



Summary Findings of

National Nutrition and Health

Survey,

9th Feb to 5th May 2014, Nigeria

SMART Methods









I. INTRODUCTION

A "Saving One Million Lives" initiative was launched in Nigeria in October 2012 with the main objective to save one million lives by 2015. The initiative is a result based sector wide approach to improve health outcomes. Every year about one million women and children die in Nigeria. Among the three elements of the initiative, a data management system to support the performance management and monitor the progress of outcome is one. For this reason, generation of data on key indicators on regular basis was found imperative for estimation of lives saved in the country thereby to assess the progress towards the initiative.

National Bureau of Statistics (NBS) and National Population Commission (NPopC) have been conducting surveys including Multiple Indicator Cluster Survey (MICS) and Demographic Health Surveys (DHS) every 4 to 5 years at national level. The frequency of these surveys is not helping to regularly track the progress as the main objective of the initiative is to save one million lives within three years time, by 2015. Hence, a sound data collection system which can capture change over time has a paramount importance to be able to estimate the lives saved within the timeframe of the project.

As a result, a cross-sectional survey using SMART method was proposed to be conducted. For the same reason, a survey was conducted in 24 states of the country from July to August 2013. This is the second round survey aimed to provide reliable data for planning and monitoring of key activities. Now the survey is scaled up to the national level with additional new key indicators that will enable to monitor the progress in the country.

2. OBJECTIVES

The objectives of the survey are:

- 1. Determine the prevalence of acute malnutrition among children 6 to 59 months of age using weight-forheight and/or bilateral edema and Mid Upper Arm Circumference (MUAC),
- 2. Determine the prevalence of chronic malnutrition (height-for-age) and underweight (weight-for-age) among children 0 to 59 months of age,
- 3. Determine the prevalence of acute malnutrition among women 15 to 49 years of age using MUAC,
- 4. To assess the prevalence of diarrhea and use of Oral Rehydration Salt (ORS) and zinc among children under-five years two weeks prior the survey,
- 5. Assess infant and young child feeding practice: ever breastfeed, early initiation of breast feeding, exclusive breastfeeding, minimum meal frequency, minimum dietary diversity and minimum acceptable diet among children age 0-23 months
- 6. Estimate coverage of vitamin A supplementation among children 6 to 59 months of age within the last six months,
- 7. Determine access to improved drinking water, and sanitation facility and under 3 years children's faeces disposal practice,
- 8. Determine the coverage of DPT3/Penta3 and measles vaccination among children 12 to 23 months of age.
- 9. Determine the proportion of under five children with Acute Respiratory Infection (ARI) symptoms and proportion of children with fever received treatment
- Determine the ownership and universal access of Mosquito Nets, and utilization among children 0 to 59 months, and
- 11. Assess the practice of skilled birth attendants, contraceptive prevalence rate and use of iron supplementation during pregnancy among women 15 to 49 years.

3. METHODOLOGY

The National nutrition and health survey using Standardised Monitoring and Assessment of Relief and Transitions (SMART) methods was conducted from the 9th of February to the 5th of May 2014. It is a cross-sectional household survey using a two stage cluster sampling representative at the state level. Data were collected from a total of 25,567 households, 20,939 children under-five years of age and 23,942 women of reproductive age.

All the 36 states and federal capital territory (FCT) constitute the domains of the survey. The domains used by MICS and DHS are similar which allows comparison of results.

At first stage of sampling clusters were drawn independently for each survey domain from the national master sample frame with the support from National Population Commission according to the probability proportional to size (PPS) method. The complete list of enumeration areas was used in all state except Borno state where 9 local government areas were excluded at sampling stage for security reasons. Hence, result from Borno state is not representative of the whole state. The second stage of sampling consists of selecting households within each cluster by using systematic random sampling method.

A total of 27 survey teams (3 individuals per team), 10 supervisors, 1 national coordinator, 1 assistant national coordinator, 2 technical coordinators and 4 regional coordinators were deployed to conduct the survey.

4. RESULTS

4.1. Nutritional Status of Children

Children's nutritional status is the reflection of their overall health. It is a cornerstone for survival, health and development.

Undernourished children have lowered resistance to infection and are more likely to die from common childhood illnesses. Globally, 45 percent of all under-five deaths are attributable to under-nutrition¹. It also hampers countries' socio-economic development and its potential to reduce poverty.

In addition to increasing mortality risk, poor nutrition in the first two years of child's life can lead to stunted growth, which is irreversible and is associated with impaired cognitive ability and reduced school and work performance. The global target is to reduce stunting by 40 percent and reduce and maintain wasting below 5 percent by the year 2025².

The key indicators for monitoring the nutritional status of a child under 5 are underweight, stunting and wasting. The anthropometric measurements of children in the survey population were compared to the WHO 2006 Standards. Three standard anthropometric indices are presented: acute malnutrition using Weight-for-height and/or edema and mid upper arm circumference (MUAC); stunting (height-for-age); and underweight (weight-for-age). SMART flags, Z-score less than three and greater three from observed mean, were used to exclude data that were likely of measurement error from the analysis.

The estimates for stunting and underweight were calculated for children 0 to 59 months while the estimate for acute malnutrition is based on children age 6 to 59 months.

Table I shows the percentage of children classified as malnourished according to weight-for-age, height-for-age and weight-for-height indices, as well as mid upper arm circumference values (MUAC) by background characteristics.

In summary, the results of this survey indicate that Nigeria has a stunting prevalence of 32 percent among children under 5 years of age; while about 21 percent and 9 percent are underweight and wasted respectively. In general, malnutrition prevalence in the North West and East regions are higher than in the South.

Underweight

Underweight is a measure of wasting and stunting combined. Twenty two percent of the under-five children were estimated to be underweight in West and Central Africa in 2012, which is higher than the global estimate of 15 percent³. The latest estimate for Nigeria is close to that of the region with about 21 percent of children under age 5 being underweight. Disaggregation by child's age shows that underweight is lowest in younger

¹ The latest estimates on child mortality generated by the UN Inter-agency Group on Child Mortality Estimation were released on 13 September 2013: Levels and Trends in Child Mortality, Report 2013

²WHO Global Targets 2025; Comprehensive implementation plan on maternal, infant and young child nutrition

³ United Nations Children's Fund, World Health Organization, The World Bank, UNICEF-WHO-World Bank Joint Child Malnutrition Estimates, 2013.

children as indicated by 17 percent of children under 6 months and highest in children age 12 to 23 months at 26 percent. Girls are more likely to be underweight than boys (23 percent compared with 19 percent respectively).

Disaggregation by geo-political zones shows that underweight is highest in North West at 33 percent and North East at 32 percent and lowest in the South East at 9 percent. There is a substantial variation across the surveyed states, ranging from 6 percent in Enugu and Anambra states to 41 percent in Jigawa state. Ten states were greater than the regional average of 22 percent.

Acute Malnutrition

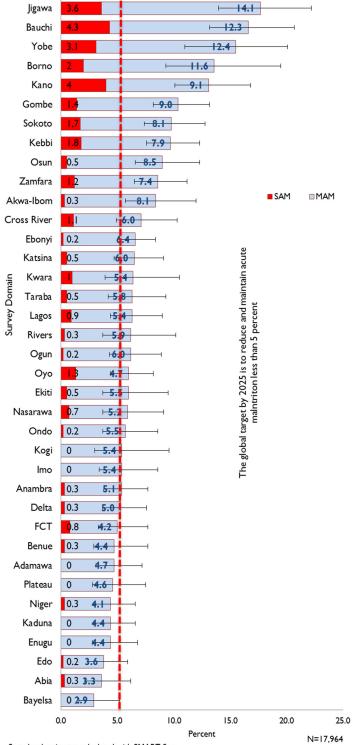
Acute Malnutrition occurs as a result of recent rapid weight loss or a failure to gain weight within a relatively short period of time. It is a measure of thinness and/or bilateral edema. It occurs more commonly in infants and younger children, often during the stage when complementary foods are being introduced and children are more susceptible to infectious diseases. A child with severe acute malnutrition (WHZ <-3; and/or MUAC<115 and/or bilateral edema) has 9-fold increased risk of death compared to a child with no acute malnutrition (WHO/UNICEF 2009).

The prevalence of Global Acute Malnutrition (GAM) and prevalence of severe acute malnutrition (SAM) expressed in z-scores, according to WHO 2006 growth standards is shown in table 1. The national GAM prevalence for under-five children based on WHO standard 2006 was 9 percent, while the prevalence of SAM was 2 percent.

The national prevalence of global acute malnutrition remain under the WHO crisis threshold (15 percent of GAM)¹. However it is worth noting that this survey was conducted between February and May 2014 before the expected hunger gap which, in Nigeria, usually occurs between June and August.

Disaggregation by child's age shows that the prevalence of acute malnutrition is highest in younger children as showed by 19 percent among children 6 to 11 months and 16 percent among children 12 to 23 months. Girls (10 percent) are more likely affected by acute malnutrition than boys (8 percent).

Disaggregation by geopolitical zones shows that acute malnutrition is highest in the North East at 12 percent and North West at 10 percent zones and lowest in South East and North Central both at 5 percent. There is a substantial variation in the prevalence of acute malnutrition across the surveyed states, ranging from 3 percent in Bayelsa state to 18 percent in Jigawa state.



State level estimates calculated with SMART flags

Figure 1: Prevalence of severe acute malnutrition (SAM) and moderate acute malnutrition (MAM) among children 6 to 59 months, 95 percent confidence interval by Survey domain

Of the 37 domains surveyed, three states (Jigawa, Bauchi and Yobe) were above the WHO GAM crisis level (GAM >15 percent) and three states (Borno, Kano, and Gombe) were above warning threshold (GAM >10 to <15 percent). Four States (Bauchi, Kano; Jigawa and Yobe) were found above the WHO SAM crisis threshold of 2 percent.

The global target by 2025^2 is to reduce and maintain GAM lower than 5 percent. A total of 9 states showed prevalence of GAM below the WHO acceptable threshold of 5 percent (Plateau; Niger, Kaduna, Enugu, Benue, Adamawa, Edo, Abia and Bayelsa). However the upper limit of the 95 percent confidence interval of each of these prevalence was higher than 5 percent.

Stunting

Stunting is a measure of linear growth and occurs as a result of inadequate nutrition over a longer time period.

The results of this survey shows that, in Nigeria, 32 percent of children under age 5 are stunted, while 12 percent are severely stunted (below -3 SD). Disaggregation by child's age shows that the prevalence of stunting increases with age from 12 percent among children under 6 months to 44 percent among children 36 to 47 months and decreases to about 37 percent among children 48 to 59 months. Girls (34 percent) are more likely to be stunted than boys (31 percent).

Disaggregation by geo-political zones shows that stunting is highest in North West at 51 percent and North East at 48 percent and lowest in the South East at 10 percent. There is a substantial variation in the prevalence of stunting across the surveyed states, ranging from 5 percent in Anambra state to 60 percent in Katsina state.

Globally, 25 percent of under-five children are stunted and the prevalence in Sub-Saharan Africa is about 38 percent. Although the Nigeria national prevalence reported in this survey remains below the regional average, 12 of the 37 surveyed states were above the regional average. The geographical distribution of stunting prevalence observed in this survey is consistent with other national level surveys such as DHS 2013 & MICS 2011.

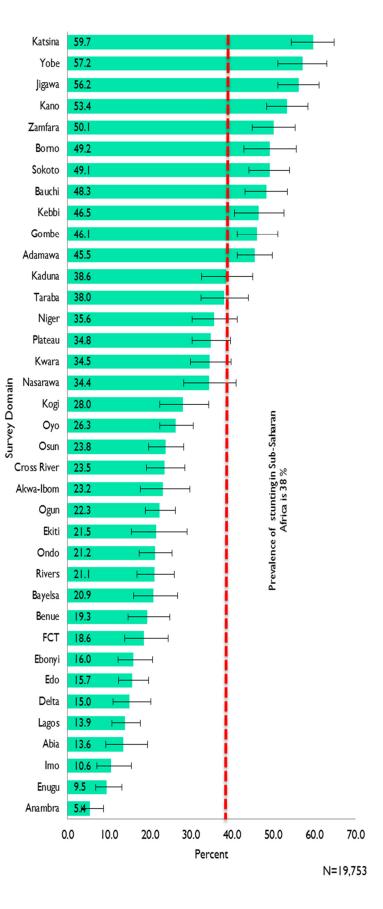


Figure 2: Prevalence of stunting among children 0 to 59 months, 95 percent confidence interval by survey domain

Table 1: Nutritional status of children

Percent of children classified as malnourished according to: weight for age (0 to 59m), height for age (0 to 59m), weight for height &/or edema (6 to 59m) and MUAC (6 to 59m) by background characteristics, Nigeria 2014

Background Characteristics	Underweight (Weight-for-Age) Percent below		Stur (Height-	nting for-Age)	Acute Mal (Weight-fo			alnutrition JAC)	Number o
			Percent below		Percent	below	MUAC	below	children under age 5
	- 2 SD	- 3 SD	- 2 SD	- 3 SD	- 2 SD	- 3 SD	125mm	I I 5mm	under age 3
National	20.9	5.7	32.2	12.1	8.7	2.2	4.6	0.9	20,520
	[20.1,21.7]	[5.3,6.1]	[31.2,33.2]	[11.5,12.8]	[8.2,9.3]	[2.0,2.5]	[4.2,5.0]	[0.7,1.0]	
Sex									
Male	19.2	4.9	30.5	10.4	7.8	1.8	5.4	I	10,259
	[18.3,20.2]	[4.4,5.4]	[29.3,31.7]	[9.7,11.2]	[7.1,8.4]	[1.5,2.1]	[4.9,6.0]	[0.8,1.3]	
Female	22.5	6.5	33.9	13.9	9.7	2.7	3.7	0.7	10,261
	[21.5,23.6]	[6.0,7.1]	[32.7,35.1]	[13.0,14.8]	[9.0,10.4]	[2.3,3.1]	[3.3,4.2]	[0.6,0.9]	
Zone									
North Central	13.7	2.4	29	8.2	5.1	0.4	3.7	0.8	3,354
	[12.3,15.2]	[1.9,3.1]	[26.9,31.2]	[7.1,9.4]	[4.2,6.1]	[0.2,0.7]	[3.1,4.5]	[0.5,1.2]	
North East	31.5	9.1	47.7	17.9	11.9	2.1	7.5	1.1	3,858
	[29.0,34.2]	[7.8,10.6]	[45.3,50.1]	[16.1,19.8]	[10.3,13.7]	[1.7,2.7]	[6.1,9.0]	[0.8,1.6]	
North West	33.1	9.4	50.8	21.1	10.1	2	6.3	1.6	5,065
	[31.0,35.2]	[8.4,10.5]	[48.6,53.0]	[19.4,22.9]	[9.0,11.4]	[1.5,2.7]	[5.5,7.1]	[1.2,2.0]	
South East	8.6	I	10.3	1.7	5.1	0.1	2.4	0.2	2,199
	[7.3,10.3]	[0.6,1.8]	[8.7,12.2]	[1.2,2.4]	[4.2,6.1]	[0.0,0.5]	[1.8,3.2]	[0.1,0.5]	
South South	12	2.2	19.8	5.5	6	0.4	2.6	0.5	2,388
	[10.5,13.7]	[1.6,3.0]	[17.8,22.0]	[4.4,6.8]	[4.9,7.2]	[0.2,0.8]	[2.0,3.4]	[0.2,1.0]	
South West	14.7	2.8	20.3	5.5	6.5	0.7	3.9	0.5	3,403
	[13.3,16.1]	[2.3,3.5]	[18.6,22.2]	[4.7,6.5]	[5.5,7.6]	[0.5,1.2]	[3.2,4.7]	[0.3,0.8]	
Age									
0-5 months	16.5	5.1	11.8	3.9					2,209
	[14.8,18.4]	[4.2,6.2]	[10.3,13.4]	[3.0,5.0]					
6-11 months	22.1	7	15.5	4.8	18.5	4.7	12.4	1.7	2,331
	[20.3,24.1]	[5.9,8.2]	[13.9,17.1]	[3.9,5.8]	[16.8,20.3]	[3.8,5.8]	[. , 3.9]	[1.2,2.5]	
12-23 months	26	8.5	29.6	10.8	15.5	4.7	8.5	1.6	4,241
	[24.4,27.6]	[7.5,9.6]	[28.0,31.3]	[9.7,11.9]	[14.2,16.9]	[4.0,5.4]	[7.6,9.6]	[1.2,2.1]	
24-35 months	22.8	7	39.4	16.8	6.4	1.6	3.5	0.9	4,207
	[21.4,24.3]	[6.2,8.0]	[37.7,41.2]	[15.5,18.3]	[5.6,7.3]	[1.2,2.1]	[2.9,4.1]	[0.6,1.2]	
36-47 months	18.8	3.6	43.9	16.2	3	0.5	0.7	0.3	3,978
	[17.4,20.3]	[3.0,4.2]	[42.0,45.9]	[14.8,17.6]	[2.4,3.6]	[0.3,0.8]	[0.5,1.1]	[0.1,0.5]	
48-59 months	16.8	2.7	36.8	13.6	3.5	0.4	0.4	0.1	3,554
	[15.3,18.4]	[2.1,3.3]	[34.9,38.8]	[12.2,15.0]	[2.9,4.3]	[0.2,0.7]	[0.2,0.7]	[0.1,0.3]	,
Sate	. / 1				- ^ -				
Abia	11.2	0.5	13.6	1.1	3.6	0.3	3.3	0	365
, wia	[7.9,15.8]	[0.1,2.1]	[9.3,19.5]	[0.5,2.7]	[2.1,6.2]	[0.0,2.1]	5.5 [1.8,5.9]	v	505
Adamawa	[7.9,13.8] [6.9	3.2	[7 .3,17.3] 45.5	[0.3,2.7] 4.7	[2.1,8.2] 4.7	0	2.4	0.2	439
, Jama Wa	[12.3,22.7]	5.2 [1.9,5.4]	43.5 [41.2,49.7]	[14.7	[3.1,7.2]	v	[1.3,4.5]	[0.0,1.6]	111
Akwa-Ibom	[12.3,22.7] 17.2	4.6	23.2	[10.3,13.4] 6.7	[3.1,7.2] 8.4	0.3	4.8	0.9	348
	[13.1,22.3]	4.8 [2.7,7.7]	[17.7,29.7]	6.7 [4.0,11.0]	6.4 [5.7,12.0]	[0.0,2.1]	4.8 [3.3,7.1]	[0.2,3.8]	טדנ
Anambra	[13.1,22.3] 5.8	0.5	[17.7,29.7] 5.4	[4.0,11.0] 0	[5.7,12.0] 5.4	0.3	[3.3,7.1] 2.8	[0.2,3.8] 0.3	434
mailiui a	5.8 [4.2,7.8]	[0.1,1.8]	[3.3,8.7]	v	[3.8,7.7]	[0.0,1.7]	[1.6,4.9]	0.3 [0.0,1.8]	434
Bauchi	[4.2,7.6] 37.6	[0.1,1.8] 2.4	48.3	18.9	[3.6,7.7] 6.6	4.3	6.8	[0.0,1.8] 1.5	881
Dauciii	37.6 [32.5,43.0]		48.3 [43.1,53.4]						001
Pavala	[32.5,43.0] 7.2	[9.3,16.3] 1.1	[43.1,53.4] 20.9	[15.2,23.3] 4.5	[13.2,20.7] 2.9	[3.1,6.1] 0	[5.0,9.3] 2.4	[0.8,2.7]	242
Bayelsa						U		0.3	362
Bonuo	[4.5,11.3] 7.9	[0.4,2.8] 0.9	[16.0,26.8] 19.3	[2.6,7.5] 2.8	[1.6,5.2] 4.7	0.3	[1.4,4.3] 2.3	[0.0,2.1]	432
Benue								0.8	432
	[5.6,11.0]	[0.4,2.2]	[14.7,24.8]	[1.7,4.6]	[2.9,7.7]	[0.0,1.7]	[1.2,4.4]	[0.3,2.3]	

Background Characteristics	Under (Weight)	weight -for-Age)		nting -for-Age)		alnutrition t-for-Age)		1alnutrition UAC)	Number of
	Percent below		Percent below		Percent below		MUAC below		 children under age 5
	- 2 SD	- 3 SD	- 2 SD	- 3 SD	- 2 SD	- 3 SD	I25mm	I I 5mm	Ū
Borno	38.7	11	49.2	18.7	13.6	2	12	1.4	600
	[31.7,46.1]	[7.8,15.3]	[42.9,55.6]	[14.8,23.4]	[9.3,19.5]	[1.1,3.5]	[7.9,17.9]	[0.7,3.0]	
Cross River	13	2.4	23.5	6.3	7.1	1.1	2.7	0.5	414
	[9.6,17.5]	[1.2,4.7]	[19.1,28.5]	[3.7,10.6]	[4.9,10.3]	[0.3,3.5]	[1.6,4.4]	[0.1,2.0]	
Delta	9.4	0.8	15	3.8	5.3	0.3	2.3	0.6	382
	[6.7,13.2]	[0.3,2.3]	[11.0,20.2]	[2.1,6.9]	[3.7,7.6]	[0.0,2.0]	[1.0,5.2]	[0.1,2.2]	
Ebonyi		1.3	16	4.8	6.6	0.2	2.6	0.4	520
	[8.4,14.2]	[0.7,2.5]	[12.2,20.6]	[3.5,6.6]	[5.2,8.4]	[0.0,1.5]	[1.5,4.7]	[0.1,1.6]	
Edo	10.4	1.7	15.7	4.3	3.8	0.2	1.9	0.2	530
	[7.8,13.7]	[0.9,3.2]	[12.4,19.7]	[2.9,6.3]	[2.4,5.9]	[0.0,1.4]	[1.1,3.3]	[0.0,1.4]	
Ekiti	14	3.1	21.5	6.6	6	0.5	4.2	0.5	421
	[9.5,20.1]	[1.7,5.6]	[15.5,29.0]	[3.6,11.7]	[3.7,9.5]	[0.1,2.1]	[2.8,6.5]	[0.1,2.0]	
Enugu	6	0.2	9.5	1.1	4.4	0	1.9	0.5	470
-	[4.1,8.6]	[0.0,1.5]	[6.8,13.2]	[0.4,2.9]	[2.8,6.8]		[0.9,4.1]	[0.1,1.8]	
FCT	8.1	0.8	18.6	4.5	5	0.8	3.6	1.1	393
	[5.4,12.1]	[0.3,2.1]	[13.9,24.5]	[2.7,7.4]	[3.3,7.7]	[0.3,2.4]	[1.8,7.0]	[0.3,3.6]	
Gombe	29.5	8.9	46.1	17.2	10.4	 I.4	7	1.9	718
	[24.0,35.7]	[6.8,11.7]	[41.2,51.1]	[14.0,20.9]	[8.2,13.2]	[0.8,2.5]	[5.4,9.0]	[1.0,3.3]	
lmo	10.7	2.4	10.6	2.8	5.4	0	1.6	0	410
	[7.1,16.0]	[1.0,5.9]	[7.1,15.5]	[1.3,5.7]	[3.4,8.6]		[0.8,3.3]		
Jigawa	40.8	13.7	56.2	23.3	17.7	3.6	7.6	1.3	794
,,	FDF / // DI	[11.0,17.1	FF 1 4 4 13	F20 1 27 01	FI 4 0 22 23	F2 2 F 01	FF 1 1 1 23	FO (O O)	
	[35.6,46.2]]	[51.1,61.1]	[20.1,26.9]	[14.0,22.2]	[2.2,5.9]	[5.1,11.2]	[0.6,2.8]	
Kaduna	21.6	4.6	38.6	13.2	4.4	0	3.4	0.6	606
	[16.9,27.2]	[3.0,7.0]	[32.6,45.0]	[9.5,18.1]	[2.9,6.6]		[2.4,4.7]	[0.2,1.6]	
Kano	37.7	11.4	53.4	22	13.1	4	4.5	1.5	738
K	[32.7,42.9]	[8.8,14.6]	[48.4,58.4]	[18.1,26.4]	[10.1,16.8]	[2.6,6.2]	[3.1,6.5]	[0.8,2.6]	(7)
Katsina	34.5	9.1	59.7	28.9	6.5	0.5	9.5	3	673
K 11.	[30.3,38.9]	[7.3,11.1]	[54.4,64.8]	[24.6,33.7]	[4.7,9.1]	[0.2,1.4]	[7.4,12.2]	[1.8,5.0]	707
Kebbi	28.6	9	46.5	16.5	9.7	1.8	7.6	1.4	797
	[23.2,34.8]	[6.7,12.1]	[40.6,52.6]	[12.6,21.2]	[7.6,12.3]	[1.1,3.0]	[5.4,10.5]	[0.8,2.4]	27/
Kogi	12.2	2.9	28	10.5	5.4	0	4.6	1.8	376
14	[8.8,16.7]	[1.6,5.3]	[22.4,34.3]	[7.0,15.6]	[3.0,9.6]		[3.2,6.5]	[0.9,3.6]	450
Kwara	17.9	2	34.5	8	6.4		3.8	0.8	453
	[14.7,21.6]	[1.0,3.9]	[29.8,39.7]	[5.6,11.2]	[3.9,10.5]	[0.3,3.2]	[2.5,5.8]	[0.3,2.1]	
Lagos	10.5	1.7	13.9	2.3	6.3	0.9	3.9	0.5	715
	[8.3,13.2]	[1.0,2.9]	[10.8,17.7]	[1.4,3.6]	[4.4,9.0]	[0.4,2.2]	[2.7,5.6]	[0.2,1.4]	107
Nasarawa	17.4	4	34.4	10.6	5.9	0.7	3	0.5	495
	[13.6,21.9]	[2.4,6.8]	[28.3,41.0]	[7.5,14.8]	[3.7,9.1]	[0.2,2.0]	[1.9,4.9]	[0.1,1.8]	
Niger	17.9	3.7	35.6	11.2	4.4	0.3	5.4	0.3	641
	[14.1,22.5]	[2.4,5.9]	[30.3,41.2]	[8.8,14.1]	[2.9,6.6]	[0.1,1.3]	[3.7,7.9]	[0.1,1.3]	
Ogun	17.2	3.2	22.3	6.2	6.2	0.2	3.4	0.4	622
. .	[13.6,21.6]	[1.6,6.2]	[18.9,26.2]	[4.3,8.7]	[4.3,8.9]	[0.0,1.2]	[2.0,5.6]	[0.1,1.3]	· - -
Ondo	16	3.8	21.2	7.3	5.7	0.2	4.2	0.9	475
-	[12.4,20.4]	[2.5,5.7]	[17.4,25.4]	[5.1,10.2]	[3.7,8.6]	[0.0,1.6]	[2.9,6.2]	[0.4,2.3]	
Osun	17.4	3.4	23.8	8.1	9	0.5	4.1	0.7	494
	[14.5,20.7]	[2.1,5.6]	[19.7,28.3]	[5.9,11.0]	[6.6,12.3]	[0.1,1.8]	[2.6,6.4]	[0.2,2.0]	
Оуо	17.5	3.3	26.3	7.3	6	1.3	3.6	0.3	676
	[14.6,20.8]	[2.2,4.8]	[22.4,30.6]	[5.1,10.4]	[4.4,8.2]	[0.7,2.7]	[2.2,5.8]	[0.1,1.3]	

Table 1: continued

Background	Underweight (Weight-for-Age)			Stunting (Height-for-Age)		Acute Malnutrition (Weight-for-Age)		Acute Malnutrition (MUAC)	
Characteristics	Percent	t below	Percent below		Percent	t below	MUAC	C below	children under age 5
	- 2 SD	- 3 SD	- 2 SD	- 3 SD	- 2 SD	- 3 SD	I25mm	I I 5mm	under age 5
Plateau	16	2.8	34.8	10.3	4.6	0	3	0.4	564
	[12.4,20.2]	[1.8,4.5]	[30.2,39.6]	[7.9,13.3]	[2.8,7.5]		[1.9,4.7]	[0.1,1.5]	
Rivers	11.9	2	21.1	6.5	6.2	0.3	1.6	0.3	352
	[8.8,15.9]	[0.9,4.2]	[16.9,26.0]	[4.4,9.7]	[3.7,10.2]	[0.0,2.2]	[0.7,3.5]	[0.0,2.2]	
Sokoto	34.7	9	49.1	20.5	9.8	1.7	7.9	2	721
	[29.5,40.3]	[6.8,11.8]	[44.1,54.0]	[16.6,25.0]	[7.4,12.8]	[0.8,3.6]	[5.7,10.8]	[1.1,3.6]	
Taraba	18.3	4	38	13.3	6.3	0.5	4.3	0.2	470
	[14.0,23.5]	[2.6,6.4]	[32.5,43.9]	[9.2,18.8]	[4.2,9.3]	[0.1,1.8]	[2.6,6.9]	[0.0,1.7]	
Yobe	40. I	12	57.2	23.5	15.5	3.1	10.6	1.2	750
	[35.0,45.5]	[9.2,15.5]	[51.1,63.0]	[18.8,28.9]	[11.7,20.1]	[1.9,5.1]	[7.6,14.5]	[0.6,2.2]	
Zamfara	31.1	7.7	50.1	22.7	8.6	1.2	6.1	1.3	736
	[26.6,36.1]	[6.1,9.8]	[44.9,55.3]	[18.5,27.6]	[6.5,11.2]	[0.6,2.5]	[4.4,8.6]	[0.8,2.4]	

WHO Flags were used for National Estimates

SMART flags were used for State and Zone estimates

Note: According to WHZ, Global Acute Malnutrition (GAM) is <-2SD and Severe Acute Malnutrition (SAM) is <-3 SD. Estimate of global and severe acute malnutrition includes bilateral edema cases. Mid upper arm circumference (MUAC) used <125mm and <115mm as cut off for global and severe acute malnutrition respectively.

4.2. Maternal Nutrition

Well-nourished women face fewer risks during pregnancy and childbirth, and their children set off on firmer developmental paths, both physically and mentally. Under-nutrition greatly impedes countries' socio-economic development and the potential to reduce poverty.

Nutritional status of women was assessed using Mid Upper Arm Circumference (MUAC) and results are presented in table 2. According to these results, in Nigeria, 6 percent of women age 15-49 years are affected by acute malnutrition (MUAC <221mm)

The prevalence of acute malnutrition was higher in adolescents, age 15 to 19 years, with 16 percent compared to adult women, 20 to 49 years, with 3 percent. The nutritional status of a woman before and during pregnancy is important for a healthy pregnancy outcome. Therefore, more effort is needed to improve teenage nutritional status which will have positive birth outcome and prevent the vicious cycle of intergenerational growth failure.

Disaggregated data by geo-political zones shows that acute malnutrition in women is highest in North East at 10 percent and lowest in South East at 2 percent.

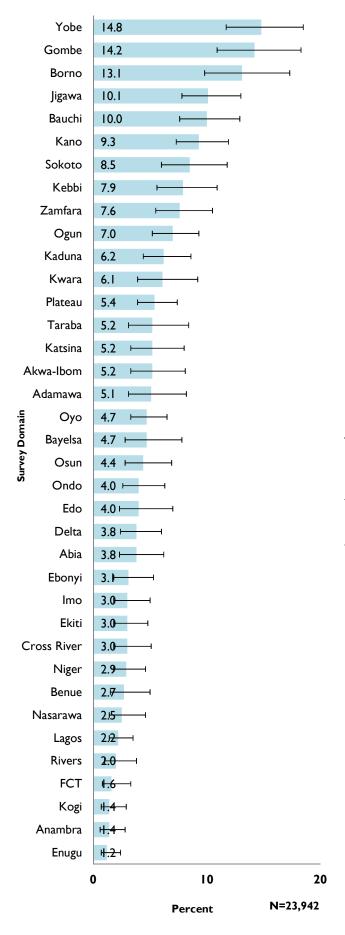
The lowest and highest prevalence of acute malnutrition (MUAC <221mm) were reported in Enugu state at I percent and Yobe state at 15 percent respectively.

The geographical distribution of prevalence of acute malnutrition in women is consistent with previous nutrition surveys conducted since 2010.

The consistent high estimates for women's acute malnutrition in Yobe state deserves further investigation.

Percent distribution of women age 15 to 49 with acute malnutrition by background characteristics, Nigeria, 2014

Background	MUAC i	in mm	Number of women age	
Characteristic	<u><</u> 221 mm	<214 mm	15-49 years	
National	5.5	2.5	23,942	
	[5.1,5.9]	[2.3,2.7]		
Age in years				
15 to 19	16.4	7.8	3,895	
	[15.1,17.8]	[6.9,8.7]		
20 to 49	3.4	1.5	20,047	
	[3.1,3.7]	[1.3,1.7]		
Zone				
North Central	3.2	1.3	4,403	
	[2.6,3.9]	[1.0,1.8]		
North East	10.4	5.1	3,831	
	[9.2,11.9]	[4.2,6.1]		
North West	7.9	3.6	4,805	
	[7.0,8.9]	[3.1,4.3]		
South East	2.4	0.9	3,324	
	[1.8,3.1]	[0.6,1.4]		
South South	3.6	1.9	3,495	
	[2.9,4.5]	[1.4,2.5]		
South West	3.9	1.5	3,941	
	[3.3,4.6]	[1.1,2.0]		



4.3. Infant and Young Child Feeding

Initiation of breastfeeding

Breastfeeding has many health benefits for both the mother and infant. Breast milk contains all the nutrients an infant needs in the first six months of life. Early initiation of breastfeeding ensures that the infant receives the colostrum, or "first milk", which is rich in protective factors. WHO recommends that mothers initiate breastfeeding within one hour of birth.¹

Table 3 shows that, in Nigeria, the recommendation to initiate breastfeeding within one hour of birth is met for only 22 percent of children while early initiation of breastfeeding within one day after birth is 80 percent.

Disaggregated data by geo-political zones shows that the percentage of children who initiated breastfeeding within one hour of birth is lowest in South West 14 percent and North West 15 percent and highest in North Central and South South each at 31 percent.

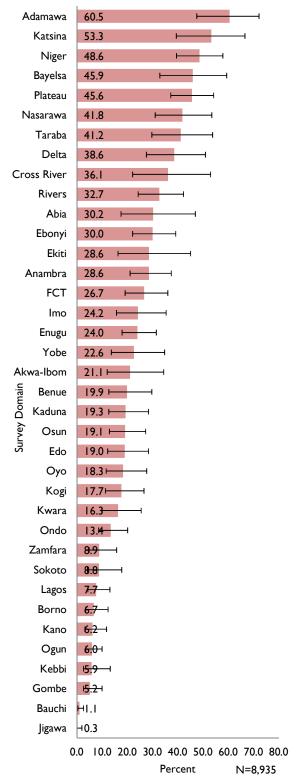
Table 3: Initiation of breastfeeding

Percent of children 0 to 23 months who were ever breastfed, breastfed within one hour of birth and within one day of birth, Nigeria, 2014

Background	Percentage	Percentage who v	Number of	
Characteristics	who were ever breastfed	Within one hour of birth	Within one day of birth	children 0-23 months
National	96.9	21.5	79.7	8,935
	[96.5,97.3]	[20.1,23.0]	[78.3,81.0]	-,
Sex				
Male	97.1	20.7	79	4,481
	[96.6,97.6]	[19.1,22.4]	[77.2,80.7]	
Female	96.7	22.3	80.3	4,454
	[96.1,97.3]	[20.6,24.1]	[78.7,81.8]	
Age in Months				
0 to 11	96.9	20.9	78.6	4,637
	[96.2,97.4]	[19.3,22.7]	[76.7,80.3]	
12 to 23	96.8	17.9	79.6	4,298
	[96.1,97.4]	[16.3,19.6]	[77.6,81.5]	
Zone				
North Central	95.9	31.1	79.6	1,504
	[94.6,96.9]	[27.6,34.7]	[76.8,82.1]	
North East	97.6	19.9	76.3	1,713
	[96.7,98.3]	[16.9,23.3]	[71.6,80.4]	
North West	95.4	15.4	80.4	2,307
	[94.2,96.4]	[12.7,18.6]	[77.0,83.4]	
South East	98.1	27.1	81.2	912
	[96.9,98.8]	[23.0,31.7]	[77.7,84.2]	
South South	97.3	30.9	87.7	1,001
	[96.1,98.2]	[26.4,35.7]	[85.2,89.8]	
South West	98.4	13.6	74.5	1,498
	[97.6,99.0]	[11.0,16.7]	[71.2,77.6]	,

Figure 3: Prevalence of acute malnutrition (MUAC <221 mm) among women age 15 to 49 years, 95 percent confidence interval by survey domain

Figure 4 presents the percentage of early initiation of breastfeeding by state. The lowest percentage of children breasted within one hour of birth was reported in Jigawa at 0.3 percent and the highest in Adamawa state at 61 percent



Breastfeeding and Supplementation

Breastfeeding practices and introduction of complementary foods are important determinants of the nutritional status of children, particularly those under age 2 years. Breast milk is uncontaminated and contains all the nutrients needed by children in the first six months of life. Supplementing breast milk before age 6 months is unnecessary and discouraged because of the likelihood of contamination, which may result in the risk of diarrhoeal diseases. After age 6 months, breast milk should be complemented by other solid or mushy food to provide adequate nutrition to the child (PAHO, 2002).

In this survey, information was collected on infant feeding for the youngest child under age 2 using a 24-hour recall period. As reported in table 4, the recommendation to exclusively breastfeed children for the first six months of life is met for only 25 percent of children.

The majority (71 percent) of children under 6 months are predominantly breastfed, meaning that they either exclusively breastfed or received plain water and nonmilk liquids. The proportion of children who are still being breastfed decreases steadily with age, 77 percent of children continued breastfeeding at one year and about 20 percent at two years (table 5).

Percent of living children according to breastfeeding status, Nigeria, 2014

2014	Children age 0-5 months								
Background Characteristics	Percent exclusively breastfed	Percent predominantly breastfed	Number of children 0-5 months						
National	25.2	70.6	2,265						
	[23.0,27.5]	[68.3,72.9]							
Sex									
Male	25	71.6	1,134						
	[22.2,28.0]	[68.3,74.7]							
Female	25.4	69.7	1,131						
	[22.6,28.4]	[66.6,72.6]							
Zone									
North Central	32.1	66.7	424						
	[27.0,37.6]	[61.4,71.6]							
North East	22.3	85	392						
	[17.9,27.3]	[80.8,88.5]							
North West	10.3	79.4	567						
	[7.6,13.9]	[75.3,83.0]							
South East	18.1	49.4	252						
	[13.4,24.1]	[42.2,56.6]							
South South	30.8	57.1	250						
	[23.8,38.8]	[48.9,65.0]							
South West	39.8	75.8	380						
	[34.2,45.8]	[69.8,81.0]							

Figure 4: Percent of children 0 to 23 months who were breastfed within one hour of birth, 95 percent confidence interval by survey domain

Table5: Breastfeeding

Percent of living children according to breastfeeding status by age, Nigeria, 2014

2014	Children ag	e 12-15	Children a	ge 20-23
	mont		mon	
Background Characteristics	Percent breastfed (Continued breastfeeding at I year)	Number of children 12-15 months	Percent breastfed (Continued breastfeeding at 2 years)	Number of children 20-23 months
National	76.5 [74.0,78.9]	1598	19.6 [17.4,22.0]	1338
Sex				
Male	76.1	804	19	682
Female	[72.7,79.3] 76.9 [73.2,80.2]	794	[16.1,22.3] 20.2 [17.0,23.7]	656
Zone	[]		[,]	
North Central	79.6 [74.3,84.1]	273	29.3 [22.3,37.5]	195
North East	94.9	309	40.4	289
North West	[91.2,97.1] 93.5	420	[34.1,47.2] 26.1	354
South East	[90.1,95.7] 50.2	147	[21.5,31.3] 0.9	126
South South	[40.8,59.5] 54	190	[0.2,3.3] 6.4	141
South West	[45.9,62.0] 68 [60.8,74.4]	259	[3.1,12.6] 9 [5.4,14.6]	233

Minimum dietary diversity is defined as the percentage of children aged 6 to 23 months who received food from four or more of seven food groups during the past 24 hours. In Nigeria the percentage of children aged 6 to 23 months who consumed the minimum dietary diversity was 37 percent. The proportion of children who were fed the minimum number of times was 57 percent.

Minimum acceptable diet is defined as breastfeeding children aged 6 to 23 months who had the minimum dietary diversity and meal frequency, along with nonbreastfeeding children who had the minimum dietary diversity, minimum meal frequency, and no less than two milk feedings, in the past 24 hours. Based on this, a minimum acceptable diet was consumed only by 18 percent, while 46 percent had consumed iron-rich food during the previous day.

Younger children, aged 6 to 8 months, consumed less diverse and acceptable diets, and also have a reduced consumption of iron-rich foods.

In general, the four indicators of infant and young child feeding practices in children are worse in the northeastern and northwestern compared with South. These percentages are consistent with the geographic distribution of malnutrition observed in the country.

The lowest percentage of children who consumed the minimum acceptable diet are reported in Kaduna at 5 percent followed by Gombe, Bauchi, Katsina and Bayelsa all reported that only about 9 percent of children 6 to 23 months consumed the minimum acceptable diet.

The highest percentages, with about 36 percent of children 6 to 23 months who consumed the minimum acceptable diet are reported from Kogi state.

Table 6: Infant and young child feeding (IYCF) practices

Percent of children age 6-23 months who received appropriate liquids and solid, semi-solid, or soft foods the minimum number of times or more; from minimum food groups during the previous day, Nigeria, 2014

Packground	Perc	Number of			
Background - Characteristics	Minimum dietary diversity	Minimum meal frequency	Minimum acceptable diet	Iron-rich foods	children age 6-23 months
National	37	56.7	17.5	45.8	6,670
	[35.3,38.7]	[54.9,58.5]	[16.3,18.8]	[44.1,47.6]	
Sex					
Male	37.3	56.2	17	46.9	3,347
	[35.3,39.4]	[54.0,58.3]	[15.5,18.5]	[44.8,49.0]	
Female	36.6	57.2	18	44.8	3,323
	[34.4,38.7]	[54.9,59.4]	[16.4,19.7]	[42.6,47.0]	
Age in month	s				
6 to 8	11.5	57.8	9.8	15.3	1,168
	[9.6,13.8]	[54.4,61.1]	[8.0,11.9]	[13.1,17.8]	
9 to 11	24.8	47.3	15.7	34.8	1,204
	[22.1,27.7]	[44.0,50.7]	[13.6,18.1]	[31.8,38.0]	
12 to 17	42. I	58.9	23.5	53.3	2,303
	[39.5,44.8]	[56.4,61.4]	[21.4,25.7]	[50.7,55.8]	
18 to 23	53	59.1	16	61.6	1,995
	[50.3,55.8]	[56.4,61.7]	[14.0,18.2]	[58.9,64.3]	
Zone					
North Central	44.3	63.4	25.3	55	1,080
	[39.7,48.9]	[58.6,67.9]	[21.6,29.4]	[50.7,59.3]	
North East	25.1	46.3	12	32.6	1,321
	[21.8,28.7]	[42.9,49.7]	[9.9,14.4]	[28.8,36.7]	
North West	23.3	52.6	12.6	23.1	1,740
	[20.0,26.8]	[49.0,56.2]	[10.5,14.9]	[19.9,26.7]	
South East	57.4	79.6	28.6	75.3	660
	[52.7,61.9]	[75.2,83.3]	[24.7,32.8]	[70.9,79.3]	
South South	39.7	55.1	15.6	60.I	751
	[35.2,44.5]	[50.1,59.9]	[12.8,18.8]	[55.5,64.5]	
South West	45.4	53.8	17.8	60.1	1,118
	[41.7,49.1]	[49.5,58.2]	[14.7,21.4]	[56.6,63.5]	

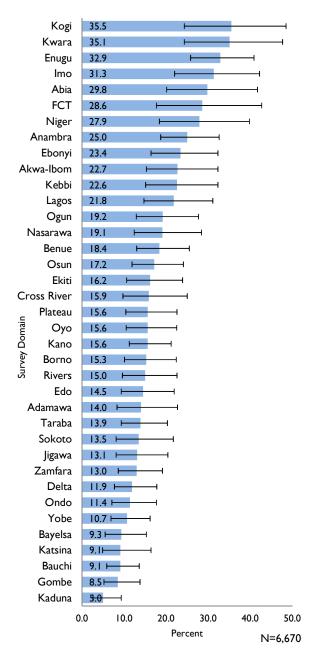


Figure 5: Percent of children age 6 to 23 months who received minimum acceptable diet, 95 percent confidence interval by survey domain

4.4. Vitamin A Supplementation

Vitamin A is a crucial micronutrient for the development of children's immune and visual systems. According to the survey results, about 49 percent of Nigerian children aged between 6 to 59 months received Vitamin A supplement in the 6 months prior to the survey. This implies that about 50 percent of Nigerian children, who did not receive this supplement may be growing up with lower immunity which can trigger frequent health problems and poor growth due to vitamin A deficiency. Results disaggregated by sex show no differences in supplementation between girls and boys.

However younger children seems to be at greater risk, as only 41 percent of children aged 6 to 11 months received vitamin A supplement compared with 50 percent older children. With regards to geo-political distribution, lower levels of vitamin A supplementation have been observed in the South East zone with 26 percent of children 6 to 59 months received vitamin A supplement in the last 6 months. The highest percentage of supplementation has been reported in the South West zone with 80 percent of children 6 to 59 months received vitamin A supplement in the last 6 months. Figure 6 shows the geographical distribution of children who received vitamin A supplement per survey domain. The highest and lowest percentage of children receiving vitamin A supplementation were observed in Lagos at 93 percent and Benue at 7 percent respectively.

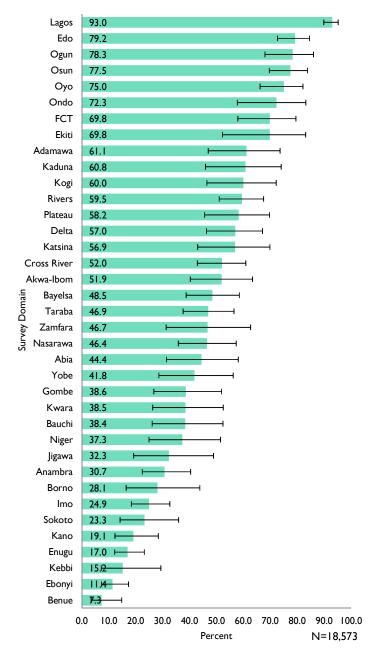


Figure 6: Percent of children age 6 to 59 months who received vitamin A tablets 6 months prior to the survey, 95 percent confidence interval by survey domain

5. CHILD HEALTH

5.1. Vaccination Coverage

Immunization is one of the most cost-effective and proven health intervention that has a significant impact in reducing child morbidity and mortality. A world fit for children goal is to ensure full immunization of children less than one year of age at 90 percent nationally, with at least 80 percent coverage in each state.

Data were collected on DTP/Penta and measles vaccination coverage among children under-five years. Mothers were asked to provide vaccination card and interviewers copied vaccination information from the cards onto the questionnaire. If the child had no vaccination card, the respondent was asked to recall the vaccine given to the child. If the mother indicated that the child had received DTP/Penta, she was asked the number of dose(s) the child had received the vaccine.

Table 7 shows the proportion of children age 12 to 23 months who had received DTP/Penta and measles vaccinations before the survey. Overall, 64 percent of children 12 to 23 months had received measles vaccine. Although 67 percent received the first dose of DTP/Penta vaccine, only 52 percent had received all the three doses. This reflects a dropout rate of 22 percent. It is observed that measles dose coverage is higher than the third dose of DTP; this could be related to measles vaccination campaigns conducted in 2013. Ten percent of eligible children received no vaccine at all.

There is a significant variation among the geopolitical zones and states in vaccination coverage. Eighty five percent of children in South West had received DTP3/Penta3, while only 18 percent in North West.

The variation in DTP3/Penta3 vaccination coverage among states ranges from 2 percent in Sokoto to 92 percent in Osun state. Similar pattern is also observed in measles coverage. Overall, 11 of the 37 domains achieved the international goal of 80 percent coverage, while the coverage is below 25 percent in 9 states.

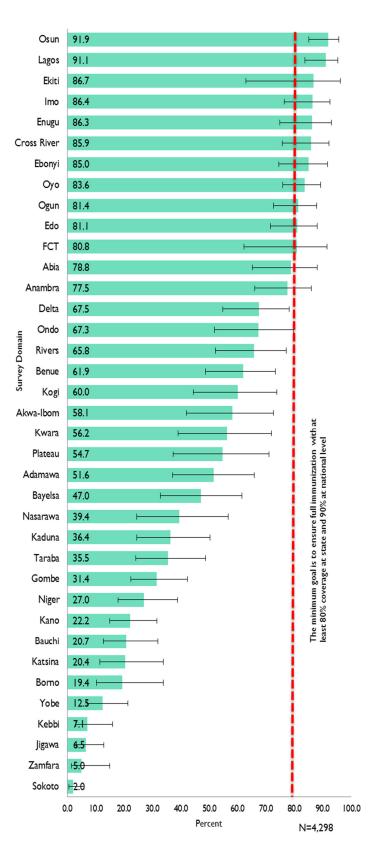


Figure 7: Percent of children 12 to 23 months who received DTP3/Penta3 containing vaccine, 95 percent confidence interval by survey domain.

Table 7: Vaccinations by background characteristics

Percent of children age 12 to 23 months vaccinated against vaccine preventable childhood diseases at any time before the survey, Nigeria, 2014

Background Characteristics	Any Vaccination	DPTI/ Pental	DPT2/ Penta2	DPT3/ Penta3	Measles	Percentage with vaccination card seen	Number of children age I2-23 months
National	89.7	67	61.6	52.2	63.7	35.8	4,298
	[88.2,91.0]	[64.9,69.0]	[59.4,63.7]	[50.1,54.3]	[61.6,65.7]	[33.9,37.8]	
Zone							
North Central	90.1	70.9	65.8	54.5	70	39.4	697
	[86.4,92.8]	[65.2,76.1]	[59.6,71.5]	[48,6,60.2]	[65.0,74.6]	[34.6,44.4]	
North East	82.1	46.8	38.7	27.4	44.5	15.1	854
	[76.2,86.7]	[41.1,52.5]	[33.5,44.2]	[22.9,32.5]	[39.1,50.0]	[12.3,18.4]	
North West	86.7	35.8	27.2	17.9	42.5	9.9	1,119
	[83.4,89.4]	[31.2,40.8]	[22.9,31.9]	[14.3,22.0]	[37.8,47.2]	[7.1,13.6]	(2)
South East	97.1	94.5	91.8	82.7	82.7	55.1	431
	[94.5,98.4]	[90.8,96.8]	[87.7,94.6]	[77.9,86.6]	[78.4,86.3]	[49.5,60.5]	470
South South	88.9	83.5	78.6	67.9	73.4	52.2	472
	[84.2,92.3]	[78.5,87.5]	[72.9,83.3]	[62.0,73.3]	[68.0,78.1]	[46.5,57.9]	
South West	95.4	92.4	91	85.1	83.1	59.6	725
State	[92.9,97.0]	[89.1,94.8]	[87.5,93.6]	[81.4,88.2]	[79.3,86.3]	[54.5,64.5]	
Abia	95.5	95.5	90.9	78.8	80.3	53	66
ADIa	[86.5,98.6]	[86.5,98.6]	[80.8,96.0]	[65.2,88.0]	[66.9,89.2]	[40.2,65.5]	
	91.6	81.1	69.5	51.6	62.1	23.2	95
Adamawa							75
	[81.0,96.5]	[67.8,89.7]	[54.9,80.9]	[37.1,65.8]	[49.2,73.5]	[14.5,34.8]	
Akwa-Ibom	79.7	78.4	70.3	58.1	63.5	40.5	74
	[65.4,89.1]	[64.3,87.9]	[54.9,82.1]	[41.9,72.7]	[49.7,75.4]	[30.0,52.1]	
Anambra	97.8	91	88.8	77.5	83.1	47.2	89
	[85.9,99.7]	[77.4,96.8]	[75.7,95.2]	[66.1,85.9]	[73.8,89.6]	[35.2,59.6]	
Bauchi	94.7	34.9	26.6	20.7	40.8	13.6	169
	[89.1,97.5]	[24.4,47.2]	[18.1,37.4]	[12.7,31.9]	[31.3,51.1]	[8.2,21.8]	
Bayelsa	84.8	71.2	63.6	47	59.1	59.1	66
	[71.0,92.8]	[58.1,81.5]	[48.1,76.8]	[32.8,61.6]	[42.8,73.6]	[44.1,72.5]	
Ponuo	90.7	87.6	79.4	61.9	73.2	58.8	97
Benue	[81.0,95.7]	[77.7,93.5]	[64.3,89.2]	[48.7,73.4]	[64.7,80.3]	[47.0,69.6]	
_					· · · ·	[+7.0,07.0] 4.7	٥٢١
Borno	54.3	26.4	25.6	19.4 [10.2.22.0]	27.1		129
	[36.2,71.2]	[14.5,43.0]	[14.2,41.7]	[10.2,33.8]	[15.2,43.5]	[1.9,11.0]	
Cross Rivers	95.8	94.4	93	85.9	84.5	69	71
	[87.4,98.7]	[85.7,97.9]	[83.7,97.1]	[75.8,92.2]	[72.3,91.9]	[51.6,82.3]	
Delta	83.1	81.8	77.9	67.5	70.1	58.4	77
	[66.7,92.4]	[66.4,91.1]	[62.9,88.0]	[54.8,78.1]	[56.6,80.8]	[42.3,72.9]	
Ebonyi	96	94	93	85	81	61	100
	[87.3,98.8]	[85.5,97.6]	[84.4,97.0]	[74.5,91.7]	[71.0,88.1]	[49.4,71.5]	
Edo	92.8	87.4	84.7	81.1	82.9	38.7	111
	[84.0,96.9]	[77.8,93.2]	[75.1,91.0]	[71.6,88.0]	[73.3,89.5]	[29.0,49.5]	
F L:	97.6	91.6	91.6	86.7	90.4	56.6	83
Ekiti	[85.5,99.6]	[58.3,98.8]	[58.3,98.8]	[62.9,96.2]	[82.8,94.8]	[42.4,69.8]	
							05
Enugu	98.9	97.9	94.7	86.3	82.1	57.9	95
	[92.7,99.9]	[91.9,99.5]	[82.3,98.6]	[74.8,93.1]	[71.0,89.6]	[46.2,68.8]	

Background Characteristics	Any Vaccination	DPT1/ Pental	DPT2/ Penta2	DPT3/ Penta3	Measles	Percentage with vaccination card	Number of children age
	91.3	85.6	82.7	80.8	84.6	seen 65.4	12-23 months
FCT	[75.8,97.3]	[69.2,94.0]	[63.2,93.0]	[62.2,91.5]	[66.5,93.8]	[51.5,77.0]	101
- .	[/ 3.8, 77.5] 98.1	53.5	42.1	31.4	[00.5,75.0] 50.9	26.4	159
Gombe	[94.5,99.4]	[40.2,66.2]	[30.3,55.0]	[22.3,42.3]	[38.7,63.0]	[18.5,36.2]	157
	[۲۹.3, ۷۷.۹] 96.3	[+0.2,00.2] 95.1	92.6	[22.3,42.3] 86.4	85.2	59.3	81
Imo	[89.3,98.8]	[87.9,98.1]	[85.4,96.4]	[76.5,92.6]	[75.4,91.5]	[47.4,70.2]	01
	[87.3,78.8] 92.4	30.6	[03.4,70.4] 19.4	[70.3,72.0] 6.5	38.2	ربي. 7.1	170
ligawa	[85.1,96.2]	[20.3,43.2]	[11.9,30.1]	[3.1,12.8]	[28.3,49.3]	[3.7,13.1]	170
	[03.1,70.2] 89	[20.3, 4 3.2] 57.1	46.8	36.4	[28.3,47.3] 59.7	[3.7,13.1]	154
Kaduna							154
	[78.1,94.8]	[43.3,69.9]	[34.0,60.0]	[24.4,50.3]	[47.5,70.9]	[9.3,32.5]	150
Kano	95.6	46.8	35.4	22.2	46.2	10.1	158
	[90.9,97.9]	[36.1,57.9]	[25.5,46.8]	[15.0,31.5]	[35.3,57.5]	[5.1,19.3]	1.42
Katsina	78.9	35.9	30.3	20.4	44.4	10.6	142
	[69.3,86.1]	[24.0,49.8]	[19.5,43.8]	[11.4,33.8]	[31.4,58.1]	[5.9,18.3]	
Kebbi	88.5	15.4	11	7.1	48.9	8.8	182
	[77.4,94.5]	[8.1,27.4]	[4.9,22.7]	[3.0,16.0]	[34.1,63.9]	[2.9,23.5]	
Kogi	85	73.8	72.5	60	68.8	33.8	80
	[72.6,92.4]	[56.5,85.9]	[54.7,85.2]	[44.4,73.8]	[51.6,81.9]	[22.8,46.8]	
Kwara	82.2	65.8	61.6	56.2	61.6	32.9	73
	[71.7,89.4]	[51.2,77.9]	[46.3,75.0]	[39.0,72.0]	[46.8,74.6]	[19.8,49.3]	
Lagos	99.4	98.1	96.2	91.1	90.5	75.3	158
	[95.7,99.9]	[94.4,99.4]	[89.9,98.6]	[83.7,95.4]	[83.0,94.9]	[65.4,83.1]	
Nasarawa	97.1	64.4	53.8	39.4	76	25	104
	[91.9,99.0]	[48.0,78.0]	[37.9,69.0]	[24.4,56.7]	[63.1,85.4]	[15.1,38.5]	
Niger	86.9	44.3	38.5	27	54.1	18.9	122
	[73.1,94.2]	[30.3,59.2]	[25.8,53.0]	[17.8,38.8]	[40.2,67.3]	[10.8,30.9]	
Ogun	93	90.7	89.1	81.4	78.3	52.7	129
	[86.3,96.6]	[84.0,94.8]	[81.9,93.7]	[72.7,87.8]	[69.7,85.0]	[40.0,65.0]	
Ondo	81.7	76.9	76	67.3	70.2	36.5	104
	[65.0,91.5]	[58.2,88.9]	[57.6,88.0]	[51.8,79.8]	[53.7,82.7]	[25.4,49.4]	
Osun	97.3	97.3	93.7	91.9	80.2	57.7	111
	[92.2,99.1]	[92.2,99.1]	[88.3,96.7]	[85.1,95.7]	[71.4,86.8]	[45.0,69.4]	
Оуо	96.4	90.7	90.7	83.6	80.7	54.3	140
-,-	[92.1,98.4]	[83.2,95.1]	[83.2,95.1]	[75.9,89.2]	[71.4,87.5]	[41.9,66.2]	
Plateau	97.4	69.2	65.8	54.7	73.5	30.8	117
lateau	[93.0,99.1]	[49.8,83.6]	[47.1,80.6]	[37.3,71.0]	[61.1,83.1]	[20.7,43.1]	
Rivers	95.9	84.9	79.5	65.8	76.7	54.8	73
	[87.7,98.7]	[72.5,92.3]	[65.5,88.7]	[52.1,77.2]	[64.4,85.7]	[42.1,66.9]	
Sokoto	77	11.8	4.6	2	16.4	2.6	152
300010	[62.7,86.9]	[5.6,23.4]	[1.7,11.7]	[0.6,5.9]	[9.5,27.0]	[1.0,6.8]	
Taraba	97.3	76.4	60	35.5	72.7	21.8	110
Taraba	[91.4,99.2]	[63.3,85.8]	[47.8,71.1]	[24.1,48.7]	[60.6,82.2]	[14.3,31.8]	
V-h-	66.7	[05.5,05.0] 26	21.4	12.5	26.6	8.3	192
Yobe	[52.0,78.7]	[16.2,39.2]	[12.8,33.4]	[7.0,21.3]	[16.3,40.2]	[4.2,15.9]	172
	[32.0,78.7] 70.2	[10.2,37.2]	[12.8,55.4] 8.1	[7.0,21.3] 5	[10.3,+0.2] 18.6	3.1	161
Zamfara	[54.1,82.5]	[5.4,25.9]	[2.8,21.3]	5 [1.5,15.0]	[10.6,30.6]	[1.2,7.9]	101

5.2. Acute Respiratory Infection

Acute respiratory infection (ARI) is the leading cause of morbidity and mortality among children under 5 years globally. Timely diagnosis and treatment with antibiotics can prevent a considerable proportion of mortality. The prevalence of ARI was estimated by asking mothers (caretakers) whether the child had had cough accompanied by short, rapid breathing in the two weeks prior to the survey. The estimate is not based on diagnosis by health professionals, hence this result needs to be interpreted with caution. However, our estimate it similar to the one obtained in MICS 2011 and DHS 2013.

Overall, 3 percent of children under 5 years were reported to have had symptoms of acute respiratory infection during two weeks preceding the survey. Of these children, only 35 percent were given antibiotics. In South West zone 67 percent of children had received antibiotics while only 15 percent had received antibiotics in South East zone two weeks prior to the survey. Antibiotic treatment was most prevalent among children age 12 to 23 months (43 percent) and least prevalent among older children age 48 to 59 months (29 percent).

Table 8: Treatment of children with Acute Respiratory Infection (ARI)

Percent of children age 0 to 59 months with Acute Respiratory Infection (ARI) in the last two weeks who were given antibiotics, Nigeria, 2014

Background characteristics	Had symptoms of ARI	Number of children age 0-59 months	Children with a symptom of ARI in the last two weeks who were given antibiotics	Number of children age 0-59 months with symptoms of ARI
National	2.8	20,939	34.9	604
	[2.5,3.1]		[30.4,39.8]	
Sex				
Male	2.8	10,479	38.7	308
	[2.4,3.2]		[32.6,45.1]	
Female	2.6	10,460	30.9	296
	[2.2,3.0]		[25.4,37.0]	
Age in months				
<6	1.8	2,265	34.6	45
	[1.3,2.5]		[21.6,50.6]	
6-11	2.7	2,372	35	66
	[2.0,3.5]		[24.3,47.5]	
12-23	3.2	4,298	42.7	147
	[2.6,4.0]		[34.4,51.3]	
24-35	2.5	4,261	32.6	120
	[2.0,3.1]		[24.6,41.9]	
36-47	3.1	4,036	32.8	122
	[2.5,3.8]		[24.2,42.7]	
48-59	2.4	3,603	28.5	104
	[1.9,3.0]		[20.1,38.7]	
Zone				
North Central	2.8	3,493	61.6	94
	[2.1,3.6]		[49.7,72.3]	
North East	4.3	3,982	33.8	189
	[3.4,5.6]		[24.9,43.9]	
North West	3	5,274	24.4	156
	[2.3,3.8]		[16.5,34.6]	
South East	2.4	2,272	15.4	55
	[1.6,3.4]		[7.1,30.2]	
South South	2.7	2,465	23.5	68
	[1.9,4.0]		[13.8,37.0]	
South West	1.2	3,453	66.9	42
	[0.8,1.7]		[49.4,80.7]	

5.3. Fever

Fever is a manifestation of malaria and other acute infections in children. Malaria is one of the leading cause of death globally. Question on prevalence and treatment of fever were asked for children under 5 years. Table 9 shows the proportion of children under 5 years with a fever during the two weeks prior to the survey, percentage who had a fever and who had a finger or heel stick for malaria testing and percentage receiving treatment by background characteristics.

Twenty seven percent of children had a fever in the last two weeks prior to the survey. Fever prevalence varied considerably among zones ranging from 14 to 36 percent in South West and North West zones respectively. The prevalence of fever was highest in children age group 12 to 23 months (32 percent).

Table 9: Malaria and treatment of children with fever

Percent of children age 0 to 59 months who had a fever in the last two weeks, blood taken from finger or heel, who were given antimalarial drugs and antibiotics, Nigeria, 2014

			Children with a fe	ver in the last two	o weeks who :	
Background Characteristics	Had fever in the last two weeks	Number of children age 0-59 months	Had blood taken from a finger or heel for testing	Were given antimalarial	Were given antibiotics	Number of children with fever in last two weeks
National	26.7	20,939	7.8	27.3	15.4	5,860
	[25.7,27.8]	,	[6.9,8.8]	[25.6,29.2]	[14.1,16.8]	
Sex	27.1	10,479	7.8	28.1	15.7	3,001
Male	[25.9,28.4]	10,479	7.8 [6.7,9.1]	[25.9,30.3]		3,001
		10.460	[6.7,9.1] 7.8	[23.9,30.3] 26.6	[14.1,17.4]	2 050
Female	26.3	10,460			15.2	2,859
Age in months	[25.2,27.5]		[6.6,9.1]	[24.5,28.8]	[13.5,17.0]	
<6	14.4	2,265	6.3	16.6	17.7	341
-0	[12.8,16.2]	2,205	[4.0,9.8]	[12.7,21.4]	[13.5,22.9]	511
6-11	29.9	2,372	6.5	22.1	[13.3,22.7] [6.3	750
0-11	[27.8,32.1]	2,372	[4.8,8.7]	[18.7,25.9]	[13.6,19.4]	/30
12.22		4 200				1.425
12-23	31.7	4,298	9.5	27.1	16.4	1,435
	[30.0,33.4]		[7.9,11.4]	[24.6,29.8]	[14.3,18.7]	
24-35	28.6	4,261	7.2	29.1	16.6	1,281
- · · -	[27.0,30.3]		[5.7,9.0]	[26.1,32.2]	[14.2,19.3]	
36-47	27.2	4,036	7.1	29.6	13.6	1,138
	[25.5,29.0]		[5.6,9.1]	[26.4,33.0]	[11.4,16.1]	
48-59	24.4	3,603	8.3	30.7	13	912
7	[22.8,26.2]		[6.4,10.6]	[27.3,34.4]	[10.7,15.8]	
Zones	20.2	2 402	127	21.1	20.1	745
North Central	20.2	3,493	13.6	31.1	28.1	745
	[18.2,22.2]	2 000	[10.7,17.1]	[26.9,35.5]	[24.1,32.6]	1004
North East	29.4	3,982	7.6	26.8	19.7	1206
	[26.8,32.1]		[5.3,10.6]	[22.8,31.3]	[16.7,23.2]	
North West	35.5	5,274	4.4	11.3	9	2,026
	[33.1,37.9]		[3.4,5.7]	[9.3,13.6]	[7.4,10.8]	
South East	27.6	2,272	7.2	37.3	10.5	622
	[24.8,30.5]		[4.7,11.1]	[32.5,42.4]	[7.8,14.1]	
South South	32.3	2,465	7.8	37.5	13.8	767
	[29.3,35.6]		[5.8,10.4]	[32.4,42.9]	[10.4,18.2]	
South West	13.9	3,453	13.4	47.3	25.1	494
	[12.4,15.6]		[10.1,17.6]	[41.5,53.2]	[20.1,30.9]	
States						
Abia	27.3	374	3.9	42.2	15.7	102
	[22.1,33.1]		[1.1,13.5]	[30.7,54.5]	[9.3,25.1]	
Adamawa	26.7	454	9.1	34.7	19.8	121
	[21.4,32.6]		[4.6,17.2]	[21.8,50.3]	[10.4,34.5]	
Akwa-Ibom	32.1	364	6	24.8	8.5	117
	[24.5,40.9]		[2.8,12.5]	[14.5,39.1]	[3.3,20.4]	
Anambra	24.8	452	10.7	35.7	11.6	112
	[19.8,30.5]		[3.9,26.0]	[26.9,45.6]	[5.7,22.3]	
Bauchi	36.6	902	13.3	[]	[6.]	330
	[31.0,42.5]		[7.8,21.9]	[12.7,24.6]	[11.7,21.6]	
Bayelsa	38.3	371	7.7	23.2	12	142
Dujcisa	[30.9,46.2]		[4.0,14.4]	[15.1,34.1]	[7.1,19.5]	
Panua	[30:3,40.2]	455	[4.0,14.4] 3.4	32.8	9	67
Benue	[9.8,21.5]		[6.1,27.0]	[24.6,42.2]	[4.1,18.4]	57
D	[7 .8,21.5] 17.5	624	[6.1,27.0] I.8	[24.6,42.2] 47.7	[4.1,18.4] 7.3	109
Borno		027				107
- -	[12.1,24.6]	400	[0.5,6.2]	[34.9,60.8]	[4.1,12.9]	140
Cross River	35.3	422	10.1	53	4. [(4.20.1]	149
	[27.5,44.0]	26.1	[5.9,16.6]	[38.7,66.8]	[6.4,28.1]	
Delta	34.3	396	11	33.8	11	136
	[28.5,40.7]		[5.5,21.0]	[23.7,45.7]	[6.0,19.5]	
Ebonyi	26.4	535	8.5	29.8	5	141
	[21.1,32.3]		[4.5,15.6]	[21.4,39.8]	[2.4,9.9]	

Table 9: continued Number of Children with a fever in the last two weeks who :							
Background Characteristics	Had fever in the last two weeks	children age 0-59 months	Had blood taken from a finger or heel for testing	Were given antimalarial	Were given antibiotics	Number of children with fever in last two weeks	
Edo	16.5	553	14.3	62.6	19.8	91	
	[12.6,21.2]		[8.2,23.7]	[51.4,72.7]	[8.6,39.2]		
Ekiti		427	18.8	46.9	21.9	64	
	[11.1,20.0]		[9.9,32.7]	[33.5,60.8]	[11.3,38.2]		
Enugu	27.7	487	11.1	37	10.4	135	
	[21.7,34.7]		[5.9,20.0]	[27.8,47.4]	[6.0,17.4]		
FCT	15.6	417	12.3	60	15.4	65	
CI	[11.9,20.1]		[4.6,29.1]	[46.2,72.4]	[6.6,31.8]		
Gombe	38.7	727	4.6	20.3	16.7	281	
Gombe	[33.4,44.2]	121	[2.6,8.1]	[14.1,28.4]	[11.7,23.3]	201	
mo	31.1	424	3	39.4	9.1	132	
Imo	[24.6,38.5]	727	[0.9,9.8]	[28.4,51.6]	[4.4,17.9]	132	
igawa	[24.6,38.5] 38.4	816	[0.9,9.8]	[20.4,51.0] [6.9	[4.4,17.7] [6.9	313	
igawa	38.4 [32.7,44.4]	010	[7.2,17.1]	[12.4,22.7]	[12.0,23.4]	313	
Cadupa		40E	[/.2,17.1] I.6			100	
Kaduna	30.4	625		12.6	10	190	
Kana	[24.8,36.6]	750	[0.5,4.7]	[7.6,20.2]	[6.0,16.1]	222	
Kano Katsina	29.4	759	5.8	14.3	8.1	223	
	[25.7,33.4]	 - ·	[3.1,10.7]	[9.3,21.5]	[4.8,13.3]		
	28.4	751	6.6	15	7	213	
	[21.7,36.1]	.	[3.7,11.4]	[8.2,25.8]	[3.9,12.3]		
Kebbi	46.3	816	0.5	7.1	8.2	378	
	[40.1,52.6]		[0.1,2.0]	[3.8,13.0]	[5.1,12.9]		
Kogi	18.1	397	20.8	37.5	22.2	72	
	[13.0,24.7]		[11.2,35.5]	[25.4,51.4]	[12.0,37.5]		
Kwara	18.1	464	31	38.1	26.2	84	
	[14.5,22.4]		[19.4,45.5]	[25.5,52.6]	[14.9,41.8]		
agos	12.3	726	16.9	62.9	22.5	89	
	[9.4,15.9]		[9.9,27.3]	[50.0,74.2]	[13.0,35.9]		
Nasarawa	31.9	505	6.8	11.8	53.4	161	
	[28.2,35.8]		[3.7,12.2]	[6.2,21.4]	[39.4,66.9]		
Niger	20	676	6.7	40.7	10.4	135	
	[15.7,25.1]		[3.6,11.9]	[29.1,53.5]	[5.8,17.8]		
Ogun	13.7	627	9.3	55.8	22.1	86	
-	[10.0,18.6]		[4.2,19.5]	[42.9,68.0]	[13.4,34.2]		
Ondo	18	488	11.4	33	26.1	88	
	[14.1,22.7]		[6.0,20.5]	[21.4,47.0]	[14.4,42.6]		
Osun	16.9	502	15.3	36.5	25.9	85	
	[12.9,21.8]		[7.9,27.7]	[26.0,48.4]	[15.8,39.5]		
Оуо	12	683	8.5	37.8	31.7	82	
-,-	[8.9,16.0]	200	[3.1,21.4]	[22.1,56.5]	[19.1,47.7]	02	
Plateau	27.8	579	[3.1,21.4]	[22.1,50.5]	51.6	161	
accau	[23.6,32.4]	577	[6.9,19.4]	[7.9,24.5]	[40.2,62.8]	101	
livers	[23.6,32.4] 36.8	359	[6.9,19.4] 3.8	[7.9,24.5] 38.6		132	
Rivers		337			18.2	132	
Salvati	[29.3,44.9]	740	[1.7,8.1]	[29.0,49.2]	[10.8,29.0]	20.4	
Sokoto	51.3	749	2.1	4.2	5.5	384	
	[43.6,58.8]	100	[1.0,4.4]	[2.3,7.3]	[3.3,9.0]		
Taraba	36.1	490	5.6	9.6	36.7	177	
	[31.0,41.6]		[2.2,13.6]	[5.6,16.0]	[26.8,47.9]		
Yobe	23.9	785	2.7	50.5	27.7	188	
	[18.1,31.0]		[1.0,6.9]	[36.8,64.2]	[19.2,38.2]		
Zamfara	42.9	758	2.2	6.5	7.7	325	
	[34.9,51.2]		[1.1,4.0]	[4.2,9.8]	[4.7,12.4]		

Of those who had fever in the two weeks prior to the survey, only 8 percent had finger or heel stick. North Central zone has the highest percentage of blood testing (14 percent) while North West zone with the lowest (4 percent). Overall, 27 percent of children who had fever in the two weeks prior to the survey were given antimalarial. Forty seven percent of children with fever in South West received antimalarial drug while only 11 received in North West.

5.4. Diarrhoeal Disease

Diarrhoea is the second leading cause of mortality among children under five years of age globally. It can be easily treated with oral rehydration therapy and zinc tablets. Most of these deaths are due to dehydration from loss of substantial quantities of water and electrolytes in loose stools and mainly affects children under the age of 2 years. It has been proven that treatment with zinc tablets effectively reduces both the duration and severity of diarrhoea episodes as well as the need for advanced medical care. The provision of zinc tablets may also reduce the demand of caregivers for other less effective drugs, such as antibiotics, which should not be routinely administered.

Mothers were asked whether any of their children had diarrhoea any time during two weeks preceding the survey. If so, the mother (caretaker) was asked if the child was given ORS and/or Zinc. Respondent's perception of diarrhoea could affect the estimates of diarrhoea. Two weeks period was used as a recall period in order to minimize recall bias.

Prevalence of diarrhoea also varies seasonally, hence it is important to take this in to account when interpreting the results.

Table 10 : Diarrhoea, oral rehydration salt and zinc

Percent of children age 0 to 59 months with diarrhoea in the last two weeks, and treatment with oral rehydration salts (ORS) and zinc, Nigeria, 2014

rehydration salts	、 <i>,</i>	-	Children with diar	Number of children	
Background	Had diarrhoea in the last	Number of children age —	received	:	age 0-59 months
Characteristics	two weeks	0-59 months	Oral rehydration salts (ORS)	Zinc	with diarrhoea in the last two weeks
National	17.7	20,939	20.4	6.7	3,997
	[16.9,18.6]		[18.7,22.2]	[5.7,7.9]	
Sex					
Male	18.6	10,479	21.2	7.2	2,093
	[17.5,19.6]		[19.0,23.7]	[5.9,8.6]	
Female	16.9	10,460	19.5	6.3	I,904
	[15.9,17.9]		[17.4,21.8]	[5.0,7.9]	
Age in months					
<6	10.7	2,265	15.9	5.1	253
	[9.4,12.2]		[11.5,21.5]	[3.1,8.3]	
6-11	24.1	2,372	24.1	6.3	601
	[22.0,26.2]		[20.4,28.3]	[4.6,8.6]	
12-23	24.1	4,298	24.1	7.3	1,112
	[22.6,25.6]		[21.1,27.4]	[5.8,9.1]	
24-35	18.5	4,261	19.3	6.1	864
	[17.1,20.0]		[16.3,22.6]	[4.5,8.2]	
36-47	15.5	4,036	14.9	7.6	672
	[14.1,17.0]		[11.8,18.6]	[5.7,10.1]	
48-59	12.4	3,603	19.3	6.8	492
	[11.2,13.7]		[15.2,24.2]	[4.7,9.7]	
Zone					
North Central	15.2	3,493	33.8	21.4	530
			[28.2,39.9]	[17.1,26.5]	
North East	20.8	3,982	18.7	3.1	898
	[18.4,23.4]		[14.3,24.0]	[1.9,5.1]	
North West	29	5,274	13.8	3.6	1605
	[26.9,31.3]		[11.7,16.3]	[2.3,5.6]	
South East	13.6	2,272	11.5	4.2	309
	[11.8,15.5]		[8.1,16.0]	[2.1,8.3]	
South South	13.1	2,465	21.3	7.2	329
	[11.2,15.4]		[16.6,26.8]	[4.6,11.0]	
South West	8.9	3,453	40.6	8.6	326
	[7.6,10.3]		[33.9,47.7]	[5.7,12.9]	
State					
Abia	11.5	374	20.9	4.7	43
	[8.3,15.8]		[10.1,38.3]	[1.1,17.6]	
Adamawa	15.9	454	25	2.8	72
	[10.5,23.2]	244	[14.0,40.5]	[0.4,18.9]	
Akwa-Ibom	15.7	364	8.8	0	57
	[10.9,22.0]	450	[3.6,19.7]	1.4	(0
Anambra	15.3	452	4.3	1.4	69
-	[11.4,20.2]	000	[1.4,12.7]	[0.2,9.3]	27/
Bauchi	30.6	902	23.6	2.9	276
	[25.7,36.0]	271	[14.4,36.0]	[1.2,6.8]	(0
Bayelsa	18.6	371	27.5	8.7	69
	[13.8,24.7]	455	[16.8,41.7]	[2.6,25.5]	43
Benue	13.8	455	23.8	0	63
	[10.4,18.2]	124	[13.9,37.7]	2.4	40
Borno	6.7 נכנו ככו	624	9.5	2.4	42
	[3.3,13.2]	422	[3.3,24.3]	[0.3,18.3]	50
Cross River	.8 [7 5 10 2]	422	32	10 [2 2 4	50
	[7.5,18.2]	207	[20.1,46.8]	[4.4,21.2]	50
Delta	3. [9.4.19.0]	396	26.9	9.6 נו כב א בז	52
	[9.4,18.0]		[13.9,45.7]	[3.8,22.1]	

Eighteen percent of children under age of 5 years were reported to have had diarrhoea in two weeks period preceding the survey. The highest prevalence was reported among children aged 6 to 11 and 12 to 24 months (24 percent each) and the lowest among children under 6 months at 11 percent.

Among children who had diarrhoea in the two weeks period preceding the survey, only 20 percent and 7 percent were given ORS and zinc tablets for treatment respectively. Children living in the South West zone were more likely to receive ORS (41 percent) and children living in North central were more likely to receive zinc tablets (21 percent) compared with other zones.

	Had diarrhea	Number of	Children with dia receive	Number of children age 0-	
Background Characteristics	in last two weeks	children age 0-59 months	Oral rehydration salts (ORS)	Zinc	59 months with diarrhoea in the last two weeks
Ebonyi	14.6	535	23.1	6.4	78
,	[11.5,18.4]		[14.0,35.6]	[2.5,15.5]	
Edo	10.7	553	18.6	16.9	59
	[7.4,15.2]		[10.9,30.0]	[7.5,33.8]	
Ekiti	13.1	427	37.5	12.5	56
	[9.4,18.1]		[23.8,53.6]	[4.9,28.3]	
Enugu	12.9	487	9.5	4.8	63
	[9.5,17.4]	417	[4.4,19.5]	[1.6,13.5]	4.4
FCT	10.6	417	59.1	40.9	44
	[6.4,16.8] 31.2	727	[32.7,81.1] 18.5	[21.9,63.0] 2.6	227
Gombe	[27.3,35.4]	121	[13.5,24.8]	2.6	227
Imo	13.2	424	8.9	5.4	56
ino	[9.8,17.6]		[3.2,22.4]	[0.9,26.5]	
ligawa	33.6	816	[9.3	8.8	274
Jigawa	[28.6,38.9]		[13.7,26.6]	[5.0,15.0]	
Kaduna	24.2	625	17.2	1.3	151
	[20.0,28.8]		[12.2,23.7]	[0.3,5.3]	
Kano	26.7	759	23.6	1.5	203
	[23.3,30.5]		[17.6,31.0]	[0.5,4.2]	
Katsina	26.6	751	13.5	10.5	200
	[20.7,33.5]		[8.8,20.1]	[4.2,23.7]	
Kebbi	33.1	816	0.4	0.7	270
	[25.4,41.8]		[0.0,2.8]	[0.2,3.1]	
Kogi	17.6	397	37.1	20	70
	[13.8,22.3]		[24.9,51.2]	[11.2,33.1]	
Kwara	13.6	464	33.3	17.5	63
	[8.3,21.5]		[16.3,56.2]	[8.6,32.2]	
Lagos	6.1	726	56.8	4.5	44
	[4.0,9.1]		[41.5,71.0]	[1.2,15.7]	
Nasarawa	17	505	14	29.1	86
	[13.6,21.1]		[6.5,27.5]	[16.0,46.8]	
Niger	17.3	676	42.7	27.4	117
	[11.4,25.4]		[28.9,57.9]	[17.3,40.5]	
Ogun	9.7	627	31.1	3.3	61
	[6.7,13.9]	400	[18.6,47.3]	[0.9,11.8]	
Ondo	9.4	488	21.7	23.9	46
	[6.4,13.6] 11.2	502	[9.0,43.9] 48.2	[11.4,43.5] 8.9	56
Osun	[8.3,14.9]	502	46.2 [34.1,62.6]	0.7 [3.6,20.7]	20
2	[8.3,14.7] 9.2	683	[34.1,82.8] 38.1	[3.6,20.7] 4.8	63
Оуо	[6.5,12.9]	005	[23.2,55.6]	۰.5 [1.5,14.2]	65
Distance	15	579	29.9	28.7	87
Plateau	[11.7,19.1]	577	[19.1,43.4]	[18.6,41.6]	0,
Rivers	11.7	359	21.4	4.8	42
Rivers	[7.3,18.1]	557	[12.1,35.1]	[1.2,16.5]	12
Sokoto	34.3	749	4.7	1.2	257
	[26.3,43.3]		[2.3,9.4]	[0.4,3.4]	
Taraba	18.6	490	18.7	9.9	91
	[13.6,24.8]		[9.9,32.4]	[4.4,20.9]	
Yobe	24.2	785	5.8	0	190
	[17.0,33.2]		[2.4,13.5]		
Zamfara	33	758	3.2	0.8	250
	[26.6,40.0]		[1.6,6.3]	[0.2,2.8]	

5.5. Stool Disposal

The safe disposal of children's feaces is important because children's faeces are the most likely cause of faecal contamination to the immediate household environment.

Safe disposal of child's faeces is disposing of the stool by the child using toilet, or by rinsing the stool into toilet or by burying. Disposal of faeces of children 0 to 3 years of age is presented in table 11. In Nigeria, 55 percent of children age 0 to 3 years have their faeces disposed safely.

Half of the children have their faeces rinsed into toilet while 25 percent of their faeces thrown in to garbage.

Table 11: Disposal of child's faeces

Percent distribution of children age 0 to 3 years whose stools were disposed of safely the last time the child passed stools, *Nigeria, 2014*

Background Characteristics	Percentage of children whose last stools were disposed of safely	Number of children age 0-3 years
National	55	13196
	[52.8,57.2]	
Zone		
North Central	40.5	2209
	[35.1,46.0]	
North East	61.6	2492
	[55.4,67.3]	
North West	64.9	3359
	[60.1,69.5]	
South East	46.3	1407
	[41.2,51.4]	
South South	40.1	1528
	[34.6,45.9]	
South West	64.6	2201
	[59.5,69.3]	

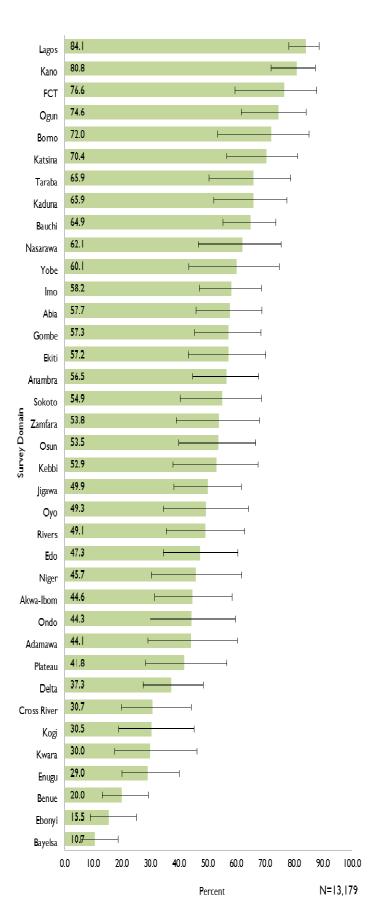


Figure 8: Percent distribution of children age 0 to 3 years whose stools were disposed of safely the last time the child passed stools, 95 percent confidence interval by survey domain.

6. Women Health

6.1. Current use of Contraception

The current use of contraception measure the actual use of contraceptive practices among women age 15 to 49 years who are married or in union at the time of the survey. It is one of the key indicators that help to assess success of a family planning programs. Appropriate family planning is important for the health of women and children.

In Nigeria, 23 percent of women currently married or in union age 15 to 49 years reported current use of any contraceptive methods. Overall, 15 percent uses modern methods while 8 percent rely on traditional methods. Only 4 percent of adolescent (15 to 19 years) reported current use of contraception compared to 25 percent of adult women (20-49 years).

The South West zone has the highest proportion of women currently using family planning methods (45 percent), followed by the South East (42 percent). The lowest proportion of women married or in union using a family planning method is in the North West (6 percent).

Table 12: Use of contraception

Percent of women age 15 to 49 years currently married or in union who are using (or whose partner is using) a contraceptive method, Nigeria, 2014

Background characteristics	Modern method	Traditional method	Any method	Number of women age 15-49 years currently married or in union
National	15.2	7.9	23.2	17689
	[14.3,16.1]	[7.3,8.6]	[22.1,24.3]	
Age group				
15 to 19	2.2	1.4	3.6	1198
	[1.4,3.4]	[0.8,2.4]	[2.6,5.0]	
20 to 49	16.2	8.4	24.6	649
	[15.3,17.1]	[7.8,9.1]	[23.5,25.8]	
Zone				
North Central	15.9	6.2	22.1	3143
	[13.8,18.2]	[5.1,7.6]	[19.5,25.0]	
North East	6.3	1.9	8.2	3258
	[5.0,8.0]	[1.3,2.7]	[6.7,10.1]	
North West	5.1	0.7	5.8	4232
	[3.8,6.7]	[0.5,1.2]	[4.5,7.5]	
South East	19.3	23.1	42.4	1928
	[17.2,21.6]	[19.9,26.6]	[38.6,46.3]	
South South	21.8	14.5	36.3	2101
	[19.4,24.3]	[12.4,16.9]	[33.2,39.4]	
South West	31.3	13.9	45.3	2908
	[28.7,34.1]	[11.9,16.2]	[42.0,48.6]	
State				
Abia	25.9	13.2	39.2	378
	[20.5,32.2]	[9.4,18.3]	[32.7,46.0]	
Adamawa	8.5	3.9	12.3	413
	[5.6,12.7]	[1.8,8.0]	[7.9,18.8]	
Akwa-Ibom	26.2	14.9	41.2	328
	[21.0,32.2]	[9.6,22.6]	[33.7,49.1]	
Anambra	18.5	22.2	40.7	378
	[14.6,23.2]	[15.6,30.7]	[32.4,49.7]	
Bauchi	8	0.7	8.7	688
	[4.9,12.8]	[0.3,2.0]	[5.5,13.5]	
Bayelsa	17.2	20.1	37.3	319
	[13.0,22.5]	[14.6,26.9]	[30.5,44.7]	
Benue	19.9	16.3	36.2	423
	[14.0,27.4]	[11.7,22.4]	[27.3,46.1]	

Background Characteristics	Modern method	Traditional method	Any method	Number of women age 15-4 years currently married or i union
Borno	I	0	I	516
	[0.4,2.6]		[0.4,2.6]	
Cross River	23.1	14.5	37.7	337
	[17.9,29.4]	[10.5,19.7]	[31.0,44.8]	
Delta	23.5	13.2	36.8	340
Delta	[18.0,30.2]	[9.1,18.9]	[29.5,44.7]	
Ebonyi	11.6	34.7	46.2	424
Eboliyi	[8.6,15.4]	[26.1,44.4]	[36.0,56.8]	
Edo	20.2	6.6	26.8	456
Edo	[15.9,25.2]	[4.0,10.6]	[21.7,32.6]	150
El.:+:	30.4	[1.0,10.0]	42.7	372
Ekiti	[24.1,37.5]	[8.4,17.8]	[34.6,51.3]	572
F	[24.1,37.3] 21	28.3	49.4	385
Enugu				303
	[16.6,26.3]	[21.3,36.5]	[42.0,56.8]	412
FCT	17.4	1.2	18.6	413
	[13.5,22.2]	[0.4,3.3]	[14.3,24.0]	
Gombe		0.5	11.5	555
	[6.7,17.6]	[0.1,2.3]	[7.1,18.3]	
Imo	18.2	20.9	39.1	363
	[13.6,23.9]	[14.6,29.1]	[31.1,47.8]	
Jigawa	8.1	0.5	8.6	630
	[4.8, 3.3]	[0.2,1.4]	[5.1,14.0]	
Kaduna	8.3	2.2	10.5	554
	[5.3,12.8]	[1.1,4.4]	[6.8,15.9]	
Kano	8.3	0.6	8.9	628
	[4.8, 3.8]	[0.2,2.0]	[5.4,14.3]	
Katsina	1.7	0.4	2.1	703
	[0.8,3.8]	[0.1,1.9]	[1.1,4.3]	
Kebbi	0.2	0.5	0.6	646
	[0.0,1.1]	[0.1,2.0]	[0.2,2.0]	
Kogi	12.3	7	19.3	383
KOği	[8.3,17.8]	[4.7,10.5]	[13.7,26.6]	505
12	[0.3,17.0] 17.4	[4.7,10.5] 6.4	23.8	374
Kwara		[4.1,9.9]	[16.8,32.5]	374
	[11.3,25.7]			50/
Lagos	32.4	18.4	50.9	586
	[27.2,38.1]	[14.0,23.9]	[44.1,57.6]	405
Nasarawa	14.1	4.6	18.6	483
	[9.9,19.6]	[2.6,7.8]	[13.5,25.1]	/
Niger	12.6	1.4	14	564
	[8.3,18.7]	[0.6,3.5]	[9.3,20.6]	
Ogun	28.5	14.9	43.5	529
	[23.1,34.7]	[10.6,20.7]	[36.3,50.9]	
Ondo	20.4	9.4	29.8	416
	[15.7,26.2]	[5.4,15.9]	[22.1,38.8]	
Osun	34.3	12.5	46.8	440
	[29.2,39.9]	[8.8,17.4]	[39.5,54.2]	
Оуо	35.8	10.1	45.8	565
- / -	[29.2,42.9]	[6.9,14.5]	[38.5,53.4]	
Plateau	18.3	4.6	22.9	503
. accau	[13.2,24.7]	[2.7,7.5]	[17.7,29.0]	
Pivors	[13.2,24.7] [8.7	[2.7,7.5]	37.4	321
Rivers	[13.5,25.3]	[13.6,25.1]	[30.2,45.1]	521
Calasta	0.7	0.0	[30.2,45.1] 0.7	595
Sokoto		0.0		373
	[0.2,2.1]	.	[0.2,2.1]	457
Taraba	9	3.5	12.5	456
	[5.1,15.3]	[1.9,6.3]	[8.0,18.9]	
Yobe	2.4	5.2	7.6	630
	[1.0,5.5]	[2.8,9.6]	[4.4,13.0]	
Zamfara	0.7	0.3	I	595
	[0.2,2.1]	[0.0,2.4]	[0.4,2.7]	

6.2. Assistance at Delivery

Inadequate maternal care during pregnancy and delivery is mainly responsible for the considerable proportion of maternal deaths. Assistance during childbirth by skilled health provider is an important intervention to improve the birth outcome and the mother's and infant's health. Table 13, shows the proportion of live births in the 2 years prior to the survey assisted by skilled provider. Forty two percent of all deliveries are assisted by skilled provider. This percentage is highest in South East zone at 91 percent and lowers in North West zone at 14 percent. Only 27 percent of mother's age 15 to 19 years are assisted during delivery by skilled provider compared to 44 percent of women age 20 to 49 years. The proportion of delivery assisted by health provider considerably varied among states; the highest in Anambra state at 98 percent and the lowest in Sokoto state at 3 percent.

Table 13: Assistance during delivery and Iron supplementation

[59.5,81.9]

71.1

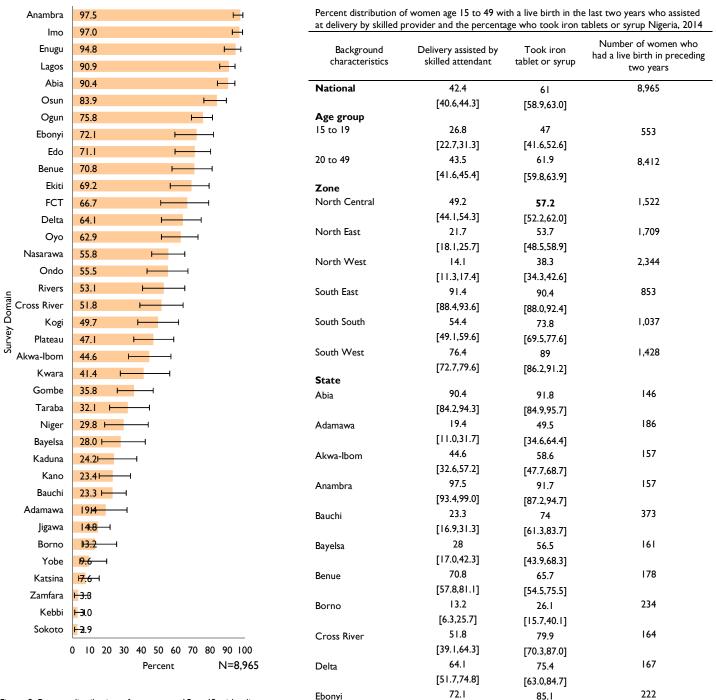
[59.6,80.3]

[76.7,90.9]

81.6

[71.5,88.7]

228



Edo

Figure 9: Percent distribution of women age 15 to 49 with a live birth in the last two years who assisted at delivery by skilled provider, 95 percent confidence interval by survey domain

Background characteristics	Delivery assisted by any skilled attendant	Took iron tablet or syrup	Number of women who had a live birth in preceding two years
Ekiti	69.2	80.2	182
	[56.8,79.4]	[64.4,90.1]	
Enugu	94.8	90.7	193
. 8.	[88.2,97.8]	[85.3,94.2]	
FCT	66.7	65.6	186
	[51.3,79.1]	[48.9,79.2]	
Gombe	35.8	75.5	327
•••••••	[26.0,46.9]	[62.9,84.9]	•=-
mo	97	91.9	135
	[92.8,98.8]	[85.6,95.5]	155
igawa	[/2.0,/0.0]	55.9	365
igawa	[9.7,21.8]		505
Kaduna		[45.3,66.0]	207
Kaduna	24.2	43.4	297
/	[14.7,37.4]	[31.6,56.0]	220
Kano	23.4	65.3	329
	[15.5,33.7]	[52.1,76.6]	
Katsina	7.6	22	381
	[3.6,15.5]	[14.2,32.5]	
Kebbi	3	13	362
	[1.3,7.0]	[7.2,22.4]	
Kogi	49.7	60.6	193
	[37.9,61.7]	[46.2,73.4]	
Kwara	41.4	47	181
	[27.8,56.5]	[34.5,59.8]	
agos	90.9	96.3	296
	[85.5,94.4]	[93.3,98.0]	
Nasarawa	55.8	73.1	242
	[46.0,65.2]	[63.0,81.3]	
Niger	29.8	34	285
-	[18.7,44.0]	[22.7,47.5]	
Ogun	75.8	89.6	260
0	[69.2,81.3]	[84.7,93.1]	
Ondo	55.5	73.2	209
-	[43.3,67.1]	[59.1,83.8]	
Osun	83.9	92.6	217
	[76.3,89.4]	[88.4,95.4]	
Эуо	62.9	86.4	264
0,0	[51.7,72.9]	[78.2,91.8]	207
Plateau	[31.7,72.7] 47.1	[78.2,91.6] 72	257
atedu			231
Divers	[35.6,58.9]	[60.4,81.3]	170
Rivers	53.1	81.3	160
.	[40.7,65.2]	[72.5,87.7]	2.4
Sokoto	2.9	10.4	346
	[1.2,6.6]	[5.5,19.0]	
Taraba	32.1	66.7	234
	[21.6,44.7]	[53.4,77.7]	
Yobe	9.6	22.3	355
	[4.3,19.9]	[14.0,33.4]	
Zamfara	3.3	15.5	336
	[1.1,9.0]	[8.8,25.7]	

6.3. Iron Supplementation during Pregnancy

Table 13 shows the proportion of women who took iron tablets or syrup during their most recent pregnancy in the two years prior to the survey. Of those women who gave birth in the two years prior to the survey, 61 percent took iron tables or syrup. There was a significant variation in iron supplementation among states that ranges from 10 to 96 percent. Women in age 15 to 19 years were less likely than women in age 20 to 49 years to have taken iron supplements during pregnancy.

7. Malaria

7.1. Ownership and Use of Mosquito Net by Children

Malaria is one of the leading cause of morbidity and mortality in Nigeria. Children under the age of 5 years and pregnant women are the most vulnerable to illness and death from malaria. Prevention measures, especially the use of insecticide treated net (ITNs) is currently considered the most cost-effective method of malaria prevention in highly endemic areas.

All household were asked whether they possess any type of mosquito net and, if so, how many. The result indicate that 53 percent of households in Nigeria possess at least one mosquito net. The percentage of households that own any mosquito net is the highest (62 percent) in the South West zone while the lowest at 44 percent in South South zone. The possession of mosquito nets varies noticeably by states. In Sokoto states 76 percent of the households possesses any type of mosquito net while only 24 percent possesses any type of mosquito net in Federal Capital Territory (FCT).

The result indicate that 25 percent of children slept under any net on the night before the interview. Children in the South West zone are more likely to sleep under a net (41 percent) than other zones, with the lowest in the North Central zone at 16 percent.

Table 14: Household availability and use of mosquito nets	

Percent of households with at least one mosquito net and children age 0 to 59 months who, the night before the survey, slept under a mosquito net, Nigeria, 2014

Background Characteristics	Percentage of households with at least one mosquito net:	Number of households	Percentage of children age 0-59 who spent last night in the interviewed households	Percentage of children who slept under mosquito net last night	Number of children age 0-59 months
National	53.3	25,567	99	25.4	20,939
	[52.0,54.5]		[98.8,99.1]	[24.0,26.8]	
Zone					
North Central	45	4,491	98.3	16.2	3,493
	[41.8,48.2]		[97.7,98.7]	[13.6,19.1]	
North East	54.7	3,855	99.3	20.9	3,982
	[51.2,58.0]		[98.9,99.5]	[17.8,24.5]	
North West	55.6	4,501	98.5	23	5,274
	[52.5,58.6]		[98.0,98.9]	[19.9,26.5]	
South East	54.4	3,819	99.1	21.5	2,272
	[51.6,57.2]		[98.5,99.4]	[18.5,24.7]	
South South	43.8	4,437	99.2	25.5	2,465
	[41.1,46.5]		[98.7,99.5]	[22.6,28.7]	
South West	62.1	4,464	99.7	40.5	3,453
	[59.3,64.9]		[99.4,99.8]	[36.8,44.4]	
State					
Abia	47.1	766	99.2	28.6	374
	[39.6,54.8]		[96.7,99.8]	[19.6,39.7]	
Adamawa	50.5	641	99.3	13.7	454
	[42.8,58.3]		[98.1,99.8]	[7.8,22.7]	
Akwa-Ibom	31.9	742	98.6	18.1	364
	[26.5,37.9]		[96.3,99.5]	[13.0,24.8]	
Anambra	48	748	99.1	16.4	452
	[42.0,54.0]		[97.8,99.7]	[12.4,21.4]	
Bauchi	54.1	658	99	13.9	902
	[46.0,62.0]		[98.3,99.4]	[8.3,22.3]	
Bayelsa	39.4	715	99.2	28.6	371
	[32.5,46.8]		[96.7,99.8]	[21.2,37.3]	
Benue	54.3	615	98.7	18	455
	[46.1,62.3]		[96.5,99.5]	[12.6,25.2]	
Borno	59.9	611	99.2	34.8	624
	[51.3,67.9]		[97.5,99.7]	[25.9,44.9]	
Cross River	44.3	724	99.8	25.8	422
	[38.1,50.8]		[98.3,100.0]	[18.8,34.4]	
Delta	51.7	764	99.7	32.6	396
	[44.3,59.0]		[98.2,100.0]	[24.9,41.3]	

Background Characteristics	d Percentage of households with at least one mosquito net:	Number of households	Percentage of children age 0-59 who spent last night in the interviewed households	Percentage of children who slept under mosquito net last night	Number of children age 0-59 monthe
Ebonyi	47.4	768	99.4	22.6	535
	[40.6,54.3]		[98.4,99.8]	[15.2,32.3]	
Edo	53.1	767	98.6	24.2	553
	[46.2,59.8]		[96.8,99.4]	[17.3,32.9]	
Ekiti	36.1	721	99.8	20.6	427
	[30.1,42.4]		[98.3,100.0]	[14.0,29.3]	
Enugu	58.8	769	99.2	27.1	487
	[52.8,64.5]		[97.9,99.7]	[20.6,34.7]	
FCT	24.2	698	98.8	10.8	417
	[19.7,29.4]		[97.3,99.5]	[7.3,15.8]	
Gombe	52.1	657	99.3	13.9	727
	[45.2,58.8]		[98.2,99.7]	[9.8,19.2]	
Imo	66.4	768	98.6	16.5	424
	[61.0,71.4]		[96.5,99.4]	[11.5,23.1]	
Jigawa	65.6	640	98.2	33.9	816
	[58.2,72.4]		[96.7,99.0]	[24.4,45.0]	
Kaduna	41.5	655	99.2	13.8	625
	[33.7,49.8]		[98.2,99.6]	[9.5,19.6]	
Kano	51.7	659	98.3	26.2	759
	[45.3,58.1]		[97.2,99.0]	[18.7,35.4]	
Katsina	71.7	657	97.1	34.2	751
	[64.0,78.3]		[94.3,98.5]	[26.1,43.4]	
Kebbi	39.4	639	99.6	12.4	816
	[29.4,50.5]		[98.9,99.9]	[6.5,22.3]	
Kogi	55.6	630	98.5	22.7	397
0	[48.5,62.4]		[96.5,99.4]	[16.2,30.7]	
Kwara	39.9	637	98.3	10.8	464
	[31.2,49.2]		[97.0,99.0]	[6.4,17.6]	
Lagos	62.9	768	99.7	34.7	726
	[57.5,67.9]		[98.9,99.9]	[27.8,42.3]	
Nasarawa	32.4	633	99	8.5	505
	[26.3,39.1]		[97.9,99.5]	[5.2,13.6]	
Niger	41.7	624	97.2	17.5	676
	[32.4,51.5]	•=•	[95.2,98.4]	[10.5,27.5]	
Ogun	68.2	721	99.7	50.6	627
0.800	[61.1,74.6]		[97.9,100.0]	[42.1,59.0]	•=-
Ondo	55.2	721	99.6	37.1	488
Cildo	[49.2,61.0]	721	[98.5,99.9]	[27.8,47.5]	100
Osun	70.6	769	99.8	47.4	502
Coun	[65.1,75.6]	/0/	[98.6,100.0]	[39.3,55.7]	502
Оуо	66.8	764	99.6	49.2	683
0,0	[58.4,74.2]	701	[98.1,99.9]	[39.3,59.1]	005
Plateau	52.1	654	97.9	18	579
Tateau	[44.4,59.8]	054	[96.0,98.9]	[11.7,26.5]	577
Rivers	42.1	725	99.4	25.3	359
	[36.8,47.6]	725	[97.9,99.9]	[19.9,31.8]	
Sokoto	[36.6,47.6] 75.7	637	99.3	[19.5]	749
	[67.4,82.4]	037	[98.0,99.8]	[12.1,29.8]	/ ד /
Taraba	[67.4,82.4] 41	636	[98.0,99.8] 99.6	[12.1,29.6]	490
I al dUd		020	[98.4,99.9]		770
Yoho	[33.1,49.5]	450		[10.2,21.8]	705
Yobe	67.2	652	99.5	32.4	785
7	[59.9,73.7]	714	[98.4,99.8]	[22.9,43.5]	750
Zamfara	44.8	614	99.1	11.1	758

8. Water and Sanitation

8.1. Water

The source of drinking water is an indicator for whether it is suitable for drinking or not. Nigeria has a goal to increased access to improved drinking water to 77 percent by end of 2015. The population using improved source of drinking water are those using any of the following types of supply: piped water (into dwelling, compound, yard or plot, to neighbor, public tab/standpipe), tubewell/borehole, protected well, protected spring and rain water.

Overall, 52 percent of households in Nigeria have access to an improved source of drinking water. The most common source of improved drinking water in Nigeria is tubewell/borehole (34 percent). The proportion of households in South East has the highest at 65 percent access to improved source of drinking water while North West has the lowest at 40 percent. Among states, the access to improved source of drinking water varies from 19 percent to 84 percent.

8.2. Sanitation

Inadequate disposal of human excreta and personal hygiene is associated with a range of diseases including diarrhoeal disease. An improved sanitation facility is defined as one that hygienically separates human excreta from human contact. Ensuring adequate sanitation facility is one of the Millennium Development Goals (MDG7). 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 slap, and use of a composting toilet.

Overall, only 37 percent of households in Nigeria have access to improved sanitation facility. In the South West zone 69 percent of households have access to improved sanitation facility while in North West only 20 percent of households have access. The percentage of access to sanitation facilities varies significantly among states with the highest in Lagos state at 98 percent and lowest in Zamfara state at 5 percent. Bush/field is the most common non-improved type of facility used in Nigeria.

Table 15: Use of improved water sources and sanitation facility

Percent distribution of household using improved drinking water sources and have access to improved sanitation facility, Nigeria, 2014

access to improved sar	itation facility, Nigeria, 20) 4		
Background Characteristics	Improved sources of drinking water	Improved Sanitation Facility	Number of households	
National	52	37.2	25,571	
	[49.6,54.5]	[35.3,39.1]		
Zone				
North Central	53.6	30.9	4,493	
	[47.6,59.5]	[26.6,35.6]	.,	
North East	46	21	3,856	
	[39.3,52.8]	[16.9,25.9]		
North West	40.2	20.4	4,501	
	[34.5,46.2]	[16.4,25.1]		
South East	65.3	48.3	3,819	
	[59.5,70.6]	[43.5,53.2]		
South South	63.3	39	4,438	
	[58.2,68.2]	[34.2,44.1]		
South West	54	66.8	4,464	
	[48.7,59.3]	[62.4,71.0]		
State		. / .		
Abia	70.5	60.4	766	
	[56.1,81.7]	[46.9,72.5]		
Adamawa	48.9	11.1	642	
	[34.1,64.0]	[5.1,22.4]		
Akwa-Ibom	69.7	48.4	742	
	[55.7,80.8]	[36.7,60.2]		
Anambra	62.4	58.7	748	
	[49.8,73.6]	[48.3,68.4]		
Bauchi	59.1	21.3	658	
	[42.3,74.1]	[13.5,31.9]		
Bayelsa	32.4	15.6	716	
	[21.3,46.0]	[9.4,24.9]		
Benue	47.7	25.5	616	
	[33.3,62.5]	[15.7,38.6]		
Borno	33.9	24.7	611	
	[20.5,50.4]	[13.9,40.0]		
Cross River	37.8	25.6	724	
	[25.3,52.3]	[17.0,36.6]		
Delta	65.8	49.1	764	
	[54.5,75.6]	[36.9,61.4]		
Ebonyi	63.9	12.6	768	
	[49.2,76.5]	[7.0,21.7]		
Edo	56.6	42.9	767	
	[44.2,68.2]	[31.7,54.8]		
Ekiti	74.1	42.4	721	
	[61.2,83.8]	[31.7,54.0]		
Enugu	44	27.4	769	
	[30.7,58.2]	[18.1,39.3]		
FCT	61	73.8	698	
	[48.3,72.4]	[61.0,83.5]		
Gombe	51.9	29.8	657	
	[36.0,67.4]	[20.4,41.4]		
lmo	82.7	65.4	768	
	[71.4,90.1]	[54.5,74.9]		
Jigawa	80	11.9	640	
	[66.3,89.0]	[5.5,23.9]		

Table 15: continued					
Background	Improved sources	Improved	Number of	Rivers	84.0
Characteristics	of drinking water	Sanitation Facility	households	lmo	82.7
Kaduna	33.1	11.1	655	Jigawa	80.0
	[21.3,47.6]	[5.8,20.3]		Kwara	77.1
Kano	45.5	43.6	659	Ekiti	74.1
	[31.6,60.2]	[31.1,56.9]		Osun	72.2
Katsina	35.6	21.9	657	Abia	70.5
	[21.9,52.2]	[13.2,34.1]		Akwa-Ibom	69.7
Kebbi	18.6	6.9	639	Delta	65.8
	[8.8,35.2]	[2.6,17.3]		Ebonyi	63.9
Kogi	49.5	31.4	630	Оуо	63.7
	[34.6,64.5]	[21.6,43.3]		Anambra	62.4
Kwara	77.1	32.8	637	FCT	
	[63.7,86.6]	[20.7,47.8]		-	
Lagos	37.6	98.3	768	Bauchi	59.1
-	[27.1,49.4]	[95.4,99.4]		Edo	56.6
Nasarawa	45	20.5	633	Niger	54.9
	[30.6,60.4]	[13.0,30.9]		.⊑ Ondo	52.0
Niger	54.9	23.7	625	Gombe	51.9
	[38.2,70.5]	[14.0,37.1]		ີ Ogun	51.5
Ogun	51.5	63.4	721	LE Ondo Gombe Gombe A Ogun Kogi	49.5
	[38.2,64.5]	[49.7,75.2]		Adamawa	48.9
Ondo	52	47	721	Benue	47.7
	[38.8,65.0]	[34.1,60.3]		Plateau	45.9
Osun	72.2	54	769	Kano	45.5
	[60.3,81.6]	[41.2,66.2]		Yobe	45.2
Оуо	63.7	48.8	764	Nasarawa	45.0
	[51.0,74.8]	[34.6,63.2]		Enugu	44.0
Plateau	45.9	20.6	654	0	
	[31.2,61.2]	[11.9,33.4]		Cross River	37.8
Rivers	84	36.4	725	Lagos	37.6
	[70.4,92.0]	[25.9,48.4]		Katsina	35.6
Sokoto	30.5	8.3	637	Borno	33.9
	[17.3,47.8]	[3.7,17.9]		Kaduna	33.1
Taraba	31.1	30.2	636	Bayelsa	32.4
	[18.9,46.7]	[19.9,42.9]		Taraba	31.1
Yobe	45.2	9.8	652	Sokoto	30.5
	[29.5,62.0]	[4.7,19.2]		Zamfara	25.7
Zamfara	25.7	5.2	614	Kebbi	18.6
	[14.5,41.5]	[1.8,13.9]		l. I	.0 10.0 20.0 30.0 40.0 50.0 60.0 70.0 80.0 90.0 1

Figure 10: Percent distribution of household using improved drinking water, 95 percent confidence interval by survey domain

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