDHS collected information on the coverage of three doses of pneumococcal vaccine, a vaccine introduced into Kenya's

routine immunisation programme in February 2012. The Kenyan immunisation programme considers a child to be fully vaccinated if the child has received all basic vaccinations and three doses of pneumococcal vaccination.

The information on vaccination coverage was obtained in two ways; from vaccination cards and from mother's verbal reports. All mothers were asked to show the interviewer the vaccination cards used to record the child's immunisations. If the card was available, the interviewer copied the dates of each vaccination received. If a vaccination was not recorded 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 a card for a child at all, she was further asked to recall whether the child had received BCG, polio, pentavalent, measles, and pneumococcal vaccine. If she indicated that the child had received the polio, pentavalent, or pneumococcal vaccines, she was asked the number of doses that the child received.

Tables 3.16 and 3.17 present information on vaccination coverage for children age 12-23 months, who should be vaccinated against the previously named childhood illnesses. The results are based both on the vaccination card record and information provided by the mother. Table 3.16 shows that vaccination cards were available for 75 percent of children.

Table 3.16 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 seen, by background characteristics, Kenya 2014

| Background characteristic | BCG  | Pentavalent <sup>1</sup> |      |      |      | Polio <sup>2</sup> |      |      | Measles | All basic vaccinations <sup>3</sup> | Pneumococcal |      |      | Fully vaccinated <sup>4</sup> | No vaccinations | Percent-age with a vaccination card | Number of children |
|---------------------------|------|--------------------------|------|------|------|--------------------|------|------|---------|-------------------------------------|--------------|------|------|-------------------------------|-----------------|-------------------------------------|--------------------|
|                           |      | 1                        | 2    | 3    | 0    | 1                  | 2    | 3    |         |                                     | 1            | 2    | 3    |                               |                 |                                     |                    |
| <b>Sex</b>                |      |                          |      |      |      |                    |      |      |         |                                     |              |      |      |                               |                 |                                     |                    |
| Male                      | 97.1 | 98.3                     | 96.3 | 89.6 | 78.8 | 97.4               | 94.3 | 81.3 | 87.9    | 71.2                                | 94.3         | 90.8 | 84.5 | 67.0                          | 1.2             | 75.3                                | 1,966              |
| Female                    | 96.2 | 96.7                     | 95.3 | 90.2 | 76.2 | 97.3               | 94.1 | 81.0 | 86.2    | 71.0                                | 93.0         | 90.9 | 85.9 | 68.1                          | 2.2             | 73.9                                | 1,811              |
| <b>Residence</b>          |      |                          |      |      |      |                    |      |      |         |                                     |              |      |      |                               |                 |                                     |                    |
| Urban                     | 97.7 | 98.0                     | 95.9 | 91.2 | 89.7 | 97.4               | 94.6 | 78.8 | 91.7    | 71.0                                | 94.1         | 90.3 | 86.3 | 66.9                          | 1.3             | 67.2                                | 1,330              |
| Rural                     | 96.1 | 97.3                     | 95.8 | 89.2 | 71.0 | 97.3               | 94.0 | 82.4 | 84.6    | 71.2                                | 93.5         | 91.1 | 84.5 | 67.8                          | 1.8             | 78.7                                | 2,447              |
| <b>Education</b>          |      |                          |      |      |      |                    |      |      |         |                                     |              |      |      |                               |                 |                                     |                    |
| No education              | 89.9 | 91.4                     | 87.3 | 77.3 | 54.8 | 92.0               | 85.5 | 68.4 | 70.8    | 51.5                                | 89.4         | 85.1 | 74.5 | 49.8                          | 5.4             | 71.0                                | 431                |
| Primary incomplete        | 95.8 | 97.8                     | 96.1 | 88.0 | 68.6 | 98.1               | 94.7 | 82.4 | 82.5    | 68.9                                | 92.6         | 90.1 | 82.8 | 65.4                          | 1.4             | 77.5                                | 1,072              |
| Primary complete          | 97.9 | 98.7                     | 98.1 | 93.0 | 81.5 | 97.8               | 95.3 | 82.1 | 90.2    | 74.0                                | 93.5         | 91.6 | 87.0 | 69.5                          | 1.2             | 76.6                                | 1,021              |
| Secondary+                | 98.7 | 98.4                     | 96.7 | 93.3 | 89.9 | 98.2               | 96.0 | 83.7 | 94.1    | 77.4                                | 96.3         | 92.9 | 89.3 | 73.8                          | 0.9             | 71.9                                | 1,253              |
| <b>Wealth quintile</b>    |      |                          |      |      |      |                    |      |      |         |                                     |              |      |      |                               |                 |                                     |                    |
| Lowest                    | 92.8 | 94.8                     | 91.7 | 83.3 | 58.9 | 95.2               | 90.3 | 78.4 | 76.4    | 61.6                                | 90.4         | 86.6 | 78.9 | 57.6                          | 3.4             | 77.7                                | 940                |
| Second                    | 96.7 | 98.4                     | 97.7 | 90.1 | 72.8 | 98.6               | 95.7 | 83.0 | 86.9    | 72.8                                | 93.9         | 92.2 | 84.2 | 68.8                          | 1.1             | 79.4                                | 765                |
| Middle                    | 98.1 | 98.3                     | 97.2 | 92.0 | 79.6 | 97.7               | 94.4 | 81.7 | 88.3    | 74.0                                | 94.8         | 92.5 | 87.4 | 71.6                          | 1.3             | 74.5                                | 667                |
| Fourth                    | 98.6 | 99.2                     | 98.7 | 93.7 | 88.7 | 98.6               | 95.9 | 83.0 | 94.5    | 77.3                                | 94.7         | 92.3 | 88.3 | 72.6                          | 0.3             | 76.9                                | 666                |
| Highest                   | 98.4 | 97.8                     | 95.2 | 92.7 | 94.4 | 97.3               | 96.1 | 80.5 | 93.1    | 73.2                                | 95.9         | 92.0 | 89.3 | 70.6                          | 1.5             | 64.0                                | 739                |
| Total                     | 96.7 | 97.5                     | 95.8 | 89.9 | 77.6 | 97.3               | 94.2 | 81.2 | 87.1    | 71.1                                | 93.7         | 90.8 | 85.1 | 67.5                          | 1.6             | 74.7                                | 3,777              |

<sup>1</sup> Pentavalent is DPT-Hep B-Hib.

<sup>2</sup> Polio 0 is the polio vaccination given at birth.

<sup>3</sup> BCG, measles, and three doses each of pentavalent and polio vaccine excluding polio vaccine given at birth.

<sup>4</sup> BCG, measles, three doses each of pentavalent, polio vaccine excluding polio vaccine given at birth, and pneumococcal vaccine.

Table 3.17 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 seen, by county, Kenya 2014

| County               | BCG     | Pentavalent <sup>1</sup> |         |         | Polio <sup>2</sup> |         |         | Measles |         |        | All basic vaccinations <sup>3</sup> |        |        | Fully vaccinated <sup>4</sup> | No vaccinations | Percent-age with a vaccination card | Number of children |
|----------------------|---------|--------------------------|---------|---------|--------------------|---------|---------|---------|---------|--------|-------------------------------------|--------|--------|-------------------------------|-----------------|-------------------------------------|--------------------|
|                      |         | 1                        | 2       | 3       | 0                  | 1       | 2       | 3       | Measles | 3      | 1                                   | 2      | 3      |                               |                 |                                     |                    |
| <b>Coast</b>         |         |                          |         |         |                    |         |         |         |         |        |                                     |        |        |                               |                 |                                     |                    |
| Mombasa              | 97.1    | 97.2                     | 96.6    | 91.9    | 84.4               | 97.5    | 95.4    | 85.3    | 86.6    | 74.7   | 95.7                                | 93.9   | 89.8   | 72.7                          | 1.3             | 78.6                                | 391                |
| Kwale                | 100.0   | 100.0                    | 98.3    | 95.6    | 95.7               | 98.3    | 97.0    | 90.0    | 89.1    | 72.3   | 96.7                                | 96.1   | 92.3   | 67.7                          | 0.0             | 66.4                                | 93                 |
| Kilifi               | 98.6    | 96.7                     | 96.7    | 95.1    | 78.1               | 97.8    | 95.9    | 91.6    | 90.7    | 82.9   | 96.1                                | 96.1   | 93.6   | 82.0                          | 0.0             | 62.3                                | 89                 |
| Tana River           | 94.3    | 95.3                     | 95.3    | 87.5    | 88.3               | 96.2    | 93.6    | 84.7    | 83.7    | 72.1   | 95.3                                | 92.9   | 87.4   | 71.5                          | 3.0             | 80.9                                | 144                |
| Lamu                 | 97.1    | 97.1                     | 95.0    | 89.9    | 50.8               | 97.1    | 93.8    | 80.5    | 77.6    | 64.3   | 94.3                                | 92.8   | 85.2   | 61.3                          | 2.5             | 72.1                                | 32                 |
| Taita Taveta         | 94.2    | 99.3                     | 97.0    | 84.7    | 65.5               | 100.0   | 97.7    | 90.7    | 83.2    | 66.4   | 91.9                                | 90.4   | 79.3   | 63.9                          | 0.0             | 72.3                                | 9                  |
| <b>North Eastern</b> |         |                          |         |         |                    |         |         |         |         |        |                                     |        |        |                               |                 |                                     |                    |
| Garissa              | 98.4    | 98.4                     | 98.4    | 97.5    | 92.8               | 100.0   | 100.0   | 91.7    | 93.0    | 87.3   | 95.6                                | 95.6   | 90.4   | 83.1                          | 0.0             | 71.5                                | 23                 |
| Wajir                | 83.4    | 87.5                     | 82.9    | 77.4    | 56.3               | 86.9    | 80.6    | 63.0    | 81.2    | 44.3   | 84.8                                | 80.6   | 72.7   | 41.7                          | 10.6            | 51.1                                | 121                |
| Mandera              | 80.3    | 94.4                     | 93.9    | 91.6    | 53.3               | 91.4    | 85.4    | 75.9    | 64.5    | 54.4   | 94.4                                | 91.3   | 84.7   | 54.4                          | 5.6             | 61.2                                | 43                 |
| <b>Eastern</b>       |         |                          |         |         |                    |         |         |         |         |        |                                     |        |        |                               |                 |                                     |                    |
| Marsabit             | 91.0    | 90.8                     | 86.2    | 79.1    | 53.3               | 90.2    | 87.0    | 64.8    | 64.5    | 43.7   | 83.8                                | 82.4   | 74.1   | 37.9                          | 6.6             | 58.6                                | 54                 |
| Isiolo               | 71.8    | 68.3                     | 56.5    | 48.8    | 49.5               | 71.8    | 58.0    | 36.2    | 61.7    | 27.7   | 70.3                                | 57.9   | 48.7   | 27.7                          | 28.2            | 16.5                                | 24                 |
| <b>Central</b>       |         |                          |         |         |                    |         |         |         |         |        |                                     |        |        |                               |                 |                                     |                    |
| Makueni              | 98.7    | 99.0                     | 98.2    | 93.6    | 79.1               | 98.6    | 95.3    | 87.6    | 92.1    | 81.8   | 94.6                                | 93.7   | 89.6   | 78.1                          | 0.5             | 85.3                                | 431                |
| Meru                 | 92.6    | 96.4                     | 93.4    | 85.7    | 43.1               | 99.0    | 95.6    | 86.4    | 76.8    | 69.9   | 94.7                                | 92.2   | 84.6   | 66.6                          | 1.0             | 80.5                                | 16                 |
| Tharaka-Nithi        | 96.4    | 98.6                     | 96.5    | 94.4    | 77.4               | 98.6    | 95.9    | 88.3    | 86.5    | 80.0   | 94.9                                | 93.8   | 92.0   | 79.0                          | 1.4             | 89.0                                | 20                 |
| Embu                 | 99.2    | 100.0                    | 100.0   | 93.6    | 78.9               | 100.0   | 96.6    | 85.9    | 91.3    | 81.9   | 97.2                                | 97.2   | 89.1   | 78.3                          | 0.0             | 89.9                                | 95                 |
| Kitui                | 100.0   | 98.3                     | 98.3    | 96.8    | 100.0              | 100.0   | 100.0   | 93.6    | 98.5    | 90.6   | 100.0                               | 100.0  | 100.0  | 90.6                          | 0.0             | 92.2                                | 33                 |
| Machakos             | 100.0   | 100.0                    | 100.0   | 99.2    | 97.9               | 100.0   | 94.7    | 89.9    | 92.8    | 82.7   | 100.0                               | 100.0  | 99.2   | 92.7                          | 0.0             | 83.4                                | 42                 |
| Makueni              | 96.1    | 96.1                     | 93.1    | 81.5    | 52.8               | 97.7    | 88.5    | 76.4    | 84.9    | 65.2   | 81.0                                | 78.1   | 69.2   | 52.7                          | 2.3             | 85.3                                | 76                 |
| <b>Rift Valley</b>   |         |                          |         |         |                    |         |         |         |         |        |                                     |        |        |                               |                 |                                     |                    |
| Nyandarua            | 100.0   | 100.0                    | 100.0   | 97.8    | 91.5               | 98.4    | 97.6    | 91.5    | 97.2    | 88.7   | 98.0                                | 97.2   | 95.9   | 86.7                          | 0.0             | 72.7                                | 86                 |
| Nyeri                | 100.0   | 100.0                    | 100.0   | 99.1    | 80.8               | 96.2    | 96.2    | 93.8    | 96.8    | 90.6   | 96.2                                | 95.3   | 95.3   | 89.7                          | 0.0             | 93.1                                | 63                 |
| Kirinyaga            | 99.6    | 99.4                     | 98.4    | 95.5    | 94.8               | 99.8    | 98.4    | 81.8    | 97.2    | 79.6   | 97.6                                | 95.2   | 92.3   | 77.6                          | 0.2             | 76.1                                | 363                |
| Murang'a             | 100.0   | 100.0                    | 98.1    | 90.8    | 88.5               | 100.0   | 98.1    | 91.0    | 95.1    | 82.6   | 98.0                                | 89.7   | 84.9   | 77.8                          | 0.0             | 81.3                                | 53                 |
| Kiambu               | 98.7    | 97.2                     | 97.2    | 94.9    | 94.6               | 100.0   | 99.0    | 85.8    | 92.7    | 79.5   | 94.4                                | 93.1   | 89.1   | 77.8                          | 0.0             | 82.2                                | 59                 |
| <b>Rift Valley</b>   |         |                          |         |         |                    |         |         |         |         |        |                                     |        |        |                               |                 |                                     |                    |
| Turkana              | (100.0) | (100.0)                  | (100.0) | (100.0) | (97.6)             | (100.0) | (100.0) | (82.7)  | (100.0) | (62.7) | (92.3)                              | (92.3) | (92.3) | (54.9)                        | (0.0)           | (60.3)                              | 31                 |
| West Pokot           | 99.0    | 99.0                     | 95.7    | 89.9    | 91.9               | 99.0    | 93.8    | 77.9    | 97.3    | 77.9   | 97.3                                | 92.0   | 89.9   | 76.1                          | 1.0             | 74.3                                | 70                 |
| Samburu              | 100.0   | 100.0                    | 100.0   | 99.0    | 97.9               | 100.0   | 100.0   | 82.8    | 99.0    | 82.8   | 100.0                               | 100.0  | 97.2   | 82.8                          | 0.0             | 76.1                                | 150                |
| Trans-Nzoia          | 96.7    | 97.4                     | 95.1    | 87.9    | 68.2               | 96.6    | 93.0    | 81.2    | 83.1    | 65.6   | 92.3                                | 89.7   | 81.7   | 64.0                          | 1.8             | 77.3                                | 1,083              |
| Uasin Gishu          | 94.5    | 94.4                     | 91.5    | 86.2    | 73.4               | 94.4    | 88.9    | 76.1    | 71.9    | 57.4   | 93.8                                | 89.8   | 83.2   | 56.7                          | 3.7             | 87.1                                | 61                 |
| Elgeyo Marakwet      | 78.9    | 86.4                     | 80.6    | 68.3    | 42.9               | 84.1    | 76.2    | 58.5    | 58.2    | 34.3   | 78.7                                | 73.1   | 58.7   | 30.5                          | 11.2            | 60.8                                | 66                 |
| Nandi                | 96.8    | 93.2                     | 89.7    | 86.9    | 54.2               | 96.1    | 91.1    | 84.0    | 71.7    | 63.3   | 94.5                                | 89.6   | 84.8   | 62.8                          | 1.4             | 79.4                                | 23                 |
| Baringo              | 100.0   | 100.0                    | 98.1    | 77.8    | 65.1               | 99.1    | 97.4    | 83.2    | 84.8    | 64.9   | 93.3                                | 91.3   | 73.0   | 58.4                          | 0.0             | 64.7                                | 105                |
| Lakipta              | 95.9    | 97.3                     | 95.9    | 91.5    | 70.7               | 95.9    | 93.7    | 74.6    | 91.3    | 70.0   | 83.4                                | 82.3   | 75.8   | 57.5                          | 2.7             | 73.7                                | 96                 |
| Nakuru               | 100.0   | 100.0                    | 97.9    | 97.9    | 82.0               | 99.4    | 97.9    | 91.7    | 86.6    | 85.1   | 99.4                                | 97.9   | 97.0   | 84.4                          | 0.0             | 91.2                                | 32                 |
| Narok                | 99.4    | 100.0                    | 100.0   | 99.4    | 71.6               | 100.0   | 100.0   | 96.9    | 97.5    | 93.9   | 99.4                                | 99.4   | 99.4   | 93.9                          | 0.0             | 92.1                                | 82                 |
| Kajiado              | 100.0   | 100.0                    | 98.3    | 94.5    | 69.0               | 100.0   | 97.6    | 86.9    | 82.5    | 71.1   | 92.6                                | 90.9   | 85.1   | 63.2                          | 0.0             | 81.8                                | 49                 |
| Kenja                | 98.7    | 98.7                     | 98.7    | 89.7    | 77.9               | 98.7    | 91.1    | 90.3    | 92.3    | 82.5   | 96.6                                | 96.6   | 90.9   | 78.6                          | 1.3             | 79.9                                | 38                 |
| Nakuru               | 97.2    | 97.9                     | 96.1    | 90.9    | 81.0               | 97.9    | 92.4    | 86.6    | 86.4    | 75.4   | 94.8                                | 93.0   | 86.5   | 72.0                          | 2.1             | 81.8                                | 167                |
| Narok                | 95.0    | 96.3                     | 91.2    | 83.0    | 47.3               | 96.4    | 94.2    | 75.2    | 74.5    | 59.5   | 90.8                                | 86.3   | 74.8   | 53.6                          | 1.6             | 79.1                                | 118                |
| Kericho              | 97.7    | 97.0                     | 92.4    | 79.1    | 70.0               | 91.1    | 82.0    | 61.0    | 80.9    | 51.1   | 90.3                                | 86.3   | 71.9   | 48.9                          | 1.1             | 57.2                                | 95                 |
| Bomet                | 100.0   | 100.0                    | 100.0   | 95.7    | 87.9               | 100.0   | 98.7    | 87.4    | 82.9    | 70.8   | 94.2                                | 92.9   | 88.3   | 66.3                          | 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                 |

Continued...

Table 3.17—Continued

| County         | BCG         | Pentavalent <sup>1</sup> |             |             | Polio <sup>2</sup> |             |             | Measles     | All basic vaccinations <sup>3</sup> |             |             | Fully vaccinated <sup>4</sup> | No vaccinations | Percent-age with a vaccina-tion card | Number of children |             |            |
|----------------|-------------|--------------------------|-------------|-------------|--------------------|-------------|-------------|-------------|-------------------------------------|-------------|-------------|-------------------------------|-----------------|--------------------------------------|--------------------|-------------|------------|
|                |             | 1                        | 2           | 3           | 0                  | 1           | 2           |             | 3                                   | 1           | 2           |                               |                 |                                      |                    | 3           |            |
| <b>Western</b> | <b>95.9</b> | <b>96.8</b>              | <b>95.4</b> | <b>90.2</b> | <b>61.1</b>        | <b>97.6</b> | <b>94.9</b> | <b>83.7</b> | <b>85.7</b>                         | <b>74.2</b> | <b>94.1</b> | <b>92.3</b>                   | <b>87.3</b>     | <b>71.9</b>                          | <b>2.2</b>         | <b>74.6</b> | <b>419</b> |
| Kakamega       | 94.9        | 98.9                     | 94.9        | 89.5        | 57.2               | 98.9        | 94.9        | 75.7        | 80.1                                | 63.5        | 97.6        | 94.6                          | 86.2            | 62.2                                 | 1.1                | 77.0        | 125        |
| Vihiga         | 98.3        | 98.3                     | 98.3        | 97.0        | 80.7               | 98.3        | 96.1        | 90.9        | 98.3                                | 90.9        | 98.3        | 98.3                          | 97.0            | 90.9                                 | 1.7                | 72.9        | 48         |
| Bungoma        | 95.3        | 95.0                     | 95.0        | 88.9        | 57.2               | 95.7        | 94.8        | 86.0        | 84.3                                | 76.3        | 89.1        | 88.2                          | 83.7            | 72.5                                 | 3.8                | 71.7        | 187        |
| Busia          | 98.0        | 96.9                     | 95.3        | 90.4        | 65.3               | 100.0       | 94.1        | 87.2        | 92.2                                | 76.3        | 98.9        | 95.5                          | 92.7            | 75.0                                 | 0.0                | 80.0        | 59         |
| <b>Nyanza</b>  | <b>95.6</b> | <b>98.5</b>              | <b>98.0</b> | <b>89.7</b> | <b>86.1</b>        | <b>98.0</b> | <b>94.3</b> | <b>79.3</b> | <b>85.3</b>                         | <b>67.0</b> | <b>93.6</b> | <b>90.7</b>                   | <b>82.8</b>     | <b>63.6</b>                          | <b>1.0</b>         | <b>72.4</b> | <b>552</b> |
| Siaya          | 98.4        | 100.0                    | 100.0       | 93.9        | 95.5               | 100.0       | 93.2        | 81.8        | 84.8                                | 73.3        | 99.5        | 99.5                          | 91.3            | 72.5                                 | 0.0                | 78.1        | 84         |
| Kisumu         | 97.2        | 97.6                     | 97.6        | 87.0        | 86.7               | 96.4        | 93.0        | 81.9        | 89.5                                | 73.1        | 96.8        | 95.1                          | 84.7            | 73.1                                 | 2.4                | 51.5        | 96         |
| Homa Bay       | 94.5        | 97.9                     | 97.2        | 82.3        | 83.0               | 96.0        | 90.8        | 72.9        | 80.3                                | 57.2        | 90.9        | 84.6                          | 74.7            | 53.7                                 | 2.1                | 73.9        | 131        |
| Migori         | 87.6        | 99.6                     | 97.7        | 89.9        | 69.0               | 98.3        | 94.7        | 66.2        | 82.0                                | 46.9        | 87.4        | 82.1                          | 71.2            | 36.9                                 | 0.4                | 69.0        | 102        |
| Kisii          | 100.0       | 97.8                     | 97.8        | 95.3        | 95.8               | 99.1        | 99.1        | 91.8        | 86.5                                | 80.5        | 94.4        | 94.4                          | 91.9            | 78.1                                 | 0.0                | 87.2        | 99         |
| Nyamira        | 99.0        | 99.0                     | 99.0        | 97.6        | 94.8               | 100.0       | 98.5        | 91.8        | 98.0                                | 89.8        | 96.1        | 94.6                          | 94.6            | 86.8                                 | 0.0                | 78.0        | 39         |
| <b>Nairobi</b> | <b>97.6</b> | <b>97.3</b>              | <b>93.6</b> | <b>88.0</b> | <b>90.4</b>        | <b>97.6</b> | <b>94.8</b> | <b>75.1</b> | <b>92.5</b>                         | <b>65.8</b> | <b>93.6</b> | <b>85.9</b>                   | <b>83.3</b>     | <b>60.4</b>                          | <b>1.7</b>         | <b>61.7</b> | <b>417</b> |
| Total          | 96.7        | 97.5                     | 95.8        | 89.9        | 77.6               | 97.3        | 94.2        | 81.2        | 87.1                                | 71.1        | 93.7        | 90.8                          | 85.1            | 67.5                                 | 1.6                | 74.7        | 3,777      |

Note: Figures in parentheses are based on fewer than 25–49 unweighted cases.

<sup>1</sup> Pentavalent is DPT–Hep B–Hib.<sup>2</sup> Polio 0 is the polio vaccination given at birth.<sup>3</sup> BCG, measles and three doses each of pentavalent and polio vaccine excluding polio vaccine given at birth.<sup>4</sup> BCG, measles, three doses each of pentavalent, polio vaccine excluding polio vaccine given at birth, and pneumococcal vaccine.

Overall, 68 percent of children age 12-23 months are fully vaccinated with BCG, measles, pentavalent, polio, and pneumococcal vaccines; 71 percent have received all basic vaccinations, and 2 percent of children have not received any vaccines. Regarding coverage for specific vaccines, 97 percent of children have received the BCG vaccine, 98 percent received the first pentavalent dose, 97 percent received the first polio dose (polio 1), and 94 percent received the first dose of pneumococcal vaccine. For series vaccinations, coverage declines with subsequent doses. Ninety percent of children receive the recommended three doses of pentavalent, 81 percent receive all three doses of polio, and 85 percent receive all the three doses of pneumococcal vaccine. The decline in coverage levels reflects dropout rates of 8 percent for pentavalent, 17 percent for polio, and 9 percent for pneumococcal vaccine. The dropout rate represents the proportion of children who receive the first dose of a vaccine but do not go on to get the third dose. The proportion of children vaccinated against measles is 87 percent.

For the most part, differentials in background characteristics are marginal (Table 3.16). Children of mothers with at least some education and of a higher wealth quintile are more likely to receive each of the recommended vaccinations; this association is most pronounced for polio 0, measles, and the latter doses of the series vaccinations. Fully immunised coverage levels are also high among children whose mothers have been to secondary school (74 percent) or households in the highest wealth quintile (71 percent).

Differentials in coverage across region and counties are presented in Table 3.17. Levels show that the proportions of children fully vaccinated in North Eastern and Nairobi regions are low compared with other regions, with only 42 and 60 percent of children fully immunised, respectively. Coverage levels are close to 78 percent for children in Central and Eastern regions. At the county level, Mandera, Migori, and Wajir have low fully vaccinated coverage of 28 percent, 38 percent and 38 percent respectively. Coverage levels are high in Nandi, Vihiga, and Tharaka-Nithi counties with 94 percent for Nandi and 91 percent for both Vihiga and Tharaka-Nithi counties.

Basic vaccination coverage has declined since 2008-09, from 77 percent of children with all basic vaccinations to 71 percent in 2014.

### **3.6.2 Treatment of Childhood Illnesses**

Acute respiratory infection (ARI), malaria, and dehydration caused by severe diarrhoea are major causes of child morbidity and mortality in Kenya. When a child has symptoms of these illnesses, prompt medical attention is critical. To obtain information on behaviour surrounding these common childhood illnesses, mothers were asked if any of their children under age five had experienced the following symptoms in the two weeks preceding the survey: cough with short, rapid breathing (symptoms of an acute respiratory infection, considered a proxy for pneumonia), fever (symptom of malaria), or diarrhoea. Mothers who indicated their child had experienced such symptoms were then asked if treatment or advice was sought from a health facility or provider. For children with diarrhoea, the mother was asked additional questions about treatment given to the child.

Table 3.18 presents the percentage of children with symptoms of ARI, fever, or diarrhoea in the two weeks preceding the survey. About six in every ten children with such symptoms were taken to a healthcare provider for treatment, including 66 percent of children with ARI, 63 percent of children with fever, and 58 percent of children with diarrhoea.

Differences in treatment-seeking behaviour by background characteristics are minimal. There were no distinct patterns in age of the child, the mother's education, or household wealth. Treatment was slightly more likely to be sought for male children with ARI symptoms (68 percent) or with diarrhoea (59 percent) than for female children (64 percent and 57 percent, respectively). Children

living in rural areas were somewhat more likely to be taken for treatment for all three illnesses. Estimation of these indicators is difficult at the county level because, in many counties, there were too few cases of children with the specified symptoms (Table 3.19).

**Table 3.18 Treatment for acute respiratory infection symptoms, fever, and diarrhoea by background characteristics**

Among children under age five who had symptoms of acute respiratory infection (ARI) or had fever in the two weeks preceding the survey, percentage for whom advice or treatment was sought from a health facility or provider, and among children under age five who had diarrhoea during the two weeks preceding the survey, percentage for whom advice or treatment was sought from a health facility or provider, percentage given oral rehydration therapy (ORT), percentage given a fluid made from oral rehydration salt (ORS) packets, percentage given zinc, and percentage given ORS and zinc, by background characteristics, Kenya 2014

| Background characteristic | Children with symptoms of ARI <sup>1</sup>                                             |                    | Children with fever                                                                    |                    | Children with diarrhoea                                                                |                                    |                                         |                        |                                |                    |
|---------------------------|----------------------------------------------------------------------------------------|--------------------|----------------------------------------------------------------------------------------|--------------------|----------------------------------------------------------------------------------------|------------------------------------|-----------------------------------------|------------------------|--------------------------------|--------------------|
|                           | Percent-age for whom treatment was sought from a health facility/provider <sup>2</sup> | Number of children | Percent-age for whom treatment was sought from a health facility/provider <sup>2</sup> | Number of children | Percent-age for whom treatment was sought from a health facility/provider <sup>2</sup> | Percent-age given ORT <sup>3</sup> | Percent-age given fluid from ORS packet | Percent-age given zinc | Percent-age given ORS and zinc | Number of children |
| <b>Age in months</b>      |                                                                                        |                    |                                                                                        |                    |                                                                                        |                                    |                                         |                        |                                |                    |
| <6                        | 77.6                                                                                   | 74                 | 59.7                                                                                   | 286                | 42.9                                                                                   | 43.2                               | 46.8                                    | 1.8                    | 1.7                            | 218                |
| 6-11                      | 74.1                                                                                   | 216                | 67.5                                                                                   | 597                | 65.4                                                                                   | 76.0                               | 67.3                                    | 10.6                   | 8.9                            | 508                |
| 12-23                     | 67.7                                                                                   | 379                | 63.4                                                                                   | 1,131              | 58.0                                                                                   | 78.9                               | 71.2                                    | 8.6                    | 7.9                            | 915                |
| 24-35                     | 62.3                                                                                   | 324                | 61.1                                                                                   | 933                | 59.1                                                                                   | 74.5                               | 60.8                                    | 10.4                   | 10.2                           | 596                |
| 36-47                     | 68.3                                                                                   | 306                | 62.8                                                                                   | 826                | 58.0                                                                                   | 78.3                               | 68.0                                    | 5.7                    | 5.3                            | 360                |
| 48-59                     | 55.4                                                                                   | 275                | 62.4                                                                                   | 789                | 54.1                                                                                   | 68.9                               | 54.8                                    | 5.0                    | 4.4                            | 247                |
| <b>Sex</b>                |                                                                                        |                    |                                                                                        |                    |                                                                                        |                                    |                                         |                        |                                |                    |
| Male                      | 67.7                                                                                   | 817                | 62.5                                                                                   | 2,325              | 59.3                                                                                   | 74.2                               | 67.0                                    | 8.1                    | 7.9                            | 1,511              |
| Female                    | 63.9                                                                                   | 758                | 63.4                                                                                   | 2,237              | 56.6                                                                                   | 73.3                               | 61.9                                    | 8.2                    | 6.9                            | 1,332              |
| <b>Residence</b>          |                                                                                        |                    |                                                                                        |                    |                                                                                        |                                    |                                         |                        |                                |                    |
| Urban                     | 63.8                                                                                   | 490                | 62.6                                                                                   | 1,447              | 56.8                                                                                   | 77.8                               | 67.3                                    | 11.0                   | 10.4                           | 957                |
| Rural                     | 66.9                                                                                   | 1,085              | 63.1                                                                                   | 3,114              | 58.7                                                                                   | 71.7                               | 63.2                                    | 6.7                    | 6.0                            | 1,886              |
| <b>Mother's education</b> |                                                                                        |                    |                                                                                        |                    |                                                                                        |                                    |                                         |                        |                                |                    |
| No education              | 58.9                                                                                   | 136                | 61.1                                                                                   | 392                | 64.8                                                                                   | 68.1                               | 63.8                                    | 7.9                    | 5.7                            | 312                |
| Primary incomplete        | 63.4                                                                                   | 491                | 57.7                                                                                   | 1,550              | 57.6                                                                                   | 71.9                               | 62.4                                    | 4.7                    | 4.5                            | 975                |
| Primary complete          | 67.9                                                                                   | 490                | 64.5                                                                                   | 1,250              | 54.5                                                                                   | 74.0                               | 63.7                                    | 6.0                    | 5.7                            | 734                |
| Secondary+                | 68.5                                                                                   | 459                | 67.9                                                                                   | 1,369              | 59.1                                                                                   | 77.9                               | 68.4                                    | 14.1                   | 13.2                           | 823                |
| <b>Wealth quintile</b>    |                                                                                        |                    |                                                                                        |                    |                                                                                        |                                    |                                         |                        |                                |                    |
| Lowest                    | 63.0                                                                                   | 386                | 60.1                                                                                   | 1,119              | 61.4                                                                                   | 70.7                               | 63.0                                    | 6.1                    | 5.0                            | 767                |
| Second                    | 67.1                                                                                   | 361                | 63.7                                                                                   | 1,082              | 58.3                                                                                   | 73.2                               | 63.3                                    | 5.2                    | 4.8                            | 650                |
| Middle                    | 64.9                                                                                   | 328                | 60.8                                                                                   | 881                | 56.8                                                                                   | 75.0                               | 68.7                                    | 7.5                    | 7.4                            | 525                |
| Fourth                    | 63.1                                                                                   | 270                | 62.5                                                                                   | 788                | 55.7                                                                                   | 74.5                               | 63.9                                    | 12.2                   | 11.5                           | 506                |
| Highest                   | 73.5                                                                                   | 231                | 69.5                                                                                   | 691                | 55.6                                                                                   | 78.1                               | 65.5                                    | 12.5                   | 11.6                           | 396                |
| <b>Total</b>              | <b>65.9</b>                                                                            | <b>1,575</b>       | <b>62.9</b>                                                                            | <b>4,562</b>       | <b>58.0</b>                                                                            | <b>73.8</b>                        | <b>64.6</b>                             | <b>8.1</b>             | <b>7.5</b>                     | <b>2,844</b>       |

<sup>1</sup> Symptoms of ARI, considered a proxy for pneumonia, include cough accompanied by short, rapid breathing that is chest-related and/or by difficult breathing that is chest-related.

<sup>2</sup> Excludes pharmacy, shop, and traditional practitioner

<sup>3</sup> ORT includes solution prepared from oral rehydration salt (ORS) and other home-made fluids.

Oral rehydration therapy (ORT), which involves a prompt increase in the child's intake of fluids, is a simple and effective response to diarrhoeal illness. Mothers reported that 74 percent of the children with diarrhoea were treated with some form of oral rehydration therapy, and 65 percent were given a solution prepared using a packet of oral rehydration salts (ORS) (Table 3.18). This is a marked increase from 2008-09 when only 39 percent of children with diarrhoea in the preceding weeks were treated with ORS. There are no distinct patterns in ORS treatment across background characteristics.

The Kenya Policy on Management of Diarrhoea in children under age five recommends the use of zinc with ORS. The 2014 KDHS survey shows that 8 percent of children with diarrhoea were given zinc and 8 percent were given both ORS and zinc. The use of zinc for treatment of diarrhoea has increased from less than 1 percent in 2008-09.

Table 3.19 Treatment for acute respiratory infection symptoms, fever, and diarrhoea by county

Among children under age five who had symptoms of acute respiratory infection (ARI) or had fever in the two weeks preceding the survey, percentage for whom advice or treatment was sought from a health facility or provider, and among children under age five who had diarrhoea during the two weeks preceding the survey, percentage for whom advice or treatment was sought from a health facility or provider, percentage given oral rehydration therapy (ORT), percentage given a fluid made from oral rehydration salt (ORS) packets, percentage given zinc, and percentage given ORS and zinc, by county, Kenya 2014

| County               | Children with symptoms of ARI <sup>1</sup>                                             |                    | Children with fever                                                                    |                    | Children with diarrhoea                                                                |                                    |                                         |                        |                                |                    |
|----------------------|----------------------------------------------------------------------------------------|--------------------|----------------------------------------------------------------------------------------|--------------------|----------------------------------------------------------------------------------------|------------------------------------|-----------------------------------------|------------------------|--------------------------------|--------------------|
|                      | Percent-age for whom treatment was sought from a health facility/provider <sup>2</sup> | Number of children | Percent-age for whom treatment was sought from a health facility/provider <sup>2</sup> | Number of children | Percent-age for whom treatment was sought from a health facility/provider <sup>2</sup> | Percent-age given ORT <sup>3</sup> | Percent-age given fluid from ORS packet | Percent-age given zinc | Percent-age given ORS and zinc | Number of children |
| <b>Coast</b>         | <b>67.0</b>                                                                            | <b>138</b>         | <b>68.0</b>                                                                            | <b>526</b>         | <b>64.7</b>                                                                            | <b>77.9</b>                        | <b>70.8</b>                             | <b>12.5</b>            | <b>12.1</b>                    | <b>341</b>         |
| Mombasa              | *                                                                                      | 30                 | 75.1                                                                                   | 111                | (63.3)                                                                                 | (88.4)                             | (76.6)                                  | (30.6)                 | (30.6)                         | 58                 |
| Kwale                | (62.4)                                                                                 | 22                 | 64.7                                                                                   | 105                | 62.2                                                                                   | 73.9                               | 70.2                                    | 26.9                   | 25.7                           | 59                 |
| Kilifi               | (60.5)                                                                                 | 60                 | 69.7                                                                                   | 221                | 71.5                                                                                   | 80.4                               | 74.6                                    | 0.7                    | 0.7                            | 162                |
| Tana River           | 73.2                                                                                   | 13                 | 64.5                                                                                   | 45                 | 47.8                                                                                   | 59.9                               | 53.7                                    | 15.9                   | 15.6                           | 36                 |
| Lamu                 | (68.6)                                                                                 | 5                  | 45.3                                                                                   | 12                 | 63.7                                                                                   | 79.0                               | 54.7                                    | 11.5                   | 8.3                            | 9                  |
| Taita Taveta         | (79.9)                                                                                 | 10                 | 56.3                                                                                   | 33                 | (50.8)                                                                                 | (69.2)                             | (62.0)                                  | (7.3)                  | (6.1)                          | 18                 |
| <b>North Eastern</b> | <b>35.4</b>                                                                            | <b>25</b>          | <b>50.0</b>                                                                            | <b>54</b>          | <b>49.7</b>                                                                            | <b>65.5</b>                        | <b>72.6</b>                             | <b>8.2</b>             | <b>7.2</b>                     | <b>49</b>          |
| Garissa              | *                                                                                      | 6                  | (41.4)                                                                                 | 16                 | (29.4)                                                                                 | (68.3)                             | (80.5)                                  | (10.8)                 | (10.8)                         | 12                 |
| Wajir                | (33.6)                                                                                 | 16                 | 55.1                                                                                   | 31                 | 57.2                                                                                   | 69.8                               | 72.2                                    | 8.4                    | 6.7                            | 32                 |
| Mandera              | *                                                                                      | 2                  | *                                                                                      | 7                  | *                                                                                      | *                                  | *                                       | *                      | *                              | 5                  |
| <b>Eastern</b>       | <b>67.8</b>                                                                            | <b>194</b>         | <b>68.7</b>                                                                            | <b>406</b>         | <b>57.5</b>                                                                            | <b>74.2</b>                        | <b>61.1</b>                             | <b>3.4</b>             | <b>3.0</b>                     | <b>320</b>         |
| Marsabit             | (66.8)                                                                                 | 9                  | 63.1                                                                                   | 17                 | 65.9                                                                                   | 71.2                               | 64.4                                    | 5.0                    | 3.3                            | 13                 |
| Isiolo               | (63.9)                                                                                 | 9                  | 75.6                                                                                   | 11                 | (56.9)                                                                                 | (81.8)                             | (74.8)                                  | (4.6)                  | (4.6)                          | 6                  |
| Meru                 | *                                                                                      | 35                 | 72.0                                                                                   | 128                | (69.8)                                                                                 | (65.3)                             | (52.2)                                  | (1.6)                  | (0.0)                          | 63                 |
| Tharaka-Nithi        | (67.1)                                                                                 | 15                 | 75.2                                                                                   | 39                 | (67.5)                                                                                 | (75.4)                             | (53.3)                                  | (5.1)                  | (5.1)                          | 28                 |
| Embu                 | *                                                                                      | 12                 | (72.4)                                                                                 | 27                 | (46.7)                                                                                 | (74.8)                             | (73.3)                                  | (7.6)                  | (7.6)                          | 22                 |
| Kitui                | (57.4)                                                                                 | 42                 | 60.8                                                                                   | 72                 | 54.4                                                                                   | 83.7                               | 67.2                                    | 2.0                    | 2.0                            | 77                 |
| Machakos             | (54.5)                                                                                 | 37                 | (61.4)                                                                                 | 64                 | 51.0                                                                                   | 70.7                               | 60.2                                    | 5.5                    | 5.5                            | 71                 |
| Makueni              | (64.5)                                                                                 | 36                 | 74.8                                                                                   | 49                 | (52.1)                                                                                 | (75.0)                             | (60.9)                                  | (1.2)                  | (1.2)                          | 39                 |
| <b>Central</b>       | <b>70.3</b>                                                                            | <b>125</b>         | <b>68.2</b>                                                                            | <b>308</b>         | <b>63.2</b>                                                                            | <b>75.6</b>                        | <b>66.5</b>                             | <b>9.2</b>             | <b>8.6</b>                     | <b>180</b>         |
| Nyandarua            | *                                                                                      | 17                 | 67.0                                                                                   | 40                 | (46.0)                                                                                 | (81.9)                             | (65.0)                                  | (1.1)                  | (1.1)                          | 26                 |
| Nyeri                | (72.9)                                                                                 | 23                 | (65.6)                                                                                 | 34                 | *                                                                                      | *                                  | *                                       | *                      | *                              | 11                 |
| Kirinyaga            | *                                                                                      | 6                  | (74.8)                                                                                 | 40                 | (73.6)                                                                                 | (64.4)                             | (57.6)                                  | (5.8)                  | (5.8)                          | 23                 |
| Murang'a             | (77.9)                                                                                 | 34                 | (83.3)                                                                                 | 52                 | (59.8)                                                                                 | (62.2)                             | (58.4)                                  | (8.9)                  | (8.9)                          | 35                 |
| Kiambu               | *                                                                                      | 45                 | 61.8                                                                                   | 143                | (69.9)                                                                                 | (80.6)                             | (72.2)                                  | (11.8)                 | (11.8)                         | 85                 |
| <b>Rift Valley</b>   | <b>68.2</b>                                                                            | <b>450</b>         | <b>61.8</b>                                                                            | <b>1,139</b>       | <b>59.6</b>                                                                            | <b>72.0</b>                        | <b>65.9</b>                             | <b>4.5</b>             | <b>3.3</b>                     | <b>718</b>         |
| Turkana              | *                                                                                      | 8                  | 63.4                                                                                   | 38                 | 76.5                                                                                   | 44.8                               | 45.6                                    | 13.7                   | 4.0                            | 47                 |
| West Pokot           | (77.5)                                                                                 | 11                 | 76.9                                                                                   | 28                 | 63.3                                                                                   | 23.0                               | 23.4                                    | 1.5                    | 1.5                            | 25                 |
| Samburu              | *                                                                                      | 5                  | 54.5                                                                                   | 22                 | 48.9                                                                                   | 62.1                               | 58.4                                    | 2.6                    | 2.6                            | 21                 |
| Trans-Nzoia          | (70.3)                                                                                 | 48                 | 56.2                                                                                   | 113                | 45.7                                                                                   | 51.1                               | 64.4                                    | 3.2                    | 3.2                            | 77                 |
| Uasin Gishu          | (54.9)                                                                                 | 34                 | 53.2                                                                                   | 89                 | (55.7)                                                                                 | (57.4)                             | (62.3)                                  | (2.3)                  | (2.3)                          | 43                 |
| Elgeyo Marakwet      | (93.7)                                                                                 | 15                 | 63.9                                                                                   | 49                 | (77.0)                                                                                 | (88.4)                             | (73.2)                                  | (0.0)                  | (0.0)                          | 19                 |
| Nandi                | (65.7)                                                                                 | 27                 | 50.9                                                                                   | 76                 | 48.9                                                                                   | 74.5                               | 59.8                                    | 7.8                    | 5.5                            | 42                 |
| Baringo              | 65.0                                                                                   | 29                 | 71.6                                                                                   | 53                 | 67.4                                                                                   | 90.8                               | 71.6                                    | 1.7                    | 1.7                            | 37                 |
| Laikipia             | (73.1)                                                                                 | 24                 | 73.6                                                                                   | 44                 | (60.0)                                                                                 | (74.7)                             | (58.4)                                  | (1.6)                  | (1.6)                          | 28                 |
| Nakuru               | (76.2)                                                                                 | 67                 | 67.1                                                                                   | 132                | 53.3                                                                                   | 82.9                               | 69.6                                    | 0.0                    | 0.0                            | 99                 |
| Narok                | 68.5                                                                                   | 72                 | 61.7                                                                                   | 188                | 67.7                                                                                   | 91.8                               | 77.8                                    | 9.3                    | 8.0                            | 116                |
| Kajiado              | 61.4                                                                                   | 49                 | 53.4                                                                                   | 116                | 69.9                                                                                   | 70.7                               | 81.2                                    | 1.7                    | 1.7                            | 48                 |
| Kericho              | (64.7)                                                                                 | 28                 | 65.3                                                                                   | 92                 | 55.8                                                                                   | 83.5                               | 68.0                                    | 2.4                    | 0.0                            | 58                 |
| Bomet                | (61.8)                                                                                 | 34                 | 68.9                                                                                   | 99                 | 56.7                                                                                   | 68.9                               | 65.4                                    | 7.2                    | 7.2                            | 58                 |
| <b>Western</b>       | <b>56.5</b>                                                                            | <b>276</b>         | <b>52.2</b>                                                                            | <b>782</b>         | <b>47.4</b>                                                                            | <b>69.3</b>                        | <b>59.7</b>                             | <b>5.1</b>             | <b>4.9</b>                     | <b>436</b>         |
| Kakamega             | 57.8                                                                                   | 86                 | 43.6                                                                                   | 209                | 50.0                                                                                   | 76.0                               | 59.3                                    | 4.4                    | 4.4                            | 150                |
| Vihiga               | 61.6                                                                                   | 36                 | 53.5                                                                                   | 106                | 50.1                                                                                   | 68.4                               | 65.6                                    | 9.9                    | 9.2                            | 51                 |
| Bungoma              | 49.1                                                                                   | 131                | 52.6                                                                                   | 302                | 40.5                                                                                   | 69.0                               | 59.5                                    | 5.4                    | 4.9                            | 164                |
| Busia                | (83.9)                                                                                 | 24                 | 61.4                                                                                   | 166                | 55.9                                                                                   | 56.7                               | 56.9                                    | 2.5                    | 2.5                            | 71                 |
| <b>Nyanza</b>        | <b>71.3</b>                                                                            | <b>253</b>         | <b>66.3</b>                                                                            | <b>987</b>         | <b>60.1</b>                                                                            | <b>73.0</b>                        | <b>59.9</b>                             | <b>12.7</b>            | <b>11.7</b>                    | <b>500</b>         |
| Siaya                | (79.2)                                                                                 | 43                 | 75.7                                                                                   | 170                | 65.6                                                                                   | 68.1                               | 51.3                                    | 17.0                   | 17.0                           | 53                 |
| Kisumu               | *                                                                                      | 15                 | 62.5                                                                                   | 148                | 59.5                                                                                   | 62.6                               | 51.6                                    | 14.7                   | 14.7                           | 74                 |
| Homa Bay             | 67.3                                                                                   | 77                 | 64.7                                                                                   | 281                | 70.6                                                                                   | 90.1                               | 73.9                                    | 20.2                   | 18.9                           | 144                |
| Migori               | 75.2                                                                                   | 66                 | 62.2                                                                                   | 249                | 55.4                                                                                   | 59.1                               | 51.5                                    | 3.5                    | 2.6                            | 144                |
| Kisii                | (64.2)                                                                                 | 46                 | 71.1                                                                                   | 130                | 45.5                                                                                   | 82.0                               | 63.3                                    | 11.9                   | 9.4                            | 78                 |
| Nyamira              | *                                                                                      | 6                  | *                                                                                      | 11                 | *                                                                                      | *                                  | *                                       | *                      | *                              | 5                  |
| <b>Nairobi</b>       | <b>(65.2)</b>                                                                          | <b>113</b>         | <b>64.3</b>                                                                            | <b>359</b>         | <b>57.4</b>                                                                            | <b>80.8</b>                        | <b>70.6</b>                             | <b>12.8</b>            | <b>12.8</b>                    | <b>300</b>         |
| Total                | 65.9                                                                                   | 1,575              | 62.9                                                                                   | 4,562              | 58.0                                                                                   | 73.8                               | 64.6                                    | 8.1                    | 7.5                            | 2,844              |

Note: Figures in parentheses are based on fewer than 25-49 unweighted cases; an asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

<sup>1</sup> Symptoms of ARI, considered a proxy for pneumonia, include cough accompanied by short, rapid breathing that is chest-related and/or by difficult breathing that is chest-related.

<sup>2</sup> Excludes pharmacy, shop, and traditional practitioner

<sup>3</sup> ORT includes solution prepared from oral rehydration salt (ORS) and other home-made fluids

### 3.6.3 Nutritional Status of Children

Malnutrition places children at increased risk of morbidity and mortality and is also shown to be related to impaired mental development. Anthropometry provides one of the most important indicators of children's nutritional status. In the 2014 KDHS, height and weight measurements were obtained for children born in the five years preceding the survey. The height and weight data were used to compute three summary indices of nutritional status: height-for-age, weight-for-height, and weight-for-age. These three indices were expressed as standardised scores (z-scores) or standard deviation units from the median for the child growth standards recommended by the World Health Organisation. Children who fall more than two standard deviations below the reference median are regarded as undernourished, while those who fall more than three standard deviations below the reference median are considered severely undernourished. Table 3.20 shows the nutritional status among children less than age five by selected background characteristics, and Table 3.21 presents children's nutritional status by county.

Children whose height-for-age is below minus two standard deviations (-2 SD) from the median of the reference population are considered stunted or short for their age. Stunting is the result of failure to receive adequate nutrition over an extended period and may also be affected by recurrent or chronic illness. About one-quarter (26 percent) of Kenyan children are stunted, while 8 percent are severely stunted (Table 3.20). Analysis of stunting by age group shows that stunting is highest (36 percent) in children age 18-23 months and lowest (10 percent) in children age less than 6 months. Similar results were observed for severe stunting with children 18-23 months being the most affected (12 percent), and those less than 6 months being the least affected (3 percent). Stunting levels are higher among boys (30 percent) than girls (22 percent) and higher among rural children (29 percent) than urban children (20 percent). Children of mothers with secondary or higher education are less likely to be stunted (17 percent) compared with children whose mothers did not complete primary school (34 percent) or have no education (31 percent). The table further shows that stunting in children declines as household wealth increases, from 36 percent to 14 percent.

At the county level, shown in Table 3.21, West Pokot and Kitui counties have the highest proportions (46 percent) 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 less than 16 percent.

Children whose weight-for-height is below minus two standard deviations (-2 SD) from the median of the reference population are considered wasted (or thin). Wasting represents the failure to receive adequate nutrition in the period immediately before the survey, and typically is the result of recent illness episodes, especially diarrhoea, or of a rapid deterioration in food supplies. Table 3.20 shows that 4 percent of Kenyan children are wasted and 1 percent are severely wasted. Wasting levels are highest for the children in the age groups 6-8 months and 9-11 months (each 7 percent). During this period, children are being introduced to complementary food and are more vulnerable to diseases. Children whose mothers have no education have a higher chance of wasting (10 percent) compared with children of educated mothers. Wasting in children is inversely related to household wealth.

At the county level (Table 3.21), wasting is concentrated in the north: Garissa, Wajir, Mandera, Marsabit, Turkana, West Pokot, and Samburu. More than 11 percent of children are wasted in these counties, topping out at 23 percent in Turkana. Counties with the lowest proportion of wasted children are Siaya and Kisumu, each with less than 1 percent.

Table 3.20 Nutritional status of children by background characteristics

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 <sup>1</sup> |                                      |                   | Weight-for-height       |                                      |                         |                   | Weight-for-age          |                                      |                         |                   | Number of children |
|-------------------------------------------------------|-----------------------------|--------------------------------------|-------------------|-------------------------|--------------------------------------|-------------------------|-------------------|-------------------------|--------------------------------------|-------------------------|-------------------|--------------------|
|                                                       | Percent-age below -3 SD     | Percent-age below -2 SD <sup>2</sup> | Mean Z-score (SD) | Percent-age below -3 SD | Percent-age below -2 SD <sup>2</sup> | Percent-age above +2 SD | Mean Z-score (SD) | Percent-age below -3 SD | Percent-age below -2 SD <sup>2</sup> | Percent-age above +2 SD | Mean Z-Score (SD) |                    |
| <b>Age in months</b>                                  |                             |                                      |                   |                         |                                      |                         |                   |                         |                                      |                         |                   |                    |
| <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              |
| <b>Sex</b>                                            |                             |                                      |                   |                         |                                      |                         |                   |                         |                                      |                         |                   |                    |
| 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              |
| <b>Mother's interview status</b>                      |                             |                                      |                   |                         |                                      |                         |                   |                         |                                      |                         |                   |                    |
| Mother 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             |
| Mother 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                |
| Mother not interviewed, not in household <sup>3</sup> | 11.5                        | 28.9                                 | -1.2              | 0.4                     | 4.0                                  | 2.8                     | -0.1              | 3.5                     | 14.4                                 | 0.9                     | -0.7              | 1,420              |
| <b>Residence</b>                                      |                             |                                      |                   |                         |                                      |                         |                   |                         |                                      |                         |                   |                    |
| 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             |
| <b>Mother's education<sup>4</sup></b>                 |                             |                                      |                   |                         |                                      |                         |                   |                         |                                      |                         |                   |                    |
| 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              |
| <b>Wealth quintile</b>                                |                             |                                      |                   |                         |                                      |                         |                   |                         |                                      |                         |                   |                    |
| 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              |
| <b>Total</b>                                          | <b>8.1</b>                  | <b>26.0</b>                          | <b>-1.1</b>       | <b>0.9</b>              | <b>4.0</b>                           | <b>4.1</b>              | <b>0.0</b>        | <b>2.3</b>              | <b>11.0</b>                          | <b>1.4</b>              | <b>-0.6</b>       | <b>18,986</b>      |

Note: Table is based on children who stayed in the household 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 1977 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.

<sup>1</sup> 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 85 cm; standing height is measured for all other children.

<sup>2</sup> Includes children who are below -3 standard deviations (SD) from the WHO Growth Standards population median

<sup>3</sup> Includes children whose mothers are deceased

<sup>4</sup> For women who are not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire.

Children whose weight-for-age is below minus two standard deviations (-2 SD) from the median of the reference population are considered underweight. The measure reflects the effects of both acute and chronic malnutrition. As shown in Table 3.20, 11 percent of Kenyan children are underweight, with 2 percent classified as severely underweight. Peak levels of low weight-for-age are found among children age 24-35 months. The percentage underweight is slightly higher among boys (12 percent) than girls (10 percent), and for rural children (13 percent) than urban children (7 percent). The proportion underweight decreases as mother's education level increases or household wealth quintile increases.

At the county level, more than one-quarter of children are underweight in five counties: Mandera, Marsabit, Turkana, West Pokot, and Samburu. Less than 4 percent of children are underweight in Nyeri and Nairobi counties.

Table 3.21 Nutritional status of children by county

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

| County               | Height-for-age <sup>1</sup> |                                      |                   | Weight-for-height       |                                      |                         |                   | Weight-for-age          |                                      |                         |                   | Number of children |
|----------------------|-----------------------------|--------------------------------------|-------------------|-------------------------|--------------------------------------|-------------------------|-------------------|-------------------------|--------------------------------------|-------------------------|-------------------|--------------------|
|                      | Percent-age below -3 SD     | Percent-age below -2 SD <sup>2</sup> | Mean Z-score (SD) | Percent-age below -3 SD | Percent-age below -2 SD <sup>2</sup> | Percent-age above +2 SD | Mean Z-score (SD) | Percent-age below -3 SD | Percent-age below -2 SD <sup>2</sup> | Percent-age above +2 SD | Mean Z-Score (SD) |                    |
| <b>Coast</b>         | <b>10.4</b>                 | <b>30.8</b>                          | <b>-1.3</b>       | <b>0.8</b>              | <b>4.5</b>                           | <b>3.3</b>              | <b>-0.1</b>       | <b>2.4</b>              | <b>13.6</b>                          | <b>1.2</b>              | <b>-0.8</b>       | <b>1,926</b>       |
| 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                |
| <b>North Eastern</b> | <b>10.7</b>                 | <b>24.7</b>                          | <b>-0.9</b>       | <b>2.6</b>              | <b>13.3</b>                          | <b>2.6</b>              | <b>-0.7</b>       | <b>4.5</b>              | <b>19.0</b>                          | <b>1.2</b>              | <b>-1.0</b>       | <b>604</b>         |
| 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                |
| <b>Eastern</b>       | <b>8.2</b>                  | <b>30.1</b>                          | <b>-1.3</b>       | <b>1.2</b>              | <b>4.4</b>                           | <b>4.3</b>              | <b>-0.1</b>       | <b>2.2</b>              | <b>12.2</b>                          | <b>0.9</b>              | <b>-0.8</b>       | <b>2,409</b>       |
| 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                |
| <b>Central</b>       | <b>4.9</b>                  | <b>18.4</b>                          | <b>-0.9</b>       | <b>0.2</b>              | <b>2.3</b>                           | <b>6.2</b>              | <b>0.2</b>        | <b>1.2</b>              | <b>5.3</b>                           | <b>2.4</b>              | <b>-0.3</b>       | <b>1,694</b>       |
| 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                |
| <b>Rift Valley</b>   | <b>9.3</b>                  | <b>29.8</b>                          | <b>-1.3</b>       | <b>1.3</b>              | <b>5.7</b>                           | <b>3.7</b>              | <b>-0.2</b>       | <b>3.6</b>              | <b>15.3</b>                          | <b>1.0</b>              | <b>-0.8</b>       | <b>5,466</b>       |
| 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                |
| <b>Western</b>       | <b>8.2</b>                  | <b>25.2</b>                          | <b>-1.1</b>       | <b>0.4</b>              | <b>1.9</b>                           | <b>3.4</b>              | <b>0.1</b>        | <b>1.5</b>              | <b>9.0</b>                           | <b>1.3</b>              | <b>-0.6</b>       | <b>2,476</b>       |
| 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                |
| <b>Nyanza</b>        | <b>7.6</b>                  | <b>22.7</b>                          | <b>-1.0</b>       | <b>0.4</b>              | <b>2.0</b>                           | <b>4.4</b>              | <b>0.2</b>        | <b>1.3</b>              | <b>7.4</b>                           | <b>2.0</b>              | <b>-0.4</b>       | <b>2,769</b>       |
| 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                |
| <b>Nairobi</b>       | <b>3.9</b>                  | <b>17.2</b>                          | <b>-0.7</b>       | <b>0.8</b>              | <b>2.5</b>                           | <b>5.3</b>              | <b>0.2</b>        | <b>1.2</b>              | <b>3.8</b>                           | <b>1.7</b>              | <b>-0.2</b>       | <b>1,643</b>       |
| 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 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 1977 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.

<sup>1</sup> 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 85 cm; standing height is measured for all other children.

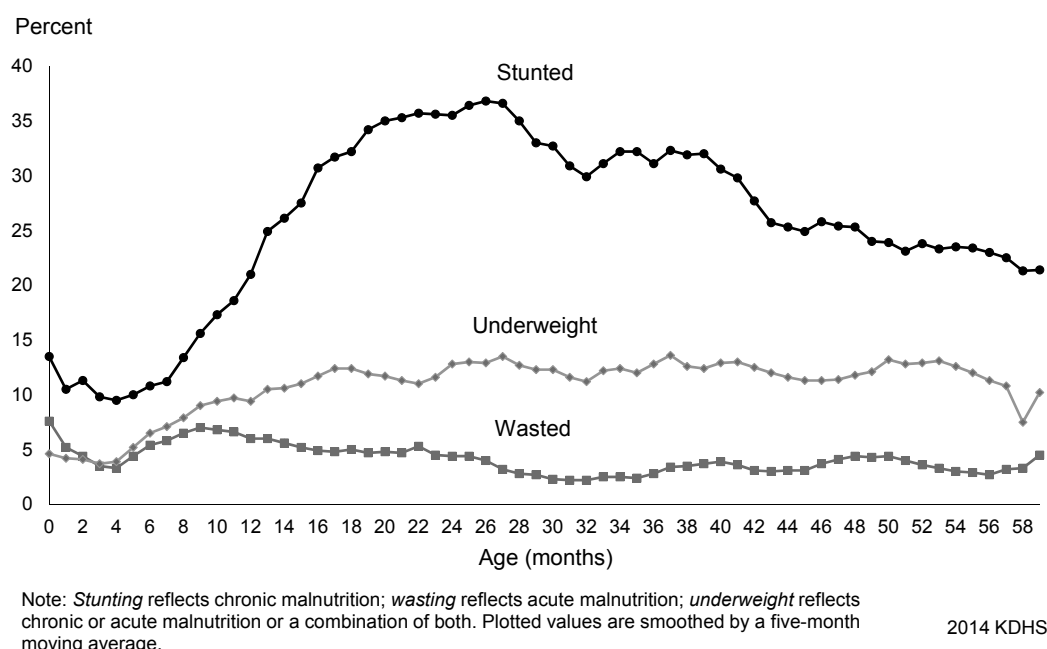
<sup>2</sup> Includes children who are below -3 standard deviations (SD) from the WHO Growth Standards population median

<sup>3</sup> Includes children whose mothers are deceased

<sup>4</sup> 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 3.6 depicts children's nutritional status by age in months. Kenyan children are more likely to experience stunting than to be underweight or wasted. Additionally, the risk of stunting peaks at age 19 to 28 months.

**Figure 3.6 Nutritional status of children by age**



### Trends in Nutritional Status

Comparison of the 2008-09 KDHS nutrition data with that from 2014 indicates an overall improvement in nutritional status of children in Kenya. Stunting has decreased from 35 percent to 26 percent. Wasting has also declined from 7 percent to 4 percent in 2014, and the proportion of underweight children declined from 16 percent to 11 percent.

### 3.6.4 Breastfeeding and Complementary Feeding

Breastfeeding practices and introduction of supplemental foods are important determinants of the nutritional status of children, particularly among children under age two. With improved nutritional status, the risk of child mortality is reduced and development is enhanced. Breast milk contains all the nutrients children need in the first six months of life. Supplementing breast milk before six months of age is unnecessary and is discouraged because of the likelihood of contamination, which may increase the risk of diarrhoeal diseases.

Table 3.22 describes the breastfeeding practices for the youngest children under age two who are living with their mother. The World Health Organization recommends that children receive nothing but breastmilk (exclusive breastfeeding) for the first six months of life. In Kenya, 61 percent of children less than six months are exclusively breastfed. More than half of children in Kenya are still breastfeeding at age 20-23 months (51 percent). The proportion of breastfed children declines with age; breastfeeding is nearly universal in a child's first month of life, but the proportion breastfed drops to 61 percent by the time a child is 18-23 months.

In addition to breast milk, 15 percent of children less than 6 months are fed complementary foods, 10 percent consume plain water, 10 percent consume other milks, and 3 percent consume non-

milk liquids. Further, Table 3.22 shows that bottle feeding is prevalent in Kenya with 11 percent of children age 6 months or younger using a bottle with a nipple. Thirty percent of children age 6-9 months use a bottle with a nipple.

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 6 months using a bottle with a nipple has also noticeably decreased from 25 percent in 2008-09 to 11 percent in 2014.

Table 3.22 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

| Age in months | Breastfeeding status |                            |                                               |                                                            |                                         |                                                  | Total | Percent-age currently breast-feeding | Number of youngest children under two years living with the mother | Percent-age using a bottle with a nipple | Number of all children under two years |
|---------------|----------------------|----------------------------|-----------------------------------------------|------------------------------------------------------------|-----------------------------------------|--------------------------------------------------|-------|--------------------------------------|--------------------------------------------------------------------|------------------------------------------|----------------------------------------|
|               | Not breast-feeding   | Exclusively breast-feeding | Breast-feeding and consuming plain water only | Breast-feeding and consuming non-milk liquids <sup>1</sup> | Breast-feeding and consuming other milk | Breast-feeding and consuming complementary foods |       |                                      |                                                                    |                                          |                                        |
| 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                                    |

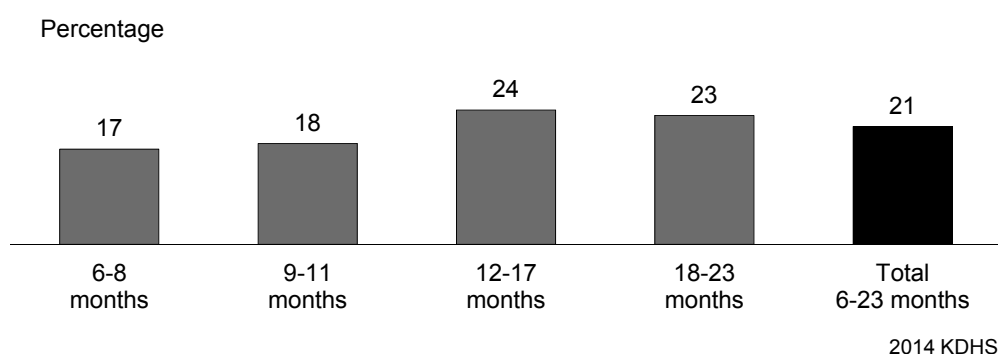
Note: Breastfeeding status refers to a "24-hour" period (yesterday and last night). Children who are classified as breastfeeding and consuming plain water only consumed no liquid or solid supplements. The categories of not breastfeeding, exclusively breastfeeding, breastfeeding and consuming plain water, 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.

<sup>1</sup> Non-milk liquids include juice, juice drinks, clear broth, or other liquids.

Figure 3.7 presents the percentage of children under age two who are consuming the minimum acceptable diet. The minimum acceptable diet recommends that breastfed children 6-23 months be fed foods from four or more food groups daily. Non-breastfed children should be fed milk or milk products in addition to foods from four or more food groups. The recommendation also requires that breastfed infants age 6-8 months be fed at least twice a day, while breastfed children age 9-23 months must be fed at least three times a day. For non-breastfed children age 6-23 months, the minimum meal frequency is solid or semi-solid food or milk feeds at least four times a day.

In Kenya, about two in ten (21 percent) children age 6-23 months consume an acceptable diet. Children age 12-17 months are slightly more likely than children in other age groups to consume an acceptable diet (24 percent).

**Figure 3.7 Minimum acceptable diet by age (months)**



## 3.7 MALARIA

### 3.7.1 Ownership and Use of Mosquito Nets

One of the strongest weapons in the fight against malaria is the use of insecticide-treated nets (ITNs) while sleeping. In the 2014 KDHS, data were collected from households on ownership and number of mosquito nets owned. Respondents were also asked to indicate particular household members who had slept under each net the night prior to the interview.

The data in Tables 3.23 and 3.24 show that 59 percent of households in Kenya own at least one ITN and 34 percent own at least one ITN for every two persons who stayed in the household the night preceding the survey (considered universal coverage). Household ownership of at least one ITN has improved slightly since the 2008-09 KDHS, which indicated that 56 percent of households had at least one ITN.<sup>3</sup>

**Table 3.23 Household possession of insecticide-treated nets by background characteristics**

Percentage of households with at least one insecticide-treated net (ITN); average number of ITNs per household; and percentage of households with at least one ITN per two persons who stayed in the household the night before the survey, by background characteristics, Kenya 2014

| Background characteristic | Percentage of households with at least one insecticide-treated net (ITN) <sup>1</sup> | Average number of insecticide-treated nets (ITN) <sup>1</sup> per household | Number of households | Percentage of households with at least one insecticide-treated net (ITN) <sup>1</sup> for every two persons who stayed in the household last night (universal coverage) <sup>2</sup> | Number of households with at least one person who stayed in the household last night |
|---------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <b>Residence</b>          |                                                                                       |                                                                             |                      |                                                                                                                                                                                      |                                                                                      |
| Urban                     | 55.7                                                                                  | 1.0                                                                         | 15,290               | 37.3                                                                                                                                                                                 | 15,120                                                                               |
| Rural                     | 60.8                                                                                  | 1.2                                                                         | 21,140               | 32.1                                                                                                                                                                                 | 21,065                                                                               |
| <b>Wealth quintile</b>    |                                                                                       |                                                                             |                      |                                                                                                                                                                                      |                                                                                      |
| Lowest                    | 50.8                                                                                  | 0.9                                                                         | 6,077                | 20.5                                                                                                                                                                                 | 6,060                                                                                |
| Second                    | 61.1                                                                                  | 1.1                                                                         | 6,557                | 28.5                                                                                                                                                                                 | 6,528                                                                                |
| Middle                    | 63.6                                                                                  | 1.3                                                                         | 6,967                | 36.2                                                                                                                                                                                 | 6,910                                                                                |
| Fourth                    | 56.4                                                                                  | 1.1                                                                         | 8,225                | 37.4                                                                                                                                                                                 | 8,163                                                                                |
| Highest                   | 60.5                                                                                  | 1.2                                                                         | 8,603                | 43.9                                                                                                                                                                                 | 8,525                                                                                |
| Total                     | 58.7                                                                                  | 1.1                                                                         | 36,430               | 34.3                                                                                                                                                                                 | 36,185                                                                               |

<sup>1</sup> 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 6 months. Note, the Roll Back Malaria (RBM) Partnership's definition for an ITN differs slightly from that used in the 2014 KDHS in that the time window in point (2) for treatment with insecticide is 12 months and not 6 months (<http://goo.gl/kNWwhus>). The percentages presented in Table 3.23 do not differ substantially by ITN definition; for example, the percentage of households with at least one ITN as defined by RBM is 58.9 percent while the percentage of households with universal coverage is 34.5 percent.

<sup>2</sup> De facto household members

<sup>3</sup> In Kenya, 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 6 months. The definition used in the 2008-09 KDHS was slightly different: an ITN was considered to be a (1) a factory-treated net that does not require any further treatment (long-lasting net), (2) a pretreated net obtained within the past 12 months, or (3) a conventional net that has been soaked with insecticide within the past 12 months.

Table 3.24 Household possession of insecticide-treated nets by county

Percentage of households with at least one insecticide-treated net (ITN); average number of ITNs per household; and percentage of households with at least one ITN per two persons who stayed in the household the night before the survey, by county, Kenya 2014

| County               | Percentage of households with at least one insecticide-treated net (ITN) <sup>1</sup> | Average number of insecticide-treated nets (ITN) <sup>1</sup> per household | Number of households | Percentage of households with at least one insecticide-treated net (ITN) <sup>1</sup> for every two persons who stayed in the household last night (universal coverage) <sup>2</sup> | Number of households with at least one person who stayed in the household last night |
|----------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <b>Coast</b>         | <b>69.1</b>                                                                           | <b>1.4</b>                                                                  | <b>3,569</b>         | <b>43.3</b>                                                                                                                                                                          | <b>3,531</b>                                                                         |
| Mombasa              | 56.9                                                                                  | 0.9                                                                         | 1,245                | 38.9                                                                                                                                                                                 | 1,221                                                                                |
| Kwale                | 81.0                                                                                  | 1.7                                                                         | 704                  | 47.8                                                                                                                                                                                 | 703                                                                                  |
| Kilifi               | 73.1                                                                                  | 1.6                                                                         | 999                  | 41.5                                                                                                                                                                                 | 993                                                                                  |
| Tana River           | 65.3                                                                                  | 1.3                                                                         | 210                  | 33.0                                                                                                                                                                                 | 208                                                                                  |
| Lamu                 | 71.1                                                                                  | 1.5                                                                         | 104                  | 51.2                                                                                                                                                                                 | 102                                                                                  |
| Taita Taveta         | 80.4                                                                                  | 1.6                                                                         | 307                  | 60.6                                                                                                                                                                                 | 304                                                                                  |
| <b>North Eastern</b> | <b>48.8</b>                                                                           | <b>1.0</b>                                                                  | <b>724</b>           | <b>21.9</b>                                                                                                                                                                          | <b>722</b>                                                                           |
| Garissa              | 61.1                                                                                  | 1.4                                                                         | 265                  | 34.4                                                                                                                                                                                 | 265                                                                                  |
| Wajir                | 53.6                                                                                  | 1.1                                                                         | 242                  | 18.1                                                                                                                                                                                 | 241                                                                                  |
| Mandera              | 28.7                                                                                  | 0.5                                                                         | 217                  | 10.9                                                                                                                                                                                 | 217                                                                                  |
| <b>Eastern</b>       | <b>56.2</b>                                                                           | <b>1.1</b>                                                                  | <b>5,262</b>         | <b>31.1</b>                                                                                                                                                                          | <b>5,227</b>                                                                         |
| Marsabit             | 24.7                                                                                  | 0.3                                                                         | 146                  | 7.0                                                                                                                                                                                  | 146                                                                                  |
| Isiolo               | 62.7                                                                                  | 1.1                                                                         | 122                  | 31.5                                                                                                                                                                                 | 121                                                                                  |
| Meru                 | 53.5                                                                                  | 1.0                                                                         | 1,406                | 30.6                                                                                                                                                                                 | 1,398                                                                                |
| Tharaka-Nithi        | 67.2                                                                                  | 1.3                                                                         | 379                  | 45.8                                                                                                                                                                                 | 375                                                                                  |
| Embu                 | 55.9                                                                                  | 1.1                                                                         | 548                  | 35.3                                                                                                                                                                                 | 539                                                                                  |
| Kitui                | 61.1                                                                                  | 1.1                                                                         | 856                  | 29.3                                                                                                                                                                                 | 849                                                                                  |
| Machakos             | 56.0                                                                                  | 1.1                                                                         | 1,088                | 31.5                                                                                                                                                                                 | 1,088                                                                                |
| Makueni              | 55.3                                                                                  | 1.1                                                                         | 717                  | 27.7                                                                                                                                                                                 | 711                                                                                  |
| <b>Central</b>       | <b>37.7</b>                                                                           | <b>0.7</b>                                                                  | <b>5,012</b>         | <b>25.0</b>                                                                                                                                                                          | <b>4,990</b>                                                                         |
| Nyandarua            | 12.5                                                                                  | 0.2                                                                         | 593                  | 7.1                                                                                                                                                                                  | 589                                                                                  |
| Nyeri                | 19.7                                                                                  | 0.3                                                                         | 792                  | 11.9                                                                                                                                                                                 | 788                                                                                  |
| Kirinyaga            | 68.5                                                                                  | 1.4                                                                         | 622                  | 54.3                                                                                                                                                                                 | 620                                                                                  |
| Murang'a             | 43.7                                                                                  | 0.8                                                                         | 968                  | 27.1                                                                                                                                                                                 | 965                                                                                  |
| Kiambu               | 39.9                                                                                  | 0.7                                                                         | 2,037                | 25.2                                                                                                                                                                                 | 2,028                                                                                |
| <b>Rift Valley</b>   | <b>55.6</b>                                                                           | <b>1.1</b>                                                                  | <b>9,249</b>         | <b>31.6</b>                                                                                                                                                                          | <b>9,195</b>                                                                         |
| Turkana              | 46.2                                                                                  | 0.7                                                                         | 448                  | 16.3                                                                                                                                                                                 | 446                                                                                  |
| West Pokot           | 60.2                                                                                  | 1.1                                                                         | 319                  | 21.2                                                                                                                                                                                 | 319                                                                                  |
| Samburu              | 18.8                                                                                  | 0.3                                                                         | 146                  | 8.7                                                                                                                                                                                  | 145                                                                                  |
| Trans-Nzoia          | 70.6                                                                                  | 1.5                                                                         | 814                  | 38.4                                                                                                                                                                                 | 809                                                                                  |
| Uasin Gishu          | 72.0                                                                                  | 1.5                                                                         | 962                  | 49.7                                                                                                                                                                                 | 950                                                                                  |
| Elgeyo Marakwet      | 21.9                                                                                  | 0.3                                                                         | 301                  | 10.1                                                                                                                                                                                 | 301                                                                                  |
| Nandi                | 78.8                                                                                  | 1.6                                                                         | 671                  | 41.9                                                                                                                                                                                 | 667                                                                                  |
| Baringo              | 59.8                                                                                  | 1.1                                                                         | 391                  | 32.8                                                                                                                                                                                 | 387                                                                                  |
| Laikipia             | 17.5                                                                                  | 0.3                                                                         | 406                  | 10.6                                                                                                                                                                                 | 402                                                                                  |
| Nakuru               | 37.7                                                                                  | 0.6                                                                         | 1,950                | 22.7                                                                                                                                                                                 | 1,948                                                                                |
| Narok                | 52.2                                                                                  | 1.0                                                                         | 752                  | 25.4                                                                                                                                                                                 | 746                                                                                  |
| Kajiado              | 49.8                                                                                  | 0.9                                                                         | 770                  | 33.3                                                                                                                                                                                 | 759                                                                                  |
| Kericho              | 79.5                                                                                  | 1.6                                                                         | 589                  | 45.4                                                                                                                                                                                 | 589                                                                                  |
| Bomet                | 77.6                                                                                  | 1.8                                                                         | 732                  | 46.8                                                                                                                                                                                 | 727                                                                                  |
| <b>Western</b>       | <b>81.5</b>                                                                           | <b>1.8</b>                                                                  | <b>3,604</b>         | <b>45.3</b>                                                                                                                                                                          | <b>3,581</b>                                                                         |
| Kakamega             | 78.8                                                                                  | 1.7                                                                         | 1,350                | 47.0                                                                                                                                                                                 | 1,341                                                                                |
| Vihiga               | 82.9                                                                                  | 1.7                                                                         | 446                  | 44.9                                                                                                                                                                                 | 446                                                                                  |
| Bungoma              | 82.9                                                                                  | 1.8                                                                         | 1,180                | 41.7                                                                                                                                                                                 | 1,170                                                                                |
| Busia                | 83.9                                                                                  | 1.9                                                                         | 628                  | 48.8                                                                                                                                                                                 | 624                                                                                  |
| <b>Nyanza</b>        | <b>81.1</b>                                                                           | <b>1.6</b>                                                                  | <b>4,559</b>         | <b>45.3</b>                                                                                                                                                                          | <b>4,542</b>                                                                         |
| Siaya                | 78.8                                                                                  | 1.5                                                                         | 725                  | 41.6                                                                                                                                                                                 | 720                                                                                  |
| Kisumu               | 87.6                                                                                  | 1.7                                                                         | 943                  | 52.6                                                                                                                                                                                 | 939                                                                                  |
| Homa Bay             | 74.3                                                                                  | 1.5                                                                         | 877                  | 37.5                                                                                                                                                                                 | 873                                                                                  |
| Migori               | 74.6                                                                                  | 1.4                                                                         | 701                  | 30.3                                                                                                                                                                                 | 699                                                                                  |
| Kisii                | 86.1                                                                                  | 1.9                                                                         | 904                  | 54.4                                                                                                                                                                                 | 903                                                                                  |
| Nyamira              | 84.5                                                                                  | 1.7                                                                         | 409                  | 57.1                                                                                                                                                                                 | 409                                                                                  |
| <b>Nairobi</b>       | <b>43.3</b>                                                                           | <b>0.7</b>                                                                  | <b>4,451</b>         | <b>28.5</b>                                                                                                                                                                          | <b>4,397</b>                                                                         |
| Total                | 58.7                                                                                  | 1.1                                                                         | 36,430               | 34.3                                                                                                                                                                                 | 36,185                                                                               |

<sup>1</sup> 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 6 months

<sup>2</sup> De facto household members

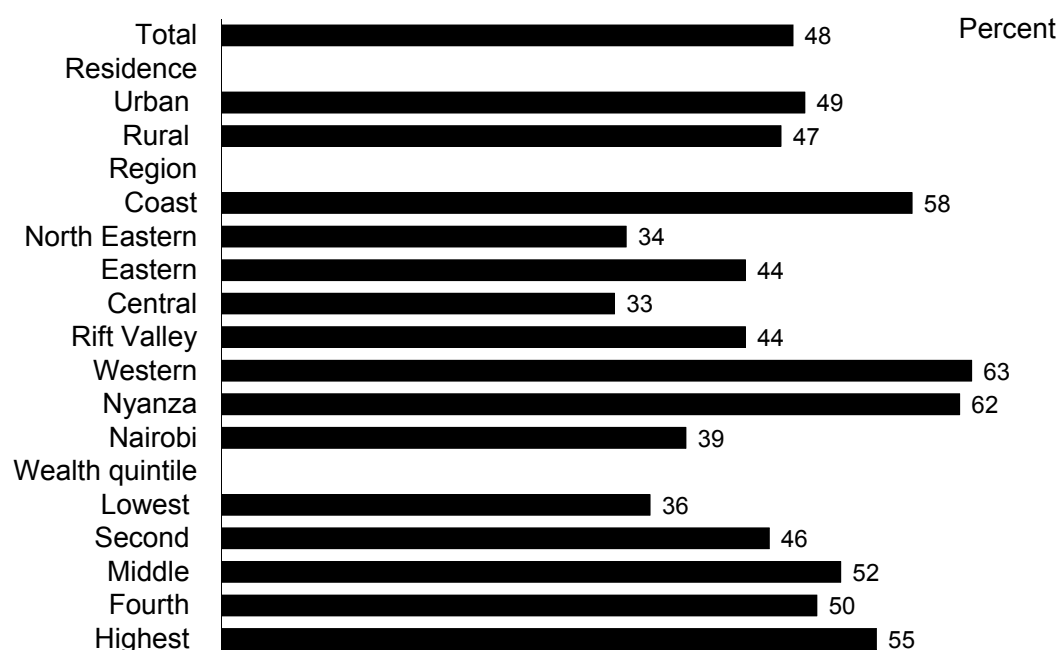
The data in Table 3.23 indicates that rural households are slightly more likely to own an ITN (61 percent) than those in urban areas (56 percent). These figures show a change in ITN ownership among rural households from the 2008-09 KDHS, which indicated that urban households were more likely to own an ITN (58 percent) than rural households (55 percent).

As in the 2008-09 KDHS, the 2014 KDHS shows that the ownership of at least one ITN is similar across the top four wealth quintiles (ranging from 56 percent to 64 percent). However, ownership of at least one ITN is lower among households in the lowest wealth quintile (51 percent).

Table 3.24 shows marked regional variation in the ownership of ITNs. While 82 percent of households in Western region own at least one ITN, only 38 percent of households in Central region and 43 percent of households in Nairobi do. It is worthwhile to note that at least 74 percent of households in counties in the malaria prone regions of Nyanza and Western have at least one ITN.

Figure 3.8 shows the percentage of the de facto population with access to an ITN in the household, by residence and region. Forty-eight percent of household members in Kenya have access to an ITN in the household. 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 regions had access to an ITN (63 percent and 62 percent, respectively). Access to ITNs is lower in Nairobi (39 percent), North Eastern region (34 percent), and Central region (33 percent). Unlike ownership of ITNs, access to ITNs among household members increases with household wealth, from 36 percent in the lowest wealth quintile to 55 percent in the highest quintile.

**Figure 3.8 Percentage of the de facto population with access to an ITN\* in the household**



\* 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 6 months.

2014 KDHS

Table 3.25 shows the use of nets by children and pregnant women by background characteristics while Table 3.26 presents the data by county. The results show that 59 percent of children under five slept under any mosquito net the night before the survey while 54 percent slept under an ITN. Further, in households with at least one ITN, 77 percent of children under age five slept under an ITN the night before the survey.

Fifty-six percent of pregnant women age 15-49 in all households slept under any mosquito net while 51 percent slept under an ITN the night before the survey. In households with at least one ITN, 77 percent of pregnant women slept under an ITN the night before the survey.

Children under age five residing in urban areas are more likely than their rural counterparts to have slept under an ITN last night (59 percent and 52 percent, respectively). Net use among children under age five and household wealth are positively associated. Forty percent of children in households in the lowest wealth quintile slept under an ITN the night before survey; this percentage increases to 63 percent of children in the highest wealth quintile.

The relationships between ITN use and residence or wealth for pregnant women are similar to those for children under age five; however, the differences are less pronounced.

Children and pregnant women in the malaria-prone regions of Western, Nyanza, and Coast were more likely to have slept under an ITN the night before the survey compared with those in other regions (Table 3.26).

**Table 3.25 Use of insecticide-treated nets by children and pregnant women by background characteristics**

Percentage of children under age five who, the night before the survey, slept under any mosquito net, slept under an insecticide-treated net (ITN), and slept under an ITN or in a dwelling in which the interior walls have been sprayed against mosquitoes (IRS) in the past 12 months; and among children under five years of age in households with at least one ITN, percentage who slept under an ITN the night before the survey; percentage of pregnant women age 15-49 who, the night before the survey, slept under any mosquito net, slept under an ITN, and slept under an ITN or in a dwelling in which the interior walls have been sprayed with IRS in the past 12 months; and among pregnant women age 15-49 in households with at least one ITN, percentage who slept under an ITN the night before the survey, by background characteristics, Kenya 2014

| Background characteristic | Children under age five in all households                      |                                                                            |                                                                                                                                                                |                       | Children under age five in households with at least one ITN <sup>1</sup>   |                       | Pregnant women age 15-49 in all households                     |                                                                            |                                                                                                                                                                |                                | Pregnant women age 15-49 in households with at least one ITN <sup>1</sup>  |                                |
|---------------------------|----------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------------------------------------------------|-----------------------|----------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|----------------------------------------------------------------------------|--------------------------------|
|                           | Percent-<br>age who<br>sleep<br>under any<br>net last<br>night | Percent-<br>age who<br>slept<br>under an<br>ITN <sup>1</sup> last<br>night | Percent-<br>age who<br>slept<br>under an<br>ITN <sup>1</sup> last<br>night or in<br>a dwelling<br>sprayed<br>with IRS <sup>2</sup><br>in the past<br>12 months | Number of<br>children | Percent-<br>age who<br>slept<br>under an<br>ITN <sup>1</sup> last<br>night | Number of<br>children | Percent-<br>age who<br>slept<br>under any<br>net last<br>night | Percent-<br>age who<br>slept<br>under an<br>ITN <sup>1</sup> last<br>night | Percent-<br>age who<br>slept<br>under an<br>ITN <sup>1</sup> last<br>night or in<br>a dwelling<br>sprayed<br>with IRS <sup>2</sup><br>in the past<br>12 months | Number of<br>pregnant<br>women | Percent-<br>age who<br>slept<br>under an<br>ITN <sup>1</sup> last<br>night | Number of<br>pregnant<br>women |
|                           |                                                                |                                                                            |                                                                                                                                                                |                       |                                                                            |                       |                                                                |                                                                            |                                                                                                                                                                |                                |                                                                            |                                |
| <b>Residence</b>          |                                                                |                                                                            |                                                                                                                                                                |                       |                                                                            |                       |                                                                |                                                                            |                                                                                                                                                                |                                |                                                                            |                                |
| Urban                     | 68.3                                                           | 58.9                                                                       | 59.0                                                                                                                                                           | 6,563                 | 84.5                                                                       | 4,570                 | 60.5                                                           | 51.1                                                                       | 51.9                                                                                                                                                           | 750                            | 80.8                                                                       | 474                            |
| Rural                     | 54.2                                                           | 51.7                                                                       | 52.1                                                                                                                                                           | 13,236                | 73.2                                                                       | 9,343                 | 52.8                                                           | 50.1                                                                       | 50.3                                                                                                                                                           | 1,188                          | 74.0                                                                       | 804                            |
| <b>Wealth quintile</b>    |                                                                |                                                                            |                                                                                                                                                                |                       |                                                                            |                       |                                                                |                                                                            |                                                                                                                                                                |                                |                                                                            |                                |
| Lowest                    | 42.3                                                           | 40.4                                                                       | 40.7                                                                                                                                                           | 4,850                 | 66.5                                                                       | 2,949                 | 39.7                                                           | 38.2                                                                       | 38.7                                                                                                                                                           | 459                            | 73.0                                                                       | 240                            |
| Second                    | 57.6                                                           | 55.2                                                                       | 55.5                                                                                                                                                           | 4,231                 | 74.4                                                                       | 3,137                 | 59.6                                                           | 56.6                                                                       | 57.0                                                                                                                                                           | 358                            | 74.6                                                                       | 272                            |
| Middle                    | 60.6                                                           | 57.3                                                                       | 57.9                                                                                                                                                           | 3,636                 | 77.2                                                                       | 2,696                 | 61.0                                                           | 58.1                                                                       | 59.7                                                                                                                                                           | 349                            | 76.3                                                                       | 265                            |
| Fourth                    | 66.0                                                           | 59.6                                                                       | 59.8                                                                                                                                                           | 3,411                 | 83.3                                                                       | 2,441                 | 59.3                                                           | 51.0                                                                       | 51.0                                                                                                                                                           | 368                            | 77.7                                                                       | 241                            |
| Highest                   | 73.8                                                           | 62.5                                                                       | 62.7                                                                                                                                                           | 3,670                 | 85.3                                                                       | 2,691                 | 62.8                                                           | 52.0                                                                       | 52.0                                                                                                                                                           | 403                            | 80.9                                                                       | 259                            |
| Total                     | 58.9                                                           | 54.1                                                                       | 54.4                                                                                                                                                           | 19,798                | 76.9                                                                       | 13,913                | 55.8                                                           | 50.5                                                                       | 51.0                                                                                                                                                           | 1,937                          | 76.5                                                                       | 1,278                          |

Note: Table is based on children who stayed in the household the night before the interview.

<sup>1</sup> 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 6 months. Note, the Roll Back Malaria (RBM) Partnership's definition for an ITN differs slightly from that used in the 2014 KDHS in that the time window in point (2) for treatment with insecticide is 12 months and not 6 months (<http://goo.gl/kNWwhus>). The percentages presented in Table 3.25 do not differ substantially by ITN definition; with ITN defined by RBM for example, among children under age five in households with at least one ITN, the percentage who slept under an ITN the night before the survey is 76.9 percent; 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 is 76.3 percent.

<sup>2</sup> Indoor residual spraying (IRS) is limited to spraying conducted by a government, private, or non-governmental organisation.

Table 3.26 Use of insecticide-treated nets by children and pregnant women by county

Percentage of children under age five who, the night before the survey, slept under any mosquito net, slept under an insecticide-treated net (ITN), and slept under an ITN or in a dwelling in which the interior walls have been sprayed against mosquitoes (IRS) in the past 12 months; and among children under five years of age in households with at least one ITN, percentage who slept under an ITN the night before the survey; percentage of pregnant women age 15-49 who, the night before the survey, slept under any mosquito net, slept under an ITN, and slept under an ITN or in a dwelling in which the interior walls have been sprayed with IRS in the past 12 months; and among pregnant women age 15-49 in households with at least one ITN, percentage who slept under an ITN the night before the survey, by county, Kenya 2014

| County               | Children under age five in all households                      |                                                                            |                                                                                                                                                                |                          | Children under age five in households with at least one ITN <sup>1</sup>   |                          | Pregnant women age 15-49 in all households                     |                                                                            |                                                                                                                                                                |                                   | Pregnant women age 15-49 in households with at least one ITN <sup>1</sup>  |                                   |
|----------------------|----------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------------------------------------------------------------------------|-----------------------------------|
|                      | Percent-<br>age who<br>sleep<br>under any<br>net last<br>night | Percent-<br>age who<br>slept<br>under an<br>ITN <sup>1</sup> last<br>night | Percent-<br>age who<br>slept<br>under an<br>ITN <sup>1</sup> last<br>night or in<br>a dwelling<br>sprayed<br>with IRS <sup>2</sup><br>in the past 12<br>months | Number<br>of<br>children | Percent-<br>age who<br>slept<br>under an<br>ITN <sup>1</sup> last<br>night | Number<br>of<br>children | Percent-<br>age who<br>sleep<br>under any<br>net last<br>night | Percent-<br>age who<br>slept<br>under an<br>ITN <sup>1</sup> last<br>night | Percent-<br>age who<br>slept<br>under an<br>ITN <sup>1</sup> last<br>night or in<br>a dwelling<br>sprayed<br>with IRS <sup>2</sup><br>in the past 12<br>months | Number<br>of<br>pregnant<br>women | Percent-<br>age who<br>slept<br>under an<br>ITN <sup>1</sup> last<br>night | Number<br>of<br>pregnant<br>women |
|                      |                                                                |                                                                            |                                                                                                                                                                |                          |                                                                            |                          |                                                                |                                                                            |                                                                                                                                                                |                                   |                                                                            |                                   |
| <b>Coast</b>         | <b>70.5</b>                                                    | <b>65.4</b>                                                                | <b>65.4</b>                                                                                                                                                    | <b>2,006</b>             | <b>82.2</b>                                                                | <b>1,596</b>             | <b>71.3</b>                                                    | <b>63.1</b>                                                                | <b>63.1</b>                                                                                                                                                    | <b>202</b>                        | <b>86.9</b>                                                                | <b>147</b>                        |
| Mombasa              | 67.2                                                           | 61.5                                                                       | 61.5                                                                                                                                                           | 477                      | 85.9                                                                       | 342                      | (66.7)                                                         | (55.0)                                                                     | (55.0)                                                                                                                                                         | 48                                | *                                                                          | 30                                |
| Kwale                | 74.6                                                           | 72.4                                                                       | 72.4                                                                                                                                                           | 421                      | 83.4                                                                       | 365                      | (86.6)                                                         | (84.7)                                                                     | (84.7)                                                                                                                                                         | 47                                | (96.3)                                                                     | 41                                |
| Kilifi               | 70.9                                                           | 63.6                                                                       | 63.6                                                                                                                                                           | 759                      | 79.1                                                                       | 611                      | 68.7                                                           | 58.0                                                                       | 58.0                                                                                                                                                           | 74                                | (87.1)                                                                     | 50                                |
| Tana River           | 60.1                                                           | 57.4                                                                       | 57.6                                                                                                                                                           | 174                      | 78.3                                                                       | 128                      | 53.6                                                           | 47.6                                                                       | 47.6                                                                                                                                                           | 20                                | (63.6)                                                                     | 15                                |
| Lamu                 | 68.8                                                           | 57.7                                                                       | 57.7                                                                                                                                                           | 55                       | 81.0                                                                       | 39                       | (73.6)                                                         | (64.0)                                                                     | (64.0)                                                                                                                                                         | 5                                 | *                                                                          | 4                                 |
| Taita Taveta         | 83.2                                                           | 82.0                                                                       | 82.0                                                                                                                                                           | 120                      | 88.8                                                                       | 111                      | *                                                              | *                                                                          | *                                                                                                                                                              | 8                                 | *                                                                          | 7                                 |
| <b>North Eastern</b> | <b>43.8</b>                                                    | <b>40.2</b>                                                                | <b>40.3</b>                                                                                                                                                    | <b>664</b>               | <b>77.7</b>                                                                | <b>343</b>               | <b>43.4</b>                                                    | <b>43.1</b>                                                                | <b>43.4</b>                                                                                                                                                    | <b>78</b>                         | <b>82.4</b>                                                                | <b>41</b>                         |
| Garissa              | 52.5                                                           | 47.6                                                                       | 47.9                                                                                                                                                           | 239                      | 77.2                                                                       | 147                      | 51.7                                                           | 51.7                                                                       | 52.6                                                                                                                                                           | 31                                | (79.7)                                                                     | 20                                |
| Wajir                | 46.1                                                           | 42.8                                                                       | 42.8                                                                                                                                                           | 260                      | 76.1                                                                       | 146                      | 49.8                                                           | 49.4                                                                       | 49.4                                                                                                                                                           | 28                                | (88.1)                                                                     | 16                                |
| Mandera              | 27.5                                                           | 25.5                                                                       | 25.5                                                                                                                                                           | 165                      | 84.1                                                                       | 50                       | 20.6                                                           | 19.9                                                                       | 19.9                                                                                                                                                           | 19                                | *                                                                          | 5                                 |
| <b>Eastern</b>       | <b>55.7</b>                                                    | <b>53.1</b>                                                                | <b>53.2</b>                                                                                                                                                    | <b>2,464</b>             | <b>73.5</b>                                                                | <b>1,779</b>             | <b>52.3</b>                                                    | <b>49.8</b>                                                                | <b>49.8</b>                                                                                                                                                    | <b>204</b>                        | <b>72.3</b>                                                                | <b>141</b>                        |
| Marsabit             | 15.0                                                           | 12.1                                                                       | 12.1                                                                                                                                                           | 93                       | 43.7                                                                       | 26                       | 7.9                                                            | 7.9                                                                        | 7.9                                                                                                                                                            | 15                                | *                                                                          | 4                                 |
| Isiolo               | 60.6                                                           | 57.7                                                                       | 57.7                                                                                                                                                           | 83                       | 80.9                                                                       | 59                       | (62.9)                                                         | (56.4)                                                                     | (56.4)                                                                                                                                                         | 6                                 | (83.9)                                                                     | 4                                 |
| Meru                 | 64.3                                                           | 59.3                                                                       | 60.0                                                                                                                                                           | 541                      | 81.8                                                                       | 393                      | (54.4)                                                         | (49.0)                                                                     | (49.0)                                                                                                                                                         | 55                                | *                                                                          | 35                                |
| Tharaka-Nithi        | 65.4                                                           | 61.9                                                                       | 61.9                                                                                                                                                           | 155                      | 77.8                                                                       | 123                      | *                                                              | *                                                                          | *                                                                                                                                                              | 12                                | *                                                                          | 9                                 |
| Embu                 | 63.0                                                           | 58.5                                                                       | 58.5                                                                                                                                                           | 204                      | 72.3                                                                       | 165                      | *                                                              | *                                                                          | *                                                                                                                                                              | 21                                | *                                                                          | 17                                |
| Kitui                | 39.8                                                           | 39.6                                                                       | 39.6                                                                                                                                                           | 494                      | 54.2                                                                       | 361                      | (47.0)                                                         | (47.0)                                                                     | (47.0)                                                                                                                                                         | 32                                | *                                                                          | 27                                |
| Machakos             | 65.0                                                           | 62.9                                                                       | 62.9                                                                                                                                                           | 515                      | 85.0                                                                       | 381                      | *                                                              | *                                                                          | *                                                                                                                                                              | 35                                | *                                                                          | 25                                |
| Makueni              | 52.5                                                           | 50.8                                                                       | 50.8                                                                                                                                                           | 379                      | 70.9                                                                       | 272                      | (49.7)                                                         | (48.0)                                                                     | (48.0)                                                                                                                                                         | 27                                | *                                                                          | 19                                |
| <b>Central</b>       | <b>47.4</b>                                                    | <b>43.0</b>                                                                | <b>43.0</b>                                                                                                                                                    | <b>1,792</b>             | <b>80.8</b>                                                                | <b>954</b>               | <b>38.7</b>                                                    | <b>34.7</b>                                                                | <b>34.7</b>                                                                                                                                                    | <b>188</b>                        | <b>73.0</b>                                                                | <b>89</b>                         |
| Nyandarua            | 14.8                                                           | 12.3                                                                       | 12.3                                                                                                                                                           | 259                      | 69.7                                                                       | 46                       | (9.7)                                                          | (6.7)                                                                      | (6.7)                                                                                                                                                          | 26                                | *                                                                          | 3                                 |
| Nyeri                | 24.1                                                           | 17.4                                                                       | 17.4                                                                                                                                                           | 268                      | 62.6                                                                       | 75                       | (23.0)                                                         | (14.3)                                                                     | (14.3)                                                                                                                                                         | 32                                | *                                                                          | 9                                 |
| Kirinyaga            | 81.1                                                           | 78.9                                                                       | 78.9                                                                                                                                                           | 196                      | 89.6                                                                       | 173                      | (63.4)                                                         | (63.4)                                                                     | (63.4)                                                                                                                                                         | 19                                | *                                                                          | 12                                |
| Murang'a             | 58.0                                                           | 57.0                                                                       | 57.0                                                                                                                                                           | 315                      | 81.3                                                                       | 221                      | (49.9)                                                         | (45.2)                                                                     | (45.2)                                                                                                                                                         | 32                                | *                                                                          | 25                                |
| Kiambu               | 53.6                                                           | 47.5                                                                       | 47.5                                                                                                                                                           | 755                      | 81.3                                                                       | 441                      | (44.5)                                                         | (41.2)                                                                     | (41.2)                                                                                                                                                         | 79                                | *                                                                          | 41                                |
| <b>Rift Valley</b>   | <b>45.7</b>                                                    | <b>43.0</b>                                                                | <b>43.6</b>                                                                                                                                                    | <b>5,713</b>             | <b>68.9</b>                                                                | <b>3,564</b>             | <b>42.1</b>                                                    | <b>40.4</b>                                                                | <b>41.0</b>                                                                                                                                                    | <b>562</b>                        | <b>67.6</b>                                                                | <b>336</b>                        |
| Turkana              | 21.0                                                           | 21.0                                                                       | 21.0                                                                                                                                                           | 372                      | 40.8                                                                       | 192                      | 20.3                                                           | 20.3                                                                       | 20.3                                                                                                                                                           | 34                                | *                                                                          | 11                                |
| West Pokot           | 43.4                                                           | 42.9                                                                       | 43.7                                                                                                                                                           | 306                      | 61.4                                                                       | 214                      | 31.5                                                           | 31.5                                                                       | 33.0                                                                                                                                                           | 28                                | (56.9)                                                                     | 16                                |
| Samburu              | 18.2                                                           | 16.6                                                                       | 16.9                                                                                                                                                           | 117                      | 86.1                                                                       | 23                       | 8.9                                                            | 6.7                                                                        | 6.7                                                                                                                                                            | 14                                | *                                                                          | 1                                 |
| Trans-Nzoia          | 60.2                                                           | 59.2                                                                       | 61.3                                                                                                                                                           | 570                      | 74.8                                                                       | 452                      | (55.7)                                                         | (55.7)                                                                     | (55.7)                                                                                                                                                         | 48                                | (67.8)                                                                     | 39                                |
| Uasin Gishu          | 69.8                                                           | 69.3                                                                       | 69.5                                                                                                                                                           | 498                      | 84.1                                                                       | 410                      | 51.5                                                           | 51.5                                                                       | 51.5                                                                                                                                                           | 67                                | (63.1)                                                                     | 54                                |
| Elgeyo Marakwet      | 39.1                                                           | 16.9                                                                       | 16.9                                                                                                                                                           | 179                      | 56.5                                                                       | 53                       | (48.0)                                                         | (25.5)                                                                     | (25.5)                                                                                                                                                         | 15                                | *                                                                          | 5                                 |
| Nandi                | 55.2                                                           | 55.0                                                                       | 55.5                                                                                                                                                           | 416                      | 67.1                                                                       | 341                      | (61.9)                                                         | (61.9)                                                                     | (66.1)                                                                                                                                                         | 31                                | (67.6)                                                                     | 28                                |
| Baringo              | 52.5                                                           | 49.1                                                                       | 49.9                                                                                                                                                           | 235                      | 69.2                                                                       | 167                      | 45.3                                                           | 44.1                                                                       | 45.9                                                                                                                                                           | 26                                | (58.7)                                                                     | 20                                |
| Laikipia             | 22.2                                                           | 13.6                                                                       | 13.6                                                                                                                                                           | 216                      | 78.7                                                                       | 37                       | (11.4)                                                         | (6.5)                                                                      | (6.5)                                                                                                                                                          | 27                                | *                                                                          | 2                                 |
| Nakuru               | 34.1                                                           | 30.7                                                                       | 31.1                                                                                                                                                           | 880                      | 74.6                                                                       | 363                      | (37.1)                                                         | (35.0)                                                                     | (35.0)                                                                                                                                                         | 86                                | *                                                                          | 36                                |
| Narok                | 31.5                                                           | 31.1                                                                       | 32.0                                                                                                                                                           | 640                      | 56.1                                                                       | 355                      | 32.1                                                           | 32.1                                                                       | 34.2                                                                                                                                                           | 67                                | (63.0)                                                                     | 34                                |
| Kajiado              | 47.7                                                           | 42.8                                                                       | 43.0                                                                                                                                                           | 447                      | 81.4                                                                       | 235                      | 47.4                                                           | 45.1                                                                       | 45.1                                                                                                                                                           | 51                                | (72.5)                                                                     | 32                                |
| Kericho              | 55.7                                                           | 53.1                                                                       | 54.3                                                                                                                                                           | 349                      | 61.4                                                                       | 302                      | (70.2)                                                         | (68.0)                                                                     | (68.0)                                                                                                                                                         | 30                                | (74.9)                                                                     | 27                                |
| Bomet                | 63.0                                                           | 60.0                                                                       | 60.8                                                                                                                                                           | 487                      | 69.7                                                                       | 419                      | (49.0)                                                         | (47.7)                                                                     | (47.7)                                                                                                                                                         | 38                                | (60.1)                                                                     | 30                                |
| <b>Western</b>       | <b>71.8</b>                                                    | <b>68.8</b>                                                                | <b>69.0</b>                                                                                                                                                    | <b>2,526</b>             | <b>78.9</b>                                                                | <b>2,203</b>             | <b>70.5</b>                                                    | <b>66.7</b>                                                                | <b>66.7</b>                                                                                                                                                    | <b>220</b>                        | <b>75.7</b>                                                                | <b>194</b>                        |
| Kakamega             | 66.0                                                           | 62.6                                                                       | 62.9                                                                                                                                                           | 860                      | 73.1                                                                       | 737                      | 71.1                                                           | 65.7                                                                       | 65.7                                                                                                                                                           | 83                                | (74.6)                                                                     | 73                                |
| Vihiga               | 72.5                                                           | 70.9                                                                       | 71.3                                                                                                                                                           | 263                      | 78.3                                                                       | 238                      | (73.0)                                                         | (73.0)                                                                     | (73.0)                                                                                                                                                         | 23                                | (77.1)                                                                     | 22                                |
| Bungoma              | 73.7                                                           | 71.5                                                                       | 71.5                                                                                                                                                           | 955                      | 82.0                                                                       | 832                      | 66.0                                                           | 62.4                                                                       | 62.4                                                                                                                                                           | 76                                | 73.6                                                                       | 64                                |
| Busia                | 78.4                                                           | 73.9                                                                       | 73.9                                                                                                                                                           | 448                      | 83.5                                                                       | 396                      | (76.9)                                                         | (73.5)                                                                     | (73.5)                                                                                                                                                         | 38                                | (81.2)                                                                     | 34                                |
| <b>Nyanza</b>        | <b>71.6</b>                                                    | <b>68.9</b>                                                                | <b>69.6</b>                                                                                                                                                    | <b>2,894</b>             | <b>80.7</b>                                                                | <b>2,470</b>             | <b>76.0</b>                                                    | <b>70.9</b>                                                                | <b>70.9</b>                                                                                                                                                    | <b>242</b>                        | <b>86.4</b>                                                                | <b>199</b>                        |
| Siaya                | 71.3                                                           | 67.8                                                                       | 68.1                                                                                                                                                           | 428                      | 77.1                                                                       | 376                      | (70.1)                                                         | (66.3)                                                                     | (66.3)                                                                                                                                                         | 34                                | (85.3)                                                                     | 26                                |
| Kisumu               | 82.2                                                           | 81.7                                                                       | 82.2                                                                                                                                                           | 529                      | 88.4                                                                       | 489                      | (89.3)                                                         | (89.3)                                                                     | (89.3)                                                                                                                                                         | 44                                | (94.9)                                                                     | 41                                |
| Homa Bay             | 63.9                                                           | 56.4                                                                       | 58.4                                                                                                                                                           | 658                      | 74.8                                                                       | 496                      | (77.1)                                                         | (66.1)                                                                     | (66.1)                                                                                                                                                         | 51                                | (87.6)                                                                     | 39                                |
| Migori               | 63.0                                                           | 62.2                                                                       | 62.6                                                                                                                                                           | 556                      | 74.4                                                                       | 464                      | 60.3                                                           | 56.0                                                                       | 56.0                                                                                                                                                           | 59                                | 68.6                                                                       | 48                                |
| Kisii                | 80.4                                                           | 79.5                                                                       | 79.5                                                                                                                                                           | 516                      | 88.5                                                                       | 464                      | (82.1)                                                         | (76.8)                                                                     | (76.8)                                                                                                                                                         | 43                                | (97.6)                                                                     | 34                                |
| Nyamira              | 70.5                                                           | 69.6                                                                       | 69.9                                                                                                                                                           | 207                      | 79.8                                                                       | 181                      | *                                                              | *                                                                          | *                                                                                                                                                              | 11                                | *                                                                          | 10                                |
| <b>Nairobi</b>       | <b>70.7</b>                                                    | <b>49.5</b>                                                                | <b>49.5</b>                                                                                                                                                    | <b>1,738</b>             | <b>85.8</b>                                                                | <b>1,003</b>             | <b>61.0</b>                                                    | <b>43.3</b>                                                                | <b>45.7</b>                                                                                                                                                    | <b>241</b>                        | <b>(78.8)</b>                                                              | <b>133</b>                        |
| Total                | 58.9                                                           | 54.1                                                                       | 54.4                                                                                                                                                           | 19,798                   | 76.9                                                                       | 13,913                   | 55.8                                                           | 50.5                                                                       | 51.0                                                                                                                                                           | 1,937                             | 76.5                                                                       | 1,278                             |

Note: Table is based on children who stayed in the household the night before the interview. Figures in parentheses are based on fewer than 25-49 unweighted cases; an asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

<sup>1</sup> 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 6 months.

<sup>2</sup> Indoor residual spraying (IRS) is limited to spraying conducted by a government, private, or non-governmental organisation.

### 3.7.2 Intermittent Preventive Treatment of Pregnant Women

The Government of Kenya's policy advocates for pregnant women in malaria endemic areas to receive two doses of intermittent preventive treatment (IPT) in the second and third trimesters in order to reduce the risk of malaria infection. To assess the coverage of this policy, women who had a live birth in the two years before the survey were asked if they had received treatment to prevent malaria during their pregnancy.

Tables 3.27 and 3.28 present the percentage of women age 15-49 with a live birth in the two years preceding the survey who received SP/Fansidar during their pregnancy, at least one dose of which was received during an ANC visit. Table 3.27 presents this data by background characteristics and Table 3.28 presents the data by county.

Nationally, 30 percent of women reported receiving one or more doses of SP/Fansidar, at least one of which was administered during an ANC visit; however, only 17 percent reported receiving two or more doses of SP/Fansidar. Ten percent of women reported receiving three or more doses of SP/Fansidar, at least one of which was received during an ANC visit.

Regionally, the highest percentages of women receiving one or more doses of SP/Fansidar were concentrated in the Coast (74 percent), Western (53 percent), and Nyanza (44 percent) regions which are malaria endemic zones. In other regions, less than one-quarter of women received one or more dose. This pattern is similar for women receiving two or more and three or more doses.

**Table 3.27 Use of intermittent preventive treatment (IPTp) by women during pregnancy by background characteristics**

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 <sup>1</sup> | Percentage who received 2 or more doses of SP/Fansidar <sup>1</sup> | Percentage who received 3 or more doses of SP/Fansidar <sup>1</sup> | Number of women with a live birth in the two years preceding the survey |
|---------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------|
| <b>Residence</b>          |                                                                     |                                                                     |                                                                     |                                                                         |
| Urban                     | 26.8                                                                | 14.1                                                                | 7.8                                                                 | 2,618                                                                   |
| Rural                     | 31.1                                                                | 18.4                                                                | 11.4                                                                | 4,739                                                                   |
| <b>Wealth quintile</b>    |                                                                     |                                                                     |                                                                     |                                                                         |
| Lowest                    | 33.3                                                                | 19.7                                                                | 11.5                                                                | 1,823                                                                   |
| Second                    | 29.4                                                                | 16.5                                                                | 10.1                                                                | 1,461                                                                   |
| Middle                    | 32.5                                                                | 20.5                                                                | 13.5                                                                | 1,332                                                                   |
| Fourth                    | 27.2                                                                | 13.9                                                                | 8.0                                                                 | 1,283                                                                   |
| Highest                   | 24.6                                                                | 13.0                                                                | 7.1                                                                 | 1,458                                                                   |
| Total                     | 29.6                                                                | 16.9                                                                | 10.1                                                                | 7,357                                                                   |

<sup>1</sup> Received the specified number of doses of SP/Fansidar, at least one of which was received during an ANC visit

Table 3.28 Use of intermittent preventive treatment (IPTp) by women during pregnancy by county

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

| County               | Percentage who received 1 or more doses of SP/Fansidar <sup>1</sup> | Percentage who received 2 or more doses of SP/Fansidar <sup>1</sup> | Percentage who received 3 or more doses of SP/Fansidar <sup>1</sup> | Number of women with a live birth in the two years preceding the survey |
|----------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------|
| <b>Coast</b>         | <b>73.7</b>                                                         | <b>52.5</b>                                                         | <b>32.7</b>                                                         | <b>793</b>                                                              |
| 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                                                                      |
| <b>North Eastern</b> | <b>5.2</b>                                                          | <b>2.1</b>                                                          | <b>1.1</b>                                                          | <b>228</b>                                                              |
| Garissa              | 2.7                                                                 | 1.0                                                                 | 0.8                                                                 | 86                                                                      |
| Wajir                | 4.4                                                                 | 2.0                                                                 | 0.5                                                                 | 93                                                                      |
| Mandera              | 11.3                                                                | 4.3                                                                 | 3.0                                                                 | 49                                                                      |
| <b>Eastern</b>       | <b>24.3</b>                                                         | <b>9.8</b>                                                          | <b>5.0</b>                                                          | <b>872</b>                                                              |
| Marsabit             | 1.5                                                                 | 1.2                                                                 | 0.6                                                                 | 35                                                                      |
| Isiolo               | 48.2                                                                | 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                                                                     |
| <b>Central</b>       | <b>16.4</b>                                                         | <b>4.5</b>                                                          | <b>2.4</b>                                                          | <b>682</b>                                                              |
| 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                                                                     |
| <b>Rift Valley</b>   | <b>14.6</b>                                                         | <b>6.9</b>                                                          | <b>4.5</b>                                                          | <b>2,167</b>                                                            |
| 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          | 11.0                                                                | 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                                                                     |
| <b>Western</b>       | <b>53.4</b>                                                         | <b>38.4</b>                                                         | <b>26.2</b>                                                         | <b>827</b>                                                              |
| 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                                                                     |
| <b>Nyanza</b>        | <b>43.5</b>                                                         | <b>21.8</b>                                                         | <b>9.7</b>                                                          | <b>1,035</b>                                                            |
| Siaya†               | 58.1                                                                | 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                                                                     |
| Kisii                | 25.5                                                                | 11.3                                                                | 3.7                                                                 | 193                                                                     |
| Nyamira              | 21.9                                                                | 18.1                                                                | 7.0                                                                 | 67                                                                      |
| <b>Nairobi</b>       | <b>6.3</b>                                                          | <b>1.3</b>                                                          | <b>0.8</b>                                                          | <b>753</b>                                                              |
| Total                | 29.6                                                                | 16.9                                                                | 10.1                                                                | 7,357                                                                   |

<sup>1</sup> Received the specified number of doses of SP/Fansidar, at least one of which was received during an ANC visit

† Counties in which IPTp is recommended in some or all sub-counties

### 3.7.3 Treatment of Children with Fever

Prompt and effective treatment for malaria is crucial to prevent the disease from becoming severe and complicated. Artemisinin combination therapy (ACT) is the recommended first line antimalarial treatment for uncomplicated malaria in Kenya. The 2014 KDHS asked mothers whether their children under age five had a fever in the two weeks preceding the survey and if so, what treatment was given. Table 3.29 shows treatment behaviours for children with fever in the two weeks preceding the survey by background characteristics; Table 3.30 shows this data by county.

**Table 3.29 Prevalence, diagnosis, and prompt treatment of children with fever by background characteristics**

Percentage of children under age five with fever in the two weeks preceding the survey; among children under age five with fever, percentage for whom advice or treatment was sought, percentage who had blood taken from a finger or heel, percentage who took any antimalarial, percentage who took any artemisinin-based combination therapy (ACT), and percentage who took any ACT the same or next day following the onset of fever; and among children under age five with fever who took any antimalarial drug, percentage who took any ACT, by background characteristics, Kenya 2014

| Background characteristic | Children under age five                                      |                    | Children under age five with fever                               |                                                                   |                                             |                              |                                               |                    | Children under age five with fever who took any antimalarial drug |                    |
|---------------------------|--------------------------------------------------------------|--------------------|------------------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------|------------------------------|-----------------------------------------------|--------------------|-------------------------------------------------------------------|--------------------|
|                           | Percent-age with fever in the two weeks preceding the survey | Number of children | Percent-age for whom advice or treatment was sought <sup>1</sup> | Percent-age who had blood taken from a finger or heel for testing | Percent-age who took any anti-malarial drug | Percent-age who took any ACT | Percent-age who took any ACT same or next day | Number of children | Percent-age who took any ACT                                      | Number of children |
| <b>Residence</b>          |                                                              |                    |                                                                  |                                                                   |                                             |                              |                                               |                    |                                                                   |                    |
| Urban                     | 21.7                                                         | 6,677              | 72.6                                                             | 38.6                                                              | 20.4                                        | 16.8                         | 9.3                                           | 1,447              | 82.0                                                              | 295                |
| Rural                     | 25.9                                                         | 12,025             | 71.4                                                             | 33.2                                                              | 30.0                                        | 26.1                         | 14.9                                          | 3,114              | 87.0                                                              | 934                |
| <b>Wealth quintile</b>    |                                                              |                    |                                                                  |                                                                   |                                             |                              |                                               |                    |                                                                   |                    |
| Lowest                    | 25.1                                                         | 4,457              | 68.2                                                             | 30.4                                                              | 23.1                                        | 19.3                         | 10.5                                          | 1,119              | 83.5                                                              | 259                |
| Second                    | 28.5                                                         | 3,803              | 72.7                                                             | 36.9                                                              | 36.3                                        | 32.0                         | 18.2                                          | 1,082              | 88.2                                                              | 393                |
| Middle                    | 26.1                                                         | 3,375              | 72.0                                                             | 31.7                                                              | 31.9                                        | 28.5                         | 17.0                                          | 881                | 89.2                                                              | 281                |
| Fourth                    | 24.0                                                         | 3,285              | 71.7                                                             | 34.0                                                              | 26.2                                        | 22.5                         | 11.9                                          | 788                | 85.8                                                              | 207                |
| Highest                   | 18.3                                                         | 3,782              | 75.7                                                             | 44.2                                                              | 13.2                                        | 9.4                          | 5.9                                           | 691                | 71.5                                                              | 91                 |
| <b>Total</b>              | <b>24.4</b>                                                  | <b>18,702</b>      | <b>71.7</b>                                                      | <b>34.9</b>                                                       | <b>27.0</b>                                 | <b>23.1</b>                  | <b>13.1</b>                                   | <b>4,562</b>       | <b>85.8</b>                                                       | <b>1,230</b>       |

<sup>1</sup> Excludes advice or treatment from a traditional practitioner, relatives/ friends, and other

In the two weeks preceding the survey, 24 percent of children under age five had a fever. Treatment or advice was sought for 72 percent of children with fever, while 35 percent had blood taken from a finger or heel for testing (considered a proxy for malaria test). Twenty-seven percent of children who had fever were given antimalarial drugs, and 23 percent were specifically given ACT. Only 13 percent of children with a fever took ACTs the same day or next day after fever onset, as recommended by the treatment guidelines. Among children under age five with fever who took any antimalarial drug, 86 percent took ACT. Children with a fever in rural areas were more likely to be treated for malaria (e.g. take any antimalarial, take ACT, take ACT the same or next day as fever onset) compared with those in urban areas.

Less than 10 percent of children under age five had a fever in the two weeks preceding the survey in Mandera, Nyamira, Garissa, and West Pokot counties while prevalence was more than 45 percent in Siaya, Homa Bay, Migori, and Vihiga counties. Children with a fever in Western and Nyanza regions were more likely to receive treatment for malaria than children in other regions.

Table 3.30 Prevalence, diagnosis, and prompt treatment of children with fever by county

Percentage of children under age five with fever in the two weeks preceding the survey; among children under age five with fever, percentage for whom advice or treatment was sought, percentage who had blood taken from a finger or heel, percentage who took any antimalarial, percentage who took any artemisinin-based combination therapy (ACT), and percentage who took any ACT the same or next day following the onset of fever; and among children under age five with fever who took any antimalarial drug, percentage who took any ACT, by county, Kenya 2014

| County               | Children under age five                                      |                    | Children under age five with fever                               |                                                                   |                                             |                              |                                               |                    | Children under age five with fever who took any antimalarial drug |                    |
|----------------------|--------------------------------------------------------------|--------------------|------------------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------|------------------------------|-----------------------------------------------|--------------------|-------------------------------------------------------------------|--------------------|
|                      | Percent-age with fever in the two weeks preceding the survey | Number of children | Percent-age for whom advice or treatment was sought <sup>1</sup> | Percent-age who had blood taken from a finger or heel for testing | Percent-age who took any anti-malarial drug | Percent-age who took any ACT | Percent-age who took any ACT same or next day | Number of children | Percent-age who took any ACT                                      | Number of children |
| <b>Coast</b>         | <b>27.2</b>                                                  | <b>1,936</b>       | <b>78.0</b>                                                      | <b>34.9</b>                                                       | <b>11.9</b>                                 | <b>10.2</b>                  | <b>3.6</b>                                    | <b>526</b>         | <b>85.3</b>                                                       | <b>63</b>          |
| Mombasa              | 22.5                                                         | 493                | 91.1                                                             | 46.7                                                              | 14.9                                        | 13.5                         | 3.0                                           | 111                | *                                                                 | 17                 |
| Kwale                | 25.7                                                         | 408                | 69.5                                                             | 42.8                                                              | 33.2                                        | 30.0                         | 11.8                                          | 105                | (90.5)                                                            | 35                 |
| Kilifi               | 31.3                                                         | 705                | 78.6                                                             | 31.0                                                              | 2.1                                         | 1.0                          | 0.0                                           | 221                | *                                                                 | 5                  |
| Tana River           | 26.8                                                         | 166                | 81.1                                                             | 22.6                                                              | 12.3                                        | 9.5                          | 5.8                                           | 45                 | *                                                                 | 5                  |
| Lamu                 | 22.2                                                         | 52                 | 61.5                                                             | 11.8                                                              | 5.7                                         | 1.2                          | 0.0                                           | 12                 | *                                                                 | 1                  |
| Taita Taveta         | 29.5                                                         | 110                | 58.6                                                             | 21.7                                                              | 1.3                                         | 1.3                          | 1.3                                           | 33                 | *                                                                 | 0                  |
| <b>North Eastern</b> | <b>8.7</b>                                                   | <b>625</b>         | <b>59.3</b>                                                      | <b>31.4</b>                                                       | <b>7.3</b>                                  | <b>5.0</b>                   | <b>3.9</b>                                    | <b>54</b>          | <b>*</b>                                                          | <b>4</b>           |
| Garissa              | 7.0                                                          | 223                | (44.0)                                                           | (52.4)                                                            | (5.6)                                       | (5.6)                        | (5.6)                                         | 16                 | *                                                                 | 1                  |
| Wajir                | 12.5                                                         | 252                | 65.3                                                             | 19.9                                                              | 4.3                                         | 0.4                          | 0.0                                           | 31                 | *                                                                 | 1                  |
| Mandera              | 4.8                                                          | 150                | *                                                                | *                                                                 | *                                           | *                            | *                                             | 7                  | *                                                                 | 2                  |
| <b>Eastern</b>       | <b>18.2</b>                                                  | <b>2,235</b>       | <b>76.6</b>                                                      | <b>33.2</b>                                                       | <b>18.1</b>                                 | <b>11.9</b>                  | <b>6.4</b>                                    | <b>406</b>         | <b>65.8</b>                                                       | <b>73</b>          |
| Marsabit             | 19.3                                                         | 88                 | 63.1                                                             | 22.3                                                              | 10.6                                        | 10.1                         | 1.8                                           | 17                 | *                                                                 | 2                  |
| Isiolo               | 13.2                                                         | 81                 | 78.7                                                             | 60.7                                                              | 51.1                                        | 43.4                         | 43.4                                          | 11                 | (84.9)                                                            | 5                  |
| Meru                 | 26.0                                                         | 490                | 73.3                                                             | 54.0                                                              | 23.1                                        | 14.9                         | 7.8                                           | 128                | *                                                                 | 29                 |
| Tharaka-Nithi        | 28.1                                                         | 137                | 78.9                                                             | 41.9                                                              | 27.2                                        | 9.8                          | 6.3                                           | 39                 | *                                                                 | 11                 |
| Embu                 | 13.8                                                         | 194                | (72.4)                                                           | (38.4)                                                            | (21.7)                                      | (21.7)                       | (10.9)                                        | 27                 | *                                                                 | 6                  |
| Kitui                | 17.0                                                         | 424                | 72.1                                                             | 9.1                                                               | 7.4                                         | 3.5                          | 2.5                                           | 72                 | *                                                                 | 5                  |
| Machakos             | 13.6                                                         | 474                | (81.6)                                                           | (18.4)                                                            | (12.8)                                      | (10.8)                       | (6.2)                                         | 64                 | *                                                                 | 8                  |
| Makueni              | 14.1                                                         | 346                | 89.7                                                             | 21.7                                                              | 13.7                                        | 7.8                          | 0.0                                           | 49                 | *                                                                 | 7                  |
| <b>Central</b>       | <b>17.9</b>                                                  | <b>1,725</b>       | <b>71.5</b>                                                      | <b>24.7</b>                                                       | <b>4.8</b>                                  | <b>3.7</b>                   | <b>3.0</b>                                    | <b>308</b>         | <b>*</b>                                                          | <b>15</b>          |
| Nyandarua            | 17.2                                                         | 232                | 70.8                                                             | 22.6                                                              | 6.7                                         | 5.3                          | 2.8                                           | 40                 | *                                                                 | 3                  |
| Nyeri                | 14.1                                                         | 240                | (67.2)                                                           | (17.5)                                                            | (0.0)                                       | (0.0)                        | (0.0)                                         | 34                 | *                                                                 | 0                  |
| Kirinyaga            | 21.2                                                         | 188                | (82.4)                                                           | (28.6)                                                            | (18.6)                                      | (18.6)                       | (16.2)                                        | 40                 | *                                                                 | 7                  |
| Murang'a             | 17.7                                                         | 293                | (85.1)                                                           | (3.7)                                                             | (0.0)                                       | (0.0)                        | (0.0)                                         | 52                 | *                                                                 | 0                  |
| Kiambu               | 18.5                                                         | 772                | 64.8                                                             | 33.6                                                              | 3.2                                         | 1.2                          | 1.2                                           | 143                | *                                                                 | 5                  |
| <b>Rift Valley</b>   | <b>20.9</b>                                                  | <b>5,457</b>       | <b>68.7</b>                                                      | <b>25.6</b>                                                       | <b>13.3</b>                                 | <b>9.8</b>                   | <b>5.4</b>                                    | <b>1,139</b>       | <b>73.6</b>                                                       | <b>151</b>         |
| Turkana              | 11.4                                                         | 333                | 63.4                                                             | 49.5                                                              | 29.9                                        | 21.7                         | 18.5                                          | 38                 | *                                                                 | 11                 |
| West Pokot           | 9.4                                                          | 294                | 80.4                                                             | 20.6                                                              | 32.2                                        | 16.1                         | 16.1                                          | 28                 | *                                                                 | 9                  |
| Samburu              | 19.1                                                         | 114                | 54.5                                                             | 16.6                                                              | 6.8                                         | 5.0                          | 2.5                                           | 22                 | *                                                                 | 1                  |
| Trans-Nzoia          | 21.9                                                         | 516                | 65.9                                                             | 45.2                                                              | 12.4                                        | 10.9                         | 4.1                                           | 113                | *                                                                 | 14                 |
| Uasin Gishu          | 19.3                                                         | 463                | 62.8                                                             | 17.0                                                              | 5.8                                         | 4.7                          | 1.8                                           | 89                 | *                                                                 | 5                  |
| Elgeyo Marakwet      | 29.7                                                         | 164                | 67.1                                                             | 13.5                                                              | 2.0                                         | 1.5                          | 1.5                                           | 49                 | *                                                                 | 1                  |
| Nandi                | 19.7                                                         | 388                | 52.8                                                             | 12.2                                                              | 8.8                                         | 8.8                          | 5.3                                           | 76                 | *                                                                 | 7                  |
| Baringo              | 22.9                                                         | 230                | 71.6                                                             | 39.1                                                              | 27.7                                        | 22.9                         | 11.4                                          | 53                 | (82.8)                                                            | 15                 |
| Laikipia             | 21.6                                                         | 206                | 74.9                                                             | 26.0                                                              | 16.8                                        | 6.2                          | 6.2                                           | 44                 | *                                                                 | 7                  |
| Nakuru               | 15.5                                                         | 849                | 67.9                                                             | 27.6                                                              | 11.6                                        | 11.0                         | 6.8                                           | 132                | *                                                                 | 15                 |
| Narok                | 30.7                                                         | 614                | 78.0                                                             | 20.4                                                              | 13.3                                        | 9.7                          | 3.6                                           | 188                | (73.0)                                                            | 25                 |
| Kajiado              | 25.7                                                         | 452                | 64.7                                                             | 21.8                                                              | 1.4                                         | 0.0                          | 0.0                                           | 116                | *                                                                 | 2                  |
| Kericho              | 25.6                                                         | 359                | 70.7                                                             | 37.9                                                              | 19.4                                        | 14.4                         | 6.9                                           | 92                 | *                                                                 | 18                 |
| Bomet                | 20.8                                                         | 475                | 73.9                                                             | 14.9                                                              | 21.0                                        | 12.9                         | 8.1                                           | 99                 | *                                                                 | 21                 |
| <b>Western</b>       | <b>36.1</b>                                                  | <b>2,166</b>       | <b>67.5</b>                                                      | <b>37.9</b>                                                       | <b>51.8</b>                                 | <b>49.5</b>                  | <b>28.3</b>                                   | <b>782</b>         | <b>95.5</b>                                                       | <b>405</b>         |
| Kakamega             | 28.9                                                         | 721                | 56.0                                                             | 34.9                                                              | 38.7                                        | 38.4                         | 19.6                                          | 209                | 99.3                                                              | 81                 |
| Vihiga               | 49.2                                                         | 215                | 69.1                                                             | 34.4                                                              | 40.7                                        | 39.5                         | 18.0                                          | 106                | 97.0                                                              | 43                 |
| Bungoma              | 35.8                                                         | 842                | 74.6                                                             | 41.6                                                              | 58.7                                        | 55.1                         | 33.5                                          | 302                | 93.8                                                              | 177                |
| Busia                | 42.7                                                         | 388                | 67.9                                                             | 37.2                                                              | 62.9                                        | 59.6                         | 36.5                                          | 166                | 94.6                                                              | 104                |
| <b>Nyanza</b>        | <b>37.4</b>                                                  | <b>2,638</b>       | <b>75.6</b>                                                      | <b>46.9</b>                                                       | <b>48.7</b>                                 | <b>42.2</b>                  | <b>24.9</b>                                   | <b>987</b>         | <b>86.7</b>                                                       | <b>481</b>         |
| Siaya                | 44.9                                                         | 378                | 80.7                                                             | 61.1                                                              | 59.4                                        | 59.2                         | 38.4                                          | 170                | 99.7                                                              | 101                |
| Kisumu               | 30.9                                                         | 478                | 74.9                                                             | 48.8                                                              | 46.0                                        | 39.5                         | 18.8                                          | 148                | 85.7                                                              | 68                 |
| Homa Bay             | 45.6                                                         | 616                | 67.5                                                             | 50.7                                                              | 51.7                                        | 46.5                         | 29.9                                          | 281                | 89.9                                                              | 145                |
| Migori               | 48.2                                                         | 516                | 80.4                                                             | 42.6                                                              | 42.4                                        | 37.2                         | 21.0                                          | 249                | 87.8                                                              | 105                |
| Kisii                | 28.1                                                         | 463                | 80.2                                                             | 27.1                                                              | 46.9                                        | 27.2                         | 13.4                                          | 130                | 57.9                                                              | 61                 |
| Nyamira              | 5.7                                                          | 187                | *                                                                | *                                                                 | *                                           | *                            | *                                             | 11                 | *                                                                 | 1                  |
| <b>Nairobi</b>       | <b>18.7</b>                                                  | <b>1,920</b>       | <b>67.4</b>                                                      | <b>36.0</b>                                                       | <b>10.6</b>                                 | <b>6.9</b>                   | <b>3.8</b>                                    | <b>359</b>         | <b>*</b>                                                          | <b>38</b>          |
| Total                | 24.4                                                         | 18,702             | 71.7                                                             | 34.9                                                              | 27.0                                        | 23.1                         | 13.1                                          | 4,562              | 85.8                                                              | 1,230              |

Note: Figures in parentheses are based on fewer than 25-49 unweighted cases; an asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

<sup>1</sup> Excludes advice or treatment from a traditional practitioner, relatives/ friends, and other.

## 3.8 HIV

### 3.8.1 Knowledge of HIV Prevention Methods

Knowledge of ways to reduce HIV transmission is important in the fight against HIV/AIDS. HIV prevention programmes focus their messages and efforts on several important aspects of behaviour to avoid the spread of HIV, including: using condoms, limiting the number of sexual partners, and staying faithful to one partner. To ascertain the depth of knowledge about modes of HIV prevention, respondents were prompted with questions about these specific behaviours.

Knowledge of HIV prevention methods among women and men age 15-49 is presented in Table 3.31 by background characteristics and in Table 3.32 by county. The results show knowledge is generally widespread in the country; about 80 percent of women and 88 percent of men know that HIV can be prevented by using condoms during sexual intercourse. Ninety-two percent of women and 94 percent of men say that limiting sexual intercourse to one uninfected partner can reduce the chances of getting HIV. Similarly, 77 percent of women and 85 percent of men cited both these methods of HIV prevention.

**Table 3.31 Knowledge of HIV prevention methods by background characteristics**

Percentage of women and men age 15-49 who, in response to prompted questions, say that people can reduce the risk of getting HIV 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

| Background characteristic  | Percentage of women who say HIV can be prevented by: |                                                                    |                                                                                        |                 | Percentage of men who say HIV can be prevented by: |                                                                    |                                                                                        |               |
|----------------------------|------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------|-----------------|----------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------|---------------|
|                            | Using condoms <sup>1</sup>                           | Limiting sexual intercourse to one uninfected partner <sup>2</sup> | Using condoms and limiting sexual intercourse to one uninfected partner <sup>1,2</sup> | Number of women | Using condoms <sup>1</sup>                         | Limiting sexual intercourse to one uninfected partner <sup>2</sup> | Using condoms and limiting sexual intercourse to one uninfected partner <sup>1,2</sup> | Number of men |
| <b>Age</b>                 |                                                      |                                                                    |                                                                                        |                 |                                                    |                                                                    |                                                                                        |               |
| 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         |
| <b>Marital status</b>      |                                                      |                                                                    |                                                                                        |                 |                                                    |                                                                    |                                                                                        |               |
| 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                                                                                   | 3,515         |
| Never had sex              | 69.3                                                 | 85.6                                                               | 63.8                                                                                   | 4,456           | 77.8                                               | 88.1                                                               | 72.8                                                                                   | 1,834         |
| Married or 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           |
| <b>Residence</b>           |                                                      |                                                                    |                                                                                        |                 |                                                    |                                                                    |                                                                                        |               |
| 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         |
| <b>Education</b>           |                                                      |                                                                    |                                                                                        |                 |                                                    |                                                                    |                                                                                        |               |
| 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         |
| <b>Wealth quintile</b>     |                                                      |                                                                    |                                                                                        |                 |                                                    |                                                                    |                                                                                        |               |
| 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        |
| Men 50-54                  | na                                                   | na                                                                 | na                                                                                     | 0               | 84.6                                               | 94.9                                                               | 82.4                                                                                   | 756           |
| Total 15-54                | na                                                   | na                                                                 | na                                                                                     | 0               | 87.5                                               | 94.3                                                               | 84.6                                                                                   | 12,819        |

na = Not applicable

<sup>1</sup> Using condoms every time they have sexual intercourse

<sup>2</sup> Partner who has no other partners

Table 3.32 Knowledge of HIV prevention methods by county

Percentage of women and men age 15-49 who, in response to prompted questions, say that people can reduce the risk of getting HIV 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

| County               | Percentage of women who say HIV can be prevented by: |                                                                    |                                                                                      |                 | Percentage of men who say HIV can be prevented by: |                                                                    |                                                                                      |               |
|----------------------|------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------|----------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------|
|                      | Using condoms <sup>1</sup>                           | Limiting sexual intercourse to one uninfected partner <sup>2</sup> | Using condoms and limiting sexual intercourse to one uninfected partner <sup>2</sup> | Number of women | Using condoms <sup>1</sup>                         | Limiting sexual intercourse to one uninfected partner <sup>2</sup> | Using condoms and limiting sexual intercourse to one uninfected partner <sup>2</sup> | Number of men |
| <b>Coast</b>         | <b>75.3</b>                                          | <b>87.5</b>                                                        | <b>71.9</b>                                                                          | <b>3,076</b>    | <b>78.0</b>                                        | <b>89.6</b>                                                        | <b>73.7</b>                                                                          | <b>1,260</b>  |
| 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            |
| <b>North Eastern</b> | <b>27.1</b>                                          | <b>55.6</b>                                                        | <b>21.0</b>                                                                          | <b>648</b>      | <b>57.0</b>                                        | <b>68.1</b>                                                        | <b>47.6</b>                                                                          | <b>227</b>    |
| 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            |
| <b>Eastern</b>       | <b>73.5</b>                                          | <b>94.3</b>                                                        | <b>71.3</b>                                                                          | <b>4,375</b>    | <b>85.7</b>                                        | <b>95.4</b>                                                        | <b>83.2</b>                                                                          | <b>1,825</b>  |
| 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           |
| <b>Central</b>       | <b>77.8</b>                                          | <b>89.6</b>                                                        | <b>74.1</b>                                                                          | <b>3,994</b>    | <b>89.7</b>                                        | <b>96.6</b>                                                        | <b>87.6</b>                                                                          | <b>1,564</b>  |
| 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           |
| <b>Rift Valley</b>   | <b>80.4</b>                                          | <b>92.9</b>                                                        | <b>77.7</b>                                                                          | <b>7,953</b>    | <b>87.3</b>                                        | <b>93.5</b>                                                        | <b>84.5</b>                                                                          | <b>3,050</b>  |
| 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           |
| <b>Western</b>       | <b>85.9</b>                                          | <b>91.4</b>                                                        | <b>81.2</b>                                                                          | <b>3,225</b>    | <b>89.9</b>                                        | <b>95.4</b>                                                        | <b>86.9</b>                                                                          | <b>1,164</b>  |
| 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           |
| <b>Nyanza</b>        | <b>87.9</b>                                          | <b>94.4</b>                                                        | <b>84.9</b>                                                                          | <b>4,038</b>    | <b>94.4</b>                                        | <b>97.1</b>                                                        | <b>92.7</b>                                                                          | <b>1,405</b>  |
| 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           |
| <b>Nairobi</b>       | <b>86.8</b>                                          | <b>94.7</b>                                                        | <b>83.5</b>                                                                          | <b>3,770</b>    | <b>93.1</b>                                        | <b>95.9</b>                                                        | <b>89.9</b>                                                                          | <b>1,568</b>  |
| Total 15-49          | 79.8                                                 | 91.6                                                               | 76.6                                                                                 | 31,079          | 87.6                                               | 94.2                                                               | 84.8                                                                                 | 12,063        |
| Men 50-54            | na                                                   | na                                                                 | na                                                                                   | 0               | 84.6                                               | 94.9                                                               | 82.4                                                                                 | 756           |
| Total 15-54          | na                                                   | na                                                                 | na                                                                                   | 0               | 87.5                                               | 94.3                                                               | 84.6                                                                                 | 12,819        |

na = Not applicable

<sup>1</sup> Using condoms every time they have sexual intercourse

<sup>2</sup> Partner who has no other partners

Women and men age 15-19 have lower levels of knowledge of these HIV prevention methods than people age 20 and older. Similarly, knowledge of prevention methods is lower among women and men who have never had sex than among those who are married or living together with a partner, those who are divorced/separated/widowed, or those who never married but have had sex. Urban residents were more knowledgeable on each of the described methods of HIV prevention than their rural counterparts. As expected, women and men with higher levels of education are more likely than those with lower levels of education to be aware of HIV prevention methods. Similarly, women and men in households in higher wealth quintiles have more knowledge of HIV prevention methods than those in lower quintiles.

As shown in Table 3.32, knowledge varies across the counties and between women and men. Women in Garissa, Wajir, and Mandera counties are less knowledgeable of methods of HIV prevention compared with women from other counties. Men's knowledge in Garissa and Mandera is also lower than in other counties. Low levels of knowledge were also found among women and men in Turkana and in Kwale, men in Kilifi, and women in Kitui.

### 3.8.2 Knowledge of HIV Prevention among Young People

Table 3.33 shows knowledge of HIV prevention among young people age 15-24. About one-half of young people in Kenya are knowledgeable about methods of HIV prevention; 54 percent among women and 64 percent among men. Knowledge of prevention methods is slightly lower among those who have never had sex than among those who have married or those who never married but have had sex.

Like the 2008-09 KDHS, the results indicate that young people (both women and men) residing in urban areas are more knowledgeable than their rural counterparts about HIV prevention. Education and household wealth are strongly related to young people's knowledge. The level of awareness by region generally shows that young women and men in North Eastern region are the least knowledgeable about HIV prevention.

| Table 3.33 Knowledge of HIV prevention among young people                                                                     |                                                          |                 |                                                          |               |
|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------|----------------------------------------------------------|---------------|
| Percentage of young women and young men age 15-24 with knowledge of HIV prevention, by background characteristics, Kenya 2014 |                                                          |                 |                                                          |               |
| Background characteristic                                                                                                     | Women age 15-24                                          |                 | Men age 15-24                                            |               |
|                                                                                                                               | Percentage with knowledge of HIV prevention <sup>1</sup> | Number of women | Percentage with knowledge of HIV prevention <sup>1</sup> | Number of men |
| <b>Age</b>                                                                                                                    |                                                          |                 |                                                          |               |
| 15-19                                                                                                                         | 49.0                                                     | 5,820           | 57.7                                                     | 2,540         |
| 15-17                                                                                                                         | 46.5                                                     | 3,510           | 52.5                                                     | 1,531         |
| 18-19                                                                                                                         | 52.7                                                     | 2,310           | 65.6                                                     | 1,009         |
| 20-24                                                                                                                         | 59.6                                                     | 5,735           | 70.9                                                     | 2,125         |
| 20-22                                                                                                                         | 59.6                                                     | 3,529           | 70.8                                                     | 1,365         |
| 23-24                                                                                                                         | 59.5                                                     | 2,206           | 71.2                                                     | 760           |
| <b>Marital status</b>                                                                                                         |                                                          |                 |                                                          |               |
| Never married                                                                                                                 | 53.8                                                     | 7,277           | 63.6                                                     | 4,214         |
| Ever had sex                                                                                                                  | 62.2                                                     | 3,006           | 69.7                                                     | 2,460         |
| Never had sex                                                                                                                 | 47.9                                                     | 4,271           | 55.0                                                     | 1,754         |
| Ever married                                                                                                                  | 54.9                                                     | 4,278           | 65.2                                                     | 452           |
| <b>Residence</b>                                                                                                              |                                                          |                 |                                                          |               |
| Urban                                                                                                                         | 60.5                                                     | 4,628           | 68.1                                                     | 1,751         |
| Rural                                                                                                                         | 50.0                                                     | 6,927           | 61.1                                                     | 2,915         |
| <b>Region</b>                                                                                                                 |                                                          |                 |                                                          |               |
| Coast                                                                                                                         | 51.1                                                     | 1,179           | 50.3                                                     | 493           |
| North Eastern                                                                                                                 | 14.6                                                     | 241             | 25.3                                                     | 108           |
| Eastern                                                                                                                       | 43.1                                                     | 1,527           | 64.1                                                     | 724           |
| Central                                                                                                                       | 51.8                                                     | 1,248           | 71.0                                                     | 549           |
| Rift Valley                                                                                                                   | 55.6                                                     | 3,091           | 61.9                                                     | 1,171         |
| Western                                                                                                                       | 56.8                                                     | 1,343           | 65.5                                                     | 533           |
| Nyanza                                                                                                                        | 63.2                                                     | 1,577           | 70.6                                                     | 601           |
| Nairobi                                                                                                                       | 62.6                                                     | 1,349           | 70.9                                                     | 485           |

Continued...

Table 3.33—Continued

| Background characteristic | Women age 15-24                                          |                 | Men age 15-24                                            |               |
|---------------------------|----------------------------------------------------------|-----------------|----------------------------------------------------------|---------------|
|                           | Percentage with knowledge of HIV prevention <sup>1</sup> | Number of women | Percentage with knowledge of HIV prevention <sup>1</sup> | Number of men |
| <b>Education</b>          |                                                          |                 |                                                          |               |
| No education              | 13.6                                                     | 434             | 22.6                                                     | 67            |
| Primary incomplete        | 40.0                                                     | 3,117           | 45.1                                                     | 1,395         |
| Primary complete          | 54.1                                                     | 2,154           | 59.2                                                     | 738           |
| Secondary+                | 64.9                                                     | 5,849           | 76.7                                                     | 2,466         |
| <b>Wealth quintile</b>    |                                                          |                 |                                                          |               |
| Lowest                    | 34.9                                                     | 1,849           | 42.5                                                     | 718           |
| Second                    | 50.0                                                     | 2,193           | 60.0                                                     | 902           |
| Middle                    | 57.4                                                     | 2,329           | 65.9                                                     | 1,033         |
| Fourth                    | 60.1                                                     | 2,402           | 69.9                                                     | 1,124         |
| Highest                   | 62.7                                                     | 2,780           | 74.3                                                     | 890           |
| Total 15-24               | 54.2                                                     | 11,555          | 63.7                                                     | 4,666         |

<sup>1</sup> Knowledge of HIV prevention means knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting HIV, knowing that a healthy-looking person can have HIV, and rejecting the two most common local misconceptions about transmission or prevention of HIV.

### 3.8.3 Multiple Sexual Partners

Having multiple sexual partners and having unprotected sex increases one's chances of both contracting and transmitting HIV. The percentages of women and men age 15-49 who had two or more sexual partners in the last year and who used a condom at last sex, and the mean number of partners are presented in Table 3.34 (women) and Table 3.35 (men).

More men than women report having two or more sexual partners (13 percent and 1 percent, respectively). Among men, this is a small increase from the 2008-09 KDHS where 9 percent of men reported having two or more sexual partners while among women, there was no notable change. Having two or more partners is more common among divorced, separated, or widowed women and men (3 percent and 19 percent, respectively) compared with married women and men (1 percent and 13 percent, respectively). Having multiple partners is slightly more common in urban settings, and residents in Nairobi reported the highest percentage of multiple partners at 4 percent for women and 19 percent for men.

Among those reporting two or more sexual partners in the past 12 months, condom use at last sex was 40 percent for women and 43 percent for men. Men age 20-24 were more likely to report condom use (70 percent) than men in other age groups. Condom use during last sex among those with two or more partners in the last 12 months was lowest among married women and men (13 percent and 20 percent, respectively), and highest among urban women and men (both 47 percent).

The mean number of lifetime sexual partners among women and men is also presented in Tables 3.34 and 3.35. Women reported fewer lifetime sexual partners than men (2.1 and 7.2, respectively). The mean remained the same among women between the 2008-09 KDHS and 2014 KDHS, while the change was minimal for men (from 6.7 to 7.2). Women and men's mean number of sex partners increases with age; the increase is notable among men who have a mean of 2.8 partners at age 15-19 and a mean of 9.8 at age 40-49. Divorced, separated, or widowed women and men have a higher mean than their married and never-married counterparts. The mean number of sexual partners does not differ substantially across education or wealth quintile.

Table 3.34 Multiple sexual partners in the past 12 months: Women

Among all women age 15-49, percentage who had sexual intercourse with two or more sexual partners in the past 12 months; among those having two or more partners in the past 12 months, percentage reporting that a condom was used at last intercourse; and mean number of sexual partners during their lifetime for women who ever had sexual intercourse, by background characteristics, Kenya 2014

| Background characteristic  | All women                                            |                 | Women who had 2+ partners in the past 12 months                       |                 | Women who ever had sexual intercourse <sup>1</sup> |                 |
|----------------------------|------------------------------------------------------|-----------------|-----------------------------------------------------------------------|-----------------|----------------------------------------------------|-----------------|
|                            | 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 |
| <b>Age</b>                 |                                                      |                 |                                                                       |                 |                                                    |                 |
| 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           |
| <b>Marital status</b>      |                                                      |                 |                                                                       |                 |                                                    |                 |
| Never married              | 1.4                                                  | 4,255           | 65.6                                                                  | 60              | 2.0                                                | 2,124           |
| Married/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           |
| <b>Residence</b>           |                                                      |                 |                                                                       |                 |                                                    |                 |
| Urban                      | 2.1                                                  | 5,929           | 47.4                                                                  | 122             | 2.2                                                | 5,180           |
| Rural                      | 1.0                                                  | 8,696           | 29.6                                                                  | 84              | 2.1                                                | 7,238           |
| <b>Region</b>              |                                                      |                 |                                                                       |                 |                                                    |                 |
| 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           |
| <b>Education</b>           |                                                      |                 |                                                                       |                 |                                                    |                 |
| 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           |
| <b>Wealth quintile</b>     |                                                      |                 |                                                                       |                 |                                                    |                 |
| 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           |
| <b>Total</b>               | <b>1.4</b>                                           | <b>14,625</b>   | <b>40.1</b>                                                           | <b>205</b>      | <b>2.1</b>                                         | <b>12,418</b>   |

Note: Figures in parentheses are based on fewer than 25-49 unweighted cases; an asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

<sup>1</sup> Means are calculated excluding respondents who gave non-numeric responses.

Table 3.35 Multiple sexual partners in the past 12 months: Men

Among all men age 15-49, percentage who had sexual intercourse with two or more sexual partners in the past 12 months; among those having two or more partners in the past 12 months, percentage reporting that a condom was used at last intercourse; and mean number of sexual partners during their lifetime for men who ever had sexual intercourse, by background characteristics, Kenya 2014

| Background characteristic  | All men                                              |               | Men who had 2+ partners in the past 12 months                         |               | Men who ever had sexual intercourse <sup>1</sup> |               |
|----------------------------|------------------------------------------------------|---------------|-----------------------------------------------------------------------|---------------|--------------------------------------------------|---------------|
|                            | 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 |
| <b>Age</b>                 |                                                      |               |                                                                       |               |                                                  |               |
| 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         |
| <b>Marital status</b>      |                                                      |               |                                                                       |               |                                                  |               |
| Never married              | 11.3                                                 | 5,350         | 72.4                                                                  | 605           | 4.6                                              | 3,498         |
| Married/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           |
| <b>Residence</b>           |                                                      |               |                                                                       |               |                                                  |               |
| Urban                      | 14.4                                                 | 5,300         | 46.6                                                                  | 761           | 7.6                                              | 4,666         |
| Rural                      | 11.4                                                 | 6,762         | 42.3                                                                  | 771           | 6.2                                              | 5,398         |
| <b>Region</b>              |                                                      |               |                                                                       |               |                                                  |               |
| 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         |
| <b>Education</b>           |                                                      |               |                                                                       |               |                                                  |               |
| 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         |
| <b>Wealth quintile</b>     |                                                      |               |                                                                       |               |                                                  |               |
| 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        |
| Men 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.

<sup>1</sup> Means are calculated excluding respondents who gave non-numeric responses.

### 3.8.4 Coverage of Prior HIV Testing

Knowledge of HIV status helps HIV-negative individuals make specific decisions to reduce their risk and increase safe sex practices so they can remain disease free. For those who are HIV infected, knowledge of their status allows them to take action to protect their sexual partners, to access treatment, and to plan for the future. Tables 3.36 through 3.39 present coverage of prior HIV testing for women and men by background characteristics and by county.

Table 3.36 shows that 91 percent of women age 15-49 know where to get an HIV test, and 83 percent of women have been tested for HIV and have received the test results. In the 12 months preceding the survey, 53 percent of women were tested for HIV and received the results. Women age 15-19, those who have never had sex, those living in rural areas, those with no education, and those in the lowest wealth quintile are least likely to have ever had an HIV test.

Table 3.36 Coverage of prior HIV testing by background characteristics: 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, percentage ever tested, and percentage 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 <sup>1</sup> |       |                        |                                                                                                         |                 |
| <b>Age</b>                 |                                              |                                                                                                           |                                      |                           |       |                        |                                                                                                         |                 |
| 15-24                      | 82.7                                         | 70.4                                                                                                      | 0.6                                  | 29.0                      | 100.0 | 72.3                   | 49.5                                                                                                    | 11,555          |
| 15-19                      | 71.5                                         | 52.7                                                                                                      | 0.6                                  | 46.7                      | 100.0 | 54.0                   | 35.3                                                                                                    | 5,820           |
| 20-24                      | 94.1                                         | 88.4                                                                                                      | 0.6                                  | 11.0                      | 100.0 | 90.9                   | 64.0                                                                                                    | 5,735           |
| 25-29                      | 96.9                                         | 93.9                                                                                                      | 0.5                                  | 5.6                       | 100.0 | 95.4                   | 63.4                                                                                                    | 6,100           |
| 30-39                      | 96.2                                         | 92.2                                                                                                      | 0.7                                  | 7.1                       | 100.0 | 94.2                   | 54.4                                                                                                    | 8,283           |
| 40-49                      | 91.2                                         | 83.3                                                                                                      | 1.0                                  | 15.7                      | 100.0 | 85.5                   | 45.1                                                                                                    | 5,142           |
| <b>Marital status</b>      |                                              |                                                                                                           |                                      |                           |       |                        |                                                                                                         |                 |
| Never married              | 78.5                                         | 63.3                                                                                                      | 0.7                                  | 36.1                      | 100.0 | 64.7                   | 42.3                                                                                                    | 8,997           |
| Ever had sex               | 91.7                                         | 84.0                                                                                                      | 0.7                                  | 15.3                      | 100.0 | 85.8                   | 60.0                                                                                                    | 4,541           |
| Never had sex              | 65.0                                         | 42.1                                                                                                      | 0.7                                  | 57.2                      | 100.0 | 43.1                   | 24.2                                                                                                    | 4,456           |
| Married or living together | 95.5                                         | 91.1                                                                                                      | 0.7                                  | 8.3                       | 100.0 | 93.2                   | 57.5                                                                                                    | 18,549          |
| Divorced/separated/widowed | 95.1                                         | 90.4                                                                                                      | 0.8                                  | 8.8                       | 100.0 | 92.5                   | 54.9                                                                                                    | 3,533           |
| <b>Residence</b>           |                                              |                                                                                                           |                                      |                           |       |                        |                                                                                                         |                 |
| Urban                      | 92.9                                         | 87.1                                                                                                      | 0.4                                  | 12.4                      | 100.0 | 88.7                   | 57.8                                                                                                    | 12,690          |
| Rural                      | 88.8                                         | 80.1                                                                                                      | 0.8                                  | 19.1                      | 100.0 | 82.2                   | 49.4                                                                                                    | 18,389          |
| <b>Education</b>           |                                              |                                                                                                           |                                      |                           |       |                        |                                                                                                         |                 |
| No education               | 79.1                                         | 71.6                                                                                                      | 1.6                                  | 26.8                      | 100.0 | 74.4                   | 37.1                                                                                                    | 2,176           |
| Primary incomplete         | 86.1                                         | 75.7                                                                                                      | 1.2                                  | 23.1                      | 100.0 | 78.3                   | 46.8                                                                                                    | 7,989           |
| Primary complete           | 94.6                                         | 88.8                                                                                                      | 0.5                                  | 10.7                      | 100.0 | 90.6                   | 57.1                                                                                                    | 7,637           |
| Secondary+                 | 92.7                                         | 85.8                                                                                                      | 0.3                                  | 13.8                      | 100.0 | 87.2                   | 56.5                                                                                                    | 13,277          |
| <b>Wealth quintile</b>     |                                              |                                                                                                           |                                      |                           |       |                        |                                                                                                         |                 |
| Lowest                     | 83.9                                         | 74.8                                                                                                      | 1.2                                  | 24.0                      | 100.0 | 77.5                   | 45.0                                                                                                    | 4,838           |
| Second                     | 89.9                                         | 81.2                                                                                                      | 0.7                                  | 18.0                      | 100.0 | 83.4                   | 51.7                                                                                                    | 5,457           |
| Middle                     | 91.1                                         | 83.1                                                                                                      | 0.9                                  | 16.1                      | 100.0 | 84.9                   | 52.0                                                                                                    | 6,032           |
| Fourth                     | 92.3                                         | 85.1                                                                                                      | 0.6                                  | 14.3                      | 100.0 | 86.8                   | 56.1                                                                                                    | 6,550           |
| Highest                    | 93.0                                         | 87.1                                                                                                      | 0.3                                  | 12.6                      | 100.0 | 88.6                   | 56.2                                                                                                    | 8,203           |
| Total                      | 90.5                                         | 83.0                                                                                                      | 0.7                                  | 16.4                      | 100.0 | 84.9                   | 52.8                                                                                                    | 31,079          |

<sup>1</sup> Includes 'don't know/missing'

Table 3.37 shows that in a majority of counties (37 out of 47), three out of four women have ever been tested and received results. Nairobi recorded the highest coverage of prior HIV testing at 90 percent, while Mandera county reported the lowest coverage at 37 percent. Counties in the North Eastern region and to the north, including Turkana, West Pokot, and Samburu, reported lower testing coverage compared with the rest.

Table 3.37 Coverage of prior HIV testing by county: 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, percentage ever tested, and percentage 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 <sup>1</sup> |              |                        |                                                                                                         |                 |
| <b>Coast</b>         | <b>90.6</b>                                  | <b>84.3</b>                                                                                               | <b>0.3</b>                           | <b>15.4</b>               | <b>100.0</b> | <b>85.8</b>            | <b>53.4</b>                                                                                             | <b>3,076</b>    |
| Mombasa              | 91.5                                         | 86.7                                                                                                      | 0.0                                  | 13.3                      | 100.0        | 87.7                   | 57.8                                                                                                    | 912             |
| Kwale                | 91.1                                         | 85.0                                                                                                      | 0.0                                  | 15.0                      | 100.0        | 85.7                   | 51.8                                                                                                    | 619             |
| Kilifi               | 90.1                                         | 82.6                                                                                                      | 0.7                                  | 16.7                      | 100.0        | 84.9                   | 53.9                                                                                                    | 1,043           |
| Tana River           | 85.9                                         | 77.5                                                                                                      | 0.8                                  | 21.8                      | 100.0        | 81.6                   | 41.6                                                                                                    | 197             |
| Lamu                 | 90.8                                         | 81.7                                                                                                      | 0.0                                  | 18.3                      | 100.0        | 83.7                   | 45.3                                                                                                    | 89              |
| Taita Taveta         | 92.1                                         | 86.6                                                                                                      | 0.5                                  | 12.8                      | 100.0        | 87.4                   | 51.4                                                                                                    | 215             |
| <b>North Eastern</b> | <b>59.5</b>                                  | <b>48.7</b>                                                                                               | <b>0.6</b>                           | <b>50.7</b>               | <b>100.0</b> | <b>51.6</b>            | <b>20.1</b>                                                                                             | <b>648</b>      |
| Garissa              | 62.4                                         | 53.4                                                                                                      | 0.3                                  | 46.3                      | 100.0        | 55.2                   | 27.3                                                                                                    | 261             |
| Wajir                | 59.4                                         | 53.0                                                                                                      | 0.1                                  | 46.9                      | 100.0        | 55.9                   | 21.1                                                                                                    | 212             |
| Mandera              | 55.4                                         | 36.6                                                                                                      | 1.4                                  | 62.0                      | 100.0        | 40.9                   | 8.1                                                                                                     | 175             |
| <b>Eastern</b>       | <b>90.7</b>                                  | <b>83.2</b>                                                                                               | <b>0.4</b>                           | <b>16.4</b>               | <b>100.0</b> | <b>84.3</b>            | <b>51.0</b>                                                                                             | <b>4,375</b>    |
| Marsabit             | 74.9                                         | 64.3                                                                                                      | 1.2                                  | 34.6                      | 100.0        | 66.1                   | 34.2                                                                                                    | 115             |
| Isiolo               | 93.6                                         | 87.0                                                                                                      | 0.5                                  | 12.5                      | 100.0        | 89.4                   | 45.5                                                                                                    | 104             |
| Meru                 | 92.1                                         | 84.5                                                                                                      | 0.0                                  | 15.5                      | 100.0        | 85.6                   | 45.3                                                                                                    | 1,110           |
| Tharaka-Nithi        | 90.3                                         | 82.8                                                                                                      | 2.5                                  | 14.7                      | 100.0        | 86.4                   | 51.6                                                                                                    | 275             |
| Embu                 | 90.0                                         | 83.6                                                                                                      | 0.0                                  | 16.4                      | 100.0        | 83.7                   | 51.4                                                                                                    | 459             |
| Kitui                | 90.2                                         | 82.8                                                                                                      | 0.2                                  | 16.9                      | 100.0        | 83.3                   | 56.2                                                                                                    | 759             |
| Machakos             | 92.5                                         | 86.5                                                                                                      | 0.6                                  | 13.0                      | 100.0        | 87.1                   | 55.4                                                                                                    | 873             |
| Makueni              | 89.2                                         | 80.0                                                                                                      | 0.3                                  | 19.7                      | 100.0        | 81.4                   | 52.3                                                                                                    | 680             |
| <b>Central</b>       | <b>92.7</b>                                  | <b>84.4</b>                                                                                               | <b>1.1</b>                           | <b>14.5</b>               | <b>100.0</b> | <b>86.7</b>            | <b>53.0</b>                                                                                             | <b>3,994</b>    |
| Nyandarua            | 92.9                                         | 84.5                                                                                                      | 1.4                                  | 14.1                      | 100.0        | 88.6                   | 54.5                                                                                                    | 436             |
| Nyeri                | 94.7                                         | 87.7                                                                                                      | 0.5                                  | 11.8                      | 100.0        | 88.3                   | 54.5                                                                                                    | 650             |
| Kirinyaga            | 94.2                                         | 85.5                                                                                                      | 0.8                                  | 13.7                      | 100.0        | 88.1                   | 56.6                                                                                                    | 451             |
| Murang'a             | 90.8                                         | 82.0                                                                                                      | 1.4                                  | 16.6                      | 100.0        | 84.5                   | 51.5                                                                                                    | 735             |
| Kiambu               | 92.3                                         | 83.9                                                                                                      | 1.1                                  | 15.0                      | 100.0        | 86.2                   | 51.6                                                                                                    | 1,722           |
| <b>Rift Valley</b>   | <b>89.9</b>                                  | <b>81.4</b>                                                                                               | <b>0.9</b>                           | <b>17.7</b>               | <b>100.0</b> | <b>83.9</b>            | <b>51.8</b>                                                                                             | <b>7,953</b>    |
| Turkana              | 75.4                                         | 69.5                                                                                                      | 0.1                                  | 30.3                      | 100.0        | 69.8                   | 42.4                                                                                                    | 320             |
| West Pokot           | 79.1                                         | 66.6                                                                                                      | 6.1                                  | 27.3                      | 100.0        | 75.0                   | 34.1                                                                                                    | 267             |
| Samburu              | 84.3                                         | 67.8                                                                                                      | 2.5                                  | 29.7                      | 100.0        | 73.4                   | 45.0                                                                                                    | 123             |
| Trans-Nzoia          | 85.9                                         | 72.1                                                                                                      | 0.4                                  | 27.5                      | 100.0        | 77.4                   | 43.1                                                                                                    | 768             |
| Uasin Gishu          | 95.4                                         | 89.1                                                                                                      | 0.5                                  | 10.4                      | 100.0        | 90.2                   | 63.5                                                                                                    | 784             |
| Elgeyo Marakwet      | 89.8                                         | 79.4                                                                                                      | 0.6                                  | 20.0                      | 100.0        | 81.0                   | 51.3                                                                                                    | 250             |
| Nandi                | 88.5                                         | 81.8                                                                                                      | 0.5                                  | 17.8                      | 100.0        | 82.4                   | 53.3                                                                                                    | 628             |
| Baringo              | 85.6                                         | 74.9                                                                                                      | 0.4                                  | 24.7                      | 100.0        | 77.5                   | 51.5                                                                                                    | 335             |
| Laikipia             | 89.6                                         | 81.7                                                                                                      | 1.1                                  | 17.2                      | 100.0        | 84.5                   | 50.2                                                                                                    | 342             |
| Nakuru               | 92.6                                         | 84.2                                                                                                      | 0.9                                  | 14.8                      | 100.0        | 86.9                   | 50.3                                                                                                    | 1,574           |
| Narok                | 90.2                                         | 84.1                                                                                                      | 2.0                                  | 13.9                      | 100.0        | 86.3                   | 55.6                                                                                                    | 642             |
| Kajiado              | 91.3                                         | 85.6                                                                                                      | 0.3                                  | 14.1                      | 100.0        | 86.1                   | 53.0                                                                                                    | 670             |
| Kericho              | 94.4                                         | 84.8                                                                                                      | 0.5                                  | 14.7                      | 100.0        | 87.6                   | 59.1                                                                                                    | 563             |
| Bomet                | 91.8                                         | 84.2                                                                                                      | 0.2                                  | 15.6                      | 100.0        | 86.2                   | 53.0                                                                                                    | 687             |
| <b>Western</b>       | <b>87.7</b>                                  | <b>77.8</b>                                                                                               | <b>1.2</b>                           | <b>21.0</b>               | <b>100.0</b> | <b>80.2</b>            | <b>45.4</b>                                                                                             | <b>3,225</b>    |
| Kakamega             | 87.9                                         | 77.9                                                                                                      | 1.7                                  | 20.4                      | 100.0        | 80.7                   | 44.4                                                                                                    | 1,108           |
| Vihiga               | 89.6                                         | 79.7                                                                                                      | 0.9                                  | 19.4                      | 100.0        | 82.6                   | 44.8                                                                                                    | 368             |
| Bungoma              | 85.6                                         | 74.6                                                                                                      | 1.2                                  | 24.1                      | 100.0        | 76.6                   | 44.4                                                                                                    | 1,203           |
| Busia                | 90.9                                         | 83.3                                                                                                      | 0.5                                  | 16.3                      | 100.0        | 85.4                   | 50.0                                                                                                    | 546             |
| <b>Nyanza</b>        | <b>93.0</b>                                  | <b>86.4</b>                                                                                               | <b>0.5</b>                           | <b>13.2</b>               | <b>100.0</b> | <b>88.4</b>            | <b>60.4</b>                                                                                             | <b>4,038</b>    |
| Siaya                | 92.9                                         | 85.5                                                                                                      | 0.0                                  | 14.5                      | 100.0        | 89.0                   | 57.5                                                                                                    | 572             |
| Kisumu               | 94.4                                         | 89.0                                                                                                      | 0.2                                  | 10.8                      | 100.0        | 89.7                   | 62.1                                                                                                    | 820             |
| Homa Bay             | 96.2                                         | 93.0                                                                                                      | 0.8                                  | 6.2                       | 100.0        | 94.0                   | 70.9                                                                                                    | 798             |
| Migori               | 93.6                                         | 87.7                                                                                                      | 1.3                                  | 11.0                      | 100.0        | 90.8                   | 64.5                                                                                                    | 650             |
| Kisii                | 89.2                                         | 78.9                                                                                                      | 0.1                                  | 21.1                      | 100.0        | 80.7                   | 51.4                                                                                                    | 864             |
| Nyamira              | 91.0                                         | 82.3                                                                                                      | 0.3                                  | 17.4                      | 100.0        | 86.1                   | 50.6                                                                                                    | 334             |
| <b>Nairobi</b>       | <b>94.3</b>                                  | <b>90.0</b>                                                                                               | <b>0.3</b>                           | <b>9.8</b>                | <b>100.0</b> | <b>90.9</b>            | <b>60.4</b>                                                                                             | <b>3,770</b>    |
| Total                | 90.5                                         | 83.0                                                                                                      | 0.7                                  | 16.4                      | 100.0        | 84.9                   | 52.8                                                                                                    | 31,079          |

<sup>1</sup> Includes 'don't know/missing'

While more men than women reported knowing where to get an HIV test, men reported lower levels of HIV testing compared with women. Table 3.38 shows that 71 percent of men age 15-49 have ever been tested for HIV and received results. Forty-five percent were tested for HIV in the past 12 months and received results of the last test. Similar to the trends observed for women, men age 15-19, those who have never had sex, those in rural areas, those with no education, and those in the lowest wealth quintile reported lower HIV testing coverage.

Table 3.38 Coverage of prior HIV testing by background characteristics: 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, percentage ever tested, and percentage 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 <sup>1</sup> |       |                        |                                                                                                         |               |
| <b>Age</b>                 |                                              |                                                                                                         |                                      |                           |       |                        |                                                                                                         |               |
| 15-24                      | 93.3                                         | 56.6                                                                                                    | 0.9                                  | 42.5                      | 100.0 | 57.5                   | 38.9                                                                                                    | 4,666         |
| 15-19                      | 89.5                                         | 41.0                                                                                                    | 0.9                                  | 58.1                      | 100.0 | 42.0                   | 26.6                                                                                                    | 2,540         |
| 20-24                      | 97.9                                         | 75.2                                                                                                    | 0.8                                  | 24.0                      | 100.0 | 76.1                   | 53.6                                                                                                    | 2,125         |
| 25-29                      | 98.6                                         | 83.0                                                                                                    | 0.2                                  | 16.8                      | 100.0 | 83.2                   | 57.8                                                                                                    | 2,104         |
| 30-39                      | 97.9                                         | 79.8                                                                                                    | 0.4                                  | 19.8                      | 100.0 | 80.2                   | 50.0                                                                                                    | 3,268         |
| 40-49                      | 97.0                                         | 76.8                                                                                                    | 1.0                                  | 22.2                      | 100.0 | 77.8                   | 41.9                                                                                                    | 2,024         |
| <b>Marital status</b>      |                                              |                                                                                                         |                                      |                           |       |                        |                                                                                                         |               |
| Never married              | 93.8                                         | 58.1                                                                                                    | 0.8                                  | 41.1                      | 100.0 | 58.9                   | 39.4                                                                                                    | 5,350         |
| Ever had sex               | 97.4                                         | 69.8                                                                                                    | 0.6                                  | 29.6                      | 100.0 | 70.4                   | 49.8                                                                                                    | 3,515         |
| Never had sex              | 87.1                                         | 35.5                                                                                                    | 1.2                                  | 63.3                      | 100.0 | 36.8                   | 19.7                                                                                                    | 1,834         |
| Married or living together | 97.9                                         | 81.5                                                                                                    | 0.5                                  | 18.0                      | 100.0 | 82.1                   | 51.2                                                                                                    | 6,095         |
| Divorced/separated/widowed | 97.6                                         | 77.0                                                                                                    | 0.5                                  | 22.4                      | 100.0 | 77.6                   | 45.8                                                                                                    | 618           |
| <b>Residence</b>           |                                              |                                                                                                         |                                      |                           |       |                        |                                                                                                         |               |
| Urban                      | 98.0                                         | 77.7                                                                                                    | 0.6                                  | 21.7                      | 100.0 | 78.3                   | 51.3                                                                                                    | 5,300         |
| Rural                      | 94.6                                         | 65.5                                                                                                    | 0.7                                  | 33.8                      | 100.0 | 66.3                   | 41.3                                                                                                    | 6,762         |
| <b>Education</b>           |                                              |                                                                                                         |                                      |                           |       |                        |                                                                                                         |               |
| No education               | 77.5                                         | 42.5                                                                                                    | 0.3                                  | 57.1                      | 100.0 | 42.9                   | 26.2                                                                                                    | 345           |
| Primary incomplete         | 91.7                                         | 56.2                                                                                                    | 1.1                                  | 42.8                      | 100.0 | 57.3                   | 34.4                                                                                                    | 3,071         |
| Primary complete           | 97.7                                         | 74.8                                                                                                    | 0.6                                  | 24.7                      | 100.0 | 75.3                   | 47.9                                                                                                    | 2,734         |
| Secondary+                 | 98.7                                         | 78.4                                                                                                    | 0.5                                  | 21.1                      | 100.0 | 78.9                   | 51.7                                                                                                    | 5,913         |
| <b>Wealth quintile</b>     |                                              |                                                                                                         |                                      |                           |       |                        |                                                                                                         |               |
| Lowest                     | 89.1                                         | 56.5                                                                                                    | 0.8                                  | 42.7                      | 100.0 | 57.3                   | 34.7                                                                                                    | 1,691         |
| Second                     | 95.6                                         | 65.8                                                                                                    | 0.9                                  | 33.4                      | 100.0 | 66.7                   | 41.1                                                                                                    | 2,145         |
| Middle                     | 96.3                                         | 69.1                                                                                                    | 0.9                                  | 30.0                      | 100.0 | 70.0                   | 45.7                                                                                                    | 2,370         |
| Fourth                     | 97.9                                         | 75.0                                                                                                    | 0.2                                  | 24.8                      | 100.0 | 75.3                   | 49.7                                                                                                    | 2,959         |
| Highest                    | 98.6                                         | 80.4                                                                                                    | 0.6                                  | 19.0                      | 100.0 | 81.0                   | 51.5                                                                                                    | 2,897         |
| Total 15-49                | 96.1                                         | 70.9                                                                                                    | 0.6                                  | 28.5                      | 100.0 | 71.6                   | 45.7                                                                                                    | 12,063        |
| Men 50-54                  | 96.8                                         | 72.2                                                                                                    | 0.5                                  | 27.3                      | 100.0 | 72.8                   | 37.0                                                                                                    | 756           |
| Total 15-54                | 96.2                                         | 71.0                                                                                                    | 0.6                                  | 28.4                      | 100.0 | 71.6                   | 45.2                                                                                                    | 12,819        |

<sup>1</sup> Includes 'don't know/missing'

Table 3.39 shows HIV testing among men by county. Nairobi has the highest percentage of men age 15-49 that have ever tested and received results at 83 percent, while Mandera and West Pokot counties have the lowest coverage at 4 percent and 35 percent, respectively. In all other counties, over 50 percent of men age 15-49 have ever been tested and received results.

HIV testing coverage has improved since the 2008-09 KDHS. Among women age 15-49, those who were ever tested and received results increased from 57 percent to 83 percent in 2014. Similarly, the percentage who were tested in the past 12 months and received the results of the last test increased from 29 percent to 53 percent. Among men, this pattern is similar. Having ever been tested and received results increased from 40 percent to 71 percent while having tested and received results within the past 12 months increased from 23 percent to 46 percent.

Table 3.39 Coverage of prior HIV testing by county: 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, percentage ever tested, and percentage who were tested in the past 12 months and received the results of the last test, according to county, 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 <sup>1</sup> |              |                        |                                                                                                         |               |
| <b>Coast</b>              | <b>96.6</b>                                  | <b>64.4</b>                                                                                             | <b>0.3</b>                           | <b>35.4</b>               | <b>100.0</b> | <b>64.6</b>            | <b>40.5</b>                                                                                             | <b>1,260</b>  |
| Mombasa                   | 98.6                                         | 67.4                                                                                                    | 0.2                                  | 32.4                      | 100.0        | 67.6                   | 39.9                                                                                                    | 481           |
| Kwale                     | 87.8                                         | 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            |
| <b>North Eastern</b>      | <b>74.4</b>                                  | <b>44.0</b>                                                                                             | <b>0.0</b>                           | <b>56.0</b>               | <b>100.0</b> | <b>44.0</b>            | <b>22.8</b>                                                                                             | <b>227</b>    |
| 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            |
| <b>Eastern</b>            | <b>95.0</b>                                  | <b>66.6</b>                                                                                             | <b>0.3</b>                           | <b>33.1</b>               | <b>100.0</b> | <b>67.0</b>            | <b>39.8</b>                                                                                             | <b>1,825</b>  |
| Marsabit                  | 96.5                                         | 59.3                                                                                                    | 0.0                                  | 40.7                      | 100.0        | 59.3                   | 51.0                                                                                                    | 40            |
| Isiolo                    | 99.1                                         | 76.6                                                                                                    | 0.2                                  | 23.3                      | 100.0        | 76.7                   | 40.9                                                                                                    | 35            |
| Meru                      | 91.3                                         | 67.0                                                                                                    | 0.5                                  | 32.5                      | 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                      | 94.0                                         | 63.4                                                                                                    | 0.5                                  | 36.1                      | 100.0        | 63.9                   | 36.1                                                                                                    | 164           |
| Kitui                     | 96.0                                         | 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           |
| <b>Central</b>            | <b>96.6</b>                                  | <b>70.5</b>                                                                                             | <b>0.7</b>                           | <b>28.7</b>               | <b>100.0</b> | <b>71.4</b>            | <b>40.1</b>                                                                                             | <b>1,564</b>  |
| Nyandarua                 | 95.1                                         | 65.8                                                                                                    | 2.3                                  | 31.9                      | 100.0        | 68.1                   | 39.9                                                                                                    | 198           |
| Nyeri                     | 96.9                                         | 77.0                                                                                                    | 1.1                                  | 21.9                      | 100.0        | 78.1                   | 47.0                                                                                                    | 229           |
| Kirinyaga                 | 96.2                                         | 69.3                                                                                                    | 1.5                                  | 29.2                      | 100.0        | 70.8                   | 35.7                                                                                                    | 184           |
| Murang'a                  | 96.1                                         | 69.5                                                                                                    | 0.7                                  | 29.8                      | 100.0        | 70.8                   | 45.6                                                                                                    | 284           |
| Kiambu                    | 97.3                                         | 70.4                                                                                                    | 0.0                                  | 29.6                      | 100.0        | 70.4                   | 36.7                                                                                                    | 669           |
| <b>Rift Valley</b>        | <b>95.6</b>                                  | <b>70.5</b>                                                                                             | <b>0.6</b>                           | <b>28.9</b>               | <b>100.0</b> | <b>71.1</b>            | <b>47.1</b>                                                                                             | <b>3,050</b>  |
| 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               | 90.9                                         | 62.8                                                                                                    | 1.2                                  | 36.0                      | 100.0        | 64.0                   | 41.0                                                                                                    | 329           |
| Uasin Gishu               | 97.8                                         | 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                   | 96.2                                         | 66.9                                                                                                    | 0.2                                  | 32.9                      | 100.0        | 67.1                   | 44.4                                                                                                    | 125           |
| Laikipia                  | 96.3                                         | 76.7                                                                                                    | 1.9                                  | 21.4                      | 100.0        | 78.6                   | 43.1                                                                                                    | 124           |
| Nakuru                    | 96.9                                         | 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                   | 97.1                                         | 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                     | 96.3                                         | 66.8                                                                                                    | 1.2                                  | 32.0                      | 100.0        | 68.0                   | 43.8                                                                                                    | 267           |
| <b>Western</b>            | <b>96.0</b>                                  | <b>62.0</b>                                                                                             | <b>1.0</b>                           | <b>37.0</b>               | <b>100.0</b> | <b>63.0</b>            | <b>39.8</b>                                                                                             | <b>1,164</b>  |
| Kakamega                  | 97.7                                         | 65.7                                                                                                    | 0.0                                  | 34.3                      | 100.0        | 65.7                   | 41.5                                                                                                    | 411           |
| Vihiga                    | 92.0                                         | 54.9                                                                                                    | 0.4                                  | 44.7                      | 100.0        | 55.5                   | 34.5                                                                                                    | 140           |
| Bungoma                   | 96.8                                         | 55.9                                                                                                    | 0.6                                  | 43.6                      | 100.0        | 56.4                   | 36.9                                                                                                    | 413           |
| Busia                     | 93.7                                         | 72.2                                                                                                    | 4.4                                  | 23.5                      | 100.0        | 76.5                   | 46.2                                                                                                    | 199           |
| <b>Nyanza</b>             | <b>98.2</b>                                  | <b>81.1</b>                                                                                             | <b>0.7</b>                           | <b>18.2</b>               | <b>100.0</b> | <b>81.8</b>            | <b>56.2</b>                                                                                             | <b>1,405</b>  |
| 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                  | 97.2                                         | 83.2                                                                                                    | 2.2                                  | 14.6                      | 100.0        | 85.4                   | 58.9                                                                                                    | 243           |
| Migori                    | 97.0                                         | 84.8                                                                                                    | 1.1                                  | 14.0                      | 100.0        | 86.0                   | 62.4                                                                                                    | 211           |
| Kisii                     | 99.1                                         | 64.8                                                                                                    | 0.4                                  | 34.8                      | 100.0        | 65.2                   | 38.7                                                                                                    | 315           |
| Nyamira                   | 98.1                                         | 75.0                                                                                                    | 0.5                                  | 24.4                      | 100.0        | 76.2                   | 41.6                                                                                                    | 114           |
| <b>Nairobi</b>            | <b>98.8</b>                                  | <b>83.4</b>                                                                                             | <b>1.2</b>                           | <b>15.4</b>               | <b>100.0</b> | <b>84.6</b>            | <b>57.9</b>                                                                                             | <b>1,568</b>  |
| Total 15-49               | 96.1                                         | 70.9                                                                                                    | 0.6                                  | 28.5                      | 100.0        | 71.6                   | 45.7                                                                                                    | 12,063        |
| Men 50-54                 | 96.8                                         | 72.2                                                                                                    | 0.5                                  | 27.3                      | 100.0        | 72.8                   | 37.0                                                                                                    | 756           |
| Total 15-54               | 96.2                                         | 71.0                                                                                                    | 0.6                                  | 28.4                      | 100.0        | 71.6                   | 45.2                                                                                                    | 12,819        |

<sup>1</sup> Includes 'don't know/missing'

### 3.9 DOMESTIC VIOLENCE

As part of the 2014 KDHS, selected women and men were asked a series of questions concerning domestic violence. Specifically, ever-married women and men were asked if their current or most recent spouse/partner ever physically harmed them, i.e., by pushing, slapping, punching,

kicking, or trying to strangle or burn them or threatening them with a weapon. They were also asked if their spouse/partner had ever physically forced them to have sexual intercourse or perform other sexual acts when they did not want to. Because of the sensitivity of these questions, if there was more than one eligible respondent in the household, the domestic violence section was administered to only one, randomly selected respondent. Interviewers were instructed to inform the selected respondent that she/he would be the only one asked these questions in that household. Interviewers were also trained on the importance of ensuring confidentiality of these questions and were instructed not to ask the questions if the interview could not be conducted in private. Data on the prevalence of domestic violence are presented for women in Table 3.40 and for men in Table 3.41.

**Table 3.40 Experience of domestic violence: Ever-married women**

Percentage of ever-married women age 15-49 who have experienced physical or sexual violence committed by their husband/partner ever and in the last year, by background characteristics, Kenya 2014

| Background characteristic  | Percentage who have experienced physical violence |                | Percentage who have experienced sexual violence |                | Percentage who have experienced physical or sexual violence |                | Number of women |
|----------------------------|---------------------------------------------------|----------------|-------------------------------------------------|----------------|-------------------------------------------------------------|----------------|-----------------|
|                            | Ever <sup>1</sup>                                 | Past 12 months | Ever <sup>1</sup>                               | Past 12 months | Ever <sup>1</sup>                                           | Past 12 months |                 |
| <b>Age</b>                 |                                                   |                |                                                 |                |                                                             |                |                 |
| 15-19                      | 23.8                                              | 20.9           | 7.6                                             | 4.2            | 27.8                                                        | 23.0           | 111             |
| 20-24                      | 33.5                                              | 24.0           | 12.4                                            | 10.5           | 37.0                                                        | 28.0           | 647             |
| 25-29                      | 38.4                                              | 24.9           | 14.9                                            | 11.8           | 41.1                                                        | 28.1           | 1,002           |
| 30-39                      | 39.4                                              | 22.7           | 14.7                                            | 9.4            | 41.4                                                        | 25.3           | 1,395           |
| 40-49                      | 42.6                                              | 19.3           | 13.9                                            | 8.6            | 43.7                                                        | 21.3           | 867             |
| <b>Marital status</b>      |                                                   |                |                                                 |                |                                                             |                |                 |
| Married or living together | 35.3                                              | 22.5           | 12.3                                            | 9.6            | 37.6                                                        | 25.6           | 3,347           |
| Married once               | 32.9                                              | 21.6           | 10.9                                            | 9.2            | 35.3                                                        | 24.7           | 3,112           |
| Married more than once     | 67.1                                              | 34.5           | 29.8                                            | 14.9           | 67.9                                                        | 37.0           | 235             |
| Divorced/separated/widowed | 54.1                                              | 23.3           | 22.6                                            | 11.1           | 56.4                                                        | 25.0           | 670             |
| <b>Residence</b>           |                                                   |                |                                                 |                |                                                             |                |                 |
| Urban                      | 35.1                                              | 21.7           | 14.7                                            | 11.0           | 37.7                                                        | 25.1           | 1,588           |
| Rural                      | 40.6                                              | 23.3           | 13.5                                            | 9.1            | 42.7                                                        | 25.8           | 2,435           |
| <b>Region</b>              |                                                   |                |                                                 |                |                                                             |                |                 |
| Coast                      | 27.4                                              | 16.9           | 9.1                                             | 6.2            | 30.2                                                        | 19.2           | 439             |
| North Eastern              | 12.1                                              | 5.8            | 0.4                                             | 0.4            | 12.1                                                        | 5.8            | 97              |
| Eastern                    | 40.6                                              | 22.6           | 12.9                                            | 9.1            | 42.3                                                        | 25.1           | 585             |
| Central                    | 32.8                                              | 18.5           | 8.7                                             | 5.9            | 35.5                                                        | 20.5           | 518             |
| Rift Valley                | 32.4                                              | 18.6           | 9.7                                             | 6.3            | 33.8                                                        | 20.1           | 983             |
| Western                    | 51.6                                              | 29.1           | 25.3                                            | 19.3           | 55.6                                                        | 36.6           | 433             |
| Nyanza                     | 49.5                                              | 31.0           | 19.4                                            | 13.0           | 51.9                                                        | 33.5           | 553             |
| Nairobi                    | 46.1                                              | 29.9           | 21.8                                            | 16.1           | 49.0                                                        | 34.5           | 414             |
| <b>Education</b>           |                                                   |                |                                                 |                |                                                             |                |                 |
| No education               | 34.6                                              | 21.6           | 9.5                                             | 7.1            | 35.7                                                        | 22.5           | 375             |
| Primary incomplete         | 48.9                                              | 28.2           | 16.9                                            | 12.2           | 50.6                                                        | 30.9           | 1,150           |
| Primary complete           | 39.2                                              | 23.0           | 16.7                                            | 11.7           | 41.9                                                        | 26.3           | 1,120           |
| Secondary+                 | 30.1                                              | 18.2           | 10.6                                            | 7.1            | 32.9                                                        | 21.2           | 1,378           |
| <b>Wealth quintile</b>     |                                                   |                |                                                 |                |                                                             |                |                 |
| Lowest                     | 39.7                                              | 24.7           | 14.4                                            | 9.8            | 42.4                                                        | 27.2           | 707             |
| Second                     | 46.2                                              | 27.2           | 15.0                                            | 10.4           | 48.3                                                        | 29.5           | 781             |
| Middle                     | 42.6                                              | 25.6           | 16.3                                            | 11.9           | 44.4                                                        | 28.3           | 760             |
| Fourth                     | 36.7                                              | 19.3           | 13.3                                            | 8.2            | 38.7                                                        | 22.3           | 894             |
| Highest                    | 28.8                                              | 18.0           | 11.5                                            | 9.2            | 31.6                                                        | 21.5           | 880             |
| <b>Total</b>               | <b>38.4</b>                                       | <b>22.7</b>    | <b>14.0</b>                                     | <b>9.8</b>     | <b>40.7</b>                                                 | <b>25.5</b>    | <b>4,023</b>    |

Note: Total includes 5 women with missing information as to marital status.

<sup>1</sup> Includes violence in the past 12 months

The data show that women are more likely to experience physical violence committed by their spouse/partner than men and that sexual violence committed by a spouse/partner is not as prevalent as physical violence. Table 3.40 shows that 38 percent of ever-married women age 15-49 have ever experienced physical violence committed by their husband/partner, while 23 percent experienced violence in the 12 months prior to the survey. Nine percent of ever-married men age 15-49 have ever experienced physical violence committed by their wife/partner, while 5 percent experienced violence in the 12 months prior to the survey. About 14 percent of women and 4 percent of men have ever

experienced sexual violence committed by a spouse/partner, while 10 percent of women and 3 percent of men experienced sexual violence by a spouse/partner in the past 12 months.

**Table 3.41 Experience of domestic violence: Ever-married men**

Percentage of ever-married men age 15-49 who have experienced physical or sexual violence committed by their wife/partner ever and in the last year, by background characteristics, Kenya 2014

| Background characteristic  | Percentage who have experienced physical violence |                | Percentage who have experienced sexual violence |                | Percentage who have experienced physical or sexual violence |                | Number of men |
|----------------------------|---------------------------------------------------|----------------|-------------------------------------------------|----------------|-------------------------------------------------------------|----------------|---------------|
|                            | Ever <sup>1</sup>                                 | Past 12 months | Ever <sup>1</sup>                               | Past 12 months | Ever <sup>1</sup>                                           | Past 12 months |               |
| <b>Age</b>                 |                                                   |                |                                                 |                |                                                             |                |               |
| 15-19                      | *                                                 | *              | *                                               | *              | *                                                           | *              | 9             |
| 20-24                      | 11.7                                              | 8.8            | 5.5                                             | 4.0            | 15.0                                                        | 12.3           | 168           |
| 25-29                      | 8.7                                               | 6.0            | 6.5                                             | 5.5            | 12.4                                                        | 9.5            | 534           |
| 30-39                      | 7.1                                               | 3.8            | 4.3                                             | 3.1            | 9.4                                                         | 5.8            | 1,115         |
| 40-49                      | 9.8                                               | 5.0            | 3.0                                             | 2.0            | 11.7                                                        | 6.3            | 799           |
| <b>Marital status</b>      |                                                   |                |                                                 |                |                                                             |                |               |
| Married or living together | 7.1                                               | 4.4            | 3.9                                             | 3.0            | 9.4                                                         | 6.4            | 2,405         |
| Married once               | 5.2                                               | 4.0            | 3.4                                             | 2.8            | 7.3                                                         | 5.9            | 2,096         |
| Married more than once     | 19.9                                              | 7.0            | 7.1                                             | 4.7            | 23.7                                                        | 10.2           | 309           |
| Divorced/separated/widowed | 25.4                                              | 12.4           | 11.1                                            | 6.2            | 30.6                                                        | 15.9           | 216           |
| <b>Residence</b>           |                                                   |                |                                                 |                |                                                             |                |               |
| Urban                      | 8.6                                               | 5.3            | 4.9                                             | 3.8            | 11.2                                                        | 7.7            | 1,192         |
| Rural                      | 8.6                                               | 4.8            | 4.1                                             | 2.9            | 11.1                                                        | 6.8            | 1,432         |
| <b>Region</b>              |                                                   |                |                                                 |                |                                                             |                |               |
| Coast                      | 5.5                                               | 2.7            | 3.6                                             | 1.7            | 7.2                                                         | 3.5            | 244           |
| North Eastern              | 3.2                                               | 3.2            | 0.0                                             | 0.0            | 3.2                                                         | 3.2            | 42            |
| Eastern                    | 7.5                                               | 4.7            | 3.4                                             | 3.2            | 9.8                                                         | 7.0            | 371           |
| Central                    | 6.8                                               | 3.0            | 3.3                                             | 2.1            | 9.1                                                         | 4.2            | 337           |
| Rift Valley                | 7.1                                               | 4.6            | 3.7                                             | 2.6            | 9.5                                                         | 6.5            | 655           |
| Western                    | 12.8                                              | 6.0            | 5.0                                             | 3.9            | 15.5                                                        | 8.6            | 253           |
| Nyanza                     | 10.3                                              | 5.5            | 7.4                                             | 5.7            | 13.9                                                        | 9.2            | 345           |
| Nairobi                    | 12.2                                              | 8.5            | 5.6                                             | 4.6            | 15.0                                                        | 11.3           | 377           |
| <b>Education</b>           |                                                   |                |                                                 |                |                                                             |                |               |
| No education               | 3.3                                               | 1.8            | 0.8                                             | 0.2            | 4.2                                                         | 2.0            | 101           |
| Primary incomplete         | 9.3                                               | 5.2            | 4.9                                             | 3.8            | 12.9                                                        | 8.1            | 603           |
| Primary complete           | 8.6                                               | 4.3            | 5.2                                             | 3.2            | 11.7                                                        | 6.9            | 770           |
| Secondary+                 | 8.7                                               | 5.7            | 4.0                                             | 3.4            | 10.4                                                        | 7.4            | 1,150         |
| <b>Wealth quintile</b>     |                                                   |                |                                                 |                |                                                             |                |               |
| Lowest                     | 9.5                                               | 5.7            | 5.3                                             | 3.1            | 12.7                                                        | 8.0            | 375           |
| Second                     | 8.5                                               | 5.3            | 5.0                                             | 4.3            | 11.8                                                        | 8.2            | 470           |
| Middle                     | 11.6                                              | 6.5            | 4.4                                             | 3.2            | 13.4                                                        | 8.4            | 496           |
| Fourth                     | 7.0                                               | 4.0            | 3.6                                             | 2.6            | 9.3                                                         | 5.8            | 638           |
| Highest                    | 7.6                                               | 4.4            | 4.4                                             | 3.4            | 9.7                                                         | 6.5            | 645           |
| Total 15-49                | 8.6                                               | 5.0            | 4.4                                             | 3.3            | 11.1                                                        | 7.2            | 2,624         |
| Men 50-54                  | 8.2                                               | 3.2            | 2.7                                             | 2.1            | 8.8                                                         | 4.1            | 265           |
| Total 15-54                | 8.6                                               | 4.9            | 4.3                                             | 3.2            | 10.9                                                        | 6.9            | 2,890         |

Note: Total includes 3 men with missing information as to marital status. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

<sup>1</sup> Includes violence in the past 12 months

The data show that divorced, separated, and widowed women and men are more likely to report having experienced physical or sexual violence than their currently married counterparts, ever and in the past 12 months. Among those who are currently married, however, women and men who have married more than once are more likely to have ever experienced physical or sexual violence than women and men who have married only once, ever and in the past 12 months.

Women and men with incomplete primary level of education were more likely to have experienced physical violence. The data show that 49 percent of women have experience physical violence with one in three (28 percent) experiencing such violence in the 12 months preceding the survey. Women in the highest wealth quintile were least likely to have experienced violence, although the relationship between household wealth and experience of violence was not as clear for men.

Women in Western, Nyanza, and Nairobi regions reported higher levels of physical and sexual violence committed by a spouse/partner than women in other regions; approximately one-half have ever experienced physical violence compared with the low reported in North Eastern region (12 percent). Similarly, men in these three regions also reported higher levels of physical and sexual violence committed by a spouse/partner compared with men in other regions.

### 3.10 FEMALE CIRCUMCISION

Female circumcision, also referred to as female genital mutilation (FGM) or female genital cutting (FGC), is practiced in many communities in Kenya. It involves the partial or total removal of the external female genitalia or other injury to the female organs for cultural or other non-therapeutic reasons. The practice poses risks to the health and even life of the women and girls who are subjected to it, and it violates internationally accepted human rights. In the 2014 KDHS, women were asked if they had ever heard of female circumcision and if so, whether they themselves had ever been circumcised.

Table 3.42 presents knowledge and prevalence of female circumcision. The results show that almost all women (96 percent) have heard of female circumcision, with only small differentials by background characteristics. Twenty-one percent of women report that they themselves are circumcised. The prevalence of female circumcision varies widely by background characteristics. The practice appears to be less common among younger women and is perhaps on the decline; 11 percent of women age 15-19 are circumcised compared with more than 20 percent among those over age 30. More than 40 percent of women age 45-49 are circumcised. Rural women (26 percent) are more likely to have been circumcised compared with their urban counterparts (14 percent).

**Table 3.42 Knowledge and prevalence of female circumcision**  
Percentage of women who have heard of female circumcision and percentage circumcised, according to background characteristics, Kenya 2014

| Background characteristic | Percentage of women who have heard of female circumcision | Percentage of women circumcised | Number of women |
|---------------------------|-----------------------------------------------------------|---------------------------------|-----------------|
| <b>Age</b>                |                                                           |                                 |                 |
| 15-19                     | 93.5                                                      | 11.4                            | 2,717           |
| 20-24                     | 96.3                                                      | 14.7                            | 2,691           |
| 25-29                     | 96.6                                                      | 18.0                            | 2,932           |
| 30-34                     | 97.3                                                      | 22.9                            | 2,162           |
| 35-39                     | 96.3                                                      | 27.8                            | 1,780           |
| 40-44                     | 96.1                                                      | 32.1                            | 1,292           |
| 45-49                     | 96.9                                                      | 40.9                            | 1,052           |
| <b>Residence</b>          |                                                           |                                 |                 |
| Urban                     | 97.3                                                      | 13.8                            | 5,929           |
| Rural                     | 95.2                                                      | 25.9                            | 8,696           |
| <b>Region</b>             |                                                           |                                 |                 |
| Coast                     | 87.3                                                      | 10.2                            | 1,421           |
| North Eastern             | 99.7                                                      | 97.5                            | 299             |
| Eastern                   | 97.0                                                      | 26.4                            | 2,066           |
| Central                   | 98.5                                                      | 16.5                            | 1,905           |
| Rift Valley               | 98.8                                                      | 26.9                            | 3,714           |
| Western                   | 94.7                                                      | 0.8                             | 1,571           |
| Nyanza                    | 92.4                                                      | 32.4                            | 1,908           |
| Nairobi                   | 97.7                                                      | 8.0                             | 1,742           |
| <b>Education</b>          |                                                           |                                 |                 |
| No education              | 90.6                                                      | 58.2                            | 1,015           |
| Primary incomplete        | 93.3                                                      | 25.4                            | 3,793           |
| Primary complete          | 96.5                                                      | 21.1                            | 3,543           |
| Secondary+                | 98.2                                                      | 12.2                            | 6,274           |
| <b>Wealth quintile</b>    |                                                           |                                 |                 |
| Lowest                    | 90.9                                                      | 39.8                            | 2,236           |
| Second                    | 94.8                                                      | 26.0                            | 2,590           |
| Middle                    | 95.7                                                      | 17.8                            | 2,859           |
| Fourth                    | 97.5                                                      | 17.2                            | 3,113           |
| Highest                   | 98.8                                                      | 12.0                            | 3,827           |
| <b>Total</b>              | <b>96.0</b>                                               | <b>21.0</b>                     | <b>14,625</b>   |

The largest differentials are seen by region. Female circumcision is nearly universal in North Eastern region (98 percent) compared with Nyanza (32 percent), Rift Valley (27 percent), and Eastern regions (26 percent). Western region recorded the lowest prevalence at 1 percent. The practice decreases as education increases. About 58 percent of women with no education are reported to have been circumcised compared with 12 percent of those with a secondary level of education. Similarly, circumcision among women declines with increasing wealth. Twelve percent of women in the highest wealth quintile are circumcised compared with 40 percent of women in the lowest quintile.

Female circumcision is declining slowly over time. The 1998 KDHS reported 38 percent of women were circumcised. This declined to 32 percent in 2003, 27 percent in 2008-09, and 21 percent in 2014.

### 3.11 FISTULA

Fistula is 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 fistula are often socially rejected. The inclusion of fistula questions in the 2014 KDHS was born out of the need to estimate the prevalence of fistula in Kenya. This is the initial step towards planning for effective management of obstetric fistula. After describing the condition, women were asked if they had ever experienced symptoms of fistula.

Table 3.43 shows that 1 percent of women in Kenya have experienced fistula. Small differences exist across background characteristics. Young women aged 15-19 are less likely to have had fistula, most likely because they have not yet started childbearing, compared with older women. Women age 30-34 were slightly more likely to have experienced fistula (2 percent). Women in the North Eastern, Central, and Nairobi regions also reported slightly higher levels of fistula (2 percent).

**Table 3.43 Fistula**

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

| Background characteristic | Percentage of women who have ever had fistula | Number of women |
|---------------------------|-----------------------------------------------|-----------------|
| <b>Age</b>                |                                               |                 |
| 15-19                     | 0.3                                           | 2,717           |
| 20-24                     | 1.1                                           | 2,691           |
| 25-29                     | 1.1                                           | 2,932           |
| 30-34                     | 1.6                                           | 2,162           |
| 35-39                     | 1.1                                           | 1,780           |
| 40-44                     | 1.1                                           | 1,292           |
| 45-49                     | 1.0                                           | 1,052           |
| <b>Residence</b>          |                                               |                 |
| Urban                     | 1.3                                           | 5,929           |
| Rural                     | 0.8                                           | 8,696           |
| <b>Region</b>             |                                               |                 |
| Coast                     | 0.7                                           | 1,421           |
| North Eastern             | 1.8                                           | 299             |
| Eastern                   | 0.8                                           | 2,066           |
| Central                   | 1.8                                           | 1,905           |
| Rift Valley               | 0.7                                           | 3,714           |
| Western                   | 0.5                                           | 1,571           |
| Nyanza                    | 1.3                                           | 1,908           |
| Nairobi                   | 1.6                                           | 1,742           |
| <b>Education</b>          |                                               |                 |
| No education              | 1.1                                           | 1,015           |
| Primary incomplete        | 0.6                                           | 3,793           |
| Primary complete          | 1.4                                           | 3,543           |
| Secondary+                | 1.1                                           | 6,274           |
| <b>Wealth quintile</b>    |                                               |                 |
| Lowest                    | 0.7                                           | 2,236           |
| Second                    | 0.9                                           | 2,590           |
| Middle                    | 0.7                                           | 2,859           |
| Fourth                    | 1.8                                           | 3,113           |
| Highest                   | 0.9                                           | 3,827           |
| <b>Total</b>              | <b>1.0</b>                                    | <b>14,625</b>   |

# OVERVIEW OF DATA COLLECTED IN FULL AND SHORT QUESTIONNAIRES

## Appendix **A**

| 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 <sup>1</sup>                                                              | •    |       |
| 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                                                                                                               | •    |       |

<sup>1</sup> 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 only collected from women in the one-half of households administered the full questionnaire, there are sufficient cases to calculate county level estimates of women's nutritional status.



## REFERENCES

---

Bradley, Sarah E. K., Trevor N. Croft, Joy D. Fishel, and Charles F. Westoff. 2012. *Revising Unmet Need for Family Planning*. DHS Analytical Studies No. 25. Calverton, Maryland, USA: ICF International.

Central Bureau of Statistics (CBS), Ministry of Health (MOH), and ORC Macro. 2004. *Kenya Demographic and Health Survey 2003*. Calverton, Maryland: CBS, MOH, and ORC Macro.

Government of Kenya, 2010. Kenya Health Policy, 2012-2030. Nairobi, Kenya. <http://www.eahp.or.tz/policies/view/kenya-health-policy-2012-2030>.

Household Survey Indicators for Malaria Control. 2013. <http://www.malariasurveys.org/documents/Household%20Survey%20Indicators%20for%20Malaria%20Control.pdf>.

Kenya National Bureau of Statistics (KNBS) and ICF Macro. 2010. *Kenya Demographic and Health Survey 2008-09*. Calverton, Maryland: KNBS and ICF Macro.

National Council for Population and Development (NCPD) [Kenya] and Institute for Resource Development/Macro Systems Inc. (IRD). 1989. *Kenya Demographic and Health Survey 1989*. Columbia, Maryland: NCPD and IRD.

National Council for Population and Development (NCPD) [Kenya], Central Bureau of Statistics (CBS), and Macro International Inc. (MI). 1994. *Kenya Demographic and Health Survey 1993*. Calverton, Maryland: NCPD, CBS, and MI.

National Council for Population and Development (NCPD) [Kenya], Central Bureau of Statistics (CBS), and Macro International Inc. (MI). 1999. *Kenya Demographic and Health Survey 1998*. Calverton, Maryland: NCPD, CBS, and MI.

United Nations Children's Fund (UNICEF.) 2013. *Levels and Trends in Child Mortality*. United Nations Inter-Agency Group for Child Mortality Estimation. New York, New York.