NIGERIA

NATIONAL

Monitoring the Situation of Children and Women

MULTIPLE INDICATOR CLUSTER SURVEY

2016-2017

FINAL REPORT

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MICS

Nigeria

Multiple Indicator Cluster Survey 2016-17

Final Report

May, 2018

The fifth round Multiple Indicator Cluster Survey (MICS5) was carried out in 2016-2017 by the National Bureau of Statistics (NBS) in collaboration with the National Primary Health Care Development Agency (NPHCDA) and National Agency for the Control of Aids (NACA), as part of the global MICS programme. Technical support was provided by the United Nations Children's Fund (UNICEF) and WHO/UNICEF Joint Monitoring Programme (JMP) while World Health Organization (WHO), World Bank, Save One Million Live (SOML), Bill and Melinda Gates Foundation, United Nations Population Funds (UNFPA) and UNICEF provided financial support.

The global MICS programme was developed by UNICEF in the 1990s as an international household survey programme to support countries in the collection of internationally comparable data on a wide range of indicators on the situation of children and women. MICS surveys measure key indicators that allow countries to generate data for use in policies and programmes, and to monitor progress towards the Sustainable Development Goals (SDGs) and other internationally agreed upon commitments. The Nigeria MICS5 provided opportunity for strengthening of national statistical capacity by providing technical guidance on data gathering, quality of survey information, statistical tracking and analysis. MICS5 contributed to the improvement of data and monitoring systems in Nigeria and strengthened technical expertise in the design, implementation and analysis of such systems. In addition, MICS5 provided statistics to complement and assess the quality of data from recent national surveys such as Nigerian General Household Panel Survey (NGHPS) and National Demographic and Health Survey (NDHS) conducted by National Population Commission (NPopC).

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List of Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
APP	Agricultural Promotion Policy
BCG	Bacillus Calmette-Guérin (Tuberculosis)
BMGF	Bill and Melinda Gates Foundation
BNPC	Budget and National Planning Commission
CAPI	Computer Assisted Personal Interviewing
CBN	Central Bank of Nigeria
CDC	Centers for Disease Control and Prevention
CRC	Convention on the Rights of the Child
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
CSPro	Census and Survey Processing System
DFID	Department for International Development
DPT	Diphtheria Pertussis Tetanus
ECCD	Early Childhood Care and Development
ECDI	Early Child Development Index
EPI	Expanded Programme on Immunization
FGM/C	Female genital mutilation/cutting
GPI	Gender Parity Index
HIV	Human Immunodeficiency Virus
ICT	Information and Communications Technology
IDD	Iodine Deficiency Disorders
ITN	Insecticide Treated Net
IUD	Intrauterine Device
JMP	Joint Monitoring Programme
LAM	Lactational Amenorrhea Method
LLIN	Long-Lasting Insecticidal Net
MCV	Measles Containing Vaccines
MDAs	Ministries, Departments and Agencies
MDG	Millennium Development Goals
MICS	Multiple Indicator Cluster Survey
MICS5	Fifth global round of Multiple Indicator Clusters Surveys programme
MoH	Ministry of Health
MOV	Missed opportunity for Vaccination
NACA	National Agency for the Control of AIDS
NAR	Net Attendance Rate
NBS	National Bureau of Statistics
NDHS	National Demographic and Health Survey
NGHIPS	Nigerian General Household Panel Survey
NISH	National Integrated Survey of Households
NPHCDA	National Primary Health Care Development Agency
NPopC	National Population Commission
PNC	Post-natal Care
Ppm	Parts Per Million
ORT	Oral rehydration treatment
SDG	Sustainable Development Goals
SFR	Survey Findings Report
SOML	Saving One Million Live
SPSS	Statistical Package for Social Sciences

TFR	Total Fertility Rate
UNAIDS	United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNGASS	United Nations General Assembly Special Session on HIV/AIDS
UNICEF	United Nations Children's Fund
UNIO	United Nations and International Organizations
VIP	Ventilated Improved Pit
WB	World Bank
WCARO	West and Central Africa Regional Office
WFFC	World Fit for Children
WHO	World Health Organization

Foreword

The Nigeria Multiple Indicator Cluster Survey (MICS) 2016-17 was conducted by the National Bureau of Statistics (NBS) in collaboration with United Nations Children's Fund (UNICEF). It is part of the global MICS exercise aimed primarily to collect data on main indicators related to survival, development and protection of children, women and men. In Nigeria, the current survey is the fifth round, having previously conducted the survey in 1995, 1999, 2007 and 2011. The survey serves as a reliable information source and a sound basis for informed decision-making for planners, policy-makers and programme implementers.

More specifically, Nigeria MICS 2016-17 collected data on indicators related to child mortality; child and maternal nutrition; child health, reproductive health; water and sanitation; child development; literacy and education; child protection; knowledge of HIV and AIDS; access to mass media and use of information and communication technology among others. The survey provides estimated disaggregation of Nigeria by states, geo political zones, sex, age, residence (urban and rural), mother's education and wealth quintiles. For this round of Nigeria MICS, water quality testing was also included for the first time and has generated valuable data on the quality of drinking water consumed at the household level. This was done by subjecting water used in the household for cooking and drinking to microbiological parameters test.

Nigeria MICS data is useful in monitoring progress towards Sustainable Development Goals (SDGs) as well as various international agreements such as A World Fit for Children (WFFC).I am confident that the findings from Nigeria MICS 2016-17 will be instrumental in formulating sectoral plans and shaping policies toward the SDGs. I look forward to see the results and the dataset being used widely and effectively by the public, most especially the policy-makers, planners, researchers, development partners and Non-Governmental Organizations (NGOs) to formulate and monitor programmes and strategies.

MICS 2016-17 Final Report is a follow-up to MICS 2016-17 Survey Findings Report (SFR) published in October 2017. In this report, some of the important indicators were explained in simple prose format and charts to make it useful and friendly for policy makers. It also contains trend analysis from last MICS results and abridged tables from SFR.Hence, this Final report should be used as complementary to the SFR.

On behalf of Government of Nigeria, I would like to thank UNICEF, WHO, UNFPA, Save One Million Lives (SOML), Bill and Melinda Gates Foundation and other development partners for their technical and financial support throughout the planning, implementation, analysis, report writing and dissemination of Nigeria MICS 2016-17.

Yemi Kale
Statistician General of the Federation

Acknowledgements

The Multiple Indicator Cluster Survey (MICS) is a primary source of information on women and children as it provides statistical indicators that are critical for the measurement of human development. It is an international household surveydeveloped by United Nations Children's Fund (UNICEF). The MICS is designed to collect statistically sound and internationally comparable estimates of key indicators that are used to assess the situation of children and women in the areas of health, nutrition, water and sanitation, education, child protection and HIV/AIDS. It is also being used to generate data for monitoring the progress towards national goals and global commitments which aimed at promoting the welfare of children and women.

Apart from being a major source of data for indicators related to development and improvement of well-being of children, women and men, MICS also has as a key objective to improve statistical systems and this was demonstrated by having key players in Nigeria Statistical Systems in the planning and execution of the survey.

The first in the series of the MICS in Nigeria was conducted in 1995 by the Federal Office of Statistics (FOS), now National Bureau of Statistics (NBS), with technical and funding assistance from UNICEF. Since then, MICS has been institutionalized within the National Integrated Survey of Households (NISH) in the National Bureau of Statistics, as a process of collecting regular, reliable and timely social statistics. The second and third rounds of MICS were conducted in 1999 and 2007 respectively. The fourth round of MICS conducted in 2011 was better planned and executed than the previous rounds. The MICS 2016-17 (MICS5) consolidated on the achievement of MICS4 by providing data for more indicators, introduced the use of Computer Assisted Personal Interveiw (CAPI) device and further raised the quality of data collection as acknowledged by UNICEF regional office and headquarters.

In addition, the current round of MICS has been expanded in content and scope to include questionnaires for individual men and water quality test. New modules were also introduced such as tobacco and alcohol use, life satisfaction, access to mass media and use of information and communication technology. Another innovation introduced in the MICS 2016-17 included further analysis and disaggregation of state data up to senatorial district levels (as can be seen in Lagos and Kano statesreports) with the aim of providing data that can be used for better planning and programming at the grassroots. The climax of the new innovations was the successful combination and implementation of two national surveys- Multiple Indicator Cluster Survey (MICS) and National Immunization Coverage Survey (NICS)- jointly executed together as MICS/NICS.

In presenting this Final Report of MICS5, we wish to express our gratitude and appreciation to all those who contributed directly or indirectly in the design and execution of the survey. The list includes staff of National Bureau of Statistics (NBS),National Steering and Technical Committees on MICS5 which cut across various Ministries, Departments and Agencies (MDAs), includingNational Primary Health Care Development Agency (NPHCDA), National Agency for the Control of AIDS (NACA), Sustainable Development Goals (SDG) Office, National Population Commission, Central Bank of Nigeria, the Federal Ministries of Health, Education, Water Resources, Agriculture, Women Affairs, Budget and National Planning, and various Non-Government Organizations. We appreciate the spirit of partnershipdemonstratedby these agencies to the success of the survey in releasing their staff at various stages.

We are thankful to UNICEF Nigeria for the technical and financial support for MICS5. We recorgnised the significant contributions of the Chief of Monitoring and Evaluation (Mr. Denis Jobin) and Monitoring and Evaluation Specialist (Dr. Adeniyi Olaleye) towards the successful completion of the survey. We also appreciate the technical inputs of UNICEF West and Central Africa Region (WCARO) office and UNICEF headquartersin providing quality assurance throughout the process.

We acknowledge the technical support of WHO/UNICEF Joint Monitoring Programme (JMP) and Ministry of Water Resourceson Water Quality test. We are also grateful to United Nations Population Fund (UNFPA), Bill and Melinda Gates Foundation, the World Bank, US Agency for International Development (USAID) through NACA, Kano State Government, and Saving One Million Lives (SOML) for their financial contributions to the project.

The NBS also expresses its appreciation for the support and efforts of the state governments through the Statistician Generals' of State Bureau of Statistics (SBS) and Director of State Statistical Agencies (SSA) who in their capacities ensured the success of this survey in their respective states. We deeply appreciate your efforts and collaboration both with UNICEF and NBS.

We wish to appreciate the dedication of MICS implementation team in NBS for providing the logistical arrangements for the training, data collection, monitoring of the field work and for maintaining a high level of data quality control. My special thanks go to Mr. Adeyemi Adeniran (MICS5 National Coordinator) who brought his wealth of experience to bear in conducting this round of MICS, Mr. Tunde Adebisi (Sampling Expert), Mr. B.M Samanja (Director, Field Services and Methodology), Zonal Controllers, State Officers and the remaining core members of MICS5.

Finally, we wish to acknowledge with gratitude the contributions of field personnels including supervisors and interviewers who visited the households and collected the information from the respondents. Their resilience, dedication and hard work added value to the quality and outcome of this survey.

Dr. Isiaka Olarewaju
Nigeria MICS Project Director
National Bureau of Statistics

Executive Summary

Introduction

This report is based on the Nigeria Multiple Indicator Cluster Survey (MICS 5) 2016-17, conducted between September 2016 and January 2017 by National Bureau of Statistics (NBS), with technical and financial support from UNICEF, WHO, UNFPA, Bill and Melinda Gates Foundation, Save One Million Lives and NACA. The survey provides statistically sound and internationally comparable data essential for developing evidence-based policies and programmes, and for monitoring progress toward national goals and global commitments. Among these global commitments are those emanating from the World Fit for Children Declaration and Plan of Action, the goals of the United Nations General Assembly Special Session on HIV/AIDS, the Education for All Declaration and the Millennium/Sustainable Development Goals (MDGs/SDGs). The Nigeria Multiple Indicator Cluster Survey 2016-17 has been designed to measure achievements of MDGs and provide baseline for SDGs. More specifically, Nigeria MICS 2016-17 will assist UNICEF in monitoring and evaluating its country programmes including those on child survival, development, protection and rights of children, women and men.

Survey Objectives

The objectives of Nigeria Multiple Indicator Cluster Survey (MICS) 2016-17 are to: (1) provide up-to-date information for assessing the situation of children and women in Nigeria, (2) generate data for the critical assessment of the progress made in various programme areas, and to identify areas that require more attention, (3) contribute to the generation of baseline data for the SDG, (4) provide data needed for monitoring progress toward goals established in the post Millennium Declaration and other internationally agreed goals, as a basis for future action, (5) provide disaggregated data to identify disparities among various groups to enable evidence based actions aimed at social inclusion of the most vulnerable.

Sample and Survey Methodology

The sample for the Nigeria MICS 2016-17 was designed to provide estimates for a large number of indicators on the situation of children and women at the national, rural/urban, states as well as, the 6 geo-political zones of Nigeria. The states within each zone were identified as the main sampling Strata while the Enumeration Areas (EAs) within each state were identified as the Primary Sampling Units (PSUs). The EAs for the survey were selected from the National Integrated Survey of Households round 2 (NISH2) master samples, based on a list of EAs prepared for the 2006 Population Census. Two stage sampling was conducted with the first stage being the selection of EAs within the strata while the second stage was the selection of households within each EAs. Out of 37,440 households sampled, 35,747 households were visited, 34,289 were occupied and 33,901 were successfully interviewed, representing a household response rate of 98.9 percent. Of these, 34,376 women and 15,183 men age 15-49 years were successfully interviewed.

Questionnaires

Four sets of questionnaires were used in the survey; the household questionnaire, the individual women questionnaire, the individual men questionnaire and the under-five children questionnaire. These were the MICS5 standard questionnaires adapted to Nigeria situation.

Fieldwork and Data Processing

Training for the fieldwork was conducted for thirty-one (31) days in August 2016. The data were collected by 78 teams; each team comprised four interviewers, one driver, one measurer and a supervisor. Fieldwork began in September, 2016 and concluded in January 2017. Using Computer Assisted Personal Interviewing (CAPI), the data were electronically captured from the field and transmitted to a central server, using CSPro

CAPI application, Version 5.0. Data were analysed using the Statistical Package for Social Scientists (SPSS) software, Version 21. Model syntax and tabulation plans developed by UNICEF MICS team were customized and used for this purpose.

Characteristics of Households

The age structure of Nigeria shows a largely young population. Of the 182,165 household members enumerated, forty-Seven percent of the population are under the age of 15 years, contributing to the high dependency ratio in Nigeria. Households are traditionally headed by men, but a substantial proportion, about fifteen percent, of households were headed by women. Majority of Nigerian, 63.4 percent of households, reside in rural areas, with the North West region accounting for the highest proportion, 26.9 percent, while South East region has the least, 9.2 percent. Twenty-two percent of the household heads had no education, while 19.3 had primary education, 26.7 percent with Secondary / Secondary-technical and 16.3 percent had higher education.

Characteristics of Women, Men and Under five Children

Women: Majority of the woman are married, with 7 in 10 women age 15-49 years being currently married. About 23 percent of them had no education, 14.4 percent with primary education, while 36.3 had secondary education and 10.2 percent had higher education. Sixty-four percent of women resides in the rural areas.

Men: In contrast to the women, about half of eligible men were never married. Among the eligible men, 10.3 percent of them had no education, 13.2 percent with primary education, while 45.2 had secondary education and 17.3 percent had higher education. Similar to the women, most men, sixty-three percent, resides in the rural areas.

Children: There is a somewhat higher proportion of children in the rural areas, 69.5 percent, compared to the adult population. Likewise, a higher proportion of children under 5 years old were in the poorest households, 23 percent, compared to 17.8 percent in the richest households.

Child Mortality

MICS 5 estimate of neonatal mortality rate is 39 per 1,000 live births, while Infant mortality rate is 70 per 1,000 live births. This implies that 1 in 15 livebirths in Nigeria die before their first birthday according to the MICS5 2016-17 survey. Also, under-five mortality rate is estimated to be 120 per 1,000 live births – 1 in 9 live births die before their fifth birthday.

Urban-rural mortality differential is pronounced across early childhood age groups. As expected, mortality rates in urban areas are lower than rural areas in Nigeria. Also, mortality is higher in the poorer households, as one out of 6 children who lives in the poorest household in Nigeria die before their fifth birthday. Nine states in the northern region have higher U5 mortality rates than the national average: Nasarawa, Niger, Bauchi, Gombe, Jigawa, Kano, Katsina, Kebbi, and Zamfara. To achieve SDG 3.2, there must be at least 50 percent reduction in early childhood mortality rates before 2030 across all groups.

Nutrition

Three in 10 children under five years have acute, chronic or both malnutrition. Two in 5 children under five years are stunted and 1 in 5 children under 5 years are severely stunted. Fourteen in 36 states in Nigeria have wasting prevalence that are classified as serious for public health significance. Mothers with at least secondary education have higher proportion of obese children than those with lower and non-formal education.

Quite a low proportion of mother, three out of 10, initiated early breastfeeding as recommended by WHO, however, 7 in 10 mothers eventually initiated breastfeeding within 24 hour of birth delivery. The 24 percent exclusive breastfeeding rate is yet to meet the WHO Global nutrition target of 50 percent. One in two infants is predominantly breastfed while just one in five is exclusively breastfed.

Salt Iodization

Iodized salt containing 15 ppm or more are consumed in 69 percent of sampled household with higher prevalence in South South and South East. There was slight variation in households using adequately iodized salt in urban and rural areas. Richer households consume adequately iodized salt more than others in poorer wealth quintile.

Low Birth Weight

Only one in 4 live births were weighed at birth, and fifteen percent of these births are classified as low weight because they are less than 2,500 grams at birth. Although more babies are weighed at birth in the southern part of the country, the proportion of low birth weights babies is less than 20 percent across all the geopolitical zones in Nigeria.

Child health

Vaccination coverage is an important indicator of Immunization, one of the cost-effective means of ending preventable deaths of newborn and under 5 children. Eighteen percent of children age 12-23 months received all recommended vaccination by their first birthday in the survey. Specific vaccine coverage are 35 percent for Tuberculosis; 34 percent coverage for polio, 30 percent coverage for pentavalent vaccine, 39 percent coverage for Measles and 36 percent coverage for yellow fever. The MICS 2016-17 survey also showed that about half of women with a live birth in the last two years prior to the survey received antenatal tetanus toxoid, which protected against neonatal tetanus.

Malaria prevention in pregnancy was adequate in only one out of 6 women age 15-49 years, who received three or more doses of SP/Fansidar during their last pregnancy that led to a live birth in the last 2 years. Reported illnesses in under-five children, two weeks preceding survey, are diarrhoea in 14.3 percent, ARI in 3 percent, and malaria fever in 25.4 percent of children under five.

Water and Sanitation

Access to safe and clean drinking water and sanitation is essential to human health. Sixty-four percent of household members use improved sources of drinking water. Only 2.3 percent of households using unimproved drinking water sources have appropriate water treatment method. About fifty-two percent of household population use improved sanitation facility, mostly using pit latrine with slab and flush or pour flush into septic tank. On shared sanitation facilities, one in 3 household members use improved sanitation facilities that are not shared. Overall, 26.5 percent of households have both improved drinking water source and improved sanitation facility. One in 10 households have a specific place for handwashing where water and soap or other cleansing agents are present. There are differentials across social groups in Nigeria.

E.Coli contaminated drinking water is high and of public health concern as 90.8 percent of household members in Nigeria drink faecal contaminated water. Percentage of Household with improved drinking water sources accessible on the premises, available when needed, and free from faecal contamination is remarkably low 3.7 percent.

Reproductive Health

Fertility is high in the Nigerian population, as a woman will have about 6 children over her childbearing years. Adolescent birth rate is 120 per 1,000 women in the 15-19 age group. Adolescent fertility differentials per 1,000 women age 15-19 are: 59 in urban; 154 in rural; 35 in the richest quantile; 199 in the

poorest quantile; 9 in women with higher education; 232 in women with non-formal education. Also, three in 10 women age 20-24 have had a live birth before age 18.

One out of 8 women currently married or in union are using contraception (13.4 percent). Unmet need for family planning in Nigeria is 27.6 percent. The most commonly used contraceptive methodis injectable (4.3% percent). Contraceptive prevalence ranges from 7.6 percent in North-East to 25.8 percent in South-West. About 21 percent of married women in urban areas and 10 percent in rural areas use a method of contraception. Adolescents are far less likely to use contraception than older women.

About 65.8 percent received antenatal care from a skilled provider and 49.1 percent of women with a live birth in the last two years had adequate antenatal visit (four or more antenatal visits). Two out of 5 of births were delivered by skilled personnel- doctor, nurse, midwife or auxiliary midwife. Assistance by skilled birth attendant is as low as 23.6 percent in North-West and as high as 90.7 percent in the South-East. 37.5 percent of women age 15-49 used health facility for their last delivery;24.4 percent in public health facilities and 13.1 percent in private health facilities.

Early childhood development

One out of 3 children attends organized early childhood education programme in Nigeria, with more children in Southern regions than Northern part. About two-thirds (62.8 percent) of the children have an adult household member engage them on four or more activities that promote learning and school readiness. Involvement of biological father and mother in activities that support early learning is as low as 10.8 percent and 28.1 percent respectively. Only 5.6 percent of the children live in households where there are at least 3 children's books accessible to the child. Three in 5 children age 36-59 months are developmentally on track in at least three of the four early childhood development domains. One third of children were left with inadequate care either by being left alone or in the care of another child.

Literacy and Education

The percentage of young people age 15-24 years who can read a short simple statement about everyday life or who attended secondary or higher education was used in the survey to estimate literacy rate. Literacy rate is 59.3 percent for women and 79.9 percent for men age 15-24. The rate is very low among young women and men in Niger, Bauchi, Gombe, Yobe, Jigawa, Katsina, Kebbi, Sokoto and Zamfara, which are all in the Northern region of Nigeria. School readiness is also low as 39 percent of children in the first grade of primary school attended pre-school the previous year.

Net intake rate in primary education is 39.4 percent. One third of children of school-entry age were enrolled in first grade of primary school. Three in 5 of primary school age children and two in 5 secondary school age children are currently attending school. 94 percent of children reach final grade (primary 6) in government-owned primary school.

Primary school completion rate is 63 percent. This implies that six in 10 children of primary completion age of 11 years are in the last grade of primary education. Transition rate to secondary school is 49 percent. Gender parity for primary school is 1.00, indicating no difference in the attendance of girls and boys in primary school. It is however, 0.97 for secondary school.

Child protection

Forty-seven percent of children under age 5 have their birth registered under civil authority. About 50 percent of children are involved in child labour, while 39 percent are working under hazardous condition. In Nigeria, about 85 percent of children age 1-14 years was subjected to at least one form of violent discipline.

Early marriage and domestic violence

The percentage of women who married before age 15 years in Nigeria is 18.5 percent. Forty-four percent of women age 20-49 years married before age 18 years. About 18.4 percent of women had some form of female genital mutilation. One in three women in Nigeria feel that a husband/partner is justified in hitting or beating his wife in at least one of the five situations.

HIV/AIDS and Sexual Behaviour

Majority of young people have heard of HIV/AIDS but few have correct and comprehensive knowledge of the disease. Twenty-nine percent of women and thirty-four percent of men have knowledge of the two main ways of HIV prevention. About half of the women can identify the 3 ways of HIV transmission from mother to child. Stigma and discrimination is still high in Nigeria because about one in ten persons in Nigeria have accepting attitude towards people living with HIV.

Six in 10 men and women age 15-49 know where to do an HIV test. Only one in seven have been tested and know the result of the test in the last 12 months. More men know where to go for test, but more women actually do the test before or in the last 12 months to the survey.

Early sexual debut is higher in the Northern Nigeria, among female age 15-24 who do not have formal education, married, live in poorest wealth quintile household and in rural areas. Other risk factors for HIV/AIDS are having multiple sexual partner and sex with a non-marital, non-cohabiting partner, as well as age-mixing among sexual partner; very few women age 15-49 (2 percent) had sex with more than one partner in the last 12 months. Percentage of men (11 percent) who were engaged in the same risky sexual behaviour is higher than female. Age mixing is a common practice as 2 in 5 young women (41 percent) age 15-24 reported that they had sex with a man 10 or more years older. Age mixing is notably high in North West, rural areas, among ever married women, no education women and poor households.

Sixty-one percent of young men and 47 percent of young women who had sex with non-marital and non-cohabiting partners reported use of condom during the last sex in the last 12 months preceding the survey. Condom use among different social groups who are involved in non-regular sex is specifically higher in South East, urban areas, age group 23-24 year, never married, higher education and richest wealth index quintile household.

Access to Mass Media and Use of Information/Communication Technology

Exposure to specific media (newspapers/magazines, radio and television) at least once a week among young people is low - 5.5 percent of young women and 18.5 percent of young men. South west has the highest media exposure: 91.7 percent of males and 80.7 percent of female exposed to at least one of the three media sources in a week. Exposure to computer and the internet is also low- 13.4 percent and 20.6 percent of young women and men had ever used computer respectively. Also, 17.3 percent and 32 percent of young women and men had ever used internet respectively.

Subjective well-being

At least nine in 10 young women and men age 15-24 years are very or somewhat happy. Young people who are happy are more than those who are satisfied with life, and those who are satisfied with life are more than those who perceived a better life. Zamfara (97.8 percent) and Akwa-Ibom (99.6 percent) have the highest percentage of young women and men who have overall life satisfaction respectively. Seven in 10 young women and men perceived that their lives improved during the last one year and expect that it will get better after one year.

Tobacco and Alcohol Use

Use of tobacco products is higher among men than women in the last one month: 6.9 percent of men and 0.3 percent of women use Tobacco products. Proportion of people age 15-49 who smoked a whole cigarette before age 15 years is 1.6 percent of men and 0.2 percent of women.

Use of alcohol is also higher among men than women in the last one month as 19.4 percent of men use alcohol while 6.4 percent of women use alcohol. Percentage of people age 15-49 who had at least one alcoholic drink whole before age 15 years is 5.5 percent of men and 3.3 percent of women.

I. Introduction

Background

This report is based on the Nigeria Multiple Indicator Cluster Survey (MICS)2016-17, conducted between September 2016 and Jauary 2017 by National Bureau of Statistics (NBS), with technical and financial support from UNICEF, WHO, UNFPA, Bill and Melinda Gates Foundation, Save One Million Lives and NACA. The survey provides statistically sound and internationally comparable data essential for developing evidence-based policies and programmes, and for monitoring progress toward national goals and global commitments. Among these global commitments are those emanating from the World Fit for Children Declaration and Plan of Action, the goals of the United Nations General Assembly Special Session on HIV/AIDS, the Education for All Declaration and the Sustainable Development Goals (SDGs).

The Federal Government of Nigeria has made several efforts to achieve the objectives and aspirations expressed in the Sustainable Development Goals (SDGs). The Government has also expressed strong commitment to, and declared as a matter of high priority, efforts to monitor and evaluate progress towards the attainment of the benchmarks established in the World Fit for Children goals, the UNICEF Country Programme, the Convention on the Rights of the Child (CRC) and the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), among others.

In recent times, a number of development initiatives were launched to improve the economic and social life of the people. The Change agenda of the present Government and Vision 20:2020 are developed to create employment, increase and stabilise electricity power supply, improve social and economic infrastructure and provide enabling environment for local and foreign investments and to become one of the twenty leading economies in the world by year 2020.

The National Bureau of Statistics (NBS), an agency of the Federal Government of Nigeria, with strong financial and technical support from International Development partners and donors like UNICEF, UNFPA and DFID among others has also been involved in effort to achieve the goals through provision of relevant data to monitor, evaluate and advise necessary adjustment in development programmes. The Nigeria Multiple Indicator Cluster Survey 2016-17 conducted by NBS has been designed to measure achievements of MDGs and provide baseline for SDGs. More specifically, Nigeria MICS 2016-17 will assist UNICEF in monitoring and evaluating its country programmes including those on child survival, development, protection and rights of children, women and men.

Survey Objectives

The objectives of Nigeria Multiple Indicator Cluster Survey (MICS) 2016-17 are to:

- ✓ provide up-to-date information for assessing the situation of children and women in Nigeria;
- ✓ generate data for the critical assessment of the progress made in various programme areas, and to identify areas that require more attention;
- ✓ contribute to the generation of baseline data for the SDG;

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

- ✓ provide disaggregated data to identify disparities among various groups to enable evidence based actions aimed at social inclusion of the most vulnerable.

II. Sample and Survey Methodology

Sample Design

The sample for the Nigeria, 2016-17 was designed to provide estimates for a large number of indicators on the situation of children and women at the national, rural/urban, states as well as, the 6 geo-political zones of Nigeria. The states within each zone were identified as the main sampling Strata while the Enumeration Areas (EAs) within each state were identified as the Primary Sampling Units (PSUs). The EAs for the survey were selected from the National Integrated Survey of Households round 2 (NISH2) master samples, based on a list of EAs prepared for the 2006 Population Census. Two stage sampling was conducted with the first stage being the selection of EAs within the strata while the second stage was the selection of households within each EAs.

Within each state, 60 EAs were selected systematically from the NISH2 master sample, apart from Lagos and Kano where 120 EAs were sampled for each state. The larger sample size for Lagos and Kano states was based on requests by the respective State governments to have sufficient sample to enable disaggregation of indicators at senatorial district level. After a household listing was carried out within the selected EAs, a systematic sample of sixteen (16) households was drawn in each sample EA. The sample was stratified by state and was not self-weighting. For reporting of results, sample weights were applied. Out of 2,340 EAs selected for coverage, 2,239 were listed and covered during the fieldwork period. A total of 101 EAs could not be enumerated because they were inaccessible due to insecurity especially in Borno, Yobe and Adamawa states. A more detailed description of the sample design can be found in Appendix A,

The Nigeria MICS 2016-17 was implemented jointly with the National Immunisation Coverage Survey (NICS) which was designed to provide estimates of vaccine coverage for the country. However, the sample size for Nigeria MICS 2016-17 was not sufficient to estimate state level vaccination coverage for children aged 12 to 23 months in twenty states, namely: Abia, Akwa Ibom, Anambra, Bayelsa, Benue, Cross River, Delta, Edo, Ekiti, Enugu, Imo, Kogi, Kwara, Ogun, Ondo, Osun, Oyo, Plateau, Rivers and FCT (Abuja). Consequently, supplemental sampling was conducted to meet the requirements for vaccine coverage estimation, in these twenty states.

Questionnaires

Four sets of questionnaires were used in the Nigeria, 2016-17:

1. **Household questionnaire** - used to collect basic demographic information on all the household members (usual residents) and household characteristics;

Household questionnaire modules	• Household Information Panel • List of Household Members • Education • Child Labour • Child Discipline • Household Characteristics • Insecticide Treated Nets • Water and Sanitation • Handwashing • Salt Iodization • Water Quality Test

2. Individual women questionnaire - administered in each household to all women age 15-49 years;

Individual women questionnaire modules	• Woman Information Panel • Woman's Background • Access to Mass Media and Use of Information/Communication Technology • Fertility/Birth History • Desire for Last Birth • Maternal and New-born Health • Post-natal Health Checks • Illness Symptoms • Use of Contraception • Unmet Need for Contraception • Female Genital Mutilation/Cutting • Attitudes Toward Domestic Violence • Marriage/Union • Sexual Behaviour • HIV/AIDS • Tobacco and Alcohol Use • Life Satisfaction

3. Individual men questionnaire - administered to all men age 15-49 years in every other (one in every two) households;

Individual men questionnaire modules	• Men Information Panel • Man's Background • Access to Mass Media and Use of Information/Communication Technology • Fertility • Attitudes Toward Domestic Violence • Marriage/Union • Sexual Behaviour • HIV/AIDS • Circumcision • Tobacco and Alcohol Use • Life Satisfaction

4. Under-5 children questionnaire - administered to mothers or caretakers of all children less than 5 years of age[1] living in sampled households.

Under-5 children questionnaire modules	• Under Five Information Panel • Age • Birth Registration • Early Childhood Development • Breastfeeding and Dietary Intake • Immunization • Care of Illness • Anthropometry

The questionnaires are based on the MICS questionnaire[2] model (English version), customised and pre-tested in Cross River, Enugu, Gombe, Lagos, Kaduna, Kano, Nasarawa and Oyo states in April, 2016. Based on the results of the pre-test, modifications were made to the wording of the questionnaires. A copy of the Nigeria MICS 2016-2017 questionnaires is provided in Appendix F.

In addition to the administration of questionnaires, fieldwork teams tested the salt used for cooking in the households for iodine content, water quality tests were conducted, observed the place for hand washing, and measured the weights and heights of children age under 5 years. Details and findings of these observations and measurements are provided in the respective sections of the report.

Training and Fieldwork

Training for the fieldwork was conducted for thirty-one (31) days in August 2016. Training included lectures on interviewing techniques and contents of the questionnaires. Mock interviews among trainees were also conducted to gain practice in asking questions. Towards the end of the training

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

[2] *The model MICS 2016-17 questionnaires can be found at* ***http://mics.unicef.org/tools#survey-design****.*

period, trainees spent 2 days in field practice in purposively selected residential areas in 2 communities in each of the 6 training locations in Keffi (Nasarawa state), Gombe (Gombe state), Kano (Kano state), Enugu (Enugu state), Ikeja (Lagos state) and Calabar (Cross River state).

The data were collected by 78 teams; each team comprised four interviewers, one driver, one measurer and a supervisor. Fieldwork began in September, 2016 and concluded in January 2017.

Using Computer Assisted Personal Interviewing (CAPI), the data were electronically captured from the field and transmitted to a central server, using CSPro CAPI application, Version 5.0. Being the first time of using CAPI, the programme was pre-tested to know the effectiveness and efficiency of the device. Using CAPI to captured data helps in reducing error associated with paper questionnaire such as omission and skipping errors.

Data Processing

Data were analysed using the Statistical Package for Social Scientists (SPSS) software, Version 21. Model syntax and tabulation plans developed by UNICEF MICS team were customized and used for this purpose.

III. Sample Coverage and the Characteristics of Households and Respondents

Sample Coverage

Out of 37,440 households sampled, 35,747 households were visited, 34,289 were occupied and 33,901 were successfully interviewed, representing a household response rate of 98.9 percent. In the interviewed households, 36,176 women (age 15-49 years) were identified. Of these, 34,376 were successfully interviewed, yielding a response rate of 95.0 percent within the interviewed households.

The survey also sampled men (age 15-49), but required only a subsample. All men (age 15-49) were identified in 17,868households selected for the men questionnaire; 16,514 men (age 15-49 years) were listed in the household questionnaires. Questionnaires were completed for 15,183eligible men, which corresponds to a response rate of 91.9 percent within eligible interviewed households.

There were 28,578 children under age five listed in the household questionnaires. Questionnaires were completed for 28,085 of these children, which corresponds to a response rate of 98.3 percent within interviewed households.

Overall response rates of 93.9, 90.9 and 97.2 are calculated for the individual interviews of women, men, and under-5s, respectively (Table 3.1).

Table 3.1 (HH.1): Results of household, women's, men's and under-5 interviews

Number of households, women, men, and children under 5 by interview results, and household, women's, men's and under-5's response rates, Nigeria, 2016-17

		Residence		Geopolitical zone					
	Total	Urban	Rural	North Central	North East	North West	South East	South South	South West
Households									
Sampled	37,440	12,240	25,200	6,720	5,760	7,680	4,800	5,760	6,720
Actual Coverage	35,747	11,991	23,756	6,552	4,620	7,586	4,752	5,626	6,611
Occupied	34,289	11,311	22,978	6,318	4,447	7,424	4,593	5,387	6,120
Interviewed	33,901	11,104	22,797	6,244	4,396	7,395	4,524	5,354	5,988
Household response rate	98.9	98.2	99.2	98.8	98.9	99.6	98.5	99.4	97.8
Women									
Eligible	36,176	11,689	24,487	7,462	5,469	9,765	3,753	4,918	4,809
Interviewed	34,376	10,965	23,411	7,013	5,223	9,376	3,645	4,728	4,391
Women's response rate	95.0	93.8	95.6	94.0	95.5	96.0	97.1	96.1	91.3
Women's overall response rate	93.9	92.1	94.9	92.9	94.4	95.6	95.7	95.5	89.3
Men									
Eligible	16,514	5,450	11,064	3,468	2,559	4,356	1,568	2,253	2,310
Interviewed	15,183	4,890	10,293	3,184	2,452	3,935	1,481	2,173	1,958
Men's response rate	91.9	89.7	93.0	91.8	95.8	90.3	94.5	96.4	84.8
Men's overall response rate	90.9	88.1	92.3	90.7	94.7	90.0	93.0	95.9	82.9
Children under 5									
Eligible	28,578	7,612	20,966	5,474	4,855	9,662	2,399	3,187	3,001
Mothers/caretakers interviewed	28,085	7,471	20,614	5,347	4,733	9,519	2,383	3,172	2,931
Under-5's response rate	98.3	98.1	98.3	97.7	97.5	98.5	99.3	99.5	97.7
Under-5's overall response rate	97.2	96.4	97.5	96.5	96.4	98.1	97.8	98.9	95.6

There is no substantial difference in the response rate across areas and geopolitical zones at the household level. Most states had more than 98 percent household response rate except in Abia and Anambra - 97.6 percent each, Lagos - 95.8 percent, Ogun - 97.1 percent and Taraba - 97.3 percent. Despite the high response rate in Borno, Taraba and Yobe, it was observed that out of the 960 sampled households in each of these three states, only 292, 766 and 702 households were occupied respectively. The women response rates were also similar across the states with the exception of Osun state with, 84.2 percent. Ekiti, Ogun, Osun, Oyo and Sokoto states recorded the lowest response rate for men 80.5, 80.3, 70.3, 77.8 and 74.8 respectively. It is advised that the results for these states be interpreted with caution because of the low response rates. The difference between sampled and occupied household was due to the insecurity situations in the affected states.

Characteristics of Households

The weighted age and sex distribution of the survey population is provided in Table HH.3.2. The distribution is also used to produce the population pyramid in Figure 3.1. in the households successfully interviewed. A weighted total of182,165 household members were listed: 90,172were males, and 91,993were female.

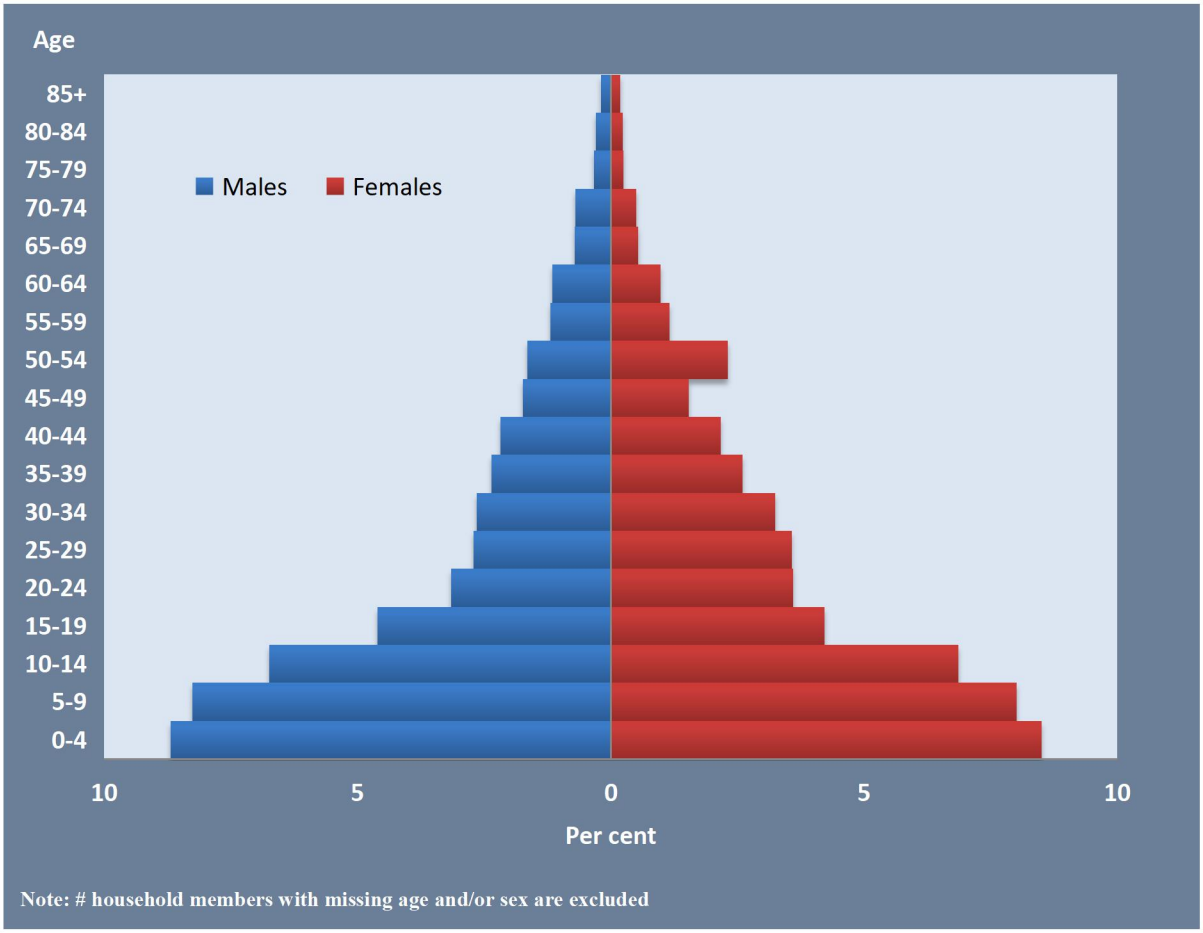
Table 3.2 (HH.2): Age distribution of household population by sex

Percent and frequency distribution of the household population by five-year age groups, dependency age groups, and by child (age 0-17 years) and adult populations (age 18 or more), by sex, Nigeria, 2016-17

	Total		Males		Females	
	Number	Percent	Number	Percent	Number	Percent
Total	**182,165**	**100.0**	**90,172**	**100.0**	**91,993**	**100.0**
Age (Years)						
0-4	31,299	17.2	15,822	17.5	15,476	16.8
5-9	29,627	16.3	15,051	16.7	14,575	15.8
10-14	24,773	13.6	12,292	13.6	12,481	13.6
15-19	16,075	8.8	8,398	9.3	7,677	8.3
20-24	12,294	6.7	5,752	6.4	6,542	7.1
25-29	11,438	6.3	4,942	5.5	6,496	7.1
30-34	10,734	5.9	4,824	5.3	5,911	6.4
35-39	9,038	5.0	4,308	4.8	4,730	5.1
40-44	7,935	4.4	3,986	4.4	3,949	4.3
45-49	5,970	3.3	3,174	3.5	2,796	3.0
50-54	7,224	4.0	3,016	3.3	4,207	4.6
55-59	4,289	2.4	2,177	2.4	2,111	2.3
60-64	3,883	2.1	2,110	2.3	1,773	1.9
65-69	2,296	1.3	1,316	1.5	980	1.1
70-74	2,193	1.2	1,292	1.4	901	1.0
75-79	1,066	0.6	613	0.7	453	0.5
80-84	961	0.5	538	0.6	423	0.5
85+	680	0.4	352	0.4	327	0.4
Missing	392	0.2	208	0.2	184	0.2
Dependency age groups						
0-14	85,698	47.0	43,166	47.9	42,533	46.2
15-64	88,880	48.8	42,687	47.3	46,193	50.2
65+	7,194	3.9	4,111	4.6	3,083	3.4
Missing	392	0.2	208	0.2	184	0.2
Child and adult populations						
Children age 0-17 years	96,192	52.8	48,746	54.1	47,446	51.6
Adults age 18+ years	85,581	47.0	41,218	45.7	44,363	48.2
Missing	392	0.2	208	0.2	184	0.2

The age structure of Nigeria shows a larger proportion of its population are young. Forty-Seven percent of the population is under the age of 15 years, thereby contributing to the dependency ratio. The population pyramid shown in figure 3.1 indicates that there is even distribution at the base up to the age group 19–24. However, the age specific sex ratio is greater than 1.0 for age group 50–54.

Figure 3.1: Age and sex distribution of household population, Nigeria, 2016-17



Tables 3.3, 3.4 and 3.5 provide basic information on the households, female respondents age 15-49, male respondents 15-49, and children under-5. Both unweighted and weighted numbers are presented. Such information is essential for the interpretation of findings presented later in the report and provides background information on the representativeness of the survey sample. The remaining tables in this report are presented only with weighted numbers.[3]

Table 3.3 provides basic background information on the households, including the sex of the household head, geopolitical zone, area of residence, number of household members, education of household

[3]See Appendix A: Sample Design, for more details on sample weights.

head, and ethnicity[4] of the household head are shown in the table. These background characteristics are used in subsequent tables in this report. The weighted and unweightedtotal number of households is equal, since sample weights were normalized3 The table also shows the weighted mean household size estimated by the survey.

Table 3.3 (HH.3): Household composition

Percent and frequency distribution of households by selected characteristics, Nigeria, 2016-17

		Number of households	
	Weighted percent	Weighted	Unweighted
Total	**100**	**33,901**	**33,901**
Geopolitical zone			
North Central	16.0	5,435	6,244
North East	16.5	5,581	4,396
North West	26.9	9,128	7,395
South East	9.2	3,132	4,524
South South	12.6	4,281	5,354
South West	18.7	6,344	5,988
Sex of household head			
Male	85.0	28,829	27,982
Female	15.0	5,072	5,919
Residence			
Urban	36.6	12,421	11,104
Rural	63.4	21,480	22,797
Number of household members			
1	10.7	3,634	4,180
2	9.5	3,220	3,583
3	12.5	4,244	4,433
4	13.6	4,620	4,536
5	12.8	4,328	4,326
6	11.3	3,816	3,828
7	8.6	2,932	2,764
8	5.9	2,004	1,876
9	4.2	1,435	1,282
10+	10.8	3,666	3,093
Education of household head			
None	22.0	7,443	7,658
Non-formal	15.5	5,269	4,175
Primary	19.3	6,558	7,252
Secondary / Secondary-technical	26.7	9,047	9,257
Higher	16.3	5,526	5,496
Missing	0.2	58	63
Ethnicity of household head			
Hausa	39.6	13,433	10,948
Igbo	13.1	4,436	5,764
Yoruba	17.3	5,873	5,886
Other ethnic group	30.0	10,159	11,303
Mean household size	5.4	33,901	33,901

Fifteen percent of the total households were headed by women. About 63.4 percent of households reside in rural areas. North West has the highest number of households with 26.9 percent, while South East has the least 9.2percent. Twenty-two percent of the household heads had no education while 19.3 had primary education, 26.7 percent with Secondary / Secondary-technical and 16.3 percent had higher education.

[4] This was determined by asking describe the questions asked and used for the construction of this background variable; typical questions asked in MICS surveys are mother tongue, ethnic background and/or religion.

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

Tables 3.4, 3.5 and 3.6 provide information on the background characteristics of female and male respondents 15-49 years of age and of children under age 5. In all the three tables, the total numbers of weighted and unweighted observations are equal, since sample weights have been normalized (standardized)3. In addition to providing useful information on the background characteristics of women, men, and children under age five, the tables are also intended to show the numbers of observations in each background category. These categories are used in the subsequent tabulations of this report.

Table 3.4 provides background characteristics of female respondents, age 15-49 years and includes information on the distribution of women according to zone, area of residence, age, marital/unionstatus, motherhood status, births in last two years, education[5], wealth index quintiles[6, 7], andethnicity of the household head.

In general, the distribution pattern of the women population is in line with that of households. Sixty-four percent of the women reside in rural areas while 36 percent live in urban areas. About 7 in 10 (71.0 percent) women age 15-49 years are currently married, 24.8 percent of them are yet to marry. About 23 percent had no education, 14.4 percent with primary education while 36.3 had secondary education and 10.2 percent had higher education. There is similarity in the distribution of wealth index quintiles among the women.

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

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

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

In Nigeria MICS 2016-17, the following assets were used in these calculations: Type of floor, roof, wall, fuel used by household for cooking, household assets, source and location of drinking water and sanitation facility.

The wealth index is assumed to capture the underlying long-term wealth through information on the household assets, and is intended to produce a ranking of households by wealth, from poorest to richest. The wealth index does not provide information on absolute poverty, current income or expenditure levels. The wealth scores calculated are applicable for only the particular data set they are based on.

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

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

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

Percent and frequency distribution of women age 15-49 years by selected background characteristics, Nigeria, 2016-17

	Weighted percent	Number of women	
		Weighted	Unweighted
Total	**100.0**	**34,376**	**34,376**
Geopolitical zone			
North Central	17.5	6,006	7,013
North East	19.2	6,584	5,223
North West	31.8	10,932	9,376
South East	7.1	2,445	3,645
South South	10.7	3,668	4,728
South West	13.8	4,741	4,391
Residence			
Urban	36.0	12,373	10,965
Rural	64.0	22,003	23,411
Age (Years)			
15-19	19.8	6,822	6,805
20-24	16.9	5,816	5,721
25-29	17.2	5,915	5,933
30-34	15.7	5,390	5,296
35-39	12.6	4,339	4,391
40-44	10.4	3,571	3,605
45-49	7.3	2,524	2,625
Marital/Union status			
Currently married/in union	71.0	24,373	23,891
Widowed	1.9	638	648
Divorced	1.0	356	295
Separated	1.1	375	476
Never married/in union	24.8	8,520	8,938
Motherhood and recent births			
Never gave birth	28.3	9,717	10,025
Ever gave birth	71.7		
Gave birth in last two years	33.6	11,547	11,204
No birth in last two years	38.1	13,084	13,121
Education			
None	22.7	7,799	7,255
Non-formal	16.4	5,646	4,800
Primary	14.4	4,963	5,213
Secondary	36.3	12,466	13,452
Higher	10.2	3,502	3,656
Wealth index quintile			
Poorest	17.8	6,120	5,855
Second	18.8	6,478	6,646
Middle	19.5	6,708	6,812
Fourth	20.5	7,053	7,178
Richest	23.3	8,017	7,885

Table 3.5 (HH.4M): Men's background characteristics

Percent and frequency distribution of men age 15-49 years by selected background characteristics, Nigeria, 2016-17

		Number of men	
	Weighted percent	Weighted	Unweighted
Total	**100.0**	**15,183**	**15,183**
Geopolitical zone			
North Central	18.0	2,730	3,184
North East	19.4	2,943	2,452
North West	30.8	4,674	3,935
South East	6.5	984	1,481
South South	11.0	1,664	2,173
South West	14.4	2,189	1,958
Residence			
Urban	37.1	5,627	4,890
Rural	62.9	9,556	10,293
Age (Years)			
15-19	23.1	3,508	3,590
20-24	15.7	2,378	2,378
25-29	14.4	2,191	2,149
30-34	13.7	2,078	2,076
35-39	12.8	1,936	1,938
40-44	11.4	1,724	1,729
45-49	9.0	1,368	1,323
Marital/Union status			
Currently married/in union	47.5	7,213	7,164
Widowed	0.2	35	34
Divorced	0.3	44	39
Separated	0.8	114	141
Never married/in union	51.1	7,749	7,781
Fatherhood status			
Has at least one living child	46.0	6,977	6,942
Has no living children	53.7	8,154	8,201
Education			
None	10.3	1,563	1,526
Non-formal	14.1	2,140	1,681
Primary	13.2	1,997	2,090
Secondary	45.2	6,861	7,319
Higher	17.3	2,622	2,567
Wealth index quintile			
Poorest	17.2	2,614	2,481
Second	19.1	2,901	2,963
Middle	19.3	2,927	3,000
Fourth	21.1	3,202	3,276
Richest	23.3	3,539	3,463

Similarly, Table 3.5provides background characteristics of male respondents 15-49 years of age. The table shows information on the distribution of men according to zone, residence, age, marital status, fatherhood status, education, wealth index quintiles, and ethnicity of the household head.

About 63 percent of the men reside in rural areas while 37.1 percent are in urbanareas. The table indicated that 47.5 percent of the eligible men are currently married while 51.1 percent have never married. Among the eligible men, 10.3 percent of them had no education, 13.2 percent with primary education while 45.2 had secondary education and 17.3 percent had higher education. The distribution of men across the wealth index quintiles is similar.

Background characteristics of children under 5 are presented in Table HH.3.6. These include the distribution of children by several attributes: sex, zones, residence, age in months, respondent type, mother's (or caretaker's) education, wealth and ethnicity.

Table 3.6, shows that more (69.5 percent) eligible children are in rural areas while 30.5 percent are in urban, this distribution corresponds with that of women and men. About 23 percent of children below 5 years are from pooresthouseholds while 17.8 percent are from the richest.

Table 3.6 (HH.5): Under-5's background characteristics

Percent and frequency distribution of children under five years of age by selected characteristics, Nigeria, 2016-17

		Number of under-5 children	
	Weighted percent	Weighted	Unweighted
Total	**100.0**	**28,085**	**28,085**
Geopolitical zone			
North Central	16.4	4,616	5,347
North East	21.5	6,041	4,733
North West	37.9	10,635	9,519
South East	5.5	1,550	2,383
South South	8.1	2,273	3,172
South West	10.6	2,968	2,931
Sex			
Male	50.6	14,213	14,222
Female	49.4	13,872	13,863
Residence			
Urban	30.5	8,553	7,471
Rural	69.5	19,532	20,614
Age (Months)			
0-5	9.7	2,723	2,748
6-11	9.4	2,640	2,697
12-23	19.7	5,535	5,522
24-35	19.6	5,514	5,470
36-47	20.7	5,818	5,925
48-59	20.9	5,856	5,723
Respondent to the under-5 questionnaire			
Mother	95.5	26,829	26,759
Other primary caretaker	4.5	1,256	1,326
Mother's education[a]			
None	29.0	8,134	7,672
Non-formal	22.1	6,196	5,507
Primary	15.4	4,330	4,661
Secondary	25.8	7,245	8,005
Higher	7.8	2,178	2,237
Wealth index quintile			
Poorest	22.7	6,369	6,277
Second	21.4	6,018	6,222
Middle	19.8	5,549	5,412
Fourth	18.4	5,156	5,221
Richest	17.8	4,993	4,953
Ethnicity of household head			
Hausa	55.5	15,592	13,549
Igbo	8.2	2,310	3,189
Yoruba	9.4	2,640	2,769
Other ethnic group	26.9	7,543	8,578

[a] In this table and throughout the report, mother's education refers to educational attainment of mothers as well as caretakers of children under 5, who are the respondents to the under-5 questionnaire if the mother is deceased or is living elsewhere.

Housing characteristics, asset ownership, and wealth quintiles

Housing characteristics

Tables 3.7, 3.8 and 3.9 provide further details on household characteristics. Table 3.7presents characteristics of housing in Nigeriawhich reflect ahousehold's socioeconomic situation. It also includes information onavailability of electricity, the main materials of the flooring, roof, and exterior walls, as well as the number of rooms used for sleeping. This is disaggregated by geopolitical zones and residence.

Access to Electricity: About 54 percent ofhouseholds in Nigeria have access to electricity (86.8 percent in urban and 35.7 percent in rural). South West zone has the highest access to electricity (78.1 percent) while the North East has the lowest (38.7 percent).

Flooring material: Finished floor is the most common flooring materialused in Nigerian households (68.6 percent). Higher percentage of urban household use finished floor (90.7 percent) than rural households (55.8 percent). About 30.0 percent of Nigeria households have natural floor, which is more common in ruralareas (42.5 percent) than urban areas (8.5 percent).

Roofing material: About 83 percent households in Nigeria used finished roofing. Urban households have higher perecentage of those that used finished roofing (96.5 percent) than rural households (74.6 percent). Only 1 in 10 households used natural roofing, and it is more common in rural areas (20.0 percent) than urban (1.5 percent).

Wall material: In Nigeria, 64.3 percent of households used finished wall. The proportion is higher in South West (89.4 percent), closely followed by South East (87.8 percent), South South (84.8 percent), North Central (63.0 percent) while North East (43.3 percent) and North West (42.7 percent).

Sleeping room: The number of rooms used for sleeping in relation to the number of household members is anindication of the extent of crowding, which in turn increases the risk of contracting communicablediseases. Thirty-three percent of households use one room for sleeping.

Table 3.7 (HH.6): Housing characteristics

Percent distribution of households by selected housing characteristics, according to area of residence and regions, Nigeria, 2016-17

		Residence		Geopolitical zone					
	Total	Urban	Rural	North Central	North East	North West	South East	South South	South West
Electricity									
Yes	**54.4**	86.8	35.7	48.1	38.7	40.6	66.3	68.6	78.1
No	**45.6**	13.2	64.3	51.8	61.3	59.3	33.7	31.4	21.9
Flooring									
Natural floor	**30.0**	8.5	42.5	26.0	47.5	51.5	12.1	11.9	8.4
Rudimentary floor	**0.8**	0.4	1.0	0.2	0.3	1.0	0.1	2.0	0.9
Finished floor	**68.6**	90.7	55.8	72.6	51.1	47.2	87.7	86.0	90.3
Other	**0.6**	0.4	0.6	1.2	1.0	0.4	0.1	0.2	0.4
Roof									
Natural roofing	**13.2**	1.5	20.0	16.0	27.5	19.6	2.1	2.8	1.7
Rudimentary roofing	**3.6**	1.7	4.7	3.1	1.8	7.9	1.8	1.7	1.5
Finished roofing	**82.6**	96.5	74.6	80.7	70.6	71.1	96.2	95.4	96.3
Other	**0.5**	0.3	0.6	0.3	0.2	1.3	0.0	0.1	0.5
Exterior walls									
Natural walls	**15.4**	3.7	22.2	12.4	35.4	24.2	3.1	4.9	1.0
Rudimentary walls	**19.9**	5.0	‘28.5	23.8	20.5	33.0	9.0	9.6	9.5
Finished walls	**64.3**	91.1	48.8	63.0	43.3	42.7	87.8	84.8	89.4
Other	**0.4**	0.2	0.5	0.7	0.7	0.1	0.1	0.7	0.0
Rooms used for sleeping									
1	**33.1**	42.6	27.6	24.0	22.3	23.4	30.5	42.9	59.2
2	**31.8**	29.3	33.2	31.5	35.5	34.2	32.7	31.4	25.1
3 or more	**35.0**	28.0	39.1	44.4	42.2	42.4	36.8	25.5	15.7
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Number of households	**33,901**	**12,421**	**21,480**	**5,435**	**5,581**	**9,128**	**3,132**	**4,281**	**6,344**
Mean number of persons per room used for sleeping	**2.6**	2.6	2.5	2.4	2.8	2.9	2.1	2.3	2.5

Asset ownership

Table 3.8 shows percentage distribution of ownership of assets by households and by individual household members, as well as ownership of dwellings. The possession and use of household durable goods have multiple effects and implications. For instance, a radio or a television can bring household members information and new ideas, a refrigerator prolongs the wholesomeness of foods, and a means of transport can increase access to many services that are beyond walking distance.

About 60 percent of households in Nigeria have radios, 74.4 percent have mobile telephones, 47.0 percent have televisions, 2.5 percent have non-mobile telephones, and about 22 percent have refrigerators. In both urban and rural areas, only a small percentage of households possess a means of transport. More households in rural areasown a motorcycle or scooter (37.3 percent versus 21.6 percent) or a bicycle (23.6 percent versus 13.1 percent) than urban areas. Only 11.1 percent of households in Nigeria own a car or truck. Three in five of all households own agricultural land (63.2 percent) while 49.1 percenthave farm animals/Livestock.

Overall, about 43 percent of households have a bank account, and more than two-third of urban households have an account (66.9 percent versus 28.4 percent in rural households). Three in five of households in Nigeria owned a dwelling (68.4 percent); rural82.3 percent andurban 44.2 percent. More than half of all households own a radio across all the geopolitical zones.

Three in five of the households in the Southern part of Nigeria have a television, whereas the Northern part has lower proportions (North Central 47.8 percent, North East 29.3 percent and North West 26.4 percent). The percentage of households' ownership of agricultural land is highest in North West (78.3 percent), followed by North East (70.1 percent) and North Central (69.9 percent) while South West (34.4 percent) is the lowest. Although North West has the highest percentage of ownership of dwelling (86.8 percent), only 1 in 5 of them owned a bank account (22.8 percent).

Table 3.8 (HH.7): Household and personal assets

Percentage of households by ownership of selected household and personal assets, and percent distribution by ownership of dwelling, according to area of residence and regions, Nigeria, 2016-17

		Residence		Geopolitical zone					
	Total	**Urban**	**Rural**	North Central	North East	North West	South East	South South	South West
Percentage of households that own a									
Radio	**59.8**	66.9	55.7	59.1	54.4	59.0	65.0	57.5	65.3
Television	**47.0**	74.2	31.2	47.8	29.3	26.4	63.8	66.7	69.9
Non-mobile telephone	**2.5**	3.2	2.1	2.6	2.2	3.9	1.2	2.1	1.7
Refrigerator	**21.7**	40.5	10.9	19.5	10.1	13.1	30.1	35.0	33.2
Percentage of households that own									
Agricultural land	**63.2**	33.5	80.4	69.9	70.1	78.3	66.0	55.0	34.0
Farm animals/Livestock	**49.1**	25.7	62.6	60.4	61.0	67.0	36.7	19.5	29.2
Percentage of households where at least one member owns or has a									
Watch	**56.6**	72.3	47.6	50.6	47.3	44.4	68.3	73.0	70.8
Mobile telephone	**74.4**	89.8	65.5	79.9	69.1	57.8	81.9	84.4	87.9
Bicycle	**19.7**	13.1	23.6	15.1	27.7	27.7	22.5	17.8	5.1
Motorcycle or scooter	**31.6**	21.6	37.3	45.5	23.8	39.1	30.4	26.9	19.4
Animal-drawn cart	**6.3**	1.6	9.0	1.3	12.2	14.2	1.2	0.7	0.3
Car or truck	**11.1**	18.5	6.8	12.7	6.2	8.5	13.5	11.6	16.3
Boat with a motor	**1.8**	1.0	2.2	2.3	1.0	1.3	1.2	4.6	1.1
Bank account	**42.5**	66.9	28.4	41.6	27.3	22.8	59.9	58.8	65.5
Ownership of dwelling									
Owned by a household member	**68.4**	44.2	82.3	73.5	78.8	86.8	71.5	54.6	36.0
Not owned	**31.6**	55.7	17.6	26.4	21.2	13.2	28.4	45.4	64.0
Rented	**24.5**	48.2	10.8	18.2	15.8	8.5	25.5	34.4	53.4
Other	**7.1**	7.6	6.8	8.2	5.5	4.6	3.0	10.9	10.6
Total	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of households	**33,901**	12,421	21,480	5,435	5,581	9,128	3,132	4,281	6,344

Wealth quintiles

Table 3.9presents wealth quintiles by residence and geographical zone. In urban areas, about 47 percent of the population are in the richest wealth quintile, in sharp contrast to rural areas, where only 6.4 percent of the population are in the richest wealth quintile. Among geopolitical zones, the wealth

quintile distribution varies; more than half of the population in the South West (53.0 percent) is in the richest quintile, while 3 in 10 households in the South South (35.8 percent) and South East (31.1 percent) are in the richest quintile. In contrast, a significant proportion of households in the North West and North East (33.6 percent and 27.9 percent, respectively) are in the poorest quintile.

Table 3.9 (HH.8): Wealth quintiles

Percent distribution of the household population by wealth index quintile, according to area of residence and regions, Nigeria, 2016-17

	Wealth index quintile						
	Poorest	Second	Middle	Fourth	Richest	Total	Number of household members
Total	**20.0**	**20.0**	**20.0**	**20.0**	**20.0**	**100**	**182,165**
North Central	**15.6**	**22.6**	**25.5**	**20.0**	**16.3**	**100**	**30,688**
Benue	19.3	29.7	23.6	17.7	9.8	100	5,012
Kogi	2.4	17.6	36.2	31.7	12.0	100	3,152
Kwara	7.5	13.6	19.9	29.4	29.6	100	2,709
Nasarawa	8.4	31.3	32.5	17.5	10.3	100	3,792
Niger	20.1	21.0	26.5	18.4	13.9	100	7,954
Plateau	24.5	22.4	19.6	14.9	18.6	100	6,581
FCT Abuja	1.1	13.1	22.0	23.6	40.3	100	1,489
North East	**27.9**	**23.8**	**23.5**	**18.7**	**6.2**	**100**	**36,964**
Adamawa	22.2	23.9	26.9	18.0	9.0	100	4,379
Bauchi	43.1	30.7	14.2	7.0	5.0	100	8,746
Borno	6.2	14.5	35.0	37.7	6.6	100	11,063
Gombe	42.4	27.0	14.0	10.3	6.4	100	3,291
Taraba	27.3	31.4	21.9	14.1	5.2	100	2,974
Yobe	41.3	24.9	19.4	8.8	5.6	100	6,511
North West	**33.6**	**27.1**	**16.8**	**11.6**	**10.9**	**100**	**61,155**
Jigawa	50.3	29.8	8.7	6.6	4.6	100	8,019
Kaduna	11.9	19.4	27.5	20.6	20.6	100	10,418
Kano	20.4	30.3	21.7	15.2	12.4	100	13,560
Katsina	43.0	27.6	11.7	8.3	9.5	100	10,941
Kebbi	43.7	24.1	16.0	8.3	7.8	100	5,391
Sokoto	46.0	28.5	11.2	8.4	5.9	100	5,164
Zamfara	40.2	29.3	14.0	7.5	8.9	100	7,663
South East	**2.0**	**9.5**	**22.1**	**35.3**	**31.1**	**100**	**12,708**
Abia	0.0	4.6	21.0	41.1	33.3	100	1,826
Anambra	1.7	5.0	12.3	33.0	48.0	100	2,965
Ebonyi	7.8	33.1	33.4	19.5	6.1	100	2,248
Enugu	0.5	6.8	27.0	36.9	28.8	100	2,399
Imo	0.4	2.1	20.2	43.7	33.6	100	3,270
South South	**0.7**	**7.9**	**22.7**	**32.9**	**35.8**	**100**	**17,393**
Akwa Ibom	1.4	7.4	28.5	38.2	24.4	100	3,893
Bayelsa	0.7	9.5	23.0	37.1	29.8	100	1,279
Cross River	1.4	18.2	35.9	27.1	17.4	100	3,233
Delta	0.1	5.2	19.7	36.3	38.8	100	2,921
Edo	0.0	3.8	9.5	29.5	57.2	100	2,339
Rivers	0.2	3.7	15.7	30.4	50.0	100	3,729
South West	**1.6**	**6.8**	**12.3**	**26.2**	**53.0**	**100**	**23,257**
Ekiti	0.3	6.0	26.4	37.1	30.3	100	1,128
Lagos	0.0	0.1	1.2	13.4	85.4	100	7,576
Ogun	0.8	6.3	14.3	26.8	51.8	100	2,317
Ondo	2.0	13.7	21.4	28.3	34.5	100	3,471
Osun	0.4	8.0	20.1	39.8	31.8	100	3,257
Oyo	4.9	11.4	13.8	32.1	37.9	100	5,508
Residence							
Urban	3.0	5.0	16.1	29.2	46.8	100	61,430
Rural	28.7	27.6	22.0	15.3	6.4	100	120,735

IV. Child Mortality

One of the overarching goals of the Sustainable Development Goals (SDGs) is to ensure healthy lives and promote well-being for all at all ages. A key target of this goal is to end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births by 2030. It is important to monitor the progress of this target in Nigeria where under-five mortality, though reducing, is still relatively high.

Mortality rates presented in this chapter are calculated from information collected in the birth histories of the Women's Questionnaires. All interviewed women who had ever given birth were asked to report the number of sons and daughters who live with them, the number who live elsewhere, the number who have died and a detailed retrospective birth history in chronological order starting with the firstborn. Childhood mortality rates are expressed by conventional age categories and are defined as follows:

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

KEY FINDINGS

Neonatal mortality is 39 per 1,000 live births.

Infant mortality rate is 70 per 1,000 live births.

Under-five mortality rate is 120 per 1,000 live births.

One in 15 livebirths in Nigeria die before their first birthday.

One in 9 live births die before their fifth birthday.

One in 6 children who lives in the poorest household in Nigeria die before their fifth birthday.

Nine states have higher under five mortality rates than the national average: Nasarawa, Niger, Bauchi, Gombe, Jigawa, Kano, Katsina, Kebbi, and Zamfara.

To achieve SDG 3.2, there must be at least 50% reduction in early childhood mortality rates before 2030 across all groups.

Rates are expressed as deaths per 1,000 live births, except in the case of child mortality, which is expressed as deaths per 1,000 children surviving to age one, and post-neonatal mortality, which is the difference between infant and neonatal mortality rates.

Childhood mortality in Nigeria

Table 4.1 presents neonatal, post-neonatal, infant, child, and under-five mortality rates for five-year period before the survey. Neonatal mortality is estimated at 39 per 1,000 live births, while post-neonatal mortality rate is 31 per 1,000 live births. Infant mortality rate, often used as indicator of health status of a country, is 70 per 1,000 live births, while under-five mortality rate is 120 per 1,000 live births. This implies that in five years preceding the survey, 1in 15 live births in Nigeria die before their first birthday, while 1in 9live births die before their fifth birthday. About 1 in 19 children surviving to age 12 months die before celebrating theirfifth birthday.

Table 4.1 (CM.1): Early childhood mortality rates

Neonatal, post-neonatal, Infant, child and under-five mortality rates for five year periods preceding the survey, Nigeria, 2016-17

Years preceding the survey	Period	Neonatal mortality rate[1]	Post-neonatal mortality rate[2, a]	Infant mortality rate[3]	Child mortality rate[4]	Under-five mortality rate[5]
0-4	2013-2017	39	31	70	54	120

[1] MICS indicator 1.1 - Neonatal mortality rate[2] MICS indicator 1.3 - Post-neonatal mortality rate
[3] MICS indicator 1.2; SDG indicator 3.2 - Infant mortality rate[4] MICS indicator 1.4 - Child mortality rate
[5] MICS indicator 1.5; MDG indicator 4.1 - Under-five mortality rate
[a]Post-neonatal mortality rates are computed as the difference between the infant and neonatal mortality rates

Figure 4.1: Projected reduction in early childhood mortality rates to meet SDG 3.2 by 2030

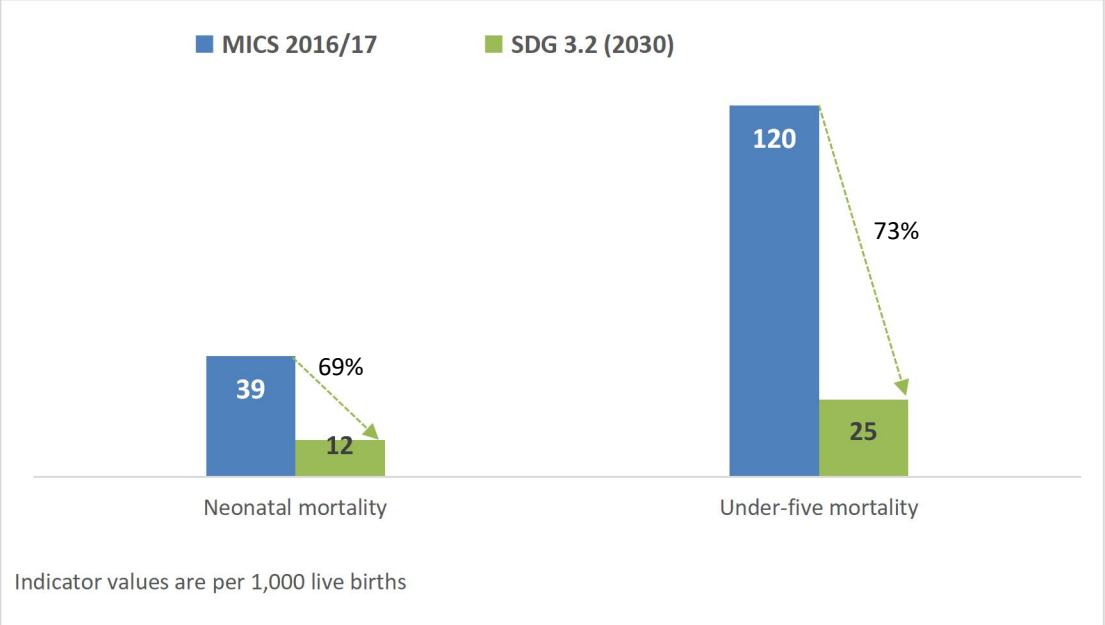


Figure 4.1 presents the required percentage reduction projected from MICS 2016-17, in neonatal and under-5 mortality rates to achieve SDG 3.2 target by 2030. Nigeria requires a 69 percent reduction from her current neonatal mortality rate to achieve the SDG 3.2 target of 25 per 1,000 live births within a period of 13 years. Also, she requires 79 percent reduction in current under-five mortality rate to meet the SDG target.

Early childhood mortality rates by socioeconomic characteristics

Estimates of early childhood mortality by socioeconomic characteristics are presented in Tables 4.2 and 4.3. The socio-economic variations on early childhood mortality were computed for geopolitical zones, state, residence and maternal education.

The mortality rates were lower in the southern part of the country than the northern part. All the mortality rates are consistently highest in the North West region, while neonatal, infant and under-five mortality rates are lowest in the South South region for the five years preceding MICS 2016-17. Post-neonatal and child mortality rate are however lowest in the South West. The chances of a child surviving to first birthday are 2.2 times higher in the South South than in the North West while for underfive, it is 2.7 times higher.

Table 4.2 (CM.2): Early childhood mortality rates by socio-economic characteristics

Neonatal, post-neonatal, Infant, child and under-five mortality rates for the five year period preceding the survey, by socio-economic characteristics, Nigeria, 2016-17

	Neonatal mortality rate[1]	Post-neonatal mortality rate[2, a]	Infant mortality rate[3]	Child mortality rate[4]	Under-five mortality rate[5]
Region					
North Central	43	29	72	33	103
North East	33	29	62	56	115
North West	45	41	87	83	162
South East	26	20	46	22	67
South South	22	17	39	21	59
South West	36	16	52	16	67
Residence					
Urban	35	18	53	27	78
Rural	40	37	77	66	138
Mother's education					
None	43	38	82	69	145
Non Formal	41	43	85	86	164
Primary	39	28	67	46	110
Secondary	33	19	52	22	73
Higher	34	12	46	9	55
Wealth index quintile					
Poorest	39	41	80	85	158
Second	42	42	84	79	156
Middle	44	31	75	54	125
Fourth	36	21	57	24	80
Richest	30	15	45	11	56
Total	**39**	**31**	**70**	**54**	**120**

[1] MICS indicator 1.1 - Neonatal mortality rate[2] MICS indicator 1.3 - Post-neonatal mortality rate

[3] MICS indicator 1.2; MDG indicator 4.2 - Infant mortality rate[4] MICS indicator 1.4 - Child mortality rate

[5] MICS indicator 1.5; MDG indicator 4.1 - Under-five mortality rate

[a] Post-neonatal mortality rates are computed as the difference between the infant and neonatal mortality rates

Urban-rural mortality differential is also pronounced across early childhood age groups. As expected, mortality rates in urban areas are lower than rural areas in Nigeria. Infant mortality rate is 77 per 1,000 live births in the rural areas, while it is 53 per 1,000 live births in urban areas. Also, children survival to fifth birthday is 1.8 times higher in urban than rural areas.

Table 4.3 (CM.2): Early childhood mortality rates by States

Neonatal, post-neonatal, Infant, child and under-five mortality rates for the five year period preceding the survey, by 36 states and FCT, Nigeria, 2016-17

	Neonatal mortality rate[1]	Post-neonatal mortality rate[2, a]	Infant mortality rate[3]	Child mortality rate[4]	Under-five mortality rate[5]
North Central	**43**	**29**	**72**	**33**	**103**
Benue	41	28	70	14	82
Kogi	29	20	49	28	75
Kwara	27	12	40	6	45
Nasarawa	47	34	81	43	121
Niger	59	41	100	54	149
Plateau	34	20	55	27	80
FCT-Abuja	27	17	44	28	71
North East	**33**	**29**	**62**	**56**	**115**
Adamawa	21	28	49	37	84
Bauchi	41	40	81	87	161
Borno	(26)	15	42	42	82
Gombe	35	56	90	78	162
Taraba	22	41	64	45	105
Yobe	44	20	64	41	102
North West	**45**	**41**	**87**	**83**	**162**
Jigawa	37	46	83	120	192
Kaduna	28	38	66	18	82
Kano	69	44	112	103	203
Katsina	35	32	68	72	135
Kebbi	55	56	111	70	174
Sokoto	28	23	51	72	119
Zamfara	53	51	104	118	210
South East	**26**	**20**	**46**	**22**	**67**
Abia	(32)	23	55	30	83
Anambra	(23)	16	39	15	53
Ebonyi	30	18	47	15	62
Enugu	(†)	(†)	(†)	(†)	(†)
Imo	(35)	30	66	33	96
South South	**22**	**17**	**39**	**21**	**59**
Akwa Ibom	21	21	42	32	73
Bayelsa	29	27	57	41	95
Cross River	20	18	38	15	52
Delta	28	19	48	16	63
Edo	(†)	(†)	(†)	(†)	(†)
Rivers	(27)	14	41	18	58
South West	**36**	**16**	**52**	**16**	**67**
Ekiti	(46)	24	69	18	86
Lagos	29	16	45	6	50
Ogun	(28)	20	49	19	66
Ondo	(30)	6	37	32	67
Osun	(56)	21	78	25	101
Oyo	(42)	17	59	15	73

[1] MICS indicator 1.1 - Neonatal mortality rate[2] MICS indicator 1.3 - Post-neonatal mortality rate

[3] MICS indicator 1.2; MDG indicator 4.2 - Infant mortality rate[4] MICS indicator 1.4 - Child mortality rate

[5] MICS indicator 1.5; MDG indicator 4.1 - Under-five mortality rate (†) The result did not pass reliability test

( ) Total number of live births (exposure) are based on 250-499 unweighted cases

[a] Post-neonatal mortality rates are computed as the difference between the infant and neonatal mortality rates

Maternal education is expected to have inverse relationship with early childhood mortality. The MICS 2016-17 result follows this pattern as neonatal, post-neonatal, infant, child and under-five mortality rates decreases with higher level of maternal education in Nigeria. This is more evident on child mortality rate, where women with non-formal education have a rate of 86 per 1,000 livebirths, while those with higher education have 9 per 1,000 livebirths.

Early childhood mortality rates decrease as household wealth index increases. Infant mortality among the poorest household is higher (80 per 1,000 livebirths) than the richest (45 per 1000 livebirths). One in 6 children under-five who lives in the poorest household in Nigeria will likely die before their fifth birthday, compared to 1 in 18 in the richest quintile households. While the national average of under-five mortality rate is relatively high and still far from the target of Sustainable Development Goal, 9 states have higher values than the national average: Nasarawa, Niger, Bauchi, Gombe, Jigawa, Kano, Katsina, Kebbi, and Zamfara.

Early childhood mortality rates by demographic characteristics

Estimates of early childhood mortality by demographic characteristics of mother and child are presented in Table 4.4. The demographic differentials were computed for sex of child, mother's age at first birth, birth order and previous birth interval. Neonatal, post-neonatal, infant and under-five mortality rates were lower for female than male newborn within five years preceding MICS 2016-17.

Table 4.4 (CM.3): Early childhood mortality rates by demographic characteristics

Neonatal, post-neonatal, Infant, child and under-five mortality rates for the five year period preceding the survey, by demographic characteristics, Nigeria, 2016-17

	Neonatal mortality rate[1]	Post-neonatal mortality rate[2, a]	Infant mortality rate[3]	Child mortality rate[4]	Under-five mortality rate[5]
Total	39	31	70	54	120
Sex of child					
Male	44	33	77	53	126
Female	33	30	63	55	114
Mother's age at birth (years)					
Less than 20	57	39	96	68	158
20-34	34	29	63	49	109
35-49	43	34	77	63	135
Birth Order					
1	48	32	80	45	122
2-3	29	25	54	43	94
4-6	32	29	61	58	115
7+	62	45	108	82	181
Previous birth interval					
< 2 years	63	46	110	78	179
2 years	29	29	58	53	108
3 years	26	22	48	44	90
4+ years	23	21	44	35	78

[1] MICS indicator 1.1 - Neonatal mortality rate[2] MICS indicator 1.3 - Post-neonatal mortality rate

[3] MICS indicator 1.2; MDG indicator 4.2 - Infant mortality rate[4] MICS indicator 1.4 - Child mortality rate

[5] MICS indicator 1.5; MDG indicator 4.1 - Under-five mortality rate

[a] Post-neonatal mortality rates are computed as the difference between the infant and neonatal mortality rates

Birth interval is an important factor in predicting birth outcome for both mother and child. There is inverse relationship between birth intervals in years and child's death, asit is expected that births spacing less than 2 years have higher mortality outcome than longer years of birth spacing. The shorter birth spacing has higher mortality across all early age groups. Children whose mothers are between ages 20 and 24 at birth survive infancy and childhood more than other age groups. Infants of the second and third birth order had the lowest mortality rates in all the indices while children of the seventh birth order had the highest mortality rates.

V. Nutrition

Nutritional Status

The nutritional status of children under the age of 5 is a reflection of their overall health. Children are considered well-nourished when they have access to adequate food supply, are not exposed to repeated illness, and are well cared for, to allow them reach their growth potential. Undernutritionis associated with more than half of all child deaths worldwide. Undernourished children are more likely to die from common childhood ailments, and for those who survive, have recurring sicknesses and faltering growth. Three-quarters of children who die from causes related to malnutrition were only mildly or moderately malnourished – showing no outward sign of their vulnerability.

In a well-nourished population, there is a reference distribution of height and weight for children under age five. Under-nourishment in a population can be gauged by comparing children to a reference population. The reference population used in this report is based on the WHO growth standards.[8] Each of the three nutritional status indicators – weight-for-age, height-for-age, and weight-for-height - can be expressed in standard deviation units (z-scores) from the median of the reference population.

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

Height-for-age is a measure of linear growth. Children whose height-for-age is more than two standard deviations below the median of the reference population are considered short for their age and are classified as *moderately and severely stunted.* Those whose height-for-

[8] **http://www.who.int/childgrowth/standards/technical_report**

KEY FINDINGS

Prevalence- Public health significance:
32% Underweight - very high
44% Stunting - very high
11% Wasting - serious
2% Overweight

3 in10 children under five years in Nigeria have acute, chronic or both malnutrition

2 in 5 children under five years in Nigeria are stunted; 1 out of 5 are severely stunted.

14 in 36 states in Nigeria have wasting prevalence that are classified as serious for public health significance.

Children of mothers with at least secondary education are obese than those with lower and non-formal education

3 in10 mothers initiated breastfeeding early as recommended by WHO; 7 in10 initiated breastfeeding within 24 hour of birth delivery

24 percent exclusive breastfeeding rate is yet to meet the WHO Global nutrition target of 50 percent

Half of infants are predominantly breastfed while just one out of five are exclusively breastfed.

Iodized salt containing 15 ppm or more are consumed in 69% of sampled household.

One in4 babies were weighed at birth. Fifteen percent of these babies are classified as low weight because they are less than 2,500 grams at birth.

age is more than three standard deviations below the median are classified as *severely stunted.* Stunting is a reflection of chronic malnutrition as a result of failure to receive adequate nutrition over a long period and recurrent or chronic illness.

Weight-for-height can be used to assess wasting and overweight status. Children whose *weight-for-height* is more than two standard deviations below the median of the reference population are classified as *moderately and severely wasted,* while those who fall more than three standard deviations below the median are classified as *severely wasted*. Wasting is usually the result of a recent nutritional deficiency. The indicator of wasting may exhibit significant seasonal shifts associated with changes in the availability of food or disease prevalence. Children whose weight-for-height is more than two standard deviations above the median reference population are classified as overweight or obese.

In MICS, weights and heights of all children under 5 years of age were measured using the anthropometric equipment recommendedby UNICEF.[9] Findings in this section are based on the results of these measurements. Tables 5.1 and 5.2 present the prevalence of malnutrition in terms of undernutrition (underweight, stunting and wasting) and overweight. The result also shows the pattern of malnutrition among different social groups based on the anthropometric measurementsthat were taken during fieldwork. Additionally, Figure 5.1 presents nutritional status of children under five children by age. The result has also been interpreted based on World Health Organisation standard prevalence cut-off values for public health significance[10] as follows:

Underweight	*Stunting*	*Wasting*
< 10%: Low prevalence	<20%: Low prevalence	<5%: Acceptable
10-19%: Medium prevalence	20-29%: Medium prevalence	5-9%: Poor
20-29%: High prevalence	30-39%: High prevalence	10-14%: Serious
≥ 23%: Very high prevalence	≥ 40%: Very high prevalence	≥ 15%: Critical

Weight for age (underweight)

A total of 31.5 percent children under-5 are moderately and severely underweight, while 11.5 percent are severely underweight. This implies that at least 3 in 10 children under five years in Nigeria have acute, chronic or both malnutrition. This prevalence is consideredvery high by WHO standard.

The prevalence of underweight is high among children with the following characteristics: age 12-35 months, male, rural residence, geopolitical zones of North West and North East, mothers with none or non-formal education, and poorest wealth quintile household. Cases of severe underweight, which is chronic malnutrition with its consequence mortality risk, are high in Yobe (24.1 percent), Sokoto (22.9percent) and Jigawa (22.2percent). It is however low in Enugu (0.5percent), Rivers (1.3percent) and Edo (2.1percent).

Height for age

The proportion of children who suffered growth retardation from long term nutritional deprivation, stunting, is 43.6 percent. About half of this proportion is severely stunted (22.8 percent). This implies thatmore than2 in 5 children under five years in Nigeria are stunted and about1 in 5 are severely

[9] See MICS Supply Procurement Instructions: **http://www.childinfo.org/mics5_planning.html**

[10]http://www.who.int/childgrowth/publications/physical_status/en/

stunted. The prevalence of stunting is specifically high among children: age 12-35 months, male, living in rural areas, northern zone, mothers with none and non-formal education and poorer wealth quintile household. This variation among different social and demographic groups has the same pattern as that of underweight. States where at least half of the children under-five years have cases of severe stunting are Jigawa (66.0 percent), Bauchi (64.9perecnt), Yobe (61.0 percent), Katsina (60.9 percent), Sokoto (60.9 percent), Kebbi (60.3 percent), Zamfara (68.5 percent) and Kano (58.5 percent). Enugu (0.9 percent) and Lagos (2.4 percent) states have the least cases of severe stunting in Nigeria.

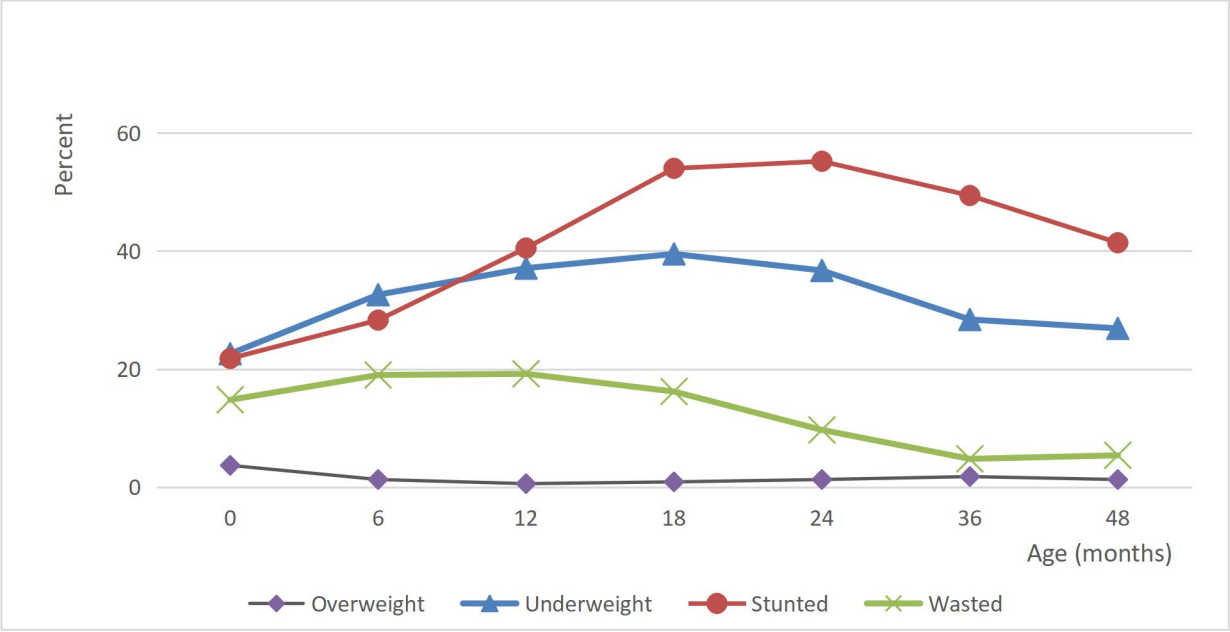
Table 5.1 (NU.1): Nutritional status of children

Percentage of children under age 5 by nutritional status according to three anthropometric indices: weight for age, height for age, and weight for height, Nigeria, 2016-17

	Weight for age		Height for age		Weight for height		Overweight
	Underweight		Stunted		Wasted		
	Percent below - 2 SD[1]	- 3 SD[2]	Percent below - 2 SD[3]	- 3 SD[4]	Percent below + 2 SD[7]	- 3 SD[6]	Percent above + 2 SD[7]
Total	**31.5**	**11.5**	**43.6**	**22.8**	**10.8**	**2.9**	**1.5**
Geopolitical zone							
North Central	19.6	5.5	34.9	14.3	7.1	1.5	2.1
North East	40.0	14.5	52.4	29.0	13.0	3.5	1.3
North West	42.6	17.6	58.5	33.8	12.9	3.7	1.5
South East	13.7	3.7	16.9	5.1	8.2	2.0	2.1
South South	13.8	3.3	19.0	7.0	6.8	2.0	1.3
South West	16.6	3.8	19.4	5.9	8.9	2.2	0.8
Sex							
Male	33.1	12.4	45.7	24.6	11.9	3.3	1.7
Female	29.9	10.7	41.4	21.0	9.6	2.5	1.3
Residence							
Urban	23.0	7.2	30.6	13.6	10.5	2.6	1.1
Rural	35.3	13.5	49.3	26.9	10.9	3.1	1.7
Age (months)							
0-5	22.6	8.8	21.8	9.3	14.8	5.5	3.7
6-11	32.6	11.7	28.3	11.6	19.0	5.0	1.3
12-17	37.1	14.2	40.5	19.3	19.2	4.7	0.6
18-23	39.5	18.4	54.0	29.8	16.2	4.4	0.9
24-35	36.7	15.2	55.2	32.8	9.7	2.5	1.3
36-47	28.4	9.6	49.4	26.5	4.8	1.3	1.8
48-59	26.9	6.9	41.4	20.1	5.4	1.1	1.3
Mother's education*							
None	39.7	15.4	55.1	31.2	11.0	3.0	1.4
Non-formal	44.7	17.7	60.9	34.3	14.0	4.1	1.3
Primary	27.0	8.9	38.8	18.7	9.4	2.3	1.5
Secondary	19.7	6.2	27.6	11.4	9.2	2.6	1.7
Higher	12.3	3.2	15.5	5.6	8.8	1.6	1.8
Wealth index quintile							
Poorest	46.6	18.8	62.8	36.0	13.2	4.2	1.5
Second	38.1	15.5	54.5	31.1	11.1	3.1	1.9
Middle	28.5	10.3	43.5	21.9	9.6	2.1	1.4
Fourth	24.0	6.6	32.2	13.7	10.3	2.3	1.3
Richest	15.8	4.3	18.3	6.9	9.2	2.5	1.4

[1] MICS indicator 2.1a - Underweight prevalence (moderate and severe)[2] MICS indicator 2.1b - Underweight prevalence (severe)
[3] MICS indicator 2.2a - Stunting prevalence (moderate and severe)[4] MICS indicator 2.2b - Stunting prevalence (severe)
[5] MICS indicator 2.3a - Wasting prevalence (moderate and severe)[6] MICS indicator 2.3b - Wasting prevalence (severe)
[7] MICS indicator 2.4 - Overweight prevalence

Figure 5.1: Underweight, stunted, wasted and overweight children under age 5 (moderate and severe), MICS, 2016-17



Weight for height (wasting)

Wasting increases children susceptibility to infectious diseases and risk of mortality. With about 11 percent prevalenceamong under five children, wasting is a serious public health concern in Nigeria.The prevalence of wasting is particularly critical for children age 6-23 months with a range of values from 16 percent to 19 percent.

Wasting is also high among children who are male, living in rural areas, North West and North East, mothers with none and non-formal education, and poorest wealth quintile household. As with other anthropometric measures, this variation in prevalence of wasting among different social and demographic groups has the same pattern.Fourteen out of 36 states in Nigeria have wasting prevalence values that are classified as serious for public health concern: Yobe (17.5 percent), Sokoto (17.2percent), Borno (17.0percent), Katsina (14.9percent), Jigawa (13.8percent), Kebbi (13.7percent), Gombe (13.4percent), Kaduna (11.7percent), Akwa Ibom (11.5percent), Lagos (11.4percent), Abia (11percent), Kano (10.8percent), Ebonyi (10.6percent) and Zamfara (10.4percent)

Overweight

The prevalence of overweight among under-five children is 1.5 percent. While there are no recorded cases of overweight in Ogun State, the percentage is highest in Taraba State (5.5%). Children of mothers with at least secondary education are obese than those with lower and non-formal education. Infants age 0 to 5 months have higher percentage of overweight children than other age categories.

Table 5.2 (NU.2): Nutritional status of children by states

Percentage of children under age 5 by nutritional status according to three anthropometric indices: weight for age, height for age, and weight for height, Nigeria, 2016-17

	Weight for age		Height for age		Weight for height		
	Underweight		Stunted		Wasted		Overweight
	Percent below		Percent below		Percent below		Percent above
	- 2 SD[1]	- 3 SD[2]	- 2 SD[3]	- 3 SD[4]	- 2 SD[5]	- 3 SD[6]	+ 2 SD[7]
Total	31.5	11.5	43.6	22.8	10.8	2.9	1.5
Geopolitical zone							
North central	19.6	5.5	34.9	14.3	7.1	1.5	2.1
Benue	15.1	4.9	28.8	10.0	6.7	1.6	3.2
Kogi	15.4	4.8	28.6	9.6	8.5	2.9	1.8
Kwara	22.3	7.1	31.5	15.4	9.4	2.6	2.6
Nasarawa	20.7	5.6	37.2	14.1	6.8	1.2	1.7
Niger	24.3	6.9	37.3	16.1	8.8	1.7	0.8
Plateau	18.5	4.5	40.0	17.8	4.7	0.8	3.1
FCT Abuja	12.6	2.6	22.8	6.3	5.1	1.3	1.3
North east	**40.0**	**14.5**	**52.4**	**29.0**	**13.0**	**3.5**	**1.3**
Adamawa	23.7	6.9	37.9	19.8	9.5	3.4	1.8
Bauchi	48.5	15.3	64.9	35.7	7.6	1.0	1.0
Borno	36.4	12.2	45.0	23.4	17.0	4.4	0.5
Gombe	41.2	17.6	54.4	32.5	13.4	3.9	1.5
Taraba	24.2	9.3	41.4	22.9	8.4	3.4	5.5
Yobe	51.0	24.1	61.0	36.9	17.5	5.3	1.0
North west	**42.6**	**17.6**	**58.5**	**33.8**	**12.9**	**3.7**	**1.5**
Jigawa	50.4	22.2	66.0	40.7	13.8	3.8	1.2
Kaduna	34.0	12.8	47.0	27.9	11.7	4.1	2.4
Kano	40.3	16.1	58.0	32.8	10.8	2.8	1.7
Katsina	46.4	18.5	60.9	35.8	14.9	4.1	1.4
Kebbi	44.9	18.4	60.3	33.0	13.7	3.7	0.9
Sokoto	48.6	22.9	60.9	33.8	17.2	5.6	1.1
Zamfara	36.6	15.3	58.5	32.6	10.4	2.8	1.3
South east	**13.7**	**3.7**	**16.9**	**5.1**	**8.2**	**2.0**	**2.1**
Abia	20.2	5.4	20.5	4.9	11.0	3.0	1.1
Anambra	12.3	3.0	14.3	4.6	8.0	1.8	3.7
Ebonyi	17.6	6.7	25.3	9.9	10.6	3.7	3.3
Enugu	5.7	0.5	8.5	0.9	3.6	0.4	1.3
Imo	14.3	3.7	17.2	5.1	8.1	1.5	1.1
South south	**13.8**	**3.3**	**19.0**	**7.0**	**6.8**	**2.0**	**1.3**
Akwa Ibom	22.7	6.5	29.4	12.3	11.5	3.9	0.7
Bayelsa	10.0	2.3	15.3	5.5	3.2	1.0	1.6
Cross River	13.9	2.8	20.1	7.0	5.5	1.3	1.4
Delta	11.2	2.2	16.3	4.6	4.8	0.9	0.6
Edo	10.2	2.1	13.6	5.4	6.6	2.1	1.4
Rivers	7.6	1.3	10.9	3.3	5.0	1.3	2.6
South west	**16.6**	**3.8**	**19.4**	**5.9**	**8.9**	**2.2**	**0.8**
Ekiti	11.6	3.1	21.9	7.3	6.8	2.2	0.5
Lagos	14.5	3.2	11.4	2.4	11.4	2.7	0.7
Ogun	22.4	5.5	26.1	10.1	9.0	1.4	0.0
Ondo	16.0	2.8	22.4	8.8	5.9	1.8	0.8
Osun	18.7	6.6	23.5	6.8	8.0	2.2	0.7
Oyo	17.4	3.4	24.4	7.0	7.6	1.9	1.4

[1] MICS indicator 2.1a - Underweight prevalence (moderate and severe)[2] MICS indicator 2.1b - Underweight prevalence (severe)
[3] MICS indicator 2.2a - Stunting prevalence (moderate and severe)[4] MICS indicator 2.2b - Stunting prevalence (severe)
[5] MICS indicator 2.3a - Wasting prevalence (moderate and severe)[6] MICS indicator 2.3b - Wasting prevalence (severe)
[7] MICS indicator 2.4 - Overweight prevalence

Breastfeeding and Infant and Young Child Feeding

Proper feeding of infants and young children can increase their chances of survival and promote optimal growth and development, especially in the critical window of birth to 2 years of age. Breastfeeding for the first few years of life protects children from infection, provides an ideal source of nutrients, and is economical and safe. However, many mothers do not initiate breastfeeding early enough, do not breastfeed exclusively for the recommended 6 months or stop breastfeeding too soon. There are often pressures to switch to infant formula, which can contribute to growth faltering and micronutrient malnutrition and unsafe if hygienic conditions, including safe drinking water, are not readily available.

Studies have shown that, in addition to continued breastfeeding, consumption of appropriate, adequate and safe solid, semi-solid and soft foods from the age of 6 months onwards leads to better health and growth outcomes, with potential to reduce stunting during the first two years of life.[11]

UNICEF and WHO recommend that infants be breastfed within one hour of birth, breastfed exclusively for the first six months of life and continue to be breastfed up to 2 years of age and beyond.[12] Starting at 6 months, breastfeeding should be combined with safe, age-appropriate feeding of solid, semi-solid and soft foods.[13]A summary of key guiding principles[14, 15] for feeding 6-23 months old is provided in the table below along with proximate measures for these guidelines collected in this survey.

The guiding principles for which proximate measures and indicators exist are:

(i) continued breastfeeding;
(ii) appropriate frequency of meals (but not energy density); and
(iii) appropriate nutrient content of food.

Feeding frequency is used as proxy for energy intake, requiring children to receive a minimum number of meals/snacks (and milk feeds for non-breastfed children) for their age while dietary diversity is used to ascertain the adequacy of the nutrient content of the food (not including iron) consumed. For dietary diversity, seven food groups were created for which a child consuming at least four of these is considered to have a better quality diet. In most populations, consumption of at least four food groups means that the child has a high likelihood of consuming at least one animal-source food and at least one fruit or vegetable, in addition to a staple food (grain, root or tuber).[16]

These three dimensions of child feeding are combined into an assessment of the children who received appropriate feeding, using the indicator of "minimum acceptable diet". To have a minimum acceptable diet in the previous day, a child must have received:

(i) the appropriate number of meals/snacks/milk feeds;

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[11]Bhuta, Z. et al. 2013. *Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost?* The Lancet June 6, 2013.
[12]WHO. 2003. *Implementing the Global Strategy for Infant and Young Child Feeding*. Meeting Report Geneva, 3-5 February, 2003.
[13]WHO. 2003. *Global Strategy for Infant and Young Child Feeding*.
[14] PAHO. 2003.*Guiding principles for complementary feeding of the breastfed child*.
[15]WHO. 2005.*Guiding principles for feeding non-breastfed children 6-24 months of age*.
[16]WHO. 2008. ***Indicators for assessing infant and young child feeding practices.****Part 1: Definitions*.

(ii) food items from at least 4 food groups; and
(iii) breast milk or at least 2 milk feeds (for non-breastfed children).

Initiation of breastfeeding

Table 5.3 show mothers' reports of what their last child, born in the last two years preceding the survey, were ever breastfed, breastfed within one hour and one day of birth and those who received a prelacteal feed. The practice of breastfeeding is high in Nigeria with 95 percent of children ever breastfed.

Table 5.3 (NU.3): Initiation of breastfeeding

Percentage of last live-born children in the last two years who were ever breastfed, breastfed within one hour of birth, and within one day of birth, and percentage who received a prelacteal feed, Nigeria, 2016-17

	Percentage who were ever breastfed[1]	Percentage who were first breastfed:		Percentage who received a prelacteal feed	Number of last live-born children in the last two years
		Within one hour of birth[2]	Within one day of birth		
Total	**95.0**	**32.8**	**78.7**	**52.1**	**11,547**
Geopolitical zone					
North Central	96.9	37.0	82.5	44.5	1,770
North East	94.9	32.1	75.5	64.8	2,394
North West	93.0	31.8	78.1	59.1	4,603
South East	96.4	34.5	81.3	43.5	620
South South	97.9	41.8	84.9	36.5	900
South West	96.9	24.9	75.6	28.4	1,261
Residence					
Urban	96.4	33.9	82.2	45.9	3,426
Rural	94.4	32.4	77.2	54.7	8,121
Months since last birth					
0-11	96.4	33.9	82.2	45.9	3,426
12-23	94.4	32.4	77.2	54.7	8,121
Assistance at delivery					
Skilled attendant	96.3	35.1	82.1	43.7	4,970
Traditional birth attendant	95.7	39.8	78.6	58.8	1,803
Other	92.8	26.9	75.0	57.3	3,397
No one/Missing	94.6	30.1	75.2	60.6	1,377
Place of delivery					
Home	93.9	31.6	76.6	59.5	6,952
Health facility	96.8	35.2	82.5	41.4	4,333
Public	96.9	38.0	84.9	42.6	2,823
Private	96.6	29.8	78.1	39.2	1,511
Other/DK/Missing	93.1	27.0	70.9	32.4	262
Mother's education					
None	93.9	31.0	73.3	61.2	3,208
Non-formal	93.1	32.2	77.3	60.0	2,560
Primary	95.4	36.3	82.4	50.7	1,716
Secondary	97.0	32.9	82.6	41.6	3,182
Higher	96.4	34.3	80.7	36.8	882
Wealth index quintile					
Poorest	92.7	28.1	70.9	60.2	2,587
Second	93.8	31.3	75.5	57.7	2,548
Middle	95.5	36.0	81.9	52.8	2,270
Fourth	96.9	36.1	85.8	46.0	2,113
Richest	96.8	33.8	81.4	40.2	2,028

[1] MICS indicator 2.5 - Children ever breastfed[2] MICS indicator 2.6 - Early initiation of breastfeeding

However, only 32.8 percent of babies were breastfed within one hour of birth despite the fact that this is a very important step in management of lactation and establishment of a physical and emotional

relationship between the baby and the mother. This implies that 3 in 10 mothers initiated breastfeeding early as recommended by WHO while 8in 10 initiated breastfeeding within one day of birth. Fifty-two percent of live last-born within two years preceding had received prelacteal feed which is any food given to newborn before initiating breastmilk.

South South has the highest proportion of newborn who were breastfed within one hour of birth (41.8 percent) and within a day of birth (84.9 percent). While the South West zone (24.9 percent) ranked lowest on percentage of newborn who were breastfed within one hour of delivery, North East ranked lowest on proportion of newborn breastfed within one day of birth. Although marginal, urban areas perform better in the initiation of breastfeeding and avoidance of prelacteal feeding than rural areas.

The onset of breastfeeding varied with place of delivery and the person who assisted the delivery. A higher proportion of children delivered in public health facilities (38%) were breastfed within the hour or one day of birth than those delivered in a private sector health facility (29.8 percent). Similarly, a higher proportion of babies delivered by a skilled birth attendant were breastfed within one day (82.1 percent) compared to those delivered by a traditional birth attendant (78.6 percent). Practice of prelacteal feeding is high in the North East, in babies delivered at home, among mothers with no formal education and household of poorest wealth quintile.

Exclusive Breastfeeding

Table 5.4 presents percentage of children exclusively and predominantly breastfed and continued breastfeeding at 1 and 2 years of age. Nigeria MICS 2016-17 estimate of 24 percent exclusive breastfeeding is yet to meet the WHO Global nutrition target of 50 percent by 2025.

Exclusive breastfeeding is when infants less than 6 months are fed on breast milk only, allowing for vitamins, mineral supplements and medicine to be administered as prescribed. The rate of exclusive breastfeeding is closer to the Global Nutrition target in South West (44 percent) and among mothers with higher education (41 percent). However, variations on exclusive breastfeeding exist among different groups: Southern states are performing better than Northern states; mothers who live in urban areas, have at least secondary education and are in middle or higher wealth quintile household perform better than others.

Table 5.4 (NU.4): Breastfeeding status

Percentage of living children according to breastfeeding status at selected age groups, Nigeria, 2016-17

	Children age 0-5 months			Children age 12-15 months		Children age 20-23 months	
	Percent exclusively breastfed[1]	Percent predominantly breastfed[2]	Number of children	Percent breastfed (Continued breastfeeding at 1 year)[3]	Number of children	Percent breastfed (Continued breastfeeding at 2 years)[4]	Number of children
Total	**23.7**	**54.0**	**2,723**	**85.9**	**2,100**	**37.1**	**1,434**
Geopolitical zone							
North Central	24.9	45.8	441	82.9	270	33.6	231
North East	21.3	50.4	619	90.0	429	52.3	333
North West	18.5	56.6	1,028	92.7	925	49.0	474
South East	25.3	47.8	157	56.3	108	10.9	91
South South	27.2	52.5	207	67.7	158	9.8	134
South West	43.9	70.5	271	80.8	209	14.5	170
Sex							
Male	23.5	53.0	1,355	86.5	1,004	39.7	736
Female	24.0	55.0	1,369	85.4	1,096	34.3	698
Residence							
Urban	31.7	59.5	754	81.8	653	23.7	450
Rural	20.7	51.9	1,969	87.8	1,447	43.2	984
Mother's education							
None	19.6	47.2	761	89.4	586	54.0	397
Non-formal	16.9	58.6	608	92.6	509	59.1	250
Primary	20.8	50.5	402	85.1	311	38.6	215
Secondary	30.6	56.2	761	80.1	538	15.7	457
Higher	41.0	65.2	190	73.5	155	13.0	115
Wealth index quintile							
Poorest	16.4	49.7	588	90.6	485	56.7	283
Second	20.0	51.8	639	90.7	467	53.7	307
Middle	23.7	54.9	551	86.2	405	39.4	260
Fourth	27.1	54.4	537	81.0	385	18.5	312
Richest	35.8	61.8	408	78.5	357	17.0	273

[1] MICS indicator 2.7 - Exclusive breastfeeding under 6 months[2] MICS indicator 2.8 - Predominant breastfeeding under 6 months

[3] MICS indicator 2.9 - Continued breastfeeding at 1 year[4] MICS indicator 2.10 - Continued breastfeeding at 2 years

Predominant Breastfeeding

Predominant breastfeeding is when infants less than 6 months of age are given plain water and non-milk liquids in addition to breast milk. Percentage of predominantly breastfed infants age less than 6 months is about twice that of exclusively breastfed infants. About one of two infants are predominantly breastfed while just one in five are exclusively breastfed. In comparison with other groups, the practice of predominant breastfeeding is higher in South West, urban areas, mothers with higher education and households in the richest wealth quintile

Age-appropriate breastfeeding

Table 5.5 presents information on age appropriate breastfeeding in Nigeria. For infants age 0-5 months, exclusive breastfeeding was considered as age-appropriate feeding while children age 6-23 months were considered to be appropriately fed if they were receiving breast milk and solid, semi-solid or soft food. About half of children age 0-23 months were appropriately breastfed for age in Nigeria. Children who are from North West, North East, poor household, rural areas and have mothers with no formal education are more appropriately breastfed than other groups.

Table 5.5 (NU.6): Age-appropriate breastfeeding

Percentage of children age 0-23 months who were appropriately breastfed during the previous day, Nigeria, 2016-17

	Children age 0-5 months	Children age 6-23 months	Children age 0-23 months
	Percent exclusively breastfed[1]	Percent currently breastfeeding and receiving solid, semi-solid or soft foods	Percent appropriately breastfed[2]
Total	**23.7**	**69.7**	**58.2**
Geopolitical zone			
North Central	24.9	66.9	55.7
North East	21.3	75.6	60.9
North West	18.5	77.6	63.4
South East	25.3	48.5	42.6
South South	27.2	53.8	47.4
South West	43.9	56.2	53.4
Sex			
Male	23.5	69.4	58.0
Female	24.0	70.0	58.5
Residence			
Urban	31.7	63.3	56.0
Rural	20.7	72.5	59.2
Mother's education			
None	19.6	76.4	62.4
Non-formal	16.9	78.4	62.8
Primary	20.8	70.8	58.2
Secondary	30.6	59.7	52.3
Higher	41	53.7	50.8
Wealth index quintile			
Poorest	16.4	78.3	63.4
Second	20	74.3	59.8
Middle	23.7	73.4	60.4
Fourth	27.1	61.0	52.0
Richest	35.8	58.6	53.8

[1] MICS indicator 2.7 - Exclusive breastfeeding under 6 months
[2] MICS indicator 2.12 - Age-appropriate breastfeeding

Infant and Young Child Feeding

The critical "window of opportunity" that exists between conception and the child's second year of life paves way for a strong, healthy and productive future. Optimal nutrition (exclusive breastfeeding and minimum acceptable diet) from 0-23 months has a lasting impact on a child's growth, development and future productivity. Absence of proper nutrition during this critical period exposes the child to frequent and severe childhood illnesses, stunted growth, developmental delays and death.

Table 5.6 (NU.8): Infant and young child feeding (IYCF) practices

Percentage of children age 6-23 months who received appropriate liquids and solid, semi-solid, or soft foods the minimum number of times or more during the previous day, by breastfeeding status, Nigeria, 2016-17

	Currently breastfeeding				Currently not breastfeeding					All			
	Percent of children who received:				Percent of children who received:					Percent of children who received:			
	Minimum dietary diversity[a]	Minimum meal frequency[b]	Minimum acceptable diet[1, c]	Number of children age 6-23 months	Minimum dietary diversity[a]	Minimum meal frequency[b]	Minimum acceptable diet[2, c]	At least 2 milk feeds[3]	Number of children age 6-23 months	Minimum dietary diversity[4, a]	Minimum meal frequency[5, b]	Minimum acceptable diet[c]	Number of children age 6-23 months
Total	**35.6**	**42.9**	**16.5**	**6,217**	**56.1**	**40.4**	**11.0**	**24.9**	**1,716**	**40.2**	**42.4**	**15.3**	**8,174**
Geopolitical zone													
North Central	35.5	46.9	18.2	880	58.9	45.4	12.0	21.0	298	41.5	46.5	16.6	1,217
North East	28.3	47.9	16.1	1,379	49.1	41.9	14.2	20.0	248	31.7	47.0	15.8	1,677
North West	36.4	40.7	15.5	2,760	44.0	35.7	6.8	24.9	411	37.5	40.1	14.4	3,268
South East	39.3	52.6	19.8	238	67.4	42.7	13.4	30.1	201	52.3	48.1	16.9	458
South South	48.1	46.2	24.3	383	65.2	38.6	11.0	20.1	260	55.2	43.1	18.9	658
South West	39.5	29.7	13.4	577	59.9	40.4	11.6	33.7	298	46.8	33.4	12.8	896
Sex													
Male	35.3	42.2	15.2	3,109	56.4	40.8	11.1	26.1	868	39.9	41.9	14.3	4,086
Female	35.9	43.6	17.8	3,108	55.7	40.0	10.9	23.8	848	40.5	42.9	16.3	4,089
Residence													
Urban	40.9	36.3	15.5	1,715	62.9	43.8	14.9	34.0	689	47.5	38.5	15.3	2,487
Rural	33.6	45.5	16.9	4,502	51.5	38.0	8.3	18.8	1,027	37.0	44.1	15.3	5,687
Mother's education													
None	32.3	44.4	15.7	1,929	46.9	34.5	9.5	18.7	319	34.5	43.0	14.8	2,322
Non-formal	29.0	39.5	12.6	1,543	41.7	27.6	4.6	17.0	194	30.2	38.2	11.7	1,789
Primary	36.5	46.7	18.3	913	55.4	36.8	7.9	19.7	242	40.5	44.6	16.2	1,192
Secondary	42.9	43.9	20.7	1,454	58.8	40.9	10.3	22.5	715	48.6	42.9	17.2	2,234
Higher	49.4	36.6	16.6	377	71.9	60.0	23.2	51.4	247	58.9	45.8	19.2	637
Wealth index quintile													
Poorest	27.8	43.0	14.0	1,582	40.2	34.8	6.2	17.1	207	29.2	42.1	13.1	1,851
Second	29.8	47.0	16.5	1,449	46.1	41.7	7.6	13.8	260	32.6	46.2	15.2	1,753
Middle	36.4	46.3	16.9	1,231	49.6	29.6	7.3	16.5	274	39.1	43.3	15.2	1,565
Fourth	40.7	37.6	16.7	986	63.0	38.2	10.5	24.3	463	47.8	37.8	14.7	1,492
Richest	50.8	37.9	19.9	969	64.7	49.6	17.1	38.8	513	56.0	41.9	18.9	1,514

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

[3] MICS indicator 2.14 - Milk feeding frequency for non-breastfed children[4] MICS indicator 2.16 - Minimum dietary diversity

[5] MICS indicator 2.15 - Minimum meal frequency

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

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

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

Estimates of Infant and Young Child Feeding indicators in Table 6 are based on the mother's report of consumption of food and fluids prior to being interviewed. Data are subject to a number of limitations: respondent's inability to provide a full report on the child's liquid and food intake due to recall errors as well as lack of knowledge in cases where the child was fed by other individuals.

Overall, less than half (42.9 percent) of the children age 6-23 months were fed the minimum number of times, and only 35.6 percent of them received the minimum dietary diversity- foods from at least 4 food groups. A similar proportion of females (43.6 percent) and males (42.2 percent) achieved the minimum meal frequency. The overall assessment using the indicator of minimum acceptable diet shows that only 16.5 percent of children age 6-23 months were benefitting from a diet sufficient in both diversity and frequency. By geopolitical zone, diet sufficiency in both diversity and frequency was highest in South South (24.3 percent) and lowest in South west (13.4 percent). It also increased with mother's education and wealth quintile.

Salt Iodization

Iodine Deficiency Disorders (IDD) is the world's leading cause of preventable mental retardation and impaired psychomotor development in young children. In its most extreme form, iodine deficiency causes cretinism. It also increases the risks of stillbirth and miscarriage in pregnant women. IDD takes its greatest toll in impaired mental growth and development, contributing in turn to poor school performance, reduced intellectual ability, and impaired work performance. The indicator is the percentage of households consuming iodized salt (> 0 parts per million). Salt is adequately iodized when it contains at least 15 ppm for household use. MBI rapid salt test kit was used to test for iodine in salt used by households for cooking.

Table 5.7 (NU.10) Iodized salt consumption

Percent distribution of households by consumption of iodized salt, Nigeria, 2016-17

			Percent of households with:					
				Salt test result				
	Percent of households in which salt was tested	Number of households	No salt	Not iodized 0 PPM	>0 and <15 PPM	15+ PPM[1]	Iodized >0 PPM	Number of households in which salt was tested or with no salt
Total	93.9	33901	5.4	3.2	22.2	69.2	91.4	33644
Geopolitical zone								
North Central	96.0	5435	3.6	1.1	15.9	79.3	95.3	5413
North East	94.5	5581	4.9	2.7	23.4	69.0	92.4	5544
North West	92.4	9128	6.7	7.4	34.5	51.4	86.0	9041
South East	94.1	3132	5.3	1.0	13.4	80.2	93.7	3113
South South	96.2	4281	2.8	1.1	12.9	83.1	96.0	4240
South West	91.8	6344	7.5	2.0	19.3	71.3	90.5	6293
Residence								
Urban	92.6	12421	6.6	2.5	19.0	71.9	90.9	12313
Rural	94.6	21480	4.8	3.6	24.0	67.6	91.6	21330
Wealth index quintile								
Poorest	94.1	6026	5.1	5.5	33.1	56.3	89.4	5978
Second	94.1	6280	5.2	4.4	26.6	63.8	90.4	6235
Middle	93.4	6883	6.2	3.2	22.8	67.8	90.6	6850
Fourth	92.8	7156	6.4	2.3	18.3	73.0	91.3	7095
Richest	94.8	7556	4.3	1.3	12.9	81.5	94.4	7487

[1]MICS indicator 2.19 - Iodized salt consumption

In Nigeria, about 91 percent of households used iodized salt for cooking as shown in Table 5.7. Salt containing 15 ppm or more of iodine was found in about 7 in 10 households, with higher prevalences in South South and South East. There was slight variation in households using adequately iodized salt in urban and rural areas. Richer households consume adequately iodized salt more than others in lower wealth quintile.

Low Birth Weight

Weight at birth is a good indicator of the newborn's chances for survival, growth, long-term health and psychosocial development. It also reflects the mother's health and nutritional status. Low birth weight (defined as less than 2,500 grams) can lead to severe health risks for children. Babies who were undernourished in the womb have increased risk of dying during their early days, months and years. Those who survive may have impaired immune function and increased risk of disease. They are likely to remain undernourished with reduced muscle strength throughout their lives, and suffer a higher incidence of diabetes and heart disease in later life. Children born with low birth weight also risk a lower IQ and cognitive disabilities, affecting their performance in school and their job opportunities as adults.

In low and middle income countries, low birth weight is primarily from the mother's poor health and nutrition. Inadequate weight gain during pregnancy is particularly important since it accounts for a large proportion of foetal growth retardation. The mother's poor nutritional status before conception, poor nutrition during pregnancy, and short stature (due mostly to under nutrition and infections during her childhood) have the most impact. In addition, diseases such as diarrhoea and malaria can significantly impair foetal growth if the mother becomes infected while pregnant. Also, teenagers who give birth when their own bodies have yet to finish growing run a higher risk of bearing low birth weight babies.

One of the major challenges in measuring the incidence of low birth weight is that more than half of infants in the low and middle income countries are not weighed at birth. In the past, most estimates of low birth weight for these countries were based on data compiled from health facilities. However, these estimates are biased because majority of births are not delivered in health facilities, and therefore not weighed at birth. Those who are weighed, represent only a selected sample of all births. For this reason, the percentage of births weighing below 2500 grams is estimated from two items in the questionnaire: the mother's assessment of the child's **size** at birth (i.e., very small, smaller than average, average, larger than average, very large) and the mother's recall of the child's weight or the weight as recorded on a health card if the child was weighed at birth.[17]

Table 5.7 presents percentage of most recent live birth in the last 2 years preceding the study who were weighed, and those weighing below 2,500 grams across different social and demographic groups in Nigeria. One out of 4 last live births were weighed at birth. Fifteen percent of these births are classified as low weight because they are less than 2,500 grams at birth.

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

Proportion of infants weighed at birth is highest in South West (64percent) and South East (61 percent) compared to 11 and 13 percent in North West and North East respectively. Although more babies are weighed at birth in the Southern part of the country, the proportion of low birth weights babies are less than 20 percent across all the geopolitical zones in Nigeria. This pattern is almost exact for all the social and demographic groups. However, greater proportion of babies born in urban areas, from mothers with at least secondary education, and from the richest wealth quintile household were weighed at birth than other groups.

Table 5.8 (NU.1): Low birth weight infants

Percentage of last live-born children in the last two years that are estimated to have weighed below 2,500 grams at birth and percentage of live births weighed at birth, Nigeria, 2016-17

	Percentage of live births:	
	Below 2,500 grams[1]	Weighed at birth[2]
Total	**14.8**	**25.2**
Geopolitical zone		
North Central	16.6	26.0
North East	15.7	13.0
North West	14.6	11.4
South East	14.7	61.4
South South	12.6	47.7
South West	13.1	64.2
Mother's age at birth (years)		
Less than 20	15.3	12.9
20-34	14.7	27.2
35-49	15.0	26.8
Residence		
Urban	13.8	48.7
Rural	15.3	15.3
Mother's education		
None	15.6	9.4
Non formal	14.7	20.9
Primary	14.2	44.9
Secondary	12.0	81.5
Higher	15.8	4.2
Wealth index quintile		
Poorest	15.2	4.0
Second	15.7	8.9
Middle	15.5	19.5
Fourth	14.5	35.9
Richest	13.0	68.3

[1] MICS indicator 2.20 - Low-birthweight infants[2] MICS indicator 2.21 - Infants weighed at birth

VI. Child Health

The Sustainable Development Goal 3 seeks, among other targets, to end preventable deaths of newborns and children under 5 years of age and reduce by one third premature mortality from non-communicable diseases through prevention and treatment. Immunization and care of illness have been shown to be the most cost-effective in achieving these targets especially among children under five who are most vulnerable. This chapter presents result from MICS 2016-17 and NICS on vaccination coverage and care of illness among children in Nigeria.

Vaccination Coverage

Nigeria is one of the 194 Member States of the World Health Assembly that endorsed the Global Vaccine Action Plan (GVAP) in May 2012. This is to achieve the Decade of Vaccine vision to prevent millions of deaths by 2020 through universal and equitable access to immunization. The World Health Organization Recommended Routine Immunizations is that children[18] should be vaccinated against tuberculosis, diphtheria, pertussis, tetanus, polio, measles, hepatitis B, haemophilus influenza type b, pneumonia/meningitis, rotavirus, and rubella.The vaccination schedule followed by the National Immunization Programme (NIP) provides birth doses of BCG, Polio, and Hepatitis B vaccines (within 24 hours of birth), three doses of the Pentavalent vaccine containing DPT, Hepatitis B, and Haemophilus influenza type b (Hib) antigens, three doses of Polio vaccine, two/three doses of Pneumococcal (conjugate) vaccine, two or three doses of rotavirus vaccine, two doses of the MMR vaccine containing measles, mumps, and rubella antigens, and, in addition, one dose of vaccine against yellow fever. All vaccinations should be received during the first year of life except the doses of MMR at 12 and 18 months and yellow fever at 12 months.

KEY FINDINGS

18% of children age 12-23 months received all recommended vaccination by their first birthday

Specific vaccine coverage:
Measles- 39%
Yellow fever- 36%
Tuberculosis- 35%
Polio – 34%
Pentavalent- 30%

Vaccination coverage reduces with time for multi-dose vaccines: Polio, PENTA/DPT and PCV.

Reported illnesses two weeks preceding survey for under-five children:
Malaria fever-25.4%
Diarrhoea- 14.3%
ARI symptom- 3%

Half of women with a live birth in the last two years prior to survey were protected against neonatal tetanus

One in 6 women age 15-49 years received three or more doses of SP/Fansidar during their last pregnancy that led to a live birth in thelast 2 years

[18] **http://www.who.int/immunization/policy/Immunization_routine_table2.pdf** .Table 2 includes recommendations for all children and additional antigens recommended only for children residing in certain regions of the world or living in certain high-risk population groups.

The sample size for the Nigeria MICS 2016-17 was insufficient for estimating state level vaccination coverage for children aged 12 to 23 months in twenty states, namely: Abia, Akwa Ibom, Anambra, Bayelsa, Benue, Cross River, Delta, Edo, Ekiti, Enugu, Imo, Kogi, Kwara, Ogun, Ondo, Osun, Oyo, Plateau, Rivers and FCT (Abuja). In these twenty states, supplemental sampling was conducted to meet the requirements for vaccine coverage estimation for urban and rural areas; six geopolitical zones; the 36 states of the Federation and the Federal Capital Territory. The main objectives were to provide reliable estimates for coverage in vaccination antigens for children between the ages of 12 – 23 months at state level.

Table 6.1 (CH.1): Vaccinations by source of information, and vaccination by 12 months of age

Percentage of children age 12-23 months who received vaccination at any time before the survey by source of information, and vaccination by 12 months of age. Nigeria, MICS 2016-17

Antigens		Vaccinated at any time before the survey according to:			Vaccinated by 12 months of age
		Vaccination card	Mother's report	Either	
BCG[1]		27.8	25.3	53.1	**52.8**
Polio	At birth	23.5	23.4	46.9	**46.9**
	1	25.5	25.0	50.4	**49.8**
	2	23.3	20.2	43.5	**43.0**
	3[2]	21.4	13.3	34.7	**34.0**
PENTA/ DPT	1	26.9	22.3	49.3	**48.8**
	2	24.7	16.0	40.8	**40.3**
	3[3,4,5]	23.0	11.4	34.4	**33.6**
PCV	1	19.3	20.4	39.6	**38.8**
	2	17.9	15.2	33.1	**32.4**
	3	16.6	10.7	27.2	**26.2**
HepB at birth		20.3	9.7	30.1	**30.0**
Inactivated Polio Vaccine		18.8	23.6	42.4	**40.2**
Yellow fever[6]		19.6	19.3	39.0	**36.0**
Measles[7]		20.4	21.4	41.8	**38.5**
Fully vaccinated[8, b]		16.3	4.7	21.0	**17.5**
No vaccinations		0.1	4.0	4.1	**4.1**
Number of children		**5,535**	**5,535**	**5,535**	**5,535**

[1] MICS indicator 3.1 - Tuberculosis immunization coverage
[2] MICS indicator 3.2 - Polio immunization coverage
[3] MICS indicator 3.3 - Diphtheria, pertussis and tetanus (DPT) immunization coverage
[4] MICS indicator 3.5 - Hepatitis B immunization coverage
[5] MICS indicator 3.6 - Haemophilusinfluenzae type B (Hib) immunization coverage
[6] MICS indicator 3.7 - Yellow fever immunization coverage
[7] MICS indicator 3.4; MDG indicator 4.3 - Measles immunization coverage
[8] MICS indicator 3.8 - Full immunization coverage
[a] All MICS indicators refer to results in this column
[b] Includes: BCG, Polio3, PENTA3/DPT3, Measles and Yellow fever as per the vaccination schedule in Nigeria

Note that Table 6.1 is the results of the MICS survey alone while Tables 6.2 and 6.3 are the results of the MICS and NICS surveys combined. Due to larger sample size, MICS/NICS results yield better precision than MICS only. The estimates for full immunization coverage from the Nigeria MICS 2016-17 are based on children age 12-23 months because of the National Immunization Programme (NIP) vaccination

schedule. Table 6.1 presents percentage of children age 12-23 months who received vaccination at any time before the survey by source of information, and those vaccinated by 12 months of age.

Information on vaccination coverage was collected in two ways: from vaccination cards or verbal recall. All mothers or caretakers were asked to provide vaccination cards. If the vaccination card for a child was available, interviewers copied vaccination information from the cards onto the MICS questionnaire. If no vaccination card was available for the child, the interviewer proceeded to ask the mother to recall whether or not the child had received each of the vaccinations, and for Polio, DPT and Hepatitis B, how many doses were received. The final vaccination coverage estimates are based on information obtained from the vaccination card and the mother's report. In the first three columns of the table, the numerator includes all children who were vaccinated at any time before the survey according to the vaccination card or the mother's report. In the last column, only those children who were vaccinated before their first birthday, as recommended, are included. For children without vaccination cards, the proportion of vaccinations given before the first birthday is assumed to be the same as for children with vaccination cards.

Although, it is expected that all vaccination should have been received during the first year of life, only 18 percent of children age 12-23 months received all recommended vaccination in the national immunization schedule by their first birthday. Four percent of eligible children did not receive any vaccination. BCG had the highest coverage of 53 percent, while PCV 3 had the lowest coverage of 26 percent. Measles coverage is 38 percent, Yellow fever is 36 percent and Hepatitis B at birth is 30 percent among children aged 12-23 months before their first birthday. Vaccination coverage reduces with time for vaccines that are multi-dose: Polio, PENTA/DPT and PCV.

Vaccination Coverage by background characteristics

Tables 6.2 and 6.3 present percentage of children age 12-23 months with any evidence of vaccination by background characteristics: geopolitical zones, residence, sex, mother's education, mother's age, wealth index and state. Across all the groups, BCG vaccination coverage is the highest while measles is the lowest vaccine covered in Nigeria. Percentage of children with full vaccination and specific vaccine coverage was higher in the southern part of the country than the northern part.

South East has the highest coverage with about 9in 10 children fully vaccinated while North-west had the lowest estimate of 3in 10 children vaccinated at any time before the survey across. While the coverage of measles is low in all geopolitical region, estimate of 8.5 percent in the North West as at 2016-17, after many years of campaign for vaccination is alarming. There is urban-rural differential in vaccination coverage in Nigeria; full vaccination coverage is 75 percent in the urban areas, and 44 percent in rural areas. Vaccination coverage by sex of the child is similar. Maternal education has direct relationship with child's vaccination, specifically Hepatitis B, Pentavalent and Measles vaccines. Mothers between the ages of 30 and 39 years have the highest proportion of children with full vaccination coverage than other age groups.

Table 6.2 (CH.2A) (MICS/NICS): Percentage of children 12-23 months with any evidence of vaccination

Percentage of children age 12-23 months currently vaccinated against vaccine preventable childhood diseases, Nigeria 2016-17

	Percentage of children who received:													Card seen	Children age 12-23 months
	BCG	HepB at Birth	Polio				Pentavalent				Yellow fever	Measles (MCV1)	Full[a]		
			At birth	1	2	3		1	2	3					
Total	**53.5**	**30.2**	**47.4**	**49.7**	**42.5**	**33.2**	**48.7**	**39.9**	**33.3**	**38.8**	**41.7**	**22.9**	**53.5**	**29.0**	**6,268**
Geopolitical Zone															
North Central	63.0	38.3	56.1	59.2	53.3	37.3	58.6	48.3	39.0	49.9	52.4	26.5	63.0	30.9	900
North East	52.6	19.2	41.7	46.4	36.7	29.8	46.7	37.3	28.2	32.8	36.0	19.6	52.6	24.4	1,346
North West	30.0	14.1	28.6	29.4	23.6	19.3	25.3	17.4	13.7	19.1	22.4	8.5	30.0	15.6	2,468
South East	90.1	64.9	82.5	79.6	70.9	52.4	85.3	73.9	65.9	69.9	72.6	44.4	90.1	47.1	353
South South	83.9	58.2	72.3	77.6	69.1	53.1	79.9	72.0	64.8	68.2	69.0	42.5	83.9	51.6	503
South West	85.6	60.4	78.3	80.1	72.9	59.7	81.6	73.2	66.4	68.4	71.7	50.2	85.6	57.3	698
Residence															
Urban	75.0	47.1	68.4	67.9	59.8	48.3	69.3	59.0	50.8	60.5	62.8	38.5	75.0	41.6	1,970
Rural	43.7	22.4	37.8	41.3	34.6	26.4	39.3	31.1	25.3	28.8	32.0	15.7	43.7	23.2	4,298
Sex															
Male	54.0	30.0	48.6	50.9	43.2	33.3	49.8	40.5	32.6	38.6	41.8	22.6	54.0	28.7	3,121
Female	53.0	30.4	46.3	48.5	41.8	33.2	47.7	39.3	34.1	38.9	41.6	23.1	53.0	29.3	3,147
Mother's Education															
None	23.9	8.4	22.2	26.8	21.4	17.3	19.2	13.5	8.9	14.3	17.0	5.2	23.9	11.0	1,355
Primary	60.7	33.3	52.0	53.8	46.8	35.2	55.0	46.1	38.5	42.4	46.4	24.1	60.7	32.0	896
Secondary	82.2	49.9	73.1	74.3	64.5	52.1	76.2	65.6	56.9	63.0	66.0	41.3	82.2	46.8	1,735
Higher	93.9	69.2	90.5	82.0	74.8	61.4	92.3	81.3	73.8	86.5	88.7	54.7	93.9	52.3	490
Mother's Age (Years)															
15-19	30.2	17.5	26.1	27.7	22.3	15.3	22.8	18.2	14.7	19.2	20.5	7.4	30.2	15.0	377
20-29	52.0	29.3	47.0	48.7	40.9	33.0	46.8	38.0	32.1	37.6	39.7	22.2	52.0	28.9	2,873
30-39	60.0	34.5	53.2	55.5	48.4	37.3	55.8	46.5	38.6	43.9	48.3	26.7	60.0	33.0	2,324
40-49	49.3	24.7	39.2	46.1	40.8	31.2	47.0	36.4	30.5	36.0	38.2	21.2	49.3	24.0	587
50+	52.8	32.7	50.4	43.5	36.4	24.3	45.3	39.0	32.9	42.9	43.6	20.6	52.8	21.1	93
Wealth index quintile															
Poorest	23.2	10.2	18.7	26.2	22	16.4	19.6	14.0	10.2	13.6	15.8	5.4	23.2	11.8	1,454
Second	39.0	17.3	33.6	38.5	31.2	23.8	34.3	25.7	20.0	23.2	27.2	11.2	39.0	19.3	1,370
Middle	54.7	30.0	48.4	48.4	40.8	32.0	49.0	39.0	32.5	38.3	41.1	22.2	54.7	30.8	1,205
Fourth	76.0	43.7	68.0	66.8	57.7	44.9	70.7	60.8	50.9	55.8	59.5	35.6	76.0	39.3	1,150
Richest	87.1	58.9	80.4	78.4	69.8	56.6	82.3	71.4	63.3	74.5	76.3	48.2	87.1	51.5	1,089

[a] Includes: BCG, Polio3, DPT3, HepB3, Hib3, and Measles

Table 6.3 (CH.2A) (MICS/NICS): Percentage of children 12-23 months with any evidence of vaccination by states

Percentage of children age 12-23 months currently vaccinated against vaccine preventable childhood diseases, Nigeria 2016-17

	Percentage of children who received:													
	BCG	HepB at Birth	Polio				Pentavalent			Yellow fever	Measles (MCV1)	Full[a]	Card seen	Children age 12-23 months
			At birth	1	2	3	1	2	3					
Total	**53.5**	**30.2**	**47.4**	**49.7**	**42.5**	**33.2**	**48.7**	**39.9**	**33.3**	**38.8**	**41.7**	**22.9**	**29.0**	**6,268**
North Central	**63.0**	**38.3**	**56.1**	**59.2**	**53.3**	**37.3**	**58.6**	**48.3**	**39.0**	**49.9**	**52.4**	**26.5**	**30.9**	**900**
Benue	66.4	53.9	62.9	66.4	62.7	45.1	68.3	59.5	57.4	50.6	53.6	37.0	37.9	132
Kogi	73.3	46.9	62.7	60.3	46.9	36.4	63.7	47.6	38.4	55.7	65.0	29.9	41.5	89
Kwara	72.1	46.9	61.6	69.8	64.1	41.0	70.8	61.3	49.1	67.5	66.9	33.9	19.7	66
Nasarawa	63.8	33.7	59.6	57.6	48.7	32.8	56.4	44.7	34.9	46.5	49.7	21.4	26.3	127
Niger	38.1	20.8	33.5	44.6	39.8	24.5	36.3	30.6	20.0	28.8	31.2	13.8	24.7	255
Plateau	80.1	39.5	67.8	67.9	64.3	46.8	69.9	57.1	45.2	65.5	65.3	30.6	30.7	186
FCT-Abuja	87.5	68.7	84.4	71.8	65.6	55.6	87.7	71.9	65.7	73.7	76.3	46.8	55.2	46
North East	**52.6**	**19.2**	**41.7**	**46.4**	**36.7**	**29.8**	**46.7**	**37.3**	**28.2**	**32.8**	**36.0**	**19.6**	**24.4**	**1,346**
Adamawa	67.4	35.0	54.5	60.3	50.8	40.9	56.6	50.3	37.9	44.5	48.8	29.0	46.2	134
Bauchi	41.2	14.2	28.9	37.6	33.4	26.5	35.3	25.2	18.5	22.0	22.2	13.9	19.7	345
Borno	80.6	24.1	66.1	69.4	50.7	41.5	72.9	63.9	47.7	50.8	58.1	31.5	31.9	421
Gombe	54.4	29.9	45.0	50.1	41.2	35.9	44.7	29.1	25.0	30.5	32.4	16.7	25.8	122
Taraba	39.7	23.8	34.4	31.0	21.3	17.7	35.9	20.0	16.4	25.1	29.2	11.5	22.0	70
Yobe	16.3	2.8	12.1	15.2	12.6	9.4	17.5	11.3	8.7	14.6	14.7	6.5	7.0	253
North West	**30.0**	**14.1**	**28.6**	**29.4**	**23.6**	**19.3**	**25.3**	**17.4**	**13.7**	**19.1**	**22.4**	**8.5**	**15.6**	**2,468**
Jigawa	25.6	11.2	26.0	15.8	10.2	6.7	19.5	9.0	7.1	9.0	10.4	1.8	11.8	337
Kaduna	51.4	26.8	40.9	39.8	36.7	34.4	43.7	32.5	29.5	42.7	43.1	24.9	23.1	376
Kano	33.7	11.4	29.4	27.3	18.9	13.7	27.9	20.9	15.9	22.3	24.1	9.5	19.6	554
Katsina	28.5	16.6	32.6	33.0	27.8	21.5	28.2	18.3	12.1	17.0	21.1	5.9	18.7	478
Kebbi	22.6	11.2	23.1	26.0	18.1	12.1	20.2	16.7	11.3	12.6	25.5	4.8	12.6	202
Sokoto	16.3	4.6	12.6	15.1	10.1	7.1	9.4	5.2	2.9	6.4	9.8	2.2	5.2	218
Zamfara	19.0	11.0	23.4	42.8	37.9	35.2	14.7	9.5	8.9	12.2	16.2	4.9	8.2	303

Table 6.3 (CH.2A) (MICS/NICS): Percentage of children 12-23 months with any evidence of vaccination by states contd.

Percentage of children age 12-23 months currently vaccinated against vaccine preventable childhood diseases, Nigeria 2016-17

	Percentage of children who received:													
	BCG	HepB at Birth	Polio				Pentavalent			Yellow fever	Measles (MCV1)	Full[a]	Card seen	Children age 12-23 months
			At birth	1	2	3	1	2	3					
Total	**53.5**	**30.2**	**47.4**	**49.7**	**42.5**	**33.2**	**48.7**	**39.9**	**33.3**	**38.8**	**41.7**	**22.9**	**29.0**	**6,268**
South East	**90.1**	**64.9**	**82.5**	**79.6**	**70.9**	**52.4**	**85.3**	**73.9**	**65.9**	**69.9**	**72.6**	**44.4**	**47.1**	**353**
Abia	87.1	65.5	81.1	76.9	68.9	43.3	81.6	68.6	54.8	66.3	70.4	33.9	39.9	57
Anambra	88.5	74.6	84.7	84.1	80.7	62.1	89.5	82.4	76.2	76.4	75.0	55.2	44.6	74
Ebonyi	82.5	61.5	77.6	69.6	60.6	46.9	79.7	66.2	54.4	56.4	57.6	35.0	49.7	59
Enugu	93.2	69.2	88.2	79.8	70.4	60.2	84.9	78.6	73.8	74.5	81.2	50.5	52.8	73
Imo	95.6	55.3	80.2	83.9	71.2	47.7	88.1	71.7	65.6	72.0	74.6	43.5	47.5	91
South South	**83.9**	**58.2**	**72.3**	**77.6**	**69.1**	**53.1**	**79.9**	**72.0**	**64.8**	**68.2**	**69.0**	**42.5**	**51.6**	**503**
Akwa Ibom	82.4	59.3	70.6	75.8	70.9	58.7	80.2	73.4	68.4	64.2	63.7	44.2	46.8	120
Bayelsa	65.9	33.9	48.2	63.8	55.3	35.4	61.2	50.3	42.6	45.8	51.6	28.5	37.0	41
Cross River	88.2	44.7	69.3	82.7	77.1	58.8	83.5	76.9	69.5	69.6	73.7	49.9	54.5	76
Delta	80.9	64.8	70.7	71.6	58.2	47.8	75.7	63.7	57.2	67.5	63.7	36.3	51.1	102
Edo	96.7	69.5	89.4	86.9	78.1	52.7	88.6	86.1	74.5	83.8	86.1	45.7	55.9	81
Rivers	82.0	61.7	75.0	80.7	70.4	56.0	82.0	72.8	66.0	69.4	70.7	44.8	60.0	82
South West	**85.6**	**60.4**	**78.3**	**80.1**	**72.9**	**59.7**	**81.6**	**73.2**	**66.4**	**68.4**	**71.7**	**50.2**	**57.3**	**698**
Ekiti	86.5	56.1	84.3	76.5	71.7	57.9	87.1	80.1	72.2	70.3	80.1	48.0	65.5	30
Lagos	92.9	70.8	88.5	91.0	86.2	74.7	93.6	85.6	80.2	84.9	88.0	68.1	67.5	244
Ogun	80.0	57.2	75.7	69.2	57.8	48.0	71.1	58.9	52.1	56.5	58.7	35.0	45.0	72
Ondo	83.1	44.2	66.5	76.8	71.4	53.4	76.4	71.4	66.2	68.5	72.2	44.8	47.8	102
Osun	87.5	60.4	79.0	76.8	67.6	54.2	83.1	65.7	60.0	65.7	67.0	43.0	53.7	96
Oyo	77.1	56.9	69.7	72.7	63.6	49.5	69.1	64.9	54.1	49.2	53.1	37.4	53.9	155

[a] Includes: BCG, Polio3, DPT3, HepB3, Hib3, and Measles

Despite subsidized vaccination fee in Nigeria, the poor households have low vaccination coverage for specific and all basic vaccines. Nine in 10 children age 12-23 months in the richest wealth quintile households have full vaccination coverage compared with 2in 10 in the poorest wealth quintile households. Eleven states are performing below the national estimate on full vaccination coverage. States with lower estimates are

Jigawa (1.8 percent), Sokoto (2.2 percent), Kebbi (4.8 percent), Zamfara (4.9 percent), Katsina (5.9 percent), Yobe (6.5 percent), Kano (9.5 percent), Taraba (11.5 percent), Niger (13.8 percent), Bauchi (13.9percent) and Gombe (16.7 percent).

Neonatal Tetanus Protection

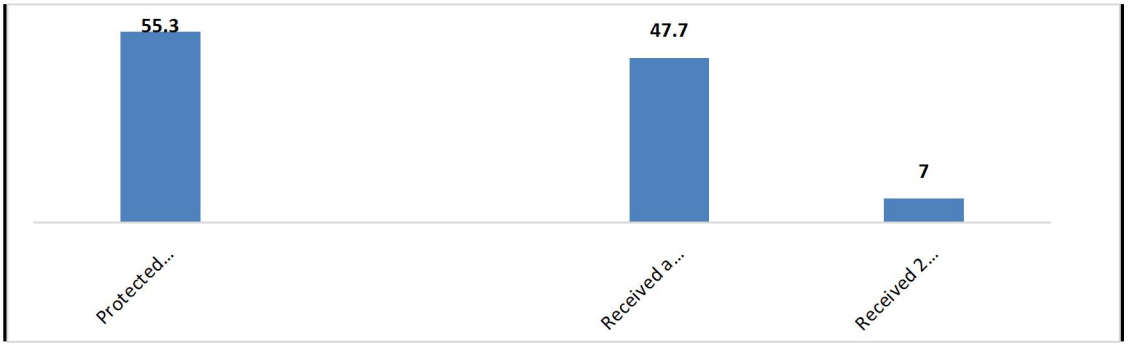
The strategy for preventing maternal and neonatal tetanus is to ensure that all pregnant women receive at least two doses of tetanus toxoid vaccine. A woman (and her newborn) was also considered protected if she has not received at least two doses of tetanus toxoid during a particular pregnancy but she had:

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

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

Figure 6.1 shows percentage of women age 15-49 years with a live birth in the last 2 years protected against neonatal tetanus in MICS 2016-17. Fifty-five percent of women with a live birth in the last two years prior to MICS 2016-17 survey are protected against tetanus and 48 percent of women received at least 2 doses of tetanus toxoid during their last pregnancy.

Figure 6.1: percentage of women age 15-49 years with a live birth in the last 2 years protected against neonatal tetanus, Nigeria 2016/17



Tables 6.4 and 6.5 show the percentage of women of reproductive age group protected against neonatal tetanus by background characteristics. The characteristics are geopolitical zones, residence, sex, mother's education, mother's age, wealth index and state. South East has the highest percentage of women protected against neonatal tetanus while North West had the lowest percentage. Also, at least 3 in 4 women in the southern part of the country are protected. The rural-urban difference on neonatal tetanus protection among this group of women is high, with urban areas having twice as much coverage as rural areas.

Table 6.4 (CH.3): Neonatal tetanus protection by background characteristics

Percentage of women age 15-49 years with a live birth in the last 2 years protected against neonatal tetanus, Nigeria,2016-17

	Percentage of women who received at least 2 doses during last pregnancy	Percentage of women who did not receive two or more doses during last pregnancy but received:				Protected against tetanus[1]	Number of women with a live birth in the last 2 years
		2 doses, the last within prior 3 years	3 doses, the last within prior 5 years	4 doses, the last within prior 10 years	5 or more doses during lifetime		
Total	**47.7**	**7.0**	**0.4**	**0.2**	**0.1**	**55.3**	**11,547**
Geopolitical zone							
North Central	43.4	6.0	0.2	0.2	0.2	49.9	1,770
North East	47.1	8.3	0.5	0.3	0.1	56.3	2,394
North West	34.1	7.6	0.5	0.0	0.0	42.2	4,603
South East	79.8	3.6	0.2	0.2	0.0	83.9	620
South South	70.3	6.2	0.0	0.0	0.0	76.5	900
South West	72.8	6.2	0.4	0.5	0.0	79.9	1,261
Residence							
Urban	66.4	8.9	0.6	0.2	0.0	76.2	3,426
Rural	39.8	6.3	0.3	0.1	0.1	46.5	8,121
Mother's Education							
None	29.8	7.0	0.1	0.2	0.1	37.3	3,208
Non-formal	28.1	5.5	0.4	0.0	0.0	34.0	2,560
Primary	52.0	9.4	0.3	0.2	0.0	61.9	1,716
Secondary	69.8	6.9	0.6	0.2	0.0	77.4	3,182
Higher	81.7	7.4	0.6	0.4	0.1	90.2	882
Wealth index quintile							
Poorest	20.6	4.8	0.2	0.0	0.0	25.6	2,587
Second	34.0	6.7	0.4	0.3	0.0	41.4	2,548
Middle	52.3	6.9	0.2	0.1	0.0	59.6	2,270
Fourth	65.2	9.5	0.5	0.0	0.2	75.4	2,113
Richest	76.0	7.9	0.7	0.4	0.0	85.0	2,028

[1] *MICS indicator 3.9 - Neonatal tetanus protection*

Neonatal tetanus protection increases with higher level of maternal education in Nigeria. This is more evident as only 37 percent of women with non-formal education have neonatal tetanus protection, while those with higher education have 90 percent coverage. This pattern is similar for wealth index quintile. Nine states are performing below the national average on neonatal tetanus protection in

Nigeria. The states with lower estimates are Sokoto (22.0 percent), Kebbi (25.1 percent), Zamfara (26.6 percent), Niger (32.7 percent), Yobe (33.1 percent), Katsina (35.6 percent), Taraba (39.8 percent) and Bauchi (46.6 percent).

Table 6.5 (CH.3): Neonatal tetanus protection by state

Percentage of women age 15-49 years with a live birth in the last 2 years protected against neonatal tetanus, Nigeria,2016-17

	Percentage of women who received at least 2 doses during last pregnancy	Percentage of women who did not receive two or more doses during last pregnancy but received:				Protected against tetanus[1]	Number of women with a live birth in the last 2 years
		2 doses, the last within prior 3 years	3 doses, the last within prior 5 years	4 doses, the last within prior 10 years	5 or more doses during lifetime		
Total	**47.7**	**7.0**	**0.4**	**0.2**	**0.1**	**55.3**	**11,547**
North Central	**43.4**	**6.0**	**0.2**	**0.2**	**0.2**	**49.9**	**1,770**
Benue	50.7	1.9	0.6	0.3	0.0	53.5	271
Kogi	61.2	12.3	0.0	0.0	0.5	74.0	133
Kwara	50.4	9.1	0.0	0.0	0.0	59.5	115
Nasarawa	49.7	6.0	0.0	0.0	0.0	55.6	244
Niger	26.6	6.1	0.0	0.0	0.0	32.7	527
Plateau	44.3	5.1	0.4	0.5	0.9	51.2	392
FCT Abuja	63.3	8.0	0.0	0.0	0.0	71.3	89
North East	**47.1**	**8.3**	**0.5**	**0.3**	**0.1**	**56.3**	**2394**
Adamawa	53.4	11.1	0.0	0.5	0.0	65.0	264
Bauchi	33.9	11.2	0.6	0.9	0.0	46.6	618
Borno	70.5	7.4	0.9	0.0	0.0	78.9	692
Gombe	45.2	11.1	1.0	0.4	0.8	58.4	236
Taraba	30.7	9.1	0.0	0.0	0.0	39.8	173
Yobe	31.4	1.7	0.0	0.0	0.0	33.1	410
North West	**34.1**	**7.6**	**0.5**	**0.0**	**0.0**	**42.2**	**4,603**
Jigawa	25.0	15.0	0.8	0.0	0.0	40.7	595
Kaduna	63.4	6.8	0.6	0.0	0.0	70.8	663
Kano	43.0	10.3	0.4	0.1	0.0	53.8	1,038
Katsina	30.9	4.7	0.0	0.0	0.0	35.6	916
Kebbi	16.8	7.7	0.5	0.0	0.0	25.1	398
Sokoto	17.8	3.8	0.4	0.0	0.0	22.0	409
Zamfara	22.4	3.5	0.7	0.0	0.0	26.6	583
South East	**79.8**	**3.6**	**0.2**	**0.2**	**0.0**	**83.9**	**620**
Abia	89.4	1.8	0.0	1.2	0.0	92.4	99
Anambra	78.2	4.1	0.0	0.0	0.0	82.3	140
Ebonyi	61.7	3.4	1.3	0.0	0.0	66.4	111
Enugu	79.3	6.8	0.0	0.3	0.0	86.4	105
Imo	87.7	2.4	0.0	0.0	0.0	90.2	164
South South	**70.3**	**6.2**	**0.0**	**0.0**	**0.0**	**76.5**	**900**
Akwa Ibom	68.0	5.9	0.0	0.0	0.0	73.9	228
Bayelsa	62.4	2.9	0.4	0.0	0.0	65.7	73
Cross River	71.5	1.2	0.0	0.0	0.0	72.8	162
Delta	58.5	9.9	0.0	0.0	0.0	68.4	173
Edo	81.7	10.2	0.0	0.0	0.0	91.9	101
Rivers	81.1	6.5	0.0	0.0	0.0	87.6	163
South West	**72.8**	**6.2**	**0.4**	**0.5**	**0.0**	**79.9**	**1,261**
Ekiti	66.1	9.0	0.0	0.7	0.0	75.8	54
Lagos	80.8	5.2	0.6	0.0	0.0	86.7	429
Ogun	67.9	7.3	0.3	0.0	0.0	75.5	132
Ondo	69.1	10.9	0.0	0.0	0.0	80.0	163
Osun	78.9	3.1	1.6	0.0	0.0	83.6	161
Oyo	64.2	5.6	0.0	1.7	0.0	71.5	322

[1] MICS indicator 3.9 - Neonatal tetanus protection

Care of Illness

A key strategy for accelerating progress toward SDG 3 is prevention and prompt management of diseases that leads to childhood mortality. Diarrhoea, pneumonia and malaria are three of such preventable childhood morbidity that causes under-five deaths. According to a UNICEF report[19] in 2016, pneumonia and diarrhoea are easily preventable illnesses but in many parts of the world, a child dies every 35 seconds of pneumonia and every 60 seconds of diarrhoea. Estimates of mortality from severe malaria among children is also high, especially in infants who are yet to fully developed immunity in high endemic area, and are prone to severe anaemia, hypoglycaemia and cerebral malaria.[20]

Several interventions and recommendations have been put in place to reduce the prevalence of these morbidities. One of such is the Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea (GAPPD). This aims to end preventable pneumonia and diarrhoea death by reducing mortality from pneumonia to 3 deaths per 1000 live births and mortality from diarrhoea to 1 death per 1000 live births by 2025. Also, WHO recommends Seasonal Malaria Chemoprevention (SMC)[21] which is intermittent administration of full treatment courses of antimalarial medicine to children in areas of highly seasonal transmission during the malaria season.

The definition of a case of diarrhoea or fever, in this survey, was the mother's (or caretaker's) report that the child had such symptoms over the specified period; no other evidence was sought beside the opinion of the mother. Pneumonia is the most serious outcome of acute respiratory infection (ARI). A child was considered to have had an episode of ARI if the mother or caretaker reported that the child had, over the specified period, an illness with a cough, with rapid or difficult breathing, and whose symptoms were perceived to be due to a problem in the chest, or both a problem in the chest and a blocked nose. While this approach is reasonable in the context of MICS, these simple case definitions must be kept in mind when interpreting the results, as well as the potential for reporting and recall biases.

Furthermore, diarrhoea, fever and ARI are not only seasonal but are also characterized by the often-rapid spread of localized outbreaks from one area to another at different points in time. The timing of the survey and the location of the teams might therefore considerably affect the results, which must consequently be interpreted with caution. For these reasons, although the period-prevalence over a two-week time window is reported, these data should not be used to assess the epidemiological characteristics of these diseases but rather to obtain denominators for the indicators related to use of health services and treatment.

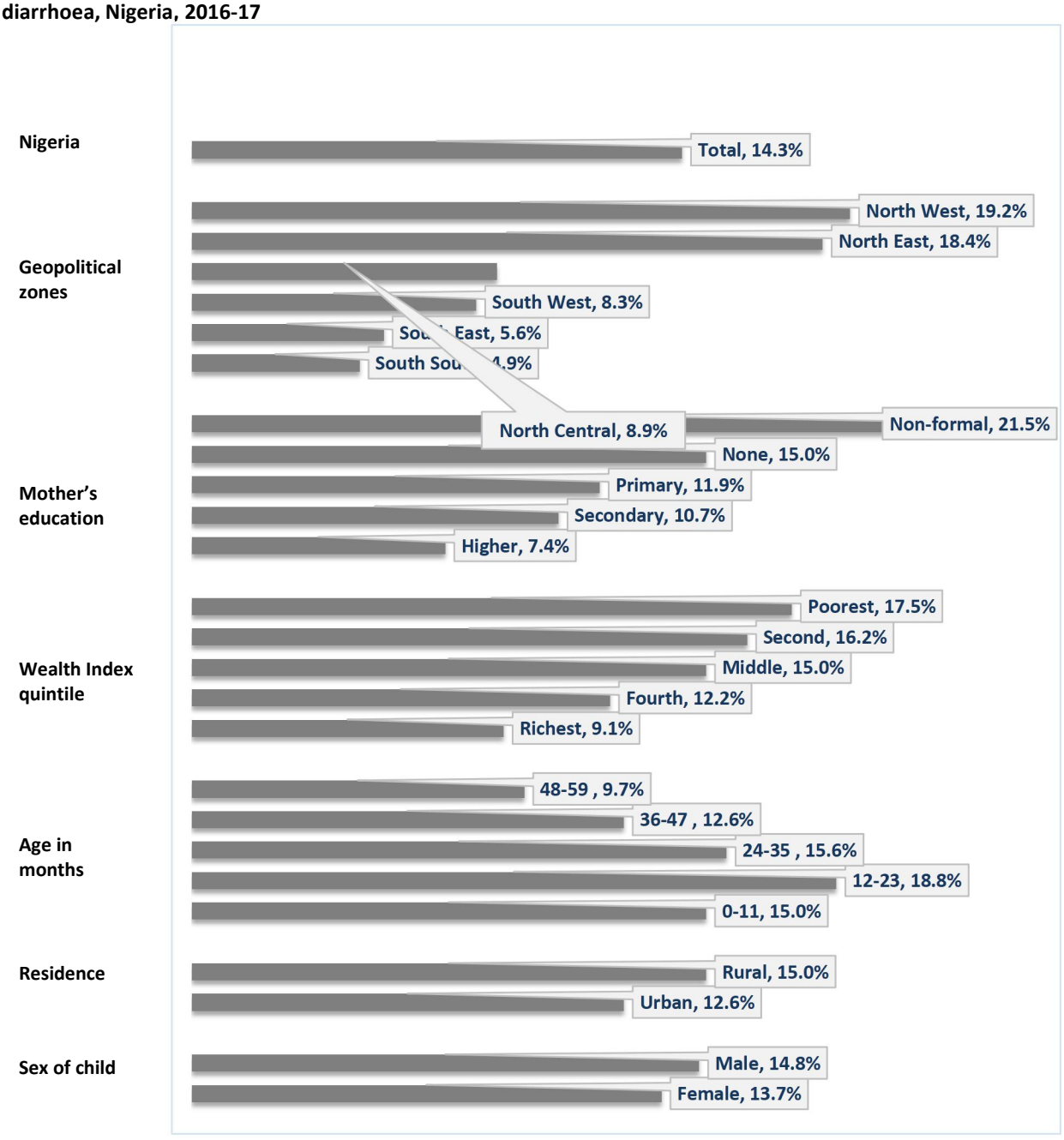
Diarrhoea

In the MICS, mothers or caretakers were asked whether their child under age five years had any episode of diarrhoea in the two weeks prior to the survey. In cases where mothers reported that the child had diarrhoea, a series of questions were asked about the treatment of the illness, including what the child

[19]https://www.unicef.org/lac/20161111_UNICEF-one-is-too-many-report.pdf
[20]http://www.who.int/malaria/areas/high_risk_groups/children/en/
[21]http://www.who.int/malaria/areas/preventive_therapies/children/en/

had been given to drink and eat during the episode and whether this was more or less than what was usually given to the child. Figure 6.2 presents percentage of children who had diarrhoea within two weeks preceding the survey. Fourteen percent of children age 0-59 months had at least one episode of diarrhoea in the two-week period before the survey. The pattern of diarrhoea episode across different social and demographic groups shows that diarrhoea was most common amongst children in the: North West; male children; rural areas; younger children age 12-23; children of mothers with non-formal education; and those from the poorest households.

Figure 6.2: Percentage of children age 0-59 months for whom the mother/caretaker reported an episode of diarrhoea, Nigeria, 2016-17



Treatment of diarrhoea

Diarrhoea is a leading cause of death among children under five worldwide. Most diarrhoea-related deaths in children are due to dehydration from loss of large quantities of water and electrolytes from the body in liquid stools. Management of diarrhoea – either through oral rehydration salts (ORS) or a recommended home fluid (RHF) – can prevent many of these deaths. In addition, provision of zinc supplements has been shown to reduce the duration and severity of the illness as well as the risk of future episodes within the next two or three months. Preventing dehydration and malnutrition by increasing fluid intake and continuing to feed the child are also important strategies for managing diarrhoea. Table 6.7 shows the pattern of care seeking and treatment of diarrhoea for children age 0-59 months who had at least an episode in the two-week period preceding the survey.

Table 6.6 (CH.5): Care seeking for Diarrhoea in the last two weeks preceding the survey

Percentage of children age 0-59 months with diarrhoea in the last two weeks, and care seeking for diarrhea

			Care seeking and treatment of Diarrhoea				
	Percent of episode of diarrhoea	Number of children age 0-59 months	**Advice or treatment sought from health facility or provider[1, a]**	**ORS or any recommended homemade fluid**	**ORS and zinc[2]**	**ORT with continued feeding[3]**	Number of children age 0-59 months with diarrhoea in the last two weeks
Total	**14.3**	**28,085**	**26.7**	**43.1**	**18.5**	**33.4**	**4,009**
Geopolitical zone							
North Central	**8.9**	4,616	29.9	46.7	15.6	37.7	411
North East	**18.4**	6,041	23.9	41.9	12.2	27.9	1,109
North West	**19.2**	10,635	27.5	42.2	22.6	34.8	2,045
South East	**5.6**	1,550	22.4	39.0	16.9	31.8	88
South South	**4.9**	2,273	26.8	46.7	13.7	31.4	112
South West	**8.3**	2,968	29.0	49.2	20.0	40.3	245
Sex							
Male	**14.8**	14,213	27.3	43.5	19.3	34.4	2,108
Female	**13.7**	13,872	26.1	42.6	17.5	32.3	1,901
Residence							
Urban	**12.6**	8,553	29.2	54.8	25.2	41.5	1,073
Rural	**15.0**	19,532	25.8	38.8	16.0	30.4	2,936
Age (months)							
0-11	**15.0**	5,363	25.8	39.5	17.2	30.3	806
12-23	**18.8**	5,535	25.8	43.5	21.1	31.6	1,041
24-35	**15.6**	5,514	28.5	45.5	16.1	36.2	860
36-47	**12.6**	5,818	25.8	41.9	19.4	34.4	735
48-59	**9.7**	5,856	28.3	45.0	18.0	35.6	567
Mother's education							
None	**15.0**	8,134	20.5	32.7	11.2	25.3	1,218
Non-formal	**21.5**	6,196	26.8	45.1	19.6	36.6	1,335
Primary	**11.9**	4,330	26.3	46.0	21.8	36.4	516
Secondary	**10.7**	7,245	33.5	49.9	22.4	35.3	777
Higher	**7.4**	2,178	41.4	61.6	34.8	48.6	162
Wealth index quintile							
Poorest	**17.5**	6,369	24.0	32.6	11.5	26.8	1,116
Second	**16.2**	6,018	23.5	35.1	15.8	29.9	975
Middle	**15.0**	5,549	28.4	52.1	22.4	41.5	833
Fourth	**12.2**	5,156	29.8	54.8	23.1	36.2	631
Richest	**9.1**	4,993	33.0	53.0	28.0	38.2	453

[1] MICS indicator 3.10 - Care-seeking for diarrhea [2] *MICS indicator 3.11 - Diarrhoea treatment with oral rehydration salts (ORS) and zinc*

[3] *MICS indicator 3.12 - Diarrhoea treatment with oral rehydration therapy (ORT) and continued feeding*

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

At least 1 in 4 cases who had diarrhoea sought advice or treatment from health facilities or providers. Although differences across social and demographic groups in seeking help from health facilities or providers for diarrhoeal episode are low, the percentages are specifically lower, in rural areas (25.8 percent), South East (22.4 percent), children younger than 24 months (25.8 percent), mothers with no education (20.5 percent) and poorer households (23.5 percent).

Management of diarrhoea either through oral rehydration salts (ORS: packets or pre-packaged ORS fluids) or a recommended home fluid (RHF: salt-sugar solution, coconut water and rice water) can prevent mortality among children under-five years. Among reported cases of diarrhoea, 43 percent used ORS or RHF for treatment. This type of diarrhoea management is higher in urban areas (54.8 percent), among mothers with higher education (61.6 percent) and wealthier households (54.8 percent). Combining ORS with Zinc has proven to be more effective in treatment of diarrhea. Only 18.5 percent managed diarrhea illness with ORS and Zinc. Although with lower percentage, the pattern of combined use of ORS and Zinc is almost the same as the combined use of ORS or RHF with continued feeding across different social and demographic groups.

Acute Respiratory Infection (ARI)

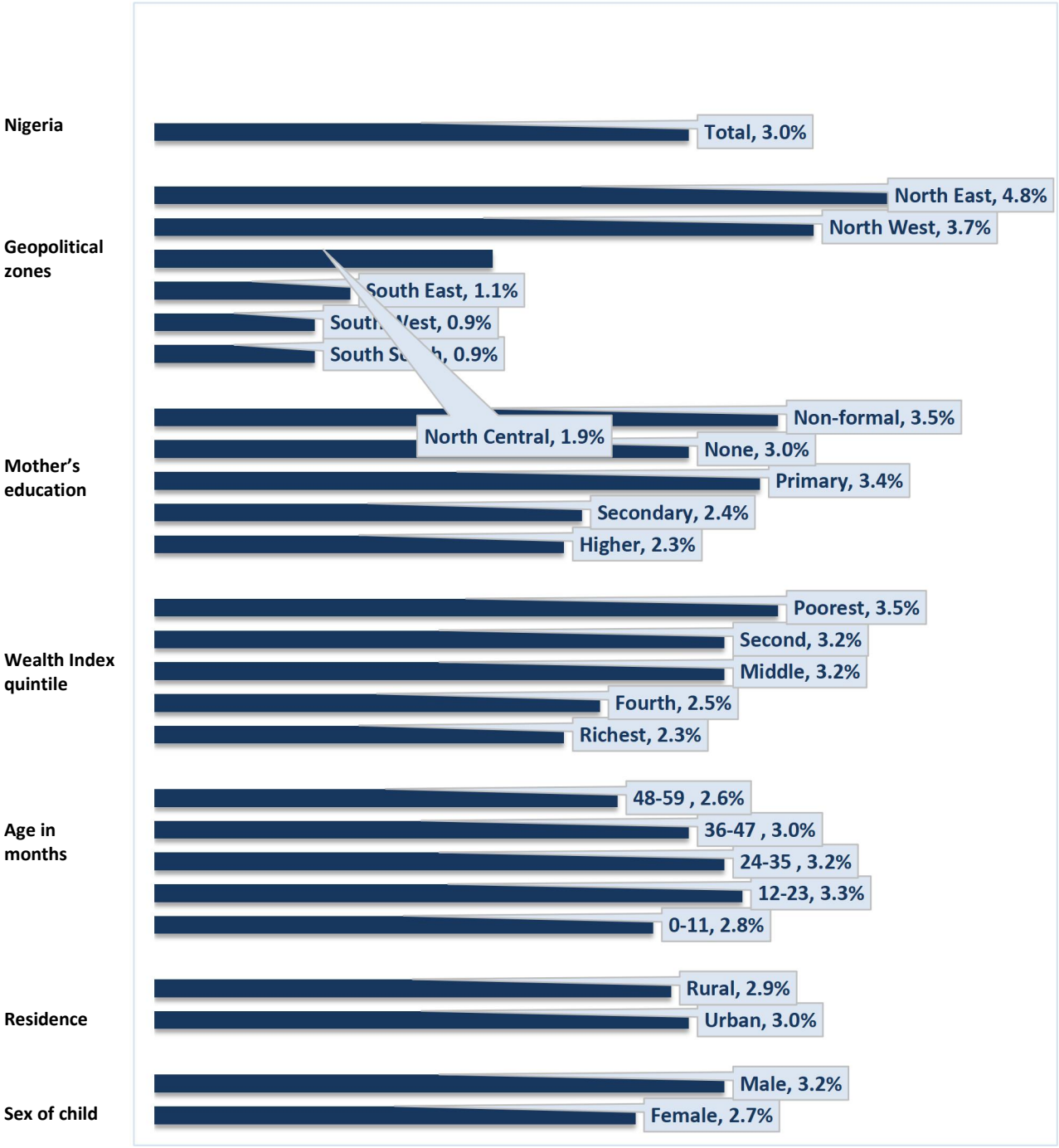
Information on symptoms of ARI were collected during the Nigeria, 2016-17 MICS to estimate the incidence of pneumonia disease which is the leading cause of death in children under five. Once diagnosed, pneumonia is treated effectively with antibiotics. Studies have shown a limitation in the survey approach of measuring pneumonia because many of the suspected cases identified through surveys are in fact, not true pneumonia.[22] While this limitation does not affect the level and patterns of care-seeking for suspected pneumonia, it limits the validity of the level of treatment of pneumonia with antibiotics, as reported through household surveys. The treatment indicator described in this report must therefore be taken with caution, keeping in mind that the accurate level is likely higher.

Figure 6.3 presents percentage of children who had symptoms of acute respiratory infection within two weeks preceding the survey. Three percent of children age 0-59 months had symptoms of ARI in the two-week period before the survey. The pattern of period-prevalence of ARI symptoms across different social and demographic groups shows that: the symptoms of ARI have higher period-prevalence among male children, North East, urban areas, younger children age 12-23, children of mothers who do not have formal education and live in the poorest household.

Table 6.7 presents the percentage of children with symptoms of ARI in the two weeks preceding the survey for whom care was sought in health facility and who received antibiotics. Twenty-three percent of children age 0-59 months with ARI symptoms were taken to a qualified provider. The percentage of mothers or caregivers of children with ARI symptoms and who sought advice or treatment from health facility in rural areas (25.5 percent) is higher than in urban areas (19.8 percent). Advice or treatment was sought the most for children age 12-23 months than other age groups. Education and wealth differentials are not distinct in seeking for help among those reported ARI symptoms in their children.

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

Figure 6.3: Percentage of children age 0-59 months for whom the mother/caretaker reported symptoms of acute respiratory infection (ARI), Nigeria, 2016-17



The use of antibiotics for the treatment of symptoms of ARI in children under 5 years by sex, age, residence, and other socioeconomic factors is also presented in Table 6.7. In Nigeria, 22 percent of under-5 children with symptoms of ARI received antibiotics during the two weeks prior to the survey.

The percentage was slightly higher in urban than in rural areas. The use of antibiotics is higher for children age 12-23 months than other age groups.

Table 6.7 (CH.4, CH.10): Care seeking for ARI symptoms in the last two weeks preceding the survey

Percentage of children age 0-59 months with symptoms of ARI in the last two weeks, and care seeking for ARI symptoms

	Percent of ARI Symptoms	Number of children age 0-59 months	Care seeking and treatment of ARI symptoms		Number of children age 0-59 months with ARI symptoms in the last two weeks
			Advice or treatment sought from health facility or provider[1, a]	Percentage of children with symptoms of ARI in the last two weeks who were given antibiotics[2]	
Total	**3.0**	**28,085**	**23.7**	**22.2**	**833**
Sex					
Male	3.2	14,213	24.6	21.7	454
Female	2.7	13,872	22.8	22.8	379
Residence					
Urban	3.0	8,553	19.8	21.7	259
Rural	2.9	19,532	25.5	22.4	574
Age (months)					
0-11	2.8	5,363	17.4	16.6	153
12-23	3.3	5,535	32.4	22.0	183
24-35	3.2	5,514	25.4	26.0	175
36-47	3.0	5,818	17.9	15.3	172
48-59	2.6	5,856	24.3	31.6	151
Mother's education					
None	3.0	8,134	21.5	17.5	246
Non-formal	3.5	6,196	29.3	30.1	217
Primary	3.4	4,330	21.4	23.6	146
Secondary	2.4	7,245	18.8	17.6	175
Higher	2.3	2,178	(*)	(*)	50
Wealth index quintile					
Poorest	3.5	6,369	22.6	21.5	221
Second	3.2	6,018	27.5	20.7	190
Middle	3.2	5,549	20.2	30.2	178
Fourth	2.5	5,156	21.5	15.7	127
Richest	2.3	4,993	27.5	21.1	117

[1] *MICS indicator 3.13 - Care-seeking for children with acute respiratory infection (ARI) symptoms*

[2] MICS indicator 3.14 - Antibiotic treatment for children with ARI symptoms

[a]Includes all public and private health facilities and providers, but excludes private pharmacy *(*) Sample data are fewer than 25 unweighted cases*

Solid Fuel Use

More than 3 billion people around the world rely on solid fuels for their basic energy needs, including cooking and heating. Solid fuels include biomass fuels, such as wood, charcoal, crops or other agricultural waste, dung, shrubs and straw, and coal. Cooking and heating with solid fuels leads to high levels of indoor smoke which contains a complex mix of health-damaging pollutants. The main problem with the use of solid fuels is their incomplete combustion, which produces toxic elements such as

carbon monoxide, polyaromatic hydrocarbons, and sulphur dioxide (SO_2), among others.

Use of solid fuels increases the risks of acute respiratory infection such as pneumonia, chronic obstructive lung disease, canceror asthma. It may also contribute to low birth weight of babies born to pregnant women exposed to smoke. The primary indicator for monitoring use of solid fuels is the proportion of the population using solid fuels as the primary source of domestic energy for cooking, shown in Table 6.8.

Table 6.8 (CH.12, CH.19): Solid fuel use by place of cooking

Percent distribution of household members in households using solid fuels by place of cooking, Nigeria, 2016-17

	Solid fuels for cooking[1]	Number of household members	Place of cooking:					Number of household members in households using solid fuels for cooking
			In the house					
			In a separate room used as kitchen	Elsewhere in the house	In a separate building	Outdoors	Other place	
Total	**80.6**	**182,165**	**37.7**	**24.0**	**12.1**	**26.1**	**0.2**	**146,816**
Geopolitical zone								
North Central	88.1	30,688	50.6	11.7	14.6	23.0	0.2	27,049
North East	97.5	36,964	51.1	26.6	3.9	18.3	0.2	36,046
North West	93.2	61,155	30.7	33.5	6.1	29.6	0.1	57,013
South East	70.0	12,708	25.5	15.7	33.2	25.4	0.3	8,901
South South	57.7	17,393	22.2	6.3	42.2	28.9	0.4	10,029
South West	33.4	23,257	16.4	17.4	21.8	44.1	0.3	7,777
Residence								
Urban	55.7	61,430	49.0	19.3	9.6	22.0	0.1	34,218
Rural	93.3	120,735	34.3	25.4	12.8	27.3	0.2	112,598
Education of HH head								
None	94.4	39,653	33.8	27.7	10.5	27.8	0.2	37,437
Non-formal	98.0	36,506	29.9	36.8	4.8	28.4	0.1	35,778
Primary	82.8	34,678	36.5	17.8	18.2	27.4	0.1	28,725
Secondary	66.8	43,819	43.5	16.3	15.8	24.2	0.2	29,281
Higher	56.3	27,166	57.1	11.1	14.3	17.5	0.0	15,286
Wealth index quintile								
Poorest	99.3	36,427	24.0	38.9	5.5	31.4	0.2	36,154
Second	99.2	36,454	35.2	26.1	8.6	30.0	0.2	36,167
Middle	95.8	36,404	41.0	19.2	14.7	24.9	0.2	34,881
Fourth	79.3	36,449	46.9	13.9	19.1	20.1	0.1	28,914
Richest	29.4	36,432	57.6	9.8	18.0	14.7	0.0	10,699

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

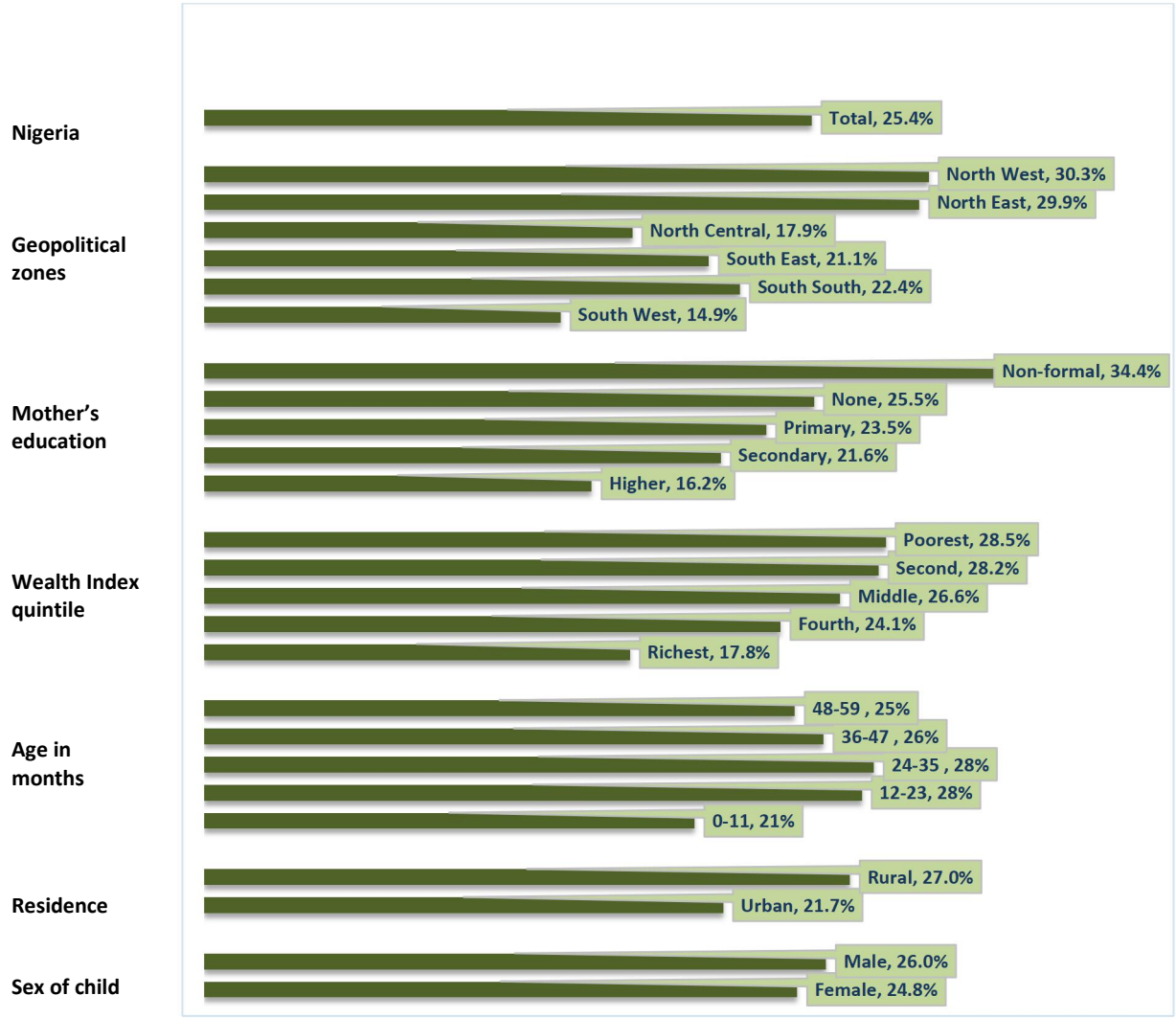
Overall, 4in 5 (80.6 percent) household members in Nigeria use solid fuels for cooking. Use of solid fuels is much higher in the rural areas (93.3 percent) than the urban areas (55.7 percent). The use of solid fuels ranges from 33.4 percent in South West to 97.5 percent in North East. While there are wealth and educational differentials; the percentages are highest with household heads with no formal education and poorest wealth quintile households.

The extent of indoor pollution is dependent on the cooking practice, places used for cooking and the type of fuel used. In Nigeria, 37.7 percent of householdsthat cook with solid fuels use separate room as kitchen. The percentage that use solid fuel to cook food within the dwelling unit is higher in urban areas (68.3 percent) than in rural areas (59.7 percent).

Malaria/Fever

In Nigeria, malaria is the commonest cause of hospital attendance for all age group and a major cause of death of children under age five[23]. A case of fever, as presented in Figure 6.4, in this survey was the mother's or caretaker's report that the child had fever symptom two weeks preceding the survey.

Figure 6.4: Percentage of children age 0-59 months for whom the mother/caretaker reported fever, Nigeria, 2016-17



[23]http://apps.who.int/medicinedocs/documents/s18401en/s18401en.pdf

One in 4 children under-five in Nigeria was reported to have had fever two weeks before the survey. Reported cases of fever was highest in the North West, children of mothers with non-formal education, poor wealth quintile households, children older than 12 months and those residing in rural areas.

Care Seeking: Malaria preventive measures and treatment for under-five children

Preventive measures and treatment with an effective antimalarial can reduce malaria mortality rates among children and pregnant women. In areas where malaria is common, WHO recommends indoor residual spraying (IRS), use of insecticide treated bednets (ITNs) and prompt treatment of cases with recommended anti-malarial drugs. Insecticide-treated mosquito nets(ITN), if used properly, are very effective in offering protection against mosquitos and other insects.

Table 6.9 (CH.14, CH.19): Household availability and use of insecticide treated nets

Percentage of households with at least one insecticide treated net (ITN), at least ITN per two people, and household members who slept under an ITN the previous night, Nigeria, 2016-17

	Percentage of households with			Percentage of household members who slept under an ITN the previous night[3]	Number of household members who spent the previous night in the interviewed households
	At least one ITN[1]	At least one ITN for every two people[2]	Number of households		
Total	**63.3**	**30.7**	**33,901**	**40.9**	**176,410**
Geopolitical zone					
North Central	62.6	29.8	5,435	38.8	29,784
North East	78.0	33.9	5,581	52.0	36,032
North West	76.9	33.4	9,128	50.1	59,198
South East	51.7	31.1	3,132	24.4	12,371
South South	48.3	26.4	4,281	27.9	16,845
South West	47.4	27.4	6,344	20.4	22,181
Residence					
Urban	55.3	25.8	12,421	33.6	59,105
Rural	68.0	33.5	21,480	44.6	117,305
Education of household head					
None	62.3	32.2	7,443	39.6	38,668
Non-formal	77.0	32.2	5,269	49.7	35,496
Primary	60.5	30.2	6,558	37.7	33,648
Secondary	58.4	27.3	9,047	37.4	42,249
Higher	63.0	33.4	5,526	40.6	26,023
Wealth index quintile					
Poorest	74.9	33.7	5,592	48.8	35,587
Second	71.5	35.4	6,328	49.4	35,297
Middle	64.7	32.1	6,897	42.8	35,289
Fourth	57.7	28.3	7,259	35.6	35,264
Richest	52.5	25.7	7,825	27.6	34,973

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

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

[3] *MICS indicator 3.19 - Population that slept under an ITN*

The use of ITNs is one of the main health interventions implemented to reduce malaria transmission in Nigeria. WHO also recommends seasonal malaria chemoprevention (SMC)[24] which is intermittent administration of full treatment courses of an antimalarial medicine to children in areas of highly seasonal transmission during the malaria season. The questionnaire incorporates questions on the availability and use of bed nets, both at household level and among children under five years of age and pregnant women. Table 6.9 shows household availability and use of ITN in Nigeria.

Approximately 6 in 10 of households in Nigeria have at least one insecticide treated net. About 3 in 10 households, however have at least one ITN for every two household members. Households in northern Nigeria owned ITN more than those in the southern part. Variation exists in the ownership of ITN across other social groups: higher percentage of rural households owned ITN more than urban households; higher proportion of households in the poor wealth quintile reported ownership of ITN than household in the wealthier quintiles; and higher proportions of households with heads with non-formal education owned ITN than others.

The use of ITN was examined among members who spent the previous night in the interviewed households in Nigeria. About 2 in 5 reported having slept under an ITN in the previous night. Less than 30 percent of household members in Southern zones used ITN in the previous night. Use of ITN in urban areas, wealthier households and households with more educated heads is lower than other groups.

Malaria preventive measures and treatment for children

Children under-five years are most vulnerable and have on the average of 2-4 attacks of malaria every year in Nigeria[25]. Table 6.10 presents preventive measures in terms of use of ITN the previous night before the survey visit, care seeking for fever, malaria diagnostic usage and anti-malarial treatment of under-five in Nigeria. The result by some background characteristics were also presented in Table 6.10.

Only 49 percent of children under the age of five years, who spent the previous night in the interviewed household, slept under insecticide treated net. There was no substantial gender difference. Variations exist among geopolitical zones on use of ITN for children under five; highest in North East (58 percent) and lowest in South west (28 percent). The usage of ITN for under-five children is more, in comparison, among the following categories: rural areas, poor wealth quintile households and mothers with non-formal education.

In 2010 the World Health Organization issued a recommendation for universal use of diagnostic testing to confirm malaria infection and apply appropriate treatment based on the results. According to the guidelines, treatment solely on the basis of clinical suspicion should only be considered when a parasitological diagnosis is not accessible. This recommendation was based on studies that showed substantial reduction in the proportion of fever that are associated with malaria to a low level.[26] This

[24]http://www.who.int/malaria/areas/preventive_therapies/children/en/
[25]**http://apps.who.int/medicinedocs/documents/s18401en/s18401en.pdf**: National Antimalarial Treatment Policy
[26]D'Acremont, V et al. 2010. *Reduction in the proportion of fevers associated with Plasmodium falciparum parasitaemia in Africa: a systematic review*. Malaria Journal 9(240).

recommendation implies that the indicator on proportion of children with fever that received antimalarial treatment is no longer an acceptable indicator of the level of treatment of malaria in the population of children under age five. However, for purposes of comparisons, as well as assessment of patterns across socio-demographic characteristics, the indicator remains a standard MICS indicator.

Table 6.10 (CH.18, CH.20, CH 22): Prevention and care seeking for malaria among under-five children

Percentage of children age 0-59 months who slept under a mosquito net last night, by type of net, Nigeria, 2016-17

	Preventive measure using ITN		Care seeking for malaria fever				
	Percentage of children under age five who slept under ITN in the previous night[1]	Number of children age 0-59 months who spent last night in the interviewed households	Sought for advice or care in a health facility or provider[2, a]	Had blood taken from a finger or heel for testing[3]	Any antimalarial drugs[4]	Treatment with Artemisinin-based Combination Therapy (ACT) among children who received anti-malarial treatment[5]	Number of children with fever in last two weeks
Total	**49.1**	**27,842**	**63.4**	**13.8**	**36.8**	**20.6**	**7,124**
Geopolitical zone							
North Central	45.5	4,583	71.8	20.5	40.8	21.1	824
North East	58.0	5,986	61.7	10.8	38.0	9.1	1,804
North West	57.6	10,548	62.6	13.8	31.9	22.1	3,218
South East	29.3	1,540	65.4	14.6	41.0	33.1	325
South South	34.5	2,253	67.2	13.6	44.3	23.5	510
South West	27.6	2,934	55.3	14.3	48.0	37.9	442
Sex							
Male	48.3	14,107	62.7	14.0	36.0	21.8	3,690
Female	49.9	13,735	64.2	13.6	37.6	19.2	3,434
Residence							
Urban	42.9	8,450	66.8	16.5	43.9	26.1	1,852
Rural	51.8	19,392	62.3	12.9	34.3	18.1	5,271
Age (months)							
0-11	52.3	5,329	62.5	11.3	28.7	18.9	1,102
12-23	50.9	5,491	62.3	11.5	33.5	18.3	1,524
24-35	50.4	5,465	66.9	15.6	42.0	20.1	1,543
36-47	46.8	5,761	61.7	14.8	35.6	24.6	1,507
48-59	45.5	5,797	63.4	15.4	42.0	20.2	1,447
Mother's education							
None	50.3	8,071	56.9	10.3	28.6	16.1	2,077
Non-formal	57.5	6,148	64.7	13.0	33.5	15.7	2,108
Primary	48.9	4,285	61.0	13.9	38.8	18.8	1,016
Secondary	42.3	7,184	69.0	15.3	45.5	24.5	1,568
Wealth index quintile							
Poorest	53.2	6,322	54.2	10.5	23.0	15.7	1,817
Second	57.4	5,953	60.1	12.3	32.4	16.8	1,696
Middle	51.3	5,504	67.1	14.0	40.9	17.1	1,478
Fourth	42.3	5,121	71.6	15.5	47.3	21.4	1,243
Richest	38.4	4,942	71.1	20.9	51.8	32.9	889

[1] MICS indicator 3.18; MDG indicator 6.7 - Children under age 5 sleeping under insecticide-treated nets (ITNs)[2] MICS indicator 3.20 - Care-seeking for fever

[3] MICS indicator 3.21 - Malaria diagnostics usage[4] MICS indicator 3.22; MDG indicator 6.8 - Anti-malarial treatment of children under age 5

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

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

For MICS indicators of care seeking and treatment for malaria among under-five children in Nigeria, 63 percent sought for advice or care in a health facility or provider, 13.8 percent had blood taken from a finger or heel for testing, 36.8 percent had taken antimalarial medication. Mothers were asked to report all the medicines given to a child to treat the fever, including those given at home and those given or prescribed at a health facility.

Artemisinin-based Combination therapy (ACT) is the first line antimalarial recommended by the World Health Organization and 20.6 percent among those who received antimalarial treatment use Artemisinin-based Combination Therapy (ACT). Higher percentage of under-five children in Southern part of the country received ACT than northern part. Children under-five in urban areas, age 36-47 months, children of mothers with higher education and from the richest households received ACT than other social groups.

Care Seeking: Malaria preventive measures and treatment for pregnant women

Pregnant women living in malaria endemic environment are highly vulnerable to malaria. Once infected, pregnant women risk anemia, premature delivery, and stillbirth. Their babies have increased risk of low birth weight and infant death.[27] For this reason, Intermittent preventive treatment (IPT) was introduced to protect pregnant women from malaria by giving drugs that prevent malaria infection during antenatal check-ups. In addition to IPT, there is distribution of insecticide-treated mosquito nets during antenatal check-ups. WHO recommends that in areas of moderate-to-high malaria transmission, all pregnant women be provided an intermittent preventive treatment with sulfadoxine-Pyrimethamine (SP) at every scheduled antenatal care visit. Table 6.11 presents the proportion of pregnant women who slept under a mosquito net during the previous night and received IPT for malaria.

Proportion of pregnant women age 15-49 years who slept under ITN in the previous night is 39.6 percent. This implies that about 2 in 5 pregnant women within two years preceding the survey slept under an ITN as recommended. Very low proportion of pregnant women in the southern part of the country practices this malaria preventive measure. Also, higher percentage of pregnant women inrural areas, withnon-formal education, and from poorest households slept under an ITN than other social groups.

In MICS 2016-17, women were asked of the medicines they had received to prevent malaria in their last pregnancy during the 2 years preceding the survey. Women are considered to have intermittent preventive therapy if they have received at least 3 doses of SP/Fansidar during the pregnancy, at least one of which was taken during antenatal care. Although, 74 percent of women took medicine to prevent malaria at ANC visit during pregnancy, only 14.9 percent took 3 or more doses of SP/Fansidaras recommended by WHO. While adherence to IPT is low for the country, it is specifically very low for

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

Southern Nigeria, urban areas, in women with at least secondary education and in the richest households.

Table 6.11 (CH.25) Intermittent preventive treatment for malaria

Percentage of women age 15-49 years who had a live birth during the two years preceding the survey and who received intermittent preventive treatment (IPT) for malaria during pregnancy at any antenatal care visit, Nigeria, 2016-17

	Percentage of pregnant women age 15-49 years who slept under ITN in the previous night[1]	Number of women with a live birth in the last two years	Percentage of pregnant women		Number of women with a live birth in the last two years and who received antenatal care
			Who took any medicine to prevent malaria at any ANC visit during pregnancy	who took SP/FansidarThree or more times[2]	
Total	**39.6**	**3,700**	**76.4**	**14.9**	**7,094**
Geopolitical zone					
North Central	34.6	615	71.6	11.9	1,070
North East	49.7	786	75.2	19.5	1,494
North West	48.7	1,571	78.1	19.7	2,147
South East	12.7	159	75.2	8.6	562
South South	17.0	242	83.5	8.8	711
South West	11.2	328	75.5	9.6	1,110
Residence					
Urban	30.3	979	78.6	13.3	2,938
Rural	43.0	2,720	74.9	16.0	4,156
Education					
None	46.4	1,128	70.5	16.5	1,394
Non-formal	50.2	835	79.6	17.0	973
Primary	36.9	553	73.9	17.7	1,160
Secondary	27.5	943	78.1	13.3	2,719
Higher	25.1	240	80.7	11.6	847
Wealth index quintile					
Poorest	49.8	868	70.4	16.7	702
Second	49.0	891	70.1	15.6	1,187
Middle	38.7	732	75.8	15.8	1,514
Fourth	30.4	623	78.4	15.8	1,788
Richest	21.4	585	81.2	12.3	1,903

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

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

VII. Water and Sanitation

The Sustainable Development Goal 6 is to ensure availability and sustainable management of water and sanitation for all by 2030. Access to safe clean water and sanitation for all and sound management of freshwater ecosystems are essential to human health and environmental sustainability and economic prosperity.[28]Drinking water can be polluted with physical, chemical, trace elements (heavy metals) and organic contaminants with aesthetic and harmful effects on public health. Unsafe drinking water can be a significant determinant of diseases such as cholera, typhoid, and schistosomiasis. In addition to preventing disease, improved access to drinking water may be particularly important for women and children, especially in rural areas, who bear the primary responsibility for carrying water, often for long distances.[29] Also, inadequate disposal of human excreta and personal hygiene are associated with a range of diseases including diarrhoeal diseases and polio and are important determinants of stunting. Improved sanitation can reduce diarrhoeal disease by more than a third[30], and can substantially lessen the adverse health impacts of other disorders among millions of children in many countries.

Use of Improved Water Sources

Safe drinking water is a basic necessity for good health. Sustainable Development goal 6, target 1 is to achieve universal and equitable access to safe and affordable drinking water for all by 2030, and increased proportion of population using safely managed drinking water services[31]. The percentage of household by main source of drinking water classified into improved and unimproved is presented in Figure 7.1

KEY FINDINGS

64% of household members use improved sources of drinking water.

2.3% of households using unimproved drinking water sources adopt appropriate water treatment methods:

- **2.4% are boiling water,**
- **1.6% are adding bleach or chlorine**
- **0.5% use water filter.**

One in 3 household members use improved sanitation facilities that are not shared

26.5% households have improved drinking water source and improved sanitation facility.

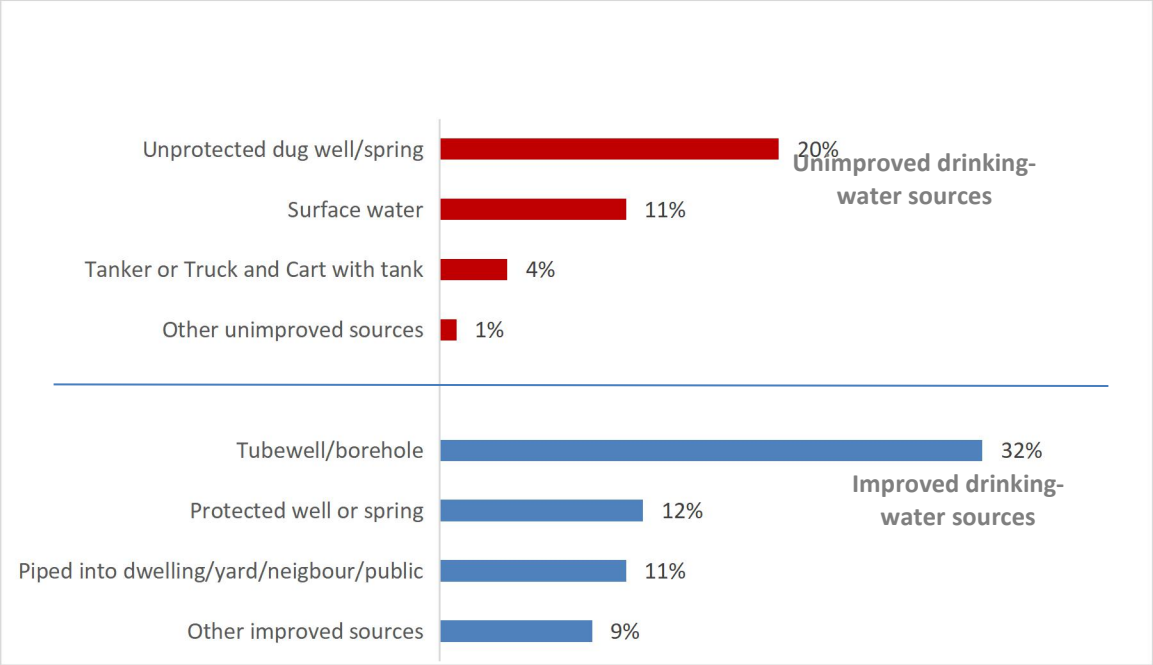
One in 10 households has a specific place for handwashing where water and soap or other cleansing agents are present.

***E.Coli* contaminated drinking water is high and of public health concern as 90.8 percent of household members in Nigeria drink faecal contaminated water**

Percentage of Household with improved drinking water sources accessible on the premises, available when needed, and free from faecal contamination is remarkably low (3.7 percent).

[28]For more details on water and sanitation and to access some reference documents, please visit **https://www.washdata.org**or the website of the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation
[29]WHO/UNICEF. 2012. *Progress on Drinking water and Sanitation: 2012 update*.
[30]Cairncross, S et al. 2010. *Water, sanitation and hygiene for the prevention of diarrhoea*. International Journal of Epidemiology 39: i193-i205.
[31] https://sustainabledevelopment.un.org/sdg6

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



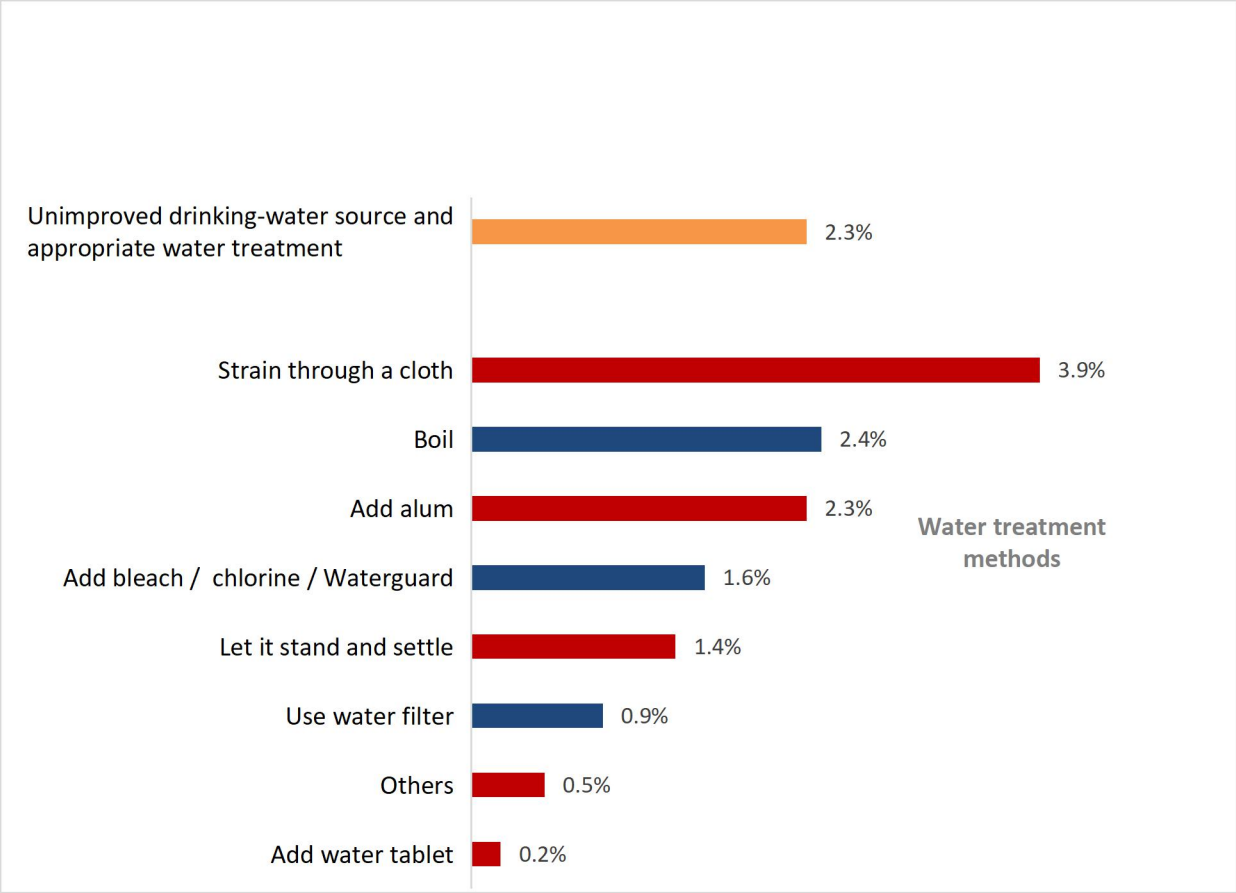
An “improved drinking-water source" is one that by the nature of its construction adequately protects the source from outside contamination, in particular from faecal matter[32]. Improved drinking-water sources are: piped water (into dwelling, compound, yard or plot, to neighbour, public tap/standpipe), tube well/borehole, protected well, protected spring, and rainwater collection. Bottled water is considered as an improved water source only if the household is using an improved water source for hand washing and cooking. Sixty-four percent of household members use improved sources of drinking water. Half of those who used improved drinking water get water from tubewell or borehole. About 36 percent of the population still drink water from unimproved sources (mostly from unprotected well/spring and surface water).

Use of household water treatment

Households were asked about ways they may be treating water at home to make it safer to drink. Boiling water, adding bleach or chlorine, using a water filter, and using solar disinfection are considered as effective treatment of drinking water. Use of household water treatment is presented in Figure 7.2. It shows water treatment by all household members and the percentage of those living in households with unimproved water sources but using appropriate water treatment methods. In Nigeria, 2.3 percent of households who are using unimproved drinking water sources adopt appropriate water treatment methods. Generally, the commonest method of water treatment used in households is straining the water through a cloth (3.9%) while very few householdsare using effective water treatment: boil water (2.4 percent), adds bleach or chlorine (1.6 percent) and use a water filter (0.5 percent).

[32] http://www.who.int/water_sanitation_health/monitoring/coverage/jmp_fast_facts/en/

Figure 7.2: Percentage of household member using water treatment and the percentage of those living in households using unimproved water sources but appropriate water treatment methods



Use and sharing of improved sanitation facilities

The 2017 thematic report on safely managed sanitation and hygiene considers the implications of target 6.2 "by 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations", and outlines Joint Monitoring Programme (JMP) plans for enhanced global monitoring of sanitation and hygiene in the 2030 Agenda for Sustainable Development. An improved sanitation facility is defined as one that hygienically separates human excreta from human contact. Improved sanitation facilities for excreta disposal include flush or pour flush to a piped sewer system, septic tank, or pit latrine; ventilated improved pit latrine, pit latrine with slab, and use of a composting toilet. Percent distribution of household population according to types of toilet facility used by the household in Nigeria is presented in Figure 7.3.

About 52 percent of household population use improved sanitation facility; the most common is pit latrine with slabs. The most commonly used unimproved sanitation facilities are open defecation (23.5 percent) and pit latrine without slab or open pit (23.2 percent).

The SDG 6.2 and the WHO / UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation, classify otherwise acceptable sanitation facilities which are public or shared between two or more households as unimproved. Therefore, “improved sanitation” is used both in the context of this report and as an SDG indicator to refer to improved sanitation facilities, which are not public or shared. As shown in Figure 7.4, 35.9 percentof the household population use improved sanitation facilities that are not shared,14.3 percent of households use improved sanitation facilities that are shared with other households and 1.3 percent use shared public facility.

Figure 7.3: Percent distribution of household population according to types of toilet facility used by the household, Nigeria, 2016-17

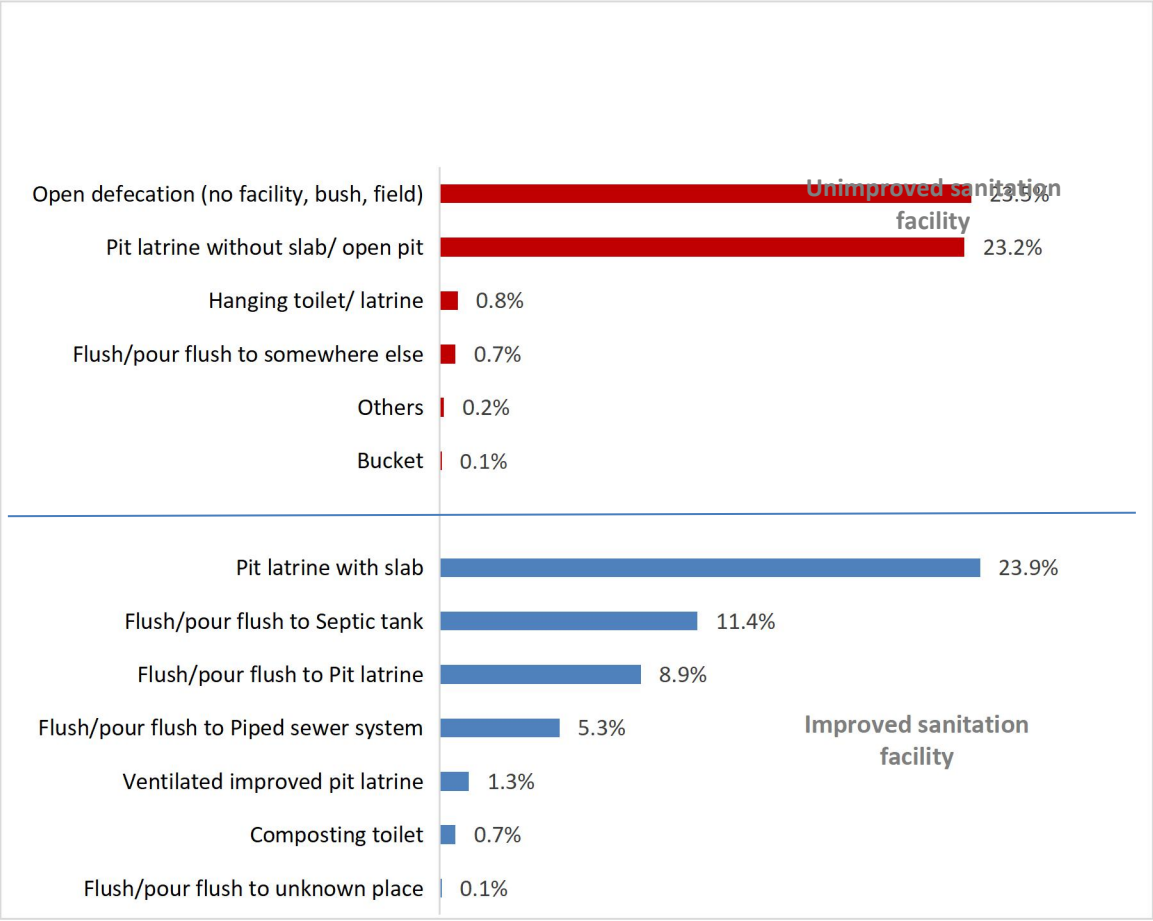
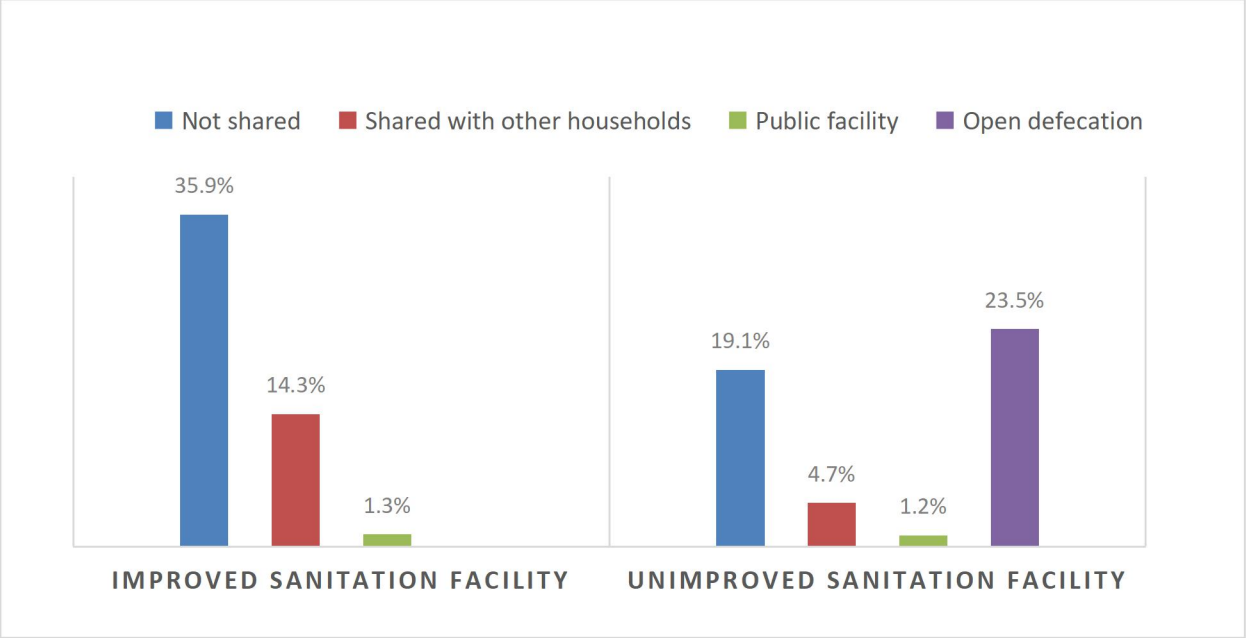


Figure 7. 4: Percent distribution of household members by use and sharing of sanitation facilities, Nigeria, 2016-17



Drinking water and Sanitation ladder

Having access to both improved drinking water source and improved sanitation facility brings the largest public health benefits to a household.[33]In its 2008 report[34], the JMP developed a new way of presenting the access figures, by disaggregating and refining the data on drinking-water and sanitation and reflecting them in "ladder" format. This ladder allows a disaggregated analysis of trends in a three rung ladder for drinking-water and a four-rung ladder for sanitation as presented in Table W7S.1. The percentage of household members with accesss to both improved sources of drinking water[35] and used improved sanitation facilities is 26.5 percent. This implies that 1in 4 households have improved drinking water source and improved sanitation facility. There are differentials across social groups in Nigeria.

[33]Wolf, J et al. 2014. *Systematic review: Assessing the impact of drinking water and sanitation on diarrhoeal disease in low- and middle-income settings: systematic review and meta-regression*. Tropical Medicine and International Health 2014.
DfID. 2013. *Water, Sanitation and Hygiene: Evidence Paper*. DfID:
http://r4d.dfid.gov.uk/pdf/outputs/sanitation/WASH-evidence-paper-april2013.pdf
[34]WHO/UNICEF JMP. 2008. *MDG assessment report*.*http://www.wssinfo.org/fileadmin/user_upload/resources/1251794333-JMP_08_en.pdf*
[35]Those indicating bottled water as the main source of drinking water are distributed according to the water source used for other purposes such as cooking and handwashing.

Table 7.1 (WS.7): Drinking water and sanitation ladders

Percentage of household population by drinking water and sanitation ladders, Nigeria, 2016-17

	Percentage of household population using:								
	Improved drinking water[1, a]		Unimproved drinking water	Improved sanitation[2]	Shared improved facilities	Unimproved sanitation		Improved drinking water sources and improved sanitation	Number of household members
	Piped into dwelling, plot or yard	Other improved				Unimproved facilities	Open defecation		
Total	**4.1**	**60.0**	**35.9**	**35.9**	**15.6**	**25.0**	**23.5**	**26.5**	**182,165**
Geopolitical zone									
North Central	2.5	56.1	41.3	27.5	12.9	9.6	50.0	21.6	30,688
North East	3.4	49.0	47.6	39.2	10.2	32.4	18.2	22.8	36,964
North West	5.8	52.8	41.4	37.9	8.0	39.8	14.3	25.6	61,155
South East	1.6	78.5	19.9	44.1	17.4	16.5	22.0	37.6	12,708
South South	5.0	70.5	24.5	38.3	24.9	16.5	20.4	34.4	17,393
South West	3.5	83.8	12.7	30.6	39.9	5.4	24.1	29.4	23,257
Residence									
Urban	8.8	74.1	17.1	49.2	29.9	14.9	6.0	41.3	61,430
Rural	1.7	52.9	45.4	29.2	8.3	30.1	32.4	19.0	120,735
Education of household head									
None	2.0	52.6	45.4	24.4	8.6	29.9	37.1	15.9	39,653
Non-formal	2.5	47.7	49.8	33.0	7.8	40.8	18.4	18.6	36,506
Primary	2.3	63.0	34.7	31.7	17.4	22.8	28.1	23.9	34,678
Secondary	4.1	69.2	26.7	36.1	26.1	16.6	21.1	28.5	43,819
Higher	11.8	68.6	19.6	61.8	17.1	12.6	8.5	52.6	27,166
Wealth index quintile									
Poorest	0.8	36.9	62.3	15.5	2.3	38.6	43.5	6.9	36,427
Second	1.5	51.1	47.5	24.8	5.0	37.9	32.3	14.4	36,454
Middle	1.5	58.7	39.8	32.4	13.2	28.8	25.5	20.0	36,404
Fourth	3.3	75.6	21.1	43.4	27.4	14.7	14.5	33.4	36,449
Richest	13.5	77.8	8.7	63.5	30.0	4.8	1.7	57.8	36,432

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

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

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

Across geopolitical zones, access to improved drinking water sources is higher in southern part compared to the northern part; it is remarkably highest in South West where at least 4 in 5 household members have access to improved drinking water source. The differences across the six geopolitical zones on improved sanitation are not so distinct, though highest in South East (44.1 percent). Percentage of household population that has both access to improved drinking water and used improved sanitation is highest in South East and lowest in North Central zone.

Access to improved drinking water sources is higher in urban areas (82.9 percent) than rural areas (54.6 percent). Also, the use of improved sanitation is higher in the urban (49.2 percent) than rural areas (29.2 percent). Proportion of household members that have access to improved drinking water and improved sanitation is 41.3 percent for urban areas and 19 percent for rural areas. The higher the education of household head and wealth index, the higher the proportion of household with drinkingwater and sanitation.

Disposal of child's faeces

Safe disposal of a child's faeces is disposing of the stool, by the child using a toilet or by rinsing the stool into a toilet or latrine. Putting disposable diapers with solid waste, a very common practice throughout the world has thus far been classified as an inadequate means of disposal of child faeces for concerns about poor disposal of solid waste itself. Disposal of faeces of children 0-2 years of age is presented in Table 7.2. In Nigeria, 58.1 percent of children had their last stools disposed of safely by using toilet /latrine or rinsing it into toilet/latrine.

Safe disposal of child's faeces occurred more in households where members used improved sanitation facility (73.8 percent), North West zone (72.2 percent), urban areas (70.6 percent), mothers with higher education (64.8) and richest wealth index quintile household (70.7 percent).

Table 7.2 (WS.8): Disposal of child's faeces

Percent distribution of children age 0-2 years according to place of disposal of child's faeces, and the percentage of children age 0-2 years whose stools were disposed of safely the last time the child passed stools, Nigeria, 2016-17

	Place of disposal of child's faeces									Percentage of children whose last stools were disposed of safely[1]	Number of children age 0-2 years
	Child used toilet/latrine	Put/rinsed into toilet or latrine	Put/rinsed into drain or ditch	Thrown into garbage	Buried	Left in the open	Other	Don't know	Missing		
Total	**6.6**	**51.5**	**6.9**	**24.8**	**4.4**	**2.2**	**2.8**	**0.6**	**0.2**	**58.1**	**16,480**
Sanitation facility used by household members											
Improved	8.5	65.4	5.2	16.1	1.8	0.7	1.5	0.7	0.2	73.8	8,208
Unimproved	7.4	63.8	6.0	15.1	4.6	1.1	1.4	0.3	0.1	71.3	4,379
Open defecation	1.6	8.6	11.3	54.3	9.5	6.5	7.1	0.8	0.4	10.1	3,892
Geopolitical zone											
North Central	3.5	26.8	9.4	42.7	4.0	6.0	5.2	1.7	0.7	30.2	2,643
North East	4.3	60.6	6.1	21.2	4.7	1.6	1.3	0.2	0.0	65.0	3,499
North West	10.6	61.6	6.2	14.6	4.2	0.8	1.3	0.5	0.2	72.2	6,286
South East	4.4	41.5	6.3	32.2	5.2	2.6	6.7	0.6	0.5	45.9	926
South South	3.9	40.0	7.6	33.8	8.0	2.5	3.4	0.7	0.2	43.9	1,347
South West	4.5	49.0	6.5	31.2	1.7	1.9	4.8	0.4	0.0	53.5	1,779
Residence											
Urban	7.6	63.1	5.4	18.6	1.6	0.7	2.0	0.9	0.1	70.6	5,006
Rural	6.1	46.5	7.5	27.6	5.6	2.8	3.1	0.5	0.3	52.7	11,473
Mother's education											
None	5.1	47.0	8.7	27.1	5.8	2.6	2.8	0.6	0.1	52.1	4,713
Non-formal	8.1	61.7	5.2	17.9	3.6	1.4	1.4	0.5	0.2	69.8	3,589
Primary	7.1	44.8	7.7	27.3	5.2	3.2	3.6	0.7	0.4	51.9	2,464
Secondary	5.4	51.1	6.3	26.6	3.8	2.2	3.7	0.8	0.2	56.6	4,421
Higher	10.4	54.4	5.1	25.1	1.9	0.5	1.7	0.8	0.3	64.8	1,292
Wealth index quintile											
Poorest	5.3	40.8	8.0	31.8	7.8	3.3	2.4	0.5	0.1	46.1	3,674
Second	7.5	49.0	7.6	24.7	5.0	2.7	2.9	0.4	0.3	56.5	3,542
Middle	5.6	51.9	7.0	24.4	3.7	2.5	3.9	0.6	0.4	57.4	3,212
Fourth	5.9	57.0	7.6	20.0	3.6	1.5	3.4	0.8	0.2	62.9	3,103
Richest	8.8	61.9	3.6	21.9	1.0	0.4	1.2	1.0	0.1	70.7	2,949

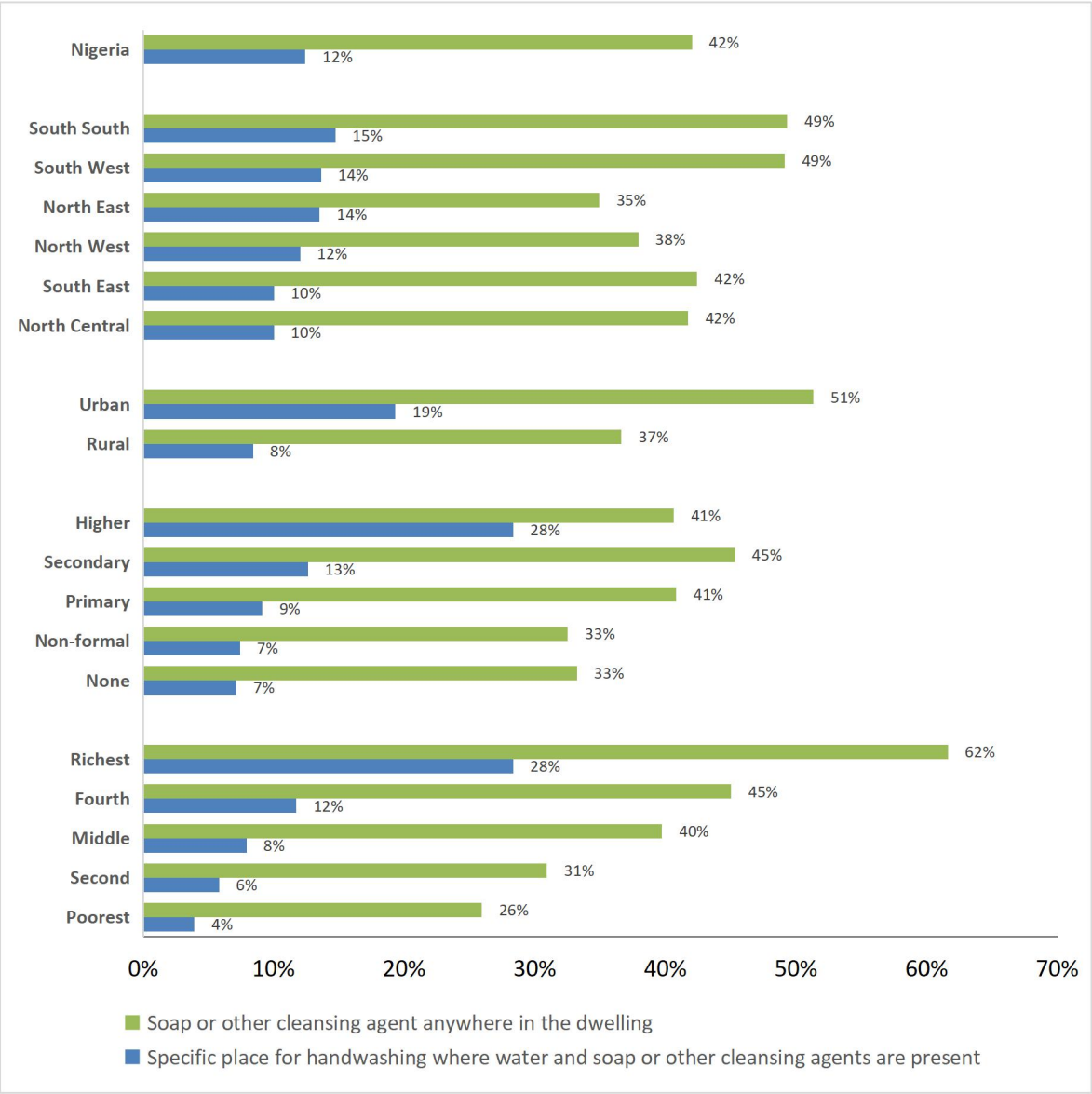
[1] MICS indicator 4.4 - Safe disposal of child's faeces

Handwashing

Handwashing with water and soap is the most cost effective health intervention to reduce both the incidence of diarrhoea and pneumonia in children under five[36]. It is most effective when done using water and soap after visiting a toilet or cleaning a child, before eating or handling food and, before feeding a child. Monitoring correct handwashing behaviour at these critical times is challenging. A reliable alternative to observations or self-reported behaviour is assessing the likelihood that correct handwashing behaviour takes place by asking if a household has a specific place where people wash their hands and, if yes, observing whether water and soap (or other local cleansing materials) are available at a specific place for handwashing. Figure 7.5 shows the percentage of households with a specific place for handwashing, where water and soap or other cleansing agent are present.

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

Figure 7.5: Percentage of households with a specific place for handwashing where water and soap or other cleansing agents are present. Nigeria, 2016-17.



There are only 12.4 percent of households with a specific place for handwashing where water and soap or other cleansing agents are present. However, the proportion of household with soap or other cleansing agents anywhere in the dwelling is 42 percent. This implies that while 4in 10 households have soap or other cleansing agents anywhere in the dwelling, 1 in 10 have a specific place for handwashing where there is water and soap.

Although having an appropriate handwashing place is generally low in Nigeria, South South (15 percent) and urban areas (19 percent) have highest proportion of household with specific place for handwashing with water and soap. Also, the higher the education of household head and wealth index, the higher the proportion of household with appropriate place for handwashing.

Water Quality

The global indicator for tracking progress towards the SDG drinking water target (SDG 6.1) is use of 'safely managed drinking water services', defined as an improved drinking water source that is accessible on premises, available when needed and free from contamination[37]. The Nigeria MICS 2016-17 recorded whether households used sources located on premises, whether water sources provided water every day in the last two weeks and also included direct measurement of microbiological quality of drinking water at both the source and the household level.

Microbiological characteristics of drinking water are used to describe the presence or absence of microbiological organisms and water borne pathogens. E.coli is a member of the faecal coliform group and is a more specific indicator of faecal pollution than other faecal coliform and often used to measure the degree of pollution and sanitary integrity of drinking water. The presence of E.coli in water has adverse health effects on infants, the elderly and those with compromised immune systems. In extreme cases, some pathogens may infect the lungs, skins, eyes, nervous system, kidney or liver and the effects may be more severe, chronic, or even fatal including stunting among children. Aside disease-causing pathogens there are also physical, chemical, trace elements (heavy metals) and organic contaminants that its presence in drinking water may have profound aesthetic and harmful effects on public health.

Achieving water quality standard that meets Nigerian Standard for Drinking Water Quality: NIS-544-2007, revised 2015, is a mandatory prerequisite for water destined for human consumption. Also, Sustainable Development Goal 6 is access to safe clean water and sanitation for all and sound management of freshwater ecosystems are essential to human health and environmental sustainability and economic prosperity.

The bacteria species *Escherichia coli (E. coli)* is the most commonly recommended faecal indicator, and many countries including Nigeria have set a standard that no *E. coli* should be found in a 100ml sample of drinking water.*E. coli* was measured in the field by MICS teams by filtering 100 mL of sample through a 0.45micron filter (Millipore Microfil®) which was then placed onto CompactDry EC growth media plates (Nissui, Japan). A 1 mL sample was also tested from the same source directly onto a second media plate. Incubation was done using ambient temperature and incubation belts were worn at night to keep the samples near body temperature. After 24-48 hours, the number of blue colonies, signifying the presence of *E. coli* colony forming units (CFU), was recorded and classified into the following risk categories: low risk (<1 per 100 mL), medium risk (1-10 per 100 mL), high risk (11-100 per 100 mL) and very high risk (>100 per 100 mL)[38]. Laboratory staff identified by the Federal Ministry of Water Resources trained field teams and conducted field visits as part of the quality assurance for the water quality module.

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[37] WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (2017), Progress on Drinking Water, Sanitation and Hygiene: 2017 Update and SDG baseline.

[38]Adapted from WHO drinking water quality guidelines, 4th Ed. (2011), E. coli coliform counts are divided into risk categories based on probability of infection of diarrheal disease. Note, this classification does not take account of the sanitary inspection.

Table 7.3 shows the levels of contamination of drinking water from a glass within the home and from water sample obtained from the water source. It also combines information on the quality, availability and location of drinking water sources to provide estimates of safely managed drinking water services for Nigeria.

Table 7.3 (WQ1, WQ.2,WQ3): Quality of household drinking water and source of drinking water, and use of safely managed drinking water sources, Nigeria 2016-17

Percent distribution of household population according to faecal contamination risk as assessed by levels of E. coli in household drinking water, and percent of household population with E. coli in drinking water Nigeria, 2016-17

	Percentage drinking water contaminated by E.Coli in the household drinking water[1]	Number of household members	Percentage drinking water contaminated by E.Coli at the source of drinking water[2]	Percentage with an improved drinking water source located on premises, free of E. coli and available when needed[2]	Number of household members with information on water quality
Total	**90.8**	**15106**	**77.3**	**3.7**	**13605**
Main source of drinking water					
Piped water	89.3	1352	65.9	3.1	1153
Tubewell/borehole	91.8	4997	61.4	4.9	4926
Protected wells and springs	96.1	1671	94.4	3.2	1571
Unprotected wells and springs	98.9	3326	98.0	0.0	3042
Rainwater collection	94.5	711	85.0	10.7	703
Tanker-truck and cart will small tank/drum	81.5	247	80.5	1.3	183
Sachet and bottled water	47.7	1074	30.0	16.5	577
Other	95.0	1726	92.8	0.0	1450
Residence					
Urban	83.5	5231	72.8	4.9	4729
Rural	94.7	9875	79.7	3.0	8876
Education of household head					
None	96.1	2835	80.3	2.6	2547
Non-formal	97.2	3108	88.5	1.1	2722
Primary	91.2	2871	75.0	5.5	2663
Secondary	86.6	4063	70.5	2.4	3663
Higher	82.4	2221	73.5	8.6	2008
Wealth index quintile					
Poorest	96.5	3194	84.6	2.0	2835
Second	96.7	2942	87.1	1.7	2612
Middle	94.9	2907	83.2	1.9	2658
Fourth	90.2	2849	73.4	2.9	2743
Richest	76.5	3212	58.5	9.8	2756

[1] MIC Indicator 4.51: Quality of drinking water at the household
[2] MIC Indicator 4.52: Quality at the source of household drinking water
[3] MIC indicator 4.53, SDG 6.1.1: Use of safely managed drinking water sources

Quality of household drinking water and source of drinking water

In Nigeria, overwhelming majority (90.8 percent) of household members drink water contaminated by *E.Coli*. This is of public health concern as 9in10 persons in Nigeria drinks faecal contaminated water which has adverse health effect. E-coli contamination is lowest in household where they drink sachet and bottled water (47.7 percent) and highest among those who fetched drinking water from

unprotected well and springs (98.9 percent). Faecal contamination of household drinking water is more prevalent in the rural areas, where household head is not educated and poor wealth index quintile households.

In about 7 in 10 households, drinking water is contaminated by *E-coli* at the source. This occurred more from sources such as well and spring (protected or unprotected), rainwater collection and tanker-truck with cart. E-coli contamination at the source of drinking water is also high in the rural areas, households where the head is not educated and poorer wealth index quintile households.

Safely Managed Drinking Water Sources

Percentage of household with improved drinking water sources accessible on the premises, available when needed, and free from faecal contamination is remarkably low (3.7 percent). Safely managed drinking water source is highest in household where the main drinking water source is from sachet and bottled water (16.5 percent), and lowest from unprotected well and spring (0.0 percent). Also improved drinking water source located on premises, free of *E-coli* and available when needed is low in rural areas, where household is poor and household head is not educated.

VIII. Reproductive Health

Fertility

Fertility is a component of population dynamics that determine the size, structure and composition of the population. Measures of current fertility are presented in Table 8.1 for the three-year period preceding the survey. A three-year period was chosen for calculating these rates to provide the most current information while also allowing the rates to be calculated for a sufficient number of cases so as not to compromise thstatistical precision of the estimates.

Age-specific fertility rates (ASFRs), expressed as the number of births per 1,000 women in a specified age group, shows the age pattern of fertility. Numerators for ASFRs are calculated by identifying live births that occurred in the three-year period preceding the survey classified according to the age of the mother (in five-year age groups) at the time of the child's birth. The denominators of the rates represent the number of woman-years lived by the survey respondents in each of the five-year age groups during the specified period.

The total fertility rate (TFR) is a synthetic measure that denotes the number of live births a woman would have if she were subject to the current age-specific fertility rates throughout her reproductive years (15-49 years). The General Fertility Rate (GFR) is the number of live births occurring during the specified period per 1,000 women age 15-49. The Crude Birth Rate (CBR) is the number of live births per 1,000 population during the specified period.

Table 8.1 and Figure 8.1 show current fertility rates in Nigeria at the national level and by urban-rural residence. Crude Birth Rate for Nigeria is 37 per 1,000 population. General fertility rate (GFR), a more refined measure of fertility based on the number of live births divided by the number of women in their childbearing years for a given period is 186.5 per 1,000 women age 15-49 years.

KEY FINDINGS

Average Nigerian woman will have about 6 children over her childbearing years.

Adolescent birth rate is 120 per 1,000 women in the 15-19 age group.

Adolescent fertility differentials per 1,000 women age 15-19 year:

- **Urban, 59: Rural, 154**
- **Richest, 35: Poorest, 199**
- **Higher Education, 9: Non-formal education, 232**

3 in 10 women age 20-24 have had a live birth before age 18

About 1 in 8 women currently married or in union are using contraception (13.4 percent)

Unmet need for family planning in Nigeria is 27.6 percent

65.8 percent received antenatal care from a skilled provider.

49.1 percent of women with a live birth in the last two years had four or more antenatal visits.

2in 5 of births were delivered by skilled personnel- doctor, nurse, midwife or auxiliary midwife

Assistance by skilled birth attendant is as low as 23.6 percent in North-West and as high as 90.7 percent in the South-East

37.5 percent of women age 15-49 used health facility for their last delivery.

- **24.4 percent in public health facilities**
- **13.1 percent in private health facilities**

The Total Fertility Rate in Nigeria is 5.8 births per woman. This implies that a woman in Nigeria will have 5.8 births over her childbearing years. The overall age pattern of fertility, as reflected in Figure 8.1, indicates that childbearing begins early at adolescents (120 births per 1,000), increases to a peak in women age 25-29(263 births per 1,000) and declines thereafter.

Table 8.1 (RH.1): Fertility rates

Total fertility rate, age-specific fertility rate, general fertility rate and crude birth rate for the three-year period preceding the survey, by area, Nigeria, 2016-17

	Urban	Rural	Total
Age (Years)			
15-19[1]	59	154	120
20-24	190	264	238
25-29	253	269	263
30-34	227	238	234
35-39	155	170	165
40-44	79	110	99
45-49	26	62	49
TFR[a]	4.9	6.3	5.8
GFR[b]	157.2	202.9	186.5
CBR[c]	33.8	39.6	37.7

[1] MICS indicator 5.1; MDG indicator 5.4 - Adolescent birth rate
[a] TFR: Total fertility rate expressed per woman age 15-49 years
[b] GFR: General fertility rate expressed per 1,000 women age 15-49 years
[c] CBR: Crude birth rate expressed per 1,000 population

Figure 8.1: Age-specific fertility rates by area, Nigeria, 2016-17

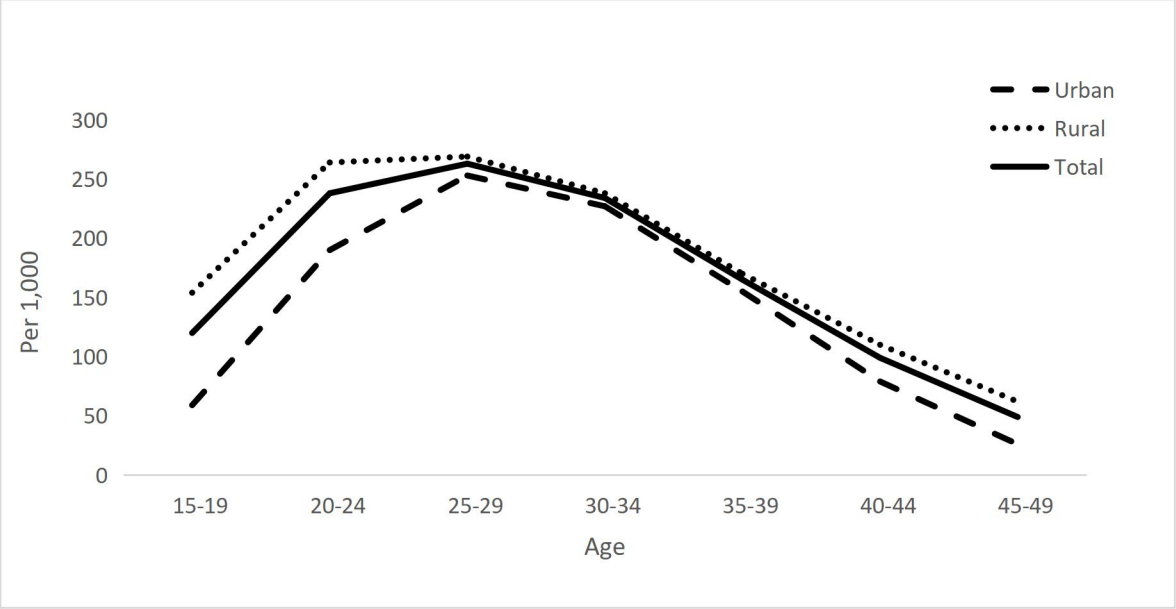


Table 8.2 (RH.2): Adolescent birth rate and total fertility rate

Adolescent birth rates and total fertility rates for the three-year period preceding the survey, Nigeria, 2016-17

	Adolescent birth rate[1] (Age-specific fertility rate for women age 15-19 years)	Total fertility rate
Total	120	5.83
Education		
None	228	7.22
Non-formal	232	7.58
Primary	184	6.24
Secondary	51	4.77
Higher	9	3.67
Wealth index quintile		
Poorest	199	7.42
Second	171	6.79
Middle	131	5.95
Fourth	79	5.25
Richest	35	4.30
Geopolitical zone & States		
North Central	**91**	**5.33**
Benue	79.0	4.8
Kogi	36.0	3.7
Kwara	70.0	4.4
Nasarawa	101.0	5.7
Niger	138.0	6.4
Plateau	94.0	5.6
FCT Abuja	39.0	4.6
North East	**146.0**	**6.4**
Adamawa	113.0	5.5
Bauchi	186.0	6.8
Borno	128.0	6.1
Gombe	181.0	7.3
Taraba	81.0	5.5
Yobe	159.0	6.8
North West	**176.0**	**7.3**
Jigawa	186.0	8.5
Kaduna	134.0	5.6
Kano	169.0	7.7
Katsina	218.0	7.5
Kebbi	157.0	7.7
Sokoto	174.0	7.3
Zamfara	208.0	7.3
South East	**38.0**	**4.6**
Abia	37.0	5.1
Anambra	40.0	4.3
Ebonyi	53.0	5.2
Enugu	23.0	3.8
Imo	36.0	5.1
South South	**53.0**	**4.3**
Akwa Ibom	67.0	4.5
Bayelsa	78.0	4.8
Cross River	68.0	4.4
Delta	57.0	5.2
Edo	42.0	3.8
Rivers	18.0	3.3
South West	**43.0**	**4.4**
Ekiti	60.0	4.4
Lagos	21.0	4.0
Ogun	50.0	4.5
Ondo	47.0	4.5
Osun	57.0	4.7
Oyo	54.0	4.9

[1] *MICS indicator 5.1; MDG indicator 5.4 - Adolescent birth rate*

Table 8.2 further presents the pattern of adolescent birth rates and total fertility rates among different social and demographic groups in Nigeria.

Residence fertility differentials: Fertility is higher in rural areas than in urban areas across all the measures. TFR and GFR are both 29 percent higher in rural areas than urban areas. CBR is 17 percent higher in rural areas than urbanareas. The same pattern is observed for ASFRs, which are higher in the rural areas than urban areas for all age groups as shown in Figure 8.1. The urban-rural difference in fertility is most pronounced for women in the 15-19 age group (adolescent): 59 births per 1,000 women in urban areas versus 154 births per 1,000 women in rural areas.

Education fertility differentials: Maternal education is expected to have inverse relationship with fertility rates. The MICS 2016-17 result follows this pattern as adolescent birth rate and total fertility rate decreases with higher level of maternal education in Nigeria. This is more evident on adolescent birth rate (ASFR 15-19), with birth rates of 232 per 1,000 women with non-formal education compared to birth rates of 9 per 1,000 women with higher education. Total fertility rate for women with higher education and women with no education is in the ratio 3:7 in Nigeria.

Wealth Index fertility differentials: The adolescent birth rate among the poorest household is higher (199 per 1,000 women) than the richest (35 per 1000 women). Also, a woman age 15-49 years who is in the poorest wealth index quintile will have 7 children in her lifetime compared to 4 for women in the richest wealth index quintile.

State fertility differentials: While the national total fertility rate of 5.83 is relatively high, eleven states from the north have higher values than the national TFR.The four states with highest TFR in Nigeria are Jigawa (8.5), Kano (7.7), Kebbi (7.7) and Katsina (7.5) while the states with lowest TFR include Rivers (3.3), Kogi (3.7), Edo (3.8) and Enugu (3.8).

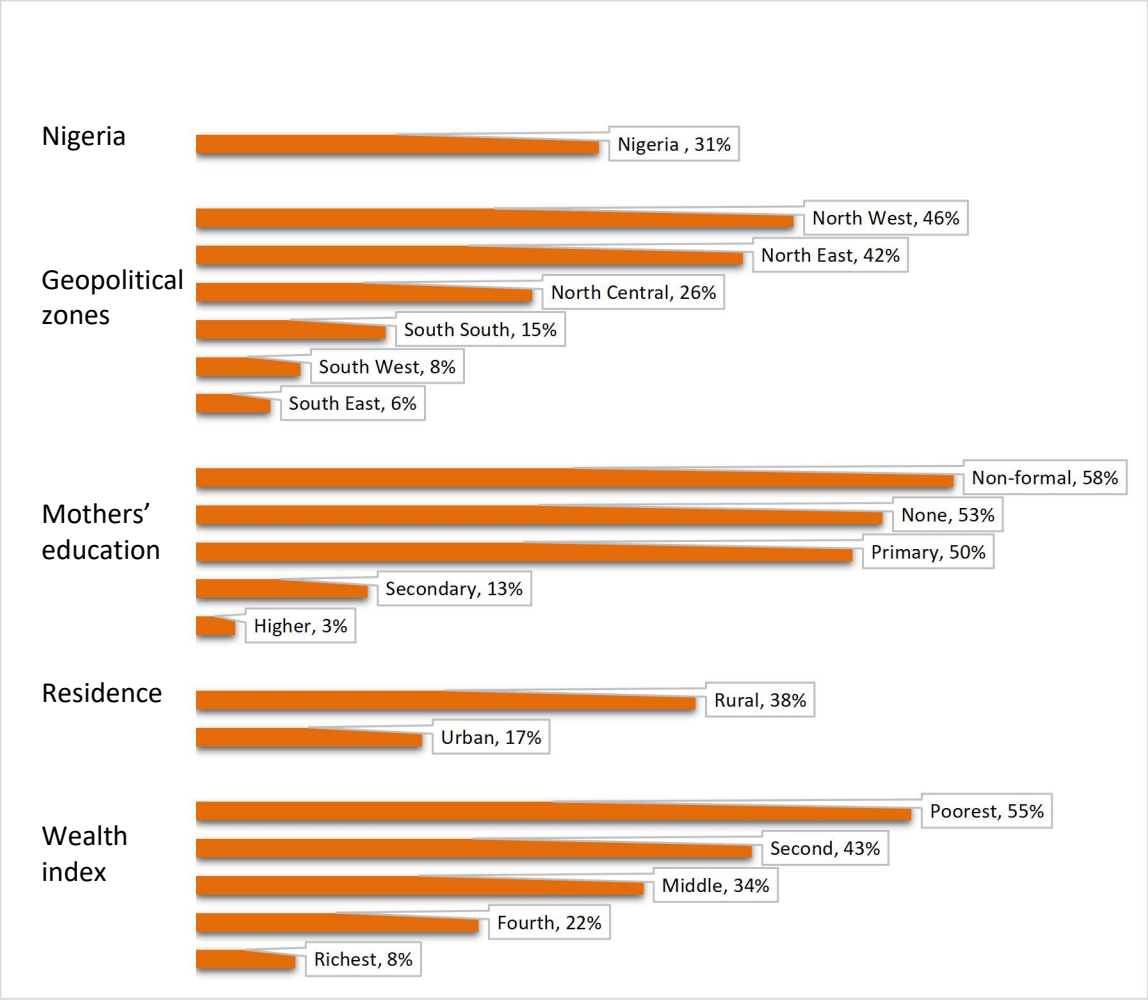
Early Childbearing

Early child bearing is unsafe for mother and child. Although very early childbearing before age 15 has reduced, births among older adolescent -before age 18 is still high in all regions with Nigeria having the highest rate in Sub-Saharan Africa.[39] MICS 2016-17 indicator of early childbearing is the percentage of women age 20-24 years who had at least one live birth before age 18 as presented in Figure 8.3.

In Nigeria, 3 in 10 women age 20-24 have had a live birth before age 18. Across different socio-economic groups, early childbearing is more prevalent in the North West (46 percent) and North East (42 percent). There is wide disparity on early childbearing between women with higher education (3 percent) and those with non-formal education (58 percent). Early childbearing also occurred more in rural areas (38 percent) and poorest wealth index quintile (55 percent) than urban areas andricher wealth index groups.

[39]https://data.unicef.org/topic/maternal-health/adolescent-health/#

Figure 8.2: Percentage of women age 15-49 years who had at least one live birth before age 18, Nigeria, 2016-17



Contraception

Family planning is conscious effort to limit or space the number of children by a couple through the use of contraceptive methods. Appropriate family planning is important to the health of women and children by: a) preventing pregnancies that are too early or too late; b) extending the period between births; and c) limiting the total number of children. Access by all couples to information and services to prevent pregnancies that are too early, too closely spaced, too late or too many is critical.

Table 8.3 shows the pattern of contraceptive use in women age 15-49 who are currently married or in union. About 13.4 percent of women currently married or in union[40] are using contraception. The most commonly used contraceptive methods areinjectable (4.3 percent), pills (2.3 percent), implants (1.4 percent), male condom (1.1 percent), periodic abstinence (1 percent), withdrawal (0.9 percent) and IUD (0.7 percent). Less than 0.7 percent of married women use other methods such as: female sterilization,

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

female condom, male sterilization, vaginal methods (diaphragm/foam/jelly) and Lactational Amenorrhea Method (LAM).

Figure 8.2 shows the contraceptive use differentials in Nigeria. Contraceptive prevalence ranges from 7.6 percent in North-East to 25.8 percent in South-West. About 21 percent of married women in urban areas and 10 percent in rural areas use a method of contraception. Adolescents are far less likely to use contraception than older women. Only 2.2 percent of married women age 15-19currently use a method of contraception compared to 9.0 percent of married women age 20-24. Contraceptive use among older women ranges from 12.2 percent to 17.6 percent.

Women's education level is associated with contraceptive use. The percentage of married women using any method of contraception increases from 3.6 percent among those with non-formal education to 16.4 percent among those with primary education, and 21.4 and 29.0 percent among those with secondary and higher education respectively. In addition to differences in overall prevalence, the pattern of use by specific methods also varies with the level of education. The most common contraceptive method for married women with primary or lower education is injectables (1.5 and 5.6 percent respectively), while those with secondary or higher education is (7.2 and 7.3 percent respectively).

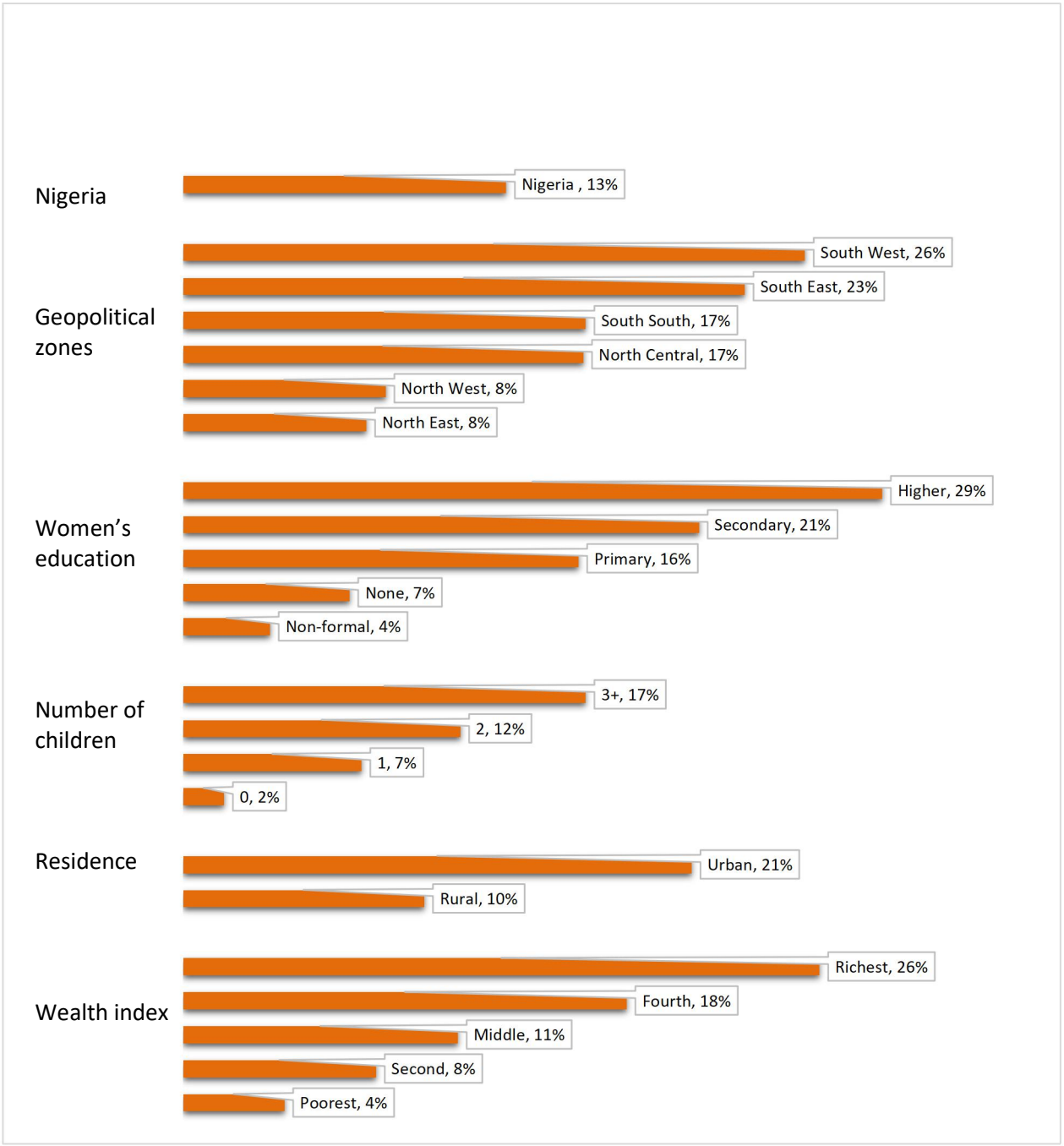
Table 8.3 (RH.5): Use of contraception

Percentage of women age 15-49 years currently married or in union who are using (or whose partner is using) a contraceptive method, Nigeria, 2016-17

	Percent of women currently married or in union who are using (or whose partner is using):																	Number of women age 15-49 years currently married or in union
	No method	Female sterili-zation	Male sterili-zation	IUD	Injectables	Implants	Pill	Male condom	Female condom	Diaphragm/Foam/Jelly	LAM Periodic abstinence	Withdrawal	Other	Any modern method	Any tradi-tional method	Any method [1]	
Total	**86.6**	**0.2**	**0.0**	**0.7**	**4.3**	**1.4**	**2.3**	**1.1**	**0.1**	**0.1**	**0.6**	**1.0**	**0.9**	**0.7**	**10.8**	**2.6**	**13.4**	**24,373**
Geopolitical zone																		
North Central	83.4	0.3	0.0	0.8	6.0	2.0	2.3	1.5	0.1	0.0	0.8	1.1	0.7	1.0	13.8	2.8	16.6	4,228
North East	92.4	0.2	0.0	0.2	2.5	0.7	1.3	0.0	0.0	0.1	1.0	0.2	0.3	1.0	6.1	1.5	7.6	4,852
North West	91.6	0.1	0.0	0.3	3.4	1.0	2.1	0.2	0.0	0.1	0.1	0.1	0.4	0.5	7.4	1.0	8.4	8,815
South East	76.7	0.4	0.0	0.6	3.8	1.9	1.9	3.6	0.2	0.5	1.9	5.0	3.4	0.1	14.7	8.6	23.3	1,310
South South	83.3	0.2	0.0	0.5	3.9	2.0	2.5	1.2	0.1	0.0	0.6	3.3	1.5	0.6	11.2	5.5	16.7	2,064
South West	74.2	0.3	0.0	2.6	7.9	2.1	4.4	3.3	0.2	0.1	0.8	1.4	2.0	0.8	21.7	4.1	25.8	3,103
Residence																		
Urban	78.9	0.2	0.0	1.6	6.5	2.4	4.1	2.2	0.1	0.1	0.5	1.4	1.3	0.5	17.9	3.3	21.1	7,507
Rural	90.0	0.2	0.0	0.3	3.3	1.0	1.5	0.5	0.0	0.1	0.7	0.8	0.7	0.8	7.7	2.3	10.0	16,866
Age (Years)																		
15-19	97.8	0.0	0.0	0.0	0.3	0.0	0.6	0.4	0.0	0.0	0.5	0.0	0.2	0.2	1.8	0.4	2.2	1,513
20-24	91.0	0.0	0.0	0.2	2.8	0.7	1.4	0.7	0.1	0.2	1.1	0.6	0.7	0.5	7.1	1.8	9.0	3,635
25-29	87.8	0.1	0.0	0.5	4.0	1.3	2.4	1.1	0.1	0.0	0.7	0.5	0.7	0.6	10.3	1.9	12.2	4,967
30-34	84.2	0.2	0.0	0.6	5.0	1.8	3.0	1.4	0.1	0.1	0.8	1.2	1.1	0.5	13.1	2.7	15.8	4,867
35-39	83.7	0.4	0.0	1.1	4.9	1.9	2.3	1.4	0.1	0.2	0.6	1.4	1.1	0.9	12.8	3.4	16.3	3,928
40-44	82.4	0.3	0.0	1.3	6.1	1.6	3.0	1.0	0.0	0.1	0.1	1.6	1.1	1.3	13.6	4.0	17.6	3,252
45-49	85.4	0.4	0.0	1.1	5.1	1.8	2.2	0.5	0.0	0.1	0.2	1.4	0.7	1.1	11.5	3.1	14.6	2,210
Number of living children																		
0	98.3	0.0	0.0	0.0	0.4	0.0	0.4	0.4	0.1	0.0	0.0	0.1	0.2	0.1	1.4	0.3	1.7	1,756
1	92.6	0.1	0.0	0.2	1.9	0.4	1.2	1.0	0.1	0.0	0.8	0.6	0.7	0.3	5.8	1.6	7.4	3,395
2	88.5	0.1	0.0	0.5	2.8	1.2	2.2	1.2	0.0	0.1	0.7	0.9	1.5	0.4	8.7	2.8	11.5	4,005
3	83.3	0.3	0.0	1.0	5.7	1.9	2.4	1.4	0.1	0.1	0.8	1.2	1.1	0.6	13.7	3.0	16.7	4,118
4+	83.4	0.3	0.0	0.9	5.7	1.8	2.9	1.0	0.0	0.2	0.6	1.2	0.7	1.1	13.5	3.1	16.6	11,099
Education																		
None	93.1	0.2	0.0	0.2	2.0	0.6	0.9	0.2	0.0	0.0	0.6	0.4	0.4	1.3	4.8	2.1	6.9	6,972
Non-formal	96.4	0.0	0.0	0.1	1.5	0.1	0.9	0.1	0.0	0.0	0.1	0.2	0.1	0.4	2.9	0.7	3.6	5,039
Primary	83.6	0.3	0.0	0.8	5.6	1.6	2.9	1.0	0.0	0.2	1.0	1.3	1.1	0.7	13.4	3.0	16.4	4,011
Secondary	78.6	0.2	0.0	1.1	7.3	2.7	3.6	2.0	0.1	0.2	0.9	1.5	1.5	0.4	18.0	3.4	21.4	6,278
Higher	71.0	0.4	0.0	2.3	7.2	3.0	5.3	3.9	0.3	0.2	0.5	3.1	2.2	0.5	23.1	5.8	29.0	2,072
Wealth index quintile																		
Poorest	95.8	0.0	0.0	0.0	1.3	0.1	0.7	0.1	0.0	0.0	0.3	0.2	0.2	1.2	2.6	1.6	4.2	5,282
Second	92.0	0.3	0.0	0.3	2.3	0.8	1.2	0.2	0.0	0.2	0.7	0.4	0.7	0.8	6.0	1.9	8.0	5,195
Middle	88.6	0.2	0.0	0.4	4.5	1.2	2.0	0.6	0.0	0.1	0.6	0.8	0.5	0.6	9.5	1.9	11.4	4,584
Fourth	81.6	0.2	0.0	0.9	6.2	2.1	3.2	1.6	0.2	0.1	0.8	1.4	1.3	0.4	15.3	3.1	18.4	4,411
Richest	73.6	0.4	0.0	2.0	7.8	3.0	4.8	2.9	0.1	0.2	0.7	2.3	1.7	0.5	21.9	4.6	26.4	4,901

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

Figure 8.3: Differentials in contraceptive use, Nigeria, 2016-17



Unmet Need

Unmet need for contraception refers to fecund women who are married or in union and are not using any method of contraception, but wish to postpone the next birth (spacing) or wish to stop childbearing altogether (limiting). Unmet need is identified in MICS 2016-17 by using a set of questions eliciting current behaviours and preferences pertaining to contraceptive use, fecundity, and fertility preferences. This indicator is also known as unmet need for family planning and is one of the indicators used to track progress toward the Sustainable Development Goal 5 of improving maternal health.

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

- are not pregnant, and not postpartum amenorrhoeic[41], and are fecund[42], and say they want to wait two or more years for their next birth OR
- are not pregnant, and not postpartum amenorrhoeic, and are fecund, and unsure whether they want another child OR
- are pregnant, and say that pregnancy was mistimed: would have wanted to wait OR
- are postpartum amenorrhoeic and say that the birth was mistimed: would have wanted to wait.

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

- are not pregnant, and not postpartum amenorrhoeic, and are fecund, and say they do not want any more children OR
- are pregnant, and say they did not want to have a child OR
- are postpartum amenorrhoeic and say that they did not want the birth.

Total unmet need for contraception is the sum of unmet need for spacing and unmet need for limiting. Met need for limiting includes women married or in union who are using (or whose partner is using) a contraceptive method[43], and who want no more children, who are using male or female sterilization, or declare themselves as infecund. Met need for spacing includes women who are using (or whose partner is using) a contraceptive method, and who want to have another child, or are undecided whether to have another child. The total of met need for spacing and limiting equals to the total met need for

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

[42]A woman is considered infecund if she is neither pregnant nor postpartum amenorrhoeic, and
(1a) has not had menstruation for at least six months, or (1b) never menstruated, or (1c) her last menstruation occurred before her last birth, or (1d) in menopause/has had hysterectomy OR
(2) She declares that she has had hysterectomy, or that she has never menstruated, or that she is menopausal, or that she has been trying to get pregnant for 2 or more years without result in response to questions on why she thinks she is not physically able to get pregnant at the time of survey OR
(3) She declares she cannot get pregnant when asked about desire for future birth OR
(4) She has not had a birth in the preceding 5 years, is currently not using contraception and is currently married and was continuously married during the last 5 years preceding the survey.

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

contraception. Table 8.4 shows the levels of met need and unmet need for contraception, and the demand for contraception satisfied.

Table 8.4 (RH.6): Unmet need for contraception

Percentage of women age 15-49 years currently married or in union with an unmet need for family planning and percentage of demand for contraception satisfied, Nigeria, 2016-17

	Met need for contraception			Unmet need for contraception			Number of women currently married or in union	Percentage of demand for contraception satisfied	Number of women currently married or in union with need for contraception
	For spacing	For limiting	Total	For spacing	For limiting	Total[1]			
Total	**7.5**	**5.9**	**13.4**	**18.5**	**9.1**	**27.6**	**24373**	**32.7**	**9991**
North Central	**9.0**	**7.6**	**16.6**	**16.6**	**9.7**	**26.3**	**4228**	**38.7**	**1815**
Benue	9.9	8.2	18.1	13.8	9.9	23.6	650	43.5	271
Kogi	2.9	3.8	6.7	19.9	13.5	33.5	357	16.7	144
Kwara	14.7	12.4	27.1	12.7	6.4	19.1	357	58.7	165
Nasarawa	10.3	6.7	17.0	18.2	6.3	24.5	530	41.0	220
Niger	6.8	4.4	11.2	19.1	10.3	29.5	1227	27.6	500
Plateau	10.0	10.1	20.1	15.4	10.1	25.5	894	44.1	408
FCT Abuja	11.9	14.3	26.2	13.1	11.0	24.1	213	52.2	107
North East	**4.9**	**2.7**	**7.6**	**20.3**	**6.6**	**26.9**	**4852**	**22.1**	**1674**
Adamawa	4.6	4.5	9.1	23.9	11.4	35.3	612	20.5	272
Bauchi	8.6	3.3	11.9	22.0	5.1	27.1	1330	30.5	518
Borno	3.1	2.6	5.8	21.4	4.5	25.9	1240	18.3	392
Gombe	4.4	2.2	6.6	21.6	6.3	27.8	440	19.2	151
Taraba	4.4	2.3	6.7	17.5	8.9	26.3	364	20.3	120
Yobe	2.5	1.0	3.5	13.9	8.0	21.9	866	13.8	220
North West	**6.0**	**2.4**	**8.4**	**20.0**	**6.9**	**26.9**	**8815**	**23.8**	**3116**
Jigawa	0.4	0.9	1.3	19.5	7.0	26.5	1110	4.8	308
Kaduna	17.4	6.7	24.1	17.5	4.5	22.0	1475	52.3	680
Kano	5.0	1.3	6.3	25.0	5.8	30.8	1862	17.1	691
Katsina	4.1	2.2	6.3	20.3	9.3	29.5	1671	17.6	599
Kebbi	4.4	1.9	6.3	19.5	10.1	29.6	764	17.6	275
Sokoto	3.5	1.2	4.7	23.6	7.0	30.6	784	13.2	277
Zamfara	4.2	1.4	5.6	13.2	6.1	19.3	1149	22.5	286
South East	**8.4**	**14.9**	**23.3**	**12.6**	**12.1**	**24.7**	**1310**	**48.6**	**628**
Abia	4.2	12.4	16.6	19.1	13.9	33.0	197	33.5	98
Anambra	9.1	19.2	28.2	8.4	13.6	22.0	322	56.2	162
Ebonyi	1.4	1.5	3.0	16.8	13.0	29.8	212	9.1	70
Enugu	5.3	16.8	22.1	14.9	10.2	25.1	232	46.8	110
Imo	16.7	19.0	35.8	8.7	10.2	19.0	345	65.4	189
South South	**8.7**	**7.9**	**16.7**	**20.2**	**15.2**	**35.5**	**2064**	**32.0**	**1076**
Akwa Ibom	12.0	3.7	15.7	25.4	15.0	40.5	457	28.0	256
Bayelsa	7.9	6.7	14.6	23.7	13.5	37.2	143	28.2	74
Cross River	11.3	11.7	23.0	18.1	8.2	26.2	391	46.7	192
Delta	4.3	6.6	10.9	26.8	18.0	44.8	354	19.6	197
Edo	7.6	8.1	15.7	15.6	23.5	39.0	296	28.7	162
Rivers	7.6	10.4	18.0	13.3	14.4	27.7	423	39.4	193
South West	**12.3**	**13.5**	**25.8**	**15.3**	**13.1**	**28.4**	**3103**	**47.7**	**1682**
Ekiti	12.9	18.6	31.4	13.1	13.0	26.1	143	54.6	82
Lagos	9.3	13.3	22.6	17.4	12.2	29.6	1097	43.3	573
Ogun	9.1	12.3	21.3	18.6	14.6	33.2	327	39.1	178
Ondo	13.1	8.8	21.8	12.7	14.9	27.6	404	44.2	199
Osun	12.0	12.7	24.6	14.5	11.2	25.6	382	49.0	192
Oyo	17.9	16.3	34.2	12.9	13.8	26.7	751	56.1	457
Residence									
Urban	11.0	10.1	21.1	17.3	10.1	27.5	7507	43.5	3647
Rural	5.9	4.0	10.0	19.0	8.6	27.7	16866	26.5	6344

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

The unmet need for contraception for spacing is 18.5 percent and for limiting is 9.1 percent. There is no notable difference in the unmet need for contraception in urban (27.5 percent) and rural areas (27.7 percent). The unmet need for contraception is highest in Delta state (44.8 percent) followed by Akwa Ibom state (40.5 percent) and lowest in Imo state (19.0 percent).

The met need for contraception among women age 15-49 years currently married or in union in Nigeria is 13.4 percent. Met need for contraception is highest in the South-West (25.8 percent) and lowest in the North-East (7.6 percent). The met need for contraception is higher in urban (21.1 percent) than in rural areas (10.0 percent). Women's education level and wealth index quintile is strongly associated with met need for contraception. Findings show that the percentage of women with met need for contraception increase from 3.6 percent among those with non-formal education to 29.0 percent among women with higher education. Women in the poorest wealth index quintile have a met need of 4.2 percent while the richest have 26.4 percent.

The percentage of demand satisfied is defined as the proportion of women currently married or in union who are currently using contraception, over the total demand for contraception. The total demand for contraception includes women who currently have an unmet need (for spacing or limiting), plus those who are currently using contraception. In Nigeria, the demand for contraception satisfied is 32.7 percent. More than 43 percent of women in the urban areas have their demand for contraception satisfied while 26.5 percent were satisfied in the rural areas.

Antenatal Care

The antenatal period presents important opportunities for reaching pregnant women with a number of interventions that may be vital to their health and well-being and that of their infants. Better understanding of foetal growth and development and its relationship to the mother's health has resulted in increased attention to the potential of antenatal care as an intervention to improve both maternal and new-born health. For example, antenatal care can be used to inform women and families about risks and symptoms in pregnancy and about the risks of labour and delivery, and therefore it may provide the route for ensuring that pregnant women do, in practice, deliver with the assistance of a skilled health care provider.

Antenatal visits also provide an opportunity to supply information on birth spacing, which is recognized as an important factor in improving infant survival. Tetanus immunization during pregnancy can be life-saving for both the mother and the infant. The prevention and treatment of malaria among pregnant women, management of anaemia during pregnancy and treatment of sexually transmitted infections (STIs) can significantly improve foetal outcomes and improve maternal health. Adverse outcomes such as low birth weight can be reduced through a combination of interventions to improve women's nutritional status and prevent infections (e.g., malaria and STIs) during pregnancy. More recently, the potential of the antenatal care as an entry point for HIV prevention and care, in particular for the prevention of HIV transmission from mother to child, has led to renewed interest in access to and use of antenatal services.

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

- Blood pressure measurement
- Urine testing for bacteriuria and proteinuria
- Blood testing to detect syphilis and severe anaemia
- Weight/height measurement (optional).

It is crucial for pregnant women to start attending antenatal care visits as early in pregnancy as possible. This is to prevent and detect pregnancy complications that could affect both the woman and her baby. Antenatal care should continue throughout the entire pregnancy. To improve maternal health, antenatal care coverage indicators should be at least one visit with a skilled provider and 4 or more visits with any providers.

Table 8.5 present percentage distribution of women age 15-49 years who gave birth in the two years preceding the surveyby their antenatal care coverage. Overall, 65.8 percent received antenatal care from a skilled provider, 87.4 percent in urban and 56.8 in rural areas. In Nigeria, most of the antenatal care is provided by nurses/midwives (34.9 percent) while less than 1 percent- receives care from traditional birth attendant.

The proportion of women who received antenatal care from any skilled provider is highly associated with, residence, education, age and wealth status. South-East has the highest proportion (91.3 percent) of women who received antenatal care by a skilled provide while North-West has the lowest (53.6 percent). The percentage is lowest among women with non-formal education (44.6 percent) and highest among women with higher education (97.9 percent).

In Nigeria, 49.1 percent of women with a live birth in the last two years had four or more antenatal visits. South-West has the highest proportion (83.8 percent) while North-East has the lowest (42.7 percent). More women (70.7 percent) had four or more antenatal visits in urban than in rural areas (40.0 percent). Mothers from the poorest households and those with primary or no education have lower proportion of those who received antenatal care, four or more timesthan more educational advantaged mothers. 21.5 percent of the women living in poorest households had four or more antenatal care visits compared to 83.2 percent among those living in richest households.

Table 8.5 (RH.7): Antenatal care coverage

Percent distribution of women age 15-49 years with a live birth in the last two years by antenatal care provider during the pregnancy for the last birth, Nigeria, 2016-17

	Provider of antenatal care[a]						No antenatal care	Any skilled provider[1, b]	4 or more visits[2]	Number of women with a live birth in the last two years
	Medical doctor	Nurse/ Midwife	Auxiliary midwife	Traditional birth attendant	Community health worker	Other				
Total	**26.5**	**34.9**	**4.4**	**0.8**	**1.5**	**0.2**	**31.6**	**65.8**	**49.1**	**11,547**
Geopolitical zone										
North Central	26.2	34.2	2.1	0.4	1.3	0.0	35.7	62.5	46.7	1,770
North East	19.5	42.9	4.6	0.2	1.4	0.0	31.4	67.0	42.7	2,394
North West	18.2	28.4	7.0	0.2	2.1	0.1	44.0	53.6	35.4	4,603
South East	44.5	46.2	0.7	0.6	0.7	0.0	7.3	91.3	79.2	620
South South	43.7	35.4	2.0	5.2	0.6	0.0	13.1	81.0	71.4	900
South West	49.8	38.3	1.4	2.2	0.4	1.6	6.3	89.5	83.8	1,261
Residence										
Urban	49.2	36.5	1.6	0.8	0.4	0.5	10.9	87.4	70.7	3,426
Rural	17.0	34.2	5.6	0.9	1.9	0.1	40.4	56.8	40.0	8,121
Mother's age at birth (Years)										
Less than 20	18.0	32.6	7.0	0.8	1.8	0.1	39.7	57.6	38.1	1,516
20-34	28.0	35.2	4.1	0.8	1.4	0.2	30.3	67.3	50.8	7,969
Missing	27.2	35.5	3.7	0.9	1.7	0.2	30.9	66.4	50.5	2,062
Education										
None	13.2	30.3	4.7	0.6	1.3	0.1	49.9	48.2	28.5	3,208
Non-formal	11.4	26.6	6.6	0.2	2.8	0.0	52.4	44.6	29.6	2,560
Primary	26.1	41.5	5.9	2.0	1.9	0.2	22.4	73.6	54.4	1,716
Secondary	41.0	44.5	2.2	1.2	0.7	0.4	9.9	87.7	72.0	3,182
Higher	68.0	28.0	1.8	0.2	0.1	0.4	1.4	97.9	87.6	882
Wealth index quintile										
Poorest	7.0	20.1	6.5	0.4	2.5	0.1	63.4	33.6	21.5	2,587
Second	12.7	33.9	7.3	0.7	2.3	0.1	43.1	53.9	34.4	2,548
Middle	24.1	42.6	4.2	1.0	1.3	0.2	26.7	70.8	50.0	2,270
Fourth	37.1	47.5	1.8	1.3	0.8	0.4	11.1	86.4	67.0	2,113
Richest	60.6	33.2	1.2	0.9	0.1	0.3	3.7	95.0	83.2	2,028

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

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

[a] Only the most qualified provider is considered in cases where more than one provider was reported.

[b] Skilled providers include Medical doctor and Nurse/Midwife.

Content of antenatal care

The coverage of key services that pregnant women are expected to receive during antenatal care are shown in Table 8.6 Among those women who had a live birth during the two years preceding the survey, 62.2 percent reported that their blood pressure was measured during antenatal care visits, 57.6 percent reported that urine specimen was taken, and 58.4 percent reported that blood sample was taken.

The percentage of women who had blood pressure measured, urine and blood sample taken during the pregnancy of their last birth is 53.6 percent. The relative disparity in the proportion of pregnant womenthat had blood pressure measured, urine sample taken, and blood sample taken respectively remains substantially similar across background characteristics: higher in the Northern region, urban residence and with increasing education. These components of antenatal care were reported in 78.7 percent of pregnant women in urban areas, while 42.9 percent received same in the rural areas.

Table 8.6 (RH.9): Content of antenatal care

Percentage of women age 15-49 years with a live birth in the last two years who, at least once, had their blood pressure measured, urine sample taken, and blood sample taken as part of antenatal care, during the pregnancy for the last birth, Nigeria, 2016-17

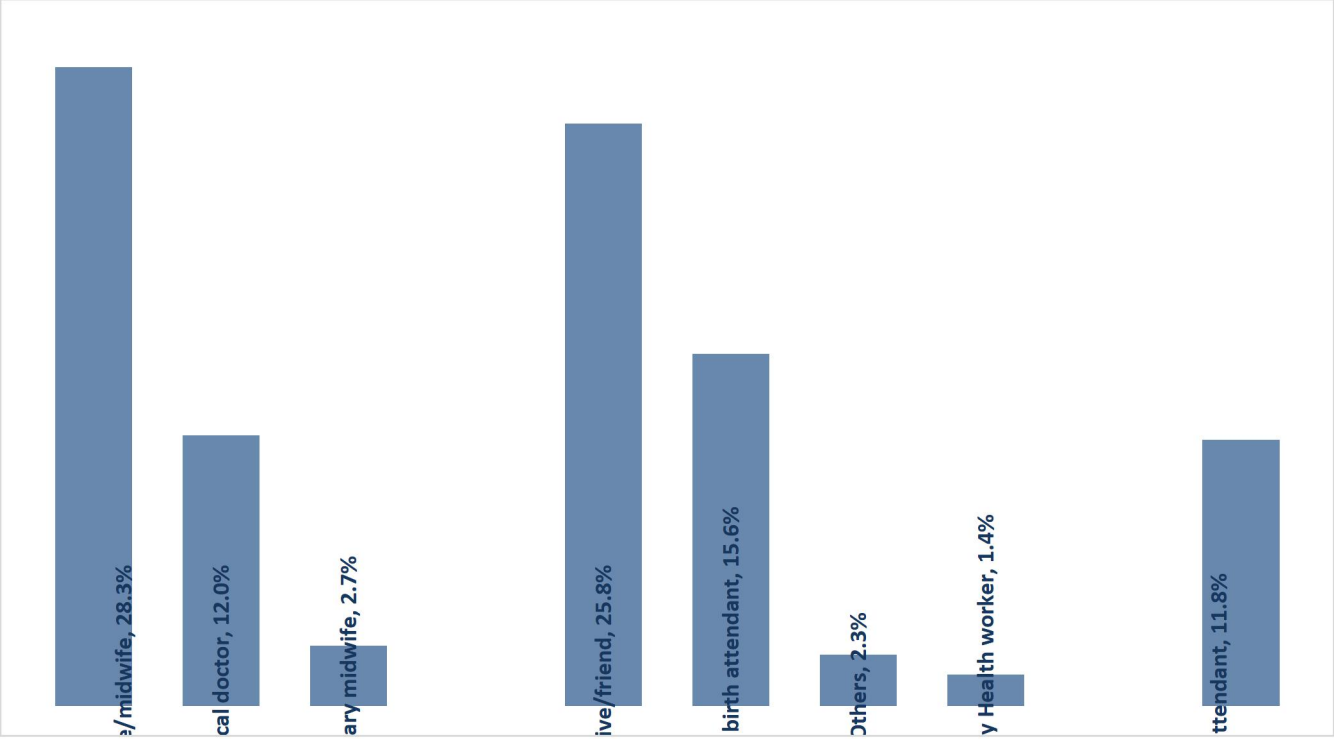
	Percentage of women who, during the pregnancy of their last birth, had:				
	Blood pressure measured	Urine sample taken	Blood sample taken	Blood pressure measured, urine and blood sample taken[1]	Number of women with a live birth in the last two years
Total	**62.2**	**57.6**	**58.4**	**53.6**	**11,547**
Geopolitical zone					
North Central	61.1	56.8	57.1	53.4	1,770
North East	64.9	59.5	60.4	56.8	2,394
North West	48.2	44.3	44.5	39.5	4,603
South East	82.3	81.4	83.2	75.1	620
South South	76.8	72.2	75.1	68.9	900
South West	89.0	81.8	83.7	77.5	1,261
Residence					
Urban	84.9	82.9	82.9	78.7	3,426
Rural	52.6	47.0	48.1	42.9	8,121
Mother's age at birth (Years)					
Less than 20	52.1	47.6	49.2	43.2	1,516
20-34	63.8	59.3	60.1	55.3	7,969
Missing	63.2	58.7	58.9	54.6	2,062
Education					
None	45.0	39.4	40.0	36.0	3,208
Non-formal	40.0	36.1	36.5	32.1	2,560
Primary	69.7	63.6	63.7	57.8	1,716
Secondary	83.8	79.7	81.3	75.4	3,182
Higher	96.4	95.4	96.6	92.9	882
Wealth index quintile					
Poorest	29.8	24.8	25.2	21.6	2,587
Second	49.0	42.7	43.5	38.1	2,548
Middle	66.5	62.2	62.8	56.7	2,270
Fourth	83.1	78.8	80.3	74.8	2,113
Richest	93.3	91.2	92.0	88.0	2,028

[1] *MICS indicator 5.6 - Content of antenatal care*

Assistance at Delivery

About three quarters of all maternal deaths occur due to direct obstetric causes.[44] The single most critical intervention for safe motherhood is to ensure that a competent health worker with midwifery skills is present at every birth, and in case of emergency, that transport is available to a referral facility for obstetric care. The two indicators on assistance at delivery are the proportion of births with a skilled attendant and proportion of institutional deliveries. The MICS included a number of questions to assess the proportion of births attended by a skilled attendant. *A skilled attendant* includes a doctor, nurse, midwife or auxiliary midwife. Figure 8. 4 and Table 8.7 present pattern of assistance at delivery.

Figure 8.4: Person assisting at delivery, Nigeria, 2016--17



In Nigeria, about 43 percent of births in two years preceding the survey were assisted at delivery by skilled personnel- doctor, nurse, midwife or auxiliary midwife. Most women were assisted by nurses/midwives and relatives/friends at delivery, while 11.8 percent of women had no attendant assisting them during delivery. More than one in four of births (28.3 percent) in the two years preceding the survey were delivered with assistance of a nurse/midwife. Doctors assisted with the delivery of 12.0 percent of births and auxiliary midwives assisted with 2.7 percent of births. More than one in ten (15.6 percent) of deliveries were assisted by traditional birth attendants.

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

The proportion of those assisted by skilled birth attendant is as low as 23.6 percent in North-West to as high as 90.7 percent in the South-East. As expected, more educated mothers were assisted by skilled attendant than non-educated mothers. Also, the percentage of deliveries by a skilled birth attendant is higher in the urban areas (67.1 percent) than in the rural areas (32.9 percent). Deliveries by traditional birth attendant were highest in the South-South zone (27.7 percent) and lowest in the South-East zone (3.3 percent).

Table 8.7 (RH.10): Assistance during delivery and caesarian section

Percent distribution of women age 15-49 years with a live birth in the last two years by person providing assistance at delivery, and percentage of births delivered by C-section, Nigeria, 2016-17

	Person assisting at delivery				Percent delivery assisted by any skilled attendant[1, a]	Percent delivered by C-section		Percent delivered by caesarean section Total[2]	Number of women who had a live birth in the last two years
	Medical doctor	Nurse/ Midwife	Auxiliary midwife	No attendant		Decided before onset of labour pains	Decided after onset of labour pains		
Total	**12.0**	**28.3**	**2.7**	**11.8**	**43.0**	**1.2**	**1.6**	**2.8**	**11,547**
Geopolitical zone									
North Central	14.9	31.2	4.1	4.5	50.3	1.0	1.4	2.3	1,770
North East	6.5	25.3	2.3	7.6	34.0	0.7	0.8	1.4	2,394
North West	6.2	14.9	2.5	22.7	23.6	0.7	1.3	2.0	4,603
South East	20.9	68.0	1.8	1.2	90.7	2.3	2.3	4.5	620
South South	18.0	43.8	2.2	0.9	64.0	2.1	2.6	4.7	900
South West	30.8	48.7	3.2	3.4	82.7	3.2	3.8	6.9	1,261
Residence									
Urban	23.5	41.3	2.3	5.7	67.1	2.7	3.0	5.7	3,426
Rural	7.2	22.9	2.9	14.4	32.9	0.6	1.0	1.6	8,121
Mother's age at birth (Years)									
Less than 20	8.2	19.7	3.5	9.5	31.4	0.7	1.4	2.1	1,516
20-34	12.4	30.0	2.8	11.4	45.1	1.0	1.8	2.7	7,969
35-49	13.4	28.3	1.8	15.1	43.5	2.4	1.3	3.7	2,062
Place of delivery									
Home	1.9	7.2	1.6	19.3	10.7	0.0	0.0	0.0	6,952
Health facility	28.6	62.8	4.3	0.3	95.6	3.2	4.3	7.5	4,333
Public	26.1	66.5	5.0	0.3	97.6	3.2	3.9	7.1	2,823
Private	33.2	55.9	2.9	0.3	92.0	3.1	5.0	8.1	1,511
Other/DK/Missing	6.6	19.4	6.8	3.0	32.8	0.0	0.0	0.0	262
Education									
None	4.6	15.8	2.0	18.5	22.4	0.3	0.5	0.9	3,208
Non-formal	3.7	10.0	2.8	19.6	16.5	0.5	0.6	1.1	2,560
Primary	9.5	30.3	4.3	9.7	44.1	0.6	1.1	1.6	1,716
Secondary	19.3	49.1	2.4	3.1	70.9	1.1	2.8	3.9	3,182
Higher	41.4	48.4	2.9	0.6	92.7	7.7	5.4	13.1	882
Wealth index quintile									
Poorest	2.9	7.8	2.1	19.6	12.8	0.3	0.6	0.9	2,587
Second	5.5	15.8	3.0	18.4	24.3	0.4	0.5	0.9	2,548
Middle	9.4	30.1	2.5	10.3	42.1	0.5	1.1	1.6	2,270
Fourth	14.3	46.1	3.1	5.3	63.5	0.9	2.3	3.3	2,113
Richest	32.3	49.8	2.8	2.2	84.9	4.3	4.2	8.4	2,028

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

[2] MICS indicator 5.9 - Caesarean section

[a] Skilled attendants include Medical doctor and Nurse/Midwife.

Table 8.7also shows information on women who delivered by caesarean section (C-section) and provides additional information on the timing of the decision to conduct a C-section (before labour pains began or after) to determine the basis for the C-section: medical or non–medical reasons.

Overall, 2.8 percent of women who delivered in the last two years had a C-section. One percent of the women made the decision for C-section before the onset of labour pains, and almost two percent decided for C-section after the onset of labour. Most of the deliveries by C-section were in the South-West zone (6.9 percent), while the North-East zone has the lowest (1.4 percent). Also, the percentage of deliveries by C-section is higher in urban areas (5.7 percent) than in rural areas (1.6 percent). Women with higher level of education have more deliveries by C-section (13.1 percent) than those with no education (0.9 percent).

Place of Delivery

Increasing the proportion of births that are delivered in health facilities is an important factor in reducing the health risks and improving good health and well-being of both the mother and the baby. Proper medical attention and hygienic conditions during delivery can reduce the risks of complications and infection that can cause morbidity and mortality to either the mother or the baby. Table 8.8 presents the percent distribution of women age 15-49 who had a live birth in the two years preceding the survey by place of delivery, and the percentage of institutional deliveries, according to background characteristics.

In Nigeria, 37.5 percent ofwomen age 15-49 who had a live birth in the two years preceding the surveyused health facility for their last delivery. Out of this estimate, 24.4 percent of deliveries took place in public health facilities and 13.1 percent in private health facilities. About 2 in 5 births (60.2 percent) was at home. Higher percentage of those who used health facility for child delivery is women age 20-34. Women in urban areas are more than twice as likely to deliver in a health facility as their rural counterparts (61.0 percent compared with 27.6 percent).

The proportion of institutional deliveries varies from 17.8 percent in North-West to 87.5 percent percent in South-East. Women with higher level of educational attainment deliver in health facility more than those with no formal education. The proportion of births occurring in a health facility increases steadily with wealth, from 9.7 percent in the lowest wealth quintile to 78.4 percent in the highest. Most of thewomen who received no antenatal care services delivered at home (60.2 percent). More women deliver at home in rural areas (70.7 percent) than in their urban counterpart (35.3 percent)

Table 8.8 (RH.11): Place of delivery

Percent distribution of women age 15-49 years with a live birth in the last two years by place of delivery of their last birth, Nigeria, 2016-17

	Place of delivery						
	Health facility						
	Public sector	Private sector	Home	Others	Missing/ Don't know	Delivered in health facility[1]	Number of women with a live birth in the last two years
Total	**24.4**	**13.1**	**60.2**	**2.2**	**0.1**	**37.5**	**11,547**
Geopolitical zone							
North Central	30.3	14.1	51.1	4.5	0.0	44.4	1,770
North East	24.3	1.5	73.7	0.3	0.2	25.8	2,394
North West	15.4	2.4	82.0	0.1	0.1	17.8	4,603
South East	34.1	53.5	11.6	0.5	0.3	87.5	620
South South	38.1	28.7	29.4	3.9	0.0	66.8	900
South West	34.9	41.8	13.8	9.6	0.0	76.6	1,261
Residence							
Urban	37.3	23.7	35.3	3.7	0.1	61.0	3,426
Rural	19.0	8.6	70.7	1.5	0.1	27.6	8,121
Mother's age at birth (years)							
Less than 20	19.1	6.1	73.0	1.8	0.0	25.2	1,516
20-34	25.4	14.2	58.2	2.1	0.1	39.6	7,969
Missing	24.6	14.0	58.7	2.6	0.2	38.6	2,062
Number of antenatal care visits							
None	4.7	1.7	91.3	1.9	0.4	6.4	3,653
1-3 visits	24.7	9.5	64.5	1.2	0.0	34.3	2,094
4+ visits	37.0	21.7	38.8	2.6	0.0	58.7	5,670
Missing/Don't know	28.9	14.6	51.8	4.7	0.0	43.5	130
Education							
None	13.9	3.2	81.4	1.4	0.2	17.1	3,208
Non-formal	8.8	0.6	90.1	0.4	0.1	9.4	2,560
Primary	27.9	11.2	58.0	2.9	0.0	39.1	1,716
Secondary	38.0	27.4	30.5	4.0	0.1	65.3	3,182
Higher	52.7	37.4	8.0	1.8	0.1	90.1	882
Wealth index quintile							
Poorest	8.3	1.4	89.3	0.8	0.2	9.7	2,587
Second	15.4	4.4	78.6	1.4	0.1	19.8	2,548
Middle	25.7	9.1	63.4	1.7	0.1	34.9	2,270
Fourth	36.6	20.0	40.7	2.7	0.0	56.6	2,113
Richest	42.4	36.1	16.7	4.8	0.1	78.4	2,028

[1] MICS indicator 5.8 - Institutional deliveries

Post-natal Health Checks

The time of birth and immediately after is a critical window of opportunity for lifesaving interventions for both the mother and newborn. Across the world, approximately 3 million newborns die annually in the first month of life[45] and the majority of these deaths occur within a day or two of birth[46], which is also the time when the majority of maternal deaths occur[47].

Despite the importance of the first few days following birth, large-scale, nationally representative

[45] UN Interagency Group for Child Mortality Estimation. 2013. *Levels and Trends in Child Mortality: Report 2013*

[46] Lawn, JE et al. 2005.*4 million neonatal deaths: When? Where? Why?* Lancet 2005; 365:891–900.

[47] WHO, UNICEF, UNFPA, The World Bank. 2012.*Trends in Maternal Mortality: 1990-2010*. World Health Organization.

household survey programmes have not systematically included questions on the post-natal period and care for the mother and newborn. In 2008, the Countdown to 2015 initiative, which monitors progress on maternal, newborn and child health interventions, highlighted this data gap, and called not only for post-natal care (PNC) programmes to be strengthened, but also for better data availability and quality[48].

Following the establishment and discussions of an Inter-Agency Group on PNC and drawing on lessons learned from earlier attempts of collecting PNC data, a new questionnaire module for MICS was developed and validated. Named the Post-natal Health Checks (PNHC) module, the objective is to collect information on newborns' and mothers' contact with a provider, not content of care. The rationale for this is that as PNC programmes scale up, it is important to measure the coverage of that scale up and ensure that the platform for providing essential services is in place. Content is considered more difficult to measure, particularly because the respondent is asked to recall services delivered up to two years preceding the interview. Table 8.9 presents the percent distribution of women aged 15-49 who gave birth in a health facility in the two years preceding the survey by duration of stay in the facility following the delivery and post-natal check for newborn and mother according to background characteristics.

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

Table 8.9 (RH.13): Post-partum stay in health facility and Postnatal health check for newborn and mother

Percent distribution of women age 15-49 years with a live birth in the last two years who had their last birth delivered in a health facility by duration of stay in health facility, Nigeria, 2016-17

	Duration of stay in health facility: 12 hours or more[1]	Number of women who had their last birth delivered in a health facility in the last 2 years	Health check following birth while in facility or at home[a]	Post-natal health check for the newborn[2, b]	Number of last live births in the last two years	Post-natal health check for the mother[3, b]	Number of women with a live birth in the last two years
Total	**50.5**	**4,333**	**32.8**	**37.1**	**11,547**	**37.1**	**11,547**
Geopolitical zone							
North Central	35.9	786	41.7	46.6	1,770	47.3	1,770
North East	29.5	618	21.9	24.5	2,394	24.7	2,394
North West	31.7	820	14.6	19.0	4,603	19.9	4,603
South East	76.9	542	64.5	66.1	620	64.5	620
South South	68.0	601	61.4	69.1	900	67.8	900
South West	66.1	966	71.3	76.1	1,261	73.9	1,261
Residence							
Urban	53.8	2,090	54.0	58.9	3,426	60.1	3,426
Rural	47.5	2,244	23.8	27.8	8,121	27.4	8,121
Mother's age at birth (years)							
Less than 20	41.6	382	21.7	25.9	1,516	26.9	1,516
20-34	51.3	3,156	34.9	39.3	7,969	39.1	7,969
Type of health facility							
Public	43.2	2,823	78.2	79.2	2,823	80.5	2,823
Private	64.2	1,511	80.1	81.0	1,511	80.8	1,511
Type of delivery							
Vaginal birth	47.7	4,009	80.1	81.0	1,511	35.6	11,223
C-section	85.7	324	20.2	35.5	262	87.9	324
Education							
None	32.4	548	15.0	17.6	3,208	17.1	3,208
Non-formal	25.6	240	9.1	15.2	2,560	15.6	2,560
Primary	47.2	671	34.5	39.3	1,716	39.3	1,716
Secondary	53.9	2,079	55.2	60.0	3,182	60.4	3,182
Higher	64.5	794	81.9	84.1	882	84.0	882
Wealth index quintile							
Poorest	34.0	250	7.4	10.6	2,587	10.6	2,587
Second	36.3	506	17.0	21.4	2,548	20.8	2,548
Middle	43.7	792	30.5	35.8	2,270	35.8	2,270
Fourth	50.3	1,195	48.4	53.6	2,113	54.7	2,113
Richest	61.2	1,591	71.3	74.7	2,028	74.5	2,028

[1] MICS indicator 5.10 - Post-partum stay in health facility[2] MICS indicator 5.11 - Post-natal check for the newborn

[3] MICS indicator 5.12 - Post-natal check for the mothers

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

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

Post-partum Stay in health facility

Half of women who gave birth in an institutionalised health facility stayed 12 hours or more after delivery. Across the country, this proportion varies from 31.7 percent in the North-West to 68 percent in South-South. A higher proportion (64.2 percent) of women who used private health facilities for birth delivery stayed 12 hours or more than those who used public facilities (43.2 percent).

More women who live in urban areas stay for more than 12 hours after delivery than those in rural areas. As expected, most women (85.7 percent) gave birth through C- section stay 12 hours or more in the facility after child birth. A similar pattern exists with regards to woman's age at delivery and her level of education. A higher proportion (61.2 percent) of women from the richest household stayed 12 hours or more in health facilities after child delivery than those from poorest households (34.0 percent).

Postnatal care for newborn and mother

Safe motherhood programmes have recently increased emphasis on the importance of post-natal care, recommending that all women and newborns receive a health check within two days of delivery. To assess the extent of post-natal care utilization, women were asked whether they and their newborn received a health check after the delivery, the timing of the first check, and the type of health provider for the woman's last birth in the two years preceding the survey. Table 8.9 also shows the percentage of newborns in the last two years preceding the survey who received health checks after birth. The indicator *Post-natal health checks* include any health check after birth received while in the health facility and at home, regardless of timing, as well as post-natal carevisits within two days of delivery.

About 32 percent of newborns receive a health check following birth while in a facility or at home, a total of 37.1 percent of all newborns receive a post-natal health check. Newbornpost-natal health check estimate varies from 19 percent in North West to 76.1 percent in South-West. This implies that in Nigeria, while 3 out of 4 newborns in South West will be receiving postnatal check, only 1 out of 5 will do the same in North West region of the country.

Higher percentage of newborns in urban areas, whose mothers have higher education and in richest wealth quintile household, receive post-natal health check than those in other groups. Post-natal health checks for the newborn occurred mainly in health facility deliveries (79.2 percent public, 81.0 percent private), while fewnewborns delivered at home (10.5 percent) had post-natal health check.

Post-natal check for mothers has a pattern comparable to post-natal check for newborns. Overall, 33.4 percent of mothers received health check following birth in a facility or at home while 37.1 percent of all mothers received post-natal health check. This percentage varies from 19.9 percent in North-Westto 73.9 percent in South West. Higher proportion of mothers in urban areas received a health check, both following birth (55.8 percent) and total post-natal health check (60.1 percent), than mothers in rural areas (24.0 percent and 27.4 percent, respectively). More percentage of mothers with higher education and in richest wealth quintile household receive post-natal health check than other groups.

IX. Early Childhood Development

KEY FINDINGS

One in 3 children attend organized early childhood education programme in Nigeria.

More children in Southern regions attend early childhood education programme than their Northern counterparts.

About two-thirds (62.8 percent) of the children have an adult household member engaged with them on four or more activities that promote learning and school readiness

Involvement of biological father and mother in activities that support early learning is as low as 10.8 percent and 28.1 percent respectively

Only 5.6 percent of the children live in households where there are at least 3 children's books accessible to the child

3 out 5 of children age 36-59 months are developmentally on track in at least three of the four domains

One third of children were left with inadequate care either by being left alone or in the care of another child

Early Childhood Care and Education

Readiness of children for primary school can be improved through attendance of early childhood education (ECE) programmes or through pre-school attendance. Early childhood education includes programmes for children that have organised learning components as opposed to baby-sitting and day-care for ages 36-59 months. Figure 9. 1 presents percentage of children age 36-59 months who are attending an organized early childhood education program in Nigeria. The social and demographic groups differential is also presented.

One in 3 children attends organized early childhood education programme in Nigeria. More children in Southern regions attend early childhood education programme than Northern part. This is most prevalent in South West at 82 percent, and lowest in the North East at 13 percent.

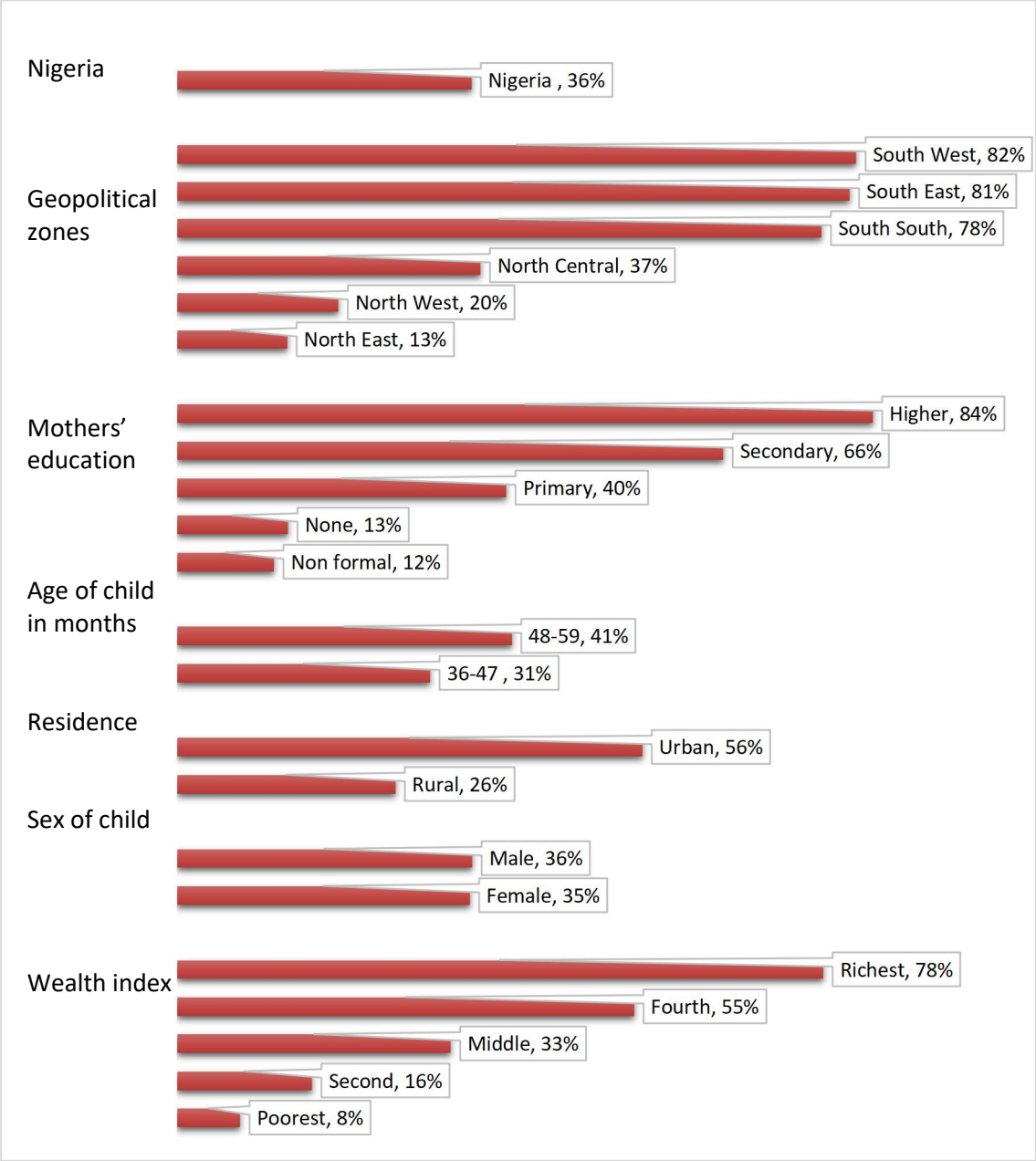
There is urban-rural differential in ECE attendance with 56 percent in urban areas, compared to 26 percent in rural areas. While there is no notable gender differential, there exist variations in other social and demographic groups: 78.2 percent of children living in the richest wealth index quintile households and 84 percent among mothers with higher education.

Support for learning

The quality of home care is a major determinant of child's development in the first 3-4 years of life when rapid brain development occurs[49]. As set out by*A World Fit for Children*, "children should be physically healthy, mentally alert, emotionally secure, socially competentand ready to learn."[50]

[49] Grantham-McGregor, S et al. 2007.*Developmental Potential in the First 5 Years for Children in Developing Countries*. The Lancet 369: 60–70
Belsky, J et al. 2006.*Socioeconomic Risk, Parenting During the Preschool Years and Child Health Age 6 Years*. European Journal of Public Health 17(5): 511–2.
[50]UNICEF. 2002.*A World Fit For Children* adopted by the UN General Assembly at the 27th Special Session, 10 May 2002: 2.

Figure 9.1: Percentage of children age 36-59 months who are attending an organized early childhood education program in Nigeria



Child development requires engagement of adultsin early learning support activities with children, presence of books in the homefor the child, and the conditions of care as part of overall quality of home care. Information on a number of activities that support early learning was collected among children age 36-59 months in the survey. These included the involvement of adults with children in the following activities: reading books or looking at picture books, telling stories, singing songs, taking children outside the home, compound or yard, playing with children, and spending time with children naming, counting, or drawing things.Table 9.1 presents percentage of children age 36-59 months with whom adult

household members engaged in activities that promote learning and school readiness during the last three days, and engagement in such activities by biological fathers and mothers.

Table 9.1 (CD.2): Support for learning

Percentage of children age 36-59 months with whom adult household members engaged in activities that promote learning and school readiness during the last three days, and engagement in such activities by biological fathers and mothers, Nigeria, 2016-17

	Percentage of children with whom adult household members have engaged in four or more activities[1]	Percentage of children living with their:		Number of children age 36-59 months	Percentage of children with whom biological fathers have engaged in four or more activities[2]	Percentage of children with whom biological mothers have engaged in four or more activities[3]
		Biological father	Biological mother			
Total	**62.8**	**89.0**	**92.8**	**11,674**	**10.8**	**28.1**
Geopolitical zone						
North Central	66.4	89.2	92.4	1,986	15.2	30.3
North East	49.3	90.8	92.4	2,559	5.0	15.4
North West	55.1	93.6	94.5	4,360	8.4	19.8
South East	86.6	78.6	90.9	631	19.9	56.0
South South	85.8	74.2	89.4	937	19.0	52.1
South West	82.7	85.2	92.0	1,201	13.8	48.2
Sex						
Male	62.4	89.8	92.6	5,906	11.6	27.5
Female	63.1	88.2	93.1	5,767	10.0	28.7
Residence						
Urban	76.0	88.0	92.8	3,572	16.2	41.5
Rural	56.9	89.4	92.8	8,102	8.5	22.2
Age (months)						
36-47	62.1	89.1	93.3	5,818	10.4	28.5
48-59	63.4	88.9	92.3	5,856	11.3	27.7
Mother's education						
None	47.9	89.5	90.2	3,437	6.8	15.5
Non-formal	50.0	92.7	93.8	2,616	3.7	11.6
Primary	66.1	87.7	92.6	1,876	9.3	24.4
Secondary	80.9	86.3	94.6	2,847	17.0	49.1
Higher	92.3	87.0	94.8	897	30.8	65.5
Father's education						
None	47.3	100.0	97.0	1,871	7.9	16.9
Non-formal	53.8	64.8	82.8	3,650	3.6	17.2
Primary	63.7	100.0	97.9	1,789	9.1	27.5
Secondary	73.3	100.0	96.7	2,783	15.4	39.1
Higher	82.4	100.0	98.6	1,556	25.2	48.4
Wealth index quintile						
Poorest	45.5	93.5	93.6	2,704	5.4	11.3
Second	51.5	91.1	93.3	2,485	6.4	17.9
Middle	61.6	85.2	91.0	2,352	7.5	23.9
Fourth	75.9	84.0	91.4	2,064	13.9	36.3
Richest	87.1	89.7	94.8	2,069	23.9	58.9

[1] MICS indicator 6.2 - Support for learning[2] MICS Indicator 6.3 - Father's support for learning

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

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

In Nigeria, about two-thirds (62.8 percent) of the children have an adult household member engage them on four or more activities that promote learning and school readiness during the 3 days preceding the survey. Although more than 80 percent of the children age 36-59 months lives with their biological

parents, involvement of biological fatherand mother in activities that support early learning is as low as 10.8 percent and 28.1 percent respectively.

Involvement of adult household member in southern part of Nigeria is higher than northern part. At least four out 5 household members in South West, South South and South East were engaged with children age 36-59 months in four or more learning activities. The pattern of biological parent's engagement in learning activities, though lower, is the same as any other adult household member. Biological mothers and fathers of children in South East zone (56 and 19.9 percent respectively) were more involved in learning activities than other regions.

Estimate from MICS 2016-17 shows that the sex of a child does not affect adult support in learning, as there is no notable difference in the proportion of male and female children for all the three indicators. Biological parents and adult household members in urban areas, with higher education and wealthier households are more supportive than other groups.

Learning Materials

Exposure to books in early years not only provides the child with greater understanding of the nature of print, but may also give the child opportunities to see others reading, such as older siblings doing school work. Presence of books is important for later school performance. The mothers/caretakers of all children under-5 (0-59 months) were asked about number of children's books or picture books they have for the child, and the types of playthings that are available at home. The percentage distribution of children on availability of books and playthings at home is presented in Table 9.2.

Only 5.6 percent of the children live in households where there are at least 3 children's books are accessible to the child. More children in southern part of Nigeria have at least this type of learning material in their homes than those in the northern part. While no gender difference was observed, a higher percentage of urban children have access to children's books at home than those in rural areas. The proportion of under-5 children who have 3 or more children's books is 12.2 percent in urban areas, compared to 2.8 percent in rural areas. Higher percent of children age 48-59 months (8.6 percent) have access to 3 or more children's books compare with children age 36-47 months (1 percent).

In Nigeria, 45.7 percent of children age 0-59 months had 2 or more types ofplaythings in their homes. The types of playthings included in the questionnaires are homemade toys (such as dolls and cars, or other toys made at home), toys that came from a store, and household objects (such as pots and bowls) or objects and materials found outside the home (such as sticks, rocks, animal shells, or leaves). Higher proportion of children in southern part of Nigeria has at least 2 types of playthings in their homes than those in the northern part.

The proportion of children who have 2 or more types ofplaythings at home is 45.8 percent among male children and 45.6 percent among female children. Urban-rural differential is observed with 54.2 percent in urban and 42 percent in rural areas. There are variations in availability of learning materials based on mother's education and wealth index; higher percentage of mothers with higher education and richest wealth index quintile households have 2 or more types ofplaythings at home than other groups.

Developmental Status of Children

Early childhood development is defined as an orderly, predictable process along a continuous path, in which a child learns to handle more complicated levels of moving, thinking, speaking, feeling and relating to others. Physical growth, literacy and numeracy skills, socio-emotional development and readiness to learn are vital domains of a child's overall development, and basis for human development.[51]A 10-item module was used to calculate the Early Child Development Index (ECDI). The primary purpose of the ECDI is to inform public policy regarding the developmental status of children in Nigeria.The index is based on selectedmilestones that children are expected to achieve by ages 3 and 4. The 10 items are used to determine if children are developmentally on track in four domains:

- Literacy-numeracy: Children are identified as being developmentally on track based on whether they can identify/name at least ten letters of the alphabet, whether they can read at least four simple, popular words, and whether they know the name and recognize the symbols of all numbers from 1 to 10. If at least two of these are true, then the child is considered developmentally on track.
- Physical: If the child can pick up a small object with two fingers, like a stick or a rock from the ground and/or the mother/caretaker does not indicate that the child is sometimes too sick to play, then the child is regarded as being developmentally on track in the physical domain.Social-emotional: Children are considered to be developmentally on track if two of the following are true: If the child gets along well with other children, if the child does not kick, bite, or hit other children and if the child does not get distracted easily.
- Learning: If the child follows simple directions on how to do something correctly and/or when given something to do, is able to do it independently, then the child is considered to be developmentally on track in this domain.

Early Child Development Index (ECDI) is then calculated as the percentage of children who are developmentally on track in at least three of these four domains as shown in Table 9.2. In Nigeria, three out five of children age 36-59 months are developmentally on track in at least three of the four domains. Although more than half of children are on track, it is remarkably higher in southern part of Nigeria than northern part. Percentage of girls (62.2 percent) who are on track is higherthan boys (60.2 percent). There are more children in older age group48-59 months on track compared to those of age 36-47 months since children acquire more skills with increasing age. Children living in richest wealth index quintile households are twice as much on track than those in poorer households.

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

Table 9.2 (CD.3) Learning materials and Early child development index

Percentage of children on availability of learning materials at home and early child development index score, Nigeria, 2016-17

	3 or more children's books[1]	Two or more types of playthings[2]	Early child development index score[3]
	0-59 months	0-59 months	36-59 months
Total	**5.6**	**45.7**	**61.2**
GeoPolitical zone			
North Central	5.1	46.5	67.3
North East	1.9	33.8	52.0
North West	1.8	46.6	51.3
South East	15.7	48.1	82.7
South South	15.6	55.3	77.1
South West	14.9	57.0	83.1
Sex			
Male	5.5	45.8	60.2
Female	5.8	45.6	62.2
Residence			
Urban	12.2	54.2	74.3
Rural	2.8	42.0	55.4
Age (months)			
36-47	1.0	29.8	54.9
48-59	8.6	55.8	67.5
Mother's education			
None	0.8	37.8	48.7
Non-formal	0.8	42.2	50.7
Primary	4.1	46.0	63.9
Secondary	10.5	52.3	75.9
Higher	24.4	62.5	87.5
Wealth index quintile			
Poorest	0.3	72.8	37.9
Second	0.9	72.1	38.7
Middle	2.7	74.0	44.8
Fourth	7.0	82.7	50.6
Richest	19.8	89.7	59.9

[1] MICS indicator 6.5 - Availability of children's books

[2] MICS indicator 6.6 - Availability of playthings

[3] MICS indicator 6.8 - Early child development index

Inadequate Care

Leaving children alone or in the presence of other young children is known to increase the risk of injuries.[52] In MICS, two questions were asked to find out whether children age 0-59 months were left alone during the week preceding the interview, and whether children were left in the care of other children under 10 years of age.

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

Table 9.3 shows that 26.5 percent of the children were left alone during the week preceding the interview, while 23.1 percent of them were left in the care of other children younger than 10 years old in Nigeria. Combining the two care indicators, it is calculated that a total of 31.7 percent of children were left with inadequate care during the past week, either by being left alone or in the care of another child. No differences were observed by the sex of the child or between urban and rural areas. On the other hand, inadequate care was more prevalent among children whose mothers had primary or secondary education (34.2 and 34.6 percent respectively), as opposed to children whose mothers had no education (27.9 percent). Children age 24-59 months was left with inadequate care more (40.3 percent) often than those who were age 0-23 months (18.2 percent).

Table 9.3 (CD.4): Inadequate care

Percentage of children under age 5 left alone or left in the care of another child younger than 10 years of age for more than one hour at least once during the past week, Nigeria, 2016-17

	Percentage of children under age 5:			
	Left alone in the past week	Left in the care of another child younger than 10 years of age in the past week	Left with inadequate care in the past week[1]	Number of children under age 5
Total	**26.5**	**23.1**	**31.7**	**28,085**
Geopolitical zone				
North Central	33.5	30.1	39.2	4,616
North East	18.2	17.5	23.4	6,041
North West	27.0	23.5	30.7	10,635
South East	36.7	28.1	42.7	1,550
South South	27.9	28.8	39.3	2,273
South West	24.4	15.4	29.3	2,968
Sex				
Male	26.9	23.6	32.2	14,213
Female	26.1	22.6	31.2	13,872
Residence				
Urban	26.6	21.5	31.2	8,553
Rural	26.5	23.8	32.0	19,532
Age (months)				
0-23	14.6	13.2	18.2	10,898
24-59	34.1	29.4	40.3	17,187
Mother's education				
None	23.7	21.4	27.9	8,134
Non-formal	27.3	25.3	31.9	6,196
Primary	27.9	24.9	34.2	4,330
Secondary	28.1	23.3	34.6	7,245
Higher	26.5	19.6	31.4	2,178
Wealth index quintile				
Poorest	27.2	23.5	30.8	6,369
Second	26.2	24.1	31.2	6,018
Middle	26.6	24.6	32.2	5,549
Fourth	27.2	24.1	34.7	5,156
Richest	25.2	18.8	30.1	4,993

[1] MICS indicator 6.7 - Inadequate care

X. Literacy and Education

Literacy among young women and men

The Youth Literacy Rate reflects the outcomes of primary education over the previous 10 years or so. While the rate is a measure of the effectiveness of the primary education system, it is also often used as a proxy measure of social progress and economic achievement. In Nigeria, sex-specific questionnaires were administered to females and males age 15-24years respectively. Literacy is assessed by the ability of the respondent to read a short simple statement or based on school attendance.

The percentage of young people age 15-24 years who are able to read a short simple statement about everyday life or who attended secondary or higher education is presented in Table 10.1 and 10. 2. Among young people in Nigeria, 59.3 percent of women and 70.9 percent of men are literate. This implies that about 5 in 10 young women and 7 in 10 young men are literate in Nigeria

The literacy rateamong different social and demographic group is identical for both sexes. Literacy rate for young women is remarkably lower than young men in the northern region. Also, percentage of those who are literate is lower in rural area than urban. Specifically, literacy rate for young women in rural areas is about 50 percent lower than those in urban areas.

The literacy rate of young peopleis less than one percent among those with no education. This is very lowcompared to 100 percent in those that have at least secondary education. Among young people with primary school education, just 7.1 and 8.3 percent of women and men respectively were able to read the simple statement shown to them.

Younger women age 15-19 years are more literate than age 20-24 years. This differs for men where older men age 20-24 are more literate than younger

KEY FINDINGS

Literacy rate among young people age 15-24:
- **59.3 percent of women**
- **70.9 percent of men**

Literacy rate is very low among
- **Young women in Niger, Bauchi, Gombe, Yobe, Jigawa, Katsina, Kebbi, Sokoto and Zamfara**
- **Young men in Bauchi, Gombe, Yobe, Jigawa, Kebbi and Sokoto.**

School readiness is still low as 39 percent of children in the first grade of primary school attended pre-school the previous year

Net intake rate in primary education is 39.4 percent. One third of children of school-entry age were enrolled in first grade of primary school

About 3in 5 of primary school age children and 2in 5 secondary school age children are currently attending school

94 percent of children reach final grade (primary 6) in government-owned primary school.

Primary school completion rate is 63 percent. This implies that 6in 10 children of primary completion age 11 years are in the last grade of primary education

Transition rate to secondary school is 49 percent

Gender parity for primary school is 1.00, indicating no difference in the attendance of girls and boys in primary school. It is 0.97 for secondary school.

men. The rate of literacy of young women in the poorest households (13.5 percent) is lower than that of the richest households (95.9 percent).

Table 10.1 (ED.1, ED.1M): Literacy (young women and men) by background characteristics

	Women		Men	
	Percentage literate[1]	Number of women age 15-24 years	Percentage literate[1]	Number of men age 15-24 years
Nigeria	59.3	12,637	70.9	5,887
Geopolitical Zones				
North Central	62.0	2,212	76.4	1,105
North East	41.9	2,533	53.1	1,193
North West	38.0	4,208	57.5	1,869
South East	95.4	921	94.3	384
South South	94.8	1,290	95.0	601
South West	92.6	1,474	93.7	735
Residence				
Urban	84.0	4,631	88.9	2,128
Rural	45.1	8,007	60.7	3,759
Education of household head				
None	0.3	2,215	0.6	537
Non-formal	1.4	1,734	1.7	673
Primary	7.1	1,313	8.3	563
Secondary	100	6,501	100	3,568
Higher	100	874	100	544
Age (years)				
15-19	63.6	6,822	68.2	3,508
20-24	54.3	5,816	74.9	2,378
Wealth index quintile				
Poorest	13.5	1,988	28.5	1,106
Second	31.6	2,507	53.7	1,132
Middle	56.4	2,711	79.2	1,226
Fourth	84.5	2,636	90.4	1,219
Richest	95.9	2,796	97.9	1,203

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

Percentage of young men and women who are literate by being able to read some simple statements across states in Nigeria is presented in Table 10.2. At least 9 in 10 young persons in states in the Southern part of the country are literate. Specifically, literacy rates among young people in all the states in the South South are over 90 percent. Illiteracy is notably high (more than half) among young women in Niger, Bauchi, Gombe, Yobe, Jigawa, Katsina, Kebbi, Sokoto and Zamfara, and young men in Bauchi, Gombe, Yobe, Jigawa, Kebbi and Sokoto.

Table 10.2 (ED.2): Literacy rate for young women and men by state

	Women		Men	
	Percentage literate[1]	Number of women age 15-24 years	Percentage literate[1]	Number of men age 15-24 years
Nigeria	59.3	12,637	70.9	5,887
North Central	**62.0**	**2,212**	**76.4**	**1,105**
Benue	69.9	368	90.5	184
Kogi	86.3	249	92.4	126
Kwara	73.5	155	81.0	93
Nasarawa	56.0	283	78.1	139
Niger	37.6	534	58.9	239
Plateau	65.1	497	69.6	272
FCT Abuja	81.3	126	90.1	52
North East	**41.9**	**2,533**	**53.1**	**1,193**
Adamawa	50.6	310	74.3	158
Bauchi	25.6	607	39.8	286
Borno	56.4	783	60.3	294
Gombe	37.5	232	47.5	118
Taraba	53.1	207	70.6	91
Yobe	28.3	393	42.7	247
North West	**38.0**	**4,208**	**57.5**	**1,869**
Jigawa	24.8	481	32.3	214
Kaduna	54.4	859	65.2	361
Kano	46.1	971	72.5	452
Katsina	32.6	729	62.6	263
Kebbi	30.9	361	41.8	180
Sokoto	20.1	320	47.4	152
Zamfara	31.0	486	53.0	248
South East	**95.4**	**921**	**94.3**	**384**
Abia	98.2	108	94.2	54
Anambra	98.1	228	95.1	92
Ebonyi	83.4	167	81.9	57
Enugu	97.9	198	96.8	83
Imo	98.2	220	98.9	98
South South	**94.8**	**1,290**	**95.0**	**601**
Akwa Ibom	94.6	325	92.7	138
Bayelsa	95.8	90	98.3	43
Cross River	94.3	248	95.0	102
Delta	91.0	202	95.3	99
Edo	94.9	163	98.3	67
Rivers	98.1	262	94.7	152
South West	**92.6**	**1,474**	**93.7**	**735**
Ekiti	96.7	67	99.0	31
Lagos	93.1	488	98.3	226
Ogun	90.7	155	89.0	83
Ondo	91.4	206	93.4	92
Osun	94.7	250	94.8	135
Oyo	90.7	308	88.3	168

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

School Readiness

Pre-school education in an organised learning is important for the readiness of children to school. Table 10.3 shows the proportion of children in the first grade of primary school (regardless of age) who

attended pre-school the previous year[53]. Overall, 39.2 percent of children, with no gender difference, who are currently in the first grade of primary school attended pre-school the previous year. More than half of the children in the first grade in urban areas (51.2 percent) had attended pre-school the previous year compared to 32.3 percent of children living in rural areas. There is regional differential as pre-school attendance in the South West is about four times higher (76.8 percent) than the North West (20.3 percent). Socioeconomic status is also an important consideration in school readiness, as school readiness increases with wealth quintile –14.8 percent among children in the poorest wealth quintile households and 63.0 percent in the richest wealth quintile households.

Table 10.3 (ED.2): School readiness

Percentage of children attending first grade of primary school who attended pre-school the previous year, Nigeria, 2016-17

	Percentage of children attending first grade who attended preschool in previous year[1]	Number of children attending first grade of primary school
Total	**39.2**	**3,793**
Geopolitical zone		
North Central	39.9	774
North East	24.6	630
North West	20.3	1,256
South East	63.6	322
South South	59.4	333
South West	76.8	479
Sex		
Male	39.7	1,934
Female	38.8	1,859
Residence		
Urban	51.8	1,345
Rural	32.3	2,447
Mother's education		
None	22.3	959
Non-formal	22.3	641
Primary	41.9	795
Secondary	57.4	1,085
Higher	57.2	301
Wealth index quintile		
Poorest	14.8	502
Second	26.5	759
Middle	35.8	888
Fourth	46.6	855
Richest	63.0	789

[1] MICS indicator 7.2 - School readiness

Primary SchoolEntry

Education is a vital prerequisite for combating poverty, empowering women, protecting children from hazardous and exploitative labour and sexual exploitation, promoting human rights and democracy, protecting the environment, and influencing population growth. In Nigeria, there are 6 grades in primary school and 6 grades in secondary school. In primary school, grades are referred to as primary 1 to primary 6, while for secondary school; grades are referred to as JSS 1 to JSS 3 and SSS 1 to SSS 3. The

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

school year typically runs from September of one year to July of the following year, and children are enrolled in primary school at age 6 and secondary school at age 12.

More than 39 percent of children age 6 years arecurrently in the first grade of primary school. While there is no substantial gender difference in the estimate of this indicator, there are differences by region and residence. Percentage of children of primary school entry age enrolled in grade 1 is highest in South East (60.5 percent) and lowest in North East (27.2 percent). There are more primary school entry age children who are enrolled in grade 1 in urban areas than rural areas. Enrolment in first grade at age 6, as expected, increases with mother's education and wealth status.

Table 10.4 (ED.3): Primary school entry

Percentage of children of primary school entry age entering grade 1 (net intake rate), Nigeria, 2016-17

	Percentage of children of primary school entry age entering grade 11	Number of children of primary school entry age
Total	**39.4**	**6,468**
Geopolitical zone		
North Central	48.2	1,083
North East	27.2	1,492
North West	32.5	2,387
South East	60.5	344
South South	52.5	495
South West	56.3	666
Sex		
Male	39.8	3,280
Female	38.9	3,187
Residence		
Urban	52.0	1,995
Rural	33.7	4,472
Mother's education		
None	25.7	2,112
Non-formal	25.2	1,441
Primary	50.2	1,093
Secondary	56.7	1,375
Higher	70.5	434
Wealth index quintile		
Poorest	17.0	1,546
Second	32.9	1,422
Middle	43.0	1,274
Fourth	50.2	1,221
Richest	65.2	1,004

1 MICS indicator 7.3 - Net intake rate in primary education

Primary and Secondary Schoolnet attendance ratio

Net attendance ratio (NAR) is expressed as percentage of children of primary school age currently attending primary or secondary school. Table 10.5 shows the percentage of children of primary school age 6 to 11 years who currently are attending primary or secondary school[54]. About 3in 5 of children of primary school age and 2in 5 children of secondary school age are currently attending school. Primary school attendance is higher in the Southern region of the country, between 85.4 percent in the South West and 88.5 percent in the South East zone, compared to the Northern region which is between 46.4 percent in the North East to 69.8 percent in the North Central. Secondary net attendance also follows the north-south dichotomy but the estimates are lower.

Table 10.5 (ED.4, ED.5): Primary and secondary school attendance and out of school children

Percentage of children of primary and secondary school age currently attending primary or secondary school (adjusted net attendance ratio), Nigeria, 2016-17

	Primary School		Secondary School	
	Net attendance ratio (adjusted)[1]	Number of children	Net attendance ratio (adjusted)[1]	Number of children
Total	60.9	33,647	46.9	24,855
Geopolitical zone				
North Central	69.8	5,598	50.3	4,242
North East	46.4	7,557	31.6	5,423
North West	49.1	12,412	33.5	8,632
South East	88.5	1,917	73.2	1,524
South South	86.7	2,641	76.5	2,271
South West	85.4	3,522	74.5	2,763
Residence				
Urban	80.0	10,296	66.1	8,723
Rural	52.5	23,351	36.5	16,132
Age at beginning of school year				
6 or 12	41.7	6,468	28.2	5,465
7 or 13	57.3	6,126	43.7	4,487
8 or 14	63.5	6,077	52.4	4,476
9 or 15	72.1	4,856	51.8	3,909
10 or 16	64.3	6,148	57.2	3,531
11 or 17	75.0	3,972	58.8	2,987
Mother's education				
None	44.1	11,283	28.8	7,489
Non-formal	41.4	7,550	26.5	4,566
Primary	78.5	5,946	58.8	4,526
Secondary	86.1	6,616	77.1	3,890
Higher	91.5	2,181	80.5	1,540
Wealth index quintile				
Poorest	26.2	7,766	11.6	5,032
Second	52.6	7,302	29.6	4,896
Middle	68.8	6,743	48.5	5,097
Fourth	79.1	6,294	65.6	5,180
Richest	90.5	5,542	80.5	4,650

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

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

A higher proportion of urban children are currently attending school compared to the rural children. In both primary and secondary school, adjusted NAR for children who are older at the beginning of the school year is higher than others. Also, school attendance varies with the mother's educational level and wealth index, with higher attendance with increasing mother's education and wealth index. Eighty percent of eligible children of mothers with higher education are attending secondary school, while only 26.5 percent of eligible children of mothers with non-formal education are attending secondary school. Eighty percent of children in the richest wealth index quintile households are currently attending secondary school compared to 11.6 percent of children in the poorest households in secondary school.

Children reaching last grade of primary

The percentage of children reaching last grade of primary school, primary school completion and transition to secondary schoolis presented in Table 10.6. The Nigeria MICS 2016-17 included only questions on school attendance in the current and previous year. Therefore, the indicator is calculated synthetically by computing the cumulative probability of survival from the first to the last grade of primary school, as opposed to calculating the indicator for a real cohort which would need to be followed from the time a cohort of children entered primary school, up to the time they reached the last grade of primary school.

Repeaters are excluded from the calculation of the indicator, because it is not known whether they will eventually graduate. As an example, the probability that a child will move from the first grade to the second grade is computed by dividing the number of children who moved from the first grade to the second grade (during the two consecutive school years covered by the survey) by the number of children who have moved from the first to the second grade plus the number of children who were in the first grade the previous school year, but dropped out. Both the numerator and denominator exclude children who repeated during the two school years under consideration.

In Nigeria, the final grade in government-owned primary school, which most children attend, is primary 6 and the majority of children in MICS 2016-17 (94.1 percent) reach this last grade. This number includes children that repeated grades and that eventually moved up to reach last grade. Male-female, rural-urban and wealth quintile differentials are not pronounced as at least 9 in 10 pupils reached grade 6.

The primary school completion rate is the ratio of the total number of students, regardless of age, entering the last grade of primary school for the first time, to the number of children of the primary graduation age at the beginning of the current (or most recent) school year. The primary school completion rate, whichindicates the proportion of children of primary completion age 11 years, attending the last grade of primary education is 63 percent and the transition rate to secondary school is 49 percent. "Effective" transition rate of 66.9 percent takes account of the presence of repeaters in the final grade of primary school. This indicator better reflects situations in which pupils repeat the last grade of primary education but eventually make the transition to the secondary level. The simple transition rate tends to underestimate pupils' progression to secondary school as it assumes that the repeaters never reach secondary school.

Some gender differential exists in the primary school completion rate, higher estimate for male children (68.5 percent) compared to female children (57.7 percent). Across the geo-political zones, primary school completion rates range between 54.0 percent in the North-East to 81.5 percent in the South-South.

Table 10.6 (ED.6, ED.7): Children reaching last grade of primary school, primary school completion and transition to secondary school

	Percent who reach grade 6 of those who enter grade 1[1]	Primary school completion rate[2]	Transition rate to secondary school[3]	Effective transition rate to secondary school
Total	**94.1**	**63**	**49**	**66.9**
Geopolitical zones				
North Central	93.9	72.9	48.4	59.8
North East	94.0	54.0	31.0	51.0
North West	91.2	57.1	36.0	49.6
South East	97.4	70.7	58.2	81.8
South South	96.3	81.5	71.7	88.2
South West	97.3	60.8	63.7	89.4
Sex				
Male	95.5	68.5	50.4	66.9
Female	92.7	57.7	47.4	67,0
Residence				
Urban	95.8	67.6	52.0	73.5
Rural	93.2	60.4	46.6	62.1
Mother's education				
None	91.9	55.2	41.0	55.2
Non-formal	95.8	49.5	34.2	50.0
Primary	94.5	85.4	53.6	74.9
Secondary	98.0	61.4	63.0	85.2
Higher	98.0	56.2	71.0	89.2
Wealth index quintile				
Poorest	86.4	32.9	25.5	35.0
Second	92.3	64.1	39.3	50.0
Middle	93.1	77.7	47.8	64.9
Fourth	96.6	86,0	48.7	72.5
Richest	98.1	52.7	66.6	87.6

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

[2]MICS indicator 7.7 - Primary completion rate

[3]MICS indicator 7.8 - Transition rate to secondary school

Education Gender Parity Index

Table10.7 shows the ratio of girls to boys attending primary and secondary education. These ratios are better known as the Gender Parity Index (GPI). The ratios included here are obtained from net attendance ratios rather than gross attendance ratios. The latter provide an erroneous description of the GPI mainly because, in most cases, the majority of over-age children attending primary education tend to be boys.

Gender parity for primary school is 1.00, indicating no difference in the attendance of girls and boys to primary school. However, the indicator drops to 0.97 for secondary education. For primary school, the parity index net attendance ratio is higher in urban areas (0.99) than in rural areas (0.92). It is also higher in the South than in the North. Mothers' educational attainment is also an important factor in gender

parity for both primary and secondary schools. Among children of mothers with no education, the index is 0.89, while it is 0.97 among children of mothers with primary education and 0.98 among children of mothers with at least secondary education. A striking feature of gender parity index in respect of primary school attendance ratio is that the figure is consistently less than 1 over the major divisions of the population of the children; this implies that the girls are on the aggregate disadvantaged. The GPI is lowest in the North-East (0.90) and highest in the South-East and South West (1.01) each.

Table 10.7 (ED.8, ED.9): Education gender parity

Ratio of adjusted net attendance ratios of girls to boys, in primary and secondary school, Nigeria, 2016-17

	Primary school			Secondary school		
	Primary school adjusted net attendance ratio (NAR), girls	Primary school adjusted net attendance ratio (NAR), boys	Gender parity index (GPI) for primary school adjusted NAR[1]	Secondary school adjusted net attendance ratio (NAR), girls	Secondary school adjusted net attendance ratio (NAR), boys	Gender parity index (GPI) for secondary school adjusted NAR[2]
Nigeria	**59.2**	**62.6**	1.0	**46.2**	**47.4**	1.0
Geopolitical zones						
North Central	**67.5**	**72.0**	**0.9**	**51.2**	**1.0**	
North East	**44.0**	**48.8**	**0.9**	**32.5**	**0.9**	**0.9**
North West	**47.4**	**50.8**	**0.9**	**36.4**	**0.8**	**1.1**
South East	**88.8**	**88.3**	**1.0**	**69.8**	**1.1**	**1.1**
South South	86.9	86.5	1.0	73.6	1.1	1.0
South West	**85.6**	**85.2**	**1.0**	**72.4**	**1.1**	
Residence						
Urban	79.5	80.5	1.0	65.8	66.4	1.0
Rural	50.2	54.8	0.9	35.1	37.7	0.9
Mother's education						
None	41.5	46.5	0.9	27.8	29.6	0.9
Non-formal	38.5	44.4	0.9	24.8	28.0	0.9
Primary	77.5	79.6	1.0	59.1	58.5	1.0
Secondary	85.4	86.8	1.0	78.3	75.8	1.0
Higher	91.3	91.6	1.0	79.5	81.6	1.0
Wealth index quintile						
Poorest	23.7	28.6	0.8	9.3	13.6	0.7
Second	50.3	55.0	0.9	25.6	33.3	0.8
Middle	65.6	71.7	0.9	43.2	53.7	0.8
Fourth	78.1	80.2	1.0	68.8	62.5	1.1
Richest	91.6	89.4	1.0	80.6	80.4	1.0

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

XI. Child Protection

Birth Registration

A name and nationality is every child's right, enshrined in the Convention on the Rights of the Child (CRC) and other international treaties. Yet the births of one in four children under the age of five worldwide have never been recorded.[55] This lack of formal recognition by the State usually means that a child is unable to obtain a birth certificate. As a result, he or she may be denied health care or education. Later in life, the lack of official identification documents can mean that a child may enter into marriage or the labour market, or be conscripted into the armed forces, before the legal age. In adulthood birth certificates may be required to obtain social assistance or a job in the formal sector, to buy or prove the right to inherit property, to vote and to obtain a passport. Registering children at birth is the first step in securing their recognition before the law, safeguarding their rights, and ensuring that any violation of these rights does not go unnoticed.[56]

KEY FINDINGS

47 percent of children under age 5 have their birth registered under civil authority

50.8 percent of children are involved in child labour 39.1 are working under hazardous condition

In Nigeria, about 85 percent of children age 1-14 years was subjected to at least one form of violent discipline

The percentage of women who married before age 15 years in Nigeria is 18.5 percent.

44 percent of women age 20-49 years married before age 18 years.

About 18.4 percent of women had some form of female genital mutilation.

33.7 percent of women in Nigeria feel that a husband/partner is justified in hitting or beating his wife in at least one of the five situations.

National Population Commission (NPopC) is the organisation in charge of birth registration in Nigeria and every child is registered at or shortly after birth in any of the health care offices and as well as the NPopC offices across the 774 LGAs in Nigeria. Provide information on the procedure/system of birth registration in the country.

Table 11.1 shows the percentage of children under age 5 with registered birth and unregistered birth from parents of caretakers who know how to register birth. About 47 percent of children under age 5 have their birth registered under civil authority. There is no substantial differenceon birth registration based on sex of children. Urban-rural differential exists, with higher birth registration in the urban areas (69.5 percent) than ruralareas (37 percent).

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

Table 11.1 (CP.1): Birth registration

Percentage of children under age 5 by whether birth is registered and percentage of children not registered whose mothers/caretakers know how to register birth, Nigeria, 2016-17

	Children under age 5 whose birth is registered with civil authorities					Children under age 5 whose birth is not registered	
	Has birth certificate				Number of children under age 5	Percent of children whose mother/caretaker knows how to register birth	Number of children under age 5 without birth registration
	Seen	Not seen	No birth certificate	Total registered[1]			
Total	**23.0**	**20.2**	**3.7**	**46.9**	**28,085**	**27.0**	**14,916**
Geopolitical zone							
North Central	22.9	18.1	4.1	45.1	4,616	24.5	2534
North East	17.8	16.2	2.8	36.9	6,041	30.8	3812
North West	17.7	16.5	3.0	37.1	10,635	19.2	6692
South East	42.2	33.6	7.2	82.9	1,550	47.5	265
South South	30.0	28.8	5.7	64.6	2,273	43.2	805
South West	37.8	31.0	4.0	72.8	2,968	59.7	807
Sex							
Male	23.5	20.3	3.4	47.3	14,213	27.0	7490
Female	22.5	20.0	4.0	46.5	13,872	27.1	7426
Residence							
Urban	38.8	27.2	3.5	69.5	8,553	49.0	2613
Rural	16.2	17.1	3.8	37.0	19,532	22.4	12303
Age (Months)							
0-11	20.7	13.4	4.4	38.5	5,363	32.6	3297
12-23	25.3	19.9	3.7	48.8	5,535	27.7	2833
24-35	24.0	21.6	3.5	49.2	5,514	25.4	2802
36-47	22.1	22.5	3.2	47.8	5,818	24.3	3037
48-59	23.1	22.9	3.7	49.7	5,856	24.5	2946
Mother's education							
None	11.3	14.8	2.4	28.5	8,134	19.3	5819
Non-formal	11.1	11.0	2.4	24.5	6,196	19.6	4679
Primary	25.7	22.6	5.2	53.5	4,330	34.2	2013
Secondary	36.5	28.3	5.5	70.3	7,245	52.2	2148
Higher	50.6	34.5	3.2	88.3	2,178	69.2	255
Wealth index quintile							
Poorest	6.6	9.4	2.2	18.3	6,369	13.7	5204
Second	13.2	15.2	3.1	31.6	6,018	21.0	4118
Middle	21.0	19.3	4.4	44.7	5,549	36.1	3068
Fourth	32.3	29.7	5.3	67.3	5,156	46.9	1687
Richest	48.6	30.9	3.8	83.2	4,993	66.6	838

[1] MICS indicator 8.1 - Birth registration

There is regional difference in birth registration; higher proportions of birth registration are in the Southern part of the country. Birth registration was highest in the South East (82.9 percent) and lowest in the North East (37.1 percent). There is increase in the proportion of birth registration with increasing mother's education and wealth quintile. Inadequate knowledge of how to register a child could be an obstacle to the fulfilment of a child's right to identity. Twenty-seven percent of mothers of unregistered children are aware of the registration process, but did not register their children.

Child Labour

Children who are involved in one form of paid and unpaid work are classified as child labourers when they are either too young to work or are involved in hazardous activities that may compromise their physical, mental, social or educational development. Article 32 (1) of the Convention on the Rights of the Child states: "States Parties recognize the right of the child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development".

The child labour module was administered for children age 5-17 and includes questions on the type of work a child does and the number of hours he or she is engaged in it. Data are collected on both economic activities (paid or unpaid work for someone who is not a member of the household, work for a family farm or business) and domestic work (household chores such as cooking, cleaning or caring for children, as well as collecting firewood or fetching water). The module also collects information on hazardous working conditions.[57, 58]

The methodology of the MICS Indicator on Child Labour uses three age-specific thresholds for the number of hours a child can perform economic activity without it being classified as in child labour. A child that performed economic activities during the last week for more than the age-specific number of hours is classified as in child labour:

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

Similarly, children's involvement in household chores was surveyed. As for economic activity above, the methodology also uses age-specific thresholds for the number of hours a child can perform household chores without it being classified as child labour. A child that performed household chores during the last week for more than the age-specific number of hours is classified as in child labour:

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

Table 11.2 shows the combined percentage of children age 5-17 years involved in child labour (from economic activities and household chores) and children working under hazardous conditions. The percentage of children in child labour and children working under hazardous condition is 50.8 percent and 39.1 percent respectively.

The proportion of children engaged in economic activities classified as child labour varies with age; 43.2 percent of children age 5-11 years, 10.9 percent of children age 12-14 years, and 1.6 percent of children age 15-17 years. Also, the proportion of children involved in household chores classified as child labour

[57] UNICEF. 2012. *How Sensitive Are Estimates of Child Labour to Definitions?* MICS Methodological Paper No. 1. UNICEF.

[58] The Child Labour module and the Child Discipline module were administered using random selection of a single child in all households with one or more children age 1-17 (See Appendix F: Questionnaires). The Child Labour module was administered if the selected child was age 5-17 and the Child Discipline module if the child was age 1-14 years old. To account for the random selection, the household sample weight is multiplied by the total number of children age 1-17 in each household.

varies with age; 4.8 percent of children age 5-11 years, 8.5 percent of children age 12-14 years, and 4.0 percent of children age 15-17 years. These indicators are both higher in the Northern region, among males, rural areas and in children not in school. There isreduction in proportion of children who are involved in child labour activities with increasing mother's education and wealth quintile. The highest proportion of child labour and children working under hazardous condition is in North Central with 56.8 percent and 49.6 percent respectively. The South West has the lowest proportion of child labour and work under hazard with 38 percent and 25.4 percent rates respectively.

Table 11.2 (CP.4): Child labour

Percentage of children age 5-17 years by involvement in economic activities or household chores during the last week, percentage working under hazardous conditions during the last week, and percentage engaged in child labour during the last week, Nigeria, 2016-17

	Children involved in economic activities for a total number of hours during last week:		Children involved in household chores for a total number of hours during last week:		Children working under hazardous conditions	Total child labour[1]	Number of children age 5-17 years
	Below the age specific threshold	At or above the age specific threshold	Below the age specific threshold	At or above the age specific threshold			
Total	**32.8**	**29.1**	**82.9**	**5.5**	**39.1**	**50.8**	**61,109**
Geopolitical zone							
North Central	35.0	31.3	83.3	6.3	49.6	56.8	10,355
North East	33.3	26.1	80.3	7.1	34.1	47.2	13,596
North West	33.2	33.8	81.4	4.7	41.9	55.1	22,022
South East	33.5	24.5	86.4	5.9	36.1	46.6	3,616
South South	34.2	25.2	88.4	3.6	37.9	48.7	5,075
South West	25.0	21.5	86.8	4.7	25.4	38.0	6,445
Sex							
Male	34.2	30.3	82.0	5.1	42.8	54.3	31,093
Female	31.2	27.9	83.9	5.9	35.1	47.2	30,016
Residence							
Urban	28.7	16.5	83.5	3.9	24.4	33.4	19,735
Rural	34.7	35.1	82.7	6.2	46.0	59.1	41,374
Age (years)							
5-11	12.0	43.2	79.8	4.8	33.2	49.9	37,469
12-14	60.1	10.9	85.5	8.5	45.7	51.4	13,328
15-17	73.2	1.6	91.0	4.0	51.6	53.3	10,312
School attendance							
Yes	31.5	28.0	84.5	5.2	37.5	48.7	45,503
No	36.6	32.4	78.4	6.2	43.6	56.9	15,606
Mother's education							
None	34.0	35.0	80.2	6.9	43.5	57.5	19,771
Non-formal	33.9	35.8	84.9	5.0	45.5	58.5	13007
Primary	32.8	29.5	86.0	4.9	42.2	51.7	10,448
Secondary	26.1	22.2	81.9	5.4	27.5	39.0	11,438
Higher	20.9	13.6	81.2	2.1	16.1	24.7	3,919
Wealth index quintile							
Poorest	37.6	40.8	81.9	7.1	50.3	66.5	13,491
Second	35.2	38.3	82.3	6.5	49.2	62.9	12,663
Middle	34.7	28.7	85.2	5.0	42.4	52.7	12,399
Fourth	31.2	19.7	83.1	5.0	30.7	39.8	12,037
Richest	23.2	14.2	82.2	3.3	17.9	26.6	10,519

[1] MICS indicator 8.2 - Child labour

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

Child Discipline

Teaching children self-control and acceptable behavior is an integral part of child discipline in all cultures. Positive parenting practices involve providing guidance on how to handle emotions or conflicts in manners that encourage judgment and responsibility and preserve children's self-esteem, physical and psychological integrity and dignity. However, children are raised through the use of punitive methods that rely on the use of physical force or verbal intimidation to obtain desired behaviors. Studies[59] have found that exposing children to violent discipline have harmful consequences, which range from immediate impacts to long-term harm that children carry forward into adult life. Violence hampers children's development, learning abilities and school performance; it inhibits positive relationships, provokes low self-esteem, emotional distress and depression; and, at times, it leads to risk taking.

Table 11.3 presents discipline methods of children age 1-14 years during the last one month. In Nigeria, 85 percent of children age 1-14 years were subjected to at least one form of violent discipline method (psychological aggression or physical punishment) by household members during the past month. For the most part, households employ a combination of violent disciplinary practices, reflecting caregivers' motivation to control children's behaviour by any means possible. While 76 percent of children experienced psychological aggression, 72 percent experienced physical punishment. The most severe forms of physical punishment (hitting the child on the head, ears or face or hitting the child hard and repeatedly) are reported in about 30 percent of children. Male children were subjected to physical discipline (74 percent) more than female children (70 percent). There is no difference in the violent method of child discipline in the geopolitical zones, area of residence, age, education of household head and household wealth index.

[59]Straus, MA and Paschall MJ.2009. *Corporal Punishment by Mothers and Development of Children's Cognitive Ability: A longitudinal study of two nationally representative age cohorts*. Journal of Aggression, Maltreatment & Trauma18(5): 459-83.
Erickson, MF and Egeland, B. 1987.*A Developmental View of the Psychological Consequences of Maltreatment*. School Psychology Review16: 156-68.
Schneider, MW et al. 2005. *Do Allegations of Emotional Maltreatment Predict Developmental Outcomes Beyond that of Other Forms of Maltreatment?*. Child Abuse & Neglect29(5): 513–32.

Table 11.3 (CP.4): Child discipline

Percentage of children age 1-14 years by child disciplining methods experienced during the last one month, Nigeria, 2016-17

	Percentage of children age 1-14 years who experienced:					
	Only non-violent discipline	Psychological aggression	Physical punishment		Any violent discipline method[1]	Number of children age 1-14 years
			Any	Severe		
Total	**8.1**	**76.2**	**72.0**	**29.5**	**84.9**	**73,066**
Geopolitical zone						
North Central	6.5	81.9	79.3	36.1	90.3	12,172
North East	10.1	72.1	69.2	23.7	83.4	16,160
North West	9.8	70.4	64.2	29.0	78.1	26,893
South East	4.5	84.4	83.6	39.7	92.7	4,164
South South	4.0	86.7	83.6	31.0	93.6	5,949
South West	5.0	83.1	78.6	26.4	91.8	7,728
Sex						
Male	7.6	76.7	74.1	31.1	85.8	36,728
Female	8.5	75.7	69.9	27.9	83.9	36,339
Residence						
Urban	7.1	78.6	73.4	29.3	87.4	22,705
Rural	8.5	75.1	71.4	29.6	83.7	50,362
Age (years)						
1-2	10.0	62.2	60.6	18.9	72.7	10,614
3-4	7.3	76.7	74.3	28.4	86.3	11,654
5-9	7.2	79.4	75.6	31.8	88.1	28,069
10-14	8.6	78.5	71.8	32.3	85.8	22,729
Education of household head						
None	9.9	74.7	69.7	28.0	83.0	15,686
Non-formal	8.9	73.1	66.2	30.3	81.2	16,089
Primary	6.9	76.6	75.6	30.1	86.2	13,684
Secondary	6.0	80.0	77.4	31.6	88.8	17,404
Higher	9.1	75.9	70.8	26.2	84.8	10,050
Wealth index quintile						
Poorest	10.3	69.2	64.7	26.3	77.7	16,455
Second	9.4	74.5	69.8	30.2	83.0	15,631
Middle	6.4	78.8	74.9	30.2	88.5	14,688
Fourth	5.9	79.2	77.8	32.6	88.8	13,683
Richest	7.6	81.1	74.7	28.8	88.1	12,610

[1] MICS indicator 8.3 - Violent discipline

Early Marriage and Polygyny

Marriage[60] before the age of 18 is a reality for many young girls. In many parts of the world parents encourage the marriage of their daughters while they are still children in hopes that the marriage will benefit them both financially and socially, while also relieving financial burdens on the family. In actual fact, child marriage is a violation of human rights, compromising the development of girls and often resulting in early pregnancy and social isolation, with little education and poor vocational training reinforcing the gendered nature of poverty.[61]

The right to 'free and full' consent to a marriage is recognized in the Universal Declaration of Human Rights - with the recognition that consent cannot be 'free and full' when one of the parties involved is not sufficiently mature to make an informed decision about a life partner. Closely related to the issue of child marriage is the age at which girls become sexually active.

Women who are married before the age of 18 tend to have more children than those who marry later in life. Pregnancy related deaths are known to be a leading cause of mortality for both married and unmarried girls between the ages of 15 and 19, particularly among the youngest of this cohort. There is evidence to suggest that girls who marry at young ages are more likely to marry older men which puts them at increased risk of HIV infection. The demand for these young wives to have children, and the power imbalance resulting from the age differential, lead to very low condom use among such couples.[62]

Table 11.4 shows the percentage of men and women at different age groups years who were married before ages 15 and 18, currently married and in polygynous marriage. The percentage of women who married before age 15 years in Nigeria is 18.5 percent. About 44 percent of women age 20-49 years married before age 18 years. The proportion of marriages before ages 15 and 18 years are higher in the Northern region and rural areas of Nigeria than others.

The North-West zone has the highest proportion of women who married before age 15 years (32.5 percent) and women age 20-49 years who married before age 18 years (67.6 percent). The South East recorded the lowest proportion of women who married before age 15 years (4.1 percent) and women age 20-49 years who married before age 18 years (13.9 percent). About one in five(22.2 percent) young women age 15-19 years is currently married. Also, estimates for early marriage and polygyny indicators steadily reduce with increasing education and wealth quintile

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

[61]Bajracharya, A ND Amin, S. 2010.*Poverty, marriage timing, and transitions to adulthood in Nepal: A longitudinal analysis using the Nepal living standards survey.* Poverty, Gender, and Youth Working Paper No. 19. Population Council.

Godha, D et al. 2011. *The influence of child marriage on fertility, fertility-control, and maternal health care utilization.* MEASURE/Evaluation PRH Project Working paper 11-124.

[62]Clark, S et al. 2006. *Protecting young women from HIV/AIDS: the case againstchild and adolescentmarriage. International Family Planning Perspectives* 32(2): 79-88.

Raj, A et al. 2009. *Prevalence of child marriage and its effect on fertility and fertility-control outcomes of young women in India: a cross-sectional, observational study*. The Lancet373(9678): 1883–9.

Table 11.4 (CP7, CP.7M): Early marriage and polygyny

Percentage of women and men age 15-49 years who first married or entered a marital union before their 15th birthday, percentages age 20-49 years who first married or entered a marital union before their 15th and 18th birthdays, percentage age 15-19 years currently married or in union, and the percentage of women who are in a polygynous marriage or union, Nigeria, 2016-17

	Percentage of women				Percentage of men			
	age 15-49 married before age 15[1]	age 20-49 married before age 18[2]	age 15-19 currently married/in union[3]	age 15-49 in polygynous marriage/ union[4]	age 15-49 married before age 15[1]	age 20-49 married before age 18[2]	age 15-19 currently married/in union[3]	age 15-49 in polygynous marriage/ union[4]
Total	18.5	44.1	22.2	36.9	2.2	**6.0**	**0.0**	**18.7**
Geopolitical zone								
North Central	12.1	39.0	13.6	40.2	1.8	6.2	0.0	21.8
North East	23.4	56.6	26.4	43.6	4.0	9.1	0.0	20.1
North West	32.5	67.6	39.0	47.5	2.3	6.8	0.0	25.4
South East	4.1	13.9	4.7	6.7	1.0	3.1	0.0	2.5
South South	6.4	21.5	4.9	11.1	1.7	4.5	0.0	7.4
South West	4.4	14.6	4.1	22.1	1.0	2.7	0.0	12.4
Residence								
Urban	10.6	29.4	6.0	24.6	1.6	3.8	0.0	12.0
Rural	23.0	52.3	31.9	42.4	2.6	7.3	0.0	22.0
Age (Years)								
15-19	10.6	na	22.2	28.8	0.3	na	0.0	*
20-24	18.2	43.5	na	30.0	0.7	3.0	na	1.8
25-29	21.1	45.2	na	34.4	2.4	4.7	na	6.3
30-34	22.1	46.6	na	38.0	4.5	8.1	na	11.1
35-39	19.6	43.2	na	40.1	3.9	7.9	na	18.6
40-44	21.7	42.0	na	43.0	3.7	7.8	na	26.1
45-49	20.3	42.3	na	42.4	1.6	5.3	na	30.1
Education								
None	29.9	63.3	56.9	52.4	3.7	10.2	0.0	24.6
Non-formal	38.1	73.3	56.5	49.9	4.7	11.7	0.0	28.1
Primary	21.7	50.8	29.8	35.6	3.2	8.8	0.0	22.5
Secondary	5.7	22.6	6.1	18.6	1.2	4.0	0.0	13.3
Higher	2.8	8.7	0.0	11.3	1.1	2.1	0.0	10.8
Wealth index quintile								
Poorest	35.0	68.0	43.8	50.0	3.6	10.8	0.0	25.0
Second	27.3	61.1	37.1	45.2	3.1	7.9	0.0	26.2
Middle	17.7	47.7	23.9	41.0	1.8	5.6	0.0	21.0
Fourth	11.9	34.9	9.8	28.8	1.9	5.3	0.0	13.3
Richest	5.3	17.1	4.3	17.5	1.1	2.3	0.0	9.2

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

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

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

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

The percentage of menage 15-49 who married before age 15 years in Nigeria is 2.2 percent, while 6.0 percent of men age 20-49 years married before age 18 years. For men, the proportion of marriages before ages 15 and 18 years are higher in the Northern region and rural areas of Nigeria than others. Likewise, these indicators steadily fall with increasing education and wealth quintile. The North-East has the highest proportion of men age 15-49 years who married before age 15 years (4.0 percent) men age 20-49 years who married before age 18 years (9.1 percent). The South-West recorded the least proportion of men age 15-49 years who married before age 15 years (1.0 percent) and men age 20-49 years who married before age 18 years (2.7 percent). None of the young men age 15-19 years is currently married. The proportion of women in polygynous marriage or union (36.9 percent) is higher than in men (18.7 percent).

Spousal age difference

Spousal age difference measures the percentage of young women who are married or in union and whose spouse is 10 or more years older. Table 11.5 presents the results of the age difference between women age 15-24 years who are currently married and their husbands. About 48 and 45 percent of currently married/in union women age 15-19 and 20-24 years respectively have husbands older by ten years or more.

Generally, northern part of Nigeria has more women age 20-24 currently married to men who are older by ten years or more compare to the southern part. North West has the highest figure of 53 percent; North East has 43 percent while North Central has 42 percent. In the southern part, South East has the highest percentage of about 41 percent, follow by South West with about 30 percent while South South has the least estimate of 28 percent. More women in the rural areas (45 percent) are married to men who are older by ten years or more compare to urban (44 percent). Distribution by geopolitical zone also shows that North West has the highest percentage (about 52 percent), of currently married/in union woman age 15-19 years have partners that are ten years older or more while South West has the least figure (about 17 percent).

Table 11.5 (CP.9): Spousal age difference

Percent distribution of women currently married/in union age 15-19 and 20-24 years according to the age difference with their husband or partner, Nigeria, 2016-17

	Percentage of currently married/in union women age 15-19 years whose husband or partner is:	Percentage of currently married/in union women age 20-24 years whose husband or partner is:
	10+ years older[1]	10+ years older[2]
Total	**47.6**	**45.2**
Geopolitical zone		
North Central	**41.0**	42.2
North East	43.3	43.1
North West	51.8	**53.0**
South East	49.7	40.8
South South	34.8	28.3
South West	17.8	29.7
Residence		
Urban	44.0	43.9
Rural	48.0	45.5

[1] MICS indicator 8.8a - Spousal age difference (among women age 15-19)
[2] MICS indicator 8.8b - Spousal age difference (among women age 20-24)
na: not applicable

Female Genital Mutilation/Cutting

Female genital mutilation/cutting (FGM/C) is the partial or total removal of the female external genitalia or other injury to the female genital organs. FGM/C is always traumatic with immediate complications including excruciating pain, shock, urine retention, ulceration of the genitals and injury to adjacent tissue. Other complications include septicaemia, infertility, obstructed labour, and even death.

FGM/C is also known as female circumcision, ispracticed in many societies in Nigeria. In many cultures, FGM/Cis a recognised and accepted practice that is considered important for the socialisation of women, curbing their sexual appetites and preparing them for marriage. This practice is considered part of a ritualinitiation into womanhood that includes a period of seclusion and education about the rights and duties of awife. The procedure is generally carried out on girls between the ages of 4 and 14; it is also done to infants, women who are about to be married and, sometimes, to women who are pregnant with their first child or who have just given birth. It is often performed by traditional practitioners, including midwives and barbers, without anaesthesia, using scissors, razor blades, or broken glass.

FGM/C is a fundamental violation of human rights. It subjects girls and women to health risks and has life-threatening consequences. Although no international human rights instruments specifically addressed the practice, Article 25 of the Universal Declaration of Human Rights states that “everyone has the right to a standard of living adequate for health and well-being” and has been used to argue that FGM/C violates the right to healthand bodily integrity. Furthermore, it could be argued that girl child, cannot be said to give informed consent to such a potentially damaging practice as FGM/C.

Table 11.6 presents percentage of women who approves FGM/C, prevalence of FGM/C among women age 15-49 years and prevalence of FGM/C among girls. About 18.4 percent of women had some form of female genital mutilation. The percentage that had flesh removed (61.8 percent) is the most identified method and the relative popularity of each method varies across categories of background characteristics. It is more prevalent in the urban areas (23.4 percent) than in the rural areas (15.6 percent). FGM/C is least prevalent in the North East where 1.4 percent of the women experienced the practice; it is higher in the South and particularly highest in the South West (41.1 percent) and in the South East (32.5 percent).

The prevalence of FGM/C is associated with age, education and wealth status. It is presented as a problem of the old, the educated and the rich. The percentages increase from 11.6 percent for women without formal education to 20.2 percent for women with secondary education or above. It is 9.9 percent practised among the poorest quintiles, 19.0 percent in the middle quintile and 22.9 percent among the fourth and23.3 percent for the richest quintile. Prevalence estimate of 12.3 percent among women aged 15-19 increases to about 27.6 percent among women aged 45-49 years.

Table 11.6 (CP.10, CP.11, CP.12): Female genital mutilation/cutting (FGM/C) among women

Percentage of women age 15-49 years by FGM/C status and percent distribution of women who had FGM/C by type of FGM/C, Nigeria, 2016-17

	Percentage of women who state that FGM/C should continue[1]	Percentage of women who had any form of FGM/C[2]	Percentage of daughters who had any form of FGM/C[3]
Total	**21.6**	**18.4**	**25.3**
Geopolitical zone			
North Central	16.4	8.6	16.1
North East	6.7	1.4	1.4
North West	40.0	19.3	56.0
South East	17.0	32.5	12.7
South South	11.6	23.3	6.1
South West	22.1	41.1	21.6
Residence			
Urban	19.9	23.4	20.5
Rural	23.1	15.6	28.8
Age of daughter			
0-4	na	na	26.6
5-9	na	na	23.9
10-14	na	na	25.1
Age (years)			
15-19	20.9	12.3	na
20-24	22.6	15.4	na
25-29	22.7	16.9	na
30-34	20.2	20.1	na
35-39	21.1	21.3	na
40-44	21.0	24.4	na
45-49	23.4	27.6	na
Education			
None	27.8	11.6	31.9
Non-formal	38.4	16.5	44.2
Primary	22.9	24.3	23.6
Secondary	18.3	20.2	17.2
Higher	11.5	21.5	9.8
Mother's FGM/C experience			
No FGM/C	7.3	na	7.3
Had FGM/C	48.0	na	53.9
Wealth index quintile			
Poorest	31.2	9.9	43.0
Second	29.5	14.6	37.7
Middle	23.0	19.0	25.7
Fourth	21.9	22.9	20.1
Richest	14.9	23.3	14.4

[1] MICS indicator 8.9 - Approval for FGM/C
[2] MICS indicator 8.10 - Prevalence of FGM/C among women
[3] MICS indicator 8.11 - Prevalence of FGM/C among girls

Table 11. 6 also shows the prevalence and extent of FGM/C performed on all daughters, age 0-14 years, of the respondents. It is important to note that prevalence data for girls age 0-14 years reflect theircurrent – not final – FGM/C status, sincemany of them may not have reached the customaryage for cutting at the time of the survey. They are reported as being uncut but arestill at risk of undergoing the procedure. Overall, about one quarter (25.3 percent) of girls have undergone FGM/C.Daughters whose mother has no education (31.9 percent) and non-formal (44.2 percent) are more likely to be exposed to the practice of FGM/C compared to daughters whose mother has primary education (23.6 percent) or secondary education or more (17.2 percent). FGM/C is common among daughters age 0-4 (26.6 percent) as compared to 25.1 percent among daughters age 10-14.

As to whether the practice should be continued or discontinued, about 21.6 percent of women thought it should be continued while 67.5percent believed it should be discontinued. More women in North West (40.0 percent) and South West (22.1 percent) support the continuation of the practice of FGM/C than women in South East and North Central (17.0 percent and 16.4 percent respectively). Support of the continuation is higher among women with no education (27.8 percent) and non-formal (38.4 percent) than those with secondary education and above (18.3 percent). About 15 percent of women from the richest households approve of the continuation of the practice compare to 31.2 percent from the poorest households.

Attitudes toward Domestic Violence

The Nigeria, MICS 2016-17 assessed the attitudes of women and men age 15-49 years towards wife/partner beating by asking the respondents whether they think that husbands/partners are justified to hit or beat their wives/partnersin a variety of situations. The purpose of these questions is to capture the social justification of violence (in contexts where women have a lower status in society) as a disciplinary action when a woman does not comply with certain expected gender roles

The responses to these questions can be found in Table 11.7 for women and men. Overall, 33.7 percent of women in Nigeria feel that a husband/partner is justified in hitting or beating his wife in at least one of the five situations. Women in the poorest quintile households (42.5 percent) feel that their husband/partner is justified to hit or beat them for at least one of a variety of reasons compared to 20.7 percent for the richest. There is a significant disparity between the North and the South. The percentage of North Central (40.3 percent) and North West (38.2 percent) is higher compared to 26.1 percent for South East and 23.7 percent for South West. More rural women (38.3 percent) as against urban women (25.4 percent) feel that their husband/partner is justified to hit or beat them for at least one of a variety of reasons.

Men are less likelyto justify violence than women. Overall, 21.5 percent of men justifies wife-beating for any of the five reasons, as compared to 33.7percent of women. About 1 in 10 of men justify wife-beating if: a wife neglects children (9.6 percent), argues with the husband (9.6 percent), and if she goes out without telling him (10.0 percent). Men living in the poorest households agreed that a husband/partner is justified to hit or beat wife with one of the reasons (20.8 percent) than men living in

the richest households (16.2 percent). The percentage of men approving of at least one reason is highest in South East (31.1 percent) and lowest in South West(14.0 percent).

Table 11.7 (CP.13, CP.13M): Attitudes toward domestic violence

Percentage of people age 15-49 years who believe a husband is justified in beating his wife in various circumstances, Nigeria, 2016-17

	For any of five reasons[1]	Number of women age 15-49 years		For any of five reasons[1]	Number of men age 15-49 years
Total	**33.7**	**34,376**		**21.5**	**15,183**
Geopolitical zone					
North Central	40.3	6,006		15.2	2,730
North East	30.0	6,584		27.2	2,943
North West	38.2	10,932		20.8	4,674
South East	26.1	2,445		31.1	984
South South	34.2	3,668		27.7	1,664
South West	23.7	4,741		14.0	2,189
Residence					
Urban	25.4	12,373		20.8	5,627
Rural	38.3	22,003		21.8	9,556
Age (years)					
15-19	30.3	6,822		24.8	3,508
20-24	34.4	5,816		21.7	2,378
25-29	35.0	5,915		23.3	2,191
30-34	34.7	5,390		19.9	2,078
35-39	34.1	4,339		20.1	1,936
40-44	35.0	3,571		18.3	1,724
45-49	33.6	2,524		18.0	1,368
Marital/Union status					
Currently married/in union	36.4	24,373		18.2	7,213
Formerly married/in union	30.0	1,405		28.6	210
Never married/in union	26.7	8,520		24.3	7,749
Education					
None	37.7	7,799		18.5	1,563
Non-formal	40.3	5,646		27.4	2,140
Primary	38.9	4,963		23.8	1,997
Secondary	30.8	12,466		22.4	6,861
Higher	17.0	3,502		14.2	2,622
Wealth index quintile					
Poorest	42.5	6,120		20.8	2,614
Second	40.9	6,478		20.4	2,901
Middle	36.7	6,708		25.4	2,927
Fourth	31.4	7,053		25.3	3,202
Richest	20.7	8,017		16.2	3,539

[1] MICS indicator 8.12 - Attitudes towards domestic violence

Children's Living Arrangements

The CRC recognizes that "the child, for the full and harmonious development of his or her personality, should grow up in a family environment, in an atmosphere of happiness, love and understanding". Millions of children around the world grow up with without the care of their parents for several reasons, including due to the premature death of the parents or their migration for work. In most cases, these children are cared for by members of their extended families, while in others, children may be living in households other than their own, as live-in domestic workers for instance. Understanding the children's living arrangements, including the composition of the households where they live and the relationships with their primary caregivers, is key to design targeted interventions aimed at promoting child's care and wellbeing.

Table 11.8 presents information on the living arrangements and orphanhood status of children under 18 years. About 8 percent of children live with neither of their biological parents while both of them are alive. More than 3 percent live with mothers only while the biological father is alive. Very few children have lost one or both parents. About 4 percent of children have only their mother alive while 1.2 percent of children have only their father alive.

Higher percentages of older children do not live with both parents and have lost one or both parents. Percentage of children living with both parents is the highestamong the poorest wealth index quintile (88.3 percent) and lowest in the fourth quintile (75.8 percent). Only 1.2 percent of children in the poorest households live with their mother only while their father is alive. The corresponding proportion of such children in the richest quintile is 5.4percent.

There isslightdifference between urban (8.9 percent) and rural (6.9 percent) areas in terms of orphanhood. It is higher in South East (12.5 percent), followed by South South (10.7 percent). Across the states; Akwa-Ibom (13.2 percent), Enugu (13.2 percent) and Imo (13.0 percent) are the highest prevalence of orphanhoodfollowed by Anambra and Ebonyi (about 12 percent each) and Abia and Rivers (about 11 percent respectively).

The Nigeria MICS 2016-17 included a simple measure of one particular aspect of migration related to what is termed children left behind, i.e. for whom one or both parents have moved abroad. While the amount of literature is growing, the long-term effects of the benefits of remittances versus the potential adverse psycho-social effects are not yet conclusive, as there is somewhat conflicting evidence available as to the effects on children. Besides presenting simple prevalence rates, the result presented in Table 11. 8 will also fill the data gap on the topic of migration.

As expected, only 0.1 percent of children age 0-17 has one or both parents living abroad. There is notable difference between groups of children, as the percentage of at least one parent abroad is higher in South West (0.7 percent) and among children in the richest households (0.4 percent). Some do not have parents abroad: North Central, North East and poor wealth index quintiles.

Table 11.8 (CP.14, CP.15): Children's living arrangements and orphanhood

Percent distribution of children age 0-17 years according to living arrangements and orphanhoodNigeria, 2016-17

	Percentage of children age 0-17 years			Number of children age 0-17 years
	Living with neither biological parent[1]	Living with one or both biological parents dead [2]	With at least one parent living abroad[3]	
Total	**7.5**	**6.9**	**0.1**	**96,192**
Geopolitical zones				
North Central	8.1	7.1	0.0	16,114
North East	6.0	6.4	0.0	21,160
North West	5.4	5.8	0.1	35,260
South East	12.5	12.4	0.3	5,567
South South	10.7	9.8	0.2	7,939
South West	12.1	6.2	0.7	10,152
Residence				
Urban	8.9	8.2	0.3	30,350
Rural	6.9	6.3	0.1	65,843
Age (years)				
0-4	3.1	2.7	0.1	31,299
5-9	6.8	5.9	0.1	29,627
10-14	9.8	9.8	0.2	24,773
15-17	17.5	15.3	0.2	10,494
Wealth index quintile				
Poorest	5.1	4.8	0.0	21,357
Second	6.1	5.6	0.0	20,354
Middle	9.0	9.1	0.1	19,298
Fourth	9.4	9.1	0.1	18,419
Richest	8.6	6.2	0.4	16,765

[1] MICS indicator 8.13 - Children's living arrangements
[2] MICS indicator 8.14 - Prevalence of children with one or both parents dead
[1] MICS indicator 8.15 - Children with at least one parent living abroad

XII. HIV/AIDS and Sexual Behaviour

Knowledge about HIV Transmission and Misconceptions about HIV

The third Sustainable Development Goal (SDG) is to ensure healthy lives, and promote wellbeing for all at all ages. To achieve this SDG goal, a global target to end AIDS by 2030 was adopted. At the 2016 United Nations General Assembly, countries were called to report on several political commitments that accelerate the end of AIDS, such as ensuring that 90% of young people have the skills, knowledge, capacity to protect themselves from HIV and have access to sexual and reproductive health services by 2020.

The Global AIDS monitoring indicators tracks progress in knowledge of HIV prevention and behaviour change to prevent further spread of the disease. One indicator in the Global AIDS Monitoring (formerly Global AIDS Response Progress Reporting GARPR or UNGASS) is the percentage of young people who have comprehensive knowledge of HIV prevention and transmission. This is defined as 1) knowing that consistent use of a condom during sexual intercourse, and having just one uninfected faithful partner can reduce the chance of getting HIV, 2) knowing that a healthy-looking person can have HIV, and 3) rejecting the two most common misconceptions about transmission of HIV.

In Nigeria, the number of new HIV infections among young people (15-24years) has been on the increase. According to the 2016 UNAIDS Prevention Gap report[63], two-thirds of young people do not have correct and comprehensive knowledge of HIV, which is partly responsible for the increase in new HIV infections. Knowledge of behavioral risk reduction, consistent condom use, sexually transmitted infections, and HIV status will provide adolescents and young people with the tools to protect themselves against HIV transmission and acquisition.

KEY FINDINGS

Majority of young people have heard of HIV/AIDS but few have correct and comprehensive knowledge of the disease

Twenty-nine percent of women and thirty-four percent of men have knowledge of the two main ways of HIV prevention

About half of the women can identify the 3 ways of HIV transmission from mother to child

Stigma and discrimination is still high in Nigeria because about one out of ten persons in Nigeria have accepting attitude towards people living with HIV

Six in 10 men and women age 15-49 know where to do an HIV test.

Only 1 in 7 have been tested and know the result of the test in the last 12 months.

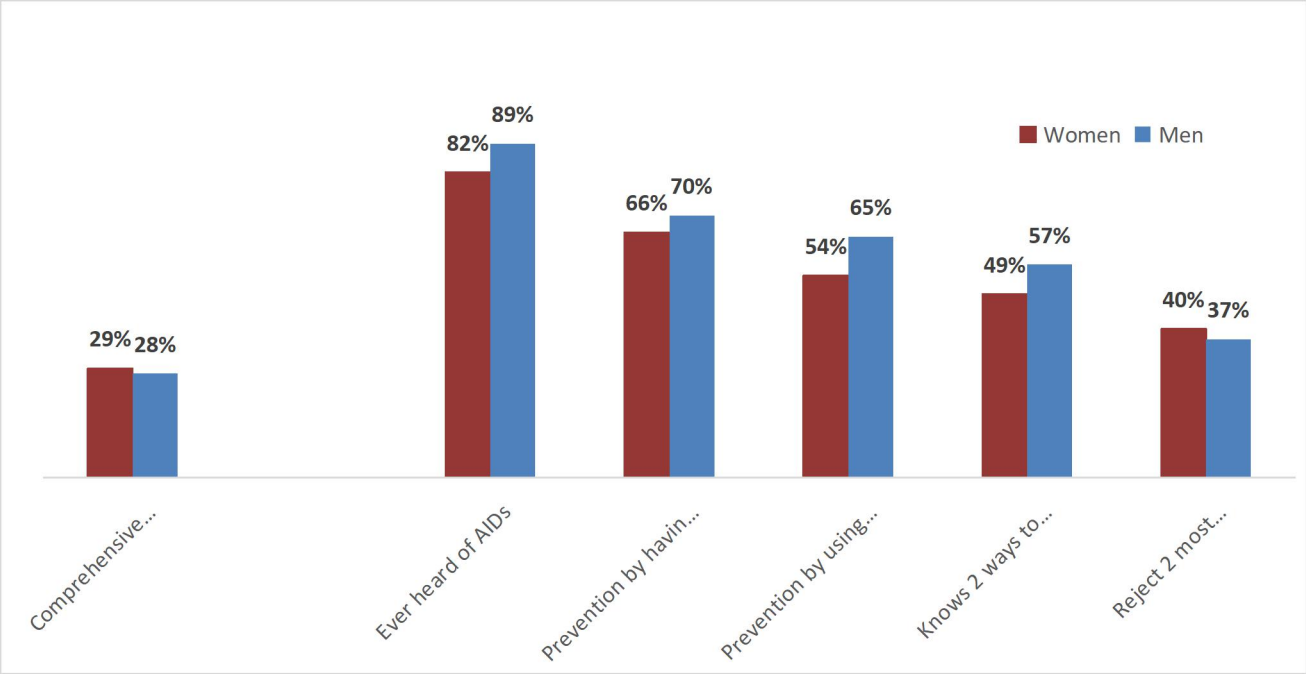
More men know where to be go for test, but more women actually do the test before or in the last 12 months to the survey.

[63]http://www.unaids.org/sites/default/files/media_asset/2016PreventionGapReportsummary_en.pdf

Knowledge about HIV Prevention among young people age 15-24

Figure 12. 1 presents percentage of young men and women aged 15-24 years who have comprehensive knowledge of HIV transmission. People who have comprehensive knowledge about HIV prevention includethose who know of the two main ways of HIV prevention (having only one faithful uninfected partner and using a condom every time), who know that a healthy-looking person can be HIV-positive, and who reject the two most common misconceptions. Comprehensive knowledge of HIV prevention methods and transmission is fairly low although there are differences by residence. It also shows the percentage of young people who correctly identify ways of preventing sexual transmission of HIV and rejects major HIV misconceptionswhich is based on two most common misconceptions in Nigeria: that HIV can be transmitted by sharing food with someone with HIV and the misconception that a healthy-looking person cannot be HIV positive.

Figure 12.1: Percentage of young men and women aged 15-24 years who have comprehensive knowledge of HIV transmission, Nigeria 2016/17



Lack of knowledge on HIV transmission and prevention methods pose a threat to current prevention measures such as testing for HIV and promoting care seeking behaviour. As expected majority of young people have heard of HIV/AIDS but few have correct and comprehensive knowledge of the disease. For young men, 89 percent have heard of AIDS, 70 percent agreed that HIV transmission can be prevented by having only one uninfected partner, and 65 percent said that using condom every time preventsHIV transmission. Also, 57 percent of the young men know at least 2 ways to prevent HIV, and only 37 percent reject the two most common misconception on HIV/AIDS. Only 28 percent of young men have comprehensive knowledge of HIV/AIDS

Although a lower proportion of young women have heard of AIDS and knows 2 ways to prevent transmission of HIV than young men, a slightly higher proportion of young women have correct and comprehensive knowledge of HIV/AIDS and rejected misconceptions of AIDS.

Knowledge about HIV Prevention among people age 15-49

Table 12.1 presents percentage of men and women age 15-49 years who have comprehensive knowledge about HIV transmission. Twenty-nine percent of women and thirty-four percent of men have knowledge of the two main ways of HIV prevention (having only one faithful uninfected partner and using condom every time), know that a healthy-looking person can be HIV-positive, and reject the two most common misconceptions. Also, Women age 15-49 in Southern part of Nigeria are more knowledgeable on prevention of HIV than those in the Northern part.

As expected, men and women who live in urban areas have more comprehensive knowledge on HIV prevention than those in rural areas. Percentage of those with comprehensive and correct knowledge is higher among women: who are between ages 20-29, who were never married, who have higher education and from the richest wealth index households. A similar pattern is seen for men on correct and comprehensive knowledge of HIV/AIDS.

Knowledge of mother to child transmission of HIV

Knowledge of mother-to-child transmission of HIV is an important first step for women to seek HIV testing when they are pregnant to avoid infection in the baby. Women and men should know that HIV can be transmitted during pregnancy, during delivery, and through breastfeeding. The percentage distribution of men and women age 15-49 years on knowledge of mother-to-child transmission (PMTCT) is presented in Figure 12.2 and Table 12.1. About half of the women can identify the 3 ways of HIV transmission from mother to child. This is slightly higher than the proportion of men who can correctly identify the three ways.

According to the National HIV Strategic framework for Nigeria 2017-2021, to eliminate Mother to Child Transmission of HIV by 2021, 95 percent of all HIV positive pregnant and breastfeeding mothers should receive antiretroviral therapy by 2021.Among people age 15-49 years, 53.2 percent of women and 55.5 percent of men know at least one of the three means through which HIV can be transmitted from mother to child and that risk can be reduced by mother taking special drugs.

Table 12.1 (HA.1, HA.1M, HA.2, HA.2M): Knowledge about HIV transmission, misconceptions about HIV, and comprehensive knowledge about HIV transmission

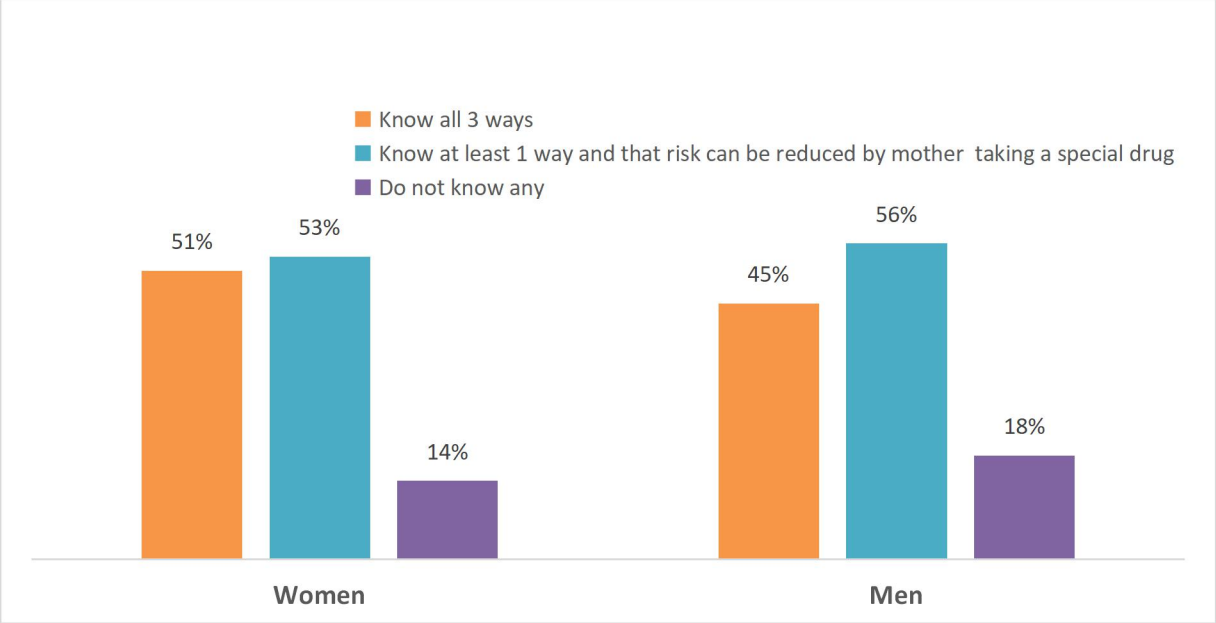
Percentage of men and women age 15-49 years who have comprehensive knowledge about HIV transmission, have heard of AIDS and know HIV can be transmitted from mother to child by all three means Nigeria, 2016-17

	Have comprehensive knowledge[1]		Have heard of AIDS and know HIV can be transmitted from mother to child by all three means[2]		Number of men age 15-49	Number of women age 15-49
	Women	Men	Women	Men		
Total	**29.4**	**34.5**	**50.7**	**45.0**	**15,183**	**34,376**
Geopolitical zone						
North Central	28.1	27.9	48.7	46.7	2,730	6,006
North East	28.5	47.1	45.1	56.9	2,943	6,584
North West	23.9	23.7	47.7	35.3	4,674	10,932
South East	31.2	40.1	55.9	41.9	984	2,445
South South	37.3	50.0	58.7	53.2	1,664	3,668
South West	38.2	34.3	59.3	42.7	2,189	4,741
Residence						
Urban	40.4	42.8	59.4	50.0	5,627	12,373
Rural	23.2	29.6	45.8	42.0	9,556	22,003
Age (years)						
15-24[1]	**29.3**	**27.9**	47.3	40.6	5,887	12,637
15-19	28.1	24.8	44.6	39.7	3,508	6,822
20-24	30.7	32.4	50.6	42.0	2,378	5,816
25-29	30.8	38.0	51.8	47.1	2,191	5,915
30-39	29.4	39.9	52.8	47.6	4,014	9,729
40-49	28.4	37.5	53.3	48.4	3,092	6,095
Marital status						
Ever married/in union	27.8	36.2	51.1	46.4	7,423	25,778
Never married/in union	34.5	32.9	49.6	43.6	7,749	8,520
Education						
None	19.8	22.1	40.7	44.1	1,563	7,799
Non-formal	17.8	24.9	41.4	32.5	2,140	5,646
Primary	25.8	27.9	53.0	40.4	1,997	4,963
Secondary	35.4	34.3	56.4	47.1	6,861	12,466
Higher	53.7	55.1	64.8	53.5	2,622	3,502
Wealth index quintile						
Poorest	15.7	20.4	35.2	34.0	2,614	6,120
Second	20.8	24.5	43.8	42.4	2,901	6,478
Middle	27.4	35.4	52.0	45.5	2,927	6,708
Fourth	32.7	38.5	57.9	51.8	3,202	7,053
Richest	45.6	48.6	60.8	48.5	3,539	8,017

[1]MICS indicator 9.1; MDG indicator 6.3 - Knowledge about HIV prevention

[2] MICS indicator 9.2 - Knowledge of mother-to-child transmission of HIV

Figure 12.2: Percentage of men and women age 15-49 years who correctly identify means of HIV transmission from mother to child, Nigeria, 2016-17

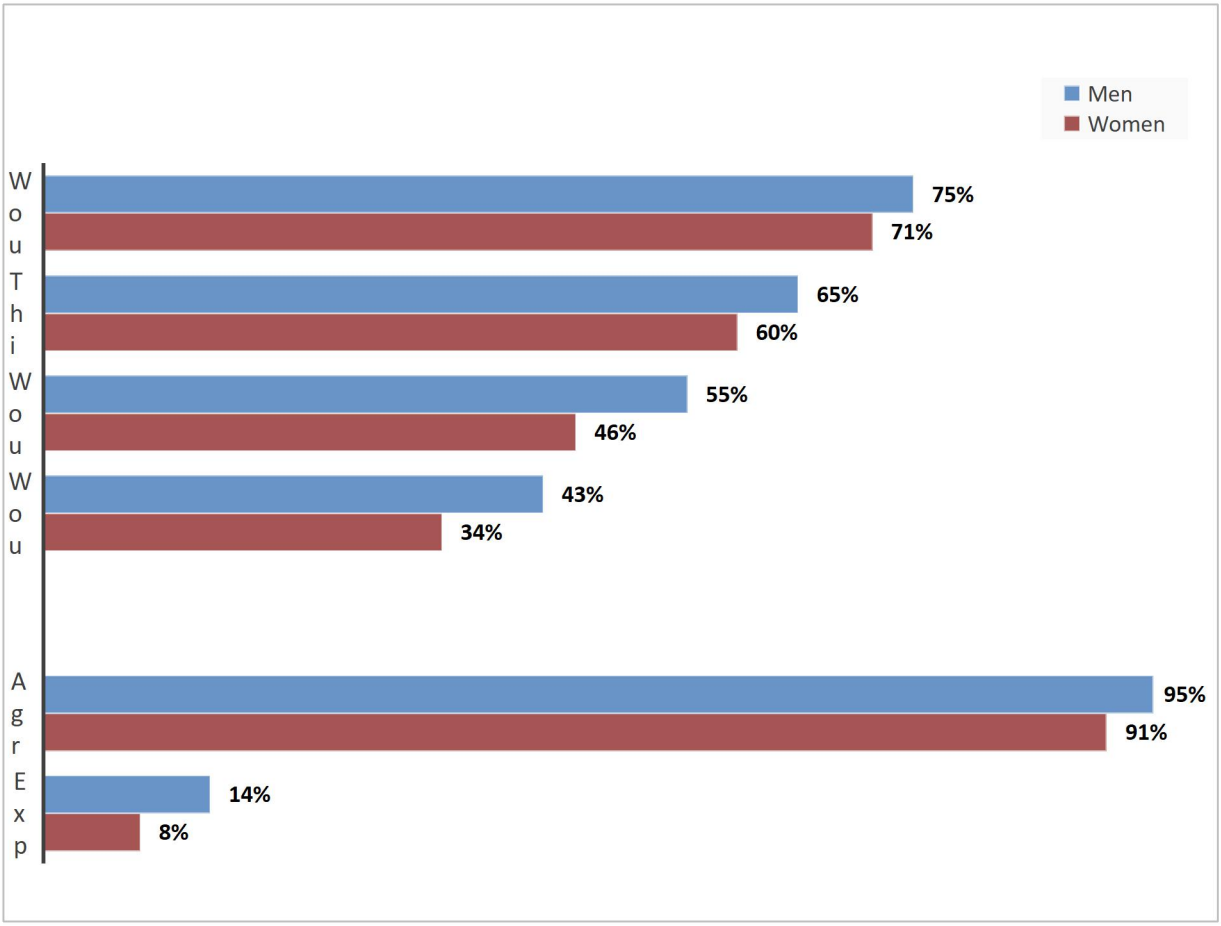


One out of two men age 15-49 with the following characteristics correctlyidentified 3 ways of mother to child HIV transmission: North East, South South, urban areas, higher education and fourth wealth quintile household. Also, more than half of women age 15-49 who are in Southern part of the country, urban areas, age 20 and above, ever married, have at least primary education and are in middle to richest wealth quintile households identified three ways of HIV transmission from mother to child.

Accepting Attitudes toward People Living with HIV

The indicators on attitudes toward people living with HIV measure stigma and discrimination in the community. Stigma and discrimination are considered low if respondents report an accepting attitude on the following four questions: 1) would care for a family member with AIDS in own home; 2) would buy fresh vegetables from a vendor who is HIV-positive; 3) thinks that a female teacher who is HIV-positive should be allowed to teach in school; and 4) would not want to keep it a secret if a family member is HIV-positive. Figure 12.3 and Table 12.2 present the percentage of men and women who reported accepting attitude on the indicators.

Figure 12.3: Percentage of men and women aged 15-49 years who reports accepting attitude, Nigeria 2016/17



Although majority of men and women age 15-49 agreed with at least one accepting attitude, only 14 percent of men and 8 percent of women expressed accepting attitude on all four indicators. This implies that stigma and discrimination is still high in Nigeria because about one out of ten persons in Nigeria have accepting attitude towards people living with HIV. The most accepted attitude for both men and women is that they would care for a family member with AIDS in their home, while the least accepting attitude is that they would not want to keep it a secret if a family member is HIV-positive.

Using the percentage of those who reported all four accepting attitude as a measure of stigmatization and discrimination towards people living with HIV in Nigeria, there are variations by social and demographic characteristics (Table 12.2). For women, HIV discrimination is higher in the Southern than the Northern (apart from North East: 5.9 percent) part of the country. Reported accepting attitude is marginally higher in rural, among those who were never married, people aged 40-49, those with higher education and poorer wealth index quintile households than other groups.

For men, HIV stigmatization and discrimination is highest in the South West and lowest in the North East. Men's reported accepting attitude is marginally higher in rural, among those were never married or in

union, people aged 40-49, those with no education and poorer wealth index quintile households than other groups.

Table 12.2 (HA.3, HA.3M): Accepting attitudes toward people living with HIV (men and women)

Percentage of women and men age 15-49 years who have heard of AIDS who express an accepting attitude towards people living with HIV, Nigeria, 2016-17

	Percentage of women who:			Percentage of men who:		
	Agree with at least one accepting attitude	Express accepting attitudes on all four indicators[1]	Number of women age 15-49 who have heard of AIDS	Agree with at least one accepting attitude	Express accepting attitudes on all four indicators[1]	Number of men age 15-49 who have heard of AIDS
Total	**91.3**	**8.3**	**28,656**	**95.3**	**14.3**	**14,097**
Geopolitical Zone						
North Central	91.5	11.1	4,877	94.5	11.0	2,580
North East	95.5	5.9	5,112	97.8	24.9	2,752
North West	90.9	11.3	8,493	93.8	12.7	4,137
South East	90.2	3.9	2,265	95.7	11.3	967
South South	94.4	8.8	3,487	96.9	18.4	1,612
South West	85.1	4.2	4,422	94.5	5.6	2,049
Residence						
Urban	91.7	8.1	11,495	95.9	12.4	5,412
Rural	91.0	8.5	17,161	94.9	15.4	8,685
Age group (Years)						
15-24	91.9	8.0	10,331	94.5	12.2	5,260
15-19	91.3	8.1	5,445	93.4	10.3	3,049
20-24	92.5	7.9	4,886	96.0	14.9	2,211
25-29	91.3	8.9	4,975	95.9	14.4	2,084
30-39	90.7	8.0	8,279	95.3	15.3	3,827
40-49	91.0	9.0	5,071	96.2	16.6	2,926
Marital status						
Ever married/in union	90.8	8.2	21,219	95.6	16.0	7,039
Never married/in union	92.8	8.7	7,399	95.0	12.6	7,053
Education						
None	88.8	7.6	5,502	93.3	20.7	1,334
Non-formal	89.2	7.5	3,995	92.8	10.9	1,836
Primary	90.7	8.5	4,235	94.1	14.4	1,806
Secondary	91.9	8.2	11,478	95.8	12.5	6,522
Higher	96.0	10.8	3,447	97.6	17.9	2,599
Wealth index quintile						
Poorest	87.4	9.1	3,887	92.7	14.6	2,209
Second	90.6	8.5	4,882	95.0	16.8	2,591
Middle	92.2	8.2	5,796	95.4	14.9	2,761
Fourth	92.4	7.3	6,431	96.1	12.3	3,055
Richest	92.0	8.8	7,660	96.5	13.5	3,481

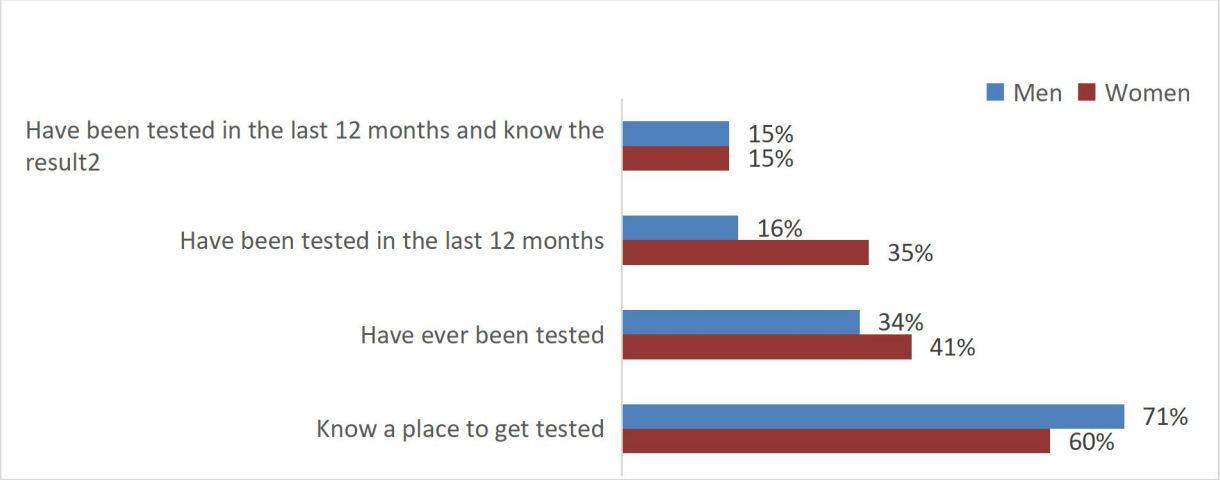
[1] MICS indicator 9.3 - Accepting attitudes towards people living with HIV

HIV Testing

Knowledge of a Place for HIV Testing and HIV Testing

Nigeria adopted the UNAIDS 90-90-90 strategy which aims to have 90percent of all people living with HIV know their HIV status, 90percent of all people diagnosed with HIV infection receive antiretroviral treatment and 90percent of all people receiving antiretroviral treatment attain viral suppression by 2020. To achieve the strategy, knowledge of where to get an HIV test is important. Individuals need to know their HIV status in order to protect themselves and to prevent infecting others. Knowledge of own status is also a critical factor in the decision to seek treatment. Figure HA.4 presents the percentage of men and women age 15-49 in Nigeria who know where to get an HIV test, ever been tested, have been tested in the last 12 months, and have been tested in the last 12 months and know the result.

Figure 12.4: Percentage of men and women age 15-49 who know where to get an HIV test, ever been tested, have been tested in the last 12 months, and have been tested in the last 12 months and know the result Nigeria 2016-17



About six in 10 men and women age 15-49 know where to do an HIV test. Only one in seven has been tested and knows the result of the test in the last 12 months. More men know where to be go for test, but more women actually do the test before or in the last 12 months to the survey. Forty-one percent of women have ever been tested for HIV, 35 percent tested in the last 12 months and 15 percent tested and know the result in the last 12 months. While it is evident that ratio of women to men who have been tested in the last 12 months is about 2:1, the same percentage of men and women know the result of the HIV test done in the previous 12 months.

Table 12.3 further shows variations in social and demographic characteristics by two MICS indicators among men and women. One indicator is on percentage of men and women age 15-49 in Nigeria who know where to get an HIV test. Knowledge of where to get HIV test is specifically lowest among men and women who are in: North West, rural areas, age 15-19 years, sexually active teenagers, never married, non-formal education and poorest wealth quintile households.

Table 12.3 (HA.4, HA.4M): Knowledge of a place for HIV testing and HIV testing (women and men age 15-49)

Percentage of women and men age 15-49 years who know where to get an HIV test and who have been tested in the last 12 months and know the result, Nigeria, 2016-17

	Percentage of women who:			Percentage of men who:		
	Know a place to get tested[1]	Have been tested in the last 12 months and know the result[2, 3]	Number of women age 15-49	Know a place to get tested[1]	Have been tested in the last 12 months and know the result[2, 3]	Number of men age 15-49
Total	**60.4**	**15.1**	**34,376**	**70.8**	**15.1**	**15,183**
Geopolitical zone						
North Central	62.9	18.9	6,006	76.7	27.0	2,730
North East	53.8	11.1	6,584	82.1	10.7	2,943
North West	48.3	7.8	10,932	54.6	6.6	4,674
South East	76.0	19.3	2,445	86.3	16.7	984
South South	78.7	26.2	3,668	84.6	26.6	1,664
South West	72.2	22.0	4,741	65.4	14.6	2,189
Residence						
Urban	76.3	21.0	12,373	79.0	17.5	5,627
Rural	51.5	11.8	22,003	66.0	13.6	9,556
Age (years)						
15-24	54.4	12.1	12,637	62.3	9.5	5,887
15-19	48.5	7.9	6,822	56.4	7.3	3,508
20-24	61.2	17.0	5,816	70.9	12.7	2,378
25-29	65.4	20.6	5,915	74.2	17.6	2,191
30-39	65.1	17.4	9,729	77.8	20.4	4,014
40-49	60.6	12.5	6,095	75.5	16.8	3,092
Age and sexual activity in the last 12 months						
Sexually active	61.9	16.9	26,331	75.9	18.8	9,058
15-24[3]	56.7	16.7	6,646	71.3	17.2	1,217
15-19	50.2	13.2	2,132	58.1	13.7	318
20-24	59.7	18.4	4,514	76.0	18.5	899
25-49	63.7	17.0	19,685	76.6	19.0	7,840
Sexually inactive	55.4	9.3	8,045	63.3	9.6	6,125
Marital status						
Ever married/in union	60.6	16.0	25,778	74.6	17.4	7,423
Never married/in union	60.2	12.7	8,520	67.2	12.8	7,749
Education						
None	38.8	7.0	7,799	57.6	5.0	1,563
Non-formal	40.5	5.2	5,646	52.4	2.2	2,140
Primary	63.1	14.4	4,963	63.0	10.9	1,997
Secondary	72.6	19.5	12,466	73.9	16.2	6,861
Higher	93.5	34.9	3,502	91.5	31.7	2,622
Wealth index quintile						
Poorest	29.9	4.1	6,120	54.8	5.8	2,614
Second	45.7	9.0	6,478	61.3	10.6	2,901
Middle	61.4	13.7	6,708	69.9	13.5	2,927
Fourth	73.2	19.4	7,053	76.5	18.7	3,202
Richest	83.5	26.0	8,017	86.0	23.6	3,539

[1] MICS indicator 9.4 - Men who know where to be tested for HIV[M]

[2] MICS indicator 9.5 - Men who have been tested for HIV and know the results[M]

[3] MICS indicator 9.6 - Sexually active young men who have been tested for HIV and know the results[M]

The second MICS indicator on HIV testing is the percentage of people who have been tested for HIV and knows the results. Although the percentage of men and women who reported this indicator is low, it is

much lower in the North West, among rural dwellers, teenagers, sexually inactive youths, never married, with non-formal education and from poorest wealth quintile households.

It is important to also consider these two indicators specifically for sexually active young people age 15 to 24 since the number of new HIV infections among young people in Nigeria has been on the increase. Knowledge of behavioral risk reduction, consistent condom use, sexually transmitted infections, and HIV status will provide adolescents and young people with the tools to protect themselves against HIV acquisition and transmission. Table 12.3 also present MICS 2016-17 result on percentage of sexually active young men and women who have knowledge of a place for HIV testing and have been tested in the last 12 months and know the result.

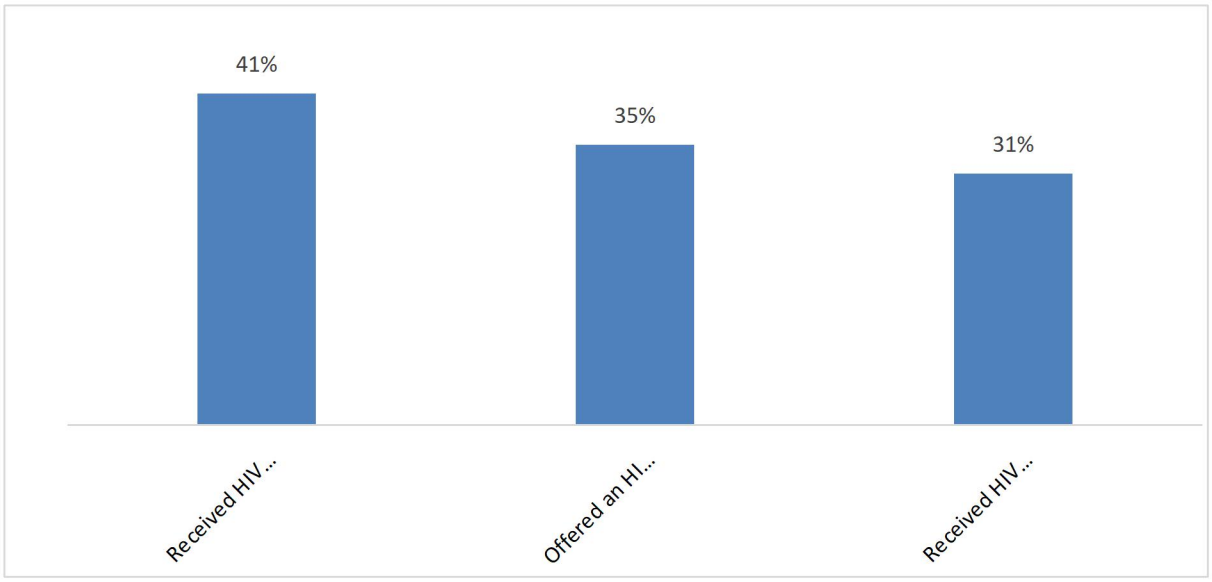
Seventy-one percent of young men and fifty-seven percent of women respectively know where to do a test for HIV/AIDS. This implies that in a population of sexually active young people, men have 25 percent higher chance of knowing a place to get tested than women. This is the same pattern for those who have been tested in the last 12 months and know the result but with 11 percent higher chance that a sexually active young man was tested in the last 12 months and knows the result than a sexually active young woman.

HIV Counselling and Testing during antenatal care

One of the WHO recommendations[64] on antenatal care for a positive pregnancy experience is that provider-initiated testing and counselling (PITC) should be considered for pregnant women in antenatal care settings as a key component of the effort to eliminate mother-to-child transmission of HIV and to integrate HIV testing with syphilis, viral or other key tests, as relevant to the setting, and to strengthen the underlying maternal and child health systems. In MICS 2016-17 women were asked if they received HIV counselling, offered an HIV test, tested for HIV, and received the results during antenatal care. Figure 12.5 and Table 12.4 show percentage of women age 15-49 with a live birth in the last 2 years who received HIV counseling and testing during antenatal care.

[64] WHO recommendations on antenatal care for a positive pregnancy experience: http://apps.who.int/iris/bitstream/10665/250796/1/9789241549912-eng.pdf

Figure 12.5: Percentage of women age 15-49 with a live birth in the last 2 years preceding the survey who received HIV coundelling and testing during antenatal care. Nigeria, 2016-17



Forty-one percent received counselling during antenatal care while 35 percent were offered an HIV test, tested for HIV and received the results during antenatal care. However, the percent of those who did both- received HIV counselling, offered an HIV test and received the results reduced to 31 percent. These two indicators on HIV counselling and testing during antenatal care vary across social and demographic groups in Nigeria. Southern part of Nigeria performs better on the two indicators than northern part. Specifically, proportion of women who received counselling during antenatal is 68.5 percentfor South East, 60.5 percent for South Southand 59.7 percent for South West, compared with 44.8 percent, 43.0 percent and 25.7 percent in North East, North Central and North West respectively. The estimates across each geopolitical zone, though similar to the indicator on receiving counselling reduced for those who were offered an HIV test, tested and received the results during the antenatal care. Overall, women who attended antenatal care in South East (49.5 percent), from urban areas (49.9 percent), age 30-34 (34.7 percent), who never married (46.4 percent), with higher level of education (69.3 percent) and from the richest wealth index quintile households (59.1 percent), received HIV counselling, were offered an HIV test, and received the results than other groups.

Table 12.4 (HA.5): HIV counselling and testing during antenatal care

Percentage of women age 15-49 with a live birth in the last 2 years who received antenatal care from a health professional during the last pregnancy, percentage who received HIV counselling, percentage who were offered, tested and received the results of the HIV test, and percentage who received counselling and were offered, tested and received the results of the HIV test, Nigeria, 2016-17

	Percentage of women who:			
	Received HIV counselling during antenatal care[1]	Were offered an HIV test and were tested for HIV during antenatal care, and received the results[2]	Received HIV counselling, were offered an HIV test, and received the results	Number of women age 15-49 with a live birth in the last 2 years
Total	**41.0**	**34.7**	**31.1**	**11,547**
Geopolitical zone				
North Central	43.0	38.6	35.4	1,770
North East	44.8	38.7	36.2	2,394
North West	25.7	18.3	15.9	4,603
South East	68.5	56.3	49.5	620
South South	60.5	55.6	49.4	900
South West	59.7	55.6	48.7	1,261
Residence				
Urban	62.9	56.0	49.9	3,426
Rural	31.8	25.7	23.2	8,121
Age (years)				
15-24	34.2	27.9	24.6	3,289
15-19	28.5	20.8	19.3	860
20-24	36.2	30.3	26.4	2,428
25-29	44.5	38.3	34.0	3,047
30-39	45.0	38.4	34.7	4,154
40-49	36.9	30.6	29.1	1,058
Marital status				
Ever married/in union	40.9	34.3	30.9	11,351
Never married/in union	52.5	54.8	46.4	186
Education				
None	22.7	16.4	14.8	3,208
Non-formal	22.3	16.4	15.6	2,560
Primary	44.2	35.9	32.5	1,716
Secondary	61.4	55.7	48.6	3,182
Higher	82.3	75.9	69.3	882
Wealth index quintile				
Poorest	14.2	9.7	8.9	2,587
Second	25.3	18.8	17.3	2,548
Middle	44.1	34.5	31.1	2,270
Fourth	60.5	53.5	48.0	2,113
Richest	71.3	67.0	59.1	2,028

[1] MICS indicator 9.7 - HIV counselling during antenatal care

[2] MICS indicator 9.8 - HIV testing during antenatal care

Sexual Behaviour Related to HIV Transmission

Promoting safer sexual behaviour is an important strategyto reducing HIV transmission. A set of questions was administered to all women and men 15-49 years of age to assess their risk of HIV infection. Risk factors for HIV include sex at an early age, sex with older men, having multiple sexual partners, sex with a non-marital non-cohabiting partner, and failure to use a condom. The use of condoms during sex, especially with non-regular or multiple partners is particularly important for

reducing the spread of HIV. Table 12.5 presents the percentage of young people age 15-24 who have never married and never had sex, and had sex at early age -before 15 years. The percentage of never married young people who havehad sex is almost the same for females (74.8 percent) and males (78.4 percent). There is however gender difference in the percentage of those who have had sex before age 15, with a female to male ratio of about 4 to 1 (15.1 percent to 4.1 percent).

Table 12.5 (HA.8, HA.8M): Sexual behaviour of young people age 15-24

Percentage of women and men age 15-24 who never had sex, and who had sex before age 15, Nigeria, 2016-17

	Percentage of women age 15-24 who		Number of women age 15-24 years	Percentage of men age 15-24 who		Number of women age 15-24 years
	Never married Never had sex[1]	Had sex before age 15[2]		Never married Never had sex[1]	Had sex before age 15[2]	
Total	**74.8**	**15.1**	**12,637**	**78.4**	**4.1**	**5887**
Geopolitical zone						
North Central	70.6	10.2	2,212	78.2	3.5	1,105
North East	89.5	18.0	2,533	93.7	2.5	1,193
North West	93.2	23.3	4,208	91.2	1.3	1,869
South East	64.4	6.1	921	56.9	5.0	384
South South	55.3	7.9	1,290	51.9	8.2	601
South West	61.5	6.0	1,474	55.2	11.1	735
Residence						
Urban	75.3	7.4	4,631	76.4	4.9	2,128
Rural	74.3	19.6	8,007	79.6	3.7	3,759
Age (years)						
15-19	85.3	12.5	6,822	88.4	3.3	3,508
15-17	90.7	11.2	4,379	92.8	3.0	2,352
18-19	72.3	14.9	2,442	79.3	3.8	1,156
20-24	47.6	18.1	5,816	62.0	5.3	2,378
20-22	51.7	18.4	3,924	66.7	4.5	1,670
23-24	37.4	17.6	1,892	50.0	7.3	708
Marital status						
Ever married/in union	na	30.8	5,365	na	8.6	277
Never married/in union	74.8	3.5	7,222	78.4	3.9	5,607
Education						
None	89.3	29.3	2,215	94.8	1.0	537
Non-formal	97.4	32.8	1,734	95.2	0.7	673
Primary	82.4	19.8	1,313	84.2	3.4	563
Secondary	74.4	6.1	6,501	75.4	5.0	3,568
Higher	50.1	3.8	874	56.7	6.2	544
Wealth index quintile						
Poorest	87.8	29.8	1,988	92.4	1.4	1,106
Second	78.7	23.1	2,507	87.3	2.6	1,132
Middle	76.7	13.4	2,711	78.2	4.5	1,226
Fourth	72.3	9.3	2,636	70.5	5.3	1,219
Richest	70.1	4.6	2,796	66.2	6.4	1,203

[1]MICS indicator 9.9 - Young people who have never had sex

[2] MICS indicator 9.10 - Sex before age 15 among young people

na: not applicable

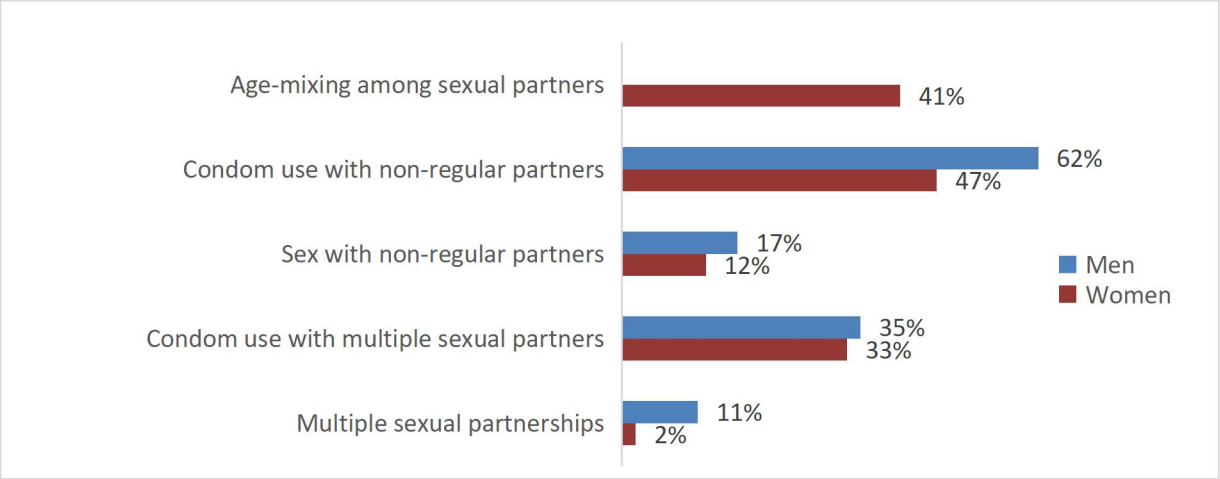
While early sexual debut is higher for female in northern part of country, it is notably high in North West where about one out 5 young females have had sex before age 15. Early sexual debut is higher among female age 15-24 who do not have formal education (32 percent), are married (30 percent), live in poorest wealth quintile household (29 percent) and in rural areas (19 percent). Also, having sex before age 15 is higher among young males who are in South West, in urban areas, ever married, had higher education and from richest wealth quintile households.

Multiple sexual partnership

Other risk factors for HIV/AIDS are having multiple sexual partner and sex with a non-marital, non-cohabiting partner, as well as age-mixing among sexual partner. Figure 12. 6 and Table 12. 6 present the percentage of men and women withmultiple sexual partners, age mixing among sexual partners and sexual relation with non-regular partners. While very few women age 15-49 (2 percent) had sex with more than one partner in the last 12 months, percentage of men (11 percent) who were engaged in the same risky sexual behaviour is higher than female.

Although the estimate is low, within group comparison based on social and demographic characteristics show that multiple sexual partnership occurred more among young women in the South West, urban areas, teenagers age 18-19, who has never married, with higher education and from rich wealth index quintile household. Higher percentage of young men who had sex with more than one partner in the last 12 months are in South West, urban areas, age 23-24 years, married, have higher education and from richer households than other social groups.

Figure 12.6. percentage of men and women on multiple sexual partnership, age mixing among sexual partners and sexual relation with non-regular partners. Nigeria 2016-17



Multiple sexual partnership and sexual relation with non-regular partners have comparable gender differentials. Young men age 15-24 are more involved in sexual relation with non-regular partners than young women. However, risky HIV/AIDS sexual behavior for both young and women is common in South South, in urban areas, age 23-24 and from rich wealth index quintile households in Nigeria. Women with non-formal education and men with higher education also practiced this sexual behavior.

Age mixing among sexual partner is when a young woman had sex with a man 10 or more years older than her. This is a common practice as two out of 5 young women (41 percent) age 15-24 reported this. Age mixing is notably high in North West, rural areas, among ever married women, no education women and poor households.

Table 12.6 (HA.6, HA.6M, HA.8, HA.8M): Multiple sexual partnership

Percentage of women and menon multiple sexual partners, age mixing among sexual partners and sexual relation with non-regular partners, Nigeria, 2016-17

	Percentage of women age 15-49 who had sex with more than one partner in the last 12 months[1]	Number of women age 15-49 years	Percentage of women age 15-24 who		Number of women age 15-24 years who had sex in the last 12 months	Percentage of men age 15-49 who had sex with more than one partner in the last 12 months[1]	Number of men age 15-49 years	Percentage of men age 15-24 who had sex with a non-marital, non-cohabiting partner[3]	Number of men age 15-24 who had sex in the last 12 months
			Had sex with a man 10 or more years older[2]	Had sex with a non-marital, non-cohabiting partner[3]					
Total	**2.0**	**34,376**	**41.2**	**12.4**	**6,655**	**11.2**	**15,183**	**17.1**	**1,254**
Geopolitical zone									
North Central	3.0	6,006	34.7	16.1	1,139	9.5	2,730	17.8	243
North East	1.4	6,584	45.1	4.2	1,350	3.7	2,943	5.2	112
North West	0.7	10,932	55.1	3.0	2,519	7.4	4,674	6.3	219
South East	3.9	2,445	28.1	25.1	355	16.0	984	34.2	140
South South	3.0	3,668	21.3	31.0	653	20.0	1,664	40.3	258
South West	2.6	4,741	17.8	23.6	639	22.6	2,189	34.6	282
Residence									
Urban	2.3	12,373	33.4	15.2	1,734	13.3	5,627	19.0	440
Rural	1.8	22,003	44.0	10.8	4,921	10.0	9,556	15.9	814
Age (years)									
15-19	2.4	12,637	38.2	9.9	2,135	5.6	5,887	8.9	337
15-17	1.4	6,822	37.5	7.3	907	1.9	3,508	5.2	132
18-19	3.5	5,816	38.8	14.6	1,228	11.1	2,378	16.4	205
20-24	2.3	5,915	42.7	15.4	4,520	13.8	2,191	29.2	917
20-22	1.6	9,729	45.8	14.9	2,967	14.2	4,014	25.3	556
23-24	1.3	6,095	36.7	16.2	1,553	16.0	3,092	38.3	361
Marital status									
Ever married/in union	1.3	25,778	49.3	2.0	5,202	14.0	7,423	16.1	250
Never married/in union	4.0	8,520	12.4	19.7	1,448	8.5	7,749	17.1	1,004
Education									
None	1.0	7,799	49.8	2.9	1,701	6.1	1,563	4.2	78
Non-formal	0.6	5,646	57.0	0.7	1,315	8.2	2,140	2.7	58
Primary	1.8	4,963	43.0	7.7	794	11.4	1,997	12.0	96
Secondary	2.6	12,466	29.3	16.8	2,416	11.9	6,861	19.5	805
Higher	4.0	3,502	22.9	34.0	429	14.5	2,622	36.5	218
Wealth index quintile									
Poorest	1.0	6,120	48.0	3.9	1,362	6.3	2,614	6.0	141
Second	1.6	6,478	45.3	8.3	1,619	7.7	2,901	10.0	182
Middle	1.9	6,708	46.3	11.1	1,430	10.4	2,927	17.5	263
Fourth	2.5	7,053	32.1	16.6	1,183	13.0	3,202	21.9	304
Richest	2.6	8,017	29.8	19.5	1,062	16.7	3,539	28.5	365

[1]MICS indicator 9.12 - Multiple sexual partnerships
[2] MICS indicator 9.11 - Age-mixing among sexual partners
[3] MICS indicator 9.14 - Sex with non-regular partners

Condom use and multiple partners

Another important risk factor for HIV/AID is failure to use condom. Men and women are more vulnerable when they are involved in multiple, non-marital and non-cohabiting sexual partnership. Table 12.7 presents the percentage of men and women who report having more than one sexual partner in the last 12 months and used condom the last time they had sex.

Table 12.7 (HA.6M, HA.8): Condom use and multiple sexual partnership

Percentage of women and men who use condom during last sex with multiple sexual partners, non-cohabiting and non-regular

partners in the last 12 months Nigeria, 2016-17

	Percentage of women who had more than one sexual partner in and used a condom the last time they had sex[1]	Number of women age 15-49 years who had more than one sexual partner in the last 12 months	Percentage of women who use condom during the last sexual intercourse with a non-regular partner[2]	Number of women age 15-24 years who had sex with a non-regular partner in the last 12 months	Percentage of men who had more than one sexual partner and used a condom the last time they had sex[1]	Number of men age 15-49 years who had more than one sexual partner in the last 12 months	Percentage of men who use condom during the last sexual intercourse with a non-regular partner[2]	Number of men age 15-24 years who had sex with a regular partner in last 12 months
Total	**33.3**	**677**	**46.6**	**1,567**	**35.3**	**1,700**	**61.4**	**1,004**
Geopolitical zone								
North Central	36.0	179	49.1	355	42.6	260	62.1	197
North East	16.5	92	21.2	105	9.2	109	21.5	62
North West	11.6	78	27.3	127	11.1	345	63.7	118
South East	57.0	94	60.5	231	64.2	158	74.6	131
South South	39.9	111	46.0	400	50.2	332	61.2	242
South West	31.6	123	50.2	347	34.8	496	63.0	254
Residence								
Urban	40.6	284	56.0	703	42.3	747	70.1	405
Rural	28.0	393	38.9	864	29.7	953	55.6	599
Age (years)								
15-19	45.9	298	40.5	674	59.7	332	51.3	311
15-17	42.7	96	34.3	318	62.0	6`8	46.9	121
18-19	47.4	202	46.0	356	59.0	264	54.1	189
20-24	30.6	139	51.2	893	52.9	303	66.0	693
20-22	24.4	159	50.9	585	32.5	571	65.2	422
23-24	9.3	82	51.6	307	11.2	494	67.2	271
Marital status								
Ever married/in union	10.5	338	31.8	109	14.7	1,040	46.9	44
Never married/in union	56.0	339	48.9	1,420	67.8	658	62.1	960
Education								
None	7.1	81	13.2	64	3.9	95	14.0	23
Non-formal	5.0	36	20.7	13	3.1	176	34.8	18
Primary	15.5	91	25.3	102	25.0	228	49.7	68
Secondary	38.9	328	46.2	1,092	41.6	819	60.3	697
Higher	54.0	141	63.4	297	50.5	381	77.3	199
Wealth index quintile								
Poorest	14.5	62	21.0	77	8.6	165	20.6	66
Second	16.3	103	27.8	208	16.4	225	47.8	114
Middle	27.4	128	36.2	301	33.8	304	61.2	215
Fourth	39.5	174	48.4	437	38.9	417	65.5	267
Richest	45.5	211	61.7	544	48.1	589	70.8	343

[1] MICS indicator 9.13 - Condom use at last sex among people with multiple sexual partnerships
[2] MICS indicator 9.15; MDG indicator 6.2 - Condom use with non-regular partners

Thirty-three percent of women and thirty-five percent of men who had multiple sexual partners used condom the last time they had sex. This implies that just 3in 10 men and women who were involved in risky sexual behaviour of multiple partnership in the last 12 months actually reported using condom, which can prevent HIV/AIDS transmission and infection. The use of condom differs among various social and demographic groups for both women and men in Nigeria. For women, those with multiple sexual partners and have the least use of condom during sex in the last 12 months preceding the survey are in North West, rural areas, age 20-24, never married, not educated and in poor household. Men with multiple sexual partners and had least use of condom during sex in the last 12 months preceding the survey are in North East, rural areas, age 20-24, never married, not educated and in poor wealth index quintile households.

Sixty-one percent of young men and 47 percent of young women who had sex with non-marital and non-cohabiting partners reported use of condom during the last sex in the last 12 months preceding the survey. Condom use among different social groups who are involved in non-regular sex is specifically higher in South East, urban areas, age 23-24 year, never married, higher education and richest wealth index quintile household.

Orphanhood

HIV/AIDS affects the lives of children and their families. Although the number of children orphaned due to AIDS has stabilized globally since 2009, efforts to mitigate the impact of AIDS on households, communities, and children continue to be intensified by national programmes and global partners. The situation of orphans and vulnerable children in Nigeria is significant as many are poor without access to food, acceptable living conditions and psychosocial support. Children who are orphaned may be at increased risk of neglect or exploitation when the parents are not available to assist them. Monitoring the variations in different outcomes for orphans and comparing them to their peers gives us a measure of how well communities and governments are responding to their needs. Table HA.8 presents school attendance of orphans and non-orphans age 10-14 years.

Table 12.8 (HA.9): School attendance of orphans and non-orphans

School attendance of children age 10-14 years by orphanhood, Nigeria, 2016-17

	Percentage of children whose mother and father have died (orphans)	Percentage of children whose parents are still alive and who are living with at least one parent (non-orphans)	Number of children age 10-14 years	Percentage of children whose mother and father have died (orphans) and are attending school	Total number of orphan children age 10-14 years	Percentage of children whose parents are still alive, who are living with at least one parent (non-orphans), and who are attending school	Total number of non-orphan children age 10-14 years	Orphans to non-orphans school attendance ratio[1]
Total	**0.7**	**83.4**	**24,773**	**79.2**	**175**	**78.4**	**20,657**	**1.0**
Sex								
Male	0.6	84.2	12,292	79.7	72	79.5	10,354	1.0
Female	0.8	82.6	12,481	78.8	102	77.3	10,304	1.0
Residence								
Urban	0.9	79.3	8,165	85.3	77	93.1	6,473	0.9
Rural	0.6	85.4	16,608	74.4	98	71.8	14,185	1.0

[1] MICS indicator 9.16; MDG indicator 6.4 - Ratio of school attendance of orphans to school attendance of non-orphans

See Table CP.14 for further overall results related to children's living arrangements and orphanhood

Less than 1 percent of children age 10-14 years in Nigeria are orphans, and the ratio of school attendance of orphan to non-orphan is 1.01. That is 79.2 percent of orphans are attending school, as compared with a 78.4 percent of non-orphan children of the same age group who are living with at least one parent. The ratio is similar for girls and boys, and for rural and urban areas.

XIII. Access to Mass Media and Use of Information/Communication Technology

Access to information from electronic and mass media is important. It increases knowledge and awareness, as well as, influence perception and cause behavioural change in the society. The Nigeria MICS 2016-17 collected information on exposure to mass media and the use of computers and the internet. Information was collected on exposure to newspapers/magazines, radio and television among women and men age 15-49 years, while the questions on the use of computers and the use of the internet were asked from young people age 15-24 years old.

KEY FINDINGS

Exposure to specific media: newspapers/magazines, radio and television at least once a week among young people is low

- **5.5 percent of young women**
- **18.5 percent of young men**

South-West has the highest media exposure: 91.7 percent of males and 80.7 percent of female exposed to at least one of the three media sources in a week

Exposure to computer and the internet is low

Ever used computer

- **13.4 percent of young women**
- **20.6 percent of young men**

Ever used Internet:

- **17.3 percent of young women**
- **32 percent of young men**

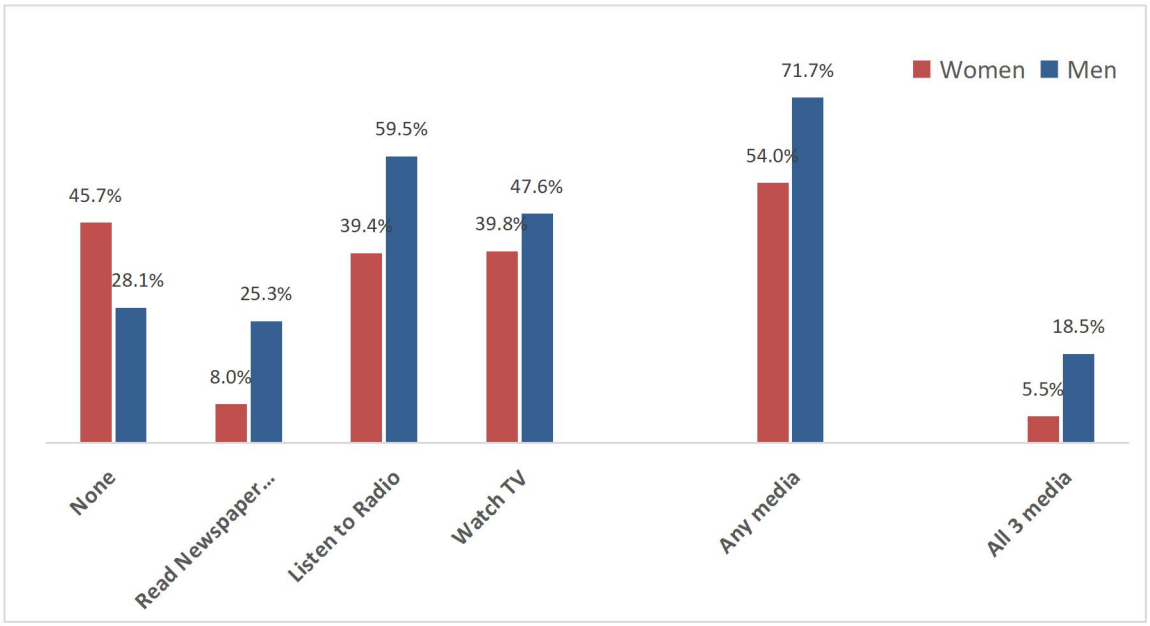
Access to Mass Media

Figure13.1 presents percentage of people age 15-49 years who read newspaper or magazine, listen to radio and watch television at least once in a week in Nigeria. Eight percent of women read a newspaper or magazine, 39.4 percent listen to the radio and about 39.8 percent watch television at least once a week. Fifty-four percent of women use at least one of the media sources in a week, while only 5.5 percent use all the three media sources.

Media usage is higher among men in all the indices as, 25.3 percent of men read a newspaper or magazine, about 60 percent listen to the radio, and close to 50 percent watch television at least once in a week. Overall, 71.1 percent of men use at least one of the media source and 18.5 percent use all the three sources.

For both men and women, differentials by residence, education and socio-economic status are observed for exposure to all types of media. There were higher proportions of exposure to media in the Southern region and urban areas irrespective of the sex. The South-West has the highest media exposure, with 91.7 percent of males and 80.7 percent of female exposed to at least one of the three media sources in a week, while it is lowest in women the North-East (37.6 percent).

Figure 13.1: Percentage of people age 15-49 years who read newspaper or magazine, listen to radio and watch television at least once in a week. Nigeria, 2016-17



Equally, media exposure increased with increasing education and wealth among the men and women. However, there was gender differential in age and media exposure. While media usage increases with age in men, there was inverse relation with women as the age increases, media exposure reduces. Men's exposure to at least one of the media sources in a week increased steadily from 61.3 percent in age 15-19 years to 77.8 percent in the age 40-44 year. In contrast, women's exposure to at least one of the three media sources reduced from 56.4 percent in age 15-19 years to 50.6 percent in age 45-49 years.

Table 13.1 (MT.1, MT.1M): Exposure to mass media

Percentage of women and men age 15-49 years who are exposed to specific mass media on a weekly basis, Nigeria, 2016-17

	All three media at least once a week[1] Women	All three media at least once a week[1] **Men**
Total	**5.5**	**18.5**
Geopolitical zone		
North Central	4.4	14.2
North East	1.5	11.3
North West	3.4	11.2
South East	9.8	29.0
South South	12.4	30.6
South West	9.6	34.9
Age (years)		
15-19	5.5	10.2
20-24	6.1	17.7
25-29	5.9	20.8
30-34	5.8	22.7
35-39	5.0	22.4
40-44	4.6	23.0
45-49	4.4	19.5
Residence		
Urban	10.0	32.9
Rural	2.9	10.0
Education		
None	0.2	0.5
Non-formal	0.4	1.2
Primary	1.3	6.8
Secondary	7.8	19.6
Higher	23.2	49.1
Wealth index quintile		
Poorest	0.3	1.7
Second	0.6	4.2
Middle	2.6	10.0
Fourth	5.6	23.6
Richest	15.6	44.9

[1] MICS indicator 10.1 - Exposure to mass media

Use of Information/Communication Technology

Computer-mediated communication via the internet is an important means of mass communication for social and behavioural change. The MICS 2016-17 assessed usage of computer and internet among young people age 15-24 as presented in Figure 13.2. There is gender differential in the use of computer and internet among young people; men have higher proportion of users than women across all indicators. One in four young men had ever used computer and 1 in 3 had ever used internet. Only 18.6 percent and 20 percent of women ever used computer and internet respectively. Likewise, higher proportion of men used computer (14.2 percent) and internet (26.2 percent) at least once a week during the last one month preceding the survey, compared to 7.5 percent and 12.9 percent respectively.

Figure 13. 2: Percentage of young men and women age 15-24 years who use computer and the internet, Nigeria 2016-17

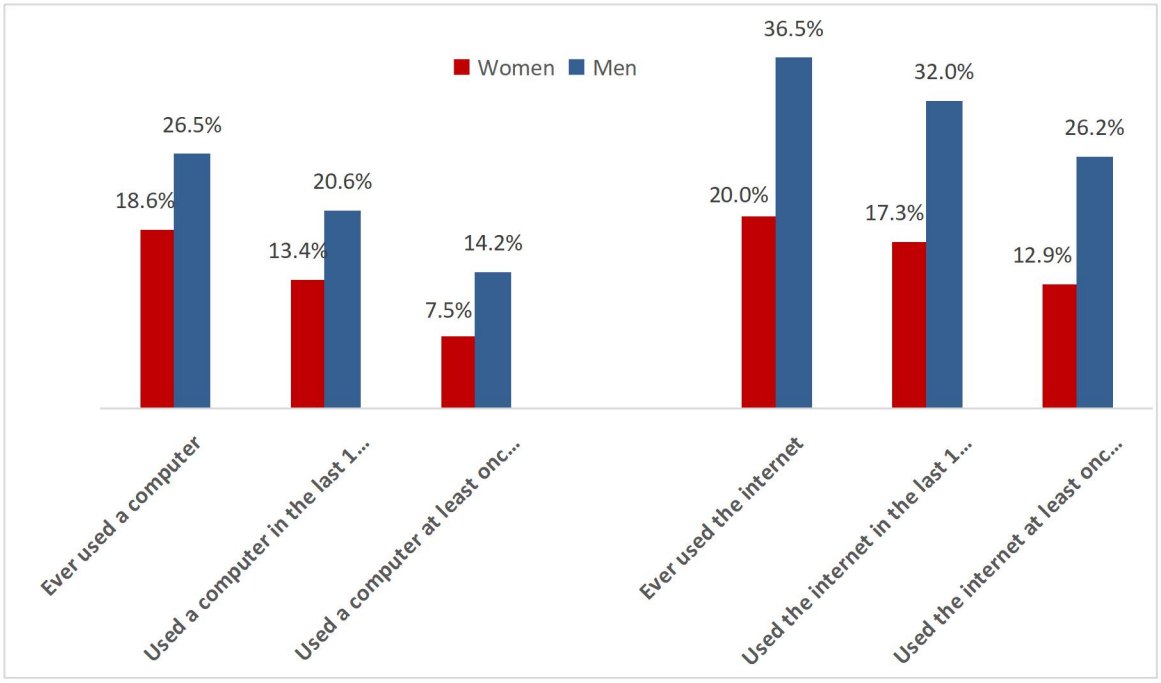


Table 13.2 further shows the percentage of women and men age 15-24 years who used computers and internet during the last 12 months by background characteristics. Percentage of women and men who used computers and internet during the last 12 months is higher in the Northern region and the urban areas. Also, as expected, computer and internet usage increases with higher education and wealth index. Although there is no age differential in computer and internet usage for women, more men age 20-24 year (27.5 percent and 41.3 percent) use computer and internet respectively than men age 15-19 year (15.9 perent and 25.7 percent).

Table 13.2 (MT.2, MT.2M): Use of computers and internet

Percentage of women and men age 15-24 years who have used a computer and the internet during the last 12 months, Nigeria, 2016-17

	Percentage of women who have ever:			Percentage of men who have ever:		
	Used a computer during the last 12 months[1]	Used the internet during the last 12 months[2]	Number of women age 15-24 years	Used a computer during the last 12 months[1]	Used the internet during the last 12 months[2]	Number of men age 15-24 years
Total	**13.4**	**17.3**	**12,637**	**20.6**	**32.0**	**5,887**
Geopolitical zone						
North Central	13.2	15.5	2,212	16.3	30.6	1,105
North East	7.0	9.2	2,533	15.4	22.2	1,193
North West	6.0	6.2	4,208	11.7	21.0	1,869
South East	21.1	28.9	921	27.7	40.2	384
South South	23.0	32.0	1,290	31.5	47.1	601
South West	32.8	45.5	1,474	45.2	61.6	735
Age (year)						
15-19	13.4	16.0	6,822	15.9	25.7	3,508
20-24	13.5	18.8	5,816	27.5	41.3	2,378
Residence						
Urban	26.4	33.8	4,631	35.4	49.0	2,128
Rural	5.9	7.7	8,007	12.2	22.4	3,759
Education						
None	0.1	0.1	2,215	0.9	1.3	537
Non-formal	0.1	0.2	1,734	0.5	2.6	673
Primary	0.7	0.6	1,313	1.1	4.5	563
Secondary	17.5	23.2	6,501	22.5	38.3	3,568
Higher	62.4	76.6	874	72.2	86.6	544
Wealth index quintile						
Poorest	0.6	0.6	1,988	3.7	7.1	1,106
Second	2.1	2.4	2,507	7.0	14.7	1,132
Middle	6.1	6.7	2,711	10.9	25.9	1,226
Fourth	14.8	21.4	2,636	25.1	42.7	1,219
Richest	38.5	48.9	2,796	54.0	66.8	1,203

[1] MICS indicator 10.2 - Use of computers

[2] MICS indicator 10.3 - Use of internet

XIV. Subjective well-being

Subjective perceptions of individuals about their income, health, living environments and other related issues, play a significant role in their lives and can impact their perception of well-being. This is irrespective of objective conditions such as actual income and physical health status[65]. In the MICS, a set of questions were asked to women and men age 15-24 years to understand how satisfied this group of young people is in different areas of their lives, such as their family life, friendships, school, current job, health, where they live, how they are treated by others, how they look, and their current income.

KEY FINDINGS

At least nine out of 10 young women and men age 15-24 years are very or somewhat happy

Young people who are happy are more than those who are satisfied with life, and those who are satisfied with life are more than those who perceived a better life

Zamfara (97.8 percent) and Akwa-Ibom (99.6 percent) have the highest percentage of young women and men who have overall life satisfaction respectively

Seven out of 10 young women and men perceived that their lives improved during the last one year and expect that it will get better after one year

Life satisfaction and happiness

Life satisfaction is a measure of an individual's perceived level of well-being. Understanding young people's satisfaction in different areas of lives can give a comprehensive picture of their life situations. A distinction can also be made between life satisfaction and happiness. Happiness is a fleeting emotion that can be affected by numerous factors, including day-to-day factors such as the weather, or a recent death in the family. It is possible for a person to be satisfied with job, income, family life, friends, and other aspects of life, but still be unhappy, or vice versa. In addition to the set of questions on life satisfaction, the survey also asked questions about happiness and the respondents' perceptions of a better life.

Tables 14.1 and 14.2 present percentage of women and men age 15-24 years on their overall life satisfaction, happiness and perception of a better life. "Life satisfaction" is defined as those who are very or somewhat satisfied with their life overall, and is based on a single cumulative question from previous responses. The pattern on life satisfaction, happiness and perception of better life are the same for both young women and men. Young people who are happy are more than those who are satisfied with life and those who are satisfied with life are more than those who perceived a better life. About 88.5 percent of young women and 89.6 percent of young men are satisfied with their life overall.

At least 9in 10 of young women and men age 15-24 years are very or somewhat happy. There are no substantial differences on life satisfaction and happiness among the wealth quintiles and education levels. For both men and women, proportions who are very or somewhat happy arealmostthe same for 15-19 and 20-24 age groups, with 90.7 and 90.7 percent, respectively for men, and 91.4 and 90.6

[65] OECD. 2013. *OECD Guidelines on Measuring Subjective Well Being*. OECD.**http://dx.doi.org/10.1787/9789264191655-en**

percent, respectively for women. Although there are more young people in rural areas who are happy than those in urban areas, proportion of those who perceived a better life is higher in urban than rural areas. Zamfara (97.8 percent) and Akwa-Ibom (99.6 percent) have the highest percentage of young women and men who have overall life satisfaction respectively. States with lowest overall life satisfaction are Ebonyi (68.7 percent) for young women and Kaduna (74.3 percent) for young men. Zamfara also have the highest proportion of young women who are happy while there are more young men who are happy in Enugu, Katsina and Sokoto.

Table 14.1 (SW.2, SW.2M, SW3, SW.3M): Overall life satisfaction, happiness and perception of better life

Percentage of women and men age 15-24 years who are very or somewhat satisfied with their life overall, the average overall life satisfaction score, and percentage of women age 15-24 years who are very or somewhat happy, Nigeria, 2016-17

	Percentage of women aged 15-24 years			Percentage of women aged 15-24 years		
	Overall life satisfaction[1]	Very or somewhat happy [2]	Perception of a better life[3]	Overall life satisfaction[1]	Very or somewhat happy [2]	Perception of a better life[3]
Total	**88.5**	**91.0**	**71.1**	**89.6**	**90.7**	**71.6**
Geopolitical zones						
North Central	89.0	90.6	68.9	86.6	93.1	67.8
North East	85.2	89.1	73.1	95.4	89.6	67.3
North West	92.6	95.1	69.1	86.7	90.5	69.8
South East	81.7	90.8	69.3	90.4	90.6	71.1
South South	86.5	89.3	73.7	91.8	93.4	77.3
South West	87.6	85.1	75.6	89.6	87.2	84.1
Age (years)						
15-19	89.9	91.4	73.3	90.0	90.7	71.6
20-24	86.9	90.6	68.6	89.0	90.7	71.5
Residence						
Urban	88.9	89.4	74.6	89.4	89.7	75.9
Rural	88.3	92.0	69.1	89.7	91.3	69.1
Marital Status						
Ever married/in union	89.1	92.5	69.1	87.6	87.6	70.4
Never married/in union	88.1	90.0	73.0	90.9	90.9	71.6
Education						
None	88.1	93.4	66.7	88.5	83.6	58.1
Non-formal	91.1	92.0	71.9	91.3	93.5	72.0
Primary	87.1	88.5	65.8	84.3	85.9	61.0
Secondary	88.3	90.8	73.0	90.0	91.9	74.4
Higher	87.8	88.6	75.3	91.0	91.4	76.7
Wealth index quintile						
Poorest	90.0	94.3	68.7	90.6	91.0	63.9
Second	87.6	91.0	67.1	89.9	91.0	66.6
Middle	86.4	89.1	69.6	87.8	90.3	71.7
Fourth	89.0	90.9	71.8	89.5	91.3	76.9
Richest	89.8	90.7	77.5	90.2	90.1	77.9

[1] MICS Indicator 11.1 - Life satisfaction[2] MICS indicator 11.2 - Happiness
[3] MICS indicator 11.3 - Perception of a better life

Perception of a better life

In addition to the series of questions on life satisfaction and happiness, respondents were asked two questions on whether they think their life improved during the last one year, and whether they think their life will be better in one year's time. Such information may contribute to understanding of

desperation that may exist among young people, as well as hopelessness and hopes for the future. Specific combinations of the perceptions during the last one year and expectations for the next one year may be valuable information to understand the general sense of well-being among young people. Percentage distribution of young people perception of a better life is also presented in Tables 14.1 and 14. 2. The proportion of women age 15-24 years who think that their lives improved during the last one year and who expect that their lives will get better after one year, is 71.1 percent. This indicator for men age 15-24 years is 71.6 percent.

Table 14.2 (SW.2, SW.2M, SW.3, SW.3M): Overall life satisfaction, happiness and perception of better life

Percentage of women and men age 15-24 years who are very or somewhat satisfied with their life overall, the average overall life satisfaction score, and percentage of women age 15-24 years who are very or somewhat happy, Nigeria, 2016-17

	Percentage of women aged 15-24 years			Percentage of women aged 15-24 years		
	Overall life satisfaction[1]	Very or somewhat happy [2]	Perception of a better life[3]	Overall life satisfaction[1]	Very or somewhat happy [2]	Perception of a better life[3]
Total	**88.5**	**91.0**	**71.1**	**89.6**	**90.7**	**71.6**
State						
Abia	87.2	90.8	79.3	83.1	92.7	87.6
Adamawa	93.4	93.8	70.0	95.4	94.9	99.6
Akwa Ibom	82.6	94.7	59.7	99.6	98.2	91.5
Anambra	82.6	85.1	65.5	88.1	83.2	64.6
Bauchi	85.4	95.1	68.2	95.4	69.9	50.6
Bayelsa	75.3	86.8	54.1	76.6	86.7	49.7
Benue	91.6	91.9	73.8	76.7	91.4	57.8
Borno	79.1	80.3	73.8	94.1	98.8	94.0
Cross River	91.6	91.5	79.1	92.8	95.6	90.4
Delta	90.7	86.0	77.7	79.7	79.3	82.9
Ebonyi	68.7	90.1	50.2	85.1	93.4	14.3
Edo	90.2	94.8	93.9	97.4	97.0	90.3
Ekiti	89.1	80.9	66.5	87.4	85.5	83.8
Enugu	82.2	95.0	69.8	97.9	100.0	93.1
Gombe	77.9	84.9	65.1	97.3	96.3	36.6
Imo	87.5	93.6	82.3	93.4	86.9	82.5
Jigawa	88.2	97.1	62.9	98.6	98.1	92.5
Kaduna	93.9	95.8	74.6	74.3	75.8	67.8
Kano	89.6	91.2	74.0	87.6	90.9	66.6
Katsina	93.0	94.5	56.9	96.3	100.0	55.6
Kebbi	92.6	95.6	60.3	75.7	89.0	69.3
Kogi	81.4	86.7	72.0	88.7	89.7	64.3
Kwara	94.3	91.6	82.8	78.2	92.5	65.4
Lagos	85.2	85.1	71.7	89.6	89.7	92.1
Nasarawa	85.7	90.6	45.3	99.2	99.3	91.9
Niger	86.5	88.7	59.3	89.2	97.0	91.9
Ogun	90.6	88.3	83.3	92.5	74.2	93.2
Ondo	90.1	91.8	76.1	90.3	94.8	75.3
Osun	88.3	81.1	79.0	96.7	94.4	85.2
Oyo	87.2	83.1	77.0	82.3	80.8	72.9
Plateau	95.7	93.7	83.7	85.1	89.3	38.4
Rivers	85.1	80.5	77.3	93.5	96.9	53.8
Sokoto	96.6	96.9	90.6	98.5	100.0	91.3
Taraba	89.6	91.5	58.1	89.0	90.3	26.9
Yobe	92.4	95.0	94.5	98.3	94.7	63.8
Zamfara	97.8	99.2	66.9	83.6	89.7	61.5
FCT-Abuja	82.2	89.3	67.5	94.5	94.4	95.7

[1] MICS Indicator 11.1 - Life satisfaction[2] MICS indicator 11.2 – Happiness
[3] MICS indicator 11.3 - Perception of a better life

XV. Tobacco and Alcohol Use

Differences in the perception of a better life is observed by wealth quintiles: 68.7 percent of young women and 63.9 percent of young men that live in households in the poorest wealth quintile think that their lives improved during the last one year and expect that it will get better after one year. While proportions for young women and men that live in households in the richest wealth quintile are 77.5 percent and 77.9 percent, respectively. Yobe and Adamawa have the highest proportion of women and men aged 15-24 who perceived a better life. A substantial number of young women in Nasarawa and young men in Taraba perceived that there was no improvement in their life in the last one year and are not expecting that it will get better after one year

Tobacco products which are made entirely or partly from tobacco leaf are intended to be smoked, sucked, chewed, or snuffed. It contains the highly addictive psychoactive ingredient, nicotine. Tobacco use is one of the main risk factors for a number of chronic diseases, including cancer, lung diseases, and cardiovascular diseases.[66]

KEY FINDINGS

Use of tobacco products is higher among men than women in the last one month

- **6.9 % of men use Tobacco products**
- **0.3 % of women use Tobacco products**

Percentage of people age 15-49 who smoked a whole cigarette before age 15 years

- **1.6 percent of men**
- **0.2 percent of women.**

Use of alcohol is also higher among men than women in the last one month

- **19.4 percent of men use alcohol**
- **6.4 percent of women use alcohol**

Percentage of people age 15-49 who had at least one alcoholic drink whole before age 15 years

- **5.5 percent of men**
- **3.3 percent of women**

The consumption of alcohol has a risk of adverse health and social consequences related to its intoxicating, toxic and dependence-producing properties. In addition to the chronic diseases that may develop in those who consume large amounts of alcohol over a number of years, alcohol use is also associated with an increased risk of acute health conditions, such as injuries, including from traffic accidents.[67] Alcohol use also causes harm far beyond the physical and psychological health of the drinker. It harms the well-being and health of people around the drinker. An intoxicated person can harm others, behave violently, or negatively affect co-workers, relatives, friends or strangers. Therefore, the impact of the harmful use of alcohol reaches deep into society.[68]MICS 2016-17 collected information on ever and current use of tobacco and alcohol and intensity of use among women and men age 15-49 years.

Tobacco Use

Tables 15.1 presentever, current and early use of tobaccoproducts by women and menage 15-49 years. Use of tobacco products is higher among men than women in Nigeria. While 16 percent of men and 1.4

[66]WHO.**http://www.who.int/topics/tobacco/en/**
[67]WHO.**http://www.who.int/topics/alcohol_drinking/en/**
[68]WHO.**http://www.who.int/mediacentre/factsheets/fs349/en/**

percent of women reported to have ever used a tobacco product, 6.9 percent of men and 0.3 percent of women used tobacco products at any time during the last one month. Among men and women who had ever smoked, 1.6 percent and 0.2 percent of them respectively started before age 15 year.

Table 15.1 (TA.1, TA.1M): Current and ever use of tobacco

Percentage of women and men age 15-49 years by pattern of use of tobacco, Nigeria, 2016-17

	Percent of women age 15-49 years			Percent of men age 15-49 years		
	Ever use any tobacco product	Current use of tobacco product[1]	Smoked a whole cigarette before age 15[2]	Ever use any tobacco product	Current use of tobacco product[1]	Smoked a whole cigarette before age 15[2]
Total	1.4	0.3	0.2	16.0	6.9	1.6
Geopolitical zones						
North Central	1.5	0.3	0.2	9.8	5.1	1.5
North East	1.1	0.4	0.1	7.4	3.7	0.6
North West	0.7	0.2	0.2	14.6	6.9	1.2
South East	1.5	0.2	0.1	30.3	12.5	1.2
South South	2.4	0.3	0.1	23.4	8.2	2.4
South West	2.4	0.2	0.3	26.3	9.7	3.6
Age (years)						
15-19	0.8	0.0	0.2	4.4	1.2	0.9
20-24	1.4	0.1	0.2	11.9	4.9	1.4
25-29	1.3	0.3	0.2	18	7.4	1.8
30-34	1.4	0.2	0.2	22.1	9.1	1.2
35-39	1.3	0.2	0.2	23.1	11.5	2
40-44	2.2	0.7	0.2	21.9	11.0	2.6
45-49	2.2	0.5	0.2	23.0	8.7	2.4
Residence						
Urban	1.9	0.3	0.2	17.5	6.6	2
Rural	1.1	0.2	0.1	15.2	7.0	1.4
Education						
None	1.1	0.2	0.1	12.6	7.4	1.5
Non-formal	0.5	0.2	0.1	11.2	6.5	0.7
Primary	1.8	0.7	0.2	22.7	11.8	2.6
Secondary	1.7	0.2	0.2	15.5	6.1	1.6
Higher	2.1	0.1	0.4	18.2	5.3	1.7
Under-5s in the samehousehold						
At least one	1.1	0.2	0.2	15.6	7.0	0.7
None	2.1	0.3	0.2	16.6	6.6	1.4
Wealth index quintile						
Poorest	0.5	0.2	0.1	11.8	6.7	0.7
Second	1.3	0.6	0.2	14.1	7.3	1.5
Middle	1.2	0.2	0.1	14.1	6.2	1.3
Fourth	1.7	0.3	0.2	18.6	8.4	2.1
Richest	2.1	0.1	0.2	20	5.8	2.1

[1] MICS indicator 12.1 - Tobacco use
[2] MICS indicator 12.2 - Smoking before age 15

Cigarettes are the most common tobacco product among current users, and 0.1 percent of women and 4.7 percent of men smoked only cigarettes in the last one month. The proportion of men who smoked cigarette before age 15 years is 1.6 percent while it is only 0.2 percent for women. Seven percent of men and 0.2 percent of women who used tobacco product in the last one month had at least one under-five child living in the same household. There is no urban-rural or socioeconomic difference in tobacco

use and its current use is commonest among males in the South-East (12.5 percent). Current tobacco use in male is commonest among men age 35-39 years and lowest among men age 15-19 years.

Alcohol Use

Table 15.2 shows the pattern of use of alcohol among women and men in Nigeria. About 85.4 percent and 73.3 percent of women and men respectively never had an alcoholic drink. Three percent of women and 5.5 percent of men age 15-49 years had at least one drink of alcohol before the age of 15 years.

Table 15.2 (TA.3, TA.3M): Use of alcohol

Percentage of women and men age 15-49 years who have never had an alcoholic drink, percentage who first had an alcoholic drink before age 15, and percentage of women who have had at least one alcoholic drink at any time during the last one month, Nigeria, 2016-17

	Percentage of women who:			Percentage of men who:		
	Never had an alcoholic drink	Had at least one alcoholic drink before age 15[1]	Had at least one alcoholic drink at any time during the last one month[2]	Never had an alcoholic drink	Had at least one alcoholic drink before age 15[1]	Had at least one alcoholic drink at any time during the last one month[2]
Total	**85.4**	**3.3**	**6.4**	**73.3**	**5.5**	**19.4**
Geopolitical zone						
North Central	89.4	2.3	5.2	82.2	3.5	14.3
North East	96.4	1.3	1.5	94.3	1.9	4.8
North West	97.8	0.5	0.8	96.2	0.4	2.0
South East	62.7	8.3	16.3	22.1	16.6	66.2
South South	57.0	8.8	21.7	35.1	13.5	48.8
South West	70.3	6.8	10.3	37.5	12.5	39.0
Age (years)						
15-19	90.6	4.1	3.4	86.0	6.0	7.4
20-24	86.6	2.6	5.9	76.1	5.5	16.9
25-29	85.3	2.8	6.3	71.4	4.9	22.3
30-34	83.5	3.2	7.8	66.5	4.9	25.9
35-39	84.9	3.0	7.0	66.0	5.2	25.9
40-44	81.0	3.8	8.3	65.5	6.1	25.6
45-49	80.4	3.6	8.7	70.1	5.1	22.6
Residence						
Urban	81.7	3.3	6.8	66.5	5.8	23.1
Rural	87.5	3.2	6.1	77.4	5.2	17.2
Education						
None	95.0	1.4	2.5	92.8	1.6	5.5
Non-formal	99.4	0.0	0.0	98.9	0.1	0.2
Primary	83.0	4.5	8.4	67.5	7.3	25.4
Secondary	77.5	5.3	9.6	66.2	7.6	24.5
Higher	73.4	3.7	10.7	64.1	5.2	25.2
Wealth index quintile						
Poorest	95.4	1.8	2.8	93.8	2.0	4.7
Second	92.8	2.3	3.3	86.7	3.4	10.1
Middle	87.0	3.2	6.0	76.6	6.0	17.3
Fourth	80.8	4.3	8.5	63.5	7.4	26.5
Richest	74.5	4.3	9.9	53.5	7.5	33.1

[1] MICS indicator 12.4 - Use of alcohol before age 15

[2] MICS indicator 12.3 - Use of alcohol

There is remarkable difference between the percentage of men and women who had at least one alcoholic drink at any time during the last one month before the survey, 5.5 percent of women and 19.6 percent of men. This implies that ratio of women to men on current use of alcohol is 1:4 in Nigeria.

While South East has the highest proportion of menwho started drinking alcohol at early age, South South has the highest proportion of women with the same behaviour. The proportion of men and who had at least one drink of alcohol before age 15 is higher among the teenagers. Irrespective of the sex, current alcohol intake increased with education level and wealth quintile.

Appendix

List of Report Writers

Isiaka A. Olarewaju	Project Director
Adeyemi Adeniran	Project Coordinator
Ogundiya Kola. J	NBS
Kareem B. Akeem	NBS
Elutade Akinloye A.	NBS
Akinola Michael	NBS
Ebhodaghe Bridget	NBS
Ekwejunor Etchie U.	NBS
Imeh I. Udoabah	NBS
Ronke Adeoye	NACA
Idoteyin Ezirim	NACA
Ogeh Ajirioghene	Federal Ministry of Health
Dickson A. Kadiri	Federal Ministry of Water Resources
Sobogun Oluwasegun O.	Federal Ministry of Education

List of Report Reviewers

Isiaka A. Olarewaju	Project Director
Adeyemi Adeniran	Project Coordinator
Dr. Funke Fayehun	University of Ibadan
Ogundiya Kola. J	NBS
Kareem B. Akeem	NBS
Elutade Akinloye A.	NBS
Akinola Michael	NBS
Ebhodaghe Bridget	NBS
Chioma Nkemakolam	NBS
Adeniyi Olaleye	UNICEF Nigeria
Denis Jobin	UNICEF Nigeria
Claes Johasson	UNICEF HQ
Issa Kone	UNICEF WCARO Region Office
Acraf Mohamed Mrabet	UNICEF WCARO Region Office