SURVEY DESIGN

B.1   INTRODUCTION

The purpose of this document is to provide recommendations for the sample design of the 2008 NDHS survey, and the corresponding selection procedures performed prior to the survey implementation.

B.2   OBJECTIVES OF THE SAMPLE DESIGN

(1) The 2008 NDHS survey is designed to allow reliable estimation of most variables for a variety of health and demographic analyses at the various domains of interest.

(2) The major domains distinguished in the tabulation of important characteristics for the eligible women population are:

- Nigeria as a whole

- Each of six major regions defined in Nigeria, and named as:

  1) North Central
  2) North East
  3) North West
  4) South East
  5) South West
  6) South South

- Urban and rural areas of Nigeria (each as a separate domain).

- Each of the 36 sates of Nigeria, plus the Federal Capital Territory (FCT) of Abuja.

(3) The primary objective of the 2008 NDHS is to provide estimates with acceptable precision for important population characteristics such as fertility, contraceptive prevalence, selected health indicators, mainly infant mortality and an HIV/AIDS module for women and men.

(4) The population covered by the 2008 NDHS is defined as the universe of all women age 15-49 in Nigeria.

(5) A sample of households was selected and all women age 15-49 identified in the households will be interviewed.

(6) Approximately half of the selected households for the women sample were used to interview the eligible men age 15-59, and estimates were computed for the same domains of study.

B.3   SAMPLE FRAME

Administratively, Nigeria is divided into states. Each state is subdivided into local government areas (LGAs), and each LGA is divided into localities. In addition to these administrative units, during the last 2006 Population Census, each locality was subdivided into convenient areas called census enumeration areas (EAs). Nigeria has 36 states, plus FCT-Abuja. At the time of survey implementation, the list of EAs did not have census information for households and the population because the census frame is under segmentation revision. Therefore, no household or population information was available at the EA level. The need for sampling planning and selection of such information on urban/rural was quite important; therefore, each EA was approximately classified as urban or rural. The available cartographic material demarcated for each EA was useful in the EA location and its identification; hence the sample frame for this survey is the list of EAs used in the last census population.

B.4   STRATIFICATION

In the current preliminary census frame, the EAs are grouped by states, by LGAs within a state, and by localities within an LGA. The EAs are stratified separately by urban and rural areas. Any locality with less than 20,000 population in each LGA constitutes the rural area in the LGA.

B.5   SAMPLE ALLOCATION

The primary sampling unit (PSU), a cluster, for the 2008 NDHS is defined on the basis of EAs from the 2006 EAs census frame. A minimum requirement of 80 households (400 population) for the cluster size has been imposed in the design. If the selected EA is small during the listing process, then a supplemental household listing should be conducted in the neighbouring EA. The number of clusters in each state was not allocated proportional to their total population (or households) due to the need to obtain estimates for each of the 36 states and FCT-Abuja. Nigeria is a country where the majority of the population resides in rural areas. With the current allocation, the urban areas in some states were over-sampled in order to provide reliable information for the total urban population at the national level. Table B.1 shows the allocation of 36,800 completed interviews among the 36 states and FCT-Abuja.

The target of the 2008 NDHS sample is to obtain 36,800 completed interviews. Based on the level of non-response found in the 2003 Nigeria DHS, to achieve this target, approximately 36,800 households will be selected, and all women age 15-49 will be interviewed. A requirement was to reach a minimum of 950 completed interviews per state. In each state, the number of households was distributed proportionately among its urban and rural areas.

The selected households were distributed in 888 clusters in Nigeria, 286 clusters in the urban areas, and 602 clusters in the rural areas.

Under this final allocation, it was expected that each of the 36 designated states and FCT-Abuja would have a minimum of 950 completed women interviews.

Table B.1 Allocation of completed interviews by region and state

Region/state	Nigeria basic information projected total women in 2007		Sample size	Number of clusters
	Women	Percentage		
North Central				
Benue	1,052,752	23.3	1,000	24
FCT-Abuja	118,951	2.6	950	23
Kogi	759,298	16.8	1,000	24
Kwara	544,327	12.0	950	23
Niger	841,025	18.6	1,000	24
Nasarawa	439,646	9.7	950	23
Plateau	766,486	16.9	1,000	24
Subtotal	**4,522,485**	**100.0**	**6,850**	**165**
Northeast				
Adamawa	713,172	16.6	950	23
Bauchi	1,013,754	23.5	1,000	24
Borno	984,658	22.9	1,000	24
Gombe	529,408	12.3	950	23
Taraba	550,753	12.8	950	23
Yobe	514,095	11.9	950	23
Subtotal	**4,305,840**	**100.0**	**5,800**	**140**
Northwest				
Jigawa	1,085,772	13.2	1,000	24
Kaduna	1,349,397	16.4	1,000	24
Kano	2,095,113	25.4	1,300	32
Katsina	1,384,984	16.8	1,000	24
Kebbi	749,280	9.1	950	23
Sokoto	841,819	10.2	1,000	24
Zamfara	742,227	9.0	950	23
Subtotal	**8,248,592**	**100.0**	**7,200**	**174**
Southeast				
Abia	654,299	20.9	950	23
Anambra	185,404	5.9	950	23
Ebonyi	535,615	17.1	950	23
Enugu	845,803	27.0	1,000	24
Imo	916,013	29.2	1,000	24
Subtotal	**3,137,134**	**100.0**	**4,850**	**117**
Southwest				
Ekiti	576,633	8.7	950	23
Lagos	2,143,930	32.4	1,300	32
Ogun	923,242	14.0	1,000	24
Ondo	838,016	12.7	1,000	24
Osun	791,359	12.0	1,000	24
Oyo	1,340,115	20.3	1,000	24
Subtotal	**6,613,295**	**100.0**	**6,250**	**151**
South South				
Akwa Ibom	864,144	18.0	1,000	24
Bayelsa	404,706	8.4	950	23
Cross River	690,371	14.4	950	23
Delta	937,995	19.6	1,000	24
Edo	746,674	15.6	950	23
Rivers	1,153,249	24.0	1,000	24
Subtotal	**4,797,139**	**100.0**	**5,850**	**141**
Total	**31,624,485**		**36,800**	**888**

B.6   SAMPLE SELECTION

The 2008 NDHS sample was selected using a stratified two-stage cluster design consisting of 888 clusters, 286 in the urban and 602 in the rural areas. Once the number of households was allocated to each state, the numbers of clusters (calculated based on an average sample take of 41 completed interviews or about 41 selected households) was calculated by dividing the total sample in the state by the sample take. Finally, all women 15-49 years were interviewed in each cluster, and in half of the selected households about 20 men were interviewed. Before the selection in a state, all EAs were stratified by urban and rural areas. The selection was performed using the following formula:

$$P_{1i} = (a / A)$$

Where,

   a: is the number of clusters to be selected in the given state

   A: is the total number of clusters in the given state.

In each selected cluster, a complete household listing operation was carried out and households were selected to achieve a fixed sample take per cluster. However, since the 2008 NDHS sample was unbalanced among residence area and state, a final weighing adjustment procedure to provide estimates at every other domain of study was required.

In a given state, if c is the fixed number of households selected out of the total households (L_i)— found in the 2008 listing process—for the ith cluster, then the household probability in the selected i^{th} cluster can be expressed as:

$$P_{2i}   =   (c / L_i)$$

The final households overall probability in the ith cluster could be calculated as:

$$f_i   =   P_{1i} * P_{2i}$$

and the sampling design weight for the ith cluster is given as:

$$1/ f_i   =   1 / (P_{1i} * P_{2i})$$

B.7   SAMPLE FOR MALE SURVEY

Men age 15-59 were interviewed in every second household selected for the women's interview. According the 2003 NDHS, a total of 2,346 successfully completed male interviews were obtained with a sample of 2,569 selected households. Therefore, it was expected to have about 16,800 successfully completed male interviews in the 2008 NDHS.

Table B.2 Sample implementation: Women

Percent distribution of households and eligible women by results of the household and individual interviews, and household, eligible women and overall response rates, according to urban-rural residence and region, Nigeria 2008

| | Residence | | Zone | | | | | | |
Result	Urban	Rural	North Central	North East	North West	South East	South South	South West	Total
Selected households									
Completed (C)	93.9	93.8	93.3	95.1	94.7	86.1	93.9	98.3	93.9
Household present but no competent respondent at home (HP)	1.0	0.8	1.0	0.3	0.7	2.4	0.8	0.2	0.8
Postponed (P)	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
Refused (R)	0.6	0.2	0.4	0.1	0.3	0.7	0.4	0.1	0.3
Dwelling not found (DNF)	0.4	0.4	0.6	0.2	0.3	0.9	0.3	0.0	0.4
Household absent (HA)	2.2	3.0	2.9	1.3	2.4	7.6	2.3	1.1	2.8
Dwelling vacant/address not a dwelling (DV)	1.6	1.6	1.4	2.6	1.4	2.2	1.9	0.3	1.6
Dwelling destroy (DD)	0.2	0.2	0.4	0.2	0.2	0.1	0.3	0.0	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	11,418	24,880	6,711	5,738	7,122	4,797	5,737	6,193	36,298
Household response rate (HRR)[1]	97.9	98.6	97.9	99.3	98.5	95.6	98.4	99.7	98.3
Eligible women									
Completed (EWC)	96.5	96.5	96.6	97.5	96.4	94.1	95.5	98.1	96.5
Not at home (EWNH)	1.6	1.8	2.0	1.1	1.3	3.1	2.8	0.9	1.8
Postponed (EWP)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Refused (EWR)	0.8	0.5	0.4	0.4	0.6	1.3	0.8	0.1	0.6
Partly completed (EWPC)	0.2	0.2	0.1	0.1	0.1	0.5	0.3	0.3	0.2
Incapacitated (EWI)	0.4	0.5	0.4	0.4	0.6	0.8	0.4	0.2	0.4
Other (EWO)	0.5	0.5	0.5	0.5	0.9	0.3	0.2	0.3	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	10,868	23,728	6,592	6,376	7,566	3,898	5,041	5,123	34,596
Eligible women response rate (EWRR)[2]	96.5	96.5	96.6	97.5	96.4	94.1	95.5	98.1	96.5
Overall response rate (ORR)[3]	94.5	95.1	94.5	96.8	95.0	89.9	93.9	97.8	94.9

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{100 * C}{C + HP + P + R + DNF}$$

[2] Using the number of eligible women falling into specific response categories, the eligible woman response rate (EWRR) is calculated as:

$$\frac{100 * EWC}{EWC + EWNH + EWP + EWR + EWPC + EWI + EWO}$$

[3] The overall response rate (ORR) is calculated as:

$$ORR = HRR * EWRR/100$$

Table B.3 Sample implementation: Men

Percent distribution of households and eligible men by results of the household and individual interviews, and household, eligible men and overall response rates, according to urban-rural residence and region, Nigeria 2008

| | Residence | | Zone | | | | | | |
Result	Urban	Rural	North Central	North East	North West	South East	South South	South West	Total
Selected households									
Completed (C)	93.7	93.6	93.0	94.7	94.2	86.5	93.5	98.2	93.6
Household present but no competent respondent at home (HP)	0.9	0.7	1.0	0.5	0.8	1.6	0.8	0.1	0.8
Postponed (P)	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
Refused (R)	0.7	0.2	0.4	0.1	0.3	0.6	0.4	0.1	0.3
Dwelling not found (DNF)	0.4	0.4	0.7	0.2	0.3	0.8	0.2	0.0	0.4
Household absent (HA)	2.5	3.2	3.0	1.4	2.8	7.8	2.6	1.2	3.0
Dwelling vacant/address not a dwelling (DV)	1.7	1.7	1.4	2.8	1.5	2.5	2.2	0.3	1.7
Dwelling destroy (DD)	0.1	0.2	0.4	0.2	0.1	0.1	0.2	0.0	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	5,612	12,215	3,301	2,814	3,508	2,353	2,839	3,012	17,827
Household response rate (HRR) [1]	97.9	98.6	97.6	99.1	98.4	96.6	98.5	99.7	98.4
Eligible men									
Completed (EMC)	91.7	93.1	91.2	94.7	92.3	86.5	91.8	97.2	92.6
Not at home (EMNH)	4.1	3.2	4.1	2.3	2.6	8.4	5.0	0.9	3.5
Postponed (EMP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Refused (EMR)	1.0	0.4	0.6	0.3	0.7	1.6	0.6	0.3	0.6
Partly completed (EMPC)	0.3	0.3	0.4	0.1	0.3	0.4	0.3	0.0	0.3
Incapacitated (EMI)	0.3	0.4	0.5	0.5	0.4	0.5	0.3	0.1	0.4
Other (EMO)	2.6	2.6	3.2	2.0	3.7	2.6	2.0	1.5	2.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of men	5,597	11,125	3,315	2,887	3,640	1,650	2,592	2,638	16,722
Eligible men response rate (EMRR) [2]	91.7	93.1	91.2	94.7	92.3	86.5	91.8	97.2	92.6
Overall response rate (ORR) [3]	89.8	91.8	89.0	93.9	90.8	83.5	90.4	96.9	91.1

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{100 * C}{C + HP + P + R + DNF}$$

[2] Using the number of eligible men falling into specific response categories, the eligible man response rate (EMRR) is calculated as:

$$\frac{100 * EMC}{EMC + EMNH + EMP + EMR + EMPC + EMI + EMO}$$

[3] The overall response rate (ORR) is calculated as:

$$ORR = HRR * EMRR/100$$

ESTIMATES OF SAMPLING ERRORS

Appendix **C**

Estimates derived from a sample survey are affected by two types of errors: 1) non-sampling errors and 2) sampling errors. Non-sampling errors are the results of mistakes made in implementing data collection and data processing, such as failure to locate and interview the correct household, misunderstanding of the questions on the part of either the interviewer or the respondent, and data entry errors. Although numerous efforts were made during the implementation of the 2008 Nigeria DHS (2008 NDHS) to minimise this type of error, non-sampling errors are impossible to avoid and difficult to evaluate statistically.

Sampling errors, on the other hand, can be evaluated statistically. The sample of respondents selected in the 2008 NDHS is only one of many samples that could have been selected from the same population, using the same design and expected size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability between all possible samples. Although the degree of variability is not known exactly, it can be estimated from the survey results.

A sampling error is usually measured in terms of the standard error for a particular statistic (mean, percentage, etc.), which is the square root of the variance. The standard error can be used to calculate confidence intervals within which the true value for the population can reasonably be assumed to fall. For example, for any given statistic calculated from a sample survey, the value of that statistic will fall within a range of plus or minus two times the standard error of that statistic in 95 percent of all possible samples of identical size and design.

If the sample of respondents had been selected as a simple random sample, it would have been possible to use straightforward formulas for calculating sampling errors. However, the 2008 NDHS sample is the result of a multi-stage stratified design, and, consequently, it was necessary to use a more complex formula. The computer software used to calculate sampling errors for the 2008 NDHS uses the Taylor linearisation method of variance estimation for survey estimates that are means or proportions. Another approach, the Jackknife repeated replication method, is used for variance estimation of more complex statistics such as fertility and mortality rates.

The Taylor linearisation method treats any percentage or average as a ratio estimate, $r = y/x$, where y represents the total sample value for variable y, and x represents the total number of cases in the group or subgroup under consideration. The variance of r is computed using the formula given below, with the standard error being the square root of the variance:

$$SE^2(r) = var(r) = \frac{1-f}{x^2} \sum_{h=1}^{H} \left[\frac{m_h}{m_{h-1}} \left(\sum_{i=1}^{m_h} z_{hi}^2 - \frac{z_h^2}{m_h} \right) \right]$$

in which

$$z_{hi} = y_{hi} - rx_{hi}, \text{ and } z_h = y_h - rx_h$$

where h represents the stratum which varies from 1 to H,

m_h is the total number of clusters selected in the hth stratum,

y_{hi} is the sum of the weighted values of variable y in the ith cluster in the hth stratum,

x_{hi} is the sum of the weighted number of cases in the ith cluster in the hth stratum, and

f is the overall sampling fraction, which is so small that it is ignored.

The Jackknife repeated replication method derives estimates of complex rates from each of several replications of the parent sample, and calculates standard errors for these estimates using simple formulas. Each replication considers *all but one* cluster in the calculation of the estimates. Pseudo-independent replications are thus created. In the 2008 NDHS, there were 886 non-empty clusters. Hence, 886 replications were created. The variance of a rate r is calculated as follows:

$$SE^2(r) = var(r) = \frac{1}{k(k-1)} \sum_{i=1}^{k} (r_i - r)^2$$

in which

$$r_i = kr - (k-1)r_{(i)}$$

where r is the estimate computed from the full sample of 886 clusters,

$r_{(i)}$ is the estimate computed from the reduced sample of 886 clusters (i^{th} cluster excluded), and

k is the total number of clusters.

In addition to the standard error, the design effect (DEFT) for each estimate is also calculated. The design effect is defined as the ratio between the standard error using the given sample design and the standard error that would result if a simple random sample had been used. A DEFT value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a value greater than 1.0 indicates the increase in the sampling error due to the use of a more complex and less statistically efficient design. Relative errors and confidence limits for the estimates are also computed.

Sampling errors for the 2008 NDHS are calculated for selected variables considered to be of primary interest for the women's and men's samples. The results are presented in this appendix for the country as a whole, for urban and rural areas, and for 6 regions. For each variable, the type of statistic (mean, proportion, or rate) and the base population are given in Table C.1. Tables C.2 to C.10 present the value of the statistic (R), its standard error (SE), the number of unweighted (N) and weighted (WN) cases, the design effect (DEFT), the relative standard error (SE/R), and the 95 percent confidence limits (R±2SE), for the selected variables including fertility and mortality rates. The sampling errors for mortality rates except for the entire country are presented for the 10 years preceding the survey. The DEFT is considered undefined when the standard error considering a simple random sample is zero (when the estimate is close to 0 or 1). In the case of the total fertility rate, the number of unweighted cases is not relevant, as there is no known unweighted value for woman-years of exposure to childbearing.

The confidence interval (e.g., as calculated for children ever born to women age 40-49) can be interpreted as follows: the overall average from the national sample is 6.507 and its standard error is 0.057. Therefore, to obtain the 95 percent confidence limits, one adds and subtracts twice the standard error to the sample estimate (i.e., 6.507 ± 2×0.057; in other words between 6.392 and 6.622). There is a high probability (95 percent) that the true average number of children ever born to all women aged 40-49 is between 6.392 and 6.622.

For the women sampling errors and not taking into consideration the estimate for using female sterilisation, the relative standard errors (SE/R) for the means and proportions range between 2 and 8.8 percent, with an average relative standard error of 2.99 percent; the highest relative standard errors are for estimates of very low values (e.g., *currently using IUD—1 percent—has 8.8 percent of relative error*). So in general, the relative standard error for most estimates for the country as a whole is small, except for estimates of very small proportions. The relative standard error for the total fertility rate is small, 1.4 percent. However, for the mortality rates, the average relative standard error for the past five-year period mortality rates is much higher, about 3.2 percent.

There are differentials in the relative standard error for the estimates of women sub-populations. For example, for the variable *want no more children*, the relative standard errors as a percent of the estimated mean for the whole country, urban total area and for the rural total area are 2.1 percent, 3.0 percent and 2.7 percent, respectively.

For the total women sample, the value of the design effect (DEFT) averaged over all variables is 1.86, which means that due to multi-stage clustering of the sample the average standard error is increased by a factor of 1.86 over that in an equivalent simple random sample.

Table C.1 List of selected variables for sampling errors, Nigeria 2008

Variable	Estimate	Base population
	WOMEN	
Urban residence	Proportion	All women 15-49
Literate	Proportion	All women 15-49
No education	Proportion	All women 15-49
Secondary education or higher	Proportion	All women 15-49
Net attendance ratio for primary school	Proportion	All women 15-49
Never married	Proportion	All women 15-49
Currently married/in union	Proportion	All women 15-49
Had first sex before 18	Proportion	All women 20-49
Currently pregnant	Proportion	All women 15-49
Children ever born	Mean	All women 15-49
Children surviving	Mean	All women 15-49
Children ever born to women age 40-49	Mean	All women 40-49
Knows any contraceptive method	Proportion	Currently married
Ever using contraceptive method	Proportion	Currently married
Currently using any contraceptive method	Proportion	Currently married
Currently using a modern method	Proportion	Currently married
Currently using pill	Proportion	Currently married
Currently using IUD	Proportion	Currently married
Currently using condom	Proportion	Currently married
Currently using female sterilisation	Proportion	Currently married
Currently using periodic abstinence	Proportion	Currently married
Obtained method from public sector source	Proportion	User modern method
Want no more children	Proportion	Currently married
Want to delay birth at least 2 years	Proportion	Currently married
Ideal family size	Mean	All women 15-49
Two or more tetanus injections	Proportion	Births in past 5 years
Neonatal tetanus	Proportion	Births in past 5 years
Mothers received medical assistance at delivery	Proportion	Children under five
Had diarrhoea in two weeks before survey	Proportion	Children under five
Treated with oral rehydration salts (ORS)	Proportion	Children under five with diarrhoea
Taken to a health provider	Proportion	Children under five with diarrhoea
Vaccination card seen	Proportion	Children 12-23 months
Received BCG	Proportion	Children 12-23 months
Received DPT (3 doses)	Proportion	Children 12-23 months
Received polio (3 doses)	Proportion	Children 12-23 months
Received measles	Proportion	Children 12-23 months
Fully immunised	Proportion	Children 12-23 months
Height-for-age (below -2SD)	Proportion	Children Under-5 who were measured
Weight-for-height (below -2SD)	Proportion	Children Under-5 who were measured
Weight-for-age (below -2SD)	Proportion	Children Under-5 who were measured
BMI <18.5	Proportion	All women 15-49
Has heard of HIV/AIDS	Proportion	All women 15-49
Knows condoms reduce HIV risks	Proportion	All women 15-49
Knows about limiting partners	Proportion	All women 15-49
Has comprehensive knowledge of HIV/AIDS	Proportion	All women 15-49
Higher-risk sex past 12 months among youth	Proportion	All women 15-24
Condom use at higher-risk sex among youth	Proportion	All women 15-24
Female circumcision	Proportion	All women 15-49
Total Fertility Rate TFR (3 years)	Rate	All women 15-49
Neonatal mortality (0-4 years)	Rate	Number of births in past 5 (10) years
Post-neonatal mortality (0-4 years)	Rate	Number of births in past 5 (10) years
Infant mortality (0-4 years)	Rate	Number of births in past 5 (10) years
Infant mortality (0-9 years)	Rate	Number of births in past 5 (10) years
Child mortality (0-4 years)	Rate	Number of births in past 5 (10) years
Under-5 mortality (0-4 years)	Rate	Number of births in past 5 (10) years
Maternal mortality ratio	Rate	Exposure years in past 6 years
	MEN	
Urban residence	Proportion	All men 15-49
Literate	Proportion	All men 15-49
No education	Proportion	All men 15-49
Secondary education or higher	Proportion	All men 15-49
Never married	Proportion	All men 15-49
Currently married	Proportion	All men 15-49
Had first sex before 18	Proportion	All men 20-49
Knows at least one method	Proportion	Currently married
Know any modern method	Proportion	Currently married
Ever used any method	Proportion	Currently married
Want no more children	Proportion	Currently married
Delay at least two years	Proportion	Currently married
Ideal number of family size	Mean	All men 15-49
Had heard about HIV/AIDS	Proportion	All men 15-49
Knows condoms reduce HIV risks	Proportion	All men 15-49
Knows about limiting partners	Proportion	All men 15-49
Has comprehensive knowledge of HIV/AIDS	Proportion	All men 15-49
Higher-risk sex past 12 months among youth	Proportion	All men 15-24
Condom use at last higher-risk sex among youth	Proportion	All men 15-24

Table C.2 Sampling errors for national sample, Nigeria 2008

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
			WOMEN					
Urban residence	0.357	0.007	33385	33385	2.502	0.018	0.344	0.371
Literate	0.537	0.009	33385	33385	3.242	0.016	0.519	0.555
No education	0.358	0.008	33385	33385	3.208	0.024	0.341	0.375
Secondary education or higher	0.446	0.008	33385	33385	3.113	0.019	0.429	0.463
Net attendance ratio for primary school	0.621	0.008	26556	25093	2.101	0.013	0.604	0.637
Never married	0.252	0.005	33385	33385	2.045	0.019	0.242	0.261
Currently married/in union	0.706	0.005	33385	33385	2.117	0.007	0.696	0.717
Had first sex before 18	0.515	0.006	26794	26892	2.099	0.012	0.503	0.528
Currently pregnant	0.105	0.002	33385	33385	1.266	0.02	0.1	0.109
Children ever born	3.055	0.029	33385	33385	1.763	0.01	2.996	3.113
Children surviving	2.475	0.021	33385	33385	1.597	0.009	2.433	2.518
Children ever born to women age 40-49	6.507	0.057	5948	5904	1.449	0.009	6.392	6.622
Knows any contraceptive method	0.684	0.009	23954	23578	3.089	0.014	0.666	0.703
Ever using contraceptive method	0.289	0.007	23954	23578	2.433	0.025	0.275	0.303
Currently using any contraceptive method	0.146	0.005	23954	23578	2.044	0.032	0.137	0.155
Currently using a modern method	0.097	0.003	23954	23578	1.683	0.033	0.09	0.103
Currently using pill	0.017	0.001	23954	23578	1.245	0.062	0.015	0.019
Currently using IUD	0.01	0.001	23954	23578	1.348	0.088	0.008	0.012
Currently using condom	0.024	0.001	23954	23578	1.379	0.056	0.022	0.027
Currently using female sterilisation	0.004	0.001	23954	23578	1.524	0.158	0.003	0.005
Currently using periodic abstinence	0.021	0.001	23954	23578	1.554	0.069	0.018	0.024
Obtained method from public sector source	0.233	0.011	2802	3126	1.388	0.048	0.211	0.256
Want no more children	0.197	0.004	23954	23578	1.593	0.021	0.189	0.205
Want to delay birth at least 2 years	0.322	0.005	23954	23578	1.817	0.017	0.311	0.333
Ideal family size	6.131	0.047	29230	28874	2.65	0.008	6.036	6.226
Two or more tetanus injections	0.453	0.008	18028	17635	2.227	0.018	0.436	0.469
Neonatal tetanus	0.48	0.008	18028	17635	2.274	0.018	0.463	0.497
Mothers received medical assistance at delivery	0.389	0.009	28647	28100	2.374	0.023	0.371	0.407
Had diarrhoea in two weeks before survey	0.101	0.004	25446	24975	1.7	0.035	0.094	0.108
Treated with oral rehydration salts (ORS)	0.255	0.012	2645	2530	1.331	0.049	0.23	0.28
Taken to a health provider	0.422	0.014	2645	2530	1.261	0.032	0.395	0.449
Vaccination card seen	0.261	0.009	5022	4945	1.385	0.034	0.244	0.279
Received BCG	0.497	0.011	5022	4945	1.524	0.022	0.475	0.519
Received DPT (3 doses)	0.354	0.011	5022	4945	1.578	0.031	0.333	0.376
Received polio (3 doses)	0.387	0.01	5022	4945	1.469	0.027	0.366	0.407
Received measles	0.414	0.011	5022	4945	1.531	0.026	0.393	0.436
Fully immunised	0.227	0.009	5022	4945	1.426	0.038	0.209	0.244
Height-for-age (below -2SD)	0.406	0.006	20633	19896	1.464	0.014	0.395	0.417
Weight-for-height (below -2SD)	0.139	0.004	20633	19896	1.586	0.031	0.131	0.147
Weight-for-age (below -2SD)	0.231	0.005	20633	19896	1.608	0.023	0.22	0.242
BMI <18.5	0.122	0.003	28119	28200	1.533	0.025	0.116	0.128
Has heard of HIV/AIDS	0.882	0.005	33385	33385	2.972	0.006	0.872	0.893
Knows condoms reduce HIV risks	0.53	0.007	33385	33385	2.607	0.013	0.515	0.544
Knows about limiting partners	0.679	0.007	33385	33385	2.715	0.01	0.665	0.693
Has comprehensive knowledge of HIV/AIDS	0.234	0.006	33385	33385	2.392	0.024	0.223	0.245
Higher-risk sex past 12 months among youth	0.288	0.009	7577	7469	1.785	0.032	0.27	0.307
Condom use at higher-risk sex among youth	0.355	0.014	2029	2154	1.357	0.041	0.326	0.384
Female circumcision	0.296	0.01	33385	33385	4.163	0.035	0.275	0.317
Total Fertility Rate TFR (3 years)	5.724	0.083	NA	93502	1.9	0.014	5.559	5.889
Neonatal mortality (0-4 years)	39.973	1.501	28799	28248	1.179	0.038	36.971	42.975
Post-neonatal mortality (0-4 years)	35.28	1.292	28855	28300	1.11	0.037	32.697	37.864
Infant mortality (0-4 years)	75.253	2.062	28871	28314	1.199	0.027	71.129	79.377
Infant mortality (0-9 years)	86.837	1.921	55445	53980	1.360	0.022	82.996	90.679
Child mortality (0-4 years)	88.173	3.051	29645	29050	1.49	0.035	82.07	94.276
Under-5 mortality (0-4 years)	156.791	3.777	29733	29130	1.466	0.024	149.236	164.346
Maternal mortality ratio	545.061	34.999	377463	377463	NA	0.064	475.063	615.059
			MEN					
Urban residence	0.378	0.008	13838	13808	1.929	0.021	0.362	0.394
Literate	0.768	0.008	13838	13808	2.11	0.01	0.753	0.783
No education	0.188	0.007	13838	13808	2.248	0.04	0.173	0.203
Secondary education or higher	0.612	0.009	13838	13808	2.105	0.014	0.594	0.629
Never married	0.474	0.006	13838	13808	1.424	0.013	0.462	0.486
Currently married	0.508	0.006	13838	13808	1.428	0.012	0.496	0.52
Had first sex before 18	0.235	0.005	11267	11276	1.294	0.022	0.225	0.246
Knows at least one method	0.897	0.007	7186	7018	1.949	0.008	0.884	0.911
Know any modern method	0.888	0.007	7186	7018	1.977	0.008	0.873	0.903
Ever used any method	0.445	0.009	7186	7018	1.516	0.02	0.427	0.463
Want no more children	0.116	0.005	7186	7018	1.218	0.04	0.107	0.125
Delay at least two years	0.383	0.008	7186	7018	1.336	0.02	0.368	0.398
Ideal number of family size	7.206	0.097	12305	12182	1.649	0.013	7.012	7.4
Had heard about HIV/AIDS	0.935	0.004	13838	13808	1.93	0.004	0.927	0.943
Knows condoms reduce HIV risks	0.724	0.007	13838	13808	1.868	0.01	0.709	0.738
Knows about limiting partners	0.83	0.006	13838	13808	1.873	0.007	0.818	0.842
Has comprehensive knowledge of HIV/AIDS	0.363	0.008	13838	13808	1.985	0.022	0.347	0.379
Higher-risk sex past 12 months among youth	0.792	0.012	1696	1674	1.248	0.016	0.768	0.817
Condom use at last higher-risk sex among youth	0.494	0.017	1315	1326	1.229	0.034	0.461	0.528

Table C.3 Sampling errors for urban sample, Nigeria 2008

Variable	Value (R)	Stand-ard error (SE)	Number of cases Un-weighted (N)	Number of cases Weight-ed (WN)	Design effect (DEFT)	Rela-tive error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
				WOMEN				
Literate	0.766	0.011	10489	11934	2.775	0.015	0.743	0.789
No education	0.165	0.01	10489	11934	2.712	0.06	0.145	0.185
Secondary education or higher	0.667	0.012	10489	11934	2.693	0.019	0.642	0.692
Net attendance ratio for primary school	0.741	0.01	7041	7482	1.538	0.013	0.722	0.76
Never married	0.339	0.008	10489	11934	1.714	0.023	0.323	0.355
Currently married/in union	0.618	0.009	10489	11934	1.798	0.014	0.601	0.635
Had first sex before 18	0.359	0.01	8462	9666	1.835	0.027	0.34	0.378
Currently pregnant	0.09	0.004	10489	11934	1.282	0.04	0.083	0.098
Children ever born	2.426	0.043	10489	11934	1.61	0.018	2.341	2.512
Children surviving	2.095	0.034	10489	11934	1.506	0.016	2.027	2.162
Children ever born to women age 40-49	5.655	0.107	1708	1910	1.524	0.019	5.441	5.87
Knows any contraceptive method	0.879	0.01	6586	7375	2.57	0.012	0.859	0.9
Ever using contraceptive method	0.473	0.014	6586	7375	2.247	0.029	0.445	0.5
Currently using any contraceptive method	0.259	0.01	6586	7375	1.789	0.037	0.239	0.278
Currently using a modern method	0.167	0.006	6586	7375	1.399	0.038	0.154	0.18
Currently using pill	0.033	0.002	6586	7375	1.122	0.075	0.028	0.037
Currently using IUD	0.022	0.002	6586	7375	1.206	0.1	0.017	0.026
Currently using condom	0.048	0.003	6586	7375	1.305	0.072	0.041	0.054
Currently using female sterilisation	0.004	0.001	6586	7375	1.14	0.211	0.003	0.006
Currently using periodic abstinence	0.036	0.003	6586	7375	1.475	0.094	0.029	0.043
Obtained method from public sector source	0.215	0.015	1449	1770	1.37	0.069	0.186	0.245
Want no more children	0.249	0.008	6586	7375	1.417	0.03	0.234	0.265
Want to delay birth at least 2 years	0.303	0.009	6586	7375	1.612	0.03	0.285	0.321
Ideal family size	5.202	0.058	9500	10785	2.316	0.011	5.085	5.318
Two or more tetanus injections	0.673	0.012	4825	5330	1.849	0.019	0.648	0.698
Neonatal tetanus	0.713	0.012	4825	5330	1.914	0.017	0.688	0.738
Mothers received medical assistance at delivery	0.654	0.015	7613	8359	2.077	0.023	0.624	0.684
Had diarrhoea in two weeks before survey	0.079	0.006	6980	7690	1.545	0.071	0.068	0.09
Treated with oral rehydration salts (ORS)	0.405	0.03	621	608	1.286	0.075	0.344	0.465
Taken to a health provider	0.498	0.027	621	608	1.123	0.054	0.444	0.552
Vaccination card seen	0.388	0.018	1369	1498	1.328	0.046	0.352	0.425
Received BCG	0.714	0.018	1369	1498	1.458	0.026	0.677	0.751
Received DPT (3 doses)	0.548	0.021	1369	1498	1.492	0.038	0.506	0.589
Received polio (3 doses)	0.516	0.019	1369	1498	1.358	0.037	0.479	0.554
Received measles	0.591	0.018	1369	1498	1.345	0.031	0.555	0.628
Fully immunised	0.375	0.018	1369	1498	1.34	0.048	0.339	0.412
Height-for-age (below -2SD)	0.313	0.01	5894	6365	1.425	0.031	0.294	0.332
Weight-for-height (below -2SD)	0.11	0.007	5894	6365	1.485	0.06	0.096	0.123
Weight-for-age (below -2SD)	0.158	0.008	5894	6365	1.536	0.051	0.142	0.174
BMI <18.5	0.091	0.004	9057	10307	1.448	0.048	0.082	0.1
Has heard of HIV/AIDS	0.953	0.004	10489	11934	2.091	0.005	0.944	0.962
Knows about condoms	0.632	0.011	10489	11934	2.24	0.017	0.611	0.653
Knows about limiting partners	0.745	0.009	10489	11934	2.224	0.013	0.726	0.764
Has comprehensive knowledge of HIV/AIDS	0.332	0.01	10489	11934	2.127	0.029	0.313	0.352
Higher-risk sex past 12 months among youth	0.439	0.018	2018	2250	1.628	0.041	0.404	0.475
Condom use at higher-risk sex among youth	0.461	0.022	818	989	1.274	0.048	0.417	0.505
Female circumcision	0.368	0.017	10489	11934	3.626	0.046	0.334	0.402
Total fertility rate TFR (3 years)	4.709	0.121	na	33523	1.657	0.026	4.467	4.951
Child mortality (0-10 years)	58.067	3.962	14328	15669	1.641	0.068	50.143	65.991
Infant mortality (0-10 years)	67.202	3.062	14214	15555	1.291	0.046	61.079	73.325
Neonatal mortality (0-10 years)	37.916	2.068	14199	15537	1.155	0.055	33.780	42.052
Post-neonatal mortality (0-10 years)	29.286	1.933	14210	15551	1.223	0.066	25.420	33.152
Under-5 mortality (0-10 years)	121.367	5.435	14347	15691	1.623	0.045	110.497	132.237
				MEN				
Literate	0.909	0.007	4643	5215	1.764	0.008	0.894	0.923
No education	0.075	0.007	4643	5215	1.877	0.097	0.06	0.089
Secondary education or higher	0.783	0.011	4643	5215	1.804	0.014	0.761	0.805
Never married	0.541	0.01	4643	5215	1.323	0.018	0.522	0.56
Currently married	0.443	0.01	4643	5215	1.341	0.022	0.423	0.462
Had first sex before 18	0.208	0.008	3817	4312	1.278	0.04	0.191	0.225
Knows at least one method	0.971	0.005	2086	2309	1.446	0.006	0.96	0.981
Know any modern method	0.969	0.006	2086	2309	1.506	0.006	0.957	0.98
Ever used any method	0.637	0.015	2086	2309	1.392	0.023	0.608	0.667
Want no more children	0.157	0.009	2086	2309	1.132	0.057	0.139	0.175
Delay at least two years	0.373	0.013	2086	2309	1.211	0.034	0.348	0.399
Ideal number of family size	5.674	0.13	4273	4826	1.685	0.023	5.415	5.933
Had heard about HIV/AIDS	0.979	0.003	4643	5215	1.431	0.003	0.973	0.985
Knows condoms reduce HIV risks	0.777	0.011	4643	5215	1.793	0.014	0.755	0.799
Knows about limiting partners	0.869	0.009	4643	5215	1.748	0.01	0.852	0.886
Has comprehensive knowledge of HIV/AIDS	0.454	0.014	4643	5215	1.852	0.03	0.427	0.482
Higher-risk sex past 12 months among youth	0.883	0.017	541	619	1.233	0.019	0.849	0.917
Condom use at last higher-risk sex among youth	0.624	0.026	471	546	1.185	0.042	0.571	0.677

na = Not applicable

Table C,4 Sampling errors for rural sample, Nigeria 2008

| Variable | Value (R) | Standard error (SE) | Number of cases | | Design effect (DEFT) | Relative error (SE/R) | Confidence limits | |
			Un-weighted (N)	Weight-ed (WN)			R-2SE	R+2SE
WOMEN								
Literate	0.409	0.011	22896	21451	3.435	0.027	0.387	0.432
No education	0.465	0.011	22896	21451	3.407	0.024	0.442	0.487
Secondary education or higher	0.323	0.01	22896	21451	3.257	0.031	0.302	0.343
Net attendance ratio for primary school	0.57	0.011	19515	17611	2.326	0.02	0.547	0.592
Never married	0.203	0.006	22896	21451	2.183	0.029	0.191	0.215
Currently married/in union	0.755	0.006	22896	21451	2.244	0.008	0.743	0.768
Had first sex before 18	0.603	0.008	18332	17226	2.139	0.013	0.588	0.619
Currently pregnant	0.113	0.003	22896	21451	1.248	0.023	0.107	0.118
Children ever born	3.404	0.036	22896	21451	1.729	0.011	3.332	3.477
Children surviving	2.687	0.026	22896	21451	1.57	0.01	2.636	2.738
Children ever born to women age 40-49	6.914	0.062	4240	3994	1.337	0.009	6.79	7.039
Knows any contraceptive method	0.596	0.012	17368	16203	3.26	0.02	0.571	0.62
Ever using contraceptive method	0.205	0.007	17368	16203	2.338	0.035	0.191	0.22
Currently using any contraceptive method	0.094	0.005	17368	16203	2.041	0.048	0.085	0.104
Currently using a modern method	0.065	0.003	17368	16203	1.805	0.052	0.058	0.071
Currently using pill	0.01	0.001	17368	16203	1.268	0.098	0.008	0.011
Currently using IUD	0.004	0.001	17368	16203	1.483	0.17	0.003	0.006
Currently using condom	0.014	0.001	17368	16203	1.326	0.085	0.012	0.016
Currently using female sterilisation	0.004	0.001	17368	16203	1.715	0.216	0.002	0.005
Currently using periodic abstinence	0.014	0.001	17368	16203	1.525	0.097	0.011	0.017
Obtained method from public sector source	0.257	0.016	1353	1356	1.376	0.064	0.225	0.29
Want no more children	0.173	0.005	17368	16203	1.65	0.027	0.164	0.183
Want to delay birth at least 2 years	0.33	0.007	17368	16203	1.909	0.021	0.316	0.344
Ideal family size	6.685	0.063	19730	18089	2.718	0.009	6.56	6.811
Two or more tetanus injections	0.357	0.01	13203	12305	2.362	0.028	0.338	0.377
Neonatal tetanus	0.379	0.01	13203	12305	2.407	0.027	0.358	0.399
Mothers received medical assistance at delivery	0.277	0.01	21034	19741	2.53	0.036	0.257	0.297
Had diarrhoea in two weeks before survey	0.111	0.004	18466	17284	1.75	0.039	0.102	0.12
Treated with oral rehydration salts (ORS)	0.208	0.013	2024	1922	1.374	0.063	0.182	0.235
Taken to a health provider	0.398	0.015	2024	1922	1.311	0.039	0.367	0.429
Vaccination card seen	0.206	0.009	3653	3447	1.381	0.046	0.187	0.225
Received BCG	0.402	0.013	3653	3447	1.545	0.032	0.377	0.428
Received DPT (3 doses)	0.27	0.012	3653	3447	1.594	0.044	0.247	0.294
Received polio (3 doses)	0.33	0.012	3653	3447	1.511	0.036	0.307	0.354
Received measles	0.337	0.013	3653	3447	1.617	0.038	0.312	0.363
Fully immunised	0.162	0.009	3653	3447	1.416	0.054	0.144	0.18
Height-for-age (below -2SD)	0.45	0.007	14739	13531	1.453	0.015	0.437	0.463
Weight-for-height (below -2SD)	0.153	0.005	14739	13531	1.647	0.036	0.142	0.164
Weight-for-age (below -2SD)	0.265	0.007	14739	13531	1.639	0.025	0.252	0.279
BMI <18.5	0.14	0.004	19062	17893	1.563	0.028	0.132	0.148
Has heard of HIV/AIDS	0.843	0.008	22896	21451	3.216	0.009	0.827	0.858
Knows about condoms	0.473	0.009	22896	21451	2.86	0.02	0.454	0.492
Knows about limiting partners	0.643	0.009	22896	21451	2.986	0.015	0.624	0.662
Has comprehensive knowledge of HIV/AIDS	0.179	0.007	22896	21451	2.595	0.037	0.166	0.192
Higher-risk sex past 12 months among youth	0.223	0.01	5559	5219	1.815	0.045	0.203	0.244
Condom use at higher-risk sex among youth	0.265	0.017	1211	1166	1.341	0.064	0.231	0.299
Female circumcision	0.256	0.013	22896	21451	4.575	0.051	0.23	0.283
Total fertility rate TFR (3 years)	6.282	0.095	na	59980	1.85	0.015	6.092	6.473
Child mortality (0-10 years)	105.962	3.581	41752	38911	1.799	0.034	98.801	113.124
Infant mortality (0-10 years)	94.730	2.286	41231	38425	1.342	0.024	90.158	99.302
Neonatal mortality (0-10 years)	49.108	1.639	41136	38336	1.311	0.033	45.831	52.385
Post-neonatal mortality (0-10 years)	45.622	1.423	41219	38415	1.226	0.031	42.776	48.468
Under-5 mortality (0-10 years)	190.654	4.270	41859	39010	1.734	0.022	182.114	199.194
MEN								
Literate	0.683	0.011	9195	8593	2.293	0.016	0.661	0.705
No education	0.257	0.011	9195	8593	2.443	0.043	0.235	0.279
Secondary education or higher	0.508	0.012	9195	8593	2.287	0.023	0.484	0.532
Never married	0.434	0.008	9195	8593	1.469	0.018	0.418	0.449
Currently married	0.548	0.008	9195	8593	1.463	0.014	0.533	0.563
Had first sex before 18	0.252	0.007	7450	6964	1.308	0.026	0.239	0.265
Knows at least one method	0.862	0.01	5100	4709	2.067	0.012	0.842	0.882
Know any modern method	0.848	0.011	5100	4709	2.093	0.012	0.827	0.869
Ever used any method	0.351	0.01	5100	4709	1.545	0.029	0.33	0.372
Want no more children	0.096	0.005	5100	4709	1.252	0.054	0.085	0.106
Delay at least two years	0.387	0.01	5100	4709	1.398	0.025	0.368	0.407
Ideal number of family size	8.211	0.133	8032	7356	1.662	0.016	7.945	8.477
Had heard about HIV/AIDS	0.908	0.006	9195	8593	2.067	0.007	0.895	0.92
Knows condoms reduce HIV risks	0.691	0.009	9195	8593	1.968	0.014	0.672	0.71
Knows about limiting partners	0.807	0.008	9195	8593	1.978	0.01	0.791	0.823
Has comprehensive knowledge of HIV/AIDS	0.308	0.01	9195	8593	2.115	0.033	0.287	0.328
Higher-risk sex past 12 months among youth	0.739	0.017	1155	1055	1.279	0.022	0.706	0.772
Condom use at last higher-risk sex among youth	0.404	0.021	844	780	1.226	0.051	0.363	0.445

na = Not applicable

Table C.5 Sampling errors for Central sample, Nigeria 2008

Variable	Value (R)	Standard error (SE)	Number of cases Un-weighted (N)	Number of cases Weight-ed (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
WOMEN								
Urban residence	0.292	0.013	6366	4748	2.238	0.044	0.266	0.317
Literate	0.476	0.022	6366	4748	3.54	0.047	0.432	0.521
No education	0.355	0.025	6366	4748	4.158	0.07	0.305	0.405
Secondary education or higher	0.393	0.02	6366	4748	3.296	0.051	0.353	0.434
Net attendance ratio for primary school	0.705	0.021	5307	3895	2.681	0.03	0.663	0.747
Never married	0.25	0.012	6366	4748	2.194	0.048	0.226	0.274
Currently married/in union	0.699	0.013	6366	4748	2.285	0.019	0.673	0.726
Had first sex before 18	0.448	0.014	5102	3789	1.979	0.031	0.42	0.476
Currently pregnant	0.104	0.005	6366	4748	1.394	0.051	0.093	0.114
Children ever born	2.979	0.063	6366	4748	1.732	0.021	2.853	3.105
Children surviving	2.516	0.046	6366	4748	1.498	0.018	2.425	2.608
Children ever born to women age 40-49	6.436	0.118	1092	817	1.419	0.018	6.201	6.671
Knows any contraceptive method	0.643	0.029	4441	3320	3.988	0.045	0.586	0.7
Ever using contraceptive method	0.264	0.016	4441	3320	2.375	0.06	0.233	0.295
Currently using any contraceptive method	0.13	0.01	4441	3320	1.97	0.076	0.11	0.15
Currently using a modern method	0.105	0.008	4441	3320	1.793	0.078	0.089	0.122
Currently using pill	0.014	0.002	4441	3320	1.258	0.156	0.01	0.019
Currently using IUD	0.008	0.002	4441	3320	1.168	0.199	0.005	0.011
Currently using condom	0.019	0.003	4441	3320	1.261	0.135	0.014	0.024
Currently using female sterilisation	0.012	0.003	4441	3320	2.016	0.279	0.005	0.018
Currently using periodic abstinence	0.012	0.003	4441	3320	1.542	0.209	0.007	0.017
Obtained method from public sector source	0.381	0.031	627	443	1.603	0.082	0.319	0.443
Want no more children	0.195	0.011	4441	3320	1.826	0.056	0.173	0.217
Want to delay birth at least 2 years	0.281	0.01	4441	3320	1.535	0.037	0.26	0.302
Ideal family size	5.746	0.084	5456	4005	2.491	0.015	5.578	5.913
Two or more tetanus injections	0.457	0.023	3350	2525	2.716	0.051	0.41	0.504
Neonatal tetanus	0.489	0.023	3350	2525	2.713	0.048	0.442	0.536
Mothers received medical assistance at delivery	0.427	0.027	5046	3830	3.079	0.062	0.374	0.48
Had diarrhoea in two weeks before survey	0.056	0.005	4542	3434	1.395	0.088	0.046	0.066
Treated with oral rehydration salts (ORS)	0.335	0.032	241	193	1.064	0.096	0.271	0.4
Taken to a health provider	0.443	0.036	241	193	1.105	0.081	0.371	0.514
Vaccination card seen	0.312	0.025	855	640	1.558	0.08	0.262	0.362
Received BCG	0.624	0.028	855	640	1.674	0.045	0.567	0.68
Received DPT (3 doses)	0.434	0.03	855	640	1.77	0.07	0.373	0.494
Received polio (3 doses)	0.405	0.024	855	640	1.433	0.06	0.357	0.454
Received measles	0.518	0.028	855	640	1.6	0.053	0.462	0.573
Fully immunised	0.259	0.021	855	640	1.375	0.081	0.217	0.301
Height-for-age (below -2SD)	0.438	0.014	3812	2800	1.592	0.031	0.411	0.465
Weight-for-height (below -2SD)	0.093	0.008	3812	2800	1.638	0.087	0.077	0.109
Weight-for-age (below -2SD)	0.195	0.011	3812	2800	1.587	0.056	0.173	0.217
BMI <18.5	0.085	0.005	5437	4043	1.25	0.056	0.075	0.094
Has heard of HIV/AIDS	0.759	0.023	6366	4748	4.323	0.031	0.712	0.805
Knows about condoms	0.483	0.017	6366	4748	2.707	0.035	0.449	0.517
Knows about limiting partners	0.621	0.022	6366	4748	3.682	0.036	0.576	0.666
Has comprehensive knowledge of HIV/AIDS	0.22	0.014	6366	4748	2.613	0.062	0.193	0.247
Higher-risk sex past 12 months among youth	0.259	0.023	1244	955	1.833	0.088	0.214	0.305
Condom use at higher-risk sex among youth	0.287	0.031	333	248	1.237	0.107	0.226	0.348
Female circumcision	0.114	0.018	6366	4748	4.387	0.153	0.079	0.15
Total fertility rate TFR (3 years)	5.411	0.166	na	13286	1.636	0.031	5.08	5.743
Child mortality (0-10 years)	61.941	4.569	9980	7582	1.530	0.074	52.802	71.080
Infant mortality (0-10 years)	77.362	3.884	9898	7515	1.267	0.050	69.595	85.130
Neonatal mortality (0-10 years)	40.547	2.758	9885	7506	1.221	0.068	35.030	46.063
Post-neonatal mortality (0-10 years)	36.816	2.439	9894	7512	1.195	0.066	31.938	41.693
Under-5 mortality (0-10 years)	134.512	6.140	9997	7594	1.507	0.046	122.232	146.791
MEN								
Urban residence	0.284	0.013	2773	2065	1.518	0.046	0.258	0.31
Literate	0.756	0.021	2773	2065	2.54	0.027	0.715	0.798
No education	0.154	0.02	2773	2065	2.975	0.132	0.113	0.195
Secondary education or higher	0.643	0.021	2773	2065	2.306	0.033	0.601	0.685
Never married	0.48	0.014	2773	2065	1.426	0.028	0.453	0.507
Currently married	0.504	0.013	2773	2065	1.411	0.027	0.477	0.531
Had first sex before 18	0.301	0.015	2205	1629	1.508	0.049	0.272	0.331
Knows at least one method	0.906	0.017	1401	1040	2.205	0.019	0.872	0.941
Know any modern method	0.895	0.019	1401	1040	2.266	0.021	0.857	0.932
Ever used any method	0.413	0.019	1401	1040	1.463	0.047	0.374	0.451
Want no more children	0.134	0.012	1401	1040	1.331	0.09	0.11	0.159
Delay at least two years	0.392	0.018	1401	1040	1.377	0.046	0.356	0.428
Ideal number of family size	6.514	0.19	2525	1867	1.84	0.029	6.134	6.895
Had heard about HIV/AIDS	0.907	0.014	2773	2065	2.484	0.015	0.879	0.934
Knows condoms reduce HIV risks	0.743	0.018	2773	2065	2.11	0.024	0.708	0.778
Knows about limiting partners	0.805	0.017	2773	2065	2.286	0.021	0.77	0.839
Has comprehensive knowledge of HIV/AIDS	0.325	0.017	2773	2065	1.958	0.054	0.29	0.36
Higher-risk sex past 12 months among youth	0.782	0.028	394	313	1.323	0.035	0.726	0.837
Condom use at last higher-risk sex among youth	0.368	0.035	309	245	1.263	0.094	0.299	0.438

na = Not applicable

Table C.6 Sampling errors for North East sample, Nigeria 2008
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| Variable | Value (R) | Standard error (SE) | Number of cases | | Design effect (DEFT) | Relative error (SE/R) | Confidence limits | |
			Un-weighted (N)	Weight-ed (WN)			R-2SE	R+2SE
			WOMEN					
Urban residence	0.263	0.012	6217	4262	2.091	0.044	0.239	0.286
Literate	0.228	0.021	6217	4262	3.979	0.093	0.186	0.27
No education	0.681	0.023	6217	4262	3.96	0.034	0.634	0.728
Secondary education or higher	0.165	0.017	6217	4262	3.651	0.104	0.13	0.199
Net attendance ratio for primary school	0.437	0.028	5547	3779	2.959	0.064	0.381	0.493
Never married	0.124	0.012	6217	4262	2.883	0.097	0.1	0.148
Currently married/in union	0.841	0.013	6217	4262	2.859	0.016	0.815	0.868
Had first sex before 18	0.734	0.014	4961	3406	2.303	0.02	0.705	0.763
Currently pregnant	0.126	0.005	6217	4262	1.129	0.038	0.117	0.136
Children ever born	3.936	0.077	6217	4262	1.801	0.019	3.783	4.09
Children surviving	2.977	0.051	6217	4262	1.59	0.017	2.875	3.079
Children ever born to women age 40-49	7.475	0.132	1113	769	1.315	0.018	7.211	7.74
Knows any contraceptive method	0.586	0.021	5147	3585	3.094	0.036	0.544	0.629
Ever using contraceptive method	0.104	0.008	5147	3585	1.802	0.074	0.089	0.12
Currently using any contraceptive method	0.04	0.004	5147	3585	1.56	0.106	0.032	0.049
Currently using a modern method	0.035	0.004	5147	3585	1.656	0.122	0.026	0.043
Currently using pill	0.006	0.001	5147	3585	1.295	0.241	0.003	0.008
Currently using IUD	0	0	5147	3585	0.813	0.579	0	0.001
Currently using condom	0.002	0.001	5147	3585	1.326	0.397	0	0.004
Currently using female sterilisation	0.002	0.001	5147	3585	1.157	0.338	0.001	0.004
Currently using periodic abstinence	0.001	0.001	5147	3585	1.124	0.426	0	0.002
Obtained method from public sector source	0.454	0.058	152	94	1.435	0.128	0.338	0.57
Want no more children	0.134	0.007	5147	3585	1.537	0.054	0.12	0.149
Want to delay birth at least 2 years	0.35	0.013	5147	3585	1.991	0.038	0.323	0.376
Ideal family size	8.137	0.113	5623	3848	2.425	0.014	7.91	8.363
Two or more tetanus injections	0.287	0.019	3972	2751	2.61	0.065	0.25	0.325
Neonatal tetanus	0.3	0.019	3972	2751	2.66	0.064	0.262	0.339
Mothers received medical assistance at delivery	0.155	0.014	6559	4575	2.577	0.092	0.126	0.183
Had diarrhoea in two weeks before survey	0.208	0.011	5737	3989	1.843	0.052	0.187	0.23
Treated with oral rehydration salts (ORS)	0.176	0.02	1103	831	1.613	0.114	0.136	0.216
Taken to a health provider	0.359	0.021	1103	831	1.375	0.059	0.317	0.402
Vaccination card seen	0.151	0.016	1129	780	1.5	0.107	0.118	0.183
Received BCG	0.272	0.024	1129	780	1.828	0.089	0.223	0.32
Received DPT (3 doses)	0.124	0.017	1129	780	1.725	0.137	0.09	0.159
Received polio (3 doses)	0.286	0.022	1129	780	1.594	0.076	0.242	0.329
Received measles	0.248	0.02	1129	780	1.574	0.082	0.208	0.289
Fully immunised	0.076	0.012	1129	780	1.531	0.16	0.052	0.101
Height-for-age (below -2SD)	0.486	0.013	4529	3097	1.66	0.027	0.46	0.512
Weight-for-height (below -2SD)	0.222	0.015	4529	3097	2.226	0.069	0.191	0.253
Weight-for-age (below -2SD)	0.345	0.016	4529	3097	2.035	0.045	0.313	0.376
BMI <18.5	0.207	0.012	5046	3456	2.029	0.056	0.184	0.23
Has heard of HIV/AIDS	0.814	0.015	6217	4262	3.011	0.018	0.784	0.844
Knows about condoms	0.386	0.02	6217	4262	3.281	0.052	0.345	0.426
Knows about limiting partners	0.623	0.021	6217	4262	3.426	0.034	0.581	0.665
Has comprehensive knowledge of HIV/AIDS	0.144	0.012	6217	4262	2.617	0.081	0.121	0.167
Higher-risk sex past 12 months among youth	0.078	0.015	1669	1166	2.25	0.19	0.048	0.107
Condom use at higher-risk sex among youth	0.192	0.046	164	91	1.477	0.237	0.101	0.284
Female circumcision	0.027	0.01	6217	4262	5.013	0.381	0.006	0.048
Total fertility rate TFR (3 years)	7.16	0.157	na	11919	1.589	0.022	6.846	7.473
Child mortality (0-10 years)	126.352	5.497	13125	9189	1.550	0.044	115.358	137.346
Infant mortality (0-10 years)	109.483	4.851	12901	9027	1.495	0.044	99.781	119.185
Neonatal mortality (0-10 years)	53.182	2.744	12869	9005	1.193	0.052	47.693	58.670
Post-neonatal mortality (0-10 years)	56.301	3.485	12896	9023	1.526	0.062	49.331	63.271
Under-5 mortality (0-10 years)	222.002	6.896	13162	9215	1.561	0.031	208.209	235.794
			MEN					
Urban residence	0.289	0.016	2444	1645	1.716	0.054	0.258	0.321
Literate	0.538	0.025	2444	1645	2.513	0.047	0.488	0.589
No education	0.45	0.028	2444	1645	2.772	0.062	0.394	0.506
Secondary education or higher	0.357	0.027	2444	1645	2.771	0.075	0.303	0.411
Never married	0.37	0.018	2444	1645	1.794	0.047	0.335	0.405
Currently married	0.61	0.017	2444	1645	1.736	0.028	0.575	0.644
Had first sex before 18	0.191	0.012	2038	1369	1.435	0.066	0.166	0.216
Knows at least one method	0.812	0.026	1476	1002	2.541	0.032	0.76	0.863
Know any modern method	0.801	0.027	1476	1002	2.578	0.034	0.747	0.854
Ever used any method	0.162	0.015	1476	1002	1.562	0.093	0.132	0.192
Want no more children	0.038	0.006	1476	1002	1.219	0.159	0.026	0.051
Delay at least two years	0.367	0.02	1476	1002	1.627	0.056	0.327	0.408
Ideal number of family size	12.114	0.389	2154	1429	1.763	0.032	11.335	12.893
Had heard about HIV/AIDS	0.878	0.018	2444	1645	2.771	0.021	0.842	0.915
Knows condoms reduce HIV risks	0.717	0.02	2444	1645	2.164	0.027	0.678	0.757
Knows about limiting partners	0.821	0.022	2444	1645	2.9	0.027	0.776	0.866
Has comprehensive knowledge of HIV/AIDS	0.324	0.021	2444	1645	2.169	0.063	0.283	0.365
Higher-risk sex past 12 months among youth	0.471	0.052	251	169	1.64	0.11	0.368	0.575
Condom use at last higher-risk sex among youth	0.242	0.045	132	80	1.193	0.185	0.152	0.331

na = Not applicable

Table C.7 Sampling errors for North West sample, Nigeria 2008

Variable	Value (R)	Standard error (SE)	Number of cases		Design effect (DEFT)	Relative error (SE/R)	Confidence limits	
			Unweighted (N)	Weighted (WN)			R-2SE	R+2SE

			WOMEN					
Urban residence	0.204	0.01	7297	8022	2.055	0.048	0.185	0.224
Literate	0.211	0.022	7297	8022	4.529	0.103	0.167	0.254
No education	0.742	0.022	7297	8022	4.253	0.029	0.699	0.786
Secondary education or higher	0.14	0.019	7297	8022	4.626	0.134	0.102	0.177
Net attendance ratio for primary school	0.434	0.02	6882	7311	2.482	0.046	0.394	0.474
Never married	0.078	0.009	7297	8022	2.99	0.12	0.059	0.097
Currently married/in union	0.896	0.011	7297	8022	3.009	0.012	0.875	0.918
Had first sex before 18	0.762	0.014	6052	6643	2.52	0.018	0.734	0.789
Currently pregnant	0.135	0.005	7297	8022	1.188	0.035	0.125	0.144
Children ever born	4.03	0.06	7297	8022	1.526	0.015	3.911	4.149
Children surviving	3.025	0.042	7297	8022	1.444	0.014	2.941	3.109
Children ever born to women age 40-49	7.707	0.112	1434	1574	1.309	0.014	7.484	7.93
Knows any contraceptive method	0.451	0.02	6596	7189	3.345	0.045	0.41	0.492
Ever using contraceptive method	0.065	0.008	6596	7189	2.569	0.12	0.049	0.08
Currently using any contraceptive method	0.028	0.004	6596	7189	2.192	0.16	0.019	0.036
Currently using a modern method	0.025	0.004	6596	7189	2.001	0.155	0.017	0.032
Currently using pill	0.006	0.001	6596	7189	1.228	0.195	0.004	0.008
Currently using IUD	0.002	0.001	6596	7189	1.485	0.375	0.001	0.004
Currently using condom	0.001	0	6596	7189	0.994	0.455	0	0.001
Currently using female sterilisation	0.001	0	6596	7189	1.013	0.449	0	0.001
Currently using periodic abstinence	0.002	0.001	6596	7189	1.501	0.457	0	0.003
Obtained method from public sector source	0.531	0.046	145	171	1.109	0.087	0.439	0.623
Want no more children	0.101	0.007	6596	7189	1.802	0.066	0.088	0.115
Want to delay birth at least 2 years	0.343	0.012	6596	7189	2.137	0.036	0.318	0.368
Ideal family size	7.99	0.16	5542	5804	3.016	0.02	7.671	8.31
Two or more tetanus injections	0.179	0.014	4888	5372	2.471	0.076	0.152	0.207
Neonatal tetanus	0.201	0.015	4888	5372	2.665	0.076	0.17	0.231
Mothers received medical assistance at delivery	0.098	0.009	7947	8779	2.107	0.088	0.081	0.115
Had diarrhoea in two weeks before survey	0.131	0.008	6899	7594	1.758	0.059	0.116	0.147
Treated with oral rehydration salts (ORS)	0.252	0.021	862	998	1.375	0.084	0.209	0.294
Taken to a health provider	0.389	0.024	862	998	1.383	0.063	0.34	0.438
Vaccination card seen	0.058	0.01	1409	1545	1.595	0.177	0.038	0.079
Received BCG	0.191	0.018	1409	1545	1.72	0.096	0.154	0.227
Received DPT (3 doses)	0.091	0.015	1409	1545	1.861	0.16	0.062	0.12
Received polio (3 doses)	0.243	0.018	1409	1545	1.597	0.076	0.206	0.28
Received measles	0.195	0.02	1409	1545	1.824	0.101	0.156	0.235
Fully immunised	0.06	0.01	1409	1545	1.53	0.166	0.04	0.08
Height-for-age (below -2SD)	0.526	0.011	5032	5488	1.399	0.02	0.505	0.547
Weight-for-height (below -2SD)	0.199	0.01	5032	5488	1.64	0.05	0.179	0.219
Weight-for-age (below -2SD)	0.351	0.013	5032	5488	1.747	0.036	0.326	0.377
BMI <18.5	0.186	0.007	5818	6395	1.431	0.039	0.171	0.201
Has heard of HIV/AIDS	0.878	0.01	7297	8022	2.559	0.011	0.858	0.897
Knows about condoms	0.464	0.017	7297	8022	2.989	0.038	0.429	0.499
Knows about limiting partners	0.662	0.014	7297	8022	2.605	0.022	0.633	0.691
Has comprehensive knowledge of HIV/AIDS	0.207	0.013	7297	8022	2.742	0.063	0.181	0.233
Higher-risk sex past 12 months among youth	0.016	0.006	2049	2251	2.004	0.347	0.005	0.027
Condom use at higher-risk sex among youth	0.231	0.098	29	36	1.236	0.426	0.034	0.428
Female circumcision	0.196	0.03	7297	8022	6.551	0.155	0.135	0.257
Total fertility rate TFR (3 years)	7.297	0.155	na	22693	1.659	0.021	6.986	7.607
Child mortality (0-10 years)	139.023	5.878	15844	17462	1.576	0.042	127.266	150.780
Infant mortality (0-10 years)	91.123	3.759	15595	17179	1.410	0.041	83.605	98.641
Neonatal mortality (0-10 years)	46.753	2.772	15559	17139	1.437	0.059	41.209	52.297
Post-neonatal mortality (0-10 years)	44.370	2.088	15590	17175	1.121	0.047	40.195	48.546
Under-5 mortality (0-10 years)	217.478	7.257	15885	17506	1.717	0.033	202.964	231.993

			MEN					
Urban residence	0.251	0.014	2930	3237	1.754	0.056	0.223	0.279
Literate	0.606	0.022	2930	3237	2.468	0.037	0.561	0.65
No education	0.407	0.024	2930	3237	2.653	0.059	0.359	0.455
Secondary education or higher	0.376	0.025	2930	3237	2.809	0.067	0.325	0.426
Never married	0.382	0.014	2930	3237	1.612	0.038	0.353	0.41
Currently married	0.603	0.015	2930	3237	1.633	0.025	0.573	0.632
Had first sex before 18	0.097	0.007	2449	2691	1.1	0.068	0.084	0.111
Knows at least one method	0.823	0.018	1805	1951	2.018	0.022	0.787	0.86
Know any modern method	0.808	0.019	1805	1951	2.064	0.024	0.77	0.846
Ever used any method	0.136	0.015	1805	1951	1.819	0.108	0.107	0.166
Want no more children	0.015	0.004	1805	1951	1.295	0.245	0.008	0.023
Delay at least two years	0.403	0.017	1805	1951	1.462	0.042	0.37	0.437
Ideal number of family size	10.589	0.348	2201	2362	1.958	0.033	9.893	11.285
Had heard about HIV/AIDS	0.909	0.01	2930	3237	1.839	0.011	0.889	0.928
Knows condoms reduce HIV risks	0.655	0.021	2930	3237	2.401	0.032	0.613	0.698
Knows about limiting partners	0.803	0.014	2930	3237	1.845	0.017	0.776	0.831
Has comprehensive knowledge of HIV/AIDS	0.377	0.022	2930	3237	2.5	0.059	0.333	0.422
Higher-risk sex past 12 months among youth	0.252	0.05	139	150	1.349	0.198	0.152	0.351
Condom use at last higher-risk sex among youth	0.363	0.082	33	38	0.961	0.225	0.199	0.526

na = Not applicable

Table C.8 Sampling errors for South East sample, Nigeria 2008

Variable	Value (R)	Standard error (SE)	Number of cases Un-weighted (N)	Number of cases Weight-ed (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE

WOMEN

Variable	Value (R)	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
Urban residence	0.44	0.014	3667	4091	1.665	0.031	0.413	0.468
Literate	0.813	0.018	3667	4091	2.724	0.022	0.778	0.848
No education	0.063	0.009	3667	4091	2.374	0.152	0.044	0.082
Secondary education or higher	0.703	0.02	3667	4091	2.643	0.028	0.663	0.743
Net attendance ratio for primary school	0.828	0.013	2388	2483	1.521	0.015	0.802	0.854
Never married	0.412	0.012	3667	4091	1.427	0.028	0.389	0.435
Currently married/in union	0.523	0.012	3667	4091	1.438	0.023	0.499	0.547
Had first sex before 18	0.281	0.012	2893	3239	1.405	0.042	0.257	0.304
Currently pregnant	0.088	0.006	3667	4091	1.246	0.066	0.076	0.1
Children ever born	2.43	0.067	3667	4091	1.412	0.028	2.296	2.564
Children surviving	2.072	0.052	3667	4091	1.272	0.025	1.969	2.175
Children ever born to women age 40-49	5.841	0.132	693	739	1.224	0.023	5.577	6.105
Knows any contraceptive method	0.855	0.018	1911	2139	2.236	0.021	0.819	0.891
Ever using contraceptive method	0.459	0.021	1911	2139	1.86	0.046	0.417	0.502
Currently using any contraceptive method	0.234	0.014	1911	2139	1.425	0.059	0.206	0.261
Currently using a modern method	0.118	0.008	1911	2139	1.152	0.072	0.101	0.135
Currently using pill	0.016	0.003	1911	2139	1.055	0.192	0.01	0.022
Currently using IUD	0.014	0.003	1911	2139	1.105	0.213	0.008	0.02
Currently using condom	0.046	0.006	1911	2139	1.219	0.127	0.034	0.058
Currently using female sterilisation	0.006	0.003	1911	2139	1.571	0.462	0	0.012
Currently using periodic abstinence	0.058	0.007	1911	2139	1.375	0.127	0.043	0.073
Obtained method from public sector source	0.121	0.021	312	393	1.138	0.174	0.079	0.163
Want no more children	0.282	0.013	1911	2139	1.252	0.046	0.256	0.307
Want to delay birth at least 2 years	0.271	0.014	1911	2139	1.34	0.05	0.244	0.298
Ideal family size	5.493	0.087	3507	3902	2.584	0.016	5.318	5.668
Two or more tetanus injections	0.777	0.019	1454	1603	1.74	0.024	0.739	0.815
Neonatal tetanus	0.813	0.019	1454	1603	1.833	0.023	0.775	0.85
Mothers received medical assistance at delivery	0.818	0.028	2450	2730	2.689	0.034	0.763	0.874
Had diarrhoea in two weeks before survey	0.049	0.006	2173	2428	1.164	0.116	0.038	0.061
Treated with oral rehydration salts (ORS)	0.329	0.056	123	120	1.193	0.171	0.217	0.441
Taken to a health provider	0.752	0.049	123	120	1.096	0.065	0.654	0.85
Vaccination card seen	0.461	0.027	442	504	1.118	0.058	0.408	0.515
Received BCG	0.791	0.023	442	504	1.146	0.029	0.745	0.836
Received DPT (3 doses)	0.669	0.03	442	504	1.301	0.045	0.609	0.728
Received polio (3 doses)	0.525	0.029	442	504	1.197	0.055	0.467	0.583
Received measles	0.639	0.026	442	504	1.108	0.041	0.587	0.69
Fully immunised	0.429	0.026	442	504	1.11	0.062	0.376	0.481
Height-for-age (below -2SD)	0.217	0.013	1864	1947	1.232	0.061	0.19	0.243
Weight-for-height (below -2SD)	0.086	0.007	1864	1947	1.046	0.085	0.071	0.101
Weight-for-age (below -2SD)	0.1	0.008	1864	1947	1.043	0.081	0.084	0.117
BMI <18.5	0.068	0.006	3171	3529	1.43	0.094	0.055	0.081
Has heard of HIV/AIDS	0.971	0.006	3667	4091	2.102	0.006	0.959	0.982
Knows about condoms	0.609	0.018	3667	4091	2.24	0.03	0.573	0.645
Knows about limiting partners	0.778	0.018	3667	4091	2.634	0.023	0.742	0.814
Has comprehensive knowledge of HIV/AIDS	0.309	0.019	3667	4091	2.452	0.061	0.272	0.347
Higher-risk sex past 12 months among youth	0.526	0.026	538	614	1.2	0.049	0.474	0.577
Condom use at higher-risk sex among youth	0.411	0.033	279	323	1.125	0.081	0.345	0.478
Female circumcision	0.528	0.023	3667	4091	2.833	0.044	0.482	0.575
Total fertility rate TFR (3 years)	4.823	0.159	na	26616	1.393	0.033	4.504	5.142
Child mortality (0-10 years)	64.296	5.226	4665	5119	1.184	0.081	53.845	74.748
Infant mortality (0-10 years)	94.979	4.913	4634	5083	1.009	0.052	85.152	104.806
Neonatal mortality (0-10 years)	50.825	4.261	4625	5074	1.085	0.084	42.302	59.348
Post-neonatal mortality (0-10 years)	44.154	3.544	4634	5083	1.087	0.080	37.067	51.242
Under-5 mortality (0-10 years)	153.169	6.831	4674	5128	1.127	0.045	139.507	166.831

MEN

Variable	Value (R)	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
Urban residence	0.454	0.02	1237	1448	1.423	0.044	0.413	0.494
Literate	0.937	0.009	1237	1448	1.252	0.009	0.919	0.954
No education	0.009	0.003	1237	1448	0.96	0.281	0.004	0.015
Secondary education or higher	0.7	0.021	1237	1448	1.589	0.03	0.659	0.742
Never married	0.57	0.018	1237	1448	1.268	0.031	0.535	0.606
Currently married	0.419	0.018	1237	1448	1.282	0.043	0.383	0.455
Had first sex before 18	0.178	0.016	981	1155	1.296	0.089	0.147	0.21
Knows at least one method	0.919	0.016	514	607	1.34	0.018	0.886	0.951
Know any modern method	0.911	0.017	514	607	1.327	0.018	0.878	0.944
Ever used any method	0.7	0.026	514	607	1.308	0.038	0.647	0.753
Want no more children	0.199	0.019	514	607	1.057	0.094	0.162	0.237
Delay at least two years	0.353	0.028	514	607	1.304	0.078	0.298	0.408
Ideal number of family size	5.439	0.146	1195	1397	1.651	0.027	5.147	5.731
Had heard about HIV/AIDS	0.964	0.007	1237	1448	1.303	0.007	0.95	0.978
Knows condoms reduce HIV risks	0.76	0.018	1237	1448	1.456	0.023	0.725	0.795
Knows about limiting partners	0.876	0.013	1237	1448	1.44	0.015	0.849	0.903
Has comprehensive knowledge of HIV/AIDS	0.396	0.022	1237	1448	1.572	0.055	0.352	0.439
Higher-risk sex past 12 months among youth	0.927	0.021	157	176	1.003	0.023	0.885	0.969
Condom use at last higher-risk sex among youth	0.662	0.045	143	163	1.124	0.067	0.573	0.751

na = Not applicable

Table C.9 Sampling errors for South South sample, Nigeria 2008

Variable	Value (R)	Standard error (SE)	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
WOMEN								
Urban residence	0.33	0.018	4813	5473	2.68	0.055	0.294	0.367
Literate	0.778	0.013	4813	5473	2.152	0.017	0.752	0.804
No education	0.06	0.006	4813	5473	1.623	0.092	0.049	0.072
Secondary education or higher	0.686	0.014	4813	5473	2.095	0.02	0.658	0.715
Net attendance ratio for primary school	0.801	0.008	3093	3264	1.108	0.011	0.784	0.818
Never married	0.393	0.01	4813	5473	1.432	0.026	0.373	0.413
Currently married/in union	0.544	0.01	4813	5473	1.462	0.019	0.523	0.565
Had first sex before 18	0.477	0.015	3782	4346	1.828	0.031	0.447	0.506
Currently pregnant	0.085	0.005	4813	5473	1.278	0.061	0.074	0.095
Children ever born	2.441	0.074	4813	5473	1.817	0.03	2.292	2.59
Children surviving	2.083	0.059	4813	5473	1.706	0.028	1.965	2.201
Children ever born to women age 40-49	6.187	0.137	725	813	1.324	0.022	5.913	6.46
Knows any contraceptive method	0.899	0.011	2661	2978	1.848	0.012	0.878	0.921
Ever using contraceptive method	0.56	0.017	2661	2978	1.742	0.03	0.526	0.593
Currently using any contraceptive method	0.262	0.011	2661	2978	1.345	0.044	0.239	0.285
Currently using a modern method	0.155	0.008	2661	2978	1.117	0.051	0.139	0.171
Currently using pill	0.026	0.003	2661	2978	1.044	0.123	0.02	0.033
Currently using IUD	0.007	0.002	2661	2978	1.131	0.267	0.003	0.01
Currently using condom	0.044	0.005	2661	2978	1.202	0.108	0.035	0.054
Currently using female sterilisation	0.006	0.002	2661	2978	1.18	0.307	0.002	0.009
Currently using periodic abstinence	0.053	0.006	2661	2978	1.307	0.107	0.042	0.065
Obtained method from public sector source	0.147	0.016	734	860	1.256	0.112	0.114	0.18
Want no more children	0.271	0.012	2661	2978	1.343	0.043	0.248	0.294
Want to delay birth at least 2 years	0.324	0.014	2661	2978	1.509	0.042	0.297	0.351
Ideal family size	5.183	0.061	4468	4994	2.113	0.012	5.061	5.305
Two or more tetanus injections	0.636	0.02	2101	2310	1.874	0.031	0.596	0.675
Neonatal tetanus	0.687	0.019	2101	2310	1.919	0.028	0.648	0.726
Mothers received medical assistance at delivery	0.558	0.027	3327	3667	2.378	0.048	0.504	0.611
Had diarrhoea in two weeks before survey	0.038	0.004	2997	3310	1.2	0.117	0.029	0.047
Treated with oral rehydration salts (ORS)	0.237	0.046	116	127	1.087	0.194	0.145	0.329
Taken to a health provider	0.614	0.046	116	127	0.929	0.074	0.523	0.705
Vaccination card seen	0.464	0.029	585	663	1.396	0.063	0.405	0.522
Received BCG	0.753	0.028	585	663	1.518	0.037	0.697	0.808
Received DPT (3 doses)	0.542	0.035	585	663	1.683	0.065	0.471	0.612
Received polio (3 doses)	0.536	0.032	585	663	1.522	0.06	0.472	0.6
Received measles	0.555	0.032	585	663	1.535	0.058	0.491	0.619
Fully immunised	0.36	0.032	585	663	1.573	0.088	0.297	0.424
Height-for-age (below -2SD)	0.311	0.015	2574	2769	1.431	0.047	0.282	0.34
Weight-for-height (below -2SD)	0.075	0.007	2574	2769	1.263	0.093	0.061	0.088
Weight-for-age (below -2SD)	0.128	0.009	2574	2769	1.292	0.073	0.11	0.147
BMI <18.5	0.077	0.006	4206	4779	1.407	0.075	0.065	0.088
Has heard of HIV/AIDS	0.92	0.01	4813	5473	2.434	0.01	0.901	0.939
Knows about condoms	0.646	0.016	4813	5473	2.364	0.025	0.614	0.679
Knows about limiting partners	0.732	0.016	4813	5473	2.537	0.022	0.699	0.764
Has comprehensive knowledge of HIV/AIDS	0.26	0.013	4813	5473	2.074	0.05	0.234	0.286
Higher-risk sex past 12 months among youth	0.642	0.019	1232	1379	1.405	0.03	0.604	0.681
Condom use at higher-risk sex among youth	0.326	0.023	778	886	1.361	0.07	0.28	0.372
Female circumcision	0.342	0.025	4813	5473	3.632	0.073	0.293	0.392
Total fertility rate TFR (3 years)	4.69	0.173	na	15276	1.586	0.037	4.343	5.036
Child mortality (0-10 years)	58.064	4.251	6225	6815	1.195	0.073	49.562	66.566
Infant mortality (0-10 years)	84.486	4.957	6198	6787	1.169	0.059	74.572	94.401
Neonatal mortality (0-10 years)	47.533	3.727	6188	6777	1.159	0.078	40.078	54.988
Post-neonatal mortality (0-10 years)	36.953	3.005	6196	6784	1.104	0.081	30.944	42.963
Under-5 mortality (0-10 years)	137.644	6.614	6237	6829	1.243	0.048	124.416	150.872
MEN								
Urban residence	0.318	0.019	2167	2437	1.882	0.059	0.28	0.355
Literate	0.893	0.011	2167	2437	1.588	0.012	0.872	0.914
No education	0.023	0.004	2167	2437	1.292	0.182	0.014	0.031
Secondary education or higher	0.802	0.013	2167	2437	1.469	0.016	0.776	0.827
Never married	0.57	0.012	2167	2437	1.082	0.02	0.547	0.593
Currently married	0.406	0.012	2167	2437	1.108	0.029	0.382	0.429
Had first sex before 18	0.376	0.015	1718	1953	1.31	0.041	0.345	0.406
Knows at least one method	0.976	0.01	895	989	2.002	0.01	0.956	0.997
Know any modern method	0.974	0.011	895	989	1.97	0.011	0.953	0.995
Ever used any method	0.738	0.021	895	989	1.419	0.028	0.696	0.78
Want no more children	0.207	0.016	895	989	1.176	0.077	0.175	0.238
Delay at least two years	0.372	0.018	895	989	1.138	0.049	0.336	0.409
Ideal number of family size	5.381	0.125	2006	2221	1.492	0.023	5.13	5.631
Had heard about HIV/AIDS	0.961	0.006	2167	2437	1.483	0.006	0.948	0.973
Knows condoms reduce HIV risks	0.776	0.014	2167	2437	1.51	0.017	0.749	0.803
Knows about limiting partners	0.886	0.011	2167	2437	1.594	0.012	0.864	0.908
Has comprehensive knowledge of HIV/AIDS	0.37	0.016	2167	2437	1.511	0.042	0.339	0.402
Higher-risk sex past 12 months among youth	0.918	0.015	413	436	1.128	0.017	0.887	0.948
Condom use at last higher-risk sex among youth	0.457	0.03	378	400	1.185	0.066	0.397	0.518

na = Not applicable

Table C.10 Sampling errors for South West sample, Nigeria 2008

| Variable | Value (R) | Stand-ard error (SE) | Number of cases | | Design effect (DEFT) | Rela-tive error (SE/R) | Confidence limits | |
			Un-weighted (N)	Weight-ed (WN)			R-2SE	R+2SE
WOMEN								
Urban residence	0.616	0.016	5025	6789	2.372	0.026	0.583	0.648
Literate	0.798	0.016	5025	6789	2.857	0.02	0.765	0.83
No education	0.12	0.015	5025	6789	3.319	0.127	0.089	0.15
Secondary education or higher	0.671	0.018	5025	6789	2.676	0.026	0.635	0.706
Net attendance ratio for primary school	0.766	0.014	3339	4361	1.757	0.019	0.737	0.795
Never married	0.327	0.011	5025	6789	1.598	0.032	0.306	0.348
Currently married/in union	0.643	0.011	5025	6789	1.701	0.018	0.62	0.666
Had first sex before 18	0.296	0.012	4004	5469	1.664	0.041	0.272	0.32
Currently pregnant	0.082	0.005	5025	6789	1.212	0.057	0.073	0.092
Children ever born	2.272	0.047	5025	6789	1.421	0.021	2.178	2.365
Children surviving	2.041	0.041	5025	6789	1.41	0.02	1.959	2.122
Children ever born to women age 40-49	4.979	0.105	891	1192	1.447	0.021	4.769	5.188
Knows any contraceptive method	0.95	0.01	3198	4366	2.655	0.011	0.93	0.971
Ever using contraceptive method	0.561	0.02	3198	4366	2.29	0.036	0.521	0.601
Currently using any contraceptive method	0.317	0.015	3198	4366	1.826	0.047	0.287	0.347
Currently using a modern method	0.21	0.01	3198	4366	1.446	0.05	0.189	0.231
Currently using pill	0.04	0.004	3198	4366	1.065	0.093	0.032	0.047
Currently using IUD	0.031	0.004	3198	4366	1.203	0.118	0.024	0.039
Currently using condom	0.061	0.005	3198	4366	1.211	0.084	0.051	0.072
Currently using female sterilisation	0.002	0.001	3198	4366	1.049	0.392	0	0.004
Currently using periodic abstinence	0.035	0.005	3198	4366	1.442	0.134	0.026	0.044
Obtained method from public sector source	0.218	0.019	832	1165	1.346	0.089	0.179	0.256
Want no more children	0.316	0.011	3198	4366	1.319	0.034	0.294	0.338
Want to delay birth at least 2 years	0.317	0.012	3198	4366	1.456	0.038	0.293	0.341
Ideal family size	4.59	0.054	4634	6322	2.273	0.012	4.482	4.698
Two or more tetanus injections	0.769	0.016	2263	3075	1.845	0.021	0.736	0.801
Neonatal tetanus	0.791	0.016	2263	3075	1.885	0.02	0.758	0.823
Mothers received medical assistance at delivery	0.765	0.021	3318	4519	2.305	0.028	0.723	0.807
Had diarrhoea in two weeks before survey	0.062	0.006	3098	4221	1.208	0.09	0.051	0.073
Treated with oral rehydration salts (ORS)	0.437	0.041	200	261	1.065	0.094	0.355	0.519
Taken to a health provider	0.487	0.04	200	261	1.028	0.082	0.408	0.567
Vaccination card seen	0.425	0.025	602	814	1.209	0.059	0.375	0.474
Received BCG	0.803	0.026	602	814	1.536	0.032	0.752	0.854
Received DPT (3 doses)	0.665	0.029	602	814	1.465	0.043	0.607	0.722
Received polio (3 doses)	0.534	0.027	602	814	1.282	0.05	0.481	0.587
Received measles	0.655	0.027	602	814	1.37	0.041	0.601	0.709
Fully immunised	0.428	0.027	602	814	1.331	0.064	0.373	0.483
Height-for-age (below -2SD)	0.312	0.012	2822	3795	1.336	0.04	0.287	0.337
Weight-for-height (below -2SD)	0.093	0.007	2822	3795	1.143	0.072	0.079	0.106
Weight-for-age (below -2SD)	0.133	0.008	2822	3795	1.203	0.061	0.117	0.149
BMI <18.5	0.097	0.006	4441	5998	1.406	0.064	0.085	0.11
Has heard of HIV/AIDS	0.934	0.01	5025	6789	2.816	0.011	0.914	0.953
Knows about condoms	0.589	0.015	5025	6789	2.096	0.025	0.559	0.618
Knows about limiting partners	0.673	0.013	5025	6789	1.947	0.019	0.647	0.699
Has comprehensive knowledge of HIV/AIDS	0.265	0.011	5025	6789	1.693	0.04	0.244	0.286
Higher-risk sex past 12 months among youth	0.518	0.028	845	1104	1.653	0.055	0.461	0.575
Condom use at higher-risk sex among youth	0.43	0.03	446	572	1.286	0.07	0.37	0.491
Female circumcision	0.534	0.025	5025	6789	3.506	0.046	0.484	0.583
Total fertility rate TFR (3 years)	4.521	0.14	na	18922	1.475	0.031	4.24	4.801
Child mortality (0-10 years)	32.108	2.899	6241	8414	1.130	0.090	26.310	37.906
Infant mortality (0-10 years)	58.905	3.910	6219	8387	1.187	0.066	51.084	66.726
Neonatal mortality (0-10 years)	36.695	3.002	6209	8373	1.149	0.082	30.691	42.700
Post-neonatal mortality (0-10 years)	22.209	2.288	6219	8387	1.131	0.103	17.633	26.785
Under-5 mortality (0-10 years)	89.121	4.904	6251	8428	1.204	0.055	79.314	98.929
MEN								
Urban residence	0.641	0.018	2287	2977	1.762	0.028	0.606	0.677
Literate	0.896	0.011	2287	2977	1.692	0.012	0.874	0.917
No education	0.052	0.01	2287	2977	2.215	0.199	0.031	0.072
Secondary education or higher	0.79	0.014	2287	2977	1.663	0.018	0.762	0.819
Never married	0.503	0.014	2287	2977	1.325	0.028	0.475	0.531
Currently married	0.48	0.014	2287	2977	1.325	0.029	0.453	0.508
Had first sex before 18	0.282	0.012	1876	2479	1.118	0.041	0.259	0.306
Knows at least one method	0.989	0.004	1095	1430	1.133	0.004	0.982	0.996
Know any modern method	0.984	0.005	1095	1430	1.307	0.005	0.975	0.994
Ever used any method	0.778	0.017	1095	1430	1.357	0.022	0.744	0.812
Want no more children	0.196	0.013	1095	1430	1.055	0.065	0.17	0.221
Delay at least two years	0.379	0.014	1095	1430	0.986	0.038	0.35	0.408
Ideal number of family size	4.732	0.082	2224	2907	1.55	0.017	4.569	4.895
Had heard about HIV/AIDS	0.978	0.004	2287	2977	1.412	0.004	0.969	0.986
Knows condoms reduce HIV risks	0.728	0.013	2287	2977	1.428	0.018	0.701	0.754
Knows about limiting partners	0.815	0.012	2287	2977	1.51	0.015	0.79	0.839
Has comprehensive knowledge of HIV/AIDS	0.373	0.016	2287	2977	1.564	0.042	0.342	0.405
Higher-risk sex past 12 months among youth	0.933	0.016	342	430	1.161	0.017	0.901	0.964
Condom use at last higher-risk sex among youth	0.603	0.031	320	401	1.138	0.052	0.541	0.665

na = Not applicable

Table D.1 Household age distribution

Single-year age distribution of the de facto household population by sex (weighted), Nigeria 2008

Age	Women		Men	
	Number	Percent	Number	Percent
0	2,719	3.6	2,784	3.7
1	2,465	3.3	2,444	3.3
2	2,423	3.2	2,483	3.3
3	2,608	3.4	2,802	3.8
4	2,429	3.2	2,507	3.4
5	2,104	2.8	2,211	3.0
6	2,659	3.5	2,623	3.5
7	2,273	3.0	2,456	3.3
8	2,626	3.5	2,571	3.4
9	1,733	2.3	1,809	2.4
10	2,349	3.1	2,495	3.3
11	1,289	1.7	1,360	1.8
12	2,023	2.7	2,106	2.8
13	1,595	2.1	1,625	2.2
14	1,518	2.0	1,665	2.2
15	1,544	2.0	1,616	2.2
16	1,225	1.6	1,226	1.6
17	1,145	1.5	1,174	1.6
18	1,684	2.2	1,522	2.0
19	989	1.3	928	1.2
20	2,148	2.8	1,814	2.4
21	802	1.1	746	1.0
22	1,291	1.7	1,077	1.4
23	1,049	1.4	855	1.1
24	946	1.3	809	1.1
25	2,355	3.1	1,878	2.5
26	1,061	1.4	850	1.1
27	1,059	1.4	837	1.1
28	1,421	1.9	1,168	1.6
29	671	0.9	597	0.8
30	2,221	2.9	2,061	2.8
31	494	0.7	433	0.6
32	944	1.2	916	1.2
33	573	0.8	537	0.7
34	501	0.7	510	0.7
35	1,711	2.3	1,705	2.3
36	522	0.7	548	0.7
37	525	0.7	562	0.8
38	782	1.0	728	1.0
39	358	0.5	398	0.5
40	1,588	2.1	1,602	2.1
41	299	0.4	297	0.4
42	512	0.7	607	0.8
43	389	0.5	367	0.5
44	282	0.4	274	0.4
45	941	1.2	1,229	1.6
46	320	0.4	347	0.5
47	337	0.4	343	0.5
48	612	0.8	520	0.7
49	407	0.5	286	0.4
50	914	1.2	1,157	1.6
51	359	0.5	200	0.3
52	655	0.9	376	0.5
53	416	0.5	230	0.3
54	357	0.5	210	0.3
55	849	1.1	633	0.8
56	336	0.4	275	0.4
57	204	0.3	217	0.3
58	355	0.5	295	0.4
59	133	0.2	185	0.2
60	888	1.2	848	1.1
61	150	0.2	212	0.3
62	251	0.3	398	0.5
63	167	0.2	216	0.3
64	118	0.2	178	0.2
65	550	0.7	593	0.8
66	82	0.1	132	0.2
67	125	0.2	169	0.2
68	229	0.3	255	0.3
69	85	0.1	119	0.2
70+	1,843	2.4	2,299	3.1
Don't know/missing	39	0.1	64	0.1
Total	75,627	100.0	74,568	100.0

Table D.2.1 Age distribution of eligible and interviewed women

De facto household population of women age 10-54, interviewed women age 15-49, and percentage of eligible women who were interviewed (weighted), by five-year age groups, Nigeria 2008

Age group	Household population of women age 10-54	Interviewed women age 15-49		Percentage of eligible women interviewed
		Number	Percent	
10-14	8,775	na	na	na
15-19	6,587	6,355	19.6	96.5
20-24	6,235	5,995	18.5	96.1
25-29	6,567	6,317	19.5	96.2
30-34	4,733	4,562	14.0	96.4
35-39	3,899	3,766	11.6	96.6
40-44	3,071	2,957	9.1	96.3
45-49	2,616	2,520	7.8	96.3
50-54	2,700	na	na	na
15-49	33,708	32,471	100.0	96.3

Note: The de facto population includes all residents and non-residents who stayed in the household the night before the interview. Weights for both household population of women and interviewed women are household weights. Age is based on the household schedule.
na = Not applicable

Table D.2.2 Age distribution of eligible and interviewed men

De facto household population of men aged 10-64, interviewed men age 15-59, and percentage of eligible men who were interviewed (weighted), by five-year age groups, Nigeria 2008

Age group	Household population of men age 10-64	Interviewed men age 15-59		Percentage of eligible men interviewed
		Number	Percent	
10-14	4,687	na	na	na
15-19	2,778	2,524	16.5	90.9
20-24	2,488	2,311	15.1	92.9
25-29	2,624	2,456	16.0	93.6
30-34	2,200	2,051	13.4	93.2
35-39	1,901	1,765	11.5	92.9
40-44	1,491	1,381	9.0	92.6
45-49	1,263	1,183	7.7	93.7
50-54	1,013	944	6.2	93.2
55-59	766	725	4.7	94.6
60-64	950	na	na	na
15-59	16,523	15,340	100.0	92.8

Note: The de facto population includes all residents and non-residents who stayed in the household the night before the interview. Weights for both household population of women and interviewed women are household weights. Age is based on the household schedule.
na = Not applicable

Table D.3 Completeness of reporting

Percentage of observations with information missing for selected demographic and health questions (weighted), Nigeria 2008

Subject	Reference group	Percentage with information missing	Number of cases
Birth date	Births in past 15 years		
Month only		2.47	73,402
Month and year		0.21	73,402
Age at death	Dead children born in past 15 years	0.26	12,221
Age/date at first union[1]	Ever-married women age 15-49	1.95	24,988
	Ever-married men age 15-49	1.68	8,930
Respondent's education	All women age 15-49	0.09	33,385
	All men age 15-54	0.09	15,486
Diarrhoea in past 2 weeks	Living children 0-59 months	1.80	24,975
Anthropometry	Living children age 0-59 months (from the Household Questionnaire)		
Height		5.30	25,760
Weight		4.74	25,760
Height or weight		5.47	25,760

[1] Both year and age missing

Table D.4 Births by calendar years

Number of births, percentage with complete birth date, sex ratio at birth, and calendar year ratio by calendar year, according to survival status of children (weighted), Nigeria 2008

Calendar year	Number of births			Percentage with complete birth date[1]			Sex ratio at birth[2]			Calendar year ratio[3]		
	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total
2008	5,437	477	5,914	100.0	99.8	100.0	98.4	119.9	100.0	na	na	na
2007	4,820	721	5,541	100.0	99.6	99.9	102.3	114.9	103.8	na	na	na
2006	4,980	713	5,693	99.9	99.5	99.9	104.1	128.9	106.9	104.0	91.5	102.3
2005	4,756	837	5,592	100.0	99.6	99.9	102.7	106.7	103.3	104.2	120.8	106.4
2004	4,149	672	4,821	100.0	98.1	99.7	105.1	109.5	105.7	86.9	65.4	83.1
2003	4,793	1,220	6,013	97.5	91.5	96.3	101.5	111.8	103.5	117.6	159.0	124.2
2002	4,001	861	4,862	96.1	91.0	95.2	105.7	102.5	105.1	83.7	70.2	80.9
2001	4,771	1,235	6,006	97.0	91.1	95.8	103.6	109.5	104.8	131.7	141.2	133.6
2000	3,242	888	4,130	96.8	90.1	95.3	98.5	106.6	100.2	72.2	78.6	73.5
1999	4,207	1,023	5,230	95.9	92.1	95.2	102.4	108.2	103.5	143.7	124.5	139.5
2004-2008	24,142	3,420	27,562	100.0	99.3	99.9	102.3	115.2	103.8	na	na	na
1999-2003	21,013	5,227	26,240	96.7	91.2	95.6	102.5	108.1	103.6	na	na	na
1994-1998	14,182	3,957	18,139	96.0	91.3	95.0	102.8	109.4	104.2	na	na	na
1989-1993	9,965	3,110	13,075	96.1	90.8	94.8	104.7	117.3	107.6	na	na	na
<1988	9,370	3,403	12,774	95.9	91.8	94.8	106.5	119.5	109.8	na	na	na
All	78,673	19,117	97,790	97.4	92.7	96.5	103.2	113.1	105.1	na	na	na

na = Not applicable
[1] Both year and month of birth given
[2] (Bm/Bf)x100, where Bm and Bf are the numbers of male and female births, respectively
[3] [2Bx/(Bx-1+Bx+1)]x100, where Bx is the number of births in calendar year x

Table D.5 Reporting of age at death in days

Distribution of reported deaths under one month of age by age at death in days and the percentage of neonatal deaths reported to occur at ages 0-6 days, for five-year periods of birth preceding the survey (weighted), Nigeria 2008

| Age at death (days) | Number of years preceding the survey | | | | Total 0-19 |
	0-4	5-9	10-14	15-19	
<1	349	325	264	176	1,113
1	225	233	141	109	708
2	90	105	77	55	328
3	78	87	76	61	302
4	45	76	44	36	200
5	44	83	55	27	209
6	40	48	30	35	154
7	63	83	58	57	261
8	30	37	20	27	113
9	16	38	26	14	94
10	14	28	15	16	72
11	4	5	5	6	20
12	8	6	6	2	22
13	2	7	4	8	22
14	37	50	40	23	150
15	14	14	10	9	47
16	4	7	5	6	22
17	4	2	3	0	9
18	2	9	3	2	16
19	3	5	1	2	10
20	8	15	14	7	44
21	14	24	16	12	66
22	2	6	1	4	13
23	0	7	2	2	11
24	4	2	3	0	10
25	0	3	4	2	9
26	2	0	1	0	3
27	0	2	1	0	3
28	2	8	5	0	15
29	4	4	0	2	10
30	10	9	11	9	39
31+	11	15	13	12	51
Missing	1	4	1	1	7
Total 0-30	1,118	1,327	941	709	4,095
Percent early neonatal[1]	77.9	72.1	73.0	70.4	73.6

[1] (0-6 days)/(0-30 days) * 100

Table D.6 Reporting of age at death in months

Distribution of reported deaths under two years of age by age at death in months and the percentage of infant deaths reported to occur at age under one month, for five-year periods of birth preceding the survey, Nigeria 2008

Age at death (months)	Number of years preceding the survey				Total 0-19
	0-4	5-9	10-14	15-19	
<1[a]	1,119	1,330	942	710	4,101
1	96	140	133	95	464
2	107	124	128	84	443
3	101	144	117	58	419
4	85	92	55	55	287
5	67	97	65	45	274
6	84	94	67	57	303
7	82	124	86	65	357
8	75	101	67	60	302
9	75	100	81	61	318
10	49	76	56	42	223
11	44	67	46	33	189
12	87	128	107	77	399
13	26	28	33	12	99
14	26	31	28	16	102
15	18	35	21	23	97
16	24	26	23	14	88
17	21	30	25	18	94
18	38	51	44	27	159
19	20	30	27	13	89
20	12	18	14	10	54
21	10	10	12	6	38
22	11	5	6	2	24
23	6	8	4	4	23
24+	9	26	19	14	68
Missing	4	3	8	0	15
1 year	330	491	370	311	1,502
Total 0-11	1,983	2,488	1,844	1,365	7,680
Percent neonatal[1]	56.4	53.5	51.1	52.0	53.4

[a] Includes deaths under one month reported in days
[1] Under one month/under one year

Table D.7 Data on siblings

Percent distribution of respondents and siblings by year of birth, Nigeria 2008

Year of birth	Respondents	Siblings
Before 1950	0.0	0.9
1950-54	0.0	1.5
1955-59	1.8	3.2
1960-64	8.1	5.1
1965-69	9.4	8.0
1970-74	12.1	11.6
1975-79	14.8	14.1
1980-84	19.7	16.5
1985 or later	34.2	39.1
Total	100.0	100.0
Lower year of birth	1958	1924
Upper year of birth	1993	2008
Median	1973	1973
Number of cases	33,385	178,701

Table D.8 Sibship size and sex ratio of siblings

Mean sibship size and sex ratio of siblings, Nigeria 2008

Respondent's year of birth	Mean sibship size	Sex ratio at birth
1955-59	5.7	107.0
1960-64	5.9	109.1
1965-69	6.1	108.1
1970-74	6.5	111.9
1975-79	6.5	108.0
1980-84	6.5	105.1
1985-89	6.5	106.1
>1989	6.3	106.4
Total	6.4	107.3

NUTRITIONAL STATUS OF CHILDREN: 2008 NDHS DATA ACCORDING TO THE NCHS/CDC/WHO INTERNATIONAL REFERENCE POPULATION

Appendix E

Table E.1 Nutritional status of children

Percentage of children under five years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by background characteristics, Nigeria 2008

Background characteristic	Height-for-age			Weight-for-height				Weight-for-age				Number of children
	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score (SD)	
Age in months												
<6	3.3	12.6	-0.1	2.6	10.9	15.0	0.3	0.8	5.6	11.5	0.2	1,897
6-8	9.5	21.9	-0.7	4.1	14.6	11.3	-0.2	5.4	20.4	4.5	-0.8	1,142
9-11	13.8	29.0	-1.0	4.1	15.5	7.4	-0.4	10.9	30.4	2.3	-1.2	1,018
12-17	24.2	45.6	-1.7	5.4	16.8	6.1	-0.5	15.0	38.4	1.9	-1.6	2,152
18-23	28.5	50.0	-1.8	4.6	14.7	6.8	-0.4	11.6	33.1	3.3	-1.3	1,597
24-35	24.7	41.1	-1.5	4.0	12.3	4.5	-0.4	13.0	32.9	2.2	-1.3	3,862
36-47	20.1	37.7	-1.4	3.4	10.6	3.6	-0.3	7.4	25.2	2.0	-1.1	4,326
48-59	20.1	39.1	-1.6	3.8	10.3	3.3	-0.4	6.9	26.7	1.1	-1.2	3,999
Sex												
Male	20.8	38.5	-1.4	4.3	12.8	5.5	-0.3	9.4	28.0	2.8	-1.1	10,043
Female	18.3	35.0	-1.2	3.6	12.0	6.4	-0.3	8.5	26.3	3.2	-1.0	9,949
Birth interval in months[2]												
First birth[3]	16.4	34.0	-1.2	3.1	10.9	6.1	-0.3	6.4	24.5	2.7	-1.0	3,448
<24	22.9	41.4	-1.5	4.6	13.5	4.7	-0.4	11.3	31.0	2.4	-1.2	3,299
24-47	19.9	37.0	-1.3	4.0	12.7	6.3	-0.3	9.3	27.8	3.1	-1.1	8,851
48+	18.3	33.9	-1.2	4.0	12.4	6.6	-0.3	8.2	25.4	3.7	-1.0	2,763
Size at birth[2]												
Very small	26.3	45.6	-1.6	5.9	17.3	5.0	-0.6	14.7	39.5	2.1	-1.5	767
Small	25.0	42.8	-1.6	4.4	15.3	4.1	-0.5	12.6	35.1	1.6	-1.5	1,675
Average or larger	18.6	35.6	-1.3	3.8	12.0	6.3	-0.3	8.3	26.0	3.2	-1.0	15,637
Missing	21.1	38.7	-1.5	1.8	9.3	6.1	-0.3	7.7	24.3	3.3	-1.1	278
Mother's interview status												
Interviewed	19.5	36.8	-1.3	3.9	12.5	6.0	-0.3	9.0	27.4	3.0	-1.1	18,362
Not interviewed but in household	18.5	35.5	-1.1	3.2	10.8	4.9	-0.2	9.2	23.0	3.7	-0.9	399
Not interviewed, and not in the household[4]	20.2	37.1	-1.3	4.0	11.7	5.3	-0.3	9.3	25.2	2.9	-1.0	1,231
Missing	100.0	100.0	-3.7	0.0	0.0	0.0	0.0	0.0	100.0	0.0	-2.3	2
Mother's nutritional status[5]												
Thin (BMI<18.5)	29.1	50.0	-1.9	5.9	17.9	4.1	-0.7	17.7	44.4	2.0	-1.7	2,033
Normal (BMI 18.5-24.9)	20.1	38.1	-1.4	4.2	12.7	5.9	-0.3	9.0	28.3	2.6	-1.1	12,065
Overweight/obese (BMI ≥25)	12.9	25.9	-0.9	2.3	9.0	7.0	-0.1	4.6	16.4	4.4	-0.6	4,187
Missing	19.4	38.1	-1.3	4.2	12.9	8.7	-0.2	7.5	24.7	5.4	-1.0	311
Residence												
Urban	13.0	27.3	-0.9	3.0	9.8	6.5	-0.2	5.0	19.1	4.0	-0.8	6,386
Rural	22.7	41.2	-1.5	4.4	13.6	5.7	-0.4	10.9	30.9	2.5	-1.2	13,607

Continued…

Background characteristic	Height-for-age			Weight-for-height				Weight-for-age				Number of children
	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score (SD)	
Zone												
North Central	21.3	39.4	-1.5	2.9	8.4	6.9	-0.1	6.2	23.7	3.4	-1.0	2,810
North East	26.4	45.0	-1.7	7.4	19.7	5.8	-0.6	15.6	39.7	2.6	-1.5	3,121
North West	29.6	49.2	-1.8	5.7	17.8	5.7	-0.5	15.0	39.8	2.6	-1.5	5,548
South East	7.0	17.8	-0.6	2.0	7.7	6.3	-0.2	3.2	11.7	4.7	-0.5	1,965
South South	11.1	26.9	-1.0	1.3	6.0	6.7	-0.1	3.9	15.5	2.6	-0.7	2,758
South West	10.7	26.8	-1.0	2.2	8.4	5.1	-0.2	3.5	17.3	2.9	-0.8	3,792
Mother's education[6]												
No education	28.1	47.4	-1.7	6.3	18.0	5.4	-0.5	14.9	39.2	2.5	-1.5	8,079
Primary	17.5	36.0	-1.3	2.5	9.8	6.0	-0.2	6.5	23.9	2.7	-1.0	4,557
Secondary	10.5	24.5	-0.9	2.1	7.7	6.5	-0.1	3.3	15.1	3.5	-0.7	4,998
More than secondary	6.4	16.8	-0.5	1.2	4.7	8.1	-0.0	1.2	9.3	5.5	-0.4	1,118
Missing	33.3	57.8	-2.5	0.0	5.8	0.0	-0.1	15.5	21.3	0.0	-1.5	10
Wealth quintile												
Lowest	29.9	49.2	-1.8	6.2	18.0	5.4	-0.5	16.3	40.1	2.2	-1.5	4,132
Second	24.5	44.6	-1.6	5.1	15.2	5.3	-0.4	12.0	34.0	2.3	-1.3	4,375
Middle	19.5	37.6	-1.4	3.5	10.3	6.3	-0.2	7.8	26.4	2.7	-1.1	3,968
Fourth	13.1	29.0	-1.1	2.5	9.3	5.7	-0.2	4.9	20.4	3.6	-0.9	3,788
Highest	8.9	20.6	-0.6	2.1	8.2	7.2	-0.1	2.7	12.5	4.5	-0.5	3,730
Total	19.6	36.8	-1.3	3.9	12.4	6.0	-0.3	9.0	27.1	3.0	-1.1	19,993

Note: Table is based on children who slept in the household the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the NCHS/CDC/WHO Child Growth Standards. Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight.

[1] Includes children who are below -3 standard deviations (SD) from the International Reference Population median

[2] Excludes children whose mothers were not interviewed

[3] First born twins (triplets, etc.) are counted as first births because they do not have a previous birth interval

[4] Includes children whose mothers are deceased

[5] Excludes children whose mothers were not weighed and measured. Mother's nutritional status in terms of BMI (Body Mass Index) is presented in Table 11.9

[6] For women who were not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire