

**Estimating the Number of Orphans
at the National and State Levels in
Nigeria, 2000–2015**

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December 2001



POLICY is a five-year project funded by the U.S. Agency for International Development under Contract No. HRN-C-00-00-00006-00, beginning July 7, 2000. The project is implemented by The Futures Group International in collaboration with Research Triangle Institute (RTI) and The Centre for Development and Population Activities (CEDPA).

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Introduction

The HIV/AIDS epidemic is having a wide impact on Nigeria. One of the more alarming is the emerging cohort of AIDS orphans and other vulnerable children (OVCs)—children who have lost either or both of their parents to AIDS. Experiences from other countries, such as Ethiopia, Uganda, and South Africa, where the epidemic is more advanced, tell us that AIDS orphans face serious threats to their well-being, and these threats can have far-reaching and long-term effects on society, public health, and the economy.

Nigeria, like many sub-Saharan African countries, has a young population. Current estimates indicate that about 44 percent of the country's population is under age 15. Unfortunately, a sizable proportion of these children have lost either one or both their parents. This report provides an estimate of orphans (under age 15) that have lost their parents to AIDS-related and non-AIDS-related causes for the 36 states of Nigeria and the Federal Capital Territory (FCT) between 2000 and 2015. The paper also briefly describes the methodology and data used to develop the estimates.

Population Projections

We began by estimating the population of Nigeria at the state level. Two modules of SPECTRUM system of policy models were used: Demography (DemProj) and the AIDS Impact Model (AIM). DemProj projects the population by age and sex and displays a full range of demographic indicators, whereas AIM shows the impact of the HIV/AIDS epidemic on the population by calculating the number of people infected with HIV, AIDS cases, AIDS deaths, AIDS orphans (maternal), and other consequences of AIDS.

Projections were made for 1990–2015 (although only results from 2000–2015 are shown in this report). In making these projections, base year (1990) data, used by age and sex for each state, were derived from the *1991 Population Census of the Federal Republic of Nigeria, Analytical Report* (NPC, 1998). The report also provides a number of different scenarios and assumptions of changes in demographic inputs that could affect future population growth. All inputs and assumptions used were based on the medium variant of population change at the state level.¹ AIM was then used to adjust for the impact of HIV/AIDS on the

¹ For the most part, state-level demographic inputs under the medium variant (NPC, 1998) were used in making state-level projections. However, in a few cases, the national medium variant inputs were used to correct for variances. Migration was ignored for lack of enough data at the state level. Notably, NPC (1998) notes that at the national level net international migration was not expected to significantly affect the projections.

population. One of the main inputs required was adult HIV prevalence, and the method through which it was estimated for each state is summarized below.

Estimating Adult HIV Prevalence

Based on a methodology developed by the UNAIDS Reference Group on HIV/AIDS Estimates, Modeling, and Projections, the Epidemic Projection Package (EPP) was used to estimate and project adult HIV prevalence using data from antenatal clinic (ANC) surveillance sites previous to and during 2001. The package estimates adult prevalence for urban and rural populations separately and thereafter generates a combined estimate for the total population. These estimates were done at the state level, and the distribution of rural and urban population and growth rates used for each state and the FCT came from the NPC (1998). Data for the EPP that was used to prepare inputs for the state AIMS were taken from various ANC sero-prevalence surveys conducted in Nigeria starting in 1990. In the case of the 2001 data, we took the reported prevalence rates that were used in preparing state-level estimates of the HIV positive urban and rural populations and calculated the weighted averages for prevalence in each state. The resulting curve for the trend in prevalence that was fitted to the EPP was checked to make it fall as close as possible between 1999 and 2001 figures.

In estimating adult HIV prevalence for the entire population using ANC data, there are several assumptions made; indeed, adult HIV prevalence estimates are only as good as the assumptions used in making them. First, it was assumed that given the current stage of the epidemic in Nigeria, HIV prevalence among pregnant women will peak in the next five years (but at a different level in each state), declining slowly after that. This assumption is also predicated on the view that there will continue to be increased program efforts to counter the transmission of HIV in Nigeria. Second, the rate of HIV prevalence in all pregnant women is assumed to be the same as the rate of prevalence in women attending antenatal clinics. Third, the prevalence rate of HIV infection in all women aged 15–49 in a given state is assumed to be the same as the prevalence rate in pregnant women. Finally, the male-to-female ratio of those who are HIV-positive is assumed to be 1:1. Therefore, based on these assumptions, it is believed that HIV prevalence rates depicted by the ANC surveillance data are representative of the general adult population aged 15–49. According to the HIV/Syphilis Sentinel Sero-Prevalence Survey reports (NASCO 1999, 2000), the assumptions are reasonable within the Nigerian context and no empirical data has been reported thus far to the contrary. In making the estimates, the start year for the HIV/AIDS epidemic was 1986, the year in which the first official AIDS cases were reported in Nigeria.

After estimating adult HIV prevalence, AIM was used to project the impact of the HIV/AIDS epidemic on the population in each state from 1990–2015. The following additional assumptions were made through the use of AIM: perinatal transmission rate of 30 percent, life expectancy after the onset of AIDS of one

year, reduction in fertility among HIV-positive women of 30 percent, and the median time from infection to full-blown AIDS for adults to be about eight years.

Results of select indicators generated from the above-mentioned projections are shown below for five-year periods beginning in 2000. These are the results after adjusting for the impact of the AIDS epidemic in each state. Table 1 lists estimated adult HIV prevalence; male and female life expectancy (LE), and the total fertility rate (TFR) for each state. Table 2 lists the estimated total population, number of people infected with HIV, and annual AIDS deaths—the HIV population and annual AIDS deaths reported here are from all age groups (total population).

Table 1. Estimated HIV Prevalence, Male/Female LE, and TFR by State

Year	HIV Prevalence (%)				Male LE				Female LE				TFR			
	00	05	10	15	00	05	10	15	00	05	10	15	00	05	10	15
Abia	3.3	3.1	2.9	3.0	57	56	58	58	58	57	59	60	5.3	5.2	5.2	5.2
Abuja–FCT.	7.9	9.5	7.9	6.8	50	45	46	49	52	47	47	51	6.1	5.7	5.5	5.2
Adamawa	4.2	6.0	5.4	4.8	54	51	51	53	55	52	52	54	5.6	5.5	5.5	5.4
Akwa Ibom	7.8	8.8	7.5	6.9	61	57	57	59	62	58	58	61	4.6	4.5	4.5	4.5
Anambra	6.4	6.4	5.6	5.5	59	56	57	58	61	58	58	59	4.7	4.6	4.6	4.5
Bauchi	6.1	7.4	5.9	4.6	52	50	50	53	53	50	51	54	5.5	5.4	5.3	5.3
Bayelsa	7.2	6.1	5.1	5.4	58	55	58	59	59	57	59	60	4.7	4.7	4.7	4.6
Benue	14.9	14.9	11.2	9.2	49	42	45	49	49	43	45	50	5.4	5.4	5.4	5.4
Borno	3.7	6.1	5.4	3.8	52	50	50	52	53	51	50	53	6.0	5.8	5.8	5.7
Cross River	7.5	8.1	6.9	6.6	57	53	54	56	59	55	56	58	4.8	4.7	4.7	4.7
Delta	7.1	8.1	6.9	6.3	57	53	54	56	58	54	54	56	5.1	5.0	4.9	4.9
Ebonyi	6.3	7.0	6.5	5.8	55	53	55	56	56	54	55	57	5.0	4.9	4.9	4.9
Edo	4.4	5.9	5.5	5.1	59	56	56	57	60	57	56	57	5.0	5.0	4.9	4.8
Ekiti	2.6	3.2	2.8	2.7	63	62	62	63	65	63	63	64	5.0	4.9	4.9	4.8
Enugu	6.5	6.9	6.1	6.0	55	53	55	56	56	54	55	57	5.0	4.9	4.9	4.9
Gombe	11.0	10.3	8.1	7.5	49	45	48	51	50	46	48	52	5.4	5.3	5.3	5.3
Imo	4.2	7.0	7.2	6.6	56	54	52	52	57	55	52	53	5.5	5.3	5.2	5.2
Jigawa	2.0	2.3	1.9	1.7	54	53	54	56	55	54	55	57	5.9	5.8	5.7	5.6
Kaduna	6.5	7.9	6.9	6.0	53	49	50	52	54	51	51	53	5.5	5.3	5.3	5.2
Kano	5.1	7.2	6.4	5.7	52	49	49	51	53	50	49	52	5.8	5.7	5.6	5.6
Katsina	3.1	3.4	3.0	3.0	55	54	55	57	56	55	56	58	5.4	5.3	5.2	5.2
Kebbi	4.4	4.3	3.6	3.6	50	49	51	53	51	50	52	54	5.8	5.8	5.7	5.6
Kogi	6.2	7.6	6.2	5.2	55	52	52	54	56	53	53	56	5.5	5.3	5.2	5.1
Kwara	3.9	5.4	4.2	2.8	59	57	57	59	60	58	58	60	5.5	5.3	5.1	5.0
Lagos	2.1	4.1	5.2	5.0	59	58	56	56	60	59	57	56	5.0	4.9	4.9	4.8
Nassarawa	7.1	9.4	8.6	7.8	52	48	48	50	53	49	48	51	6.0	5.8	5.5	5.3
Niger	3.4	6.2	6.7	5.6	58	56	54	55	59	57	55	56	5.4	5.2	5.0	4.8
Ogun	3.5	4.7	4.6	4.3	60	58	58	59	61	59	59	60	5.4	5.4	5.3	5.2
Ondo	5.6	6.8	5.8	5.2	62	58	58	59	63	59	58	60	4.9	4.8	4.8	4.8
Osun	4.0	3.9	3.5	3.7	58	57	58	58	59	58	59	59	5.4	5.3	5.3	5.2
Oyo	3.8	3.7	3.4	3.5	59	58	60	61	60	59	61	61	5.1	5.1	5.0	4.9
Plateau	6.0	7.5	6.5	5.7	52	49	50	52	53	50	51	53	5.6	5.5	5.4	5.4
Rivers	7.0	7.3	6.0	5.7	58	55	56	58	60	56	57	59	4.7	4.7	4.6	4.6
Sokoto	2.7	2.5	2.3	2.5	49	49	51	52	50	51	52	54	5.9	5.9	5.8	5.7
Taraba	6.5	7.0	6.0	5.8	53	50	51	53	56	52	53	55	5.5	5.3	5.2	5.0
Yobe	3.7	4.2	3.6	3.2	57	56	57	59	58	57	58	60	5.4	5.3	5.3	5.3
Zamfara	3.6	3.3	3.2	3.3	50	50	52	53	51	51	53	54	5.9	5.8	5.7	5.6

Table 2. Estimated Total Population, HIV Population, and Annual AIDS Deaths by State

Year	Total Pop (millions)				HIV Pop (thousands)				Annual AIDS deaths (thousands)			
	00	05	10	15	00	05	10	15	00	05	10	15
Abia	3.0	3.5	4.0	4.6	51.2	54.5	58.2	69.8	2.5	5.5	5.4	5.8
Abuja–FCT	0.5	0.6	0.6	0.7	20.3	27.0	25.7	23.8	0.8	2.3	2.7	2.4
Adamawa	2.7	3.1	3.5	4.0	56.1	92.4	96.3	96.1	2.0	6.5	9.7	9.4
Akwa Ibom	3.1	3.5	4.0	4.5	124.8	163.9	154.4	158.8	4.8	13.8	16.6	14.8
Anambra	3.7	4.2	4.7	5.2	123.6	137.6	136.1	151.7	5.8	13.3	13.6	13.2
Bauchi	3.7	4.2	4.8	5.4	112.3	158.7	145.4	127.5	5.4	12.6	16.0	13.7
Bayelsa	1.5	1.7	1.9	2.1	57.9	54.3	50.1	59.0	3.0	6.1	5.2	4.9
Benue	3.4	3.8	4.2	4.7	253.4	296.2	245.6	220.4	9.9	27.4	29.3	22.8
Borno	3.3	3.8	4.3	4.8	58.9	112.4	116.8	93.2	2.1	7.1	11.9	11.2
Cross River	2.5	2.8	3.1	3.5	97.2	121.0	115.5	122.0	3.9	10.6	12.1	11.1
Delta	3.3	3.8	4.3	4.8	123.0	158.0	151.3	156.8	4.6	13.6	16.1	14.5
Ebonyi	1.6	1.9	2.1	2.4	52.6	66.9	69.8	71.5	2.7	5.8	6.7	6.9
Edo	2.8	3.2	3.7	4.1	65.6	98.5	104.3	110.5	2.3	7.4	10.2	10.2
Ekiti	2.0	2.3	2.6	3.0	26.7	37.1	38.6	42.4	1.0	3.0	3.8	3.8
Enugu	2.4	2.7	3.1	3.5	78.7	96.3	96.9	108.2	9.7	42.7	90.8	138.4
Gombe	1.9	2.2	2.4	2.7	104.8	114.5	101.6	104.5	4.7	11.2	11.2	9.7
Imo	3.3	3.7	4.2	4.7	66.7	124.1	149.5	160.0	2.3	8.0	13.4	15.0
Jigawa	3.8	4.3	4.9	5.6	35.2	48.9	47.9	49.3	1.3	4.0	5.0	4.6
Kaduna	5.1	5.8	6.5	7.4	170.0	239.5	236.6	227.9	6.4	18.9	24.5	22.8
Kano	7.6	8.6	9.7	10.9	188.2	305.5	314.4	314.7	6.7	21.9	31.9	30.7
Katsina	4.9	5.6	6.4	7.3	74.1	96.5	98.5	110.2	3.1	8.2	9.8	9.7
Kebbi	1.3	1.5	1.7	2.0	28.5	33.4	32.4	36.2	1.2	3.1	3.3	3.2
Kogi	2.8	3.2	3.6	4.0	85.3	120.1	113.0	108.1	3.0	9.6	12.3	10.7
Kwara	2.0	2.3	2.6	2.9	39.2	61.3	56.6	42.5	1.4	4.5	6.3	5.2
Lagos	7.7	8.8	9.9	11.1	85.9	184.9	266.8	283.2	3.1	10.3	20.5	27.1
Nassarawa	1.6	1.8	2.1	2.3	55.5	85.4	91.2	92.5	2.1	6.4	8.9	9.0
Niger	3.2	3.6	4.1	4.6	52.8	115.9	142.8	133.7	1.8	6.5	12.5	14.2
Ogun	3.0	3.5	4.0	4.5	51.9	79.6	90.9	97.7	1.9	5.9	8.4	9.1
Ondo	2.9	3.4	3.8	4.2	85.2	115.2	112.5	115.0	3.1	9.5	11.8	10.8
Osun	2.8	3.2	3.6	4.1	56.2	60.7	64.9	77.4	2.8	6.1	6.1	6.5
Oyo	4.5	5.2	5.9	6.6	88.8	95.1	101.1	119.5	4.8	9.6	9.4	10.1
Plateau	2.7	3.1	3.5	3.9	82.0	118.3	117.6	114.8	3.4	9.3	12.1	11.4
Rivers	4.2	4.7	5.3	5.9	160.0	182.0	168.1	176.9	7.3	17.2	18.0	16.0
Sokoto	5.9	6.7	7.6	8.7	77.3	83.5	91.4	109.1	4.5	8.3	8.2	9.3
Taraba	2.0	2.2	2.5	2.8	62.6	79.9	78.3	83.6	2.4	6.9	8.1	7.6
Yobe	1.8	2.1	2.4	2.7	33.4	43.9	43.2	43.7	2.0	3.7	4.4	4.2
Zamfara	1.3	1.5	1.7	2.0	23.8	25.9	28.5	33.5	4.7	15.9	28.7	42.3
Total/Natl	116	132	149	168	3,010	4,089	4,152	4,245	134	383	525	572

Estimating the Number of Orphans

We then used the adjusted population projections shown above to estimate the number of orphans. Three categories of orphans were considered: *maternal orphans*, those children who have lost only a mother; *paternal orphans*, those children who have lost only a father; and *double orphans*, those children who have lost both parents. Orphans can be further classified into those children under 15 who have lost parents to AIDS-related causes and those children who have lost parents to non-AIDS-related causes.

Maternal Orphans

Maternal orphans from AIDS-related causes were calculated using AIM. AIDS orphans at a given year t , equal to the number of children under 15 that lose a mother to AIDS-related causes in year t , plus the number of AIDS orphans under 15 in year $t-1$ who survive to year t . The methodology is explained in the AIM manual (Stover, 1999) and has been produced below for convenience. First, the number of children under age 15 whose mothers are still alive is calculated:

$$CEB15_t = \sum_{\tau=t-14}^t \sum_{a=15}^{49} TFR_{\tau} \cdot ASFP_{a1} \cdot POP_{a1,\tau}$$

where

$$\begin{aligned} CEB15_t &= \text{number of children under age 15 whose mothers were living at time } t \\ POP_{a1,\tau} &= \text{women currently living who were age } a1 \text{ at time } \tau \\ TFR_{\tau} &= \text{TFR at time } \tau \\ ASFP_{a1} &= \text{percentage of lifetime births which occurred to age group } a1 \end{aligned}$$

In this equation, births are summed across the reproductive ages of currently living women, for each of the 15 preceding years. Next, the model calculates the number of children under age 15 who have not died from AIDS but who were born to women who die of AIDS:

$$ACEB15_{a,t} = \sum_{a1=15}^{64} TFR_{t-a} \cdot ASFP_{a1-a,t-a} \cdot FAD_{a1,t} \cdot [1 - PTR \cdot PropHIV_a],$$

where

$$\begin{aligned} ACEB15_{a,t} &= \text{number of surviving children under the age of 15 of age } a \text{ who were born} \\ &\text{to females who died from AIDS at time } t \\ TFR_{t-a} &= \text{TFR } a \text{ years earlier} \\ FAD_{a1,t} &= \text{number of female AIDS deaths occurring at age } a1 \text{ at time } t \end{aligned}$$

$PropHIV_a$ = proportion of women who would be HIV-positive a years before death

This equation is similar to the first one for CEB, except that it counts only children born to women who died of AIDS at time t rather than children born to all women. This figure is further adjusted to remove those children who have died from AIDS. The expression $1-PTR$ is the proportion of infants who are not infected if the mother is infected. The variable $PropHIV$ accounts for the fact that the women may not have been infected during the entire 15 years. $PropHIV_a$ is the proportion of women who died from AIDS at time t who were HIV-positive $t-a$ years earlier. This proportion is essentially the same as the cumulative proportion of people who develop AIDS by time t since infection, but shifted by one year to account for the lag from AIDS to death.

The two equations described above determine the number of children ever born to women who die of AIDS. However, the equations need to be adjusted to account for the children who will have died before year t from causes other than AIDS. This step is accomplished by dividing the number of children alive today by the number of children ever born. This adjustment factor accounts for non-AIDS mortality. Therefore, the number of new orphans, created in year t by female deaths in that year, becomes

$$New_AIDS_orphans_{a,t} = ACEB15_{a,t} \cdot \frac{Pop_{a,t}}{CEB15_{a,t}}$$

The total number of AIDS orphans in any year is increased by new orphans and decreased by child deaths and children turning 16 and older. For any particular age a , the number of orphans at time t will equal the number of new orphans created in that year plus the number of orphans aged $a-1$ at time $t-1$ who survive to year t . Thus, the equation for the total number of orphans at age a is

$$AIDS_orphans_{a,t} = New_AIDS_orphans_{a,t} + AIDS_orphans_{a-1,t-1} \cdot SR_{a-1,t-1}$$

where

$$SR_{a,t} = \text{The survival ratio from age } a-1 \text{ } t-1 \text{ to age } a \text{ } t.$$

The survival ratio in this equation is the survival ratio for all children calculated from the non-AIDS life expectancy and a model life table. This figure may underestimate orphan mortality if children who have lost their mothers do not receive the same quality of care as children who remain with their natural mothers.

Maternal orphans from non AIDS-related causes were also calculated (in a spreadsheet), using the same methodology described above; that is, maternal non-AIDS orphans at year t , equal to the number of children under 15 who lose a mother to non-AIDS-related causes in year t , plus the number of non-AIDS orphans under 15 in year $t-1$ who survive to year t . Notably, the age at death of females from non-AIDS causes at time t will be higher than that of women who die from AIDS causes. In other words, children who lose their mothers to non-AIDS-related causes will be relatively older than children who lose their mothers to AIDS. Thus, an age–sex distribution of non-AIDS deaths prior to the onset of the epidemic is used to estimate the number of female non-AIDS deaths occurring at age $a1$ at time t .² Unlike the varying levels of HIV prevalence by state, there was no reason to believe that adult female mortality (15–64) from non-AIDS causes would be different by state. Hence, the national age–sex distribution of non-AIDS deaths was used at the state level as well. In addition, we do not adjust for child deaths from AIDS for this group. After estimating maternal orphans from AIDS-related and non-AIDS-related causes, we then estimated paternal and double orphans using the following process.

Paternal and Double Orphans

To date, there is no universal methodology in estimating paternal and double orphans. However, the HIV/AIDS epidemic has undoubtedly led to an increase in the number of orphans, especially the double orphans in sub-Saharan Africa. Thus, paternal and double orphans cannot be ignored. One method that has been used by Hunter and Williamson (2000) to estimate paternal and double orphans is the use of a maternal-paternal-double orphans' ratio obtained from empirical studies in East Africa to project paternal and double orphans, given an estimate of maternal orphans for a particular population. Borrowing this concept, we use the data collected on the living arrangements of children under 15 in the 1999 Nigeria Demographic and Health Survey (NDHS) to generate a ratio for estimating paternal and double orphans at the regional level. Unlike in Hunter and Williamson (2000), where the ratio was adjusted for every five years, we keep the ratio stable at 1999 through 2015 levels. It is expected that this ratio may be a better estimate of paternal and double orphans, since prevalence varies by state; and overall, Nigeria has a lower rate of HIV prevalence than Uganda or Tanzania. However, the need for a more scientific/reliable methodology for estimating paternal and double orphans cannot be

² The age–sex distribution of non-AIDS deaths for 1987 was used in estimating non-AIDS orphans. Figures used came from the Census Bureau, International Database (www.census.gov).

overemphasized. Thus, estimates of paternal and double orphans, although useful for advocacy and policy dialogue, should be utilized cautiously for planning purposes.

Table 3 shows the ratio of maternal-paternal-double orphans for each of the five regions in our projections and how the ratios were generated from NDHS data. The first section of the table lists orphan children in each region as a percentage of all children in the total NDHS sample. The table also includes a column that shows all orphans (paternal, maternal, and double) as a percentage of children under 15 in the total sample. About 5.5 percent of all children in the sample were orphans; however, it is worth noting that there was a substantial variance in the number of orphans reported by region in the NDHS. For instance, about 9.8 percent of children under age 15 in the Southeast Region were reported to have lost either one or both parents, compared to 3.8 percent of the children in the Northeast Region. Differences also exist in the distribution of maternal, paternal, and double orphans by region.

Using this percentage distribution, we then calculate the maternal, paternal, and double orphans (each group) as a proportion of all orphans in the NDHS sample. The results are shown in the second section of Table 3. These are also the rates used to estimate paternal and double orphans produced in this report; that is, paternal and double orphans for each state in a particular region were estimated using a similar ratio, but with that particular state's number of maternal orphans as the base. Taking the Northeast Region as an example, a ratio of 42–42–16 for maternal-paternal-double was used to estimate the number of paternal and double orphans in all states within the northeast region using the estimated maternal orphans in each state as a base.

Although it would have been desirable to estimate paternal and double orphans from AIDS-related and non-AIDS-related causes separately, it was not possible primarily because of the lack of sufficient information on the proportion of paternal and double orphans who lost their parents to AIDS causes compared to those who lost their parents to non-AIDS causes. Conceivably, this distribution is different from that of maternal orphans; hence, it would be inappropriate to apply the distribution of maternal AIDS and non-AIDS orphans to the other two groups.

Table 3. Distribution of Paternal and Double Orphans Compared to Maternal Orphans³

Orphan Children as a Percentage of all Children under 15 in the NDHS Sample					
	% of children with	% of children with	% of children with	% of all orphaned	Total
Region	Mother dead	Father dead	Both parents dead	Children in sample	Sample
Northeast	1.6	1.6	0.6	3.8	3,316
Northwest	2.0	1.7	0.3	4.0	2,553
Southeast	2.3	6.5	1.0	9.8	3,595
Southwest	2.4	1.6	0.4	4.4	3,875
Central	1.6	2.0	1.8	5.4	3,697
National (total)	2.0	2.7	0.8	5.5	17,036
Percentage Distribution of Orphans by Type in each Region					
	Maternal Orphans	Paternal Orphans	Double Orphans	Total	
Northeast	42	42	16	100	
Northwest	50	43	8	100	
Southeast	23	66	10	100	
Southwest	55	36	9	100	
Central	30	37	33	100	
National (total)	36	49	15	100	

Source: Figures in first section were copied from the 1999 NDHS, Table 2.4.

Results

This section briefly presents the results of the projections that were made. Figures 1–4 and Tables 4–10 list the number of maternal, paternal, and double orphans at the national and regional levels that were estimated using the methodology described above. Estimates at the state level are provided in Appendix A.

Figure 1 and Table 4 (page 14) show that the number of maternal orphans from AIDS-related causes is expected to increase from an estimate of 304,881 in 2000 to nearly 3 million in 2015. Thus, more than 2.5 million children will be orphaned by AIDS-related causes in the next 15 years. As a percentage of children under 15, maternal orphans from all causes will increase from 1.8 to 5.4 percent in 2015.

³ Difference between the NDHS total of 17,037 and total of 17,036 in Table 3 is probably due to rounding.

Figure 1

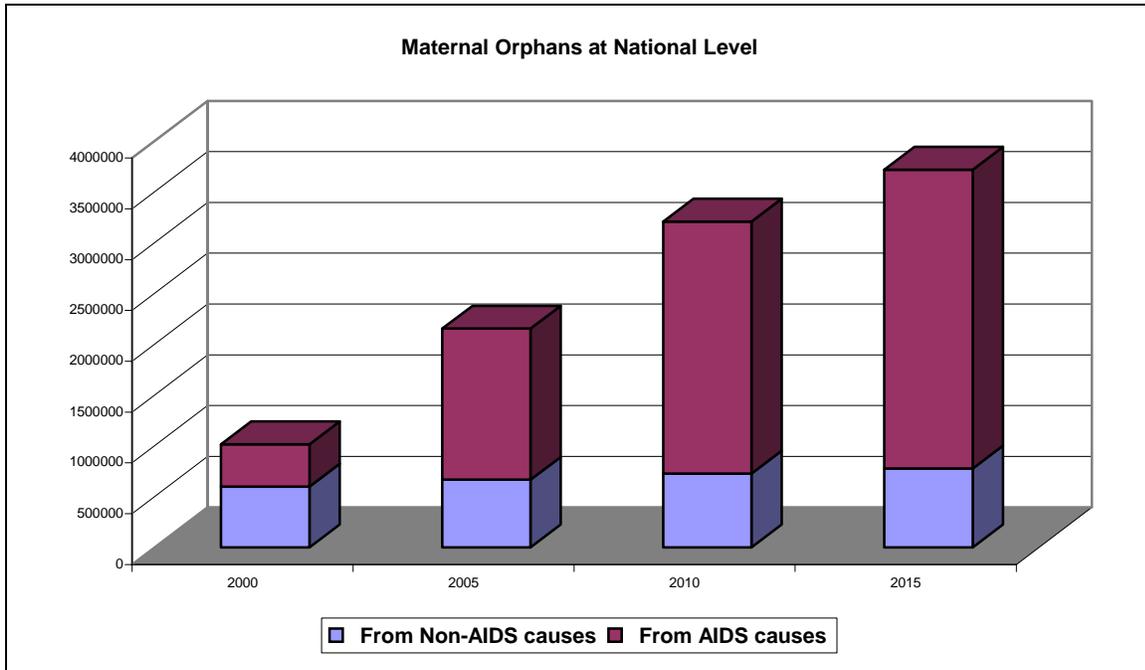
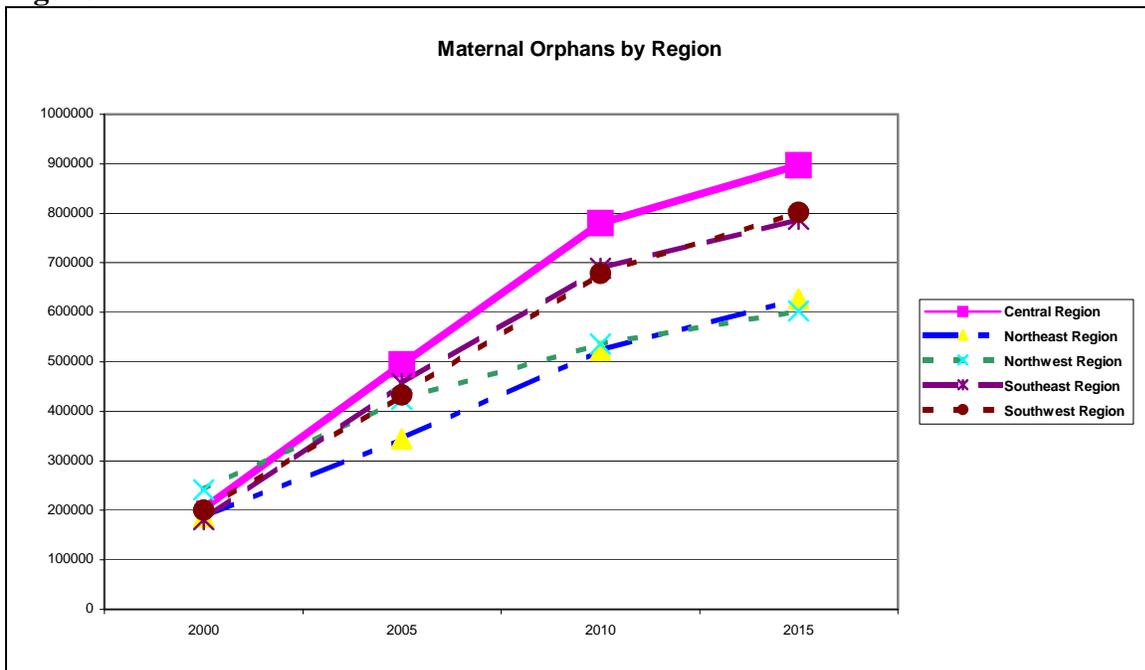


Figure 2 shows the growth in maternal orphans by region. The Central Region can be expected to have the largest number of orphans compared to other regions, whereas the Northwest Region will have the least. Differences are caused mainly by differences in HIV-infection rates between the regions.

Figure 2



The total number of maternal, paternal and double orphans in Nigeria in 2000 is estimated at 2.6 million (Figure 3 and Table 4). This number is expected to increase by more than 8 million by 2015, to 11.3 million, representing at that time just over 16 percent of the under-15 population.

Figure 3

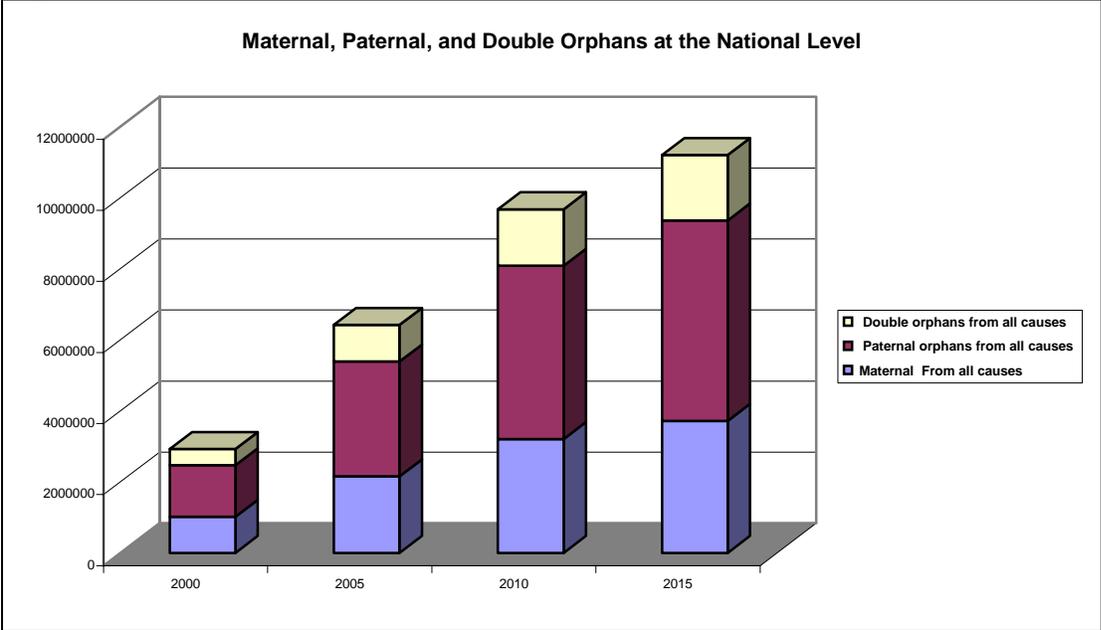


Figure 4 shows the growth in total orphans by region. These results can also be seen in the individual regional tables (Tables 5–9). In contrast to the regional projections for maternal orphans only, the Southeastern Region is projected to have the highest number of orphans, followed by the Central Region. As with maternal orphans, the Northwest Region is predicted to have the least number compared with other regions.

Figure 4

Maternal, Paternal, and Double Orphans by Region

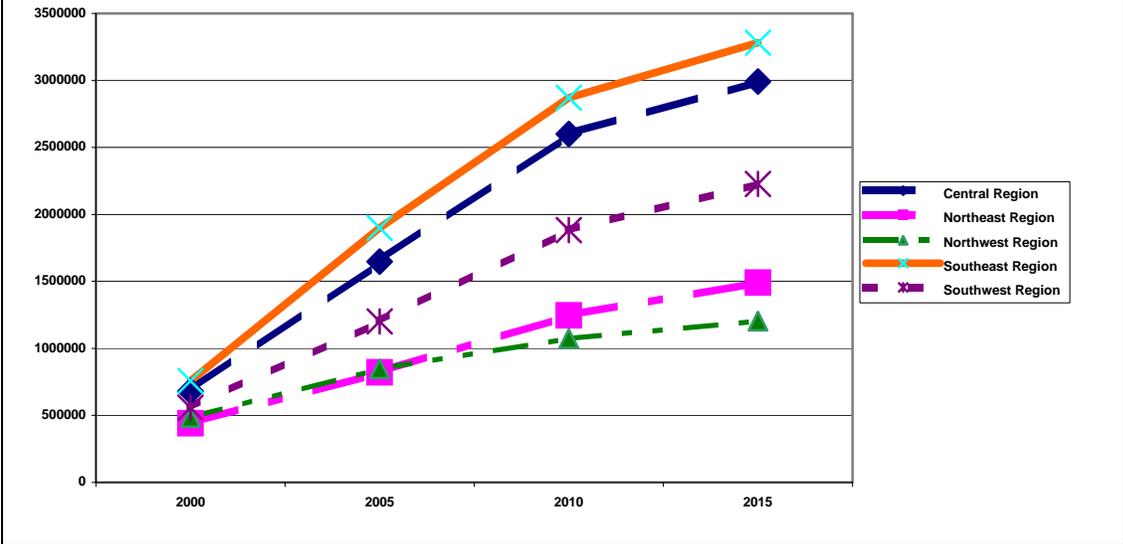


Table 4. Estimated Number of Orphans for Nigeria, 2000–2015⁴

	2000	2005	2010	2015
<i>Nigeria – State Sums</i>				
Maternal Orphans				
From non-AIDS causes	597,925	664,636	725,699	774,375
From AIDS causes	304,881	1,232,708	2,349,925	2,977,913
From all causes	902,806	1,897,344	3,075,624	3,752,288
Paternal Orphans				
Paternal orphans from all causes	1,289,050	2,856,579	4,682,505	5,694,473
Double Orphans				
Double orphans from all causes	399,888	897,892	1,505,755	1,841,900
Total Orphans (M, P, and D)				
Total orphans from all causes	2,591,744	5,651,815	9,263,885	11,288,662
Population				
Total population	115,667,771	131,934,944	149,121,620	168,411,783
Population < 15	49,835,791	57,393,442	63,177,580	69,651,396
Orphans as a % of children < 15				
Maternal orphans as a % of < 15 Pop	1.8	3.3	4.9	5.4
Paternal orphans as a % of < 15 Pop	2.6	5.0	7.4	8.2
Double orphans as a % of < 15 Pop	0.8	1.6	2.4	2.6
All orphans as a % of < 15 Pop	5.2	9.8	14.7	16.2

⁴ Projections aggregated from those done at the regional and state levels.

Table 5. Estimated Number of Orphans for Central Region, 2000–2015⁵

	2000	2005	2010	2015
<i>Central Region</i>				
Maternal Orphans				
From non-AIDS causes	100,741	116,091	129,880	136,190
From AIDS causes	68,329	286,064	569,048	723,013
Total maternal Orphans	169,070	402,155	698,928	859,203
Paternal Orphans				
From all causes	208,520	495,991	862,011	1,059,684
Double Orphans				
From all causes	185,977	442,371	768,821	945,123
Total Orphans (M, P, and D)				
Total orphans from all causes	563,567	1,340,517	2,329,760	2,864,010
Population				
Total population	20,817,235	23,654,136	26,643,241	30,019,388
Population < 15	9,191,834	10,310,996	11,358,139	12,565,747
Maternal orphans as a % of < 15 Pop	1.8	3.9	6.2	6.8
Paternal orphans as a % of < 15 Pop	2.3	4.8	7.6	8.4
Double orphans as a % of < 15 Pop	2.0	4.3	6.8	7.5
All orphans as a % of < 15 Pop	6.1	13.0	20.5	22.8

⁵ Central Region comprises the following states and the Federal Capital: Abuja FCT, Adamawa, Benue, Kogi, Kwara, Nassarawa, Niger, Plateau, and Taraba. A ratio of 30–37–33 was used in estimating the maternal-paternal-double orphans using the maternal orphans as the base.

Table 6. Estimated Number of Orphans for Northeast Region, 2000–2015⁶

	2000	2005	2010	2015
<i>Northeast Region</i>				
Maternal Orphans				
From non-AIDS causes	137,436	154,563	172,796	188,530
From AIDS causes	58,315	228,331	447,936	574,566
Total maternal orphans	195,751	382,894	620,732	763,096
Paternal Orphans				
Total paternal orphans	195,751	382,894	620,732	763,096
Double Orphans				
Total double orphans	74,572	145,864	236,469	290,703
Total Orphans From All Causes				
Total orphans from all causes	466,074	911,652	1,477,933	1,816,895
Population				
Total population	22,125,417	25,149,874	28,403,046	32,180,698
Population < 15	9,905,470	11,156,915	12,147,291	13,522,877
Maternal orphans as a % of < 15 Pop	2.0	3.4	5.1	5.6
Paternal orphans as a % of < 15 Pop	2.0	3.4	5.1	5.6
Double orphans as a % of < 15 Pop	0.8	1.3	1.9	2.1
All orphans as a % of < 15 Pop	4.7	8.2	12.2	13.4

⁶ Northeast Region comprises the following states: Bauchi, Borno, Gombe, Jigawa, Kano, and Yobe. A ratio of 42–42–16 was used in estimating the maternal-paternal-double orphans using the maternal orphans as the base.

Table 7. Estimated Number of Orphans for Northwest Region, 2000-2015⁷

	2000	2005	2010	2015
<i>Northwest Region</i>				
Maternal Orphans				
From non-AIDS causes	153,337	174,776	193,888	210,514
From AIDS causes	43,517	161,785	282,957	350,967
Total maternal orphans	196,854	336,561	476,845	561,481
Paternal Orphans				
Total paternal orphans	169,294	289,442	410,087	482,874
Double Orphans				
Total double orphans	27,560	47,119	66,758	78,607
Total Orphans From All Causes				
Total orphans	393,708	673,122	953,690	1,122,962
Population				
Total population	18,491,882	21,097,722	24,003,299	27,342,381
Population < 15	8,423,836	9,296,956	10,278,603	11,548,640
Maternal orphans as a % of < 15 Pop	2.3	3.6	4.6	4.9
Paternal orphans as a % of < 15 Pop	2.0	3.1	4.0	4.2
Double orphans as a % of < 15 Pop	0.3	0.5	0.6	0.7
All orphans as a % of < 15 Pop	4.7	7.2	9.3	9.7

⁷ The Northwest Region comprises the following states: Kaduna, Katsina, Kebbi, Sokoto, and Zamfara. A ratio of 50–43–8 was used in estimating the maternal-paternal-double orphans using the maternal orphans as the base.

Table 8. Estimated Number of Orphans for Southeast Region, 2000–2015⁸

	2000	2005	2010	2015
<i>Southeast Region</i>				
Maternal Orphans				
From non-AIDS causes	77,737	85,680	95,185	96,227
From AIDS causes	81,246	325,949	588,378	715,809
Total maternal orphans	158,983	411,629	683,563	812,036
Paternal Orphans				
Total paternal orphans	437,203	1,131,980	1,879,798	2,233,099
Double Orphans				
Total double orphans	66,243	171,512	284,818	338,348
Total Orphans From All Causes				
Total orphans	662,429	1,715,121	2,848,179	3,383,483
Population				
Total population	25,160,712	28,712,195	32,379,130	36,405,509
Population < 15	10,409,664	12,256,055	13,581,550	14,809,585
Maternal orphans as a % of < 15 Pop	1.5	3.4	5.0	5.5
Paternal orphans as a % of < 15 Pop	4.2	9.2	13.8	15.1
Double orphans as a % of < 15 Pop	0.6	1.4	2.1	2.3
All orphans as a % of < 15 Pop	6.4	14.0	21.0	22.8

⁸ The Southeast Region comprises the following states: Abia, Akwa Ibom, Anambra, Bayelsa, Cross River, Ebonyi, Enugu, Imo, and Rivers. A ratio of 23–66–10 was used in estimating the maternal-paternal-double orphans using the maternal orphans as the base.

Table 9. Estimated Number of Orphans for Southwest Region, 2000–2015⁹

	2000	2005	2010	2015
<i>Southwest Region</i>				
Maternal Orphans				
From non-AIDS causes	128,674	133,526	133,950	142,914
From AIDS causes	53,474	230,579	461,606	613,558
Total maternal orphans	182,148	364,105	595,556	756,472
Paternal Orphans				
Total paternal orphans	278,282	556,272	909,877	1,155,721
Double Orphans				
Total double orphans	45,537	91,026	148,889	189,118
Total Orphans From All Causes				
Total orphans	505,967	1,011,403	1,654,322	2,101,311
Population				
Total population	29,072,525	33,321,017	37,692,904	42,463,807
Population < 15	11,904,987	14,372,520	15,811,997	17,204,547
Maternal orphans as a % of < 15 Pop	1.5	2.5	3.8	4.4
Paternal orphans as a % of < 15 Pop	2.3	3.9	5.8	6.7
Double orphans as a % of < 15 Pop	0.4	0.6	0.9	1.1
All orphans as a % of < 15 Pop	4.3	7.0	10.5	12.2

⁹ The Southwest Region comprises the following states: Delta, Edo, Ekiti, Lagos, Ogun, Ondo, Osun, and Oyo. A ratio of 55–36–9 was used in estimating the maternal-paternal-double orphans using the maternal orphans as the base.

Appendix A

Appendix A includes tables with estimates of maternal, paternal, and double orphans at the state level. The states are listed in alphabetical order within each region, starting with the Central Region as follows.

Central Region

Abuja FCT
Adamawa
Benue
Kogi
Kwara
Nassarawa
Niger
Plateau
Taraba

Estimated Number of Orphans for Abuja FCT, 2000–2015

	2000	2005	2010	2015
<i>Abuja FCT</i>				
Maternal Orphans				
From non-AIDS causes	5,342	5,979	6,682	6,907
From AIDS causes	1,906	8,078	15,293	18,699
From all causes	7,248	14,057	21,975	25,606
Paternal Orphans				
From all causes	8,939	17,337	27,103	31,581
Double Orphans				
From all causes	7,973	15,463	24,173	28,167
Total Orphans (M, P and D)				
Total orphans from all causes	24,160	46,857	73,250	85,353
Population				
Total population	497,821	560,814	622,556	693,043
Population < 15	222,723	253,069	262,412	279,772
Maternal orphans as a % of < 15 Pop	3	6	8	9
Paternal orphans as a % of < 15 Pop	4	7	10	11
Double orphans as a % of < 15 Pop	4	6	9	10
All orphans as a % of < 15 Pop	11	19	28	31

**Estimated Number of Orphans for Adamawa State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Adamawa State</i>				
Maternal Orphans				
From non-AIDS causes	13,830	15,386	6,682	6,907
From AIDS causes	49,95	22,532	49,760	67,742
From all causes	18,825	37,918	56,442	74,649
Paternal Orphans				
From all causes	23,218	46,766	69,612	92,067
Double Orphans				
From all causes	20,708	41,710	62,086	82,114
Total Orphans (M, P, and D)				
Total orphans from all causes	62,750	126,393	188,140	248,830
Population				
Total population	2,712,317	3,094,776	3,504,803	3,969,516
Population < 15	1,194,398	1,358,934	1,502,800	1,673,856
Maternal orphans as a % of < 15 Pop	2	3	4	4
Paternal orphans as a % of < 15 Pop	2	3	5	6
Double orphans as a % of < 15 Pop	2	3	4	5
All orphans as a % of < 15 Pop	5	9	13	15

**Estimated Number of Orphans for Benue State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Benue State</i>				
Maternal Orphans				
From non-AIDS causes	16,722	19,262	21,282	23,279
From AIDS causes	25,173	101,204	183,862	211,267
From all causes	41,895	120,466	205,144	234,546
Paternal Orphans				
From all causes	51,671	148,575	253,011	289,273
Double Orphans				
From all causes	46,085	132,513	225,658	258,001
Total Orphans From All Causes				
Total orphans from all causes	139,650	401,553	683,813	781,820
Population				
Total population	3,405,330	3,791,298	4,196,016	4,695,340
Population < 15	1,482,496	1,600,922	1,788,060	2,003,951
Maternal orphans as a % of < 15 Pop	3	8	11	12
Paternal orphans as a % of < 15 Pop	3	9	14	14
Double orphans as a % of < 15 Pop	3	8	13	13
All orphans as a % of < 15 Pop	9	25	38	39

**Estimated Number of Orphans for Kogi State,
2000–2015**

	2000	2005	2010	2015
<i>Kogi State</i>				
Maternal Orphans				
From non-AIDS causes	12,213	13,908	15,725	17,730
From AIDS causes	7,493	33,869	70,691	88,828
From all causes	19,706	47,777	86,416	106,558
Paternal Orphans				
From all causes	24,304	58,925	106,580	131,422
Double Orphans				
From all causes	21,677	52,555	95,058	117,214
Total Orphans (M, P, and D)				
Total orphans from all causes	65,687	159,257	288,053	355,193
Population				
Total population	2,765,609	3,158,628	3,566,626	4,019,877
Population < 15	1,197,069	1,387,958	1,539,852	1,692,929
Maternal orphans as a % of < 15 Pop	2	3	6	6
Paternal orphans as a % of < 15 Pop	2	4	7	8
Double orphans as a % of < 15 Pop	2	4	6	7
All orphans as a % of < 15 Pop	5	11	19	21

**Estimated Number of Orphans for Kwara State,
2000–2015**

	2000	2005	2010	2015
<i>Kwara State</i>				
Maternal Orphans				
From non-AIDS causes	8,233	8,884	9,996	10,891
From AIDS causes	3,316	15,303	33,472	42,823
From all causes	11,549	24,187	43,468	53,714
Paternal Orphans				
From all causes	14,244	29,831	53,611	66,247
Double Orphans				
From all causes	12,704	26,606	47,815	59,085
Total Orphans (M, P, and D)				
Total orphans from all causes	38,497	80,623	144,893	179,047
Population				
Total population	2,007,488	2,291,419	2,591,542	2,929,324
Population < 15	850,822	992,257	1,085,328	1,194,729
Maternal orphans as a % of < 15 Pop	1	2	4	4
Paternal orphans as a % of < 15 Pop	2	3	5	6
Double orphans as a % of < 15 Pop	1	3	4	5
All orphans as a % of < 15 Pop	5	8	13	15

**Estimated Number of Orphans for Nassarawa State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Nassarawa State</i>				
Maternal Orphans				
From non-AIDS causes	7,402	10,572	12,391	13,621
From AIDS causes	5,712	24,178	49,148	65,308
From all causes	13,114	34,750	61,539	78,929
Paternal Orphans				
From all causes	16,174	42,858	75,898	97,346
Double Orphans				
From all causes	14,425	38,225	67,693	86,822
Total Orphans (M, P, and D)				
Total orphans from all causes	43,713	115,833	205,130	263,097
Population				
Total population	1,596,175	1,824,497	2,058,556	2,316,804
Population < 15	736,798	833,978	906,452	990,568
Maternal orphans as a % of < 15 Pop	2	4	7	8
Paternal orphans as a % of < 15 Pop	2	5	8	10
Double orphans as a % of < 15 Pop	2	5	7	9
All orphans as a % of < 15 Pop	6	14	23	27

**Estimated Number of Orphans for Niger State,
2000–2015**

	2000	2005	2010	2015
<i>Niger State</i>				
Maternal Orphans				
From non-AIDS causes	13,800	15,698	17,275	13,094
From AIDS causes	4,882	21,044	53,148	85,222
From all causes	18,682	36,742	70,423	98,316
Paternal Orphans				
From all causes	23,041	45,315	86,855	121,256
Double Orphans				
From all causes	20,550	40,416	77,465	108,148
Total Orphans (M, P, and D)				
Total orphans from all causes	62,273	122,473	234,743	327,720
Population				
Total population	3,175,004	3,633,845	4,113,866	4,625,664
Population < 15	1,424,149	1,571,359	1,712,868	1,879,966
Maternal orphans as a % of < 15 Pop	1	2	4	5
Paternal orphans as a % of < 15 Pop	2	3	5	6
Double orphans as a % of < 15 Pop	1	3	5	6
All orphans as a % of < 15 Pop	4	8	14	17

**Estimated Number of Orphans for Plateau State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Plateau State</i>				
Maternal Orphans				
From non-AIDS causes	14,058	15,889	17,666	19,138
From AIDS causes	8,655	34,138	65,940	85,097
From all causes	22,713	50,027	83,606	104,235
Paternal Orphans				
From all causes	28,013	61,700	103,114	128,557
Double Orphans				
From all causes	24,984	55,030	91,967	114,659
Total Orphans (M, P, and D)				
Total orphans from all causes	75,710	166,757	278,687	347,450
Population				
Total population	2,696,482	3,073,130	3,479,040	3,937,984
Population < 15	1,198,711	1,342,734	1,499,359	1,675,202
Maternal orphans as a % of < 15 Pop	2	4	6	6
Paternal orphans as a % of < 15 Pop	2	5	7	8
Double orphans as a % of < 15 Pop	2	4	6	7
All orphans as a % of < 15 Pop	6	12	19	21

**Estimated Number of Orphans for Taraba State,
2000–2015**

	2000	2005	2010	2015
<i>Taraba State</i>				
Maternal Orphans				
From non-AIDS causes	9,141	10,514	11,849	13,007
From AIDS causes	6,197	25,718	47,734	58,027
From all causes	15,338	36,232	59,583	71,034
Paternal Orphans				
From all causes	18,917	44,686	73,486	87,609
Double Orphans				
From all causes	16,872	39,855	65,541	78,137
Total Orphans (M, P, and D)				
Total orphans from all causes	51,127	120,773	198,610	236,780
Population				
Total population	1,959,009	2,223,724	2,508,226	2,829,821
Population < 15	882,668	967,780	1,058,998	1,172,759
Maternal orphans as a % of < 15 Pop	2	4	6	6
Paternal orphans as a % of < 15 Pop	2	5	7	7
Double orphans as a % of < 15 Pop	2	4	6	7
All orphans as a % of < 15 Pop	6	12	19	20

Northeast Region

Bauchi
Borno
Gombe
Jigawa
Kano
Yobe

**Estimated Number of Orphans for Bauchi State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Bauchi State</i>				
Maternal Orphans				
From non-AIDS causes	18,688	21,351	23,525	25,742
From AIDS causes	14,692	50,033	91,006	111,620
From all causes	33,380	71,384	114,531	137,362
Paternal Orphans				
Total paternal orphans	33,380	71,384	114,531	137,362
Double Orphans				
Total double orphans	12,716	27,194	43,631	52,328
Total Orphans (M, P, and D)				
Total orphans from all causes	79,476	169,962	272,693	327,052
Population				
Total population	3,699,085	4,206,331	4,749,990	5,373,454
Population < 15	1,655,744	1,840,267	2,031,784	2,260,410
Maternal orphans as a % of < 15 Pop	2	4	6	6
Paternal orphans as a % of < 15 Pop	2	4	6	6
Double orphans as a % of < 15 Pop	1	1	2	2
All orphans as a % of < 15 Pop	5	9	13	14

Estimated Number of Orphans for Borno State, 2000–2015

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Borno State</i>				
Maternal Orphans				
From non-AIDS causes	26,267	29,354	35,726	38,757
From AIDS causes	5,423	24,292	57,997	83,446
From all causes	31,690	53,646	93,723	122,203
Paternal Orphans				
Total paternal orphans	31,690	53,646	93,723	122,203
Double Orphans				
Total double orphans	12,072	20,437	35,704	46,554
Total Orphans (M, P, and D)				
Total orphans from all causes	75,452	127,729	223,150	290,960
Population				
Total population	3,314,128	3,776,062	4,270,538	4,841,370
Population < 15	1,481,831	1,685,817	1,836,761	2,052,468
Maternal orphans as a % of < 15 Pop	2	3	5	6
Paternal orphans as a % of < 15 Pop	2	3	5	6
Double orphans as a % of < 15 Pop	1	1	2	2
All orphans as a % of < 15 Pop	5	8	12	14

**Estimated Number of Orphans for Gombe State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Gombe State</i>				
Maternal Orphans				
From non-AIDS causes	9,722	11,108	12,240	13,393
From AIDS causes	11,910	45,302	74,525	83,445
From all causes	21,632	56,410	86,765	96,838
Paternal Orphans				
Total paternal orphans	21,632	56,410	86,765	96,838
Double Orphans				
Total double orphans	8,241	21,490	33,053	36,891
Total Orphans (M, P, and D)				
Total orphans from all causes	51,505	134,310	206,583	230,567
Population				
Total population	1,914,705	2,149,088	2,398,361	2,693,621
Population < 15	855,042	937,373	1,019,411	1,125,257
Maternal orphans as a % of < 15 Pop	3	6	9	9
Paternal orphans as a % of < 15 Pop	3	6	9	9
Double orphans as a % of < 15 Pop	1	2	3	3
All orphans as a % of < 15 Pop	6	14	20	20

**Estimated Number of Orphans for Jigawa State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Jigawa State</i>				
Maternal Orphans				
From non-AIDS causes	21,541	24,158	26,342	29,027
From AIDS causes	3,449	15,293	30,061	37,039
From all causes	24,990	39,451	56,403	66,066
Paternal Orphans				
Total paternal orphans	24,990	39,451	56,403	66,066
Double Orphans				
Total double orphans	9,520	15,029	21,487	25,168
Total Orphans (M, P, & D)				
Total orphans from all causes	59,500	93,931	134,293	157,300
Population				
Total population	3,804,434	4,341,264	4,933,317	5,635,558
Population < 15	1,721,925	1,973,124	2,118,592	2,360,727
Maternal orphans as a % of < 15 Pop	1	2	3	3
Paternal orphans as a % of < 15 Pop	1	2	3	3
Double orphans as a % of < 15 Pop	1	1	1	1
All orphans as a % of < 15 Pop	3	5	6	7

**Estimated Number of Orphans for Kano State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Kano State</i>				
Maternal Orphans				
From non-AIDS causes	53,687	59,978	65,600	71,357
From AIDS causes	16,998	76,700	167,641	226,264
From all causes	70,685	136,678	233,241	297,621
Paternal Orphans				
Total paternal orphans	70,685	136,678	233,241	297,621
Double Orphans				
Total double orphans	26,928	52,068	88,854	113,379
Total Orphans (M, P, and D)				
Total orphans from all causes	168,298	325,424	555,336	708,621
Population				
Total population	7,576,038	8,600,863	9,681,043	10,926,536
Population < 15	3,393,249	3,825,132	4,144,219	4,593,302
Maternal orphans as a % of < 15 Pop	2	4	6	6
Paternal orphans as a % of < 15 Pop	2	4	6	6
Double orphans as a % of < 15 Pop	1	1	2	2
All orphans as a % of < 15 Pop	5	9	13	15

**Estimated Number of Orphans for Yobe State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Yobe State</i>				
Maternal Orphans				
From non-AIDS causes	7,531	8,614	9,363	10,254
From AIDS causes	5,843	16,711	26,706	32,752
From all causes	13,374	25,325	36,069	43,006
Paternal Orphans				
Total paternal orphans	13,374	25,325	36,069	43,006
Double Orphans				
Total double orphans	5,095	9,648	13,741	16,383
Total Orphans (M, P, & D)				
Total orphans from all causes	31,843	60,298	85,879	102,395
Population				
Total population	1,817,027	2,076,266	2,369,797	2,710,159
Population < 15	797,679	895,202	996,524	1,130,713
Maternal orphans as a % of < 15 Pop	2	3	4	4
Paternal orphans as a % of < 15 Pop	2	3	4	4
Double orphans as a % of < 15 Pop	1	1	1	1
All orphans as a % of < 15 Pop	4	7	9	9

Northwest Region

Kaduna
Katsina
Kebbi
Sokoto
Zamfara

**Estimated Number of Orphans for Kaduna State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Kaduna State</i>				
Maternal Orphans				
From non-AIDS causes	26,706	29,873	32,779	35,185
From AIDS causes	15,342	64,949	129,507	166,447
From all causes	42,048	94,822	162,286	201,632
Paternal Orphans				
Total paternal orphans	36,161	81,547	139,566	173,404
Double Orphans				
Total double orphans	5,887	13,275	22,720	28,228
Total Orphans (M, P, and D)				
Total orphans from all causes	84,096	189,644	324,572	403,264
Population				
Total population	5,090,351	5,793,575	6,527,622	7,348,247
Population < 15	2,230,756	2,502,507	2,765,339	3,053,723
Maternal orphans as a % of < 15 Pop	2	4	6	7
Paternal orphans as a % of < 15 Pop	2	3	5	6
Double orphans as a % of < 15 Pop	0	1	1	1
All orphans as a % of < 15 Pop	4	8	12	13

**Estimated Number of Orphans for Katsina State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Katsina State</i>				
Maternal Orphans				
From non-AIDS causes	22,998	26,623	29,046	31,460
From AIDS causes	8,119	31,652	57,097	71,145
From all causes	31,117	58,275	86,143	102,605
Paternal Orphans				
Total paternal orphans	26,761	50,117	74,083	88,240
Double Orphans				
Total double orphans	4,356	8,159	12,060	14,365
Total Orphans (M, P, and D)				
Total orphans from all causes	62,234	116,550	172,286	205,210
Population				
Total population	4,872,514	5,577,076	6,372,944	7,282,996
Population < 15	2,213,940	2,422,641	2,701,096	3,052,823
Maternal orphans as a % of < 15 Pop	1	2	3	3
Paternal orphans as a % of < 15 Pop	1	2	3	3
Double orphans as a % of < 15 Pop	0	0	0	0
All orphans as a % of < 15 Pop	3	5	6	7

**Estimated Number of Orphans for Kebbi State,
2000–2015**

	2000	2005	2010	2015
<i>Kebbi State</i>				
Maternal Orphans				
From non-AIDS causes	13,559	15,812	17,620	19,109
From AIDS causes	3,214	12,355	21,080	24,973
From all causes	16,773	28,167	38,700	44,082
Paternal Orphans				
Total paternal orphans	14,425	24,224	33,282	37,911
Double Orphans				
Total double orphans	2,348	3,943	5,418	6,171
Total Orphans (M, P, and D)				
Total orphans from all causes	33,546	56,334	77,400	88,164
Population				
Total population	1,334,431	1,521,558	1,735,281	1,984,629
Population < 15	617,428	672,841	749,336	851,001
Maternal orphans as a % of < 15 Pop	3	4	5	5
Paternal orphans as a % of < 15 Pop	2	4	4	4
Double orphans as a % of < 15 Pop	0	1	1	1
All orphans as a % of < 15 Pop	5	8	10	10

**Estimated Number of Orphans for Sokoto State,
2000–2015**

	2000	2005	2010	2015
<i>Sokoto State</i>				
Maternal Orphans				
From non-AIDS causes	76,502	86,638	96,805	105,634
From AIDS causes	12,606	40,341	57,709	67,570
From all causes	89,108	126,979	154,514	173,204
Paternal Orphans				
Total paternal orphans	76,632.9	109,202	132,882	148,955
Double Orphans				
Total double orphans	12,475	17,777	21,632	24,249
Total Orphans (M, P, and D)				
Total orphans from all causes	178,216	253,958	309,028	346,408
Population				
Total population	5,858,845	6,680,997	7,622,839	8,727,477
Population < 15	2,743,622	3,024,522	3,309,087	3,732,471
Maternal orphans as a % of < 15 Pop	3	4	5	5
Paternal orphans as a % of < 15 Pop	3	4	4	4
Double orphans as a % of < 15 Pop	0	1	1	1
All orphans as a % of < 15 Pop	6	8	9	9

**Estimated Number of Orphans for Zamfara State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Zamfara State</i>				
Maternal Orphans				
From non-AIDS causes	13,572	15,828	17,637	19,126
From AIDS causes	4,236	12,488	17,564	20,832
From all causes	17,808	28,316	35,201	39,958
Paternal Orphans				
Total paternal orphans	15,315	24,352	30,273	34,364
Double Orphans				
Total double orphans	2,493	3,964	4,928	5,594
Total Orphans (M, P, and D)				
Total orphans from all causes	35,616	56,632	70,402	79,916
Population				
Total population	1,335,741	1,524,516	1,744,613	1,999,032
Population < 15	618,090	674,445	753,745	858,622
Maternal orphans as a % of < 15 Pop	3	4	5	5
Paternal orphans as a % of < 15 Pop	2	4	4	4
Double orphans as a % of < 15 Pop	0	1	1	1
All orphans as a % of < 15 Pop	6	8	9	9

Southeast Region

Abia
Akwa Ibom
Anambra
Bayelsa
Cross River
Ebonyi
Enugu
Imo
Rivers

**Estimated Number of Orphans for Abia State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Abia State</i>				
Maternal Orphans				
From non-AIDS causes	13,628	14,970	16,540	18,469
From AIDS causes	5,875	22,550	36,508	43,077
From all causes	19,503	37,520	53,048	61,546
Paternal Orphans				
Total paternal orphans	53,633	103,180	145,882	169,252
Double Orphans				
Total double orphans	8,126	15,633	22,103	25,644
Total Orphans (M, P, and D)				
Total orphans from all causes	81,262.5	156,333	221,033	256,442
Population				
Total population	3,030,600	3,492,800	3,994,700	4,555,400
Population < 15	1,267,800	1,534,400	1,732,100	1,921,800
Maternal orphans as a % of < 15 Pop	2	2	3	3
Paternal orphans as a % of < 15 Pop	4	7	8	9
Double orphans as a % of < 15 Pop	1	1	1	1
All orphans as a % of < 15 Pop	6	10	13	13

**Estimated Number of Orphans for Akwa Ibom State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Akwa Ibom State</i>				
Maternal Orphans				
From non-AIDS causes	6,531	7,399	8,175	9,032
From AIDS causes	11,328	46,989	91,017	112,152
From all causes	17,859	54,388	99,192	121,184
Paternal Orphans				
Total paternal orphans	49,112	149,567	272,778	333,256
Double Orphans				
Total double orphans	7,441	22,662	41,330	50,493
Total Orphans (M, P, and D)				
Total orphans from all causes	74,413	226,617	413,300	50,4933
Population				
Total population	3,081,965	3,509,692	3,955,099	4,445,802
Population < 15	1,273,944	1,423,741	1,611,924	1,789,296
Maternal orphans as a % of < 15 Pop	1	4	6	7
Paternal orphans as a % of < 15 Pop	4	11	17	19
Double orphans as a % of < 15 Pop	1	2	3	3
All orphans as a % of < 15 Pop	6	16	26	28

**Estimated Number of Orphans for Anambra State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Anambra State</i>				
Maternal Orphans				
From non-AIDS causes	9,120	10,263	11,752	13,327
From AIDS causes	12,862	51,014	84,837	97,610
From all causes	21,982	61,277	96,589	110,937
Paternal Orphans				
Total paternal orphans	60,451	168,512	265,620	305,077
Double Orphans				
Total double orphans	9,159	25,532	40,245	46,224
Total Orphans (M, P, and D)				
Total orphans from all causes	91,592	255,321	402,454	462,238
Population				
Total population	3,669,440	4,176,123	4,684,194	5,235,231
Population < 15	1,495,646	1,793,602	1,943,690	2,071,941
Maternal orphans as a % of < 15 Pop	1	3	5	5
Paternal orphans as a % of < 15 Pop	4	9	14	15
Double orphans as a % of < 15 Pop	1	1	2	2
All orphans as a % of < 15 Pop	6	14	21	22

**Estimated Number of Orphans for Bayelsa State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Bayelsa State</i>				
Maternal Orphans				
From non-AIDS causes	3,995	4,385	4,814	5,268
From AIDS causes	6,293	23,450	35,621	38,250
From all causes	10,288	27,835	40,435	43,518
Paternal Orphans				
Total paternal orphans	28,292	76,546	111,196	119,675
Double Orphans				
Total double orphans	4,287	11,598	16,848	18,133
Total Orphans (M, P, and D)				
Total orphans from all causes	42,867	115,979	168,479	181,325
Population				
Total population	1,462,523	1,661,659	1,868,162	2,096,814
Population < 15	584,622	699,461	765,299	825,961
Maternal orphans as a % of < 15 Pop	2	4	5	5
Paternal orphans as a % of < 15 Pop	5	11	15	14
Double orphans as a % of < 15 Pop	1	2	2	2
All orphans as a % of < 15 Pop	7	17	22	22

**Estimated Number of Orphans for Cross River State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Cross River State</i>				
Maternal Orphans				
From non-AIDS causes	6,772	7,670	8,490	9,268
From AIDS causes	8,988	36,539	67,761	82,198
From all causes	15,760	44,209	76,251	91,466
Paternal Orphans				
Total paternal orphans	43,340	121,575	209,690	251,532
Double Orphans				
Total double orphans	6,567	18,420	31,771	38,111
Total Orphans (M, P, and D)				
Total orphans from all causes	65,667	184,204	317,713	381,108
Population				
Total population	2,454,176	2,792,044	3,141,821	3,526,104
Population < 15	1,020,809	1,161,640	1,299,226	1,427,167
Maternal orphans as a % of < 15 Pop	2	4	6	6
Paternal orphans as a % of < 15 Pop	4	10	16	18
Double orphans as a % of < 15 Pop	1	2	2	3
All orphans as a % of < 15 Pop	6	16	24	27

**Estimated Number of Orphans for Ebonyi State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Ebonyi State</i>				
Maternal Orphans				
From non-AIDS causes	7,106	7,837	8,523	5,498
From AIDS causes	6,892	24,037	40,350	50,255
From all causes	13,998	31,874	48,873	55,753
Paternal Orphans				
Total paternal orphans	38,494.5	87,653.5	134,401	153,321
Double Orphans				
Total double orphans	5,833	13,281	20,364	23,230
Total Orphans (M, P, and D)				
Total orphans from all causes	58,325	132,808	203,638	232,304
Population				
Total population	1,641,612	1,870,253	2,116,276	2,387,967
Population < 15	701,005	798,749	895,381	992,841
Maternal orphans as a % of < 15 Pop	2	4	5	6
Paternal orphans as a % of < 15 Pop	5	11	15	15
Double orphans as a % of < 15 Pop	1	2	2	2
All orphans as a % of < 15 Pop	8	17	23	23

**Estimated Number of Orphans for Enugu State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Enugu State</i>				
Maternal Orphans				
From non-AIDS causes	10,385	11,457	12,459	8,036
From AIDS causes	8,019	32,643	58,801	71,476
From all causes	18,404	18,404	18,404	18,404
Paternal Orphans				
Total paternal orphans	50,611	50,611	50,611	50,611
Double Orphans				
Total double orphans	7,668	7,668	7,668	7,668
Total Orphans (M, P, and D)				
Total orphans from all causes	76,683	76,683	76,683	76,683
Population				
Total population	2,403,594	2,740,287	3,100,318	3,501,918
Population < 15	1,026,780	1,170,640	1,312,640	1,455,873
Maternal orphans as a % of < 15 Pop	2	2	1	1
Paternal orphans as a % of < 15 Pop	5	4	4	3
Double orphans as a % of < 15 Pop	1	1	1	1
All orphans as a % of < 15 Pop	7	7	6	5

**Estimated Number of Orphans for Imo State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Imo State</i>				
Maternal Orphans				
From non-AIDS causes	8,830	9,217	10,731	12,338
From AIDS causes	5,686	27,891	67,767	99,284
From all causes	14,516	37,108	78,498	111,622
Paternal Orphans				
Total paternal orphans	39,919	102,047	215,870	306,961
Double Orphans				
Total double orphans	6,048	15,462	32,708	46,509
Total Orphans (M, P, and D)				
Total orphans from all causes	60,483	154,617	327,075	465,092
Population				
Total population	3,248,732	3,728,370	4,204,447	4,712,831
Population < 15	1,371,868	1,678,542	1,843,865	1,987,269
Maternal orphans as a % of < 15 Pop	1	2	4	6
Paternal orphans as a % of < 15 Pop	3	6	12	15
Double orphans as a % of < 15 Pop	0	1	2	2
All orphans as a % of < 15 Pop	4	9	18	23

**Estimated Number of Orphans for Rivers State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Rivers State</i>				
Maternal Orphans				
From non-AIDS causes	11,369	12,481	13,700	14,991
From AIDS causes	15,303	60,836	105,716	121,507
From all causes	26,672	73,317	119,416	136,498
Paternal Orphans				
Total paternal orphans	73,348	201,622	328,394	375,370
Double Orphans				
Total double orphans	11,113	30,549	49,757	56,874
Total Orphans (M, P, and D)				
Total orphans from all causes	111,133	305,488	497,567	568,742
Population				
Total population	4,168,070	4,740,967	5,314,113	5,943,442
Population < 15	1,667,190	1,995,280	2,177,425	2,337,437
Maternal orphans as a % of < 15 Pop	2	4	5	6
Paternal orphans as a % of < 15 Pop	4	10	15	16
Double orphans as a % of < 15 Pop	1	2	2	2
All orphans as a % of < 15 Pop	7	15	23	24

Southwest Region

Delta
Edo
Ekiti
Lagos
Ogun
Ondo
Osun
Oyo

**Estimated Number of Orphans for Delta State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Delta State</i>				
Maternal Orphans				
From non-AIDS causes	13,976	15,463	17,326	19,546
From AIDS causes	10,162	46,652	92,596	112,112
From all causes	24,138	62,115	109,922	131,658
Paternal Orphans				
Total paternal orphans	36,878	94,898	167,936	201,144
Double Orphans				
Total double orphans	6,035	15,529	27,481	32,915
Total Orphans (M, P, and D)				
Total orphans from all causes	67,050	172,542	305,339	365,717
Population				
Total population	3,340,161	3,808,530	4,278,023	4,796,464
Population < 15	1,368,574	1,642,123	1,819,372	1,972,877
Maternal orphans as a % of < 15 Pop	2	4	6	7
Paternal orphans as a % of < 15 Pop	3	6	9	10
Double orphans as a % of < 15 Pop	0	1	2	2
All orphans as a % of < 15 Pop	5	11	17	19

**Estimated Number of Orphans for Edo State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Edo State</i>				
Maternal Orphans				
From non-AIDS causes	11,663	13,070	14,883	11,577
From AIDS causes	5,202	24,265	52,319	69,340
From all causes	16,865	37,335	67,202	80,917
Paternal Orphans				
Total paternal orphans	25,766	57,040	102,670	123,623
Double Orphans				
Total double orphans	4,216	9,334	16,801	20,229
Total Orphans (M, P, and D)				
Total orphans from all causes	46,847.2	103,708	186,672	224,769
Population				
Total population	2,816,193	3,237,485	3,665,124	4,122,024
Population < 15	1,151,605	1,387,874	1,552,236	1,688,216
Maternal orphans as a % of < 15 Pop	1	3	4	5
Paternal orphans as a % of < 15 Pop	2	4	7	7
Double orphans as a % of < 15 Pop	0	1	1	1
All orphans as a % of < 15 Pop	4	7	12	13

**Estimated Number of Orphans for Ekiti State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Ekiti State</i>				
Maternal Orphans				
From non-AIDS causes	7,113	4,866	6,076	6,887
From AIDS causes	2,159	10,142	20,872	26,597
From all causes	9,272	15,008	26,948	33,484
Paternal Orphans				
Total paternal orphans	14,166	22,929	41,171	51,156
Double Orphans				
Total double orphans	2,318	3,752	6,737	8,371
Total Orphans (M, P, and D)				
Total orphans from all causes	25,756	41,689	74,856	93,011
Population				
Total population	2011087	2315693	2637124	2992857
Population < 15	818215	988824	1099313	1208646
Maternal orphans as a % of < 15 Pop	1	2	2	3
Paternal orphans as a % of < 15 Pop	2	2	4	4
Double orphans as a % of < 15 Pop	0	0	1	1
All orphans as a % of < 15 Pop	3	4	7	8

**Estimated Number of Orphans for Lagos State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Lagos State</i>				
Maternal Orphans				
From non-AIDS causes	44,787	48,540	36,888	39,150
From AIDS causes	6,982	31,284	81,647	141,027
From all causes	51,769	79,824	118,535	180,177
Paternal Orphans				
Total paternal orphans	79,092	121,953	181,095	275,270
Double Orphans				
Total double orphans	12,942	19,956	29,634	45,044
Total Orphans (M, P, and D)				
Total orphans from all causes	143,803	221,733	329,264	500,492
Population				
Total population	7,657,194	8,784,895	9,901,850	11,066,327
Population < 15	3,130,895	3,772,833	4,052,582	4,329,636
Maternal orphans as a % of < 15 Pop	2	2	3	4
Paternal orphans as a % of < 15 Pop	3	3	4	6
Double orphans as a % of < 15 Pop	0	1	1	1
All orphans as a % of < 15 Pop	5	6	8	12

**Estimated Number of Orphans for Ogun State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Ogun State</i>				
Maternal Orphans				
From non-AIDS causes	13,726	15,094	16,870	18,578
From AIDS causes	4,584	20,867	44,681	61,857
From all causes	18,310	35,961	61,551	80,435
Paternal Orphans				
Total paternal orphans	27,974	54,940	94,036	122,887
Double Orphans				
Total double orphans	4,578	8,990	15,388	20,109
Total Orphans (M, P, and D)				
Total orphans from all causes	50,861	99,892	170,975	223,431
Population				
Total population	3,024,460	3,470,714	3,948,313	4,486,371
Population < 15	1,268,229	1,517,495	1,688,509	1,872,537
Maternal orphans as a % of < 15 Pop	1	2	4	4
Paternal orphans as a % of < 15 Pop	2	4	6	7
Double orphans as a % of < 15 Pop	0	1	1	1
All orphans as a % of < 15 Pop	4	7	10	12

**Estimated Number of Orphans for Ondo State,
2000–2015**

	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>
<i>Ondo State</i>				
Maternal Orphans				
From non-AIDS causes	10,479	7,209	8,960	10,155
From AIDS causes	6,940	32,301	65,485	80,781
From all causes	17,419	39,510	74,445	90,936
Paternal Orphans				
Total paternal orphans	26,612	60,363	113,735	138,930
Double Orphans				
Total double orphans	4,355	9,878	18,611	22,734
Total Orphans (M, P, and D)				
Total orphans from all causes	48,386	109,750	206,792	252,600
Population				
Total population	2,936,640	3,352,485	3,772,540	4,238,548
Population < 15	1,192,775	1,427,842	1,565,196	1,699,299
Maternal orphans as a % of < 15 Pop	1	3	5	5
Paternal orphans as a % of < 15 Pop	2	4	7	8
Double orphans as a % of < 15 Pop	0	1	1	1
All orphans as a % of < 15 Pop	4	8	13	15

**Estimated Number of Orphans for Osun State,
2000–2015**

	2000	2005	2010	2015
<i>Osun State</i>				
Maternal Orphans				
From non-AIDS causes	9,124	10,085	11,602	13,369
From AIDS causes	6,682	25,553	41,475	48,590
From all causes	15,806	35,638	53,077	61,959
Paternal Orphans				
Total paternal orphans	24,148	54,447	81,090	94,660
Double Orphans				
Total double orphans	3,952	8,910	13,269	15,490
Total Orphans (M, P, and D)				
Total orphans from all causes	43,906	98,994	147,436	172,108
Population				
Total population	2,788,971	3,201,392	3,644,444	4,139,447
Population < 15	1,147,034	1,411,829	1,578,981	1,740,225
Maternal orphans as a % of < 15 Pop	1	3	3	4
Paternal orphans as a % of < 15 Pop	2	4	5	5
Double orphans as a % of < 15 Pop	0	1	1	1
All orphans as a % of < 15 Pop	4	7	9	10

**Estimated Number of Orphans for Oyo State,
2000–2015**

	2000	2005	2010	2015
<i>Oyo State</i>				
Maternal Orphans				
From non-AIDS causes	17,807	19,199	21,344	23,651
From AIDS causes	10,763	39,515	62,531	73,254
From all causes	28,570	58,714	83,875	96,905
Paternal Orphans				
Total paternal orphans	43,649	89,702	128,142	148,049
Double Orphans				
Total double orphans	7,143	14,679	20,969	24,226
Total Orphans (M, P, and D)				
Total orphans from all causes	79,361	163,094	232,986	269,181
Population				
Total population	4,497,819	5,149,823	5,845,486	6,621,769
Population < 15	1,827,660	2,223,700	2,455,808	2,693,111
Maternal orphans as a % of < 15 Pop	2	3	3	4
Paternal orphans as a % of < 15 Pop	2	4	5	5
Double orphans as a % of < 15 Pop	0	1	1	1
All orphans as a % of < 15 Pop	4	7	9	10

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