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# Family Planning and Reproductive Health in Urban Nigeria: Levels, Trends and Differentials

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January 2011

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This report presents the findings from an analysis of the urban samples of the 1990, 1999, 2003 and 2008 Nigeria Demographic and Health Surveys (DHS). It was designed and written by the Measurement, Learning & Evaluation (MLE) Project of the Urban Reproductive Health Initiative, in collaboration with the Nigeria National Population Commission (NPC). The MLE project is being implemented in Nigeria by the Carolina Population Center (CPC) at the University of North Carolina at Chapel Hill (UNC) and the African Population and Health Research Center (APHRC). The Nigeria Urban Reproductive Health Initiative (NURHI) is being implemented by a consortium led by Johns Hopkins University's Center for Communication Programs (CCP). The opinions expressed in this report are those of the authors and do not necessarily reflect the views of the donor organization, the Bill & Melinda Gates Foundation.

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Information about the Nigeria's National Population Commission may be found at [www.population.gov.ng](http://www.population.gov.ng)

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## **Preface**

This report is based on a periodic Demographic and Health Survey (DHS) series, which started in Nigeria at the national level in 1990. Three of the four surveys used in this report were conducted by the National Population Commission (NPC), in fulfillment of one of its mandates. Accordingly, the NPC has been and will continue to be involved in conducting many household surveys aimed at providing necessary and timely data for researchers and other stakeholders to assist in policy formulation and coordination of population activities in Nigeria.

This report, which is titled Family Planning and Reproductive Health in Urban Nigeria: Levels, Trends and Differentials, is part of the baseline information needed for the Nigeria Urban Reproductive Health Initiative (NURHI), which was designed to achieve a 20 percentage point increase in modern contraceptive prevalence rate in selected urban areas during its five-year period of implementation. During this period, the Measurement, Learning & Evaluation (MLE) Project is expected to identify which interventions of NURHI are most effective and have the biggest impact. The production of this report from results of the Nigerian DHS series is an eloquent testimony to the richness of data from these surveys.

On behalf of NPC, I gratefully acknowledge the dedication and outstanding performance of the NPC team in writing the report. The leadership role of MLE (NURHI) in the design and publication of the report is sincerely applauded. The NPC is pleased to collaborate with the African Population and Health Research Center (APHRC) and the Carolina Population Center.



**Chief Samu'ila Danko Makama, CON  
Chairman,  
National Population Commission**

## Foreword

As part of its objective to expand the knowledge base of and evidence on urban reproductive health programs, with special attention to making contributions and generating discussion on monitoring and evaluation of urban reproductive health programs, the Measurement, Learning & Evaluation (MLE) Project of the Urban Reproductive Health Initiative undertook a secondary analysis of the 1990, 1999, 2003 and 2008 Nigeria Demographic and Health Survey (DHS) data with the goal of describing levels, trends and differentials in key family planning and reproductive health indicators in urban Nigeria.

I am delighted to present the report, which was designed and written by the MLE project constituents, the African Population and Health Research Center (APHRC) and the Carolina Population Center (CPC) at the University of North Carolina at Chapel Hill (UNC), in collaboration with the Nigeria National Population Commission (NPC). I am particularly pleased that the report is a collaborative effort between the MLE project and the NPC for a number of reasons. First, NPC's mandate includes publishing and providing information and data on population (including the DHS data) for the purpose of facilitating development planning. Second, the NPC was tasked by the MLE project and the Nigeria Urban Health Reproductive Initiative (NURHI) to conduct the baseline household survey in the six cities targeted by NURHI's proposed interventions to increase the use of contraceptive by 20 percentage points over a period of five years. The collaboration between MLE, NURHI and NPC on the planning of the baseline data collection has been exemplary so far, and it is expected that this report will complement a baseline report to be produced in the first quarter of 2011.

Besides my co-authors, I would like to acknowledge the various individuals who contributed at different levels in the production of the report. Carol Mukiira, senior research assistant at APHRC, worked tirelessly on the report, reviewing previous drafts, ensuring that tables, graphs and references were appropriately listed, and following up with the design and printing of the report. Marilyn Wamukoya and Thaddaeus Egondi, data analysts at

APHRC, contributed greatly to the production of tables used in the report. At CPC-UNC, Janine Barden-O'Fallon thoroughly reviewed previous draft of the manuscript, ensuring consistency across the six chapters, and worked with Beverly Tucker on liaising with the designer and printer of the report. Beverly also dealt with the contractual issues with the NPC team. The report also benefited greatly from the dedication of, and advice from Sani Gar from NPC. He also availed NPC materials needed for the report (logo, Appendix E). I would also like to acknowledge the contribution from the NUHRI team. Dr. Bola Kusemiju reviewed the first version of the report and drafted Appendix C: About the Nigeria Urban Health Reproductive Initiative.

It is my sincere hope that this report will shed some light on the situation of family planning and reproductive health in urban Nigeria over the last two decades. Its findings are expected to complement the MLE-NURHI baseline report to be produced in the first quarter of 2011.

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### Map of Nigeria



Base 802143 (R00931) 5-93

**List of Abbreviations**

<b>AIDS</b>	acquired immunodeficiency syndrome	<b>NEPAD</b>	New Partnership for Africa's Development
<b>APHRC</b>	African Population and Health Research Center	<b>NGO</b>	nongovernmental organization
<b>ARFH</b>	Association for Reproductive and Family Health	<b>PCA</b>	principal component analysis
<b>CC</b>	country consortium	<b>PHC</b>	primary health care
<b>CCP</b>	Center for Communication Programs	<b>PoA</b>	program of action
<b>CCPN</b>	Center for Communication Programs Nigeria	<b>PPFN</b>	Planned Parenthood Federation of Nigeria
<b>CEB</b>	children ever born	<b>RH</b>	Reproductive Health
<b>CPC</b>	Carolina Population Center	<b>RHE</b>	reproductive health education
<b>CPR</b>	contraceptive prevalence rate	<b>RHS</b>	reproductive health services
<b>DHS</b>	Demographic Health Survey	<b>SAP</b>	structural adjustment programme
<b>EPI</b>	Expanded Programme on Immunization	<b>STI</b>	sexually transmitted infections
<b>FCT</b>	Federal Capital Territory	<b>TFR</b>	total fertility rate
<b>FMOH</b>	Federal Ministry of Health	<b>UN</b>	United Nations
<b>FP</b>	family planning	<b>UNC</b>	University of North Carolina at Chapel Hill
<b>GDP</b>	Gross Domestic Product	<b>UNDP</b>	United Nations Development Programme
<b>HIV</b>	human immunodeficiency virus	<b>UNFPA</b>	United Nations Population Fund
<b>ICPD</b>	International Conference on Population and Development	<b>UNICEF</b>	United Nations Children's Fund
<b>IMF</b>	International Monetary Fund	<b>URHI</b>	Urban Reproductive Health Initiative
<b>JSI</b>	John Snow, Inc.	<b>USAID</b>	U.S. Agency for International Development
<b>LGA</b>	local government areas	<b>WHO</b>	World Health Organization
<b>MDG</b>	Millennium Development Goals		
<b>MLE</b>	Measurement, Learning & Evaluation		
<b>MMR</b>	maternal mortality Rate		
<b>NDHS</b>	Nigeria Demographic Health Survey		
<b>NURHI</b>	Nigeria Urban Reproductive Health Initiative		
<b>NEEDS</b>	New Economic Empowerment and Development Strategy		

## Executive Summary

The 1990, 1999, 2003 and 2008 Demographic Health Surveys (DHS) were nationally representative surveys that were carried out in all the states of the Federal Republic of Nigeria. They were designed to provide information on fertility, family planning and maternal and child health and survival in the country. The 1990 DHS was conducted by the Federal Office of Statistics (now National Bureau of Statistics) while the remaining three surveys were conducted by the National Population Commission as part of the Worldwide Demographic and Health Surveys Programs coordinated by ICD/Macro International Inc.

### *Characteristics of Households and Respondents in Urban Nigeria*

The age structure of the urban population in the four surveys revealed broad-based population pyramids, reflecting a young population resulting from high fertility. Nigeria's population is growing at a fast rate and still has a lot of potential for further growth. Most of the households in urban Nigeria are headed by men. The proportion of households headed by females is higher in the South than in the North. More than a third of households have access to electricity. Over three quarters of households have access to radio. A majority of women in urban Nigeria had some education. There has been an increase in the proportion of women with secondary education or higher in urban Nigeria. The proportions of women and men with secondary or higher education in the South is higher than in the North in all four surveys. Listening to radio at least once a week is very common among women and men across all surveys. Radio listening habits are positively associated with level of education and household wealth. The proportion of women and men who are currently working is positively associated with age and has been on the increase over the years for both men and women. The proportion of women who participate in fertility and family planning decisions increases with greater level of education and household wealth, and this proportion is higher in the South than in the North.

## *Fertility and Fertility Preferences*

The results of the surveys have shown that fertility in urban Nigeria has remained at a high level over the last 18 years. There is, however, some evidence of a slight decline in overall levels of fertility. The decline is a sign of the possible start of the fertility transition from high fertility to low fertility. Fertility differentials by education and household wealth are noticeable. Teenage pregnancy and motherhood is still high in urban Nigeria. The mean ideal number of children desired by women and men in the four surveys indicate that large family size is still desirable in urban Nigeria. Men, on average, want more children than women.

### *Family Planning and Proximate Determinants of Fertility*

Knowledge about family planning is high in urban Nigeria. However, the proportions of respondents who ever used or are currently using modern contraceptives are much lower. Contraceptive prevalence only increased from 9.6 percent in 1990 to 16.7 percent in 2008 in urban Nigeria. The proportions of women and men who know, ever used and are currently using a contraceptive method are positively associated with the level of education and household wealth, and are higher in the South than in the North. Intention to use family planning among currently married women who are not currently using a family planning method is also relatively low. Initiation of contraception at lower parities is positively associated with level of education and increased household wealth. Southern region residents are more likely to initiate contraception at lower parities than their northern counterparts. The private sector has become the major source of supply of contraceptives. Women with secondary and higher education are more likely than those with no education to obtain contraceptives from a private sector source. The proportion of currently married women who intend to use contraception in the future has not shown significant change over the years. Women with no education and belonging to the poor household wealth category are more likely to report their unwillingness to use family planning in the future compared with women who are more educated and belong to rich households. Radio and television are the two most common sources of family planning

messages for both women and men in urban Nigeria. The proportion of women and men who heard, saw or read a family planning message on radio, television or newspaper is positively associated with the level of education and household wealth. The proportion of women who had spousal discourse on family planning is higher in the North than in the South, and positively associated with level of education and increased household wealth. Approval of family planning is higher in the South than in the North and positively associated with level of education and household wealth. The median age at first marriage in urban Nigeria has not changed significantly in the last 18 years; it has only increased from 18 to 19 years. It is higher among southern residents than their northern counterparts and positively associated with the level of education and increased household wealth. Men enter into their first union at later ages than women. As expected, sexual activity starts at earlier ages for women than for men. Women's age at first sex increases with increase in the level of education and household wealth.

### ***Maternal and Child Health and Survival***

More than half of births in the last five years before the surveys were delivered in health facilities. Delivery at health facility is higher in the South than in the North and positively associated with the level of education and household wealth. Immunization coverage is generally low in urban Nigeria. There has been, however, an increase in overall vaccination coverage in urban Nigeria, from less than a quarter in 1999 to over a third in 2008. The proportion of children under five who were reported to have had fever or diarrhea within two weeks prior to the surveys are generally lower in the South than in the North and negatively associated with the level of education and household wealth. The indices of child malnutrition show that malnutrition is higher in the North than in the South and negatively associated with the level of education and household wealth. The infant, child and under-five mortality in urban Nigeria are still high. These three indices of child mortality are generally higher in the North than in the South, and negatively associated with the level of education and household wealth.

## Chapter 1: Introduction

Nigeria became fully independent in October 1960 as a federation of three regions (Northern, Western and Eastern) under a constitution that provided for a parliamentary system of government. The Lagos area became the Federal Capital Territory (FCT), but the FCT was changed to Abuja on December 12, 1991. On October 1, 1963, Nigeria became a republic with different administrative structures, social groups and distinct cultural traits. There are about 374 identifiable ethnic groups with Hausa, Igbo and Yoruba as major groups. The country is bordered by Niger in the North, Chad in the Northwest, Cameroon in the East and Benin in the West. In the South, it is bordered by about 850 kilometers of the Atlantic Ocean, stretching from Badagry in the West to Rio del Rey in the East. The land area of Nigeria is 923,768 square kilometers and it is the fourteenth largest country in Africa (National Population Commission, 2009).

The country has three tiers of government: federal, state and local. At present Nigeria is made up of 36 states and the FCT grouped into six geo-political zones: North West, North Central, North East, South West, South East and South South. There are also 774 constitutionally recognized local government areas (LGAs) in the country. Each state is headed by an executive governor while the FCT is administered by a cabinet minister. Each local government is administered by an executive chairman.

This introduction chapter begins with an overview of Nigeria in terms of economy, population and urbanization, family planning and reproductive health policies, followed by a summary of the Bill & Melinda Gates Foundation's reproductive health strategy, the Nigeria Urban Reproductive Health Initiative (NURHI), and the Measurement, Learning & Evaluation (MLE) project for the URHI. It concludes with a description of the data and methods used in the analysis, and a presentation of the objectives and organization of the report.

### 1.1. Economy

Prior to the 1970s, Nigeria depended mainly on agriculture for her domestic and foreign exchange earnings. Foreign earnings were derived from the export of cash crops such as cocoa, rubber, cotton,

groundnuts and palm products. With the discovery of petroleum in the late 1960s and large scale exploration in the early 1970s, petroleum became the major revenue earner for Nigeria. The high price of oil in the world market coupled with large scale production of petroleum in the early 70s contributed immensely to the growth of the economy. The country witnessed a rapid increase in the number of educational institutions, health facilities and several social amenities such as roads, electricity and piped water. There were also wage increases in the non-agricultural sector.

This oil boom made many people abandon their farms in a quest for higher incomes in urban centers. As a result, the country witnessed a sharp rise in food prices and a decline in the revenue from the agricultural sector, and many factories had to depend on the importation of previously locally produced raw materials.

Over the years, the dominant role of agriculture in the economy, especially as a foreign exchange earner, continued to wane at the benefit of petroleum exports. Oil product accounted for more than two thirds of the gross domestic product (GDP) and more than 80 percent of the total government revenue (Federal Republic of Nigeria, 2008). By the early 1980s, the country started experiencing a downturn in the economy due partly to the dwindling oil revenue. The standard of living of the population worsened as prices of goods and services became unaffordable. There was deterioration in the quality of services of educational and health institutions as essential facilities became lacking. The situation eventually led to the adoption of the structural adjustment programme (SAP) in 1986. Indeed, Table 1.1 (which describes the levels and trends in selected economic indicators over the last past three decades) shows an average of 6.5 percent decline in GDP per capita during the five-year period 1980-1984. In the 1980s the country's electric power consumption was glaringly low compared to sub-Saharan Africa or to other countries with comparable level of development. On average it stood at around 81 Kwh per capita and per year, compared to nearly 500 Kwh for sub-Saharan Africa as a whole, and far behind countries like Ghana (275 Kwh), Cameroon (196 Kwh), Cote d'Ivoire (158 Kwh), and Kenya (112 Kwh).

**Table 1.1:** Selected Economic Indicators, Nigeria and Sub-Saharan Africa

		1980-84	1985-89	1990-94	1995-99	2000-04	2005-09
Electric power consumption per capita (kWh) <sup>1</sup>	Nigeria	71.0	90.6	92.7	81.2	93.7	121.5
	SSA <sup>2</sup>	480.4	519.9	499.4	502.0	511.2	538.2
GDP per capita at constant 2000 U.S. dollars <sup>3</sup>	Nigeria	364.6	333.6	372.4	364.4	385.1	463.0
	SSA <sup>2</sup>	572.1	539.2	507.7	503.6	524.6	595.4
GDP per capita growth (%) <sup>4</sup>	Nigeria	-6.5	2.7	0.7	-0.3	3.5	3.4
	SSA <sup>2</sup>	-1.2	-0.3	-2.1	0.7	1.6	3.3

<sup>1</sup>Five-year average; the last column corresponds to 2005-2006.

<sup>2</sup>Sub-Saharan Africa

<sup>3</sup>Gross domestic product per capita, five-year average; the last column corresponds to 2005-2008.

<sup>4</sup>Average of the annual growth rates; the last column corresponds to 2005-2008.

Source: World Development Indicators; available online at <http://data.worldbank.org/data-catalog/world-development-indicators/>.

Following the signing of an International Monetary Fund (IMF) stand-by agreement in 2000, Nigeria received a debt-restructuring deal from the Paris Club and a credit from IMF, both contingent on economic reforms. Nigeria pulled out of its IMF program in April 2002 after failing to meet spending and exchange rate targets, making it ineligible for additional debt forgiveness from the Paris Club. However, since 2008, the government has begun to show political will to implement the market-oriented reforms urged by the IMF, such as modernizing the banking system, curbing inflation by blocking excessive wage demands, and resolving regional disputes over the distribution of earnings from the oil industry.

The successive governments of Nigeria have pledged to continue the economic reforms with emphasis on infrastructure improvements. A number of policies have been put in place to liberalize, deregulate and privatize key sectors of the economy such as electric power supply, telecommunication and downstream sector of the petroleum industry. While it is rather early to determine the impact of these policies, it is believed that economic policy reforms, combined with investment in human capital and physical infrastructure, as well as the establishment of macroeconomic stability and good governance, are essential to achieving a high rate of self-sustaining, long term economic growth. Based largely on increased oil exports and high global crude prices, GDP rose strongly in 2007 and 2008,

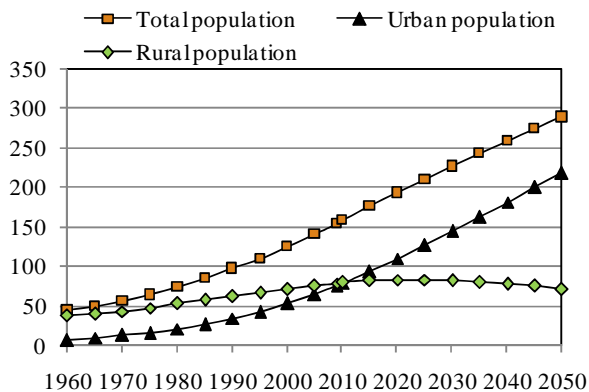
and less strongly in 2009. However, more than two thirds of employed women still work in the informal sector and, according to international measure, 83.9 percent of the Nigerian population lives on less than U.S. \$2 a day (UN, 2009).

## 1.2. Population and Urbanization

Nigeria is the most populous country in Africa at 140 million people as of 2006. With a growth rate of about 3 percent per annum, the population doubling time is less than 25 years. The phenomenal rise in population, number and size of our cities over the past few years has manifested in the acute shortage of dwelling units, resulting in overcrowding, high rents, poor urban living conditions and low infrastructure services.

Using population estimates and projections from the United Nations Population Division (available at <http://esa.un.org/wup2009/unup/index.asp?panel=1>) figure 1.1 illustrates the trends in Nigeria's urban, rural and total population over the period 1960-2050. As can be seen, the year 2010 will witness an unprecedented phenomenon, namely: a reversal in spatial population distribution whereby urban dwellers will account for almost 50 percent of the population of the country. The proportion of Nigerians living in cities rose from about 16 percent to more than 35 percent between 1960 and 1990; and it is projected that by 2050 more than three Nigerians out of four will be living in an urban area.

In absolute terms, Nigeria's urban population increased almost three-fold between 1960 and 1980, from 7.3 million to 21.3 million, and almost quadrupled between 1980 and 2010 to reach nearly 79 million. If the UN projections materialize, the urban population will reach 218 million in 2050.



**Figure 1.1: Nigeria's urban, rural and total population estimates and projections.**

Of the nearly 50 percent share of the Nigeria's urban population in 2010, it is estimated that about 66 percent live in slums (Population Reference Bureau, 2010). Several factors have been identified as contributing to the pattern of urban growth in the region, including low initial levels of urbanization, movement from the countryside to cities of relatively modest size and high rates of overall natural increase in the city (Montgomery, Stren, Cohen & Reed, 2003). In Nigeria specifically, rural-urban migration is led by young, male labor migrants moving into the cities (Olotuah & Adesiji, 2005).

The number of urban centres in Nigeria rose drastically in the last 100 years. This has resulted in the formation of more urban centres, which are densely populated (Olotuah & Adesiji, 2005). Studies have shown that the rapid rate of urbanisation in Nigeria and the consequential explosion of urban population have not been matched by a corresponding commensurate change in social, economic and technological development (Mabogunje, Hardoy & Misra, 1978). The economy of the country has been described as largely stagnant and the growth of industrialization negligible (Salau, 1992). The provision of public infrastructure and social services has been neglected, and the process of urban planning and zoning has been slow or

stagnant in many cases. Consequently, a large proportion of urban dwellers live in poor housing and environmental conditions. For example, a sizeable proportion of the population does not have reasonable access to safe water supply or the means for hygienic waste disposal (Kalbermatten, 1982). It is also argued by Olotuah (2002) that the demand for urban services in Nigeria has grown over the years, but the overall quality and coverage of public services have deteriorated.

The quality of the environment in most urban centers in Nigeria is deplorable, not only because of the material characteristics of the buildings, but also because of the spatial organization (Mabogunje, 1980). The slow process of urban planning and zoning, in the face of rapid urbanization in most cities, has given rise to poor layout of buildings with inadequate roads between them and inadequate drainage and provision for refuse disposal. Consequently, there is a high incidence of pollution (water, solid waste, air and noise) and inadequate open spaces for other land uses. These have resulted from rapid urbanization and have contributed to urban poverty in the country (Olotuah & Adesiji, 2005).

### **1.3. Overview of Population, Family Planning and Reproductive Health Policies**

The Nigerian government has recognized for a long time that its population was growing at a very rapid rate. However, it did not perceive the rapid population growth as constituting a significant obstacle to economic growth. The 1975-80 third development plans gave an insight into the official thinking of government about Nigeria's population situation prior to 1980. Rather than instituting a course of action that would lead to a control of population through deliberate reduction of family size, the plan emphasized accelerating the growth of the economy which, in turn, would bring down the birth rate in the long run. There was, however, a plan to continue with the integration of various family planning schemes into an overall health and social welfare for the country (Federal Republic of Nigeria, 1975).

In 1988, in response to the rapid rate of population growth and its adverse implications for development, the federal government of Nigeria approved the National Policy on Population for

Development, Unity, Progress and Self-Reliance (Federal Republic of Nigeria, 1988). At the inception of the 1988 national policy, the total fertility rate (TFR) was 6.3 children per woman, the infant mortality rate was 87 per 1,000 live births, and the maternal mortality rate was reported to be among the highest in Africa (Pearce, 2001). The targets for this policy were modest but realistic, such as a TWR of 4 per woman (Pearce, 2003).

The policy acknowledged that the laissez-faire approach hitherto adopted on population issues was not effective in lowering population growth, with adverse consequences on the welfare of the citizens and on the socio-economic development of the country. It was believed that the living conditions of the people would improve if the rate of population growth could be reduced to achieve the primary objective of slowing down the rate of population growth; the policy highlighted the need to:

- reduce the proportion of women who marry before age 18 years by 50 percent by 1995 and by 80 percent by the year 2000;
- reduce pregnancy to mothers below 18 years and above 35 years of age by 50 percent by 1995 and by 80 percent by the year 2000;
- reduce the total fertility rate, over 6 in 1988 to 4 by the year 2000 and reduce the rate of growth that then was estimated at about 3.3 percent to 2 percent by year 2000; and
- extend the coverage of family planning services to 50 percent of women of child-bearing age by 1995 and 80 percent by the year 2000.

Over the years, emerging issues such as HIV/AIDS, poverty, and gender inequality, among others, necessitated a review of the 1988 National Population Policy and the launching of the National Policy on Population for Sustainable Development in 2004. The policy recognizes that population factors, social and economic development, and environmental issues are interconnected and critical to the achievement of sustainable development in Nigeria. The overall goal of the policy was to improve the quality of life and standard of living for the Nigerian population (NPC, 2004), through the attainment of a number of specific goals that include:

- achievement of a balance between the rate of population growth, available resources, and social and economic development of the country;
- progress towards a complete demographic transition to a reasonable growth in birth rates and a low death rate;
- improvement in the reproductive health of all Nigerians at every stage of the life circle; and
- progress in achieving balance and integrated urban and rural development.

In an attempt to reflect the new realities and trends in the national health situation, the National Health Policy and Strategy to Achieve Health for All Nigerians was promulgated in 1988, the first comprehensive national health policy. It was formulated within the context of:

- the Health Strategy of the New Partnership for Africa's Development (NEPAD), a pledge by African leaders based on a common vision and a firm conviction that they have a pressing duty to eradicate poverty and place their countries individually and collectively on a path of sustainable growth and development; the United Nations Millennium Development Goals (MDG) that Nigeria, like other countries, has committed to achieve;
- the New Economic Empowerment and Development Strategy (NEEDS), which is aimed at re-orienting the values of Nigerians, reforming government and institutions, growing the role of the private sector, and enshrining a social charter on human development with the people of Nigeria; and
- the development a comprehensive health sector reform programme as an integral part of the NEEDS.

The following principles and values underpin the new national health policy:

- the principle of social justice and equity and the ideals of freedom and opportunity that have been affirmed in the 1999 Constitution of the Federal Republic of Nigeria;
- health and access to quality and affordable health care is a human right;
- equity in health care and in health for all Nigerians is a goal to be pursued;
- primary health care (PHC) shall remain the basic philosophy and strategy for national health development;
- good quality health care shall be assured through cost-effective interventions that are targeted at priority health problems;
- a high level of efficiency and accountability shall be maintained in the development and management of the national health system;
- effective partnership and collaboration between various health actors shall be pursued while safeguarding the identity of each; and
- since health is an integral part of overall development, inter-sectoral cooperation and collaboration between the different health-related ministries, development agencies and other relevant institutions shall be strengthened; and a gender-sensitive and responsive national health system shall be achieved by mainstreaming gender considerations and implementation of all health programs.

The current understanding of reproductive health policy in Nigeria emanates from the landmark International Conference on Population and Development (ICPD) held in Cairo in 1994. Already well documented, the ICPD Program of Action (PoA) clearly showed a paradigm shift from implementing individual vertical programs addressing maternal and child health issues to a more comprehensive and expanded understanding and approach to the provision of reproductive health services. The ICPD also anchored this new focus within the context that *reproductive health and rights* are integral to achieving sustainable development. Since the 1994 ICPD, the Nigerian government, acting through the Federal Ministry of

Health (FMOH), has made substantial efforts aimed at improving the policy environment for the implementation of reproductive health programs.

In recognition of the important link between reproductive health and the quality of life of its citizens, the Nigerian government formulated and launched a National Reproductive Health Policy and Strategy in 2001 (FMOH, 2001a). Even before the formulation of this policy, the Nigerian society (government, individual and nongovernmental organizations [NGOs]) either independently or in collaboration with international agencies and organizations had expended a lot of resources on the provision of reproductive health education (RHE) and reproductive health services (RHS) to citizens. However, available statistics show that the reproductive health (RH) situation in Nigeria is still poor. Currently, there is low access to and utilization of quality RHE and RHS. Reproductive health is on the concurrent legislative list in Nigeria, with each state having the prerogative to determine its activities, guided by the national reproductive health policy and guidelines and based on availability of local resources.

The National Reproductive Health Policy and Strategy recognizes reproductive health as a right, and as indispensable to overall health and development. Within all tiers of government, a variety of strategies seek to strengthen reproductive health rights and achieve an overall improvement in the reproductive health status of Nigerians. The policy identifies key strategic components including safe motherhood; family planning; prevention of sexually transmitted infections (STI), HIV/AIDS and harmful practices; reproductive rights and gender issues; management of cancers of the reproductive system; infertility and sexual dysfunction; management of non-infectious diseases; and adolescent reproductive health. Each component is further broken down into specific services to be provided at the national, state and LGA levels. To facilitate the implementation of the policy, a National Strategic Framework and Plan for Reproductive Health (2002-2006) was developed with the objectives to:

- reduce maternal mortality by 50 percent of the 1999 level and perinatal mortality by 30 percent of the 1999 level;

- reduce the prevalence of STI and the incidence/prevalence of reproductive cancers and infertility;
- limit all forms of gender-based violence and harmful practices; and
- increase the contraceptive prevalence rate.

More importantly, the National Strategic Framework and Plan for Reproductive Health calls for the decentralization of services to the states, LGAs and communities. In so doing, it recognizes the need for the promotion of community participation and encourages private sector support to ensure effective implementation of the strategies and activities in the plan.

In 1995, FMOH developed the first National Adolescent Health Policy, which was designed to create a climate for laws necessary to meet adolescent health needs and to promote and support the dissemination of knowledge and information to adolescents. The ministry revised this policy in 2006, in collaboration with other ministries, government agencies and NGOs (UNICEF, 2001). In 1999, the government formulated a National Adolescent Reproductive Health Strategic Framework (UN, 2009), which was revised in 2007. The revised framework encompasses a broad range of issues addressing adolescents, including sexual behavior, nutrition, drug abuse, education, career and employment, and parental responsibilities and social adjustment techniques. This strategic framework was designed to facilitate implementation of the National Adolescent Health Policy by translating the policy into actionable plans to promote adolescent sexual and reproductive health in Nigeria. The revised framework was also produced through partnerships with various federal ministries, government agencies, NGOs and youth organizations, and with inputs from the World Health Organization (WHO). The promulgation of these policies and strategic frameworks suggests that the government is aware of and responsive to the needs of adolescents. At the same time, however, it appears that mechanisms to fully implement these measures are not yet in place.

#### *1.4. Objectives and Organization of the Report*

This report uses four rounds of Nigeria DHS data (1990, 1999, 2003, and 2008) to describe levels and trends in key family planning, fertility, reproductive health, and maternal and child health indicators in urban Nigeria, as well as their differentials by region, education and wealth. The report also compares the overall urban indicators with those of the overall rural Nigeria (or total Nigeria) with the goal of depicting urban-rural differences and the extent to which they narrowed or widened over time. For indicators that are presented in the state-level analysis (see Appendix A), the report dwells on levels and trends in the five states that host the six cities to be targeted by the NURHI program: Kwara (city of Ilorin), FCT (city of Abuja), Kaduna (cities of Kaduna and Zaria), Edo (city of Benin), and Oyo (city of Ibadan).

The report is organized in six chapters. Chapter 1 (this chapter) provides the introduction and background of the study, with focus on Nigeria's economy and population and urbanization, and an overview of population, family planning and reproductive health policies and programs. It also presents the Bill & Melinda Gates Foundation's Reproductive Health Strategy; NURHI; and the MLE project for the Urban Reproductive Health Initiative.

Chapter 2 provides information on demographic and socioeconomic characteristics of the households and the individual survey respondents in urban Nigeria. The characteristics covered include the age and sex structure of Nigeria's urban population, the composition of urban households, background characteristics of the respondents, household characteristics and durable goods, household wealth, educational attainment, exposure to mass media, measures of empowerment in terms of levels of educational attainment, status of employment, women's control over earnings and women's participation in decision making.

Chapter 3 focuses on fertility and fertility preferences, specifically on measures of fertility such as TFR and children ever born. Other aspects presented in the chapter are birth intervals, age at first birth, teenage pregnancy and motherhood, ideal number of children desired and unwanted fertility.

Chapter 4 presents the results on various aspects of family planning including knowledge, ever use, current use of contraception, sources of contraceptives, future intention to use, exposure to mass media and communication on family planning. The chapter also discusses age at first marriage and age at first sexual intercourse.

Chapter 5 examines maternal and child health and survival. The issues covered include assistance during delivery, place of delivery, child immunization, prevalence of diarrhea and fever, nutritional status of children and infant and child mortality.

Finally, chapter 6 discusses the key challenges facing reproductive health and family planning in Nigeria and ends with programmatic and policy implications.

## 1.5. Data and Methods of Analysis

### 1.5.1. Data collation and management

The data used for this report are from Nigeria's 1990, 1999, 2003 and 2008 DHS. This report and the project at large benefited greatly from the timely release of the 2008 DHS. Specifically, the household, individual women, child, birth and male files were used in the analysis. For each of the data files, a thorough review was done to check for any changes across the years with respect to variables' naming and coding. Before data were merged, the key predictor variables were computed for all different target individuals, i.e. women, men and children. These predictor variables were merged with all the respective data sets above for each of the data points. Next, the merged data were appended after an identifier for data point (year of survey) was computed.

Data management and analyses were done in STATA 10®. The 1990 DHS was conducted by the Federal Office of Statistics, now National Bureau of Statistics. The 1999, 2003 and 2008 DHS were conducted by the NPC.

### 1.5.2. Key variables

Even though this report is focused on urban reproductive health indicators in Nigeria, both rural and national indicators were included so as to investigate the urban-rural differentials and their trends. The analysis covered three key indicator variables:

1. fertility and fertility preferences including total fertility rate, children ever born, birth intervals, age at first birth, teenage pregnancy, ideal number of children and unwanted fertility;
2. family planning and proximate determinants of fertility, encompassing knowledge, use and sources of modern contraception and intention to use; exposure to media on family planning; inter-spousal communication and attitude towards family planning (age at first sex and age at first marriage were also covered); and
3. maternal and child health and child survival, with focus on assistance during delivery, place of delivery, child immunization and nutrition, and morbidity and mortality.

Fertility and mortality rates and other indicators were calculated using the same method as in the DHS reports. Three main predictors were used in the analysis: region, household wealth and respondents' education, while women's age was also used in some of the tables. Selected tables were also produced by state.

**Region and State:** The division of the country into six regions as described in the 2003 and 2008 DHS was used. The regions are North Central, North East, North West, South East, South South and South West. Given the changes in administrative regions between 1990 and 2003, as shown in table 1.2, the data for 1990 and 1999 were adjusted based on the actual geographic areas. This process was largely informed by the team's knowledge and understanding of the geopolitical transformations in Nigeria. The adjustments are detailed in table A.1 of Appendix A.

**Table 1.2:** Adjustment of States within Regions to Fit the 2003 and 2008 Administrative Organization with Six Regions

State	1990		1999	
	Original (DHS)	Adjustment	Original (DHS)	Adjustment
Benue	North East	North Central	South South	
Kwara	North West	North Central	South South	
Niger	North East	North Central	South South	
Plateau	North East	North Central	South South	North Central
Kogi			South South	
Nassaraw			South South	
Abuja (FCT)			South South	
Borno	North Central	North East	North Central	
Adamawa	North Central	North East	South South	
Bauchi	North Central	North East	North Central	North East
Taraba			South South	
Yobe			North Central	
Gombe			North Central	
Jigawa			North Central	
Kaduna	North Central	North West	North East	
Kano	North West	North West	North Central	
Katsina	South East	North West	North East	North West
Sokoto	North Central	North West	North East	
Kebbi			North East	
Zamfara			North East	
Anambra	North Central	South East	North West	
Imo	South East	South East	North West	
Abia	North West	South East	North West	South East
Enugu			North West	
Ebonyi			North West	
Akwa Ibo			North West	
Edo	South East	South South	South East	
Cross River	South East	South South	North West	South South
Rivers	South East	South South	North West	
Delta			South East	
Bayelsa			North West	
Lagos	North West	South West	South East	
Ogun	North West	South West	South East	
Ondo	North East	South West	South East	South West
Oyo	North East	South West	South East	
Osun			South East	
Ekiti			South East	

**Household wealth:** For the 1999, 2003 and 2008 data sets, we used the wealth index contained in the household files and recoded the variable as tertiles (three equal-size categories) based on the urban sample. The new variable was recoded as poor, middle and rich. For the 1990 data set, a wealth index based on the urban sample was computed using principal component analysis (PCA) of the following asset items present in the data set: source of drinking water, type of toilet facility, main floor material, main roof material, main wall material and the presence of electricity, radio, television, telephone, refrigerator, gas cooker, electric iron, electric fan, bicycle, motorcycle and car. As for 1999, 2003 and 2008, the continuous wealth index was recoded as tertiles with categories labeled poor, middle and rich.

**Other predictor variables:** The education variable was fairly standard across the years. It was recoded into three categories: no education, primary education and secondary or higher. The age of the respondents was recoded as <20, 20-29, 30-39 and 40+, for both men and women.

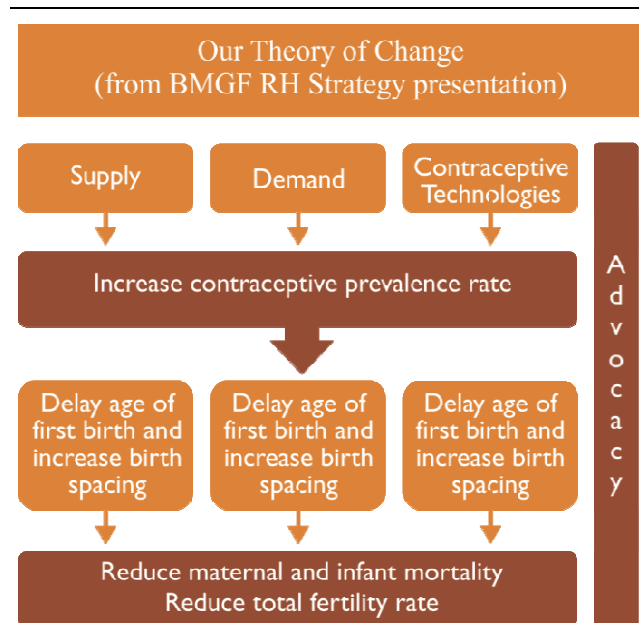
**1.6. The Bill & Melinda Gates Foundation’s Reproductive Health Strategy**

The Bill & Melinda Gates Foundation has a long history of working on family planning initiatives. Recently, the foundation has focused efforts on integrating cash transfers with family planning, client-centered approaches, targeting vulnerable populations, and increasing family planning information and access for men and women. Based on the theory of change illustrated in figure 1.2, the foundation’s reproductive health strategy, launched in 2008, has four components, outlined in table 1.3. At the global level (initiative 1), the strategy seeks to revitalize interest in family planning and broader reproductive health issues as indispensable to achieving the MDG. The work in this area complements the foundation’s other areas of focus, which include nutrition; maternal, neonatal, and child health; and vaccine-preventable diseases. The foundation invests in raising awareness of the need for family planning among donors, country governments, and the private sector; enhancing the efficiency of contraceptive procurement and distribution; and engaging donors, governments, and civil society to better coordinate efforts and increase

resources to fund family planning and reproductive health.

**Table 1.3: The Gates Foundation’s Reproductive Health Strategy**

Initiative 1: Global Action	Initiative 2: Country Action
Increase funding, improve coordination and enhance efficiency of contraceptive procurement	Develop cost-effective integrated urban interventions for increasing CPR for the poor and most vulnerable
Initiative 3: Contraceptive Technologies	Initiative 4: Learning Agenda
Develop new contraceptive technologies	Refine and replicate successful interventions; Develop future programs and policies



**Figure 1.2: The Gates Foundation’s theory of change.**

The strategy at a country level (initiative 2) is focused on building cost-effective urban supply, demand, and advocacy interventions to increase contraceptive use and improve care. The evidence gathered at this level will help municipalities provide better family planning and related services, with a focus on the poorest and most vulnerable. The strategy also prioritizes leveraging private-sector strengths and resources to increase the availability of high-quality and affordable contraceptives. Initiative 3 seeks to develop new contraceptive technologies to increase method mix and the efficacy of current methods. Finally, initiative 4 constitutes the research and knowledge sharing that will occur alongside initiatives 1-3, part of the “advocacy” depicted in figure 1.2.

The foundation’s strategy addresses major challenges in financing and procuring contraceptives and other reproductive health supplies and services, by advocating for increased funding for family planning, better coordination among donors and governments to deliver products, services, and enhanced efficiency of contraceptive procurement.

The strategy also focuses on enhancing the delivery of family-planning services to people living in impoverished urban areas, with the main investment being the Urban Reproductive Health Initiative, which aims to significantly increase access to contraceptives in four countries in sub-Saharan Africa and South Asia: Nigeria; Kenya; Senegal; and Uttar Pradesh, India. The initiative will test, validate, and share cost-effective integrated urban interventions to improve RH outcomes among the urban poor. The overall goal of the Urban Reproductive Health Initiative grants is to build a robust evidence and knowledge base for designing, implementing, and evaluating the impact of urban RH programs in sub-Saharan Africa and South Asia in order to enhance global knowledge and inform future family planning (FP) and RH programs globally. It will test such key strategic approaches as supply, demand, and advocacy interventions. The foundation’s RH strategy is detailed in Appendix B.

### ***1.7. The Nigeria Urban Reproductive Health Initiative***

In January 2009, the first country-level Urban Reproductive Health Initiative project was launched in the state of Uttar Pradesh, India by a consortium of organizations led by Family Health International. The Nigeria-based country consortium (CC) was the second to receive funding, in September 2009. NURHI was designed to increase modern contraceptive prevalence rate by at least 20 percentage points in six selected urban cities — Ibadan, Ilorin, Abuja, Kaduna, Zaria and Benin — during the five-year implementation period, with the first year tagged as the discovery phase of the project. This goal is to be achieved through the following five key objectives:

1. Develop cost-effective interventions for integrating quality family planning with maternal and newborn health, HIV and AIDS, post-partum and post-abortion care programs.
2. Improve the quality of FP services for the urban poor with emphasis on high volume clinical settings.
3. Test novel public-private partnerships and innovative private-sector approaches to increase access to and use of family planning by the urban poor.
4. Develop interventions for creating demand for and sustaining use of contraceptives among marginalized urban populations.
5. Increase funding and financial mechanisms and a supportive policy environment for ensuring access to family planning supplies and services for the urban poor.

NURHI includes four core partners: Johns Hopkins University’s Center for Communication Programs (CCP); as lead, John Snow, Inc. (JSI); the Nigerian Association for Reproductive and Family Health (ARFH); and the Center for Communication Programs Nigeria (CCPN). Other contributing partners include Development Communications Network, Advocacy Nigeria, Planned Parenthood Federation of Nigeria (PPFN), and Ipas. As the prime contractor, CCP has overall financial and programmatic responsibility for the NURHI. JSI

and ARFH will support improvements in the supply of RH services, while CCP and CCPN will facilitate increases in the demand for RH and advocacy initiatives. Other agencies, projects, and private companies will contribute technical expertise in their respective areas and/or undertake specific scopes of work.

Within the NURHI conceptual framework, demand generation is an integral component and consists of three areas: changing social norms to be more accepting of smaller families, encouraging women to delay childbearing and allow more time between births, and motivating families to have fewer children. NURHI will design and implement interventions in the target cities based on the results of comprehensive baseline data collection and NURHI-led formative research. In collaboration with the MLE project, NURHI will establish measurement and evaluation indicators and monitor the progress of the program to permit adjustments and fine tuning of activities. NURHI will also identify and work with state and city government and local partners to meet project goals and to share lessons learned in each of the target cities. During Year one, NURHI will set the stage for implementation: It will finalize selection and briefing of key stakeholders of the six target sites, collaborate with the MLE project in the conduct of baseline surveys in the six sites, initiate proof of concept research studies around supply, demand and advocacy, and develop an actionable project strategy (phase 1). During years two and three (phase 2), NURHI will implement an integrated, coordinated set of demand generation and service delivery improvement activities, supported by advocacy, in the four initial cities (Abuja, Ibadan, Ilorin and Kaduna). The overall approach will focus on a “consumer-first” orientation that recognizes and responds to the differing needs of urban populations over the course of their reproductive lifetime and the barriers they face in trying to meet their reproductive health needs. In years four and five (phase 3), NURHI will continue implementation in the initial four sites, adding innovations and activities as determined by the initial strategy as well as innovations fostered by the sites themselves. It will facilitate replication in two additional urban areas of promising practices and models emerging from the first four sites, having engaged with all sites in phase 2. The two additional cities are Benin and Zaria.

Seed funds will be used to inspire local investment (donors, government and private sector) to support the expansion to the two additional sites. These funds will support technical assistance to facilitate adaptation and/or replication of key initiatives and cover some implementation costs, with the expectation of matching allocations from host sites and, possibly, other donors. The NURHI is detailed in Appendix C.

### *1.8. Measurement, Learning & Evaluation for the URHI*

The MLE project’s overall goal is to identify which interventions of the Urban Reproductive Health Initiative in India, Kenya, Nigeria, and Senegal are most effective and have the biggest impact. Its overall goal is to use innovative methods to ensure that there is a robust evidence and knowledge base for the design, implementation, and impact evaluation of the Initiative in diverse urban environments. The MLE project will use state-of-the-art methods to evaluate the impact of the initiative on modern contraceptive use and examine related questions, such as whether FP is increasing in the poorer subgroups in the population and what pathways led to the increase. Findings from the MLE project will inform future FP and RH programs in the target countries and globally. Specifically, the objectives of the MLE are to:

- monitor and evaluate the impact of the Urban Reproductive Health Initiative within and across target countries using rigorous study designs and multiple data collection approaches;
- build country and regional capacity to undertake rigorous measurement and evaluation of population, family planning, and integrated reproductive health activities with a focus on urban and peri-urban poor and vulnerable populations;
- facilitate knowledge sharing, document and disseminate best practices across country consortia, in the region, and within the global community of practice; and
- expand the knowledge base of and evidence on urban reproductive health programs.

The key evaluation questions for URHI include the following:

1. Did the project achieve the CPR goals in the selected urban areas?
  - *IF YES:* i) Which supply side interventions contribute to increased contraceptive use? ii) Which demand and behavior change interventions contributed to increased use?
  - *IF NO:* i) What is the difference between CPR goal specified and actual CPR achieved? ii) What were the barriers to uptake? iii) What were the lessons learned?
2. Did CPR increase among the lower quintiles in the selected urban areas?
  - *IF YES:* i) Which interventions proved effective for increasing equitable use of contraception? ii) What was the relative cost-effectiveness of these interventions?
  - *IF NO:* i) What is the difference between CPR goal specified and actual CPR achieved and how does this differ between the urban poor and non-poor? ii) What were the barriers to uptake? iii) What were the lessons learned?
3. Did the private sector share of the contraceptive market increase to meet project goals?
  - *IF YES:* Which interventions proved effective for increasing the private sector share?
  - *IF NO:* i) What is the difference between the desired goal and the actual goal achieved? ii) What were the barriers? iii) What were the lessons learned?

For details about the study design to monitor and evaluate the impact of the Urban Reproductive Health Initiative, see Appendix D.

Because the success of monitoring and evaluation depends on an effective partnership between the evaluation arm (the MLE project) and the program implementation arm (CCs), the MLE project works with the CCs to design the evaluation strategy of the programs and incorporate monitoring and evaluation results into program activities, and the scale-up of promising best practices. Similarly, successful local, national, regional, and global dissemination of the program results depend on an effective collaborative relationship between the MLE project and the CCs by engaging with respective key stakeholders to

improve policymaking and funding allocations at all levels. Through establishing a Web site as a global resource on urban reproductive health, distributing MLE findings and methodologies, and developing policy briefs, fact sheets, and technical working papers, the MLE project:

- serves as the central technical resource for local efforts to monitor and evaluate programs in countries where urban reproductive health programs are being conducted;
- identifies and documents evidence-based interventions and best practices for providing FP/RH services to the urban poor and sharing information globally about promising approaches with policymakers, program managers, and researchers; and
- builds skills and professional capacity to undertake rigorous measurement and evaluation of population, family planning, and integrated reproductive health activities targeted at poor and vulnerable urban populations.

The MLE project in Nigeria is being implemented by the Carolina Population Center (CPC) at the University of North Carolina at Chapel Hill (UNC), in collaboration with the African Population and Health Research Center (APHRC).

## Chapter 2: Characteristics of Households and Respondents in Urban Nigeria

This chapter presents a descriptive summary of key demographic and socioeconomic characteristics of the urban population in the sampled households at each survey period. The issues covered include the age and sex structure of Nigeria’s urban population, the composition of urban households, background characteristics of the respondents, household characteristics and durable goods, household wealth, educational attainment, exposure to mass media, measures of empowerment in terms of levels of educational attainment, status of employment, women’s control over earnings and women’s participation in decision making.

### 2.1. Age and Sex Structure of Nigeria’s Urban Population

The individual characteristics of age and sex are of prime importance in demographic studies since most socio-demographic events are specific to age and sex. Mortality rates fluctuate greatly across ages, and child bearing is associated with only a limited part of the life span of women, as is the event of marriage.

Figure 2.1 shows the distribution of the urban population in the 1990, 1999, 2003 and 2008 Nigeria DHS by five-year age groups and sex. The total urban population covered was 11,489; 10,970; 11,887; and 49,915 people, respectively.

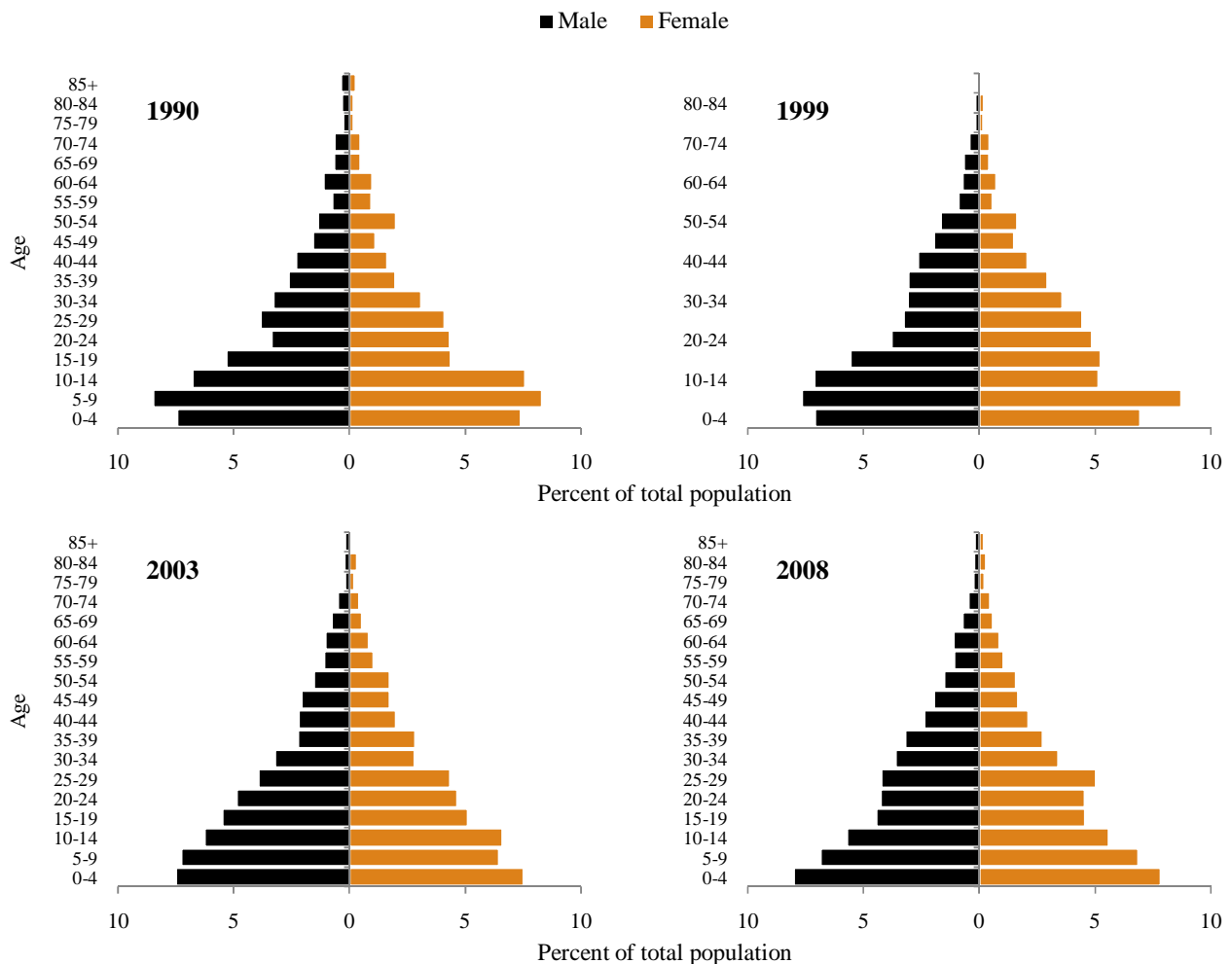


Figure 2.1: Household population by sex, urban Nigeria.

The pyramids suggest marginal changes over the 19 years covered by the surveys. Generally the proportion of persons in the younger age groups is substantially larger than the proportion in the older age groups for each sex and each time period, indicating the young age structure of the Nigerian population and high fertility norms. Over 40 percent of the urban population over the period were below 15 years of age, while about 4 percent were 65 years or older.

## 2.2. Household Composition

Information on key aspects of the household composition, including the sex of the household head and the size of the household, is presented in table 2.1. These characteristics are important as they are associated with household welfare. Female-headed households are, for example, typically poorer than male-headed households, and economic resources are often more limited in larger households. A growing body of research suggests that the observed increased concentration of poverty among women is associated with the rise in the proportion of households headed or principally maintained by women (Lloyd & Gage-Brandon, 1993; World Bank, 2001; Quisumbing, Haddad & Pena, 2001). Similarly, a multivariate statistical analysis of household structure and poverty in Nigeria found significant net disadvantage in the living conditions for female-headed household (Mberu, 2007). These outcomes underscore the importance of focusing on female-headed households in urban Nigeria under the Urban Reproductive Health Initiative, particularly following other evidence that female heads rarely co-reside with a spouse, whereas the large majority of male heads live with their wives (Bongaarts, 2001; Mberu, 2007).<sup>1</sup>

The 1990 data show that urban households in Nigeria were predominantly headed by men (82.0 percent) and only about 18.0 percent were headed by women. There is however an increasing trend in the proportion of female-headed households in urban

Nigeria over time from 18.0 percent in 1990 to 20.7 percent in 2008. The trend is duplicated in both rural and urban Nigeria, with rural female headed household increasing from 12.9 percent in 1990 to 18.6 percent in 2008. The urban households showed consistently higher proportions (from 18.0 percent in 1990 to 20.7 percent in 2008) of female headed compared to both rural and national figures throughout the four survey periods. Isiugo-Abanihe (1993) linked the enabling environment for the nucleation of household structures and growth of female-headed households in Nigeria to changing economic circumstances and rising levels of education.

The proportion of female-headed urban households shows significant regional variations. At the low end, the proportion varied from 7.8 percent in 1990 to 11.4 percent in 2008 in the North West zone, and from 8.7 percent to 8.6 percent during the same period in the North East region. At the higher end of the spectrum, the urban South South region witnessed a gradual increase in the proportion of female-headed households from 23.2 percent in 1990 to 27.2 percent in 2008.

Table 2.1 also shows that, as expected, the mean household size is consistently higher in rural Nigeria than in urban Nigeria, and in the northern regions compared to the southern ones. There is also a declining trend in rural areas with mean household size falling from 5.6 in 1990 to 4.6 in 2008.

<sup>1</sup> In sub-Saharan Africa, 92 percent of male heads co-resided with a spouse, only 6 percent of female heads lived with a husband. Male-headed than female-headed households are more likely to have at least two adults, as heads were likely to be married if they were men or to be separated, divorced, or widowed, if they were women.

**Table 2.1: Household Composition, Urban Nigeria**

Percent Distribution of Households by Sex of Household Head and Mean Household Size According to Region of Residence, Urban Nigeria 1990, 1999, 2003 and 2008

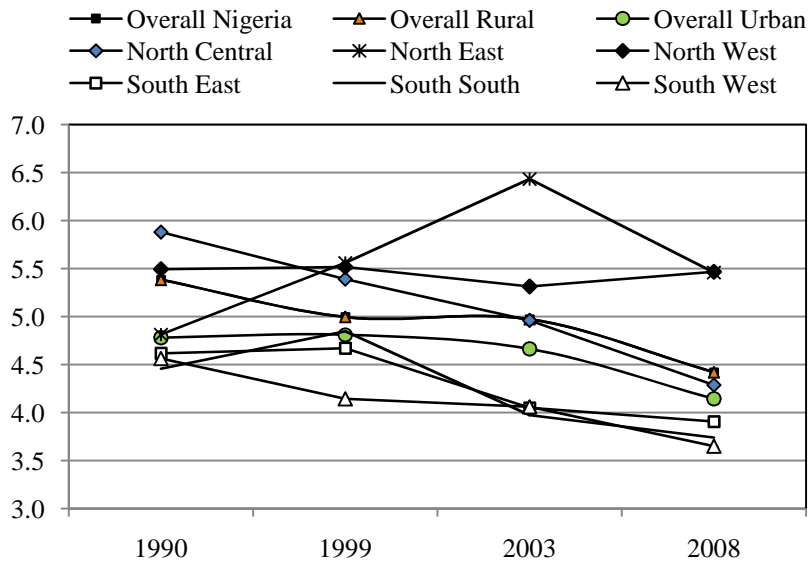
		Female headed	% Usual members			Total*	# House-holds (Unweighted)	Mean size
			1-2	3-4	5+			
Overall Nigeria	1990	14.3	21.5	25.7	52.7	99.9	8,999	5.4
	1999	16.9	22.6	27.2	50.1	99.8	7,647	5.0
	2003	16.6	23.6	27.3	48.9	99.8	7,225	5.0
	2008	19.3	30.4	26.8	42.6	99.7	34,070	4.4
Overall Rural	1990	12.9	18.7	25.9	55.2	99.9	5,130	5.6
	1999	16.2	22.2	26.7	50.9	99.8	5,165	5.1
	2003	15.2	21.3	27.6	50.8	99.8	4,294	5.2
	2008	18.6	29.2	25.9	44.6	99.7	23,346	4.6
Overall Urban	1990	18.0	28.8	25.1	46.0	99.9	3,869	4.8
	1999	18.6	23.3	28.3	48.4	100.0	2,482	4.8
	2003	19.0	27.7	26.9	45.4	99.9	2,931	4.7
	2008	20.7	32.6	28.3	38.9	99.8	10,724	4.1
North Central	1990	19.6	24.0	23.5	52.5	100.0	228	5.9
	1999	13.1	20.2	26.3	53.5	100.0	391	5.4
	2003	18.1	27.8	23.8	48.3	99.8	476	5.0
	2008	19.5	33.1	24.1	42.5	99.7	1,980	4.3
North East	1990	8.7	28.3	27.0	44.7	100.0	189	4.8
	1999	9.1	22.0	19.6	58.4	100.0	286	5.6
	2003	9.4	17.5	21.6	60.9	100.0	463	6.6
	2008	8.6	22.3	23.1	54.5	99.9	1,264	5.6
North West	1990	7.8	25.6	23.3	51.1	100.0	426	5.5
	1999	10.7	21.9	28.0	50.1	100.0	383	5.5
	2003	8.8	18.0	32.2	49.8	100.0	471	5.2
	2008	11.4	24.6	23.9	51.4	99.9	1,256	5.4
South East	1990	17.6	30.2	20.8	49.1	100.0	314	4.6
	1999	31.9	25.5	21.8	52.3	99.6	221	4.7
	2003	24.4	35.4	23.0	41.4	99.9	428	4.1
	2008	26.2	34.1	28.6	36.6	99.2	1,530	3.9
South South	1990	23.2	34.9	20.9	44.2	100.0	437	4.5
	1999	26.6	22.5	25.6	51.8	100.0	290	4.9
	2003	28.6	37.9	22.4	39.6	99.9	387	4.0
	2008	27.2	37.3	28.6	34.0	100.0	1,463	3.7
South West	1990	20.0	28.3	27.8	43.9	99.9	2,275	4.6
	1999	21.0	25.2	33.6	41.2	100.0	911	4.1
	2003	23.2	30.1	30.2	39.7	100.0	706	4.1
	2008	21.8	34.8	31.9	33.3	100.0	3,231	3.7

\* Should add up to 100%. However, 10 households in 1990, 12 in 1999, 15 in 2003 and 84 in 2008 had 0 de jure members.

Figure 2.2 shows the trend of average size of households in urban Nigeria from 1990 to 2008. There is a decline in the overall average household size in urban Nigeria from 4.8 persons in 1990 to 4.1 persons in 2008. The same trend is witnessed in the three southern zones (South East, South South and South West) as well as the North Central. However, there is a fluctuation in the trend of the household size for the North East and North West, with a peak of 6.6 persons recorded in 2003 for North East and the lowest (5.2 persons) in 2003 for the North West.

The mean household size was consistently higher in the three northern geopolitical zones than in the zones in the South. While there was a general indication of marginal decline in household size between 1990 and 2008, urban household size in zones of the North remain approximately larger than those in the southern zones; however, urban households in the South East and South South shows a slight increase from 1990 to 1991 before declining.

### 2.3. Household Characteristics and Durable Goods



**Figure 2.2: Trends in mean household size by region, Urban Nigeria 1990, 1999, 2003 and 2008.**

The physical characteristics of a household dwelling as well as the availability of durable consumer goods and type of sanitation facilities are good indicators of a household's socioeconomic status. Having access to a radio or a television exposes household members to innovative ideas; a refrigerator prolongs food storage; and a means of transport allows greater access to many services away from the local area. Ensuring adequate sanitation facilities is another of the Millennium Development Goals that Nigeria shares with other countries. A household is classified as having an improved toilet if the toilet is used only by members of one household (i.e., it is not shared with other households) and if the facility used by the household separates the waste from human contact (WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation, 2004).

Information on these items was collected during the four DHS. Table 2.2 shows that in Nigeria overall, there is generally a low percentage of access to electricity by the households. It increased from 27.5 percent in 1990 to 52.2 percent in 2003 and then declined to 50.3 percent in 2008. This low electricity presence in Nigeria as a whole is greatly influenced by rural electricity access at low levels of 9.0 percent in 1990 and a high of 33.8 percent in 2003.

There is however a high percentage of household access to electricity in urban Nigeria. It increased slightly from 83.3 percent in 1990 to 84.9 percent in 2003 and remained unchanged between 2003 and 2008. There is variation in the trend of proportion of urban households that have access to electricity among the geopolitical regions. While the North Central zone shows a decline in access to electricity from 90.1 percent in 1990 to 78.7 percent in 2008, there is fluctuation in the access to electricity in the North East and North West regions. Access to electricity in North East increased from 50.1 percent in 1990 to 55.6 percent

in 1999 and then to 58.5 percent in 2008. North West access to electricity also increased from 71.6 percent in 1990 to 83.2 percent in 1999 and to 85.2 percent in 2008. The data also show an increase in access to electricity between 1999 and 2008 in two of the three southern geopolitical zones (South East and South West zones). Access in South East zone increased from 62.3 percent in 1999 to 80.3 percent in 2008 while that of the South West remained almost unchanged at around 95 percent. Further, in 2008 all five states covered by the NURHI program had more than 80 percent of their urban households with electricity.

Table 2.2 also shows that there has been a decline in household access to piped water between 1999 and 2008 in Nigeria as whole, in the rural and urban areas as well as among the geopolitical zones. While the access to piped water in Nigeria has decreased from 24.6 percent in 1990 to 10.6 percent in 2008, that of the urban areas also decreased from 64.0 percent in 1999 to 19.9 percent in 2008. Similar trends are also evident among rural households, even though the proportions of rural households with piped water are about four times less than the proportions of the urban counterparts all through 1990 to 2008. The same trend of decline is witnessed in each of the six geopolitical zones. The North Central zone, for example, witnessed a decline

from 65.8 percent access in 1990 to 27.5 percent access in 2008. Also, access to piped water in the South West decreased from 48.8 percent in 1999 to 19.6 percent in 2008. State-level statistics show that there has been a decrease in the proportion of urban households with piped water in all the states between 2003 and 2008 except in Oyo state. The state with the lowest percentage of households with piped water was Edo with a mere 6.0 percent, while the highest was Kwara (52.0 percent) in 2008.

Though the proportion of households that have access to a flush toilet is generally low, Nigeria has witnessed a gradual increase from 9.4 percent in 1999 to 18.6 percent in 2008. As expected flush toilets were more widely used in urban areas (39.4 percent in 2008) as compared to the rural areas where a mere 7.1 percent of households used flush toilets in 2008, up from 2.2 percent in 1990. There is an opposite trend in access to flush toilets between the northern and southern zones. While the three southern zones witnessed an increase in the trend of access to flush toilets, the reverse is the case in the three northern zones. The data show that access to flush toilets increased from 46.0 percent in 1990 to 57.0 percent in 2003 in the South East zone while the North East consistently decreased from 22.6 percent in 1999 to 5.0 percent in 2008. State-level analysis reveals that for households with flush toilets, there has been an increase in all the five states with flush toilets, with Edo and Abuja having the highest of about 65 percent and Kaduna having the lowest (20.3 percent).

The ownership of radios and televisions has been on the increase in both the urban, rural and among the six geopolitical zones in Nigeria. Overall, the ownership of radios has increased from 56.6 percent in 1990 to 74.4 percent in 2008 while that of the television also increased from 20.1 percent in 1990 to 39.3 percent in 2008. There is a noticeable urban-

rural variation regarding possession of radios and televisions; in 2008, 22.9 percent of households in rural areas had a television, compared to 69.0 percent in urban households, and similarly 69.4 percent of rural households had a radio as opposed to 83.5 percent in the urban areas. There has also been an increasing trend in the ownership of television among the six geopolitical zones with the highest proportion (79.2 percent) recorded for South West zone in 2008. As the state-level data show, the percentage of households possessing a radio was above 80 percent for all the states of interest to NURHI in 2003 and 2008. For most states, there has been a gradual rise (to above 80 percent) in the number of urban households possessing televisions over three survey years (1999, 2003 and 2008). Between 2003 and 2008, the number of people who owned fridges reduced in all the five states. Edo state and Federal Capital territory (Abuja) had the highest percentages (48.5 and 49.9, respectively) whereas Oyo and Kwara had the lowest (24.6 and 27.5, percent respectively).

As expected, the data revealed that the bicycle was the most common means of mobility owned by members of the households among the rural households in all the survey years. The urban households however have motorcycle/scooter as the commonest means of mobility as revealed by the 1990 and 2008 surveys, at 18.6 percent and 23.5 percent, respectively. The ownership of means of transportation by household members varies among the geopolitical zones with households in most of the northern zones owning either bicycles or motorcycle/scooters. The trend in ownership of means of transportation in the southern zones does not differ much from what is obtained in the northern zone except in the South West, where a car/truck constitutes the highest proportion of means of transportation owned by members of the household in three of the four survey years.

**Table 2.2:** Household Characteristics and Durable Goods, Urban Nigeria  
Percentage of Households Possessing Various Household Effects, Means of Transportation and Pipe-borne Water  
According to Region of Residence, Urban Nigeria 1990, 1999, 2003 and 2008.

		Piped		Flush	Radio	TV	Fridge	Bicycle	Motor- cycle/ scooter	Car/ truck	# House- holds (Unweighted)	# House- holds (Weighted)
		Electricity	water									
<b>Overall Nigeria</b>	1990*	27.5	24.6	9.4	56.6	20.1	11.8	34.1	19.2	8.9	<b>8,781</b>	<b>8,781</b>
	1999	44.9	24.3	12.2	62.1	25.6	15.3	24.2	13.5	7.7	7,647	7,647
	2003	52.2	17.3	14.6	72.8	31.0	18.0	32.7	15.1	9.6	7,225	7,225
	2008	50.3	10.6	18.6	74.4	39.3	15.9	22.9	24.4	8.2	34,070	34,070
<b>Overall Rural</b>	1990*	9.0	11.5	2.2	48.5	7.8	3.6	39.7	19.4	5.0	<b>5,251</b>	<b>6,594</b>
	1999	27.9	13.2	4.2	55.4	13.9	7.4	30.5	13.3	4.5	5,165	5,334
	2003	33.8	8.5	6.7	65.8	15.5	7.9	41.0	13.8	4.9	4,294	4,627
	2008	31.4	5.5	7.1	69.4	22.9	6.8	29.3	24.9	4.5	23,346	21,970
<b>Overall Urban</b>	1990*	83.3	64.0	31.0	81.2	57.1	36.5	17.2	18.6	20.4	<b>3,530</b>	<b>2,187</b>
	1999	84.3	49.8	30.6	77.6	52.7	33.6	9.8	13.9	14.9	2,482	2,313
	2003	84.9	33.0	28.7	85.4	58.6	36.1	17.9	17.5	17.9	2,931	2,598
	2008	84.8	19.9	39.4	83.5	69.0	32.4	11.3	23.5	14.9	10,724	12,100
<b>North Central</b>	1990*	90.1	65.8	20.7	80.4	64.1	44.6	8.4	35.1	23.0	<b>233</b>	<b>180</b>
	1999	84.4	43.9	20.4	77.3	51.9	28.0	7.5	20.6	17.5	391	361
	2003	80.1	47.4	28.2	86.5	52.2	32.9	16.7	23.6	15.3	476	263
	2008	78.7	27.5	38.5	82.8	65.8	31.9	9.2	28.4	16.8	1,980	1,389
<b>North East</b>	1990*	50.1	40.2	0.0	76.7	22.5	16.3	37.9	25.9	6.5	<b>164</b>	<b>119</b>
	1999	55.6	47.2	22.6	67.7	34.7	23.8	25.6	21.5	13.8	286	237
	2003	63.4	23.3	10.1	76.7	36.5	24.3	43.4	25.1	16.7	463	308
	2008	58.5	14.5	5.0	75.1	39.9	15.3	26.1	35.9	8.4	1,264	966
<b>North West</b>	1990*	71.6	79.3	9.1	85.6	44.9	29.3	35.6	27.1	19.4	<b>425</b>	<b>310</b>
	1999	83.2	59.4	9.9	74.6	37.0	22.5	17.3	17.4	9.0	383	348
	2003	79.3	52.2	12.1	87.5	52.7	25.6	27.9	27.0	11.7	471	550
	2008	85.2	33.0	15.3	88.7	57.7	24.4	26.3	38.7	12.2	1,256	1,487
<b>South East</b>	1990*	65.4	62.5	40.7	74.0	34.3	22.8	31.8	18.4	9.7	<b>281</b>	<b>196</b>
	1999	62.3	44.7	46.0	65.3	39.9	25.6	14.2	9.2	10.6	221	206
	2003	79.7	30.4	57.0	89.4	66.2	50.0	14.6	8.1	32.6	428	312
	2008	80.3	7.8	47.5	84.7	66.2	32.5	16.6	26.3	14.6	1,530	1,902
<b>South South</b>	1990*	79.4	78.0	37.1	78.7	59.5	47.6	24.4	18.8	22.9	<b>358</b>	<b>308</b>
	1999	92.4	55.3	43.9	78.6	61.2	49.0	8.3	14.3	14.9	290	250
	2003	93.1	14.0	39.8	84.3	63.8	47.3	17.6	18.4	15.1	387	408
	2008	82.1	20.1	52.0	77.9	73.2	37.9	11.8	21.9	17.0	1,463	1,750
<b>South West</b>	1990*	93.7	58.1	39.0	82.5	66.9	38.7	6.3	12.5	23.0	<b>2,069</b>	<b>1,074</b>
	1999	94.8	48.8	37.4	83.9	64.1	40.1	3.2	8.9	17.5	911	911
	2003	97.2	29.2	30.8	85.8	68.2	37.8	2.0	8.7	19.0	706	757
	2008	94.9	19.6	46.6	85.5	79.2	36.6	1.5	14.0	15.9	3,231	4,605

\* In 1990, household amenities and household characteristics data are not found in the household data set but in the women's data set. Therefore, total numbers weighted and unweighted are total numbers of women and not households.

#### 2.4. Household Wealth

Wealth index is a background characteristic that is generally used for measuring the household's long-term standard of living. It is based on data from the household's ownership of consumer goods; dwelling characteristics; type of drinking water source; toilet facilities; possession of household goods and other characteristics that are related to a household's socioeconomic status.

Table 2.3 presents the percent distribution of urban households by wealth status for the four surveys. It categorizes households into three categories labeled poor, middle and rich. The trend in the household's wealth status in the three southern zones shows an increase from 33.8 percent in 1990 to 50.9 percent in 2008 for the proportion of rich households in South West zone. The South East and South South also witnessed an increase in the proportion of rich households from 1990 to 2003, but with a slight drop in 2008. The household wealth status in the three zones in the North however followed a

declining trend in the proportion of rich households, with North West recording 19.7 percent of households with rich wealth status in 2008, a decline from 20.5 percent in 1990. North East witnessed an increase of poor households between 1990 and 2008, from 64.9 percent to 68.5 percent, respectively.

### 2.5. Background Characteristics of Respondents in Urban Nigeria

Tables 2.4 and 2.5 show the distribution of urban women and men by background characteristics. The proportions of the surveyed women and men increased with age and peaked at age 20-29 before decreasing in all years, except in 1999 for men. Over one-third of the women and men interviewed were in the age group 20-29. About one in five women and men were younger than 20 years of age.

**Table 2.3: Household Wealth by Region, Urban Nigeria**  
Percentage Distribution of Households by Wealth Status 1990, 1999, 2003, 2008

		1990	1999	2003	2008
<b>Overall Urban</b>	Poor	35.4	32.8	26.8	28.9
	Middle	34.0	33.1	35.2	33.2
	Rich	30.6	34.1	38.0	37.9
<b>North Central</b>	Poor	31.5	40.1	29.8	35.6
	Middle	34.6	35.6	40.9	33.4
	Rich	33.9	24.3	29.2	31.1
<b>North East</b>	Poor	64.9	54.7	58.4	68.5
	Middle	28.2	20.5	31.3	24.4
	Rich	6.9	24.8	10.3	7.1
<b>North West</b>	Poor	47.9	58.8	38.7	50.6
	Middle	31.6	24.2	39.4	29.8
	Rich	20.5	17.0	21.9	19.7
<b>South East</b>	Poor	42.4	40.9	23.7	30.2
	Middle	28.5	20.0	20.4	32.7
	Rich	29.1	39.2	55.9	37.1
<b>South South</b>	Poor	27.6	15.4	13.0	19.0
	Middle	35.0	33.1	35.6	38.6
	Rich	37.4	51.5	51.4	42.4
<b>South West</b>	Poor	30.3	17.2	12.9	14.9
	Middle	35.9	41.9	37.7	34.2
	Rich	33.8	41.0	49.4	50.9

**Table 2.4: Background Characteristics of Women Respondents, Urban Nigeria**  
Percent Distribution of Women (Aged 15-49) by Selected Background Characteristics, Urban Nigeria 1990, 1999, 2003 and 2008

	1990		1999		2003		2008	
	%	No. of women (Unweighted)	%	No. of women (Unweighted)	%	No. of women (Unweighted)	%	No. of women (Unweighted)
<b>Age</b>								
<20	21.1	737	20.9	566	22.1	689	19.0	2027
20-29	40.6	1458	37.6	1021	38.3	1154	39.3	4111
30-39	25.0	873	26.5	717	23.8	707	25.7	2643
40+	13.3	462	14.9	393	15.9	507	16.0	1708
<b>Marital status</b>								
Never married	28.1	1006	30.6	820	32.1	1003	33.9	3447
Married	67.0	2353	63.9	1718	61.9	1864	61.3	6530
Monogamy	44.5	1580	45.4	1232	43.2	1286	47.6	4895
Polygamy	22.6	773	18.4	486	18.6	578	13.7	1635
Others	4.5	156	3.7	108	5.8	184	4.3	456
Missing	0.5	15	1.9	51	0.3	6	0.5	56
<b>Region</b>								
North Central	8.2	233	18.2	481	10.7	499	11.6	1946
North East	5.4	164	11.0	323	14.3	561	9.4	1462
North West	14.2	425	14.2	406	22.2	526	13.7	1360
South East	9.0	281	9.4	253	11.3	440	15.1	1413
South South	14.1	358	12.2	353	14.8	338	15.2	1458
South West	49.1	2069	35.1	881	26.7	693	35.0	2850
<b>Education</b>								
None	31.2	1,034	24.9	674	24.9	811	16.5	2,082
Primary	26.7	940	21.0	565	19.6	635	16.8	1815
Secondary+	42.2	1,556	25.1	1,458	55.6	1,611	66.7	6,592
<b>Overall Urban</b>	24.9	3,530	31.0	2,697	34.5	3,057	35.8	10,489
<b>Overall Rural</b>	75.1	5,251	69.1	5,502	65.5	4,563	64.3	22,896
<b>Overall Nigeria</b>	100.0	8781	100.0	8199	100.0	7620	100.0	33385

**Table 2.5: Background Characteristics of Men Respondents, Urban Nigeria**  
Percent Distribution of Men (Aged 15-59) by Selected Background Characteristics, Urban Nigeria 1999, 2003 and 2008

	1999		2003		2008	
	%	No. of men (Unweighted)	%	No. of men (Unweighted)	%	No. of men (Unweighted)
<b>Age</b>						
<20	21.3	179	18.4	190	15.6	826
20-29	24.7	206	36.2	363	33.5	1718
30-39	24.6	215	20.9	189	25.5	1278
40+	29.4	256	24.6	244	25.4	1311
<b>Marital status</b>						
Never married	42.4	356	51.0	523	48.9	2486
Married	54.7	471	45.9	433	49.0	2539
Monogamy	46.9	405	37.7	350	43.4	2214
Polygamy	7.8	66	8.2	83	5.5	325
Others	2.9	29	3.0	28	1.9	95
Missing	0.0	0	0.2	2	0.2	13
<b>Region</b>						
North Central	18.9	161	11.1	188	11.2	932
North East	10.9	104	13.8	164	9.1	687
North West	14.1	117	24.2	188	15.7	763
South East	7.4	62	11.0	109	12.8	563
South South	11.9	111	13.4	112	14.7	698
South West	36.8	301	26.5	225	36.5	1490
<b>Education</b>						
None	12.8	110	11.2	122	8.8	531
Primary	20.3	173	23.0	227	16.1	820
Secondary+	67.0	573	65.8	637	75.1	3,782
<b>Overall Urban</b>	30.8	856	37.2	986	37.3	5,133
<b>Overall Rural</b>	69.2	1,728	62.8	1,360	62.7	10,353
<b>Overall Nigeria</b>	100.0	2584	100.0	2346	100.0	15486

Slightly more than two-thirds (67.0 percent) of women were currently married in 1990. The proportion decreased gradually from 1999 to 2008. Similarly, the proportion of married men decreased from 54.7 percent in 1999 to 45.9 percent in 2003 before rising to 49.0 percent in 2008. Of the currently married women in 1990 (67.0 percent), two-thirds were married monogamously (44.5 percent). However, over three-quarters of the currently married women in 2008 were married monogamously. The proportion of women in a monogamous marriage was highest in 2008 (47.6 percent) and lowest in 2003 (43.2 percent). There was a clear decline in the number of women who reported to be in polygamous marriages, falling from 23 percent in 1990 to 14 percent in 2008, almost a 10 percentage point drop in about 20 years.

Noticeably, over two thirds of all men had completed secondary education while over half of all women had completed secondary education, with the exception of 1990 and 1999. Large regional variations exist in the proportion of urban women and men in 1990, 1999, 2003 and 2008. In 1990,

South West had the highest proportion of women (49.1 percent) while North East had the least (5.4 percent). In 1999, South West had the highest proportion of men (36.8), while South East the least (7.5 percent). About one-third of the urban women (31.2 percent) in 1990 had never attended school. Only 12.8 percent of their male counterparts in 1999 never attended school. There was a significant increase in the proportion of urban women with secondary education and higher, from 42.2 percent in 1990 to 66.7 percent in 2008. Similarly, the proportion of urban men who had secondary education and higher increased from 65.7 percent in 1999 to 75.1 percent in 2008.

## 2.6. Educational Attainment

Educational attainment of household members is generally linked to reproductive behavior, use of contraception, children's health, and proper hygiene habits. Table 2.6 presents the percentage of women and men by highest level of education and median year of schooling. As can be noticed, there was an

increase in the proportion of urban women with secondary as the highest education attained, from 42.2 percent in 1990 to 66.7 percent in 2008; the same trend could be seen in men though higher. Across the four surveys, the proportion of urban women with secondary education decreased as age increased, from 59.9 percent for women whose ages were less than 20 years to 12.6 percent for women whose ages were 40 years and above in 1990; the same trend was witnessed in the 2008 survey with 80.4 percent for ages less than 20 years down to 44.7 percent for 40 years and above. This proportion reflects increased opportunities for secondary education for younger cohorts of women.

A more intriguing education outcome relevant to the urban health reproductive initiative is the marked variations in the proportion of the urban population that had achieved secondary as the highest education attained among women across Nigeria's six geopolitical zones. The urban North East had the lowest proportion of women with secondary as the highest education attained at less than one in 10 (6.9 percent) in 1990. One phenomenon indicated by the data is the relative educational advantage of urban women in South South zone at the secondary school level across all survey years, especially in 1999, 2003 and 2008 with 73.7 percent, 78.5 percent, and 82.4 percent, respectively, the highest among the six regions. The gender disparity in educational attainment is more significant with female

disadvantage evident in urban Nigeria and most zones. The proportion of men with secondary as the highest level of education attained was 50.0 percent against 36.7 percent women in 1999 and 57.5 percent men against 44.6 percent women in 2008. The data also reveal that a gender gap in the attainment of secondary education was more pronounced in the northern zones compare to the southern zones.

Attainment of secondary as the highest level of education increased from 1999 to 2008 in all the states of interest except in Kaduna state, where there was a decrease in 2003. Among the five states of interest to the NURHI program, attainment of secondary education was highest in Edo, with 70.4 and 80.8 in 1999 and 2008, respectively. Oyo however had a slightly higher proportion (76.7 percent) than Edo (76.3 percent) in 2003. With 51.0 percent in 2008, Kaduna is the state with the lowest proportion of secondary education.

There was a decrease in the proportion of urban Nigeria with no education, from 40.5 percent in 1999 to 35.8 percent in 2008. The same trend is witnessed in the five states of interest except in Kaduna where there was an increase from 29.9 percent in 1999 to 35.1 percent in 2003, and then a decrease to 26.0 percent in 2008.

**Table 2.6: Women's and Men's Educational Attainment, Urban Nigeria**

Percentage of Women (Aged 15-49) and Men (Aged 15-59) by Highest Level of Education and Median Years of Schooling According to Background Characteristics, Urban Nigeria 1990, 1999, 2003 and 2008

	1990			1999			2003			2008		
	Secondary+	Median years of school	Number of women/men (unweighted)	Secondary+	Median years of school	Number of women/men (unweighted)	Secondary+	Median years of school	Number of women/men (unweighted)	Secondary+	Median years of school	Number of women/men (unweighted)
<b>Women</b>												
<b>Age</b>												
<20	59.9	8	737	68.1	9	566	65.6	8	689	80.4	9	2,027
20-29	54.2	8	1,485	62.0	10	1,021	65.8	11	1,154	72.6	12	4,111
30-39	23.4	4	873	49.2	6	717	47.6	6	707	61.3	11	2,643
40+	12.6	0	462	23.3	1	393	28.7	3	507	44.7	6	1,708
<b>Region</b>												
North Central	24.9	3	233	46.6	6	481	50.5	7	499	61.9	9	1,946
North East	6.9	0	164	42.9	3	323	29.7	1	561	27.0	0	1,462
North West	10.5	0	425	25.1	0	406	30.5	0	526	37.7	4	1,360
South East	46.0	6	281	49.4	6	253	71.6	12	440	76.7	12	1,413
South South	53.8	8	358	73.7	10	353	78.5	11	338	82.4	12	1,458
South West	54.0	8	2,069	67.7	10	881	72.7	11	693	79.2	12	2,850
<b>Overall Urban</b>	42.2	6	3,530	54.1	8	2,697	55.6	8	3,057	66.7	11	10,489
<b>Overall Rural</b>	11.2	0	5,251	29.0	3	5,502	27.3	0	4,563	32.3	4	22,896
<b>Overall Nigeria</b>	18.9	0	8,781	36.7	6	8,199	37.0	6	7,620	44.6	6	33,385
<b>Men</b>												
<b>Age</b>												
<20	-	-	-	83.5	9	179	75.4	8	190	85.1	9	826
20-29	-	-	-	80.4	12	206	73.0	12	363	85.1	12	1,718
30-39	-	-	-	70.2	11	215	69.7	11	189	73.5	12	1,278
40+	-	-	-	41.1	6	256	44.5	7	244	57.5	12	1,311
<b>Region</b>												
North Central	-	-	-	62.4	10	161	65.5	9	188	76.4	12	932
North East	-	-	-	65.1	11	104	52.4	7	164	48.3	6	687
North West	-	-	-	45.4	6	117	50.8	7	188	64.0	10	763
South East	-	-	-	54.7	8	62	78.1	11	109	66.3	9	563
South South	-	-	-	75.1	10	111	74.3	10	112	84.7	12	698
South West	-	-	-	78.0	11	301	77.1	11	225	85.4	12	1,490
<b>Overall Urban</b>	-	-	-	67.0	10	856	65.8	10	986	75.1	12	5,133
<b>Overall Rural</b>	-	-	-	42.5	6	1,728	45.0	6	1,360	47.0	6	10,353
<b>Overall Nigeria</b>	-	-	-	50.0	6	2,584	52.7	7	2,346	57.5	9	15,486

## 2.7. Exposure to the Mass Media

Exposure to the print and electronic media provide an indication of the extent to which men and women are regularly exposed to strategies often used to disseminate messages on family planning and other health-related topics. Tables 2.7 and 2.8 show that listening to the radio at least once a week was very common among urban women across all survey years, though there was a marginal decline over time. Similarly, listening to the radio was most

common among urban men across all three survey periods for men. However, for men, the urban/rural difference is not as pronounced as it is between urban and rural women, although it remains marginally higher among urban men compared to rural men. The urban women were more likely to listen to the radio at least once a week compared to rural women across all survey years. As expected, the same applies to television, which was watched more in the urban areas than the rural areas. For men, the pattern was similar.

**Table 2.7: Exposure to Mass Media, Urban Nigeria**

Percentage of Women (Aged 15-49) Who Are Usually Exposed to Specific Media at Least Once a Week by Background Characteristics, Urban Nigeria, 1990, 1999, 2003 and 2008

	1990			1999				2003				2008			
	Radio at least once a week	TV at least once a week	No radio or TV*	News-paper at least once a week	Radio at least once a week	TV at least once a week	None of these 3*	News-paper at least once a week	Radio at least once a week	TV at least once a week	None of these 3*	News-paper at least once a week	Radio at least once a week	TV at least once a week	None of these 3*
<b>Age</b>															
<20	84.8	72.6	11.3	43.8	71.6	71.5	15.9	17.9	71.9	66.5	16.9	20.4	66.2	72.4	16.9
20-29	84.3	72.2	11.8	43.7	74.5	70.0	15.8	25.8	74.3	68.2	15.1	24.8	69.4	70.4	17.2
30-39	81.2	61.4	15.5	38.3	74.9	64.6	17.8	20.2	75.9	59.3	17.6	21.8	69.5	69.0	18.1
40+	72.5	55.6	24.3	25.6	62.4	53.7	27.0	15.8	67.3	52.0	26.9	16.3	67.3	60.3	22.8
<b>Region</b>															
North Central	76.0	64.9	20.2	36.1	74.2	72.4	15.7	16.0	57.1	49.2	32.0	21.7	67.7	66.3	21.3
North East	58.2	25.5	39.5	25.5	45.8	42.5	42.8	11.6	45.6	37.1	41.5	7.9	51.7	37.7	39.2
North West	78.0	44.9	18.7	18.5	68.1	42.9	24.7	15.9	84.1	60.0	10.6	11.7	73.3	54.7	20.1
South East	73.2	49.1	23.1	35.7	52.4	47.7	35.4	34.8	71.3	62.7	18.9	24.2	54.9	58.6	26.9
South South	78.6	70.3	17.0	52.9	73.0	80.4	10.8	28.2	77.8	78.9	10.3	31.2	64.9	78.4	15.3
South West	89.5	81.4	6.8	50.7	86.0	80.7	6.6	23.0	83.0	76.6	9.8	24.5	78.8	83.7	8.5
<b>Education</b>															
None	68.6	44.2	27.5	0.6	48.6	31.3	43.5	0.4	57.5	32.1	36.1	0.5	51.3	32.3	42.0
Primary	84.3	65.3	12.6	18.0	69.1	60.8	19.8	5.2	69.1	56.0	21.3	5.0	60.5	57.4	26.4
Secondary+	90.6	85.9	5.5	65.9	84.2	84.8	5.6	36.0	81.4	79.5	8.7	31.3	74.7	80.7	10.4
<b>Household wealth</b>															
Poor	68.7	36.1	29.4	14.4	53.5	34.5	39.2	4.3	51.2	16.7	44.9	6.8	50.8	29.3	42.0
Middle	85.1	74.4	10.0	37.1	76.1	69.0	14.1	16.0	75.5	67.7	13.0	17.6	70.4	74.9	13.9
Rich	92.0	90.7	3.8	61.1	83.6	89.3	4.7	36.7	85.0	89.2	4.9	35.0	78.4	89.6	6.4
<b>Overall Urban</b>	82.1	67.4	14.3	39.6	72.2	66.5	18.0	21.1	73.0	63.1	18.0	21.8	68.5	68.8	18.3
<b>Overall Rural</b>	43.7	11.7	55.1	15.7	41.9	20.9	50.0	7.3	51.9	21.6	43.8	6.3	45.5	23.3	48.7
<b>Overall Nigeria</b>	53.3	25.5	44.9	23.1	51.3	35.0	40.1	12.1	59.2	35.9	34.9	11.8	53.7	39.6	37.8
<b>No. of Women (Unweighted)</b>															
Overall Urban	2922	2510	474	1043	1920	1770	505	565	2041	1705	736	2127	7038	6893	2151
Overall Rural	2346	616	2853	852	2303	1135	2758	355	2357	910	2013	1298	9794	4919	11857
Overall Nigeria	5268	3126	3327	1895	4223	2905	3263	920	4398	2615	2749	3425	16832	11812	14008
<b>No. of Women (Weighted)</b>															
Overall Urban	1795	1474	312	1005	1833	1688	458	556	1920	1660	472	2604	8171	8209	2182
Overall Rural	2884	768	3630	890	2373	1186	2832	363	2588	1077	2187	1342	9754	5001	10448
Overall Nigeria	4679	2242	3942	1894	4206	2875	3290	918	4508	2737	2660	3946	17925	13210	12630

\*In 1990 DHS, "no media" refers to no radio or TV; while in 1999, 2003 and 2008, "no media" refers to no newspaper, radio, or TV.

**Table 2.8: Exposure to Mass Media, Men, Urban Nigeria**

Percentage of Men (Aged 15-59) Who Are Usually Exposed to Specific Media at Least Once a Week by Background Characteristics, Urban Nigeria, 1993, 1999, 2003 and 2008

	1999				2003				2008			
	News- paper at least once a week	Radio at least once a week	TV at least once a week	None of these 3	News- paper at least once a week	Radio at least once a week	TV at least once a week	None of these 3	News- paper at least once a week	Radio at least once a week	TV at least once a week	None of these 3
<b>Age</b>												
<20	54.8	84.3	88.9	6.4	29.7	81.4	73.5	11.0	33.6	81.7	75.1	8.3
20-29	70.9	93.1	90.7	2.8	45.7	89.3	73.8	7.4	49.6	87.7	78.8	4.6
30-39	71.8	91.7	82.8	5.4	47.5	95.0	70.0	3.8	52.5	89.7	78.7	4.9
40+	56.8	87.7	73.3	8.7	44.1	90.3	58.2	8.8	46.9	88.7	71.7	8.3
<b>Region</b>												
North Central	50.2	87.6	84.9	6.1	19.3	76.4	57.4	16.8	44.4	86.9	72.7	6.0
North East	62.5	86.1	81.2	7.2	34.0	88.7	52.8	7.1	21.6	70.3	40.8	22.9
North West	43.4	84.3	68.9	10.6	36.6	89.5	62.0	7.3	35.2	88.1	64.2	7.5
South East	37.7	73.5	61.0	20.1	55.2	93.2	75.7	5.4	45.8	88.6	77.8	6.5
South South	60.6	80.6	80.1	8.7	44.0	82.3	66.4	15.1	50.3	85.3	86.5	4.1
South West	84.6	99.0	94.0	0.0	56.9	96.7	87.7	1.7	58.7	92.3	87.2	2.2
<b>Education</b>												
None	4.9	73.3	42.1	22.7	3.6	86.0	38.5	10.3	2.3	70.5	29.9	26.4
Primary	47.4	84.7	73.4	11.0	21.9	80.5	51.5	16.3	21.5	84.5	65.3	11.2
Secondary+	79.6	93.7	94.1	1.3	56.7	92.9	80.5	4.2	57.9	90.2	84.2	2.7
<b>Household wealth</b>												
Poor	45.6	80.7	68.2	14.1	20.8	84.0	32.9	14.1	21.6	78.3	40.9	17.1
Middle	62.4	92.1	82.8	4.0	36.9	87.6	65.7	9.2	44.7	88.1	82.2	4.1
Rich	76.7	93.2	93.8	1.7	61.7	94.1	94.6	2.3	64.7	92.6	93.0	1.4
<b>Overall Urban</b>	63.6	89.3	83.2	6.0	42.7	89.3	69.1	7.7	47.2	87.5	76.4	6.2
<b>Overall Rural</b>	32.0	73.6	36.9	21.5	19.3	84.2	32.7	14.1	18.6	76.7	34.9	19.4
<b>Overall Nigeria</b>	41.7	78.3	51.2	16.7	28.0	86.1	46.2	11.7	29.2	80.8	50.4	14.5
<b>No. of Men (Unweighted)</b>												
Overall Urban	548	763	709	52	393	858	649	92	2290	4428	3758	372
Overall Rural	552	1264	638	375	274	1153	409	183	1895	7738	3440	2208
Overall Nigeria	1100	2027	1347	427	667	2011	1058	275	4185	12166	7198	2580

The data also show that household wealth status is linearly related to exposure to mass media. On average, 90 percent of women from rich households had watched television every week across all four survey years; less than one in three did the same among women in poor households, with only 16.7 percent watching the television in 2003. For urban men, over 90 percent in rich households had watched television every week. Similarly, there is a positive linear relationship between level of education and access to the mass media. Women and men with higher education were, on average, three times more likely to have access to the mass media relative to those with no education. In terms of access to the mass media by region, women in urban South West, followed by those in the South South zone, had the most access to the mass media across three survey periods; whereas women in the North East had the least exposure over time. Urban rich

men in South West zone had the most access to mass media across three survey periods, compared to those in the poor and middle wealth households.

## 2.8. Employment Status

Like education, employment can also be a source of empowerment for women. Employed women and men are those who are currently working or worked at any time during the 12 months preceding the survey. Table 2.9 indicates that the level of employment among urban women was higher in 2003 (57.8 percent) and 2008 (59.7 percent) than the 1999 levels (52.8 percent). It is also noteworthy that as unemployment increased slightly among the urban men in 2003 (31.6 percent) from the 1999 levels of 31.8 percent, it had decreased sharply to 20.6 percent in 2008. Meanwhile, the employment levels of the urban men increased to 77.4 percent in 2008 from the 63.0 percent levels of 1999. As

expected, urban women younger than 20 years of age were more likely to be unemployed than older women. The employment status of urban men shows the same pattern as urban women's employment status. There are visible differentials in employment status by region. Unemployment was highest in North West for all three survey periods (70.3

percent, 49.3 percent and 52.4 percent in 1999, 2003 and 2008, respectively) among urban women; and South West had the lowest levels of unemployment (30.8, percent, 32.5 and 31.2 percent). For urban men, unemployment was highest in the South-South and lowest in North East and North West.

**Table 2.9: Employment Status of Women and Men, Urban Nigeria**  
Percent Distribution of Women and Men by Employment Status, According to Background Characteristics, Urban Nigeria, 1999, 2003 and 2008

	1999			2003			2008		
	Currently not working Did not work in last 12 months	Worked in last 12 months	Currently working	Currently not working Did not work in last 12 months	Worked in last 12 months	Currently working	Currently not working Did not work in last 12 months	Worked in last 12 months	Currently working
<b>Women</b>									
<b>Age</b>									
<20	83.6	0.5	15.1	78.5	1.1	20.4	77.9	1.3	20.6
20-29	50.3	1.6	47.5	41.4	3.0	55.5	40.5	2.6	56.7
30-39	23.4	1.5	74.8	18.3	1.9	79.8	18.3	2.6	79.0
40+	18.8	0.7	80.2	15.6	2.2	82.2	14.4	2.6	82.9
<b>Region</b>									
North Central	43.5	0.2	55.8	41.9	1.0	57.0	38.0	1.4	60.6
North East	66.5	1.3	32.2	45.4	4.8	49.8	42.1	2.9	54.8
North West	70.3	0.7	28.7	49.3	0.4	50.2	52.4	5.6	41.8
South East	40.5	1.3	57.2	32.4	2.9	64.6	39.5	1.2	58.9
South South	46.0	2.0	52.0	39.0	3.9	57.2	35.0	3.7	61.2
South West	30.8	1.6	66.6	32.5	1.4	66.1	31.2	1.2	67.6
<b>Overall Urban</b>	45.4	1.2	52.8	40.0	2.2	57.8	37.8	2.4	59.7
<b>Overall Rural</b>	52.5	1.4	45.7	42.5	2.2	55.3	36.8	4.2	58.8
<b>Overall Nigeria</b>	50.3	1.4	47.9	41.6	2.2	56.1	37.2	3.5	59.1
<b>No. of Women (Unweighted)</b>									
Overall Urban	1254	31	1399	1258	65	1731	4069	259	6143
Overall Rural	2916	79	2487	1961	101	2497	8607	942	13306
Overall Nigeria	4170	110	3886	3219	166	4228	12676	1201	19449
<b>Men</b>									
<b>Age</b>									
<20	84.3	6.7	9.1	80.9	2.3	13.9	64.0	3.2	32.8
20-29	48.8	5.3	45.9	37.5	4.9	57.0	27.3	2.7	69.8
30-39	5.6	6.2	88.1	6.8	2.3	90.9	3.5	1.3	95.3
40+	1.7	3.0	95.3	7.1	0.6	92.3	2.4	0.6	96.9
<b>Region</b>									
North Central	33.9	6.1	60.0	36.8	0.9	61.6	19.5	2.5	78.0
North East	19.5	5.4	75.1	22.7	2.9	74.2	11.3	2.5	85.9
North West	15.4	10.7	73.9	25.6	5.1	67.0	20.7	1.5	77.5
South East	39.1	3.1	57.8	27.0	3.6	68.3	20.7	0.3	78.9
South South	46.4	5.5	47.5	39.4	1.8	58.8	24.7	4.8	70.6
South West	34.6	2.7	62.7	37.5	1.6	60.9	21.6	1.1	77.3
<b>Overall Urban</b>	31.8	5.1	63.0	31.6	2.8	64.8	20.6	1.9	77.4
<b>Overall Rural</b>	20.4	6.7	72.7	22.9	3.2	72.7	13.7	1.8	84.5
<b>Overall Nigeria</b>	23.9	6.2	69.7	26.2	3.1	69.8	16.3	1.8	81.8
<b>No. of Men (Unweighted)</b>									
Overall Urban	259	45	550	305	28	641	1058	98	3973
Overall Rural	356	115	1253	309	44	995	1279	182	8886
Overall Nigeria	615	160	1803	614	72	1636	2337	280	12859

## 2.9. Women's Control over Earnings

Table 2.10 shows that over three-quarters of women in the 1999 and 2003 surveys who received cash earnings indicated that they alone decided how to spend their earnings. The proportion of women who decide on how their earnings are utilized decreased to 65.6 percent in 2008 from 77.8 percent in 2003. Women who reported that they make joint decisions with their spouses were more than one in 10 in the first two survey periods. This figure increased by about 10 percentage points in 2008. The proportion of women who reported that someone else made decisions on their spending declined from 10.1 percent in 1999 to 8.0 percent in 2003, and rose to 13.1 percent in 2008.

Women over 40 years in 1999 were more likely to make decisions alone on how their earnings were utilized than those in other age groups. This was not the case with women in 2003 and 2008, where those in ages 20-29 in 2003 and younger than 20 years of

age in 2008 had the highest proportion of women who decided alone on their earnings (82.1 percent and 71.2 percent, respectively). South East had the lowest proportion of women who made decisions on their earnings while the North West had the highest proportion. This pattern was similar in 2008 but different in 2003. While education had an inverse relationship with the proportion of women who made decisions alone on their earnings in 1999 and 2008, the reverse was the case in 2003. Meanwhile, poor women reported that someone else made decisions on their earnings compared to their counterparts who were in the middle and rich households for all the three survey periods.

The proportions of women making unilateral decisions on their earnings in urban areas were higher than in rural areas in 1999 and 2003, but in 2008 a higher proportion of women in rural areas made unilateral decisions compared to women in urban areas.

**Table 2.10: Women's Control over Earnings, Urban Nigeria**  
Percentage of Women Receiving Cash for Work in the Last 12 Months by Person Who Decides How Earnings Are Used, According to Selected Background Characteristics, Nigeria 1999, 2003 and 2008

	1999			2003			2008		
	Self only	Jointly	Someone else only	Self only	Jointly	Someone else only	Self only	Jointly	Someone else only
<b>Age</b>									
<20	62.1	18.1	19.8	66.8	11.9	21.3	71.2	15.4	13.4
20-29	78.9	12.3	8.9	82.1	10.7	7.3	65.7	18.7	15.7
30-39	73.3	15.0	11.7	75.5	17.3	7.2	64.8	22.9	12.4
40+	81.5	11.2	7.4	77.5	16.1	6.4	66.2	23.0	10.9
<b>Region</b>									
North Central	82.4	8.7	9.0	71.0	18.3	10.7	48.2	35.9	15.9
North East	80.6	10.2	9.2	75.1	15.2	9.8	75.0	8.9	16.2
North West	88.6	5.5	5.9	80.3	14.5	5.2	87.8	4.1	8.1
South East	53.9	28.9	17.2	75.6	16.8	7.7	34.3	31.7	34.1
South South	65.1	17.6	17.4	73.2	15.7	11.1	65.3	24.4	10.4
South West	79.3	12.7	8.0	82.6	10.9	6.5	69.3	22.3	8.5
<b>Education</b>									
None	86.4	6.3	7.3	76.8	16.0	7.2	75.5	9.8	14.7
Primary	78.7	12.3	9.1	78.0	13.2	8.8	65.8	19.4	14.8
Secondary+	71.8	16.6	11.7	78.2	13.8	8.0	62.1	26.1	11.9
<b>Household wealth</b>									
Poor	82.8	7.7	9.5	74.7	16.1	9.2	70.9	14.1	15.0
Middle	79.0	12.5	8.6	78.8	13.9	7.4	64.8	21.1	14.1
Rich	70.6	17.6	11.8	78.8	13.5	7.7	63.1	25.7	11.2
<b>Overall Urban</b>	76.6	13.3	10.1	77.8	14.2	8.0	65.6	21.4	13.1
<b>Overall Rural</b>	70.3	14.6	15.1	70.8	17.8	11.4	68.0	18.5	13.6
<b>Overall Nigeria</b>	72.6	14.1	13.3	73.5	16.5	10.1	67.1	19.5	13.4
<b>No. of Women</b>									
Overall Urban	965	171	128	1,207	248	134	2,663	928	560
Overall Rural	1,443	298	310	1,431	360	221	5,851	1,692	1,323
Overall Nigeria	2,408	469	438	2,638	608	355	8,514	2,620	1,883

## 2.10. Women's Participation in Decision Making

Table 2.11 shows that participation of women taking part in three decision-making indicators increased with age for each indicator in the 2003 and 2008 surveys (these indicators were not include in the 1990 and 1999 surveys).

As the age of women increased, they were more likely to participate in decision making on their health care, daily purchases, and visiting their families. On all three decisions, a greater proportion of women in South East participated than the other zones of the country. Conversely, women in North

East and North West were less likely to participate in decision making compare to other zones.

Education has a linear relationship with participation in decision making. As the level of education increased, the proportion of women participating in decision making also increased in 2008. However, it increased only for those with primary level before decreasing in 2003. Similarly, there is a positive correlation between women's participation in decision making and economic status. As expected, the higher the economic status of women, the higher their participation in decision making.

**Table 2.11: Women's Participation in Decision Making, Urban Nigeria**  
Percentage of Women Who Say They Alone or Jointly Have the Final Say in Specific Decisions, by Selected Background Characteristics, Urban Nigeria 2003 and 2008\*

	2003				2008			
	Own health care	Making daily purchases	Visits to family or relatives	None	Own health care	Making daily purchases	Visits to family or relatives	None
<b>Age</b>								
<20	11.5	8.2	17.9	76.6	34.2	24.1	41.7	49.7
20-29	26.1	18.9	38.4	53.3	49.0	39.3	58.6	36.2
30-39	42.3	37.9	54.6	36.6	58.9	50.3	67.6	27.5
40+	51.7	44.0	62.0	29.2	60.6	50.6	69.7	25.7
<b>Region</b>								
North Central	28.6	18.0	28.9	55.5	60.1	58.8	72.0	22.8
North East	12.5	11.8	40.5	55.8	26.9	23.0	38.2	56.2
North West	17.9	16.7	32.2	64.0	25.5	21.0	33.2	61.5
South East	58.4	44.8	64.9	29.7	57.7	50.7	66.3	27.5
South South	35.1	37.5	45.4	46.2	70.1	55.2	76.7	15.5
South West	39.4	29.0	44.9	43.8	69.6	54.5	78.7	17.9
<b>Education</b>								
None	22.0	19.1	35.5	58.5	30.1	25.7	41.9	53.5
Primary	33.7	31.8	48.3	42.3	54.9	44.5	64.2	30.3
Secondary+	34.5	26.7	43.0	48.5	65.2	54.1	73.0	21.8
<b>Household wealth</b>								
Poor	23.0	20.8	39.1	53.9	38.9	32.9	50.1	45.2
Middle	29.2	24.9	38.7	53.6	56.2	44.9	64.7	29.3
Rich	38.3	29.8	47.2	43.9	65.2	55.0	73.2	22.2
<b>Overall Urban</b>	31.2	25.8	42.1	49.8	54.6	45.3	63.7	31.2
<b>Overall Rural</b>	21.7	18.8	33.7	59.0	38.8	34.3	51.1	44.5
<b>Overall Nigeria</b>	24.9	21.1	36.6	55.9	43.7	37.8	55.1	40.4
<b>No. of Women</b>								
Overall Urban	935	743	1,205	1,447	3,429	2,907	4,060	2,174
Overall Rural	1,058	908	1,617	2,446	6,671	6,001	8,827	7,731
Overall Nigeria	1,993	1,651	2,822	3,893	10,100	8,908	12,887	9,905

\* Data for 1990 and 1999 did not include this variables



### Chapter 3: Fertility and Fertility Preferences

Fertility and individual fertility preferences explain to a large extent the rate of population growth and size. Fertility behavior, especially as it concerns pregnancies and childbirths, has a major impact on the health and well-being of mothers and their children. It therefore forms a good basis for formulating and monitoring population and health policies. Nigeria adopted a population policy in 1988 (the National Policy on Population for Development, Unity, Progress and Self-Reliance), which was reviewed and updated in 2004 (National Policy on Population for Sustainable Development). One of the targets of the policy was the need to “achieve a reduction in total fertility rate of 0.6 children [per woman] every five years”. It is evident that some progress has been made, especially in the areas of age at marriage and use of modern contraception and education of women.

This chapter assesses the progress in urban Nigeria and examines regional and socioeconomic variations that exist with regard to TFR, children ever born (CEB), length of birth interval, age at first childbirth, teenage motherhood, ideal and unwanted number of children. Differentials will be discussed in terms of mother’s place of residence (region and sector), education and household wealth.

#### 3.1. Total Fertility Rate

TFR is the average number of live births a woman (or group of women) would have during her lifetime if she were to pass through her child-bearing years (ages 15-49) conforming to age-specific fertility rates of a given year. Table 3.1 shows the level and trends in TFR for the three-year period preceding the 1990, 1999, 2003, and 2008 surveys by background characteristics in urban Nigeria. The data show that Nigeria has experienced a high fertility, ranging from a low of 4.7 children in 1999 to a high of 6.0 in 1990 or about 2.7 to 4.0 children above replacement level. The 2003 and 2008 DHS reported that an average Nigerian woman would have given birth to about 5.7 children by the end of her reproductive years.

**Table 3.1: Fertility by Background Characteristics, Urban Nigeria**  
Trends in Total Fertility Rates by Background Characteristics, Nigeria 1990, 1999, 2003, 2008

Region	Total Fertility Rate*			
	1990	1999	2003	2008
<b>Region</b>				
North Central	5.5	3.9	4.8	4.5
North East	6.3	6.3	6.5	6.9
North West	6.0	4.9	6.3	6.2
South East	4.0	3.9	4.4	4.7
South South	3.5	3.9	3.5	3.9
South West	5.0	3.7	3.8	4.0
<b>Education</b>				
None	6.1	5.5	6.3	7.0
Primary	5.8	4.8	6.3	6.0
Secondary+	4.1	3.7	3.9	3.9
<b>Household wealth</b>				
Poor	5.6	5.0	5.8	6.1
Middle	5.1	4.3	5.2	4.6
Rich	4.4	3.7	4.1	3.9
<b>Overall Urban</b>	5.1	4.3	4.9	4.7
<b>Overall Rural</b>	6.4	5.0	6.1	6.3
<b>Overall Nigeria</b>	6.0	4.7	5.7	5.7
<b>No. of respondents (All women, Unweighted)</b>				
Overall Urban	3,530	2,697	3,057	10,489
Overall Rural	5,251	5,502	4,563	22,896
Overall Nigeria	8,781	8,199	7,620	33,385

\* Total fertility rates are for three years preceding survey.

During the period under review, Nigeria’s fertility dangled between slightly declining and stalling. There was a slight increase observed between 1999 and 2003, from a TFR of 4.7 to 5.7 births. Overall, only a decrease of about 0.3 points (from 6.0 to 5.7) has been recorded in 18 years (1990 to 2008). TFR decreased by 1.3 children (21.5 percent) between 1990 and 1999, and by 0.9 children (19.7 percent) between 1999 and 2003, but remained unchanged between 2003 and 2008. In 2008, TFR was lower in urban areas than in rural areas, at 4.7 live births versus 6.3, respectively. The rate of fertility reduction was also higher in urban areas. In the 18 years under observation, there was a 6.6 percent reduction in fertility in urban areas as compared to 0.8 percent reduction in rural areas. The factors identified as explanations for this high fertility trend in Nigeria are high infant and child mortality, early and universal marriage, early child bearing as well as child bearing within much of the reproductive life span, low use of contraception and high social values placed on child bearing (Bamikale & Akinrinola, 2001). The HIV/AIDS epidemic has not only “overtaxed weak public health systems, [but

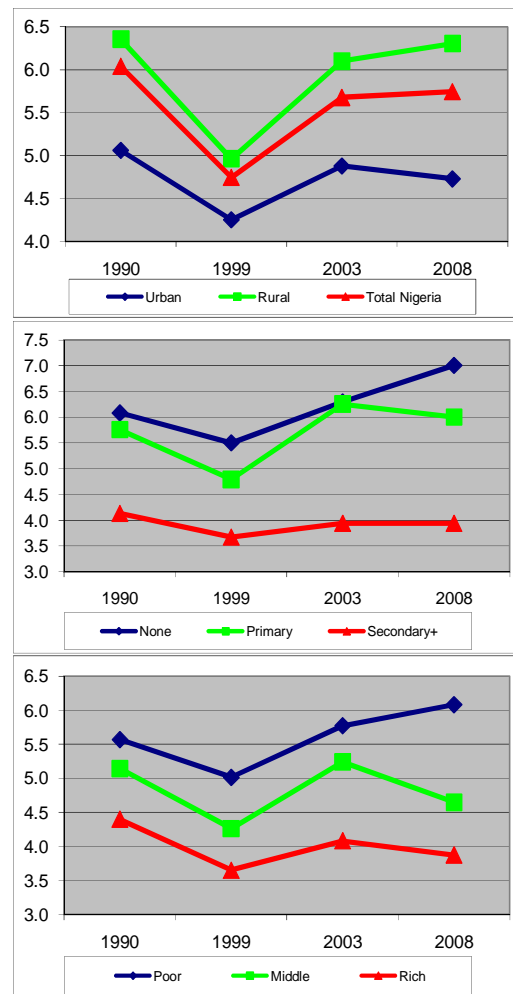
may have]... shifted resources, including personnel, away from family planning” (NPC, 2004).

Regional and socioeconomic variations in fertility for urban Nigeria presented in table 3.1 show that the highest decline took place in the South West and North Central, 21.3 percent and 17.7 percent, respectively, between 1990 and 2008. TFR in urban North East and South South regions increased by 15.5 percent and 10.6 percent, respectively, in the 18-year period. The North West had a slower decline at 5.6 percent. The decreases took place mostly in the first 10 years (1990-1999); thereafter, TFR increased in most regions. Education remains an important factor in fertility reduction in urban Nigeria. Women with no education had higher fertility compared with those with primary, secondary or more education (figure 3.1). Women who had secondary or more education had a reduction of 4.7 percent in the 18 years survey period, while those with primary or no education recorded an increase of 4.2 percent and 15.2 percent, respectively, in the same period. Total fertility was highest among women of poor income households and lowest among women of rich income households in the 18 year survey period. Between 1990 and 2008, women of rich households achieved 11.9 percent reduction in TFR, while those of poor and middle income households had increases of 9.1 percent and 9.7 percent, respectively.

### 3.2. Children Ever Born

Children ever born to a woman estimates her lifetime fertility experience up to the time the data are collected (United Nations, 1983). Data on CEB are collected by asking women about their children born alive, in or out of present or prior marriage, living or dead at the time of the survey, living at home or not, excluding stillbirths and other fetal deaths. The data obtained are also useful for estimating average family size. Table 3.2 shows the mean number of children ever born by selected background characteristics in urban Nigeria in the 1990, 1999, 2003, 2008 DHS. The data show that the mean number of children ever born was 3.1 between 1990 and 2008. There was only a modest decline during the period under review. Mean number of children ever born is lower in urban than in rural areas; the difference is 0.8 birth for

1990, which declined to 0.5 birth in 1999, then 0.7 birth in 2003 and 1.0 birth in 2008. Using these data as average family sizes in these periods, it can be concluded that the average family size in the 18 years period under assessment declined consistently by 0.3 births in the urban area and 0.1 births in the rural area.



**Figure 3.1: Total fertility rate by urban-rural residence, education and wealth.**

**Table 3.2: Children Ever Born, Urban Nigeria**  
Mean Children Ever Born by Selected Background Characteristics, 1990, 1999, 2003, and 2008

	<b>Preceding birth intervals &lt;24 months</b>			
	1990	1999	2003	2008
<b>Age</b>				
<20	0.19	0.11	0.16	0.11
20-29	1.78	1.47	1.44	1.38
30-39	4.75	4.17	4.54	3.73
40+	6.01	5.65	6.25	5.66
<b>Region</b>				
North Central	2.79	2.51	2.63	2.42
North East	3.07	2.87	3.70	3.72
North West	3.55	3.37	3.50	3.64
South East	3.00	2.37	2.31	2.21
South South	2.60	2.18	2.07	1.86
South West	2.47	2.25	1.89	1.94
<b>Education</b>				
None	4.15	4.15	4.61	4.64
Primary	3.36	3.25	3.41	3.63
Secondary+	1.33	1.50	1.52	1.58
<b>Household wealth</b>				
Poor	3.13	3.04	3.54	3.28
Middle	2.69	2.48	2.78	2.32
Rich	2.44	2.17	1.97	1.95
<b>Overall Urban</b>	2.75	2.53	2.66	2.43
<b>Overall Rural</b>	3.50	2.99	3.32	3.40
<b>Overall Nigeria</b>	3.31	2.85	3.09	3.05
<b>No. of respondents (all women, unweighted)</b>				
Overall Urban	3,530	2,697	3,057	10,489
Overall Rural	5,251	5,502	4,563	22,896
Overall Nigeria	8,781	8,199	7,620	33,385

There are regional and socio-economic variations in CEB for urban Nigeria; the pattern is about the same as the TFR. The lowest mean numbers of CEB in all four surveys were observed mostly in the South West. Faster declines can be observed in southern Nigeria, especially the South South (29 percent) and South East (26 percent). In urban northern Nigeria, the mean number of CEB increased in the North East, stalled in the North West and declined modestly in the North Central. Not surprisingly, the mean number of CEB declined with education and household wealth. On average, the difference between the mean number of CEB for women with no education and those with secondary or more education was about three births, while that for women of poor and rich households was about one birth between 1990 and 2008.

### 3.3. Birth Intervals

Lengthened intervals between births have proven to help maternal and child health by allowing mothers time to recover from their previous pregnancy and delivery, and allowing surviving children more time for breastfeeding and less competition with other siblings over resources such as food and the mother's time (Goliber, Sanders, & Ross, 2009). Improved maternal, infant and child health outcomes are achieved through more than a two year interval between births, which will in the long run reduce fertility rates, since longer birth intervals result in women having fewer children during the course of their reproductive lives (Bamikale & Akinrinola, 2002).

Table 3.3 shows the percent distribution of non-first births in the five years preceding the 1990, 1999, 2003, and 2008 DHS in urban Nigeria by selected background characteristics. In 1990, 27.4 percent of births occurred at an interval of less than 24 months; the proportion improved slightly over time with reductions in the level of births that had less than 24 months interval. The trend shows that the percentage of women with birth intervals 24 months or more increased consistently between 1990 and 2003 in all sectors. In 2003 and 2008 however, the percentage of women who had birth intervals of 24 months or more slightly decreased for all the sectors.

**Table 3.3: Preceding Birth Intervals, Urban Nigeria**  
Percent Distribution of Non-first Births in the Five Years  
Preceding the Survey with Preceding Birth Intervals Less than  
24 Months, by Selected Background Characteristics,  
1990, 1999, 2003 and 2008

	Preceding birth intervals <24 months			
	1990	1999	2003	2008
<b>Region</b>				
North Central	25.0	23.5	18.1	19.9
North East	24.8	20.2	24.8	26.0
North West	22.4	34.3	20.8	25.0
South East	44.7	32.5	42.7	38.0
South South	23.6	19.3	20.0	22.9
South West	23.6	16.7	16.8	15.5
<b>Education</b>				
None	20.5	27.2	23.6	24.1
Primary	25.9	23.1	18.5	20.7
Secondary+	34.8	21.0	25.3	24.9
<b>Household wealth</b>				
Poor	21.2	25.1	23.8	23.5
Middle	25.7	20.6	18.2	22.5
Rich	30.9	25.7	27.2	24.9
<b>Overall Urban</b>	25.8	23.8	22.9	23.7
<b>Overall Rural</b>	27.8	27.5	24.9	23.8
<b>Overall Nigeria</b>	27.4	26.5	24.3	23.7
<b>No. of Non-First Births (Unweighted)</b>				
Overall Urban	2,274	1,436	1,689	6,015
Overall Rural	4,346	3,666	3,240	17,285
Overall Nigeria	6,620	5,102	4,929	23,300

Women in the South East were most likely to have birth intervals at less than 24 months than any other region in urban Nigeria. In 1990, 44.7 percent of preceding birth intervals were less than 24 months apart in the South East; the proportion decreased in 1999 to 32.5 percent, and increased to 42.7 percent and 38 percent in 2003 and 2008, respectively.

Women in the South West were most likely to have birth intervals at 24 months or more. The trend in all regions except North Central shows a series of fluctuating levels between surveys, giving no clear pattern. In the North Central zone, an increase in the percentage of women who had births more than 24 months from preceding births was noticed between 1990 and 2003. The percentage of children born less than 24 months after a previous birth, across the states of interest, is low in 2008, with percentages as low as 13.3 in Kwara state and as high as 21.7 percent in Edo state in 2008. There seems to be mixed trends over the years with some states peaking in 1999 and others in 2003.

Like regional variations, there is no clear pattern shown in birth intervals by education and household

wealth. In 1990, the percentage of women who had their births less than 24 months apart increased with both mother's education and household wealth. In 1999, women with no education were less likely than women with education to space births appropriately. The 1999 data (on household wealth) and the 2003 and 2008 data (for education and household wealth), show no pattern that poor urban women and those with no education space births more appropriately; there are series of fluctuating levels between surveys.

### 3.4. Age at First Birth

The average age of women at the birth of their first child is known to be one of the proximate determinants of fertility. With low contraceptive use as in Nigeria, younger ages at first birth tend to boost the number of children a woman will have. Even when family planning is widespread, the timing of first births can affect completed family size if contraception is used for spacing but not for limiting fertility (Ngalinda, 1998). Child bearing at an early age entails substantial health risks for both the mother and the child. Being pregnant early in life is said to contribute to an estimated 70,000 maternal deaths worldwide annually among girls aged 15 to 19. An infant's risk of dying is 60 percent higher when the mother is under 18 years of age compared to older mothers (United Nations, 2009). Adolescent child bearing is known to hinder a mother's educational attainment and, thus, may reduce economic opportunity for the mother and her household.

Tables 3.4a and 3.4b show the median age at first birth among women aged 20-49 years and 25-49 years by selected background characteristics in urban Nigeria (1990, 1999, 2003 and 2008). The data show that in urban Nigeria the median age at first birth rose from 20 years in 1990 to 22 years in 2008. At the national level, the median age remained almost unchanged at 20 years. Mothers living in urban North East and urban North West tend to start child bearing early with a median age at first birth ranging from 17 to 19 years during the 18-year review period, while mothers living in the South West and South East tend to initiate child bearing later, with median age at first birth varying from 20 to 24 years. The median age of mothers at first birth

increased steadily, although at different rates, in the regions, by an average of two years between 1990 and 2008, as can be noticed in Figure 3.2. At the state level, Kwara, Edo and Oyo remained

**Table 3.4a: Age at First Birth, Women Aged 20-49, Urban Nigeria**

Median Age at First Birth among Women Aged 20-49 Years by Selected Background Characteristics, 1990, 1999, 2003 and 2008

	Median age at first birth*			
	1990	1999	2003	2008
<b>Age</b>				
20-29	21.3	22.3	22.5	23.7
30-39	20.0	20.9	19.7	22.4
40+	20.5	20.0	19.6	20.9
<b>Region</b>				
North Central	19.5	20.9	20.8	21.8
North East	17.3	19.6	18.2	18.5
North West	18.2	18.6	18.2	18.7
South East	21.7	22.6	24.3	25.1
South South	20.2	22.8	22.2	24.2
South West	21.6	22.2	22.7	24.0
<b>Education</b>				
None	18.7	18.5	17.2	18.1
Primary	19.9	19.7	19.8	20.0
Secondary+	22.9	24.0	23.7	24.9
<b>Household wealth</b>				
Poor	19.9	19.5	18.2	19.7
Middle	20.3	20.9	20.4	22.2
Rich	21.6	23.3	23.2	24.8
<b>Overall Urban</b>	20.6	21.3	20.9	22.6
<b>Overall Rural</b>	19.2	19.8	18.9	19.5
<b>Overall Nigeria</b>	19.6	20.2	19.6	20.5
<b>No. of respondents (All women, Unweighted)</b>				
Overall Urban	2,793	2,131	2,368	8,462
Overall Rural	4,310	4,294	3,503	18,332
Overall Nigeria	7,103	6,425	5,871	26,794

consistently at 20 years and over for the three years of survey while FCT was 23.7 in 2003 and Kaduna women gave birth at 20 years in all the three years.

**Table 3.4b: Age at First Birth, Women Aged 25-49, Urban Nigeria**

Median Age at First Birth among Women Aged 25-49 Years by Selected Background Characteristics, 1990, 1999, 2003 and 2008

	Median age at first birth*			
	1990	1999	2003	2008
<b>Age</b>				
20-29	20.8	21.7	22.2	23.5
30-39	20.0	20.9	19.7	22.4
40+	20.5	20.0	19.6	20.9
<b>Region</b>				
North Central	19.7	20.2	20.2	21.3
North East	17.1	19.3	17.9	18.5
North West	18.3	18.6	17.7	18.5
South East	21.6	22.0	22.8	24.7
South South	19.7	21.4	21.0	23.6
South West	21.1	21.9	22.3	23.8
<b>Education</b>				
None	18.9	18.7	17.2	18.2
Primary	20.0	19.4	19.5	20.1
Secondary+	22.7	23.7	22.9	24.8
<b>Household wealth</b>				
Poor	19.8	19.2	17.7	19.6
Middle	20.1	20.4	19.8	21.8
Rich	21.2	22.8	22.4	24.6
<b>Overall Urban</b>	20.3	20.9	20.3	22.2
<b>Overall Rural</b>	19.3	19.7	18.7	19.5
<b>Overall Nigeria</b>	19.6	20.0	19.3	20.3
<b>No. of respondents (All women, Unweighted)</b>				
Overall Urban	2,029	1,602	1,775	6,461
Overall Rural	3,392	3,295	2,632	14,230
Overall Nigeria	5,421	4,897	4,407	20,691

\*Used Even History Analysis where failure event was "has given birth."

The median age at first birth varied only minimally from 22 to 24 years among mothers who have secondary or more education, and increased from 20 to 22 years among mothers from rich households. As shown in figures 3.2 and 3.3, median age at first birth either stalled or declined for women of the other categories, creating a gap that widened steadily from survey to survey between women of the two extreme categories.

### 3.5. Teenage Pregnancy and Motherhood

Teenage childbearing is generally associated with higher rates of maternal morbidity and mortality, greater risks for delivery complications, low-birth weight infants and child mortality (NPC, 2009),

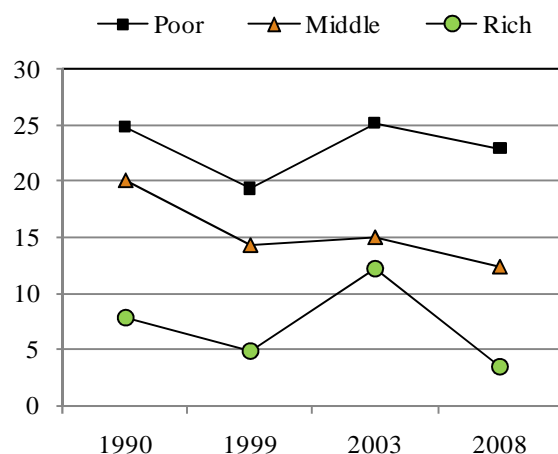
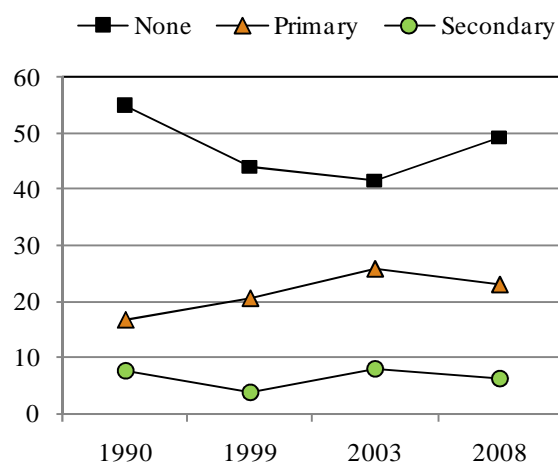
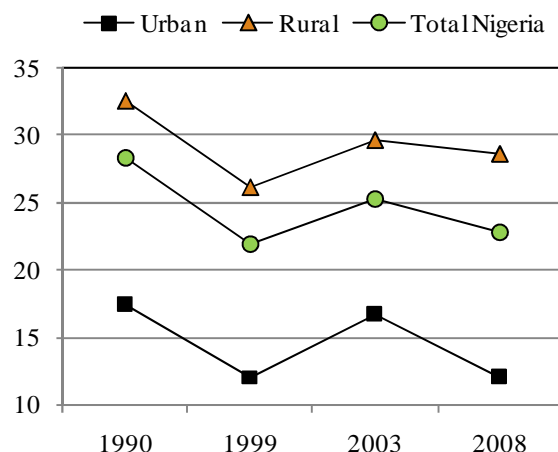
largely because most of these pregnancies are unplanned and are less likely to receive proper antenatal care, as teenagers tend to attend clinics for the first time towards the end of their pregnancy period or at delivery (Speizer, Magnani & Colvin, 2003; Woldemichael, 2005). Table 3.5 shows the percentage of women aged 15-19 who were mothers or pregnant with their first child by selected background characteristics in urban Nigeria in 1990, 1999, 2003, and 2008. The data show that on average between 1990 and 2008, 24.6 percent of teenagers were either mothers or pregnant with their first child. In 1990, 28.3 percent was observed; 21.9 percent in 1999; 25.2 percent in 2003; and 22.9 percent in 2008. Marriage may be the most important factor in teenage motherhood in urban

Nigeria because this has mostly occurred in the northern regions, where early marriage is common.

In the four surveys, there was a higher percentage of teenage mothers among rural than urban dwellers, with the level almost doubling from survey to survey. Although these levels fluctuate between surveys, a slow decline is evident among both rural and urban dwellers. Urban teenage pregnancies fell from 17 percent in 1990 to 12 percent in 2008.

**Table 3.5: Teenage Motherhood, Urban Nigeria**  
Percentage of Women 15-19 Who Are Mothers or Pregnant with their First Child by Selected Background Characteristics, 1990, 1999, 2003 and 2008

Region	Teenage motherhood			
	1990	1999	2003	2008
North Central	28.0	10.2	20.1	15.1
North East	47.7	33.1	32.1	27.7
North West	51.0	30.7	27.0	24.1
South East	5.7	9.1	12.4	5.6
South South	9.9	5.6	8.8	5.5
South West	7.2	3.4	5.5	7.2
<b>Education</b>				
None	54.9	44.2	41.7	49.4
Primary	16.8	20.6	25.8	23.1
Secondary+	7.6	3.7	8.1	6.3
<b>Household wealth</b>				
Poor	24.9	19.5	25.3	22.9
Middle	20.0	14.3	15.0	12.3
Rich	7.8	4.8	12.2	3.5
<b>Overall Urban</b>	17.4	12.1	16.7	12.0
<b>Overall Rural</b>	32.7	26.1	29.6	28.7
<b>Overall Nigeria</b>	28.3	21.9	25.2	22.9
<b>No. of respondents (teenagers aged 15-19 years, unweighted)</b>				
Overall Urban	737	566	689	2,027
Overall Rural	941	1,208	1,060	4,564
Overall Nigeria	1,678	1,774	1,749	6,591



**Figure 3.2: Teenage motherhood by urban-rural residence, education and wealth, urban Nigeria.**

Not surprisingly, the highest proportions of teenage mothers were found in the northern regions. The North West recorded a high percentage at 51.0 percent in 1990. The North West and North East consistently stand out as the regions with a high level of teenage mothers during the 18-year period of observation. It is also evident that teenage motherhood is on a decline in the northern regions, especially the North East and North West. The trend in the southern regions, on the other hand, shows no clear pattern. Education and household wealth are important factors in reducing teenage motherhood in urban Nigeria. In 1990, a high of 54.9 percent for teenage mothers was recorded among teenagers with no education, against 7.6 percent for those with secondary education or more, giving a difference of 47.3 percentage points between the two groups. In 1999, the result showed 44.2 percent versus 3.7 percent (more than 40 percentage points difference); in 2003, it was 41.7 percent versus 8.1 per cent (or 33.6 percentage point difference) and in 2008, 49.4 percent versus 6.3 per cent (or 43.1 percentage point difference). The percentage point difference in teenage motherhood between poor and rich teenagers is also substantial, with poor teenagers showing 17.1 percentage point difference compared with rich teenagers in 1990; 14.6 percentage points in 1999; 13.1 percentage points in 2003; and 19.4 percentage points in 2008. At state level, there is an apparent increase in teenage pregnancies in all states. Of all NURHI states/cities, only Kaduna showed some decline in the levels of teenage pregnancies between 2003 and 2008.

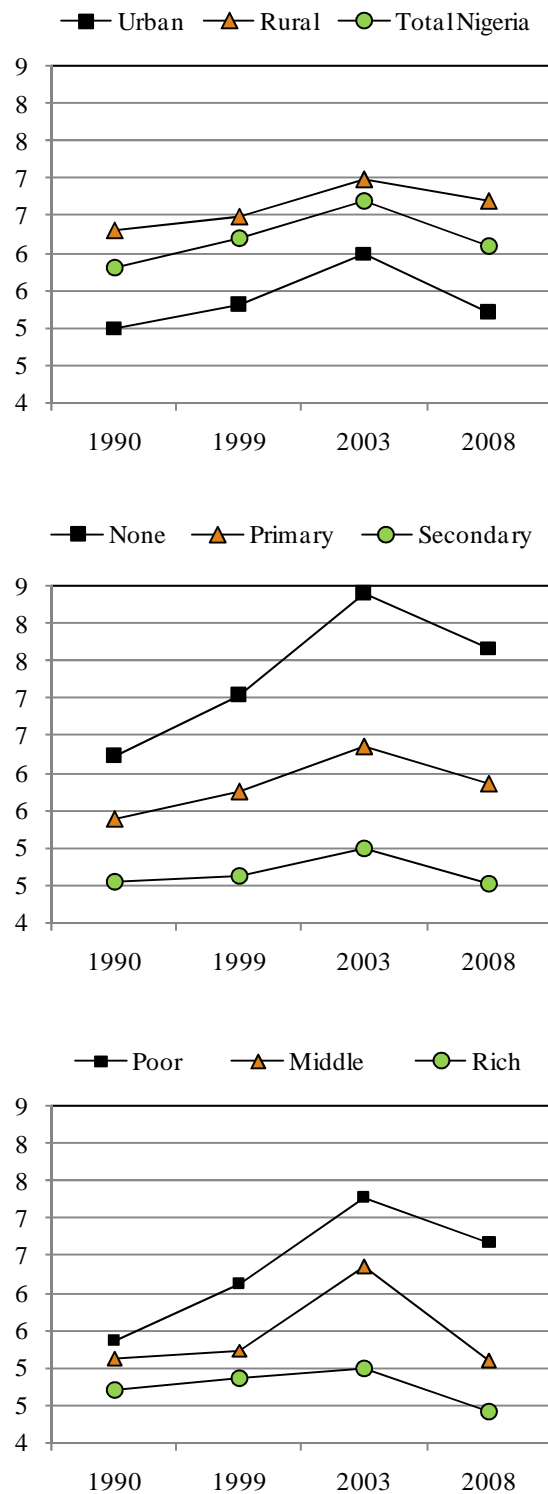
### 3.6. *Ideal Number of Children*

The number of children considered ideal by respondents is expected to indicate future fertility levels and trends, although there are data collection and measurement difficulties. In order to assess ideal number of children, the DHS asked women and men about the desired number of children they would have loved to have in their entire life if they could choose exactly that number. Table 3.6 presents the mean ideal number of children among women age 15-49 and men 15-59 by selected background characteristics in urban Nigeria. The data show that both males and females in Nigeria have a desire for large family sizes. In Nigeria as a whole, the ideal number of children is about six among women, and as high as eight children among men. The trend shows a decline for both females and males between 2003 and 2008 after a consistent rise between 1990 and 2003.

Rural respondents desire more children compared with urban respondents; and males generally prefer larger families than females. On average, rural females want about seven children compared with five children desired by those in the urban areas. Rural males desire eight children compared with six children desired by urban males. Table 3.6 also shows the mean ideal number of children among women and men by age. The pattern shows a steady increase with age in ideal number of children preferred by women. For men on the other hand, the ideal number of children preferred by those younger than 20 years of age to 30-39 shows no consistent pattern. There were increases by all ages between 1990 and 2003; however, in 2008 a notable decline was evident in their ideal number of children.

**Table 3.6:** Ideal Number of Children, Women and Men, Urban Nigeria  
Mean Ideal Number of Children among All Women Aged 15-49 and Men 15-59 by Selected Characteristics, 1990, 1999, 2003 and 2008

	Mean ideal number children among women				Mean ideal number children among men		
	1990	1999	2003	2008	1999	2003	2008
<b>Age</b>							
<20	4.7	4.9	5.5	4.8	5.1	5.9	5.6
20-29	4.7	5.1	5.6	5.0	5.4	6.6	5.5
30-39	5.6	5.6	6.5	5.4	5.8	6.1	5.6
40+	6.2	6.2	7.0	6.0	8.1	7.6	6.8
<b>Region</b>							
North Central	5.6	5.4	5.7	4.9	5.7	5.8	5.5
North East	6.4	5.9	7.8	7.8	7.3	9.8	11.0
North West	5.8	7.4	8.3	7.1	11.8	11.0	9.0
South East	5.6	5.9	5.0	5.2	6.4	4.9	5.3
South South	4.9	4.9	5.1	4.7	5.2	5.2	4.8
South West	4.7	4.6	4.6	4.3	4.5	4.6	4.4
<b>Education</b>							
None	6.2	7.0	8.4	7.7	10.5	11.8	11.2
Primary	5.4	5.8	6.4	5.9	7.0	7.0	6.8
Secondary+	4.5	4.6	5.0	4.5	5.3	5.9	5.2
<b>Household wealth</b>							
Poor	5.4	6.1	7.3	6.7	8.3	9.9	8.4
Middle	5.1	5.2	6.4	5.1	5.6	7.0	5.8
Rich	4.7	4.9	5.0	4.4	5.1	4.7	4.5
<b>Overall Urban</b>	5.0	5.3	6.0	5.2	6.1	6.6	5.8
<b>Overall Rural</b>	6.3	6.6	7.0	6.7	8.4	9.8	8.6
<b>Overall Nigeria</b>	5.8	6.2	6.7	6.1	7.7	8.6	7.5
<b>No. of respondents (All women and men, Unweighted)</b>							
Overall Urban	3,530	2,697	3,057	10,489	856	986	5,133
Overall Rural	5,251	5,502	4,563	22,896	1,728	1,360	10,353
Overall Nigeria	8,781	8,199	7,620	33,385	2,584	2,346	15,486



**Figure 3.3: Women's ideal number of children by urban-rural residence, education and wealth, urban Nigeria.**

There are notable variations among the regions for both women and men. Ideal family size is highest in the North West for both male and female respondents in the 18-year review period (7.1 children among women in 2008 versus 11.8 children among men in 1999) and lowest is in the South West where, interestingly, both males and females desire the same ideal number of children (about 4.5 children each). The trend shows a staggering pattern, having declines and increases between surveys. Ideal family size for both men and women is inversely related to education and household wealth in urban Nigeria, with ideal number of children decreasing as the women's and men's level of education and household wealth status increase. The difference in family size preference between women and men with no education and those with secondary education or more is 2.7 and 5.7 children on average, respectively. Comparing the urban poor and urban rich households, there is a difference of about 1.6 children among female and 4.1 children among male ideal family size preference.

### 3.7 Unwanted Fertility

Unwanted fertility is usually defined as actual fertility in excess of desired fertility. Although there are measurement difficulties due to a series of factors interfering with fertility preferences, the level of unwanted fertility can inform policy appropriately for reducing fertility levels and improving maternal and child health. It is also particularly useful for measuring the impact of the use of family planning measures, a justification for family planning efforts undertaken by governments. Knowledge of unwanted fertility also throws some light in the process of transition from high to low levels of fertility. It exists mostly in the intermediate transition stage, where couples are unable to control their fertility effectively. The two extreme stages of transition (the initial and the end) are said to be characterized by a nearly non-existent unwanted fertility level because fertility desires at these stages are either mostly unrestricted or completely controlled by couples (Hakkert, 2001). In the DHS, women were asked to recall if the births they had in the five years preceding the survey were wanted at the time (planned), wanted but at a later time (mistimed) or not wanted at all (unwanted). Table 3.7 shows the percent distribution of births in the

last five years preceding each survey (including current pregnancies) by fertility planning status by selected background characteristics.

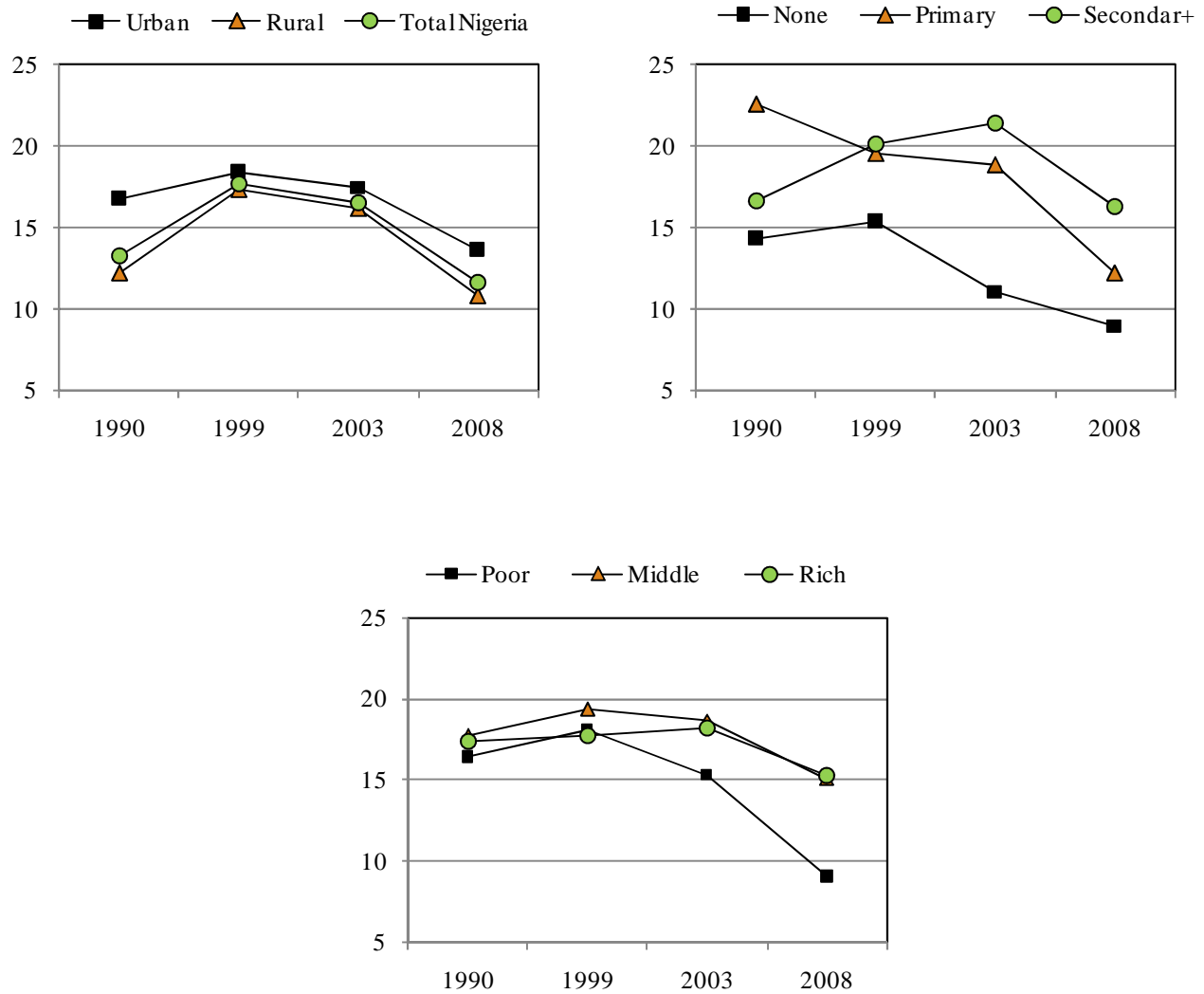
In Nigeria as a whole, the proportion of mistimed and unwanted births stood at 10.4 percent in 1990; 11.3 percent in 1999; 14.1 percent in 2003 and 10.3 percent in 2008. The percentage of mistimed births is a lot higher than unwanted births, especially in the 1990 and 1999 surveys, which may have implications for the level of met needs for family planning. The data show that urban women are more likely than their rural counterparts to have mistimed or unwanted births. On average, about only 4 percent of births in urban Nigeria were reported as unwanted in the 18-year survey period. There is a slow decline in the proportion of mistimed (wanted later) pregnancies, from about 11 percent in 1990 to about 7 percent in 2008. Adding un-timed and unwanted

fertility together, the result shows that the highest level of unwanted fertility in the 18 years of survey observation was recorded in the South South and the lowest in 1990, 2003 and 2008 was recorded in the North West. In 1999 however, the South East had the lowest unwanted fertility level of all regions. The percentage of unwanted fertility increased from 1990 to 2003 in the North East, South South and South West. There were declines witnessed in all regions in 2008. While the percentage of mistimed fertility increased with higher education, unwanted fertility, on the other hand, showed no particular pattern. Household wealth showed no clear association on the level of unwanted births, and despite the fluctuations between surveys, on a general note, the level of unwanted births declined for women in all education and household wealth categories, especially since 1999.

**Table 3.7: Wanted Fertility, Urban Nigeria**

Percent Distribution of Births in the Last Five Years Preceding Survey by Fertility Planning Status, by Selected Background Characteristics, 1990, 1999, 2003, and 2008

	1990		1999		2003		2008	
	Wanted later	Wanted no more	Wanted later	Wanted no more	Wanted later	Wanted no more	Wanted later	Wanted no more
<b>Region</b>								
North Central	15.7	1.0	7.6	0.8	9.2	5.2	5.3	3.7
North East	12.5	0.0	12.2	2.5	18.0	2.8	6.7	1.7
North West	8.1	1.1	11.2	1.8	2.5	1.1	5.4	2.0
South East	14.7	3.2	3.7	4.7	2.7	5.4	6.6	5.8
South South	11.9	6.1	15.3	3.3	16.3	13.7	12.7	7.9
South West	9.3	3.9	8.2	2.0	13.2	4.2	5.9	6.8
<b>Education</b>								
None	9.3	2.0	8.5	1.2	8.0	2.6	5.8	2.5
Primary	11.1	4.5	10.2	2.9	9.9	4.4	4.6	5.9
Secondary+	12.0	2.9	10.4	2.5	11.1	5.4	8.1	5.5
<b>Household wealth</b>								
Poor	10.0	3.0	10.7	1.7	10.5	3.0	5.4	4.0
Middle	10.9	2.7	10.1	1.6	10.0	6.2	8.2	6.1
Rich	11.3	3.3	8.3	3.2	9.3	3.4	6.7	4.6
<b>Overall Urban</b>	10.7	3.0	9.7	2.2	9.9	4.3	6.8	4.9
<b>Overall Rural</b>	7.5	2.0	9.5	1.6	9.0	5.0	5.8	3.9
<b>Overall Nigeria</b>	8.2	2.2	9.6	1.7	9.3	4.8	6.1	4.2



**Figure 3.4: Wanted fertility (wanted later or wanted no more) by urban-rural residence, education and wealth, urban Nigeria.**



## Chapter 4: Family Planning and Other Proximate Determinants of Fertility

Family planning is essential to achieving the Millennium Development Goals (Cleland, Bernstein, Ezeh, Faundes & Glasier, 2006; Potts and Fotso, 2007; Angeles, Guilkey & Mroz, 2005). While family planning programs had considerable impact on reducing fertility in many parts of the world in the 1970s through 1990s, they have received less attention at the global level in recent years, even as contraceptive use remains low in most countries of the developing world, and despite high levels of unmet need in sub-Saharan Africa in particular (Cleland et al., 2006; White & Speizer, 2007). Family Planning is a cost-effective way to save the lives of women and children, and it empowers families to determine the optimal timing and spacing of births. It is estimated that family planning could prevent as many as one in every three maternal deaths and one in every 11 child deaths by allowing women to delay motherhood, space births, avoid unintended pregnancies and abortions, and stop childbearing when they have reached their desired family size (Cleland et al., 2006). This chapter presents the results from the 1990, 1999, 2003 and 2008 DHS on aspects of contraception including contraceptive knowledge, ever use, current use, sources of contraceptives, future intention to use, and exposure to mass media and communication on family planning. The chapter also discusses age at first marriage and age at first sexual intercourse. The focus of the chapter is on women who are sexually active because they are at risk of pregnancy and have a need for regulating their fertility. The results of interviews with men are also presented alongside those of women, as men play an equally crucial role in the realization of reproductive health and family planning decisions and behavior.

### 4.1. Knowledge of Modern Contraceptives

Table 4.1 presents the percentage of currently married women aged 15-49 years and all men aged 15-59 years (married and unmarried) who know any method of contraception by selected background characteristics for the four surveys. As expected, knowledge of modern contraceptives is higher in urban than in rural areas in all the surveys for both men and currently married women. Knowledge of contraceptive methods has increased in urban Nigeria during the 18 years covered by the data for both currently married women and men. In 1990, only 68.6 percent of currently married women knew any method of contraception; by 2003, this proportion had grown to 90.7 percent only to drop slightly to 87.1 percent in 2008. Similarly for men it increased from 90.6 percent in 1999 to 95.9 percent in 2008.

The increase in contraceptive knowledge is evident in all regions, age groups, level of education and household wealth quintiles although the rates of increase vary. Generally, knowledge of contraceptives is higher among southern urban residents than among those living in the North. This is particularly noticeable both for men and women in 2003 and 2008. As expected, in all the surveys knowledge is positively associated with increase in the level of education, with educated women and men being much more likely to know about modern family planning methods than those with no education. In all the surveys, virtually all respondents with secondary and higher education have heard of at least one method, compared with uneducated respondents. Also, the proportion of urban women and urban men who know of any modern method of contraception increases with greater household wealth. Virtually all respondents in rich households have heard of at least one modern method of contraception. The proportion of urban women and urban men who know of any modern method of contraception increases with age and peaks at 30-39 years of age for women in three of the four surveys, and 30-39 year for men in 2003 and 2008. For women in 1990 DHS and men in 1999 DHS, it peaked at 20-29 years before declining. Noticeably, knowledge of contraception is higher among men than women in urban Nigeria.

**Table 4.1: Knowledge of Modern Contraceptive, Urban Nigeria**  
Percentage of Currently Married Women 15-49 and Men Aged 15-59 Who Know Any Method of Contraception by Selected Background Characteristics, 1990, 1999, 2003, and 2008

	Currently married women				Men*		
	1990	1999	2003	2008	1999	2003	2008
<b>Age</b>							
<20	52.4	55.5	82.4	66.9	81.5	89.6	92.3
20-29	73.6	81.0	92.3	87.8	99.1	95.9	97.2
30-39	71.1	87.4	92.9	90.0	95.7	97.6	97.8
40+	56.7	80.1	86.9	84.8	85.9	94.3	94.6
<b>Region</b>							
North Central	73.4	88.7	87.6	82.2	92.1	96.2	97.1
North East	24.1	57.0	76.5	74.7	84.4	85.7	86.1
North West	51.8	72.4	90.2	73.1	90.1	94.5	92.2
South East	60.3	74.0	89.4	86.1	73.6	96.3	93.9
South South	74.7	85.7	98.8	92.1	91.0	93.5	98.3
South West	81.5	93.0	99.5	98.4	95.2	99.0	99.4
<b>Education</b>							
None	50.4	63.6	79.9	65.6	71.0	83.2	80.9
Primary	73.2	85.4	92.1	87.7	90.8	93.7	95.1
Secondary+	90.2	94.7	98.4	96.3	94.3	97.0	97.9
<b>Household wealth</b>							
Poor	48.5	70.1	77.4	71.3	82.7	87.7	89.5
Middle	73.0	82.8	93.6	90.6	93.0	94.0	97.5
Rich	85.8	92.4	98.6	96.3	94.4	99.6	98.5
<b>Overall Urban</b>	68.6	82.1	90.7	87.1	90.6	94.7	95.9
<b>Overall Rural</b>	33.7	53.7	69.8	57.9	74.1	86.4	83.8
<b>Overall Nigeria</b>	41.2	61.9	76.2	67.0	79.2	89.5	88.3
<b>No. of respondents (Unweighted)</b>							
Overall Urban	2,368	1,769	1,870	6,586	856	986	5,133
Overall Rural	4,328	3,986	3,287	17,368	1,728	1,360	10,353
Overall Nigeria	6,696	5,755	5,157	23,954	2,584	2,346	15,486

\* Based on all men (married and unmarried) 15-59 years of age.

All the NURHI states experienced a rise in levels of knowledge of modern contraceptive methods between 1999 and 2003 but all fell in 2008. Knowledge levels remained high above 80 percent in all the NURHI states and all years (1999, 2003 and 2008), except in Abuja (1999), and Kwara (2003). Contraceptive knowledge was generally high across the five target states, with more than 90 percent of the respondents having heard about modern method of contraception. The year 2003 had the highest proportion of respondents who had heard of modern contraceptive methods in all the states except Kwara; the percentages were as high as 100 percent in three of the states. The proportions slightly dropped in 2008.

#### 4.2. Ever Use of Modern Contraceptives

Ever use of modern contraception is defined as the use of a contraceptive method at any time during a woman's reproductive years. Ever use of contraception

provides a measure of the cumulative experience of a population with family planning (NPC, 2009). In collecting this information, respondents who reported they had heard of a contraceptive method were asked if they had ever used that method. Men were only asked about ever use of male sterilization, male condom, the rhythm method, or withdrawal.

Table 4.2 presents the percentage of currently married women aged 15-49 years and currently married men aged 15-59 years who have ever used a modern contraceptive method by selected background characteristics in the four surveys. The table shows that ever use of contraception is higher in the urban areas than in the rural areas in the four surveys. Use of family planning increased steadily in urban Nigeria. In 2008, 38.7 percent of urban women and 47.7 percent of urban men reported having used a modern family planning method, compared with only 22.1 percent of women in 1990 and 41.2 percent of men in 1999. Women aged 30-39 were more likely to have used a

modern family planning method than either younger or older women. Generally, experience with contraception is lowest among women younger than 20, peaks in the middle of childbearing years (ages 20-39), and then drops among older women (40+). In the case of currently married men, the same pattern was observed except in 1999, which unexpectedly peaked among younger men. For 2003 and 2008, the proportion of married men who ever used a modern contraceptive method was highest among the 30-39 age group.

Respondents in the southern regions were more likely to have ever used a method than their northern counterparts. The proportions of married women and men who have ever used a method are positively associated with increase in the level of education and household wealth. At the state level, the trend is similar to that of the regional and national levels in

terms of the lagged difference between knowledge and ever use of modern contraception. The proportion of currently married women who have ever used a modern method of contraceptive has generally increased in all the five NURHI states except Kaduna, where it went down from about 36 percent in 1999 to 18 percent in 2008. The highest percentage of ever users in 2008 was found in Edo (52.1 percent) state, followed by Oyo (44.6 percent), Kwara (42.9 percent), Abuja (39.3 percent) and the least being Kaduna (18.1 percent).

#### 4.3. Current Use of Modern Contraceptive Methods

Current use of family planning methods refer to the use of contraceptive methods at the time of the survey. Data on current use of family planning methods are very important because they provide

**Table 4.2: Ever Use of Modern Contraceptives, Urban Nigeria**  
Percentage of Currently Married Women 15-49 and Currently Married Men 15-59 Who Have Ever Used a Modern Method of Contraception by Selected Background Characteristics, 1990, 1999, 2003 and 2008

	Currently Married Women				Currently Married Men		
	1990	1999	2003	2008	1999	2003	2008
<b>Age</b>							
<20	6.2	9.7	13.9	11.4	—*	—*	—*
20-29	22.9	24.3	34.9	36.4	53.8	41.8	48.8
30-39	24.8	39.8	39.6	45.5	41.0	48.8	54.9
40+	20.7	34.7	37.7	36.6	38.4	30.7	41.9
<b>Region</b>							
North Central	18.8	35.8	34.1	33.6	40.4	46.4	42.7
North East	3.7	20.4	14.6	14.3	36.1	23.7	11.6
North West	6.6	13.9	20.9	14.2	13.7	7.7	11.2
South East	15.8	17.3	47.4	32.9	12.4	68.1	54.0
South South	27.1	39.3	53.3	53.3	40.0	46.7	58.5
South West	31.9	43.1	56.3	57.7	62.6	56.7	68.5
<b>Education</b>							
None	8.2	14.2	12.1	12.6	11.5	5.1	9.9
Primary	22.4	29.4	36.9	36.7	38.0	31.0	39.5
Secondary+	42.0	46.5	53.7	50.9	53.5	53.5	58.4
<b>Household wealth</b>							
Poor	9.5	16.5	15.1	16.6	33.4	14.3	19.1
Middle	22.8	31.8	34.7	39.6	41.5	33.4	47.7
Rich	35.2	45.4	53.2	54.9	47.6	57.6	65.3
<b>Overall Urban</b>	22.1	31.6	35.7	38.7	41.2	38.7	47.7
<b>Overall Rural</b>	4.7	13.1	17.5	16.9	19.0	15.8	21.3
<b>Overall Nigeria</b>	8.4	18.5	23.1	23.7	25.4	23.2	30.0
<b>No. of respondents (Unweighted)</b>							
Overall Urban	2,368	1,769	1,870	6,586	471	435	2,552
Overall Rural	4,328	3,986	3,287	17,368	1,044	761	6,211
Overall Nigeria	6,696	5,755	5,157	23,954	1,515	1,196	8,763

\* The figure is based on very few cases and has been suppressed.

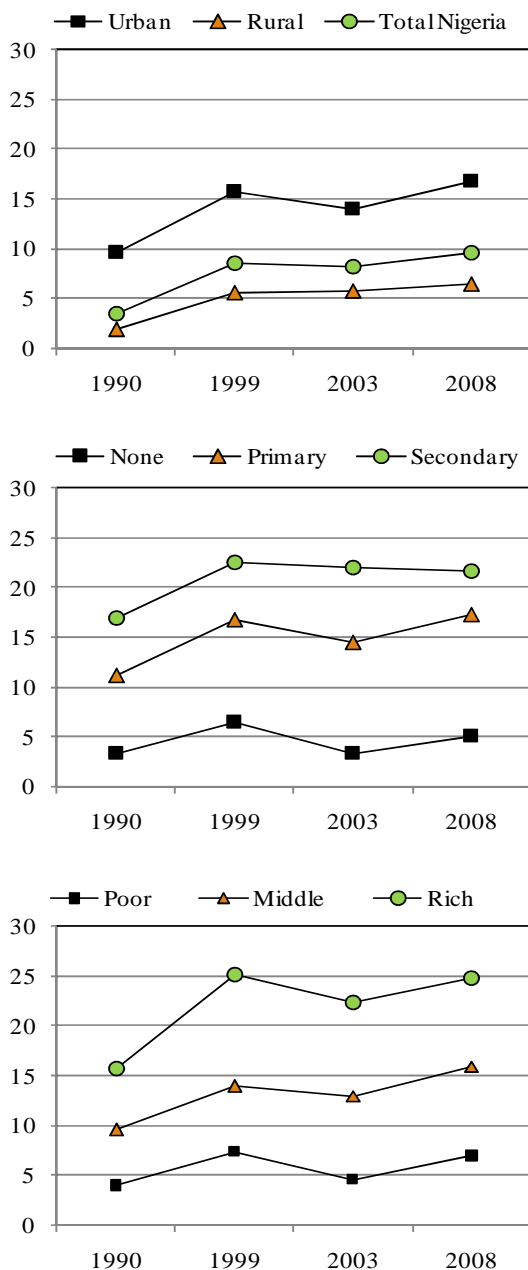
insight into one of the principal determinants of fertility among women. The level of current use is the most widely used and valuable measure of the success of family planning programs. Furthermore, it can be used to estimate the reduction of fertility attributable to contraception. The contraceptive prevalence rate (CPR) is usually defined as the percentage of currently married women who are currently using a method of contraception (NPC, 2009). This is a key output indicator for the Gates MLE project, the main objective being to increase urban CPR of the selected intervention states by 20 percentage points by the end of the project. This section focuses on the level and differentials in current use of family planning in urban Nigeria. Table 4.3 presents the percentage of currently married women who currently use any modern

method of contraception by selected background characteristics. Current use of any modern method of contraception varies with age in urban Nigeria, peaking at age group 30-39 and then declining at age 40+. This pattern of contraceptive use by age is typical of most countries. The drop in current use among older women is usually attributed to their declining fecundity –whether perceived or real - while lower levels of use among younger women are usually attributed to their desire to have (more) children. Contraceptive use among women aged less than 20 years increased from 3.3 percent in 1990 to 7.8 percent in 2003 and decreased to 4.0 percent in 2008. Overall, current use of contraception in Urban Nigeria has increased from 9.6 percent in 1990 to 16.7 percent in 2008.

**Table 4.3: Current Use of Contraceptive, Urban Nigeria**

Current Use of Modern and Any Contraceptive Method among Currently Married Women Aged 15-49 by Selected Characteristics, 1990, 1999, 2003 and 2008

	<b>Any modern method</b>				<b>Any method</b>			
	1990	1999	2003	2008	1990	1999	2003	2008
<b>Age</b>								
<20	3.3	2.3	7.8	4.0	4.3	6.8	9.4	5.3
20-29	6.8	8.6	15.2	14.0	12.1	15.2	20.2	21.9
30-39	13.0	22.8	14.3	21.0	20.3	31.4	22.3	32.0
40+	11.9	18.6	13.2	16.5	14.4	27.5	20.5	26.1
<b>Region</b>								
North Central	6.6	17.1	15.8	18.3	7.8	23.3	20.9	23.1
North East	2.0	7.6	4.3	5.3	2.0	10.9	5.7	6.3
North West	2.6	7.2	6.0	6.3	3.2	7.4	6.8	7.0
South East	9.6	10.7	17.6	14.2	22.8	27.7	28.2	28.7
South South	11.7	15.5	15.9	19.5	23.3	26.2	33.3	30.3
South West	13.7	23.3	27.4	25.2	19.4	34.3	37.3	40.0
<b>Education</b>								
None	3.3	6.4	3.3	5.0	4.9	10.0	4.7	6.9
Primary	11.2	16.8	14.5	17.3	16.0	24.0	21.2	25.1
Secondary+	17.0	22.5	22.0	21.6	27.9	33.6	32.0	34.5
<b>Household wealth</b>								
Poor	3.9	7.3	4.5	6.9	6.4	12.1	7.2	9.8
Middle	9.6	14.1	13.0	16.0	15.4	21.1	18.1	24.9
Rich	15.7	25.0	22.4	24.8	23.4	35.9	32.8	38.8
<b>Overall Urban</b>	9.6	15.7	13.9	16.7	14.8	23.4	20.2	25.9
<b>Overall Rural</b>	1.9	5.6	5.7	6.5	3.6	12.0	9.2	9.5
<b>Overall Nigeria</b>	3.5	8.6	8.3	9.7	6.0	15.3	12.6	14.6
<b>No. of respondents (Currently married women, Unweighted)</b>								
Overall Urban	2,368	1,769	1,870	6,586	2,368	1,769	1,870	6,586
Overall Rural	4,328	3,986	3,287	17,368	4,328	3,986	3,287	17,368
Overall Nigeria	6,696	5,755	5,157	23,954	6,696	5,755	5,157	23,954



**Figure 4.1: Percentage of current use of modern contraceptive method by urban-rural residence, education, and wealth.**

Contraceptive use among currently married women is higher in the southern regions than in the North; it increases with increased educational attainment and household wealth. Across all the years, use of modern contraceptive methods in rural Nigeria continues to lag behind urban areas by more than half the proportions (figure 4.1). This is also the case

with use of any contraceptive method. Even though there was a steady rise between 1990 and 2008 in rural contraceptive use compared to urban (which dipped in 2003), the rural modern contraceptive prevalence rate (CPR) remains at the single digit level.

Current use of modern contraceptive methods in urban areas across the five states of interest to the NURHI program has been on the increase between 1999 and 2008. However, despite the increase, the percentages are still low with less than a quarter currently using contraceptives. In 2008, the percentage of current use ranged between 22.0 percent and 25.0 percent in all target states, except in Kaduna state which has a mere 8.8 percent of current users of contraceptives. Kwara, Abuja and Edo recorded increasing CPRs while Oyo and Kaduna experienced a sudden rise in CPR between 1999 and 2003, but with a decline in 2008. Kaduna continues to experience a persistent decline in CPR from around 13 percent in 1999 to less than 9 percent in 2008. Oyo has experienced a consistently high CPR over all the three years of study, above 20.0 percent, peaking in 2003 with the third highest CPR ever registered in any of the states, after Kebbi in 1999 (41.7 percent) and Ekiti in 2003 (38.1 percent).

#### 4.4. Number of Living Children at First Use of Contraception

Couples using family planning as a means to control family size adopt contraception when they have already had the number of children they want. When contraception is used to space births, couples may start to use family planning with the aim of delaying a pregnancy (NPC, 2009). In cultures where smaller family size is becoming a norm, younger women adopt family planning at earlier ages than their older counterparts had done. The DHS data for Nigeria enable an examination of both periodic and cohort changes in the timing of the initiation of contraceptive use during the family building process. Table 4.4 presents the percentage of currently married women aged 15-49 who have ever used contraception by number of living children at the time of first use of contraception and by selected background characteristics, while Table 4.5 describes the same among ever-married women.

**Table 4.4: Number of Living Children at First Use of Contraception, Currently Married Women, Urban Nigeria**  
 Percent Distribution of Currently Married Women Age 15-49 Who Have Ever Used Contraception by Number of Living Children at the Time of First Contraceptive Use by Selected Background Characteristics, 1990, 1999, 2003 and 2008

	0 children				1-2 children				3+ children			
	1990	1999	2003	2008	1990	1999	2003	2008	1990	1999	2003	2008
<b>Age</b>												
<20	4.4	9.7	8.9	6.0	6.4	1.3	5.1	7.1	0.0	0.0	1.2	0.0
20-29	13.6	14.3	17.3	15.6	13.4	16.4	23.9	23.0	6.4	4.1	2.1	5.2
30-39	5.6	9.6	11.0	12.4	11.9	22.4	22.6	24.3	16.7	20.0	18.0	18.0
40+	2.2	4.8	4.9	6.4	5.1	14.3	15.2	15.5	17.5	24.6	25.5	23.2
<b>Region</b>												
North Central	2.1	13.3	7.3	5.8	7.3	17.1	15.2	16.4	13.3	15.5	17.2	16.8
North East	0.0	5.5	0.7	0.9	2.0	8.6	11.1	8.6	2.4	10.8	5.9	6.8
North West	0.9	1.7	0.8	1.2	2.7	6.8	15.2	7.4	4.4	4.7	8.7	6.8
South East	3.9	12.0	31.3	12.4	14.3	14.7	18.6	22.7	16.2	15.3	12.0	16.3
South South	11.1	15.0	25.6	27.1	16.9	18.8	28.2	22.0	12.4	21.3	18.4	12.6
South West	14.1	13.4	21.2	17.6	14.6	26.7	32.5	32.8	14.2	16.9	17.3	17.8
<b>Education</b>												
None	1.5	2.8	1.0	1.8	3.8	7.0	7.9	6.4	6.0	10.2	8.2	6.6
Primary	5.5	8.2	8.2	6.5	10.6	15.9	20.0	18.6	16.0	16.9	17.2	18.8
Secondary+	21.2	17.7	22.5	18.6	21.9	26.9	30.3	28.6	14.5	15.6	13.5	14.8
<b>Household wealth</b>												
Poor	3.2	4.3	2.6	4.0	5.7	11.5	8.7	8.6	5.3	9.6	9.2	7.9
Middle	10.3	12.3	9.7	12.7	10.5	15.6	22.3	20.9	11.3	11.3	11.8	14.5
Rich	11.9	14.4	21.5	17.5	17.5	25.0	27.9	31.0	18.2	20.6	15.8	17.5
<b>Overall Urban</b>	8.4	10.4	11.9	12.0	11.0	17.6	20.3	21.2	11.4	14.1	12.5	13.7
<b>Overall Rural</b>	2.0	5.1	5.6	5.8	2.7	9.9	11.0	8.2	4.4	7.6	7.6	7.0
<b>Overall Nigeria</b>	3.4	6.7	7.5	7.3	4.5	12.1	13.9	12.3	5.9	9.5	9.1	9.1
<b>No. of respondents (unweighted)</b>												
Overall Urban	216	179	190	674	273	305	363	1209	295	242	219	854
Overall Rural	82	199	201	741	119	388	365	1320	186	296	250	1172
Overall Nigeria	298	378	391	1415	392	693	728	2529	481	538	469	2026

Note: Difference from 100%, where applicable, due to missing and "never used."

**Table 4.5: Number of Living Children at First Use of Contraception, Ever-Married Women, Urban Nigeria**  
 Percent Distribution of Ever Married Women Age 15-49 Who Have Ever Used Contraception by Number of Living Children at the Time of First Use of Contraception by Selected Background Characteristics, 1990, 1999, 2003 and 2008

	0 children				1-2 children				3+ children			
	1990	1999	2003	2008	1990	1999	2003	2008	1990	1999	2003	2008
<b>Age</b>												
<20	4.2	9.5	8.2	6.4	6.1	1.2	6.1	7.2	0.0	0.0	1.1	0.0
20-29	13.7	14.9	17.1	15.5	13.7	16.3	23.7	22.8	6.2	4.2	2.0	5.2
30-39	5.7	9.5	11.2	12.4	12.4	23.1	22.1	24.2	16.6	19.9	17.6	17.8
40+	3.1	4.5	5.3	7.3	6.1	14.0	16.6	15.4	16.2	23.7	24.5	22.1
<b>Region</b>												
North Central	2.1	13.4	8.9	5.6	7.6	17.1	14.5	17.1	14.2	15.7	16.3	17.0
North East	0.0	5.6	1.0	1.2	2.0	8.9	11.5	8.7	2.4	10.4	5.6	6.6
North West	0.8	1.8	0.8	1.3	2.9	7.4	15.3	7.1	4.2	4.4	8.2	7.0
South East	4.0	10.8	29.6	12.2	14.8	14.5	19.1	22.2	15.0	15.0	11.7	16.2
South South	10.8	15.5	23.3	27.3	16.9	19.6	29.0	21.7	11.8	21.9	17.7	12.2
South West	14.2	13.5	21.1	17.6	14.9	26.5	31.6	32.6	13.8	16.8	17.4	17.6
<b>Education</b>												
None	1.7	2.6	1.1	1.9	3.8	7.4	8.6	6.4	6.1	10.0	8.4	6.6
Primary	5.5	7.8	8.0	6.4	11.1	16.1	19.2	18.4	15.9	17.6	16.4	18.6
Secondary+	21.1	18.3	22.5	18.8	22.6	26.8	30.4	28.3	13.7	15.1	13.1	14.7
<b>Household wealth</b>												
Poor	3.5	4.5	2.9	4.6	6.2	11.8	9.3	8.8	5.7	9.5	8.7	7.8
Middle	10.3	12.2	9.5	12.4	10.9	16.1	22.0	20.6	11.0	11.7	11.9	14.5
Rich	12.1	14.5	21.6	17.6	17.9	24.6	27.8	30.7	17.5	20.5	15.5	17.3
<b>Overall Urban</b>	8.5	10.4	11.8	12.1	11.4	17.6	20.3	21.0	11.2	14.0	12.2	13.6
<b>Overall Rural</b>	2.0	5.2	5.8	5.1	2.7	10.1	10.9	8.5	4.5	7.6	7.8	7.2
<b>Overall Nigeria</b>	3.4	6.7	7.7	7.3	4.6	12.3	13.8	12.4	5.9	9.5	9.2	9.2
<b>No. of respondents (unweighted)</b>												
Overall Urban	232	194	215	723	302	326	397	1286	308	256	234	906
Overall Rural	86	215	215	782	126	416	388	1434	200	314	272	1268
Overall Nigeria	318	409	430	1505	428	742	785	2720	508	570	506	2174

Note: Difference from 100%, where applicable, due to missing and "never used."

The results indicate that increasing proportions of currently married urban women are adopting family planning methods at lower parities (i.e., with fewer children) than before. This is deduced by the fact that for the same parity, higher proportions of women are adopting family planning methods from 1990 to 2008. The pattern is even clearer for urban residents compared to their rural counterparts even though the trend is generally similar. Younger cohorts of women have a tendency to initiate family planning use at lower parities than older cohorts in the four surveys. This pattern probably reflects the fact that young women are more likely to use family planning to space births while older women are more likely to use family planning to limit births. The trend towards initiating family planning use at lower parities can also be seen by comparing data from the four surveys from 1990, 1999, 2003 and 2008. In 1990, for example, only 11.0 percent of urban currently married women reported initiating contraceptive use when they had fewer than three children, compared with 21.2 percent in 2008. Even for currently married women at zero parity, the trend toward initiating family planning use rose from 8.4 percent in 1990 to 12.0 percent in 2008. Initiation of contraception at lower parities is also positively associated with level of education and increased household wealth. Southern region residents are more likely to initiate family planning at lower parities than their northern counterparts. Table 4.5 shows a similar pattern among ever-married urban women.

#### 4.5. *Source of Modern Contraceptives*

The private sector is increasingly viewed as part of the continuum of care and has the potential to increase coverage of reproductive health services, especially for women who cannot or choose not to access government services (Bazant, Koenig, Fotso & Mills, 2009; World Health Organization, 2004). Information on where women obtain their contraceptives is useful for family planning program managers and implementers for logistics planning. To ascertain the sources of family planning methods in Nigeria, the surveys asked women who were

currently using a modern method of contraception where they most recently obtained the methods. Table 4.6 presents the percentage of current users of modern contraceptive methods by most recent source of supply according to selected background characteristics.

In 1990, 49.7 percent of urban women obtained their supplies of contraceptives from public sector and 45.5 percent from private sector. As at 2008, 32.3 percent got their supplies from the public sector, while 60.7 percent reportedly got theirs from private sector sources. Women with secondary and higher education are more likely than women with no education to obtain contraceptives from a private sector source. Clearly, government sources become less important and private sector sources more important as educational level and household wealth increase. There is almost a clear switch between rural and urban areas in regards to private versus public source with public sources being slightly more popular in rural areas while private sources are more popular in the urban areas. Between 1990 and 2008, there is a steady rise in the private sector prevalence while the public sector staggers up and down between the years.

From the state-level analysis, Kaduna showed a very steady increase in private sector source of modern contraceptive methods, rising from 14.2 percent in 1999 to 60.0 percent in 2008. All the other states were staggering between the years, most of them showing a significant drop between 2003 and 2008. Overall, the contribution of private sources in the provision of family planning supply is growing in the five target states (figure 4.2), with more than 50.0 percent of urban women in 2008 getting their contraceptives from private sources, except in Abuja (39.5 percent). The highest proportion of private sources are recorded in Edo (71.9 percent) followed by Edo (64.7 percent).

The results show that over the years there has been increasing prominence of the private sector in being the major source of modern contraceptive methods.

**Table 4.6: Source of Modern Contraceptives, Urban Nigeria**

Percentage of Currently Married Women Who Are Current Users of Modern Contraceptive Methods by Most Recent Source of Supply by Background Characteristics, 1990, 1999, 2003 and 2008

	Public sector source of modern contraceptive				Private sector source of modern contraceptive			
	1990	1999	2003	2008	1990	1999	2003	2008
<b>Age</b>								
<20	44.9	55.5	29.8	6.4	7.7	0.0	45.5	71.2
20-29	48.0	37.1	16.0	24.2	48.5	44.8	72.5	67.5
30-39	54.6	54.5	28.2	33.1	43.2	34.6	54.1	60.6
40+	41.4	50.6	55.3	41.0	50.4	40.6	36.4	52.8
<b>Region</b>								
North Central	70.7	51.3	31.6	45.7	21.7	36.5	54.9	41.1
North East	100.0	66.0	42.4	65.3	0.0	24.8	48.1	30.1
North West	76.4	61.8	64.6	56.8	23.6	26.0	31.1	38.3
South East	45.0	66.4	32.6	20.5	51.8	24.5	45.4	70.9
South South	45.3	45.1	7.4	29.1	50.8	38.9	87.2	62.9
South West	46.0	45.1	26.9	27.6	48.6	42.9	57.9	67.3
<b>Education</b>								
None	59.0	50.8	32.2	47.7	37.7	46.8	51.7	49.1
Primary	44.7	54.6	27.0	30.1	49.3	28.3	66.8	59.9
Secondary+	50.4	47.9	30.5	31.7	45.1	39.9	54.0	61.9
<b>Household wealth</b>								
Poor	57.1	52.7	45.3	39.9	38.4	37.6	40.1	55.4
Middle	38.1	47.7	19.3	26.6	55.8	35.3	71.9	65.9
Rich	55.4	50.5	32.4	33.8	40.5	39.3	52.4	59.1
<b>Overall Urban</b>	49.7	50.0	29.8	32.3	45.5	37.9	56.8	60.7
<b>Overall Rural</b>	43.0	60.6	36.8	38.3	49.9	29.6	51.3	51.7
<b>Overall Nigeria</b>	46.9	54.9	33.0	35.0	47.3	34.0	54.3	56.7
<b>No. of respondents (Currently married women 15-49 who use modern FP, Unweighted)</b>								
Overall Urban	132	137	60	322	112	96	119	506
Overall Rural	44	132	62	358	36	65	83	415
Overall Nigeria	176	269	122	680	148	161	202	921

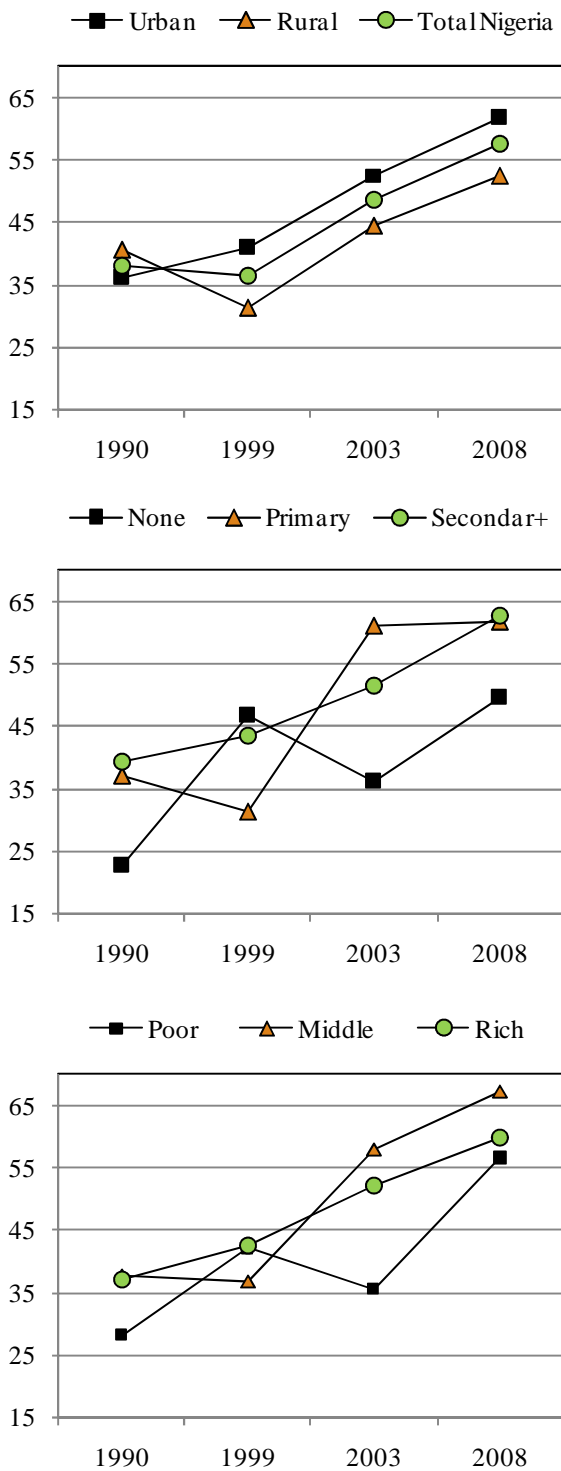
Note: Difference between the total year figures and 100% is due to "other" (203 women), "missing" (68 women) and "don't know" (three women).

#### 4.6. Future Intentions to Use Contraceptives

Future intention to use contraception is an important indicator of the changing demand for family planning, particularly the extent to which non-users of contraception plan to use family planning in the future (NPC, 2009). All women aged 15-49 who were not using contraceptives at the time of the survey were asked about their intention to use family planning in the future. Table 4.7 summarizes the results by selected background characteristics.

Overall, the proportions of currently married women who intend to use family planning in the future in urban Nigeria have not shown significant changes over the years; 35.8 percent in 1990 and around 30 percent in the years 1999, 2003 and 2008. The future intention to use family planning consistently increased with household wealth and women's educational attainment in all survey years. In the case of currently married women who do not intend to use family planning in the future, the proportion rose from 53.3 percent in 1990 to 60.5 percent in 2003, then declined to 46.8 percent in 2008. Women with no education or those from poor households reported a higher likelihood of no intention of using contraceptives in the future, compared with the more educated women or those belonging to rich households. Northern urban women were more likely to report their unwillingness to use family planning in the future than their southern counterparts.

At the state level, while Oyo state rose by 10 percentage points between 1999 and 2008, all other target states moved up and down over time without any clear patterns or progress or retrogress. Kaduna fell consistently between 39.6 percent in 1999 and 18.2 percent in 2008. Oyo state is the only one that records a gradual increase in the intention to use contraceptives in future from 35.4 percent in 1999 to 47.6 percent in 2008. In all the five states less than 50.0 percent reported having the intention of using contraception in future.



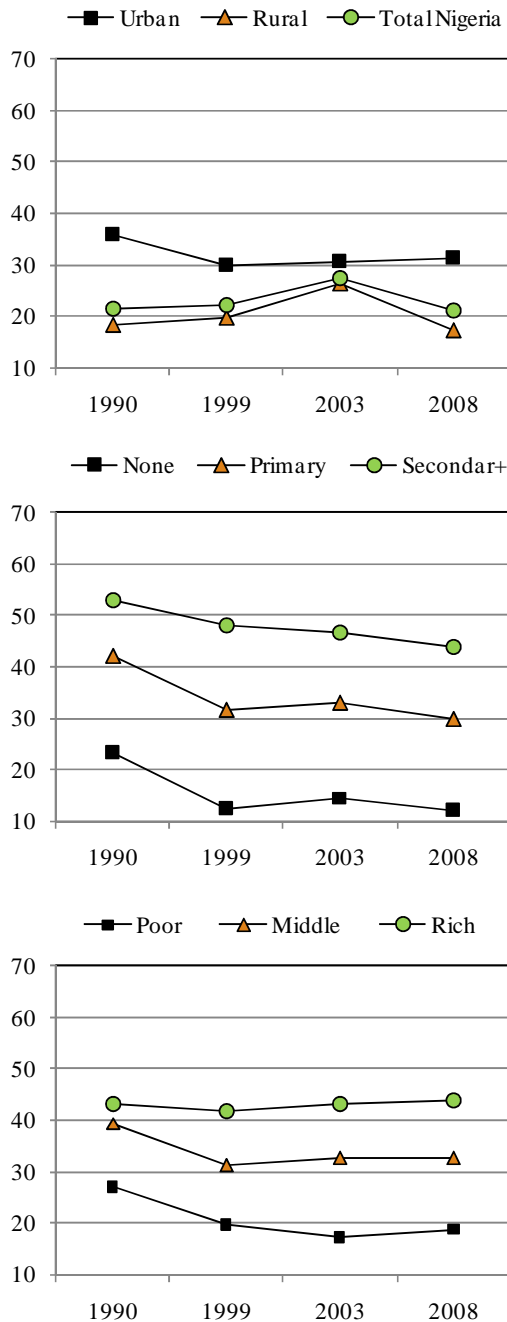
**Figure 4.2: Private source of modern contraceptives by urban-rural residence, education and wealth, urban Nigeria.**

**Table 4.7: Future Intentions to Use Contraceptives, Urban Nigeria**

Percentage of Currently Married Women Who Are Not Using a Contraceptive Method According to Whether or Not They Intend to Use Contraception in the Future by Selected Background Characteristics, 1990, 1999, 2003 and 2008

	Intends to use				Does not intend to use			
	1990	1999	2003	2008	1990	1999	2003	2008
<b>Age</b>								
<20	25.1	11.7	18.3	20.1	65.1	70.8	69.6	52.3
20-29	45.0	34.9	38.9	37.2	43.7	47.4	50.9	37.3
30-39	34.1	34.8	32.9	37.1	52.6	47.1	56.7	40.9
40+	19.8	11.1	16.3	12.6	74.8	78.3	80.1	70.9
<b>Region</b>								
North Central	36.8	40.6	41.7	25.5	55.4	35.2	46.7	48.6
North East	10.3	9.9	19.8	19.1	87.6	78.8	74.4	64.9
North West	16.8	11.9	16.1	10.0	70.0	75.7	74.4	59.4
South East	24.5	24.8	24.7	36.1	57.4	55.0	62.8	40.4
South South	38.7	43.3	46.5	34.7	52.5	41.0	48.6	36.4
South West	51.0	39.8	56.3	50.9	37.5	43.8	33.0	34.1
<b>Education</b>								
None	23.1	12.2	14.5	11.8	66.7	71.8	76.2	66.3
Primary	42.0	31.1	32.8	29.4	45.5	52.3	60.1	46.3
Secondary+	52.7	45.6	46.6	43.3	37.0	37.5	43.4	34.9
<b>Household wealth</b>								
Poor	27.0	19.4	17.1	18.6	61.7	67.9	75.8	57.4
Middle	39.5	29.9	32.6	32.1	49.8	49.1	59.6	43.9
Rich	43.2	40.3	42.8	43.2	46.3	43.6	44.6	37.4
<b>Overall Urban</b>	35.8	29.0	30.4	30.8	53.3	54.5	60.5	46.8
<b>Overall Rural</b>	18.2	19.5	26.2	17.3	71.8	62.3	65.1	58.5
<b>Overall Nigeria</b>	21.6	22.0	27.4	20.9	68.2	60.3	63.8	55.3
<b>No. of respondents (unweighted)</b>								
Overall Urban	738	385	432	1,411	1,023	747	935	2,564
Overall Rural	739	671	763	2,702	3,011	2,209	1,906	9,452
Overall Nigeria	1,477	1,056	1,195	4,113	4,034	2,956	2,841	12,016

Note: Values in each year do not add to 100%; the difference represents missing (277 women) and those that were “unsure” (6,548 women).



**Figure 4.3: Women who intend to use contraception in the future by urban-rural residence, education and wealth, urban Nigeria.**

#### 4.7. Exposure to Mass Media on Family Planning

The mass media can provide a powerful means for conveying family planning messages to the public and therefore are vital in the quest to reposition family planning in the public space in urban Nigeria (Piotrow, Rimon, Winnard, et al., 1990).

Information on public exposure to messages within particular types of media allows policy-makers to use the most effective means of communication for various target groups in the population. Studies have documented strong relationships between exposure to family planning messages in the media and contraceptive behavior (NPC, 2009; McGuire, 1986; Odimegwu, 1995; Westoff and Rodriguez, 1995; Odimegwu, 1999; Piotrow et al., 1990; Westoff and Rodriguez, 1993). Piotrow et al. (1990) reported that mass media can be powerful tools, not only for creating awareness about new technology but also for stimulating people's desire for more information and facilitating their efforts to apply the information to their own behavior. To assess the effectiveness of various media on the dissemination of family planning information, all respondents in the 1990, 1999, 2003 and 2008 surveys were asked if they had heard, seen or read family planning messages by radio, television or in a newspaper or magazine in a few months before the survey.

Tables 4.8 and 4.9 present the percentage of women and men who heard or saw a family planning message on the radio, television or print media by selected background characteristics. The results show that exposure to family planning messages is more common among men than women. The exposure to all media outlets is more prevalent among people in the 30-49 age group, as well as among urban residents, for all the survey years.

Radio and television were the two most common sources of family planning messages for both women and men across urban Nigeria. The scenario is observed to be true regardless of age range, region of residence, level of education or household wealth index. The proportion of women and men who had heard or saw a family planning message on radio, television or print media is positively associated with the level of education and household wealth index. As expected, radio and television are women's and men's most popular sources of

information on family planning in both urban and rural areas. There are no clear patterns of increasing popularity of any of the sources among women.

**Table 4.8: Exposure to Mass Media on Family Planning, Women, Urban Nigeria**  
Distribution of All Women Aged 15-49 Exposed to Mass Media on Family Planning by Selected Background Characteristics, 1990, 1999, 2003 and 2008

	<b>Radio</b>				<b>Television*</b>			<b>Newspapers*</b>			<b>None of these 3</b>		
	1990	1999	2003	2008	1999	2003	2008	1999	2003	2008	1999	2003	2008
<b>Age</b>													
<20	46.7	40.5	39.2	37.9	38.2	26.8	30.7	14.7	13.4	8.8	51.8	56.1	56.3
20-29	51.7	55.0	55.8	56.5	47.8	44.4	46.6	21.1	24.0	20.0	38.5	39.1	38.3
30-39	52.9	63.2	63.0	60.6	53.1	44.9	49.8	23.7	22.8	20.3	32.7	34.4	35.2
40+	42.9	47.6	61.5	59.4	39.5	38.3	45.1	12.6	17.7	17.5	47.9	37.0	37.8
<b>Region</b>													
North Central	50.3	52.5	40.5	35.1	45.4	28.1	30.9	21.4	16.0	14.8	41.1	56.6	60.8
North East	29.8	23.4	28.5	30.0	21.0	17.6	16.9	8.8	12.0	6.5	73.5	69.5	68.3
North West	52.5	43.1	53.7	48.5	25.7	25.8	20.3	5.4	9.3	9.6	55.4	45.6	50.4
South East	24.3	43.4	61.8	56.0	32.4	45.2	44.0	22.3	25.4	21.4	52.5	32.4	40.8
South South	51.7	55.0	64.2	47.2	54.0	55.2	45.9	25.6	34.0	19.7	34.3	31.3	43.5
South West	55.2	68.5	67.1	72.2	63.1	56.7	64.5	23.8	26.0	22.0	24.6	26.2	22.0
<b>Education</b>													
None	40.5	28.1	39.8	34.1	17.6	14.4	12.2	1.2	3.2	2.2	69.2	59.9	64.9
Primary	49.3	51.0	52.6	47.9	39.3	32.6	34.5	6.7	12.1	5.5	44.5	45.5	48.7
Secondary+	56.9	65.3	62.2	61.1	61.6	53.5	54.5	32.4	30.9	24.4	26.9	31.7	32.9
<b>Household wealth</b>													
Poor	36.4	34.5	34.8	35.1	20.9	11.2	14.5	5.1	5.8	4.5	63.3	64.6	63.6
Middle	52.3	56.6	55.5	55.3	47.3	36.4	43.5	15.1	16.5	14.3	37.5	41.6	40.3
Rich	60.2	64.7	67.0	66.3	64.5	61.1	64.0	33.5	33.2	28.6	26.6	26.1	26.5
<b>Overall Urban</b>	49.8	53.0	54.7	54.5	46.0	39.7	44.2	19.2	20.4	17.6	41.1	41.4	40.8
<b>Overall Rural</b>	16.2	27.4	32.7	31.3	12.5	11.9	13.7	5.9	7.9	4.7	71.0	66.3	67.8
<b>Overall Nigeria</b>	24.6	35.3	40.3	39.6	22.9	21.4	24.6	10.0	12.2	9.3	61.7	57.7	58.2
<b>No. of respondents exposed (unweighted)</b>													
Overall Urban	1770	1414	1520	5321	1215	1078	4180	504	577	1655	1108	1432	4707
Overall Rural	877	1477	1519	6303	666	543	2742	316	343	962	3898	2993	16368
Overall Nigeria	2647	2891	3039	11624	1881	1621	6922	820	920	2617	5006	4425	21075

\*In 1990, data were not collected on whether the respondent had heard about family planning on television or through a newspaper.

**Table 4.9: Exposure to Mass Media on Family Planning, Men, Urban Nigeria**  
Distribution of All Men Aged 15-59 Years Exposed to Mass Media on Family Planning by Selected Background Characteristics, 1999, 2003 and 2008

	Radio			Television			Newspapers			None of these 3		
	1999	2003	2008	1999	2003	2008	1999	2003	2008	1999	2003	2008
<b>Age</b>												
<20	58.5	60.0	46.9	60.8	44.1	34.7	30.4	17.9	14.7	29.9	36.0	46.1
20-29	83.5	64.2	65.5	75.7	48.9	51.0	55.1	32.0	33.1	9.3	31.3	28.4
30-39	79.7	72.5	74.3	69.3	52.1	55.4	58.5	35.6	37.4	15.5	24.0	19.4
40+	76.6	68.3	74.9	62.6	43.1	56.5	41.6	27.8	37.7	19.3	29.4	21.8
<b>Region</b>												
North Central	77.2	65.4	66.7	68.9	49.2	51.9	38.9	34.1	34.7	16.8	33.1	27.6
North East	79.1	46.2	51.7	68.0	29.5	24.7	57.0	14.1	16.7	16.5	51.4	46.1
North West	64.4	61.0	65.4	53.1	34.6	32.3	38.1	13.3	26.6	31.4	30.4	32.5
South East	69.6	57.8	82.3	46.8	39.7	67.9	33.5	28.8	38.0	24.7	40.7	15.4
South South	59.4	73.8	64.3	53.6	54.0	56.3	34.9	53.9	34.8	30.0	21.9	25.7
South West	83.4	81.2	67.9	79.7	67.1	57.3	57.4	36.8	35.4	9.1	17.5	24.8
<b>Education</b>												
None	62.9	46.6	47.0	35.7	18.0	11.2	9.1	1.9	3.8	35.6	45.5	52.0
Primary	69.1	65.1	65.4	59.3	35.9	40.8	31.1	15.9	15.1	25.9	34.0	32.3
Secondary+	79.4	69.9	70.0	75.4	56.3	57.8	58.6	38.4	39.6	12.5	26.2	23.2
<b>Household wealth</b>												
Poor	67.8	51.0	55.4	56.2	20.5	22.1	37.5	11.5	13.3	29.7	44.3	42.6
Middle	75.7	65.8	70.9	65.5	42.3	53.9	40.3	22.3	31.0	18.0	30.8	24.5
Rich	79.9	75.9	71.3	75.7	68.4	66.0	57.4	46.4	45.3	10.3	20.9	20.2
<b>Overall Urban</b>	75.2	66.2	67.2	67.1	47.3	51.0	46.7	29.1	32.5	18.1	30.2	27.2
<b>Overall Rural</b>	54.4	49.9	54.0	28.9	22.9	21.2	18.7	17.7	13.7	42.0	46.3	44.5
<b>Overall Nigeria</b>	60.8	56.0	58.9	40.7	32.0	32.3	27.3	21.9	20.7	34.6	40.3	38.1
<b>No. of respondents exposed (unweighted)</b>												
Overall Urban	644	613	3436	576	455	2538	407	292	1603	155	328	1430
Overall Rural	941	746	5674	497	335	2182	321	254	1417	724	577	4525
Overall Nigeria	1585	1359	9110	1073	790	4720	728	546	3020	879	905	5955

#### 4.8. Discussion of Family Planning with Spouse

While husband-wife communication about family planning and agreement to use contraception may not be a precondition for the adoption of certain methods, its absence may be a serious impediment to family planning use. Spousal communication is therefore an important intermediate step along the path to eventual adoption and sustained use of contraception. Lack of discussion may also be a reflection of lack of personal interest, hostility to the subject or a customary reticence in talking about sex-related matters. Many studies have reported a low level of communication between spouses about family planning and women with low levels of contraceptive use also report little spousal communication (Lasee and Becker, 1997). To assess the acceptability of family planning among couples, women who know a contraceptive method were asked if they had discussed family planning with their husbands in the year prior to the survey. Table 4.10 presents the percentage of currently married women who know a contraceptive method who discussed family planning with their spouses by selected background characteristics in 1990, 1999 and 2003 surveys.

As can be noticed, inter-spousal discussion on family planning in urban Nigeria, which rose from 49.5 percent in 1990 to 54.5 percent in 1999, declined to 43.3 percent in 2003. The proportion of women who had inter-spousal discussion on family planning is lower in the North than in the South; and is positively associated with level of education and higher household wealth. Teenage women are the least likely to have discussed family planning with their husbands. These proportions peak at age 30-39 but drop among 40+ since family planning becomes less consequential as women begin to lose their fecundity. Consistently, rural spouses trail their urban counterparts in discussing family planning by over 10 percentage points in all years of observation.

**Table 4.10: Discussion of Family Planning with Spouse, Urban Nigeria**  
Percentage of Currently Married Women Who Know a Contraceptive Method Who Discussed Family Planning with Spouse by Selected Background Characteristics, 1990, 1999 and 2003

	1990	1999	2003
<b>Age</b>			
<20	35.0	28.2	27.9
20-29	47.7	49.1	44.1
30-39	53.4	63.6	45.8
40+	50.7	50.2	42.2
<b>Region</b>			
North Central	41.3	53.3	39.8
North East	27.1	48.0	33.6
North West	22.1	35.3	29.0
South East	65.2	58.6	34.5
South South	63.9	51.6	53.6
South West	53.9	63.9	64.4
<b>Education</b>			
None	28.9	36.2	21.7
Primary	56.2	52.9	47.3
Secondary+	61.3	65.1	55.3
<b>Household wealth</b>			
Poor	41.7	38.6	26.1
Middle	43.6	54.3	41.9
Rich	60.0	65.9	55.6
Overall Urban	49.5	54.5	43.3
Overall Rural	36.3	42.8	30.7
Overall Nigeria	40.9	47.2	35.2
<b>No. of respondents (unweighted)</b>			
Overall Urban	1,690	1,476	1,636
Overall Rural	1,471	2,232	2,394
Overall Nigeria	3,161	3,708	4,030

#### 4.9. Attitudes Regarding Family Planning

When couples have a positive attitude towards family planning, they are more likely to adopt family planning. Insights into couple's attitudes are useful in the formulation of family planning policies since these insights show the extent to which further education is needed to increase acceptance of family planning. If there is widespread disapproval of family planning, this might act as a barrier to the adoption of contraceptives. Several studies have reported changes in Nigerian knowledge of and attitudes towards family planning (Adewuyi, Omideyi & Raimi, 1992; Raimi, 1994). Attitude data were collected by asking women and men if they approved of couples using family planning. Married respondents were asked whether they thought their spouses approved of family planning. Table 4.11 presents the percentage of currently married women and all men who know a method of family planning and approved of family planning by selected background characteristics.

The results show that over two-thirds (77.5 percent) of urban women approved of family planning in 1990, but the figure declined to 60.3 percent in 2003. Similarly, the proportion of men in urban Nigeria who approved of family planning declined from 66.9 percent in 1999 to 58.1 percent in 2003. The proportion of urban women/men who approved of family planning increased gradually by age, peaking at 20-29 years and declining thereafter. Approval of family planning is higher in the South than in the North and is positively associated with level of education and household wealth, with the proportion of women and men who approve of family planning consistently lowest among those from the poorest household or with no education. North Central continued to depict similar patterns as those of the southern regions. Urban women and urban men are more likely to approve family planning compared to their rural counterparts.

**Table 4.11: Approval of Family Planning, Urban Nigeria**  
Percentage of Currently Married Non-sterilized Women and All Men Aged 15 -59 Who Know a Method of Family Planning and Approved of Family Planning by Selected Background Characteristics, 1990, 1999 and 2003

	Currently married non-sterilized women			All men	
	1990	1999	2003	1999	2003
<b>Age</b>					
<20	64.1	30.4	35.9	64.3	52.7
20-29	79.2	60.2	63.7	74.4	58.9
30-39	78.0	74.3	61.3	71.0	61.9
40+	75.8	62.1	59.3	58.9	57.9
<b>Region</b>					
North Central	74.7	74.4	72.2	69.1	70.8
North East	57.2	38.7	44.4	55.5	44.6
North West	51.0	26.5	35.1	30.3	22.4
South East	77.4	70.0	62.7	63.5	67.4
South South	87.6	70.8	72.8	70.9	66.5
South West	83.6	79.5	85.5	82.5	84.4
<b>Education</b>					
None	63.2	42.7	35.1	31.1	21.2
Primary	81.9	63.8	63.4	58.3	50.1
Secondary+	85.8	78.2	75.0	76.3	67.2
<b>Household wealth</b>					
Poor	72.3	50.8	37.9	53.8	37.7
Middle	76.4	65.7	60.3	64.3	50.1
Rich	82.0	75.3	74.4	77.6	78.3
<b>Overall Urban</b>	77.5	65.3	60.3	66.9	58.1
<b>Overall Rural</b>	67.0	52.2	51.3	47.6	43.5
<b>Overall Nigeria</b>	70.6	57.1	54.5	53.6	48.9
<b>No. of respondents (Unweighted)</b>					
Overall Urban	1,679	1,473	1,628	856	986
Overall Rural	1,457	2,220	2,388	1,728	1,360
Overall Nigeria	3,136	3,693	4,016	2,584	2,346

#### 4.10. Age at First Marriage

Marriage is generally associated with fertility because it is correlated with exposure to the risk of conception. In Nigeria, most childbearing takes place within marriage, making questions on age at first marriage very important. The duration of exposure to the risk of pregnancy depends primarily on the age at which women first marry. On the average, women who marry earlier have their first child earlier and have the capacity to give birth to more children, contributing to higher fertility rates (NPC, 2009). Table 4.12 presents the median age at first marriage among urban women aged 20-49 and among urban men aged 25-59 by selected background characteristics.

For urban women, the median age at first marriage did not change between 1990 and 2003. By 2008 it had increased by three years to nearly 22 years of age. Median age at first marriage according to age of women remained largely unchanged except in 2003 when it was observed to be higher among women in their 20s than among those in their 30s and 40s. Median age at first marriage for women is higher among southern residents than their northern counterparts, and is positively associated with the level of education and household wealth. Expectedly, men marry considerably later than women, and urban men and urban women marry consistently later than their rural counterparts. As observed in the case of women, men in the South tend to marry later than those in the North.

**Table 4.12: Age at First Marriage, Urban Nigeria**

Median Age\* at First Marriage among Women Aged 20-49 and Men Aged 25-59 by Selected Background Characteristics, 1990, 1999, 2003 and 2008

	Women (age 20-49)				Men (age 25-59)		
	1990	1999	2003	2008	1999	2003	2008
<b>Age</b>							
20-29 Women (25- 29 men)	20.3	21.0	21.5	22.9	27.9	28.0	29.8
30-39	18.3	19.0	18.2	21.2	28.2	27.9	29.8
40+	18.9	18.5	17.0	19.6	27.0	25.8	28.5
<b>Region</b>							
North Central	18.4	19.5	19.5	20.8	27.6	27.5	28.7
North East	15.2	17.9	15.7	16.2	25.5	24.2	25.5
North West	14.7	15.2	15.4	16.5	25.6	25.1	27.2
South East	20.7	21.3	22.8	24.3	29.5	32.6	31.8
South South	19.6	21.5	22.1	24.1	29.2	30.4	29.9
South West	20.6	21.4	22.4	23.3	28.6	27.8	30.2
<b>Education</b>							
None	15.8	15.6	14.9	15.8	25.2	24.5	25.6
Primary	19.0	18.5	18.2	18.8	26.2	26.5	27.7
Secondary+	22.3	23.0	23.1	24.3	28.7	28.3	30.3
<b>Household wealth</b>							
Poor	18.0	17.3	15.7	17.8	25.3	23.7	26.7
Middle	19.2	19.7	18.8	21.1	26.2	27.3	29.1
Rich	20.4	21.9	22.7	24.1	29.1	29.9	30.9
<b>Overall Urban</b>	19.3	19.9	19.7	21.6	27.7	27.7	29.3
<b>Overall Rural</b>	16.3	17.5	16.2	17.1	25.1	24.9	25.2
<b>Overall Nigeria</b>	17.1	18.3	17.2	18.7	25.8	25.8	26.7
<b>No. of respondents (Unweighted)</b>							
Overall Urban	2,793	2,131	2,368	8,462	571	578	3,462
Overall Rural	4,310	4,294	3,503	18,332	1,185	874	7,054
Overall Nigeria	7,103	6,425	5,871	26,794	1,756	1,452	10,516

\* Used event history analysis where the failure event is "has married."

#### 4.11. Age at First Sex

In most Nigerian societies, the age at first marriage signifies the onset of exposure of a woman to regular sexual intercourse. Women and men sometimes engage in sexual relations before marriage (NPC, 2009). The age at which sexual intercourse starts marks the beginning of exposure to the risk of pregnancy. To obtain information on the age at first sex, women and men were asked how old they were when they first had sexual intercourse. Table 4.13 presents the median age at first sex among women aged 20-49 and among men aged 25-59 by selected background characteristics in Urban Nigeria.

Just as in the case of marriage, sexual activity among women starts at an earlier age than it does among men. This has not changed over time. Women's age at first sex increases with increase in the level of education and household wealth. For men, however, the age at first sex is observed to be negatively associated with education. While rural women are initiated into sex earlier than the urban women, men in rural and urban areas start their sexual activity at the same time.

**Table 4.13: Age at First Sex, Urban Nigeria**

Median Age\* at First Sex among Women Age 20-49 and among Men Age 25-59 by Selected Background Characteristics, 1990, 1999, 2003 and 2008

	Women (aged 20-49)				Men (aged 25-59)		
	1990	1999	2003	2008	1999	2003	2008
<b>Age</b>							
20-29 women; 25-29 men	18	19	18	19	19	21	20
30-39	18	18	17	19	19	20	20
40+	18	18	16	18	20	22	21
<b>Region</b>							
North Central	17	19	18	19	19	20	20
North East	15	18	15	16	20	22	23
North West	14	15	15	16	23	25	26
South East	18	19	19	20	19	20	21
South South	17	18	17	18	18	20	19
South West	19	19	19	20	20	20	19
<b>Education</b>							
None	15	15	15	15	20	23	23
Primary	18	18	17	18	20	22	20
Secondary+	18	20	19	20	20	20	20
<b>Household wealth</b>							
Poor	17	17	15	17	20	22	22
Middle	18	18	17	19	20	22	20
Rich	18	19	19	20	20	20	20
<b>Overall Urban</b>	18	18	18	19	20	21	20
<b>Overall Rural</b>	16	17	15	16	20	20	20
<b>Overall Nigeria</b>	16	17	16	17	20	20	20
<b>No. of respondents (Unweighted)</b>							
Overall Urban	2,793	2,131	2,368	8,462	677	796	4,307
Overall Rural	4,310	4,294	3,503	18,332	1,394	1,097	8,608
Overall Nigeria	7,103	6,425	5,871	26,794	2,071	1,893	12,915

\* Used Event History Analysis where the failure event is 'Has Had Sex'



## Chapter 5: Maternal and Child Health and Survival

Several maternal and child survival efforts have been launched by both international and national governments to improve the survival and well-being of women and children during pregnancy, delivery, and soon after delivery (Ronsmans & Graham, 2006; WHO, 2004). The various challenges poor urban mothers and children face with respect to access to care have been documented abundantly (Fotso, Ezeh & Oronje, 2008; Vlahov, Galea & Freudenberg, 2005; Magadi, Zulu & Brockerhoff, 2003). In Nigeria, the newly revised national population policy targets the reduction of infant mortality rate to 35 deaths per 1,000 live births by 2015; child mortality rate to 45 deaths per 1,000 live births by 2015; and maternal mortality ratio to 125 deaths per 100,000 live births by 2010 and 75 deaths by 2015. In trying to achieve these targets, Nigeria tries to provide quality reproductive health services that are affordable; provide free and universal child immunisation; promote use of insecticide-treated bed nets to prevent malaria; and promote exclusive breastfeeding to improve child nutrition, among other efforts. This chapter examines the progress made so far between 1990 and 2008 in delivery care, child immunisation, prevalence of diarrhoea and fever, nutritional status of children, and infant and child mortality with particular focus on urban Nigeria. The DHS asked women who had given birth in the five years preceding each survey a number of questions about maternal and child health care they received during their pregnancies and births. This assessment is based on the information drawn from their responses.

### 5.1. Assistance during Delivery

Assistance during delivery is an essential strategy for achieving maternal and child health. Statistics show that of the 210 million women worldwide who become pregnant each year, some 30 million (or about 15 percent) develop complications that in some of the cases are fatal; almost 4 million infants do not survive childbirth or the immediate postnatal

period; and millions more are disabled because of inadequately managed pregnancies and births. This highlights the importance of assistance during delivery and the period immediately following childbirth by health professionals who are equipped with skills either to manage or refer complications promptly. Table 5.1 shows the percentage of births in the past five years preceding the survey assisted at delivery by qualified care providers according to selected background characteristics in urban Nigeria for 1990, 1999, 2003, and 2008. The data show that 32.0 percent of births in Nigeria were delivered by a health professional in 1990; this increased to 35.2 percent in 2003, and made a modest improvement to 38.9 percent in 2008. On average, in the 18 years of the survey period, less than a third of births in Nigeria were assisted by a health professional. In 1990, about one quarter of women in Nigeria (24.7 percent) delivered their babies with no assistance from a health professional. By 1999 the situation improved with a decline to 6.6 percent, but since 2003, delivery with no assistance from a health professional has consistently deteriorated with an increase to 16.9 percent and then to 19.3 percent.

About two-thirds of the births in urban Nigeria between 1990 and 2008 were assisted by health professionals during delivery. Urban women were also over twice more likely to be assisted by health professionals at delivery than women who give birth in rural areas. In 1990 for example, 60.6 percent of births in urban Nigeria were assisted as against 24.4 in the rural and; in 2008, it was 65.4 percent versus 27.7 percent in the urban and rural areas respectively. While the trend in urban areas varies between stalling and increasing, the situation in rural Nigerian has been unstable with a tendency to deteriorate. Similarly, there are more deliveries in the rural areas not assisted by health professionals than in the urban. Though there was a decrease from 27.4 percent to 6.9 percent between 1990 and 1999, more deliveries took place with no assistance thereafter; 19.5 percent in 2003 and 23.7 percent in 2008 respectively.

**Table 5.1: Assistance during Delivery, Urban Nigeria**  
Percent Distribution of Births in the Past Five Years Preceding the Survey by Qualified Care Provider during Delivery by Selected Background Characteristics, 1990, 1999, 2003, and 2008

	Assistance during delivery by qualified HP*				No assistance			
	1990	1999	2003	2008	1990	1999	2003	2008
<b>Region</b>								
North Central	55.3	37.9	68.9	70.7	28.3	3.8	5.5	3.9
North East	28.9	23.8	32.4	34.3	24.6	2.6	14.9	12.4
North West	17.1	10.5	31.9	30.2	43.5	17.6	23.8	32.2
South East	90.4	45.4	88.4	85.4	0.4	3.3	0.2	2.4
South South	58.1	47.0	87.9	78.9	2.2	2.2	0.4	1.3
South West	78.2	46.2	86.9	84.1	4.2	1.0	0.7	1.5
<b>Education</b>								
None	36.1	12.2	21.4	27.5	30.7	11.6	25.0	24.4
Primary	68.4	37.0	61.5	60.9	6.4	4.2	7.2	6.9
Secondary+	84.4	49.4	84.1	84.6	2.3	1.6	1.9	2.8
<b>Household wealth</b>								
Poor	45.9	20.4	33.8	38.1	19.9	10.4	14.5	18.4
Middle	60.2	36.4	53.8	70.9	15.6	3.1	12.6	5.3
Rich	76.9	45.9	84.8	86.3	7.9	2.8	5.3	3.3
<b>Overall Urban</b>	60.6	33.8	58.5	65.4	14.7	5.6	10.6	9.0
<b>Overall Rural</b>	24.4	20.1	25.7	27.7	27.4	6.9	19.5	23.7
<b>Overall Nigeria</b>	32.0	23.9	35.2	38.9	24.7	6.6	16.9	19.3

\* Assistance by qualified health provider (HP) refers to assistance by doctor and nurse, midwife, or auxiliary midwife.

The difference between the proportion of assistance during delivery by health professionals in the urban North and the urban South is wide. During the 18 years under review, births in the South were on average about twice more likely to be assisted by a health professional (73.0 percent in the South versus 36.7 percent in the North). Births in the South East were most likely to be assisted by health professionals (85.4 percent in 2008), while those in the North West were least likely (30.2 percent in 2008). The trend shows fluctuating rates between 1990 and 2008, with the South South, North Central and North West making notable improvements (20.8 percentage points, 15.4 percentage points and 13.1 percentage points difference, respectively, in 2008 over the 1990 rates). The North West had the highest percentage of births with no assistance by a health professional in urban Nigeria between 1990 and 2008. In 1990, 43.5 percent of births in this region had no assistance from health professionals. This reduced to 17.6 percent in 1999, and then to 23.8 percent in 2003. However in 2008, 32.2 percent received no assistance at delivery, an increase over the 2003 rate. Other notably high rates recorded in 1990 were in the North Central (28.3 percent) and North East (24.6 percent), but by 2008 these rates were substantially reduced, to 3.9 percent and 12.4, percent respectively.

A mother's level of education has a strong relationship with assistance by a health professional during delivery in urban Nigeria. Births to women with secondary or more education were two times more likely to be assisted by health professionals compared to births to women with no education. On averaging the four survey years between 1990 and 2008, the proportions of births assisted by health professionals were 75.6 percent for mothers with secondary or higher education, 57.0 percent among those with primary school, and 24.3 percent for women with no education. Overall, assistance by health professionals during delivery declined in the 18-year period for mothers with primary and no education. The highest rate of births with no assistance was noted also for mothers who had no education. Assistance at delivery by health professionals varies in a similar way for household wealth status: Women in urban rich households were about twice more likely to be assisted by health professionals during delivery (73.5 percent on averaging the four surveys between 1990 and 2008) than women in the urban poor households (34.6 percent on average). Urban poor households also had the highest rate of births with no assistance.

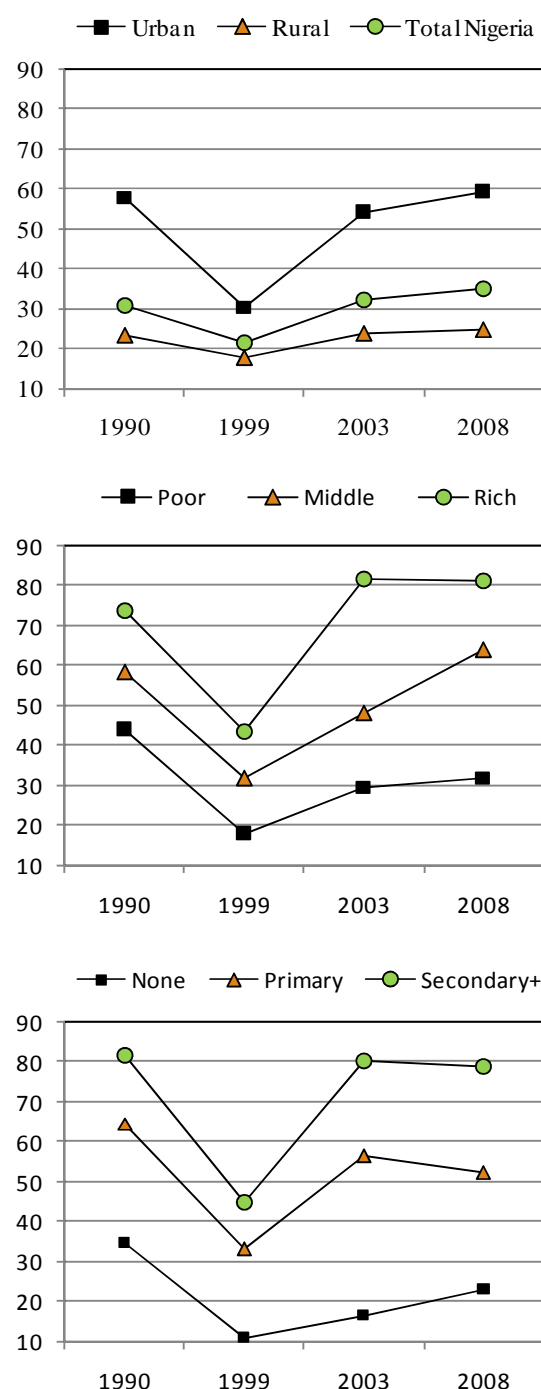
## 5.2. Place of Delivery

Closely related to assistance during delivery is place of delivery. Delivery in health facilities ensures access to proper medical attention in hygienic conditions and assistance by health professionals. Although there is a higher concentration of health facilities in southern Nigeria, 78 percent of the people live within 10 km of some kind of facility (Ali-Akpajiak & Pyke, 2003). With this level of coverage, Nigeria is considered considerably well served by health centres. Table 5.2 presents the percentage of live births in the last five years preceding the survey that were delivered in a health facility, according to selected background characteristics, in 1990, 1999, 2003, and 2008. The data show that only about one-third of births (30.0 percent on average between 1990 and 2008) in Nigeria were delivered in health facilities. There have been fluctuations in levels among the four surveys, giving no clear pattern of improvements, although an increase is noticed in 2008 over the 1990 level. Not surprisingly, delivery at a health facility is about twice more common in urban than in rural areas. In 2008 for example, about 60 percent of births in urban areas were delivered in a health facility compared to about 25 percent in the rural. Although there was a modest improvement in 2008

in rural areas over the 1990 rate, more improvement was made in the urban areas between 1999 and 2008.

**Table 5.2: Health Facility Delivery, Urban Nigeria**  
Percent Distribution of Live Births in the Last Five Years Preceding the Survey by Place of Delivery by Selected Background Characteristics, 1990, 1999, 2003, and 2008

	1990	1999	2003	2008
<b>Region</b>				
North Central	52.3	36.3	62.3	66.4
North East	29.6	21.7	28.6	28.4
North West	15.2	8.8	27.5	26.4
South East	91.7	43.8	84.0	77.8
South South	57.3	42.6	84.7	71.5
South West	74.2	40.4	82.6	77.5
<b>Education</b>				
None	34.8	10.9	16.5	23.2
Primary	64.6	33.1	56.6	52.4
Secondary+	82.0	45.1	80.5	78.9
<b>Household wealth</b>				
Poor	43.8	17.9	29.7	32.0
Middle	58.3	31.8	48.2	63.9
Rich	73.8	43.5	81.6	81.2
<b>Overall Urban</b>	58.2	30.6	54.2	59.4
<b>Overall Rural</b>	23.6	18.0	23.8	24.7
<b>Overall Nigeria</b>	30.9	21.4	32.6	35.0



**Figure 5.1: Percentage of deliveries at a health facility by urban-rural residence, education and wealth, urban Nigeria.**

The regional pattern of delivery in a health facility is skewed in favor of the South, as for most of the economic and social indicators. The proportion of deliveries in a health facility is about twice as high in the South as in the North (on average about 69.0 percent in the South and 33.6 percent in the North between 1990 and 2008). The region with the highest proportion of deliveries in a health facility was the South East (74.3 percent on average between 1990 and 2008), and the North West had the lowest proportion (19.5 percent), giving a difference of 54.8 percentage points between these regions in the 18 year survey period. Though there were no particular patterns of improvements or deteriorations in any region, in the North West and South South, some improvements occurred between 1990 and 2003.

Education, to a large extent, determined place of delivery. On average, between 1990 and 2008, the proportion of births delivered in a health facility was 71.6 percent among mothers with secondary or higher education, compared with 21.4 percent for mothers with no education. Though there were fluctuations between surveys, the trend shows a slow decline in the proportion of women who delivered in health facilities for all groups of women. Household wealth is also a strong factor determining the place of delivery. In 1990 for example, 73.8 percent of births to urban mothers from richer households were delivered at a health facility, compared to only 43.8 percent among urban poor mothers. The proportions were 43.5 percent and 19.7 percent, respectively in 1999; 81.6 percent versus 29.7 percent, respectively in 2003; and about 81.2 percent and 32.0 percent, respectively, in 2008. Although there are no notable changes in place of delivery for women with poor and middle income backgrounds over the years, those of rich income backgrounds improved modestly between the 1999 and 2008 surveys.

### 5.3. *Child Immunization*

Child immunization is a factor listed as key to child survival (Black, Morris & Bryce, 2003; Fotso, Ezeh, Madise & Ciera, 2007; Bryce, Boschi-Pinto, Shibuya, et al., 2005). The Expanded Programme on Immunization (EPI) was launched in 1974 globally and through national programs has prevented

millions of deaths to children. However, the benefits of immunization are not yet reaching all children, as 20 percent of children still do not get fully immunized during their first year of life (WHO, 2009). Leaving them vulnerable to life threatening childhood diseases. Inequalities also exist between and within countries, with services not adequately getting to the poor whose children contribute to over half of all childhood deaths (WHO, 2009).

According to the World Health Organization, a child is considered fully vaccinated if he or she has received a BCG vaccination against tuberculosis; three doses of DPT vaccine to prevent diphtheria, pertussis, and tetanus (DPT); at least three doses of polio vaccine; and one dose of measles vaccine in the first year of life. In Nigeria, BCG and Polio vaccines are given at birth; DPT and polio vaccines at approximately 6, 10, and 14 weeks of age; and measles vaccine at or soon after the child reaches nine months of age (NPC, 2009). The information on these vaccinations is supposed to be recorded on a health card given to parents or guardians. The DHS collected this information for all children born in the five years preceding each survey or, where cards were not available, asked the parents or guardians to recall information on vaccinations their children received. Table 5.3 presents the percentage of children aged 12-23 months who received full immunization at any time before the survey by selected background characteristics in urban Nigeria for 1990, 1999, 2003, and 2008.

On average in the 18-year period under review, only about 19.6 percent of children were fully immunized or one-fifth of all children 12-23 months in Nigeria. Full immunization coverage declined from 1990 to 1999 and to 2003 (from 27.5 percent, to 15.1 percent and to 13.0 percent, respectively), but increased to 22.8 percent in 2008 or about one-quarter of the population of children targeted. In 1990, 47.6 percent of urban children aged 12-23 months were fully immunized; this declined to 28.2 percent in 1999 and to 25.2 percent in 2003, then rose to 38.0 percent in 2008. Children in urban areas were more likely than rural children to receive full immunization, with the proportion of fully immunized children in the urban areas nearly doubling that in the rural areas. In 2008 for example, 38.0 percent of children in the urban areas were fully

immunized compared to 16.2 percent in the rural. Full immunization coverage declined between 1990 and 2003, but subsequently improved for both urban and rural sectors, though at a faster rate in the urban areas.

**Table 5.3: Child Full Immunization , Urban Nigeria**  
Percentage of Children Aged 12-23 Months Who Received Full Immunization\* at Any Time before the Survey by Selected Background Characteristics, 1990,1999, 2003, and 2008

	1990	1999	2003	2008
<b>Region</b>				
North Central	49.0	30.6	30.2	34.3
North East	17.8	24.2	9.8	9.6
North West	34.2	16.3	7.8	13.4
South East	51.3	36.5	57.2	48.6
South South	59.9	25.1	41.8	51.5
South West	54.7	35.7	39.7	55.7
<b>Education</b>				
None	32.4	15.6	6.5	10.1
Primary	43.7	19.8	28.3	30.8
Secondary+	67.7	42.1	36.0	53.5
<b>Household wealth</b>				
Poor	33.2	21.0	10.6	18.6
Middle	45.7	24.4	23.3	37.2
Rich	66.0	38.9	39.3	56.6
<b>Overall Urban</b>	47.6	28.2	25.2	38.0
<b>Overall Rural</b>	21.8	10.3	7.4	16.2
<b>Overall Nigeria</b>	27.5	15.1	13.0	22.8

\*Full immunization means the infant has received BCG, measles, three doses of DPT, and three doses for polio according to vaccination card (dated or undated) or as reported by mother.

The South East region had the highest coverage of children who were fully immunized in all regions (48.4 percent on average between 1990 and 2008) while the North East had the lowest coverage (15.4 percent on average between 1990 and 2008). Less than one-fifth of children in the North West received full immunization (17.9 percent on average) between 1990 and 2008. Although there are fluctuations between surveys, there is an indication that full immunization of children 12-23 months improved in all the southern regions and modestly in the North West. Mother's level of education has some connection with full immunization of children. Children whose mothers had secondary or higher education were more likely to be fully immunized

compared with children of women whose mothers had no education. In 2008 for example, coverage was 53.5 percent among urban mothers with secondary education or higher, compared to 10.1 percent among those with no education.

In urban Nigeria, household wealth also has a strong connection with full immunization. In 2008 for example, 56.6 percent of children from rich households were fully immunized, while 37.2 percent and 18.6 percent from the middle and poor household wealth categories, respectively, received full immunization. The trend in the 18-year survey period shows slight changes, more noticeable between 2003 and 2008 for all categories and from 1999 for the rich household wealth category.

#### 5.4. Prevalence of Diarrhea and Fever

Diarrhea and fever are said to be leading causes of morbidity and mortality among children (NPC, 2009). They have a capacity of hampering the intake of nutrients and contribute to the levels of malnutrition and mortality among children, even when food supply is adequate. It is estimated that in sub-Saharan countries, children suffer a minimum of five episodes of diarrhea per year, and 800,000 children die from diarrhea and dehydration annually (UN, 2009). Fever occurs all year round and is a major manifestation of malaria and other acute infections in children. Improved water supply and sanitation facilities have the potential to lessen substantially the morbidity of diarrhea and fever among children, but many Nigerians lack access to safe drinking water, adequate refuse, drainage and human waste disposal (UNICEF, 2001).

Table 5.4 shows the percentage of under-five children with diarrhea or fever in the last two weeks preceding each survey, according to selected background characteristics, in urban Nigeria 1990, 1999, 2003, and 2008. These results show that fever was more prevalent than diarrhea in the last two weeks preceding each survey. The prevalence rates were 15.6 percent for diarrhea and 28.4 percent for

**Table 5.4: Prevalence of Diarrhea and Fever, Urban Nigeria**

Percent Distribution Children under Five Years of Age with Diarrhea in the Last Two Weeks Preceding Survey and Those That Had Fever in the Last Two Weeks Preceding Survey by Selected Background Characteristics, 1990, 1999, 2003, and 2008

	Diarrhea in last 2 weeks				Fever in last 2 weeks			
	1990	1999	2003	2008	1990	1999	2003	2008
<b>Region</b>								
North Central	19.7	6.7	15.3	5.8	32.9	11.2	24.6	9.9
North East	22.7	10.6	36.7	21.3	29.2	16.1	38.8	22.3
North West	20.3	10.4	19.3	13.5	29.7	17.4	36.5	16.1
South East	11.9	7.1	9.0	5.1	28.4	19.9	23.6	23.3
South South	7.8	7.0	8.6	4.0	32.3	18.7	30.6	21.6
South West	7.9	3.5	6.6	6.3	16.5	11.4	17.3	8.3
<b>Education</b>								
None	17.2	8.9	24.8	14.1	28.7	14.8	36.7	16.7
Primary	14.2	7.1	17.8	9.3	30.4	17.6	29.4	15.9
Secondary+	9.9	6.9	11.0	5.9	23.0	15.6	25.2	16.3
<b>Household wealth</b>								
Poor	15.6	8.2	23.4	13.9	27.3	15.2	33.6	17.4
Middle	17.3	8.4	21.5	10.4	28.6	15.5	35.2	15.9
Rich	14.1	7.1	13.7	6.6	29.3	16.3	26.8	15.8
<b>Overall Urban</b>	10.5	7.4	15.0	8.1	19.9	14.1	27.7	13.2
<b>Overall Rural</b>	16.9	8.1	21.5	11.5	30.7	16.3	33.8	17.8
<b>Overall Nigeria</b>	15.6	7.9	19.5	10.4	28.4	15.7	31.9	16.4

fever in 1990 for all of Nigeria; and 7.9 percent for diarrhea and 15.7 percent for fever in 1999. Overall, about one-sixth of children under five years of age (13.4 percent on average between 1990 and 2008) were reported to have had diarrhea and about a quarter were reported to have had fever (23.1 percent) in the last two weeks before each survey. Though there seems to be a reduction between 1990 and 2008 for those who had diarrhea (5.2 percentage points difference in 2008 over the 1990 level) this reduction fluctuated over the years indicating very little improvement. The trend for those who had fever was more or less maintained from 1990 until 2003; then a substantial reduction took place in 2008.

By place of residence, the proportion of children who had diarrhea in the last two weeks preceding each survey in urban and rural areas was 10.2 percent and 14.5 percent, respectively, on average between 1990 and 2008. Those who had fever were 18.7 percent and 24.6 percent in rural and urban areas respectively in the same period. Although there were fluctuations between surveys in the 18-year period, both sectors witnessed modest declines in diarrhoea prevalence, while fever witnessed fluctuating rates between 1990 and 2003 and then a

more than double reduction in 2008 in both urban and rural areas.

The prevalence of diarrhea and fever varied across the regions; however diarrhea prevalence varies more markedly than fever prevalence. Generally, diarrhea and fever are more common in the North than in the South; the proportion of children with diarrhea in the last two weeks preceding each survey was 16.7 percent and 7.1 percent in the northern and southern regions respectively, on the average between 1990 and 2008. Fever prevalence in the same period was 23.7 percent and 20.1 percent respectively on average in the North and South. Children in the North East region were most susceptible to episodes of diarrhea (25.2 percent on average) and those of the South West were less susceptible (6.5 percent). The North West had the highest proportion of children with fever in the last two weeks preceding each survey and the South West had the least on average. The regions that witnessed declines in diarrhea among children in the 18-year survey period were the North Central and South South (19.7 percent and 7.8 percent, respectively in 1990, compared to 5.8 percent and 4.0 percent, respectively, in 2008). Although there was no clear pattern of progress about fever between

1990 and 2003, there were reductions in all regions in 2008. Education and household wealth are factors associated with diarrhea prevalence among children. Children of mothers with secondary or more education or those in the rich households are less likely to experience diarrhea compared with those whose mothers have no education or who come from poor households. By contrast, fever prevalence shows a weak relationship with education and household wealth.

### 5.5. *Nutritional Status of Children*

Malnutrition or its underlying effects on disease contributes to more than half of child deaths worldwide, even at mild and moderate levels. On average, it is estimated that a child who is severely underweight is 8.4 times more likely to die from infectious diseases than a well-nourished child, and a child who is moderately or mildly underweight is 4.6 and 2.5 times, respectively, more likely to die than a well-nourished children.

The DHS collected height and weight measurements for all children surveyed under age five to assess their nutritional status. This was analyzed using the WHO Child Growth Standards and given in three indices of height-for-age, weight-for-height, and weight-for-age. The height-for-age index indicates “linear growth retardation and cumulative growth deficits,” or stunting. Stunting results from the failure of a child to receive adequate nutrition over a long period or due to recurrent and chronic illnesses. It shows the long term effects of malnutrition. The weight-for-height index describes current nutritional status, or wasting, the failure to receive adequate nutrition in the period immediately preceding the survey. Wasting is sensitive to recent or short-term changes in dietary intake. Weight-for-age is a composite index of height-for-age and weight-for-height. It describes both the short- and long-term changes in dietary intake or acute and chronic malnutrition (NPC, 2009).

Table 5.5 shows the percentage of under-five-years-of-age children classified as malnourished according to height-for-age and weight-for-age, by selected background characteristics in urban Nigeria in 1990, 1999, 2003, and 2008. The results indicate that malnutrition in Nigeria is chronic. On average in the

18-year period covered, close to half of all children in Nigeria were stunted (40.8 percent) and nearly one-third were underweight (29.7 percent). The trend indicates fluctuations between surveys but ultimately a reduction is noticeable in 2008 over the 1990 level of about 8.0 percentage points (underweight children) and 6.0 percentage points (stunted children).

Children living in urban areas were better nourished. In 2008 for example, while 19.1 percent were underweight in urban Nigeria, 31.2 percent were found to be so in the rural areas. In the same year, 27.0 percent were found to be stunted in the urban areas while 41.3 percent were found in the rural. The trend shows that, although the situation tends towards a slight improvement over time, it is happening very slowly. There are generally more malnourished urban children in northern than in southern Nigeria. While the North East and North West have the highest proportion of malnourished children in urban Nigeria, the South South has the least. More progress has been made in the reduction of malnourished children in the South especially in the South East, where an average reduction of 16.4 percent and 26.9 percent was achieved in underweight and stunted children respectively between 1990 and 2008. In the North, the data show a largely stalled trend, indicating very slight improvement in 2008 over the 1990 level. In the North West the rates increased slightly in 2008 over those of 1990.

The data also show that the level of mothers’ education and household wealth are negatively associated with their children’s nutritional status in urban Nigeria, except in the case of stunting in 1999. Children born to mothers with no education were, on a general note, more likely to be underweight or stunted than children born to mothers with secondary or higher education. The pattern is similar for household wealth, with children born to mothers from rich households less likely to be malnourished, compared to those born to mothers from poor households. Overall, Nigeria has performed very poorly in child nutrition, as the proportion of malnourished children remains unacceptably high for all groups, and the situation has improved only sluggishly over the years.

**Table 5.5: Child Malnutrition, Urban Nigeria**

Percent Distribution Children under Five Years of Age Classified as Malnourished according to Two Anthropometric Indices of Nutritional Status (Weight-for-Age and Height-for-Age) by Selected Background Characteristics, 1990, 1999, 2003, and 2008

	Weight for age (underweight)				Height for age (stunting)			
	1990	1999*	2003	2008	1990	1999*	2003	2008
<b>Region</b>								
North Central	32.1	23.5	20.1	23.6	39.4	53.5	32.1	39.2
North East	40.3	30.2	32.9	40.0	49.9	53.2	43.4	45.0
North West	46.7	44.6	43.0	39.9	53.4	56.7	55.9	49.1
South East	29.3	15.7	8.4	12.0	36.9	33.8	19.6	17.5
South South	32.6	19.7	17.1	14.7	38.1	36.5	17.6	26.2
South West	26.8	26.4	19.0	17.2	35.8	39.3	24.7	26.6
<b>Education</b>								
None	40.7	36.3	38.0	39.4	47.6	56.2	50.5	47.5
Primary	30.2	23.9	26.1	23.9	39.1	39.7	36.1	35.9
Secondary+	22.3	20.3	15.3	13.9	28.7	38.7	20.0	23.0
<b>Household wealth</b>								
Poor	39.1	34.2	33.8	36.6	46.7	54.0	46.1	45.3
Middle	36.2	30.3	31.7	28.0	43.3	46.9	44.2	38.3
Rich	31.4	19.2	21.2	17.1	38.9	37.5	25.7	26.3
<b>Overall Urban</b>	26.0	26.7	22.4	19.1	34.7	41.6	28.9	27.0
<b>Overall Rural</b>	38.1	27.5	31.7	31.2	45.1	47.0	43.0	41.3
<b>Overall Nigeria</b>	35.3	27.3	28.7	27.3	42.7	45.5	38.5	36.7

\*In 1999, used the children files to determine stunting and underweight because these two variables did not exist in the birth files and merging them into the birth files would only yield data for those under three years of age. Therefore, the denominator in 1999 is all births in the three years preceding survey.

## 5.6. Infant and Child Mortality

The Millennium Development Goal number 4 aims at reducing child mortality by two-thirds by the year 2015 over the 2000 level. Although it has been observed that there is a general decline in infant and child mortality around the world, this decline is unevenly distributed. For example, rates tend to be higher for poor people, certain regions (rural) and in developing countries, especially sub-Saharan Africa and Asia (UN, 2009). This section presents the Nigeria picture with the view to examining the possibility of achieving the MDG number 4 in Nigeria by 2015. The DHS estimates on infant and child mortality presented here are based on information from women's birth histories. All mortality rates are expressed per 1,000 live births, but child mortality is expressed per 1,000 children surviving to 12 months of age.

Table 5.6 shows infant, child and under five years of age mortality rates by selected background characteristics in urban Nigeria 1990, 1999, 2003 and 2008 for the five-year period preceding each survey. The under-five mortality rate for the period under review is noticeably high. The trends indicate a gradual decrease in under-five mortality over the 18-year survey period, although with fluctuations between surveys. This reduction on a general note is faster for child mortality than infant mortality, with a difference of about 17.6 deaths (child mortality) and 4.4 deaths per 1,000 (infant mortality) in 2008 over the 1990 level. Worthy of note is the decline between 2003 and 2008 surveys for all childhood mortality rates, as shown in figure 5.1.

**Table 5.6: Mortality Rates, Urban Nigeria**

Infant Mortality Rates, Child Mortality Rates and Under-Five Mortality Rates by Selected Background Characteristics, 1990, 1999, 2003 and 2008

	Infant mortality rate				Child mortality rate				Under-five mortality rate			
	1990	1999	2003	2008	1990	1999	2003	2008	1990	1999	2003	2008
<b>Region</b>												
North Central	86.1	52.0	52.5	67.4	81.4	34.4	44.0	48.4	160.5	84.6	94.3	112.5
North East	101.1	46.1	113.4	86.8	60.9	46.8	114.5	97.9	155.9	90.7	214.9	176.2
North West	88.5	86.1	87.7	71.6	80.8	123.1	113.0	92.0	162.2	198.6	190.8	157.0
South East	81.2	49.4	58.6	75.5	19.5	24.6	27.4	62.6	99.1	72.8	84.4	133.3
South South	66.8	56.4	77.7	60.3	49.0	21.6	47.0	29.1	112.6	76.8	121.0	87.7
South West	65.1	52.4	62.9	53.4	54.4	34.8	47.8	26.6	115.9	85.4	107.7	78.6
<b>Education</b>												
None	79.7	75.9	119.3	84.6	72.6	89.0	129.3	105.7	146.5	158.1	233.2	181.3
Primary	73.5	59.7	88.9	71.2	50.8	41.9	68.9	49.3	120.6	99.0	151.7	116.9
Secondary+	74.1	42.2	42.6	59.5	41.3	24.0	37.2	39.8	112.3	65.2	78.2	96.9
<b>Household wealth</b>												
Poor	112.1	84.2	139.2	110.7	62.5	61.0	113.7	129.4	167.6	140.1	237.1	225.8
Middle	90.8	70.3	103.3	103.3	80.0	86.0	128.3	128.3	163.6	150.3	218.4	218.4
Rich	64.9	50.4	60.3	59.3	48.0	35.5	47.1	38.4	109.8	84.1	104.6	95.4
<b>Overall Urban</b>	75.6	58.6	80.9	67.5	57.9	52.1	77.8	58.0	129.1	107.7	152.4	121.5
<b>Overall Rural</b>	95.6	74.8	120.7	94.8	124.7	73.0	138.1	105.2	208.4	142.3	242.1	190.0
<b>Overall Nigeria</b>	91.4	70.8	109.0	87.0	109.6	67.4	121.0	92.0	191.0	133.4	217.0	171.0

Childhood mortality rates differ substantially between urban and rural areas in favor of urban areas, especially in child mortality. In 2008 for example, infant mortality was about 67.5 deaths per 1,000 births in the urban areas and 94.8 deaths per 1,000 births in the rural; child mortality on the other hand was 58.0 deaths per 1,000 in the urban and 105.2 deaths per 1,000 in the rural. The under-five mortality rate was 121.5 deaths per 1,000 births in the urban areas, and 190.0 deaths per 1,000 births in rural areas in the same year. The trends show that, firstly, reductions occurred mostly between the first and fifth birthdays rather than before the first birthdays and, secondly, that a reduction in under-five mortality was higher in rural Nigeria.

By region, under-five mortality varied widely between the North and the South. This variation is more with child mortality than infant mortality. While children in the North East had the highest probability of dying before their first birthday, those in the South East tend to have the lowest risk. The South West region has the lowest rates for child mortality and the North West the highest. Only modest reductions were achieved in childhood mortality over the years in all regions. The North East, North West and South East recorded increases

in 2008 over their 1990 rates. Although, the South East had the lowest rate of child mortality in the region, it witnessed increases consistently between 1990 and 2008 in deaths to children between their first and fifth birthdays. As for most the indicators analyzed in this report, higher levels of educational attainment and household wealth are associated with lower mortality rates. In 2008 for example, children born to mothers with secondary or higher education had less probability of dying before their fifth birthday compared with children born to mothers with no education (96.9 deaths per 1,000 live births and 181.3 deaths to 1,000 live births, respectively). Under-five mortality in 2008 was 225.8 deaths per 1,000 live births among children of urban poor households, 218.4 deaths for children of middle income households and 95.4 deaths per 1,000 for children of rich household wealth. Like child malnutrition, Nigeria has done poorly in child survival. Even the urban rich and the educated have very high rates, which suggest that there is a very poor supportive environment in Nigeria for children to survive.

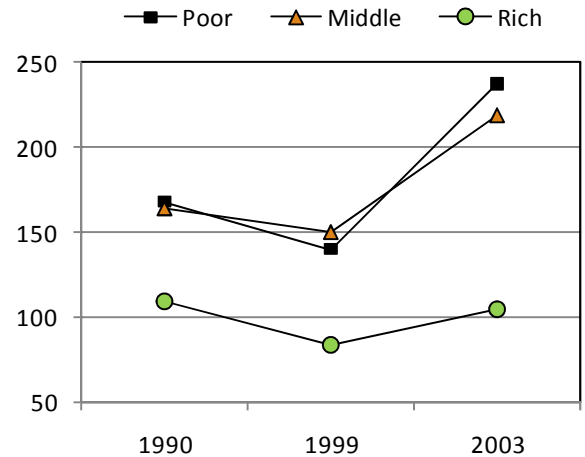
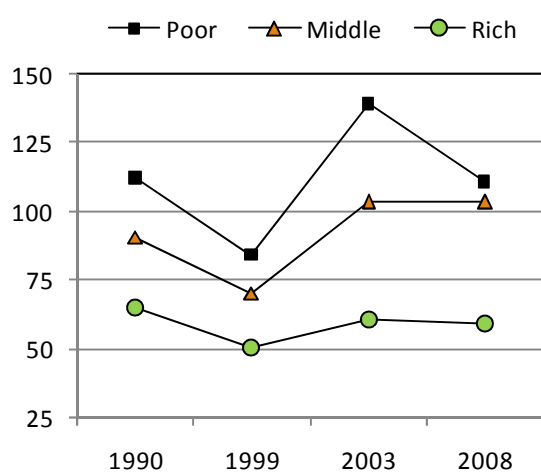
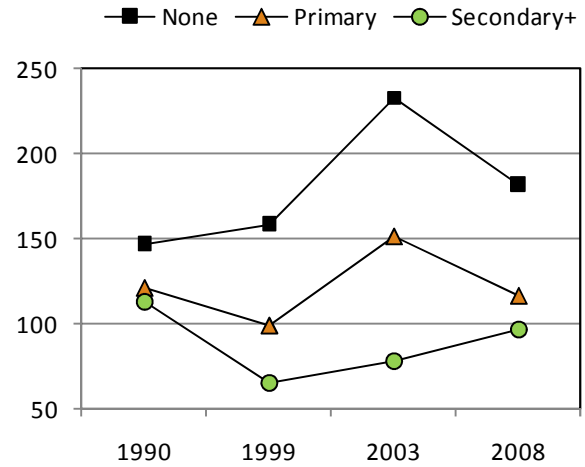
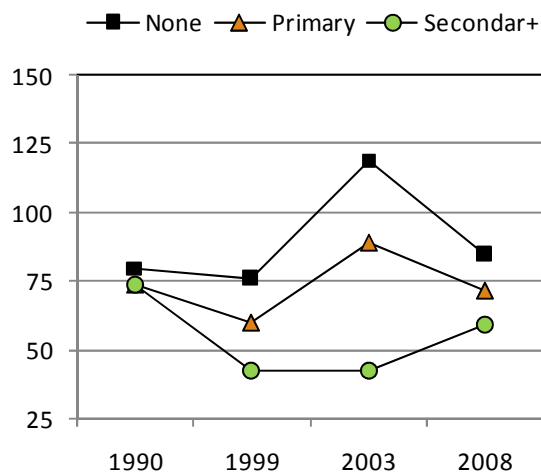
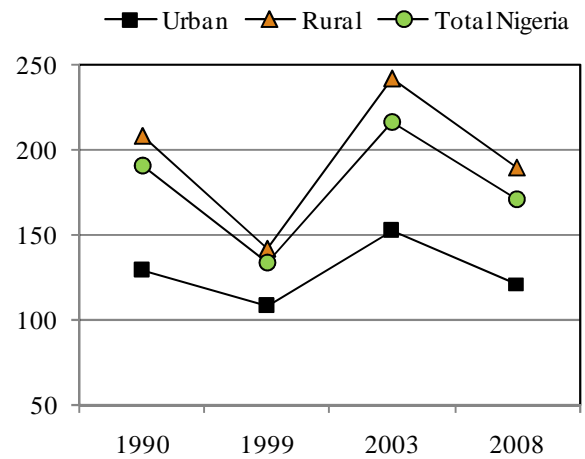
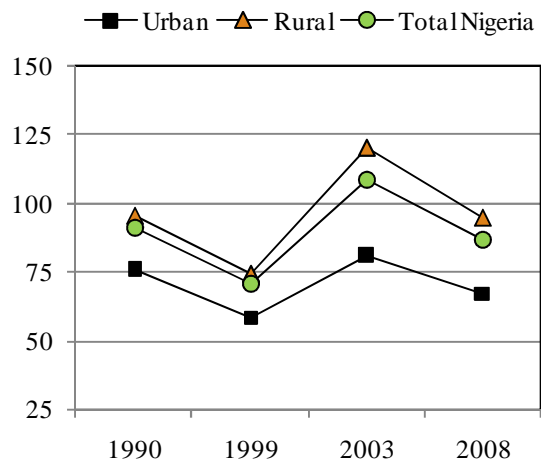


Figure 5.2: Infant mortality rate by urban-rural residence, education and wealth, urban Nigeria.

Figure 5.3: Under-five mortality rate by urban-rural residence, education and wealth, urban Nigeria.

## Chapter 6: Challenges Facing Reproductive Health and Family Planning in Nigeria

Nigeria is the most populous country in Africa. According to the 2005 data from United Nations' Population Division, with about 46 percent of the population living in urban areas, it is one of the most urbanized countries in sub-Saharan Africa, along with South Africa (59.3 percent), Cameroon (54.3 percent), Ghana (47.8 percent) and Cote d'Ivoire (46.8 percent) (UN, 2009). As in many countries of the region, Nigeria's earliest population concerns were the mal-distribution of people between rural and urban areas and migration. Through the 1950s and 1960s, the focus was on resettlement schemes and developing other strategies to help stem the flow of migrants from rural to urban areas. During the period, though national and external funds were made available for birth control programs and services, national population policy was not a major concern of the government. Therefore, couples, lineages and communities were left to their local practices and perspectives on fertility control.

In the mid-1980s, the Nigerian government launched a national population policy, which gradually transformed the fertility control scene in the country. At that time the annual population growth rate was estimated to be 3.3 percent; the infant mortality rate was 87 per 1,000 live births; and the maternal mortality rate was reported to be among the highest in Africa (Federal Republic of Nigeria, 1988; Pearce, 2001). The policy was reviewed again in 2004 (NPC, 2004). A review of several studies on maternal health and female reproductive health in Nigeria has thrown light on some of the key historical and current challenges that have dogged reproductive health and family planning programs in the country (Adetoro, Babarinsa, & Sotiloye, 1991; Alade, 1989; Backer and Rich, 1992; Feyisetan and Pebley, 1989; Harrison, 1997; Makinwa Adebusoye, 1992; Odujirin, 1991; Omorodion, 1993; Okonofua, Abejide & Mankanjuola, 1992; Pearce, 1995; Renne, 1993). They are discussed under the following subheadings: internal resistance to population control and use of modern contraceptives; unequal gender relations and regional variations; men's role and responsibility in family planning and reproductive health; external dependence and weak

internal support; structure and delivery services; and proliferation of nongovernmental organizations.

### 6.1. Internal Resistance to Family Planning and Use of Modern Contraceptives

The implementation of the national policy on population has been greeted with pressures and criticisms from both Nigerians and organizations outside the country. Internally, resistance to family planning and the use of "modern" contraceptives was strong among segments of the population, particularly men (Olusanya, 1969; Jinadu and Ajuwon, 1997). The United Nations Population Fund (UNFPA) also noted in its *Programme Review and Strategy Development Report: Nigeria* that there was limited commitment to the population policy among community leaders and religious groups, with significant numbers holding "traditional values and attitudes with respect to fertility and family size" (UNFPA, 1996). Results from ethnographic studies have underscored how Nigerians navigate a paradoxical political-economic and cultural context, where "they face powerful pressures both to limit their fertility and yet to have relatively large families. The main argument advanced is that Nigerians' high fertility behavior must be understood in the context of the ways that parenthood, children, family and kinship are inextricably intertwined with how people survive in a political economy organized around patron-clientism" (Smith, 2004; Smith, 2005; Caldwell & Caldwell, 1987).

### 6.2. Unequal Gender Relations and Regional Variations

The 1988 policy was criticized for acquiescing to the local resistance of family planning and constructing the rights and freedoms of husbands and wives as significantly different and unequal by recognizing "the patriarchal family system in the country for the stability of the home," endorsing polygamy, procreation for men up to the age of 60, and a voluntary limit of four children per woman. Given these perspectives on marital and reproductive behavior and that the precise meaning of "patriarchal family system" has typically differed from one ethnic group to the next, a wide range of cultural practices point to quite different expressions of patriarchy among different ethnic groups, and resultant reproductive health and family planning

outcomes. As this report and other reports have shown, (NPC, 2009; NPC, 2004; NPC, 2000; Federal Office of Statistics, 1992) there is evidence of differential contraceptive practices and level of fertility between regions in Nigeria. The gap between the northern region and the rest of the country has remained high and, in some cases, has widened significantly.

Apart from the challenge of regional variations, the FP/RH programs in Nigeria face the challenge of gender disparity and neglect of young people. In line with its policy statements, the initial focus of implementation of the 1988 population policy was an aggressive family planning program, which was devised mainly to reach married women. The government defined the population problem largely in terms of the reproductive behavior of wives; that is, married women. All males and single females (e.g., adolescents) were of secondary interest until quite recently (Caldwell, Orubuloye & Caldwell, 1992; Jinadu & Ajuwon, 1997; Isiugo-Abanihe, 2003). Yet the importance of men's role in reproductive health and FP and those related to adolescents' sexuality has been recently highlighted in Nigeria. For instance, early marriage and parenthood are common in Nigeria.

### ***6.3. Men's Role and Responsibility in Family Planning and Reproductive Health***

There is increasing concern that not enough attention is paid to men's attitudes, responsibilities, and sexual behaviors. This does not correspond to their power and influence in reproductive behavior, at both micro and macro-levels. Men dominate the reproductive arena as researchers, clinicians, lawmakers, funders, university professors and policy-makers (Berer, 1996). Furthermore, at the micro-level of households and lineages, men and patriarchal interests cannot be ignored. It has been reported that husbands are more likely to want more children than wives. Both male and female respondents generally felt that men make the reproductive decisions, decide whether or not to have sexual relations, decide upon the duration of abstinence and make choices about the practice of family planning (Isiugo-Abanihe, 1994). Studies in Nigeria and other countries have also suggested the vulnerability of adolescent men to some of the problems faced by young women, such as sexual

coercion, unwanted sexual touching, penetrative sex and being "rented" as prostitutes by older men and women (Ganju, Jejeebhoy, Nidadevolu, et al., 2004; Jejeebhoy and Bott, 2003; Ajuwon, 2003). In addition, research and programs have failed to incorporate the increased recognition of the need to involve men in sexual and reproductive health initiatives, as well as understand their needs, perceptions and motivations in reproductive health matters.

### ***6.4. External Dependence and Weak Internal Support***

In Nigeria, most service programs aimed at improving young people's sexual and reproductive health are sub-national in scope, and most are funded by international donors such as the U.S. Agency for International Development (USAID) and private foundations, including the Ford Foundation, the Bill & Melinda Gates Foundation, the Rockefeller Foundation, the William J. Clinton Foundation, the David and Lucile Packard Foundation, and The John D. and Catherine T. MacArthur Foundation. The major developed country governments contributing to improved adolescent sexual and reproductive health services in Nigeria are those of Canada, China, France, Germany, Italy, Japan, Switzerland, the United Kingdom and the United States. International agencies working on these programs include UNFPA, WHO and the United Nations Children's Fund (UNICEF). The overall national health budget in 2007 was 122 billion Naira, which translates into U.S. \$7 per person. Thus, the public sector—the health provider on which most Nigerians depend—is not funded adequately, and programs to implement well-intended policies often fail when donors pull out of pilot projects that they have initiated. Other external organizations linked to provision of funds include Britain's Overseas Development Agency and the International Planned Parenthood Federation.

Increasingly, it is believed that the future of the entire family planning program is in jeopardy, since much of the external funding has dried up and the government believes that neither it nor the public can bear the cost of supplies (UNFPA, 1996; van Delan and Reuser, 2008). The weakness of external dependence was highlighted by recent reviews detailing the declining support for FP programming from external sources.

Globally, the 10-year review of the flow of financial resources for the implementation of the program of action of the International Conference on Population and Development reported that donor support for family planning commodities and service delivery fell from U.S. \$560 million to U.S. \$460 million between 1995 and 2003. Other estimates covering longer periods show how the proportion of donor assistance for family planning since the mid 1990s dwindled relative to other competing new challenges, such as HIV/AIDS. Van Delan and Reuser (2008) showed that the global share of family planning in international development assistance declined from about 54.0 percent to less than 5.0 percent between 1995 and 2007. During the same period, the proportion of international assistance to STD/HIV/AIDS increased from under 10.0 percent to over 85.0 percent. In Nigeria as in other countries of the developing world, particularly sub-Saharan Africa, the overwhelmingly focus on HIV/AIDS neglects critical demographic issues and degrades health infrastructure.

### **6.5. Structure of Delivery Services**

Technically, at the time of the launch of the population policy, the new family planning facilities were to be incorporated into the primary health care system within which family planning was an important dimension. The PHC system was said to be the best way of extending medical services to rural and underserved locations. It was to be the cornerstone of a national health policy that would incorporate the idea of local materials and community participation to overcome long-standing problems within the medical care delivery system. Today, the delivery system is divided into three tiers, of which the first level is administered by local governments, which handle PHC in communities. The secondary tier is administered by state governments and consists of specialized hospitals and training programs for health providers. At the federal level, the government is responsible for policy-making, technical assistance, financing and coordination.

This official structure, however, masks major inequalities in access to services between regions, locations and socio-economic groups, even within urban settings. In addition, the entire delivery system

has deteriorated as a result of the economic downturn and markedly so after the structural adjustment programs, when funding for public services was curtailed. The family planning program implemented through the PHC program was introduced at a low point in the history of medical care delivery. Plans for improving health care were undercut by shortages in medical supplies, increases in the cost of drugs and reduction in services. Throughout the 1990s, the population program grew and the number of contraceptive service delivery points grew even faster (UNFPA, 1996). However, various reports indicate that many facilities are poorly managed, poorly equipped and under-funded. According to the 1996 UNFPA report, there were no contraceptive choices in many of the clinics and facilities. Basic items such as water, sanitary examination tables, disposal gloves and sterilizing liquid often were not available. Even though a wide range of agencies, task forces and programs have been established to address population issues (e.g., The National Primary Health Care Development Agency, National Population Program, Population Activities Fund Agency, National Population Commission, Population and Family Welfare Education), funds have remained scarce.

A number of innovative programs being carried out by federal and state ministries of health, government agencies and NGOs have arisen from the new population policies. One of the most recent and notable federal programs aimed at improving adolescent sexual and reproductive health in Nigeria is the Family Life and HIV/AIDS Education curriculum and program, launched in 2002 and implemented by state ministries of education with the support of other government agencies and international partners, as part of an attempt to improve sex education in junior secondary schools across the nation. But uptake of the curriculum has been slow and the program has been implemented in only 10 of the 36 states. A pilot project has been introduced to provide family life and HIV/AIDS education services over the Internet and by telephone. The project is aimed at youth with access to computers and mobile phones. For example, a service called My Question allows young people to ask questions about sexual and reproductive health and get accurate answers through text messages and e-mails.

Several international, national and local NGOs have carried out projects aimed at improving adolescent sexual and reproductive health in parts of the country. Many of these pilot initiatives have improved adolescent health in Nigeria in small ways and have contributed to increased attention being paid to the issue of adolescent sexual and reproductive health. However, the impacts of these programs are too modest to measure at the national or regional levels. Moreover, a barrier to the effectiveness of efforts to improve adolescents' sexual and reproductive health has been a lack of coordination among governmental and nongovernmental stakeholders, resulting in piecemeal efforts with limited impact.

### ***6.6. Proliferation of Nongovernmental Organizations***

Nigeria is a nation in which nongovernmental organizations, at the local level, was a pre-colonial invention, and served as pressure groups (Kisekka, 1992b; Mba, 1982; Pearce, 1989). With continued economic problems, these organizations multiplied dramatically and, by the early 1990s, much political hope was riding on the role that NGOs could play in addressing the problems of the marginalized populations, especially those in the rural areas. The duplication of health and reproductive health projects among competing groups, both locally and externally driven, is now a major problem.

The new Gates Urban Reproductive Health Initiative is a unique opportunity to refocus attention on critical demographic issues and to upgrade the health infrastructure in urban Nigeria. The importance of focusing in urban areas is underscored by evidence that the effect of population growth on environment and quality of life are readily visible in urban areas of developing countries (Onwuzurike & Uzochukwu, 2001). Mounting evidence points to a growing vulnerability of an increasingly marginalized and burgeoning slum population that merits attention apparently because poverty and its attendant lack of access to basic amenities have greater sexual health implications for urban residents (Brockerhoff & Brennan, 1998; Todaro, 1989). Economic stresses associated with low wages, unemployment, and increasing poverty presumably encourage many women to use sex to generate

income for basic needs, provoking early initiation of sexual activity and high incidence of multiple sexual partnerships (Carael & Allen, 1995; Ulin, 1992). These conditions also prompt men to exploit women's economic vulnerability by paying very little for sex and subjecting women to domestic violence (Gage & Ezech, 2000; Oppong, 1995). A number of studies have documented that rising urbanization has resulted in deplorable housing and environmental conditions (Olotuah & Adesiji, 2005). Other studies have also demonstrated the disadvantage of urban poverty on sexual outcomes relating to HIV/AIDS. Slum residence is unique in its adverse impact on sexual outcomes, presumably because monetary currency is central to existence in cities where difficult economic circumstances coerce women to use sex as a means of survival (Dodoo, Sloan, & Zulu, 2003; Zulu, Dodoo, & Ezech, 2002; Olotuah, 2000; Olotuah, 2002; Olotuah, 2005).

### ***6.7. Programmatic and Policy Implications***

From the foregoing, the following conclusions and programmatic implications can be drawn: Nigeria's population is growing at a fast rate and still has a lot of potential for further growth. The preponderance of young persons in the population has consequences for the future size of the country's population and the ability of national, state and local authorities to care for them. The large young population implies high dependency and the need to provide health, education, food, shelter, employment and other essential needs for them on an increasing basis. There is some evidence of a decline in overall levels of fertility in the past 18 years. The decline is a sign of a possible start of fertility transition from high fertility to low fertility. The observed decline in fertility may be as a result of contraception, although the contraceptive prevalence in urban Nigeria is still low. There is therefore the urgent need to intensify the implementation of policies and programs to reduce fertility. There should be increased effort to influence attitudinal change through communication messages to address the issue of large family size norms. Radio and television, which have been found to be the two most prominent media, should be handy.

Urbanization has risen unabated in Nigeria over the years. The rate of urbanization creates pressure on

health, education, employment, waste disposal and other urban infrastructural development. The situation has led to deplorable housing and environmental conditions, severe social problems, the culminating effects of which are insecurity of lives and property, and poor health and productivity of the urban dwellers. There is therefore an overarching need to arrest the rapid rate of urbanization in the country. Government policies have to be revisited to slow down the urbanization process and integrated rural development may be imperative in this regard. This should involve, among others, the location of educational and health institutions and the provision of infrastructural facilities in the rural areas, as well as the development of rural housing, which will serve to improve the general living conditions of the rural dwellers. Urban development and restoration should be a major concern of government in order to reduce the environmental stress experienced in the urban centers. This is achievable with major investments committed to urban infrastructure and services, with special attention to the improvement in urban housing. More importantly, the housing needs of the low-income earners, who constitute the vast majority of urban dwellers, have to be clearly discerned to engender adequate planning. In this regard the public sector has to define its role clearly, which indeed should be to facilitate an enduring environment for the private sector.

Current use of family planning methods is low despite high knowledge of contraception. Intention to use family planning among currently married women who are not currently using a family planning method is also relatively low. There is the need to provide women with information on the availability of family planning methods and their use-effectiveness. Family planning services should be comprehensive with a wide coverage level to target poor urban women or those with little or no education, with special attention to the northern regions. Efforts should be made to remove barriers to contraceptive use especially by breaking through deeply rooted values for children and other cultural barriers by placing emphasis on formal and informal education for women as well as men.

The private sector has become a major source of contraceptive supply in urban Nigeria. Government

institutions should increase their participation in commodity distribution. Radio and television are the most common source of family planning messages in urban Nigeria. Another factor that might have contributed to the decline is the slight increase in the age at marriage between 1990 and 2008. The pace of fertility reduction is not sufficient to reduce a TFR of 0.6 children per woman every five years, as stipulated in national policy on population. Fertility decline in Nigeria may continue to be stagnant or slow with the prevailing high desire for children and unwanted fertility. There is the need to create awareness among women and men about the negative health, social and economic consequences of early marriage, early pregnancy and large family size. This could be done through special information, education and communication campaigns.

The infant, child and under-five mortality rates in urban Nigeria are still high. The progress made so far towards the achievement of many of the goals set to be met in 2015 is not sufficient. This report shows that improvements have come slowly and are unevenly distributed, and the condition of women and children as presented in this report has not recorded any meaningful improvement. Explanations can be found in the response to pattern of interventions received by women and children, which is skewed as it seems to the southern regions of Nigeria and among the educated and wealthy. Many births are delivered outside health facilities and assisted at delivery by unqualified health providers. There is a need to improve the quality of care of reproductive health services and make them available to those who need them the most. This can be achieved by making adequate budgetary provisions for reproductive and child health interventions in the country. Immunization coverage is generally low in urban Nigeria, making children vulnerable to life-threatening childhood disease. Efforts should be intensified to increase immunization coverage.

Overall, increased adoption of family planning will result in the reduction of unintended pregnancy that, in turn, will reduce maternal mortality and lead to improved health status of mothers and children.

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## Appendix A: State-Level Tables

Table A.1: Adjustment of States within Regions to Fit the 2003 and 2008 Administrative Organization with Six Regions

State	1990		1999	
	Original (DHS)	Adjustment	Original (DHS)	Adjustment
Benue	North East	North Central	South South	
Kwara	North West	North Central	South South	
Niger	North East	North Central	South South	
Plateau	North East	North Central	South South	North Central
Kogi			South South	
Nassaraw			South South	
Abuja (Fct)			South South	
Borno	North Central	North East	North Central	
Adamawa	North Central	North East	South South	
Bauchi	North Central	North East	North Central	North East
Taraba			South South	
Yobe			North Central	
Gombe			North Central	
Jigawa			North Central	
Kaduna	North Central	North West	North East	
Kano	North West	North West	North Central	
Katsina	South East	North West	North East	North West
Sokoto	North Central	North West	North East	
Kebbi			North East	
Zamfara			North East	
Anambra	North Central	South East	North West	
Imo	South East	South East	North West	
Abia	North West	South East	North West	South East
Enugu			North West	
Ebonyi			North West	
Akwa Ibo			North West	
Edo	South East	South South	South East	
Cross River	South East	South South	North West	South South
Rivers	South East	South South	North West	
Delta			South East	
Bayelsa			North West	
Lagos	North West	South West	South East	
Ogun	North West	South West	South East	
Ondo	North East	South West	South East	South West
Oyo	North East	South West	South East	
Osun			South East	
Ekiti			South East	

Table A.2: Nigerian's 50 largest cities (Population of 160,000 or more)

Rank	City	State	Regopm	Population
<b>10</b>	<b>Ilorin</b>	<b>Kwara State</b>		<b>756,400</b>
11	Jos	Plateau State		742,100
19	Okene	Kogi State		444,900
27	Minna	Niger State	North Central	270,600
28	Makurdi	Benue State		249,000
45	Gboko	Benue State		166,400
<b>49</b>	<b>Abuja</b>	<b>FCT</b>		<b>159,900</b>
50	Bida	Niger State		159,100
7	Maiduguri	Borno State		971,700
32	Gombe	Gombe State		230,900
35	Damaturu	Yobe State	North East	223,000
36	Jimeta	Adamawa State		218,400
39	Mubi	Adamawa State		198,700
2	Kano	Kano State		
<b>4</b>	<b>Kaduna</b>	<b>Kaduna State</b>		<b>1,458,900</b>
<b>8</b>	<b>Zaria</b>	<b>Kaduna State</b>		<b>898,900</b>
18	Sokoto	Sokoto State	North West	500,500
22	Katsina	Katsina State		387,000
25	Bauchi	Bauchi State		291,600
38	Gusau	Zamfara State		201,200
9	Aba	Abia State		784,500
14	Enugu	Enugu State		593,300
16	Onitsha	Anambra State	South East	509,500
33	Umuahia	Abia State		230,800
41	Owerri	Imo State		187,600
5	Port Harcourt	Rivers State		
<b>6</b>	<b>Benin City</b>	<b>Edo State</b>		<b>1,051,600</b>
17	Warri	Delta State	South South	500,900
20	Calabar	Cross River State		431,200
37	Ikot Ekpene	Akwa Ibom State		209,400
42	Ugep	Cross River State		187,000
1	Lagos	Lagos State		
<b>3</b>	<b>Ibadan</b>	<b>Oyo State</b>		<b>3,078,400</b>
12	Ogbomosho	Oyo State		726,300
13	Oyo	Oyo State		620,400
15	Abeokuta	Ogun State		529,700
21	Osogbo	Osun State		421,000
23	Akure	Ondo State		369,700
24	Ife	Osun State		313,400
26	Iseyin	Oyo State	South West	286,700
29	Owo	Ondo State		243,000
30	Ado Ekiti	Ekiti State		241,200
31	Ilesa	Osun State		233,900
34	Ondo	Ondo State		225,800
40	Sagamu	Ogun State		191,500
43	Ijebu Ode	Ogun State		186,700
44	Ise Ekiti	Ekiti State		167,100
46	Ilawe Ekiti	Ekiti State		160,700
48	Ikare	Ondo State		160,600

Source: [http://en.wikipedia.org/wiki/List\\_of\\_Nigerian\\_cities\\_by\\_population](http://en.wikipedia.org/wiki/List_of_Nigerian_cities_by_population), accessed December 2009

Table A.2: Nigerian's 50 Largest Cities (Population of 160,000 or More)

Rank	City	State	Region	Population
10	Ilorin	Kwara State	North Central	756,400
11	Jos	Plateau State		742,100
19	Okene	Kogi State		444,900
27	Minna	Niger State		270,600
28	Makurdi	Benue State		249,000
45	Gboko	Benue State		166,400
49	Abuja	FCT		159,900
50	Bida	Niger State		159,100
7	Maiduguri	Borno State	North East	971,700
32	Gombe	Gombe State		230,900
35	Damaturu	Yobe State		223,000
36	Jimeta	Adamawa State		218,400
39	Mubi	Adamawa State		198,700
2	Kano	Kano State	North West	3,248,700
4	Kaduna	Kaduna State		1,458,900
8	Zaria	Kaduna State		898,900
18	Sokoto	Sokoto State		500,500
22	Katsina	Katsina State		387,000
25	Bauchi	Bauchi State		291,600
38	Gusau	Zamfara State		201,200
9	Aba	Abia State	South East	784,500
14	Enugu	Enugu State		593,300
16	Onitsha	Anambra State		509,500
33	Umuahia	Abia State		230,800
41	Owerri	Imo State		187,600
5	Port Harcourt	Rivers State	South South	1,053,900
6	Benin City	Edo State		1,051,600
17	Warri	Delta State		500,900
20	Calabar	Cross River State		431,200
37	Ikot Ekpene	Akwa Ibom State		209,400
42	Ugep	Cross River State		187,000
1	Lagos	Lagos State	South West	8,029,200
3	Ibadan	Oyo State		3,078,400
12	Ogbomosho	Oyo State		726,300
13	Oyo	Oyo State		620,400
15	Abeokuta	Ogun State		529,700
21	Osogbo	Osun State		421,000
23	Akure	Ondo State		369,700
24	Ife	Osun State		313,400
26	Iseyin	Oyo State		286,700
29	Owo	Ondo State		243,000
30	Ado Ekiti	Ekiti State		241,200
31	Ilesa	Osun State		233,900
34	Ondo	Ondo State		225,800
40	Sagamu	Ogun State		191,500
43	Ijebu Ode	Ogun State		186,700
44	Ise Ekiti	Ekiti State		167,100
46	Ilawe Ekiti	Ekiti State		160,700
48	Ikare	Ondo State		160,600

Source: [http://en.wikipedia.org/wiki/List\\_of\\_Nigerian\\_cities\\_by\\_population](http://en.wikipedia.org/wiki/List_of_Nigerian_cities_by_population), accessed December 2009.

**Table A.3:** Knowledge, Ever Use and Source of Modern Contraception among Currently Married Women Aged 15-49; Urban Nigeria DHS 1999, 2003 and 2008

	Heard of modern method of contraception			Ever use of modern contraception			Private source for contraception		
	1999	2003	2008	1999	2003	2008	1999	2003	2008
Abuja (FCT) [Abuja]	76.2	100.0	93.7	0.0	33.3	39.3	-	100.0	39.5
Benue	96.6	100.0	87.3	34.3	41.0	54.4	0.0	42.4	66.7
Kogi	97.3	87.7	83.6	37.0	42.4	19.2	43.7	80.9	23.1
Kwara [Ilorin]	95.4	76.4	94.2	34.8	28.7	42.9	75.1	37.0	50.0
Nassarawa	94.1	82.4	46.5	29.4	23.5	17.8	0.0	100.0	60.0
Niger	74.9	76.9	63.2	39.9	18.3	20.5	23.3	19.4	23.5
Plateau	80.7	100.0	85.0	35.5	47.0	43.3	25.0	50.1	26.7
<b>Subtotal North Central</b>	<b>88.7</b>	<b>87.6</b>	<b>82.2</b>	<b>35.8</b>	<b>34.1</b>	<b>33.6</b>	<b>36.5</b>	<b>54.9</b>	<b>41.1</b>
Adamawa	61.8	71.8	80.0	41.3	15.9	11.3	0.0	81.5	40.0
Bauchi	94.1	85.9	76.0	35.3	5.8	13.5	50.0	41.4	11.1
Borno	58.5	73.4	77.8	20.8	21.0	12.4	0.0	43.1	100.0
Gombe	27.8	73.9	84.8	11.1	24.2	23.9	0.0	-	23.5
Taraba	82.9	80.4	92.4	17.1	5.1	20.0	0.0	-	60.0
Yobe	33.3	72.4	47.8	13.3	3.4	13.4	40.0	-	25.0
<b>Subtotal North East</b>	<b>57.0</b>	<b>76.5</b>	<b>74.7</b>	<b>20.4</b>	<b>14.6</b>	<b>14.3</b>	<b>24.8</b>	<b>48.1</b>	<b>30.1</b>
Jigawa	44.4	35.3	84.3	11.1	0.0	5.7	0.0	-	0.0
Kaduna [Kaduna & Zaria]	96.4	98.6	91.6	35.8	32.1	18.1	14.2	52.7	60.0
Kano	66.7	86.8	80.5	6.2	25.4	17.0	67.7	21.9	30.8
Katsina	63.8	90.5	42.5	8.6	14.8	3.0	50.0	0.0	25.0
Kebbi	100.0	100.0	42.3	50.0	18.8	13.4	0.0	0.0	18.2
Sokoto	76.5	73.1	84.5	5.9	7.7	29.9	-	-	25.0
Zamfara	71.4	92.3	79.0	28.6	10.9	8.1	0.0	-	0.0
<b>Subtotal North West</b>	<b>72.4</b>	<b>90.2</b>	<b>73.1</b>	<b>13.9</b>	<b>20.9</b>	<b>14.2</b>	<b>26.0</b>	<b>31.1</b>	<b>38.3</b>
Abia	77.0	79.6	96.9	26.9	33.0	43.0	20.4	51.8	75.0
Anambra	93.1	98.3	87.6	23.0	22.8	30.5	0.0	76.4	73.8
Ebonyi	48.8	36.8	53.6	13.9	10.8	8.0	50.0	100.0	0.0
Enugu	95.2	90.1	73.7	0.0	50.6	25.3	-	26.1	55.6
Imo	100.0	100.0	100.0	20.0	70.0	54.2	-	50.0	62.5
<b>Subtotal South East</b>	<b>74.0</b>	<b>89.4</b>	<b>86.1</b>	<b>17.3</b>	<b>47.4</b>	<b>32.9</b>	<b>24.5</b>	<b>45.4</b>	<b>70.9</b>
Akwa Ibo	87.1	100.0	100.0	38.7	75.0	66.7	0.0	-	50.0
Bayelsa	100.0	-	88.3	44.4	-	38.7	100.0	-	54.6
Cross River	82.8	100.0	85.1	44.2	35.0	47.1	0.0	81.3	50.0
Delta	78.6	99.2	87.8	33.5	59.8	49.4	33.2	91.7	81.0
Edo [Benin]	87.6	93.4	91.3	41.2	53.0	52.1	62.6	63.9	71.1
Rivers	100.0	100.0	100.0	41.1	46.9	62.6	50.7	94.0	52.4
<b>Subtotal South South</b>	<b>85.7</b>	<b>98.8</b>	<b>92.1</b>	<b>39.3</b>	<b>53.3</b>	<b>53.3</b>	<b>38.9</b>	<b>87.2</b>	<b>62.9</b>
Ekiti	82.2	100.0	99.4	17.6	75.7	40.8	65.9	48.6	60.7
Lagos	93.3	98.8	98.1	51.3	54.5	68.1	53.0	67.3	71.3
Ogun	94.4	100.0	96.7	43.2	53.6	40.5	22.7	84.2	84.6
Ondo	96.6	100.0	99.0	36.8	56.4	49.5	50.0	51.1	42.5
Osun	94.8	100.0	98.8	32.3	30.1	50.0	0.0	53.0	68.3
Oyo [Ibadan]	90.8	100.0	99.0	37.5	61.3	44.6	54.0	42.6	61.4
<b>Subtotal South West</b>	<b>93.0</b>	<b>99.5</b>	<b>98.4</b>	<b>43.1</b>	<b>56.3</b>	<b>57.7</b>	<b>42.9</b>	<b>57.9</b>	<b>67.3</b>
<b>Overall Urban Nigeria</b>	<b>82.1</b>	<b>90.7</b>	<b>87.1</b>	<b>31.6</b>	<b>35.7</b>	<b>38.7</b>	<b>37.9</b>	<b>56.8</b>	<b>60.7</b>
<b>Overall rural Nigeria</b>	<b>53.7</b>	<b>69.8</b>	<b>57.9</b>	<b>13.1</b>	<b>17.5</b>	<b>16.9</b>	<b>29.6</b>	<b>51.3</b>	<b>51.7</b>
<b>Overall Nigeria</b>	<b>61.9</b>	<b>76.2</b>	<b>67.0</b>	<b>18.5</b>	<b>23.1</b>	<b>23.7</b>	<b>34.0</b>	<b>54.3</b>	<b>56.7</b>

**Table A.4:** Contraceptive Use, Intention to Use Contraceptives, and Unmet Need for Family Planning among Currently Married Women (15-49); Urban Nigeria DHS 1999, 2003 and 2008

	Current use of modern contraception			Intends to use contraception			Unmet need for FP		
	1999	2003	2008	1999	2003	2008	1999	2003	2008
Abuja (FCT) [Abuja]	0.0	5.6	23.4	10.0	33.3	26.1	28.6	22.2	14.8
Benue	24.0	25.1	27.9	29.9	47.1	50.0	10.4	16.7	20.3
Kogi	21.0	15.1	7.9	45.4	42.2	17.3	18.7	28.3	13.6
Kwara [Ilorin]	12.1	12.7	25.1	53.0	30.0	31.2	10.7	22.5	14.1
Nassarawa	5.9	11.8	10.9	31.3	33.3	18.2	29.4	5.9	22.8
Niger	20.6	8.4	10.5	35.0	23.0	13.8	18.0	23.9	24.0
Plateau	12.9	24.6	23.6	33.4	84.6	38.7	16.1	31.4	16.5
<b>Subtotal North Central</b>	<b>17.1</b>	<b>15.8</b>	<b>18.3</b>	<b>40.6</b>	<b>41.7</b>	<b>25.5</b>	<b>16.6</b>	<b>22.3</b>	<b>17.3</b>
Adamawa	6.9	5.1	3.3	18.5	20.0	19.3	44.8	13.6	16.0
Bauchi	11.8	2.7	4.4	50.0	14.0	31.2	23.5	10.2	24.0
Borno	5.2	7.6	5.5	7.6	22.0	3.5	13.7	23.6	20.7
Gombe	5.6	0.0	12.3	12.5	30.4	32.2	22.2	23.5	19.6
Taraba	4.3	0.0	4.8	7.6	16.6	24.7	18.6	16.2	25.7
Yobe	11.1	0.0	4.5	0.0	15.4	15.5	6.7	26.8	22.3
<b>Subtotal North East</b>	<b>7.6</b>	<b>4.3</b>	<b>5.3</b>	<b>9.9</b>	<b>19.8</b>	<b>19.1</b>	<b>16.9</b>	<b>19.5</b>	<b>21.6</b>
Jigawa	11.1	0.0	2.9	0.0	17.7	10.3	33.3	0.0	22.9
Kaduna [Kaduna & Zaria]	12.5	10.4	8.8	39.6	24.9	18.2	28.6	11.5	15.4
Kano	3.7	9.6	6.8	5.8	8.6	8.6	13.8	10.5	39.0
Katsina	3.4	1.6	2.0	7.1	14.4	2.1	46.6	10.2	19.5
Kebbi	41.7	6.3	7.8	14.3	20.0	5.4	0.0	18.8	12.7
Sokoto	0.0	0.0	8.3	11.8	32.0	21.4	5.9	21.2	42.3
Zamfara	21.4	0.0	4.8	18.2	7.7	3.5	21.4	10.9	24.2
<b>Subtotal North West</b>	<b>7.2</b>	<b>6.0</b>	<b>6.3</b>	<b>11.9</b>	<b>16.1</b>	<b>10.0</b>	<b>21.1</b>	<b>11.9</b>	<b>26.0</b>
Abia	19.2	24.3	15.0	16.8	10.2	43.2	15.6	18.0	19.7
Anambra	12.7	10.5	17.4	33.6	26.9	41.9	6.9	23.7	12.4
Ebonyi	9.3	3.3	2.9	27.8	8.5	19.4	14.0	11.9	21.7
Enugu	0.0	22.1	9.1	23.4	29.4	16.9	15.2	17.8	12.1
Imo	0.0	20.0	13.6	12.5	28.6	40.5	10.0	20.0	11.9
<b>Subtotal South East</b>	<b>10.7</b>	<b>17.6</b>	<b>14.2</b>	<b>24.8</b>	<b>24.7</b>	<b>36.1</b>	<b>12.9</b>	<b>19.2</b>	<b>14.7</b>
Akwa Ibo	6.5	0.0	26.7	50.0	50.0	62.5	19.4	25.0	23.3
Bayelsa	11.1	-	12.6	25.0	-	36.2	22.2	-	27.9
Cross River	17.7	20.8	26.4	44.4	44.4	29.3	17.2	22.9	19.5
Delta	21.5	23.7	14.7	38.8	48.8	30.1	7.2	21.5	23.7
Edo [Benin]	14.4	15.8	21.5	42.3	23.0	32.1	24.9	17.3	25.2
Rivers	11.8	11.1	20.9	50.0	55.1	40.3	35.3	20.7	25.2
<b>Subtotal South South</b>	<b>15.5</b>	<b>15.9</b>	<b>19.5</b>	<b>43.3</b>	<b>46.5</b>	<b>34.7</b>	<b>19.5</b>	<b>21.1</b>	<b>24.4</b>
Ekiti	17.6	38.1	17.8	16.5	78.1	36.1	17.6	9.3	25.4
Lagos	24.5	24.5	27.1	49.3	66.8	59.2	12.0	21.8	13.0
Ogun	24.8	23.4	11.6	40.6	59.8	59.6	20.0	19.0	31.4
Ondo	26.9	22.5	20.9	41.6	35.6	32.9	13.3	11.5	19.4
Osun	17.5	15.4	30.2	17.8	23.6	41.0	13.1	12.1	10.5
Oyo [Ibadan]	21.7	36.2	24.3	35.4	43.1	47.6	12.6	13.9	20.8
<b>Subtotal South West</b>	<b>23.3</b>	<b>27.4</b>	<b>25.2</b>	<b>39.8</b>	<b>56.3</b>	<b>50.9</b>	<b>14.2</b>	<b>17.4</b>	<b>16.1</b>
<b>Overall Urban Nigeria</b>	<b>15.7</b>	<b>13.9</b>	<b>16.7</b>	<b>29.0</b>	<b>30.4</b>	<b>30.8</b>	<b>16.6</b>	<b>17.3</b>	<b>19.3</b>
<b>Overall rural Nigeria</b>	<b>5.6</b>	<b>5.7</b>	<b>6.5</b>	<b>19.5</b>	<b>26.2</b>	<b>17.3</b>	<b>17.9</b>	<b>16.8</b>	<b>20.6</b>
<b>Overall Nigeria</b>	<b>8.6</b>	<b>8.3</b>	<b>9.7</b>	<b>22.0</b>	<b>27.4</b>	<b>20.9</b>	<b>17.5</b>	<b>16.9</b>	<b>20.2</b>

**Table A.5:** Teenage (15-19) Motherhood, Birth Intervals among Non-first Births, and Median Age at First Birth among Women Aged 20-49; Urban Nigeria DHS 1999, 2003 and 2008

	Teenage motherhood			Preceding birth intervals <24 months			Median age at first birth*		
	1999	2003	2008	1999	2003	2008	1999	2003	2008
Abuja (FCT) [Abuja]	0.0	20.0	5.5	31.6	19.1	24.3	20.9	18.7	23.7
Benue	7.1	16.7	19.4	16.6	14.3	30.1	18.4	20.1	19.7
Kogi	5.4	15.9	11.1	19.8	9.1	15.2	20.1	20.3	21.3
Kwara [Ilorin]	6.2	0.0	10.2	10.3	8.8	13.3	21.4	22.4	23.1
Nassarawa	50.0	50.0	25.7	20.0	27.3	19.2	19.2	18.1	20.8
Niger	12.8	15.8	24.2	33.9	22.5	22.9	21.4	21.7	20.4
Plateau	6.2	16.9	23.9	30.7	32.0	15.8	19.9	21.5	22.1
<b>Subtotal North Central</b>	<b>10.2</b>	<b>20.1</b>	<b>15.1</b>	<b>23.5</b>	<b>18.1</b>	<b>19.9</b>	<b>20.9</b>	<b>20.8</b>	<b>21.8</b>
Adamawa	8.3	7.4	15.4	24.0	14.8	21.6	19.0	20.6	19.2
Bauchi	20.0	46.9	40.4	30.0	23.3	23.7	20.6	17.1	18.0
Borno	23.0	30.6	26.5	20.0	25.5	35.0	19.3	18.6	18.7
Gombe	33.3	8.2	18.2	14.3	15.4	17.8	22.6	19.3	19.4
Taraba	55.6	14.3	14.3	21.2	38.9	16.0	20.7	18.0	19.7
Yobe	50.0	75.0	39.2	17.0	23.2	26.2	18.2	16.8	18.0
<b>Subtotal North East</b>	<b>33.1</b>	<b>32.1</b>	<b>27.7</b>	<b>20.2</b>	<b>24.8</b>	<b>26.0</b>	<b>19.6</b>	<b>18.2</b>	<b>18.5</b>
Jigawa	0.0	57.1	60.0	37.5	18.8	40.7	18.9	17.5	18.0
Kaduna [Kaduna & Zaria]	6.3	23.1	17.8	27.9	20.4	18.2	20.1	19.8	19.7
Kano	42.0	27.7	18.3	39.6	21.1	27.5	18.4	18.1	18.2
Katsina	40.0	27.7	60.7	29.4	20.1	25.7	18.3	16.8	18.8
Kebbi	20.0	50.0	21.9	36.4	18.8	20.0	17.2	16.8	18.3
Sokoto	-	29.4	19.2	10.5	6.6	26.9	18.2	16.9	17.7
Zamfara	25.0	0.0	20.0	38.5	32.8	23.4	17.6	19.4	18.6
<b>Subtotal North West</b>	<b>30.7</b>	<b>27.0</b>	<b>24.1</b>	<b>34.3</b>	<b>20.8</b>	<b>25.0</b>	<b>18.6</b>	<b>18.2</b>	<b>18.7</b>
Abia	14.5	0.0	9.0	27.9	24.9	35.8	28.3	25.5	26.4
Anambra	0.0	0.0	5.3	27.9	17.1	40.9	22.8	23.9	25.1
Ebonyi	13.1	0.0	6.0	44.2	27.1	30.5	20.3	21.8	21.9
Enugu	12.7	6.9	4.8	15.1	23.7	20.5	21.2	23.5	23.7
Imo	0.0	33.3	0.0	33.3	66.7	54.7	24.6	24.3	26.2
<b>Subtotal South East</b>	<b>9.1</b>	<b>12.4</b>	<b>5.6</b>	<b>32.5</b>	<b>42.7</b>	<b>38.0</b>	<b>22.6</b>	<b>24.3</b>	<b>25.1</b>
Akwa Ibo	0.0	0.0	12.5	16.7	0.0	25.9	22.7	24.4	30.4
Bayelsa	20.0	-	23.4	12.5	-	29.8	19.2	-	19.6
Cross River	11.4	20.2	8.8	32.2	9.2	11.8	19.2	21.9	23.9
Delta	7.1	13.4	4.6	16.1	18.9	25.3	24.0	22.9	24.2
Edo [Benin]	0.0	1.8	4.0	21.6	30.2	21.7	23.3	21.6	23.6
Rivers	33.2	12.4	0.0	6.3	26.7	23.6	22.0	21.2	24.3
<b>Subtotal South South</b>	<b>5.6</b>	<b>8.8</b>	<b>5.5</b>	<b>19.3</b>	<b>20.0</b>	<b>22.9</b>	<b>22.8</b>	<b>22.2</b>	<b>24.2</b>
Ekiti	0.0	0.0	10.5	12.8	18.4	19.7	21.7	22.5	25.1
Lagos	1.3	5.3	4.4	23.1	25.0	18.5	22.6	23.9	24.8
Ogun	6.9	20.1	12.9	14.1	0.0	13.6	21.6	20.8	21.9
Ondo	9.1	10.5	5.9	5.2	7.1	6.6	22.8	21.1	23.5
Osun	0.0	0.0	4.6	11.8	19.7	10.6	23.3	24.2	23.0
Oyo [Ibadan]	5.0	2.3	20.8	13.1	7.3	13.1	21.7	21.4	22.2
<b>Subtotal South West</b>	<b>3.4</b>	<b>5.5</b>	<b>7.2</b>	<b>16.7</b>	<b>16.8</b>	<b>15.5</b>	<b>22.2</b>	<b>22.7</b>	<b>24.0</b>
<b>Overall Urban Nigeria</b>	<b>12.1</b>	<b>16.7</b>	<b>12.0</b>	<b>23.8</b>	<b>22.9</b>	<b>23.7</b>	<b>21.3</b>	<b>20.9</b>	<b>22.6</b>
<b>Overall rural Nigeria</b>	<b>26.1</b>	<b>29.6</b>	<b>28.7</b>	<b>27.5</b>	<b>24.9</b>	<b>23.8</b>	<b>19.8</b>	<b>18.9</b>	<b>19.5</b>
<b>Overall Nigeria</b>	<b>21.9</b>	<b>25.2</b>	<b>22.9</b>	<b>26.5</b>	<b>24.3</b>	<b>23.7</b>	<b>20.2</b>	<b>19.6</b>	<b>20.5</b>

\*Used even history analysis where failure event was "has given birth."

Table A.6: Educational Attainment among Women Aged 15-49; Urban Nigeria DHS 1999, 2003 and 2008

	No Education			Primary			Secondary+		
	1999	2003	2008	1999	2003	2008	1999	2003	2008
Abuja (FCT) [Abuja]	46.2	37.5	9.1	23.1	29.2	15.3	30.8	33.3	75.7
Benue	26.1	16.8	13.3	18.0	25.3	21.2	55.9	57.9	65.6
Kogi	20.1	18.7	14.4	33.0	22.7	25.7	46.9	58.6	59.9
Kwara [Ilorin]	43.2	31.7	13.4	20.4	18.3	17.5	36.4	50.1	69.1
Nassarawa	54.6	54.2	44.6	13.6	33.3	15.5	31.8	12.5	39.9
Niger	26.1	42.6	43.3	17.6	13.2	13.4	56.3	44.2	43.3
Plateau	17.8	10.8	2.7	33.9	26.4	37.1	48.3	62.8	60.3
<b>Subtotal North Central</b>	<b>29.1</b>	<b>26.1</b>	<b>17.1</b>	<b>24.3</b>	<b>23.4</b>	<b>21.0</b>	<b>46.6</b>	<b>50.5</b>	<b>61.9</b>
Adamawa	36.4	28.6	42.9	17.0	15.2	19.1	46.6	56.2	38.1
Bauchi	13.0	54.3	64.0	0.0	33.6	21.3	87.0	12.1	14.7
Borno	52.9	49.8	68.3	11.8	20.1	7.9	35.3	30.1	23.8
Gombe	43.5	27.7	43.1	13.0	17.1	15.4	43.5	55.3	41.5
Taraba	38.9	64.9	37.4	11.1	8.1	18.7	50.0	27.0	43.9
Yobe	67.3	80.0	59.5	1.8	10.6	17.8	30.9	9.4	22.7
<b>Subtotal North East</b>	<b>48.6</b>	<b>49.7</b>	<b>57.1</b>	<b>8.5</b>	<b>20.6</b>	<b>15.9</b>	<b>42.9</b>	<b>29.7</b>	<b>27.0</b>
Jigawa	90.9	84.2	56.3	0.0	15.8	26.3	9.1	0.0	17.5
Kaduna [Kaduna & Zaria]	29.9	35.1	26.0	20.7	26.6	23.0	49.4	38.4	51.0
Kano	66.0	49.3	39.3	13.4	14.5	14.7	20.6	36.2	46.0
Katsina	56.7	48.7	81.4	16.4	16.4	9.8	26.8	34.9	8.8
Kebbi	41.7	66.7	55.6	33.3	0.0	7.9	25.0	33.3	36.5
Sokoto	86.4	87.3	63.5	4.6	7.9	9.5	9.1	4.8	27.0
Zamfara	94.7	87.7	56.3	5.3	4.1	12.7	0.0	8.2	31.0
<b>Subtotal North West</b>	<b>60.3</b>	<b>54.6</b>	<b>46.7</b>	<b>14.6</b>	<b>15.0</b>	<b>15.6</b>	<b>25.1</b>	<b>30.5</b>	<b>37.7</b>
Abia	6.5	6.0	1.1	15.2	5.8	13.8	78.3	88.2	85.1
Anambra	5.1	4.7	1.6	28.4	29.9	17.5	66.5	65.4	81.0
Ebonyi	29.5	36.9	24.8	54.4	42.1	40.8	16.2	21.0	34.5
Enugu	30.2	12.6	8.5	41.6	29.0	27.5	28.2	58.4	64.0
Imo	0.0	0.0	0.0	10.5	0.0	9.4	89.5	100.0	90.6
<b>Subtotal South East</b>	<b>16.4</b>	<b>8.9</b>	<b>4.2</b>	<b>34.3</b>	<b>19.5</b>	<b>19.1</b>	<b>49.4</b>	<b>71.6</b>	<b>76.7</b>
Akwa Ibo	0.0	0.0	1.2	20.4	5.9	9.5	79.6	94.1	89.3
Bayelsa	3.9	-	6.8	23.1	-	20.5	73.1	-	72.6
Cross River	6.3	4.7	4.6	19.1	10.2	14.4	74.6	85.1	81.0
Delta	5.7	1.2	1.3	18.7	24.3	17.1	75.6	74.5	81.6
Edo [Benin]	10.4	3.6	4.0	19.2	20.1	15.2	70.4	76.3	80.8
Rivers	4.8	2.3	2.0	19.0	27.3	12.8	76.2	70.4	85.3
<b>Subtotal South South</b>	<b>7.1</b>	<b>2.0</b>	<b>2.7</b>	<b>19.2</b>	<b>19.5</b>	<b>14.9</b>	<b>73.7</b>	<b>78.5</b>	<b>82.4</b>
Ekiti	5.9	1.9	1.7	32.4	16.0	10.0	61.7	82.1	88.3
Lagos	7.6	3.0	4.6	19.5	20.0	12.3	72.9	77.0	83.2
Ogun	10.0	1.5	6.6	32.3	39.2	23.5	57.8	59.3	69.9
Ondo	0.0	9.2	3.6	21.6	32.5	13.4	78.4	58.3	83.0
Osun	9.1	14.4	7.8	15.7	29.7	21.6	75.2	55.9	70.6
Oyo [Ibadan]	15.8	11.2	4.3	23.3	12.1	25.8	60.9	76.7	69.9
<b>Subtotal South West</b>	<b>9.3</b>	<b>5.9</b>	<b>4.9</b>	<b>23.0</b>	<b>21.4</b>	<b>15.9</b>	<b>67.7</b>	<b>72.7</b>	<b>79.2</b>
<b>Overall Urban Nigeria</b>	<b>24.9</b>	<b>24.9</b>	<b>16.5</b>	<b>21.0</b>	<b>19.6</b>	<b>16.8</b>	<b>54.1</b>	<b>55.6</b>	<b>66.7</b>
<b>Overall rural Nigeria</b>	<b>47.5</b>	<b>50.4</b>	<b>46.5</b>	<b>23.5</b>	<b>22.3</b>	<b>21.3</b>	<b>29.0</b>	<b>27.3</b>	<b>32.3</b>
<b>Overall Nigeria</b>	<b>40.5</b>	<b>41.6</b>	<b>35.8</b>	<b>22.8</b>	<b>21.4</b>	<b>19.7</b>	<b>36.7</b>	<b>37.0</b>	<b>44.6</b>

Table A.7: Percentage with Household Amenities; Urban Nigeria DHS 1999, 2003 and 2008

	Piped water*			Toilet (flush & vip)			Electricity		
	1999	2003	2008	1999	2003	2008	1999	2003	2008
Abuja (FCT) [Abuja]	73.9	81.8	29.2	8.7	27.3	65.6	82.6	100.0	82.0
Benue	29.6	25.6	5.0	40.6	29.5	36.4	81.5	77.4	57.1
Kogi	1.2	52.0	8.4	4.6	26.9	27.2	75.0	76.0	82.1
Kwara [Ilorin]	57.2	61.0	52.0	11.4	33.2	33.3	73.2	93.9	97.6
Nassarawa	50.0	52.6	31.5	11.1	0.0	16.1	94.4	94.7	87.3
Niger	83.4	42.4	49.1	35.2	43.5	41.2	98.0	78.7	85.7
Plateau	28.7	49.8	18.2	22.5	28.8	31.0	89.8	68.8	42.3
<b>Subtotal North Central</b>	<b>43.9</b>	<b>47.4</b>	<b>27.5</b>	<b>20.4</b>	<b>28.2</b>	<b>38.5</b>	<b>84.4</b>	<b>80.1</b>	<b>78.7</b>
Adamawa	45.2	5.2	3.7	6.8	6.8	2.1	54.6	66.9	70.1
Bauchi	100.0	26.1	28.0	100.0	4.7	5.6	94.1	70.2	47.4
Borno	37.4	34.4	14.3	27.0	17.0	5.3	42.3	64.5	51.4
Gombe	0.0	5.8	0.0	17.7	4.7	8.3	47.1	80.2	79.9
Taraba	37.9	0.0	16.4	12.6	3.4	6.9	51.5	25.9	75.0
Yobe	61.5	30.2	9.7	15.4	7.2	3.5	64.1	59.8	60.8
<b>Subtotal North East</b>	<b>47.2</b>	<b>23.3</b>	<b>14.5</b>	<b>22.6</b>	<b>10.1</b>	<b>5.0</b>	<b>55.6</b>	<b>63.4</b>	<b>58.5</b>
Jigawa	60.0	79.0	7.7	0.0	0.0	25.6	10.0	0.0	78.2
Kaduna [Kaduna & Zaria]	74.4	75.5	31.4	15.1	15.8	20.3	94.2	100.0	81.3
Kano	50.2	54.0	34.4	10.8	17.5	15.0	82.2	92.6	84.7
Katsina	55.2	27.5	22.2	6.0	17.4	3.5	85.1	65.8	91.9
Kebbi	7.7	31.3	39.2	0.0	6.3	15.0	61.5	87.5	87.6
Sokoto	100.0	40.5	84.5	12.5	1.9	25.9	75.0	29.0	95.7
Zamfara	93.8	50.5	2.9	0.0	0.0	0.0	87.5	62.9	75.7
<b>Subtotal North West</b>	<b>59.4</b>	<b>52.2</b>	<b>33.0</b>	<b>9.9</b>	<b>12.1</b>	<b>15.3</b>	<b>83.2</b>	<b>79.3</b>	<b>85.2</b>
Abia	41.9	1.5	2.5	58.2	61.2	64.2	91.3	85.1	83.1
Anambra	65.3	5.0	7.4	79.2	32.6	46.1	96.5	79.0	88.2
Ebonyi	36.6	0.0	6.5	35.0	0.0	19.6	40.0	1.8	42.2
Enugu	37.0	60.7	19.1	5.9	38.4	24.8	23.7	78.7	46.7
Imo	38.9	33.3	7.7	88.9	100.0	69.2	94.4	100.0	100.0
<b>Subtotal South East</b>	<b>44.7</b>	<b>30.4</b>	<b>7.8</b>	<b>46.0</b>	<b>57.0</b>	<b>47.5</b>	<b>62.3</b>	<b>79.7</b>	<b>80.3</b>
Akwa Ibo	83.9	0.0	24.4	23.2	11.8	50.0	94.6	94.1	92.3
Bayelsa	76.5	-	7.4	17.7	-	33.5	100.0	-	71.9
Cross River	52.1	5.7	16.5	50.9	32.4	50.6	96.6	100.0	61.9
Delta	20.4	19.7	29.0	79.8	56.7	64.5	96.3	84.4	79.4
Edo [Benin]	59.3	24.6	6.0	44.1	41.8	63.3	86.8	97.3	97.9
Rivers	71.7	14.2	24.4	2.4	41.9	36.5	97.7	97.1	80.8
<b>Subtotal South South</b>	<b>55.3</b>	<b>14.0</b>	<b>20.1</b>	<b>43.9</b>	<b>39.8</b>	<b>52.0</b>	<b>92.4</b>	<b>93.1</b>	<b>82.1</b>
Ekiti	30.6	15.5	25.7	0.0	12.9	30.6	93.3	93.7	93.2
Lagos	59.5	28.2	14.2	54.3	49.2	64.8	98.9	99.8	98.0
Ogun	46.2	56.2	20.6	19.4	18.0	16.0	96.7	93.2	91.8
Ondo	19.1	30.2	9.7	17.2	10.9	33.1	89.7	95.5	97.7
Osun	79.5	33.7	22.5	44.2	6.5	25.5	93.8	96.8	84.5
Oyo [Ibadan]	35.2	22.4	37.6	36.4	25.5	35.1	88.2	96.5	94.8
<b>Subtotal South West</b>	<b>48.8</b>	<b>29.2</b>	<b>19.6</b>	<b>37.4</b>	<b>30.8</b>	<b>46.6</b>	<b>94.8</b>	<b>97.2</b>	<b>94.9</b>
<b>Overall Urban Nigeria</b>	<b>49.8</b>	<b>33.0</b>	<b>19.9</b>	<b>30.6</b>	<b>28.7</b>	<b>39.4</b>	<b>84.3</b>	<b>84.9</b>	<b>84.8</b>
<b>Overall rural Nigeria</b>	<b>13.2</b>	<b>8.5</b>	<b>5.5</b>	<b>4.2</b>	<b>6.7</b>	<b>7.1</b>	<b>27.9</b>	<b>33.8</b>	<b>31.4</b>
<b>Overall Nigeria</b>	<b>24.3</b>	<b>17.3</b>	<b>10.6</b>	<b>12.2</b>	<b>14.6</b>	<b>18.6</b>	<b>44.9</b>	<b>52.2</b>	<b>50.3</b>

\* Piped water into compound or shared public tap.

Table A.8: Percentage with Household Possessions; Urban Nigeria DHS 1999, 2003 and 2008

	Radio			Television			Fridge		
	1999	2003	2008	1999	2003	2008	1999	2003	2008
Abuja (FCT) [Abuja]	78.3	86.4	92.4	52.2	68.2	82.0	17.4	54.6	49.9
Benue	85.3	91.9	72.1	48.1	47.9	45.0	25.9	23.4	19.3
Kogi	63.0	77.5	73.1	35.6	40.4	55.4	29.6	35.1	26.6
Kwara [Ilorin]	76.7	87.2	89.3	54.1	67.8	82.3	17.9	34.3	27.5
Nassarawa	83.3	79.0	88.6	61.1	31.6	56.4	44.4	21.1	24.2
Niger	85.4	92.6	88.0	59.9	68.3	70.4	32.2	37.9	45.4
Plateau	81.6	93.3	77.5	65.3	59.7	50.3	28.6	39.0	17.1
<b>Subtotal North Central</b>	<b>77.3</b>	<b>86.5</b>	<b>82.8</b>	<b>51.9</b>	<b>52.2</b>	<b>65.8</b>	<b>28.0</b>	<b>32.9</b>	<b>31.9</b>
Adamawa	68.2	79.3	79.1	38.6	47.2	44.9	18.1	28.2	11.8
Bauchi	88.2	73.8	71.6	88.2	14.1	27.2	70.6	13.4	10.8
Borno	56.1	78.5	79.3	25.5	48.0	43.3	19.5	31.0	19.8
Gombe	70.6	78.4	82.6	29.4	51.5	56.3	23.5	29.3	21.5
Taraba	80.6	84.7	78.5	35.9	10.7	56.9	23.3	8.5	16.4
Yobe	59.0	61.8	61.2	25.6	30.8	30.4	18.0	24.3	12.3
<b>Subtotal North East</b>	<b>67.7</b>	<b>76.7</b>	<b>75.1</b>	<b>34.7</b>	<b>36.5</b>	<b>39.9</b>	<b>23.8</b>	<b>24.3</b>	<b>15.3</b>
Jigawa	10.0	42.1	73.1	0.0	0.0	39.7	0.0	0.0	15.4
Kaduna [Kaduna & Zaria]	86.1	97.0	90.2	60.4	87.0	67.3	38.4	34.2	27.9
Kano	70.8	84.0	91.7	32.5	56.4	57.1	21.0	27.9	26.4
Katsina	74.6	88.8	88.9	35.8	47.9	45.5	17.9	25.4	12.6
Kebbi	69.2	81.3	83.7	15.4	50.0	58.8	7.7	18.8	24.8
Sokoto	75.0	90.4	85.3	6.3	15.5	69.0	0.0	9.7	36.2
Zamfara	87.5	89.6	82.9	43.8	21.8	42.9	25.0	22.7	15.7
<b>Subtotal North West</b>	<b>74.6</b>	<b>87.5</b>	<b>88.7</b>	<b>37.0</b>	<b>52.7</b>	<b>57.7</b>	<b>22.5</b>	<b>25.6</b>	<b>24.4</b>
Abia	94.1	87.3	85.8	76.4	64.0	79.2	46.9	34.5	34.4
Anambra	85.8	88.0	87.4	71.6	48.9	67.4	47.4	39.8	31.5
Ebonyi	36.6	64.1	74.9	11.7	3.3	30.2	1.7	0.0	12.1
Enugu	50.0	86.4	71.4	3.9	57.6	42.4	5.9	38.4	21.9
Imo	94.4	100.0	91.4	77.8	100.0	88.5	72.2	83.3	61.5
<b>Subtotal South East</b>	<b>65.3</b>	<b>89.4</b>	<b>84.7</b>	<b>39.9</b>	<b>66.2</b>	<b>66.2</b>	<b>25.6</b>	<b>50.0</b>	<b>32.5</b>
Akwa Ibo	75.0	82.4	88.5	50.0	76.5	83.3	28.6	52.9	53.9
Bayelsa	70.6	-	64.5	41.2	-	62.1	41.2	-	21.7
Cross River	80.3	94.7	76.7	54.0	58.9	61.9	50.9	49.6	36.4
Delta	90.8	77.9	75.1	89.0	50.9	68.2	70.5	35.2	29.3
Edo [Benin]	71.4	86.2	84.3	59.5	66.8	87.4	51.7	49.9	48.5
Rivers	83.4	87.8	77.4	40.5	70.2	72.6	26.1	54.9	40.2
<b>Subtotal South South</b>	<b>78.6</b>	<b>84.3</b>	<b>77.9</b>	<b>61.2</b>	<b>63.8</b>	<b>73.2</b>	<b>49.0</b>	<b>47.3</b>	<b>37.9</b>
Ekiti	73.2	88.9	85.6	46.4	72.3	67.5	11.0	28.2	20.5
Lagos	83.4	89.3	87.1	73.0	80.5	90.8	54.2	52.7	50.6
Ogun	85.2	86.7	72.7	60.9	63.8	58.2	32.1	28.4	17.0
Ondo	74.5	82.3	89.1	60.4	58.0	80.7	34.2	23.0	33.3
Osun	90.0	83.5	85.0	61.3	45.1	60.2	38.8	15.1	19.2
Oyo [Ibadan]	86.8	80.0	85.1	58.1	57.3	72.9	31.7	31.4	24.6
<b>Subtotal South West</b>	<b>83.9</b>	<b>85.8</b>	<b>85.5</b>	<b>64.1</b>	<b>68.2</b>	<b>79.2</b>	<b>40.1</b>	<b>37.8</b>	<b>36.6</b>
<b>Overall Urban Nigeria</b>	<b>77.6</b>	<b>85.4</b>	<b>83.5</b>	<b>52.7</b>	<b>58.6</b>	<b>69.0</b>	<b>33.6</b>	<b>36.1</b>	<b>32.4</b>
<b>Overall rural Nigeria</b>	<b>55.4</b>	<b>65.8</b>	<b>69.4</b>	<b>13.9</b>	<b>15.5</b>	<b>22.9</b>	<b>7.4</b>	<b>7.9</b>	<b>6.8</b>
<b>Overall Nigeria</b>	<b>62.1</b>	<b>72.8</b>	<b>74.4</b>	<b>25.6</b>	<b>31.0</b>	<b>39.3</b>	<b>15.3</b>	<b>18.0</b>	<b>15.9</b>

Table A.9: Percentage of Assistance during Delivery, Health Facility Delivery, and Immunization; Urban Nigeria DHS 1999, 2003 and 2008

	Births in the past 5 years proceeding the survey by qualified health professional*			Health facility deliveries			Children age 12-23 months fully immunized†		
	1999	2003	2008	1999	2003	2008	1999	2003	2008
Abuja (FCT) [Abuja]	13.6	25.0	78.1	13.6	33.3	66.1	42.9	0.0	55.6
Benue	33.4	81.5	77.3	33.4	69.4	72.2	0.0	16.3	25.0
Kogi	39.9	93.3	81.0	39.9	87.7	82.6	50.1	25.7	33.3
Kwara [Ilorin]	40.3	73.0	93.3	42.4	72.3	87.7	34.0	27.4	39.4
Nassarawa	33.3	22.2	46.8	33.3	22.2	43.6	50.0	50.0	3.6
Niger	42.0	58.7	47.1	36.0	45.9	42.9	16.6	41.4	14.3
Plateau	29.6	81.6	58.3	27.3	75.5	57.7	0.0	24.9	43.3
<b>Subtotal North Central</b>	<b>37.9</b>	<b>68.9</b>	<b>70.7</b>	<b>36.3</b>	<b>62.3</b>	<b>66.4</b>	<b>30.6</b>	<b>30.2</b>	<b>34.3</b>
Adamawa	25.7	71.8	43.8	19.3	73.3	32.5	33.2	25.7	33.3
Bauchi	56.5	25.4	31.9	52.2	22.9	25.3	0.0	4.6	1.8
Borno	25.4	36.3	29.9	24.0	29.2	27.8	10.5	11.2	3.0
Gombe	25.0	49.1	53.9	25.0	49.1	50.5	-	27.7	19.1
Taraba	27.3	13.4	51.6	22.7	14.9	38.1	35.7	13.0	15.0
Yobe	12.7	15.6	19.5	12.7	11.8	13.6	33.3	4.1	10.4
<b>Subtotal North East</b>	<b>23.8</b>	<b>32.4</b>	<b>34.3</b>	<b>21.7</b>	<b>28.6</b>	<b>28.4</b>	<b>24.2</b>	<b>9.8</b>	<b>9.6</b>
Jigawa	0.0	0.0	21.2	0.0	0.0	20.2	0.0	0.0	0.0
Kaduna [Kaduna & Zaria]	23.6	38.0	37.3	22.2	33.9	32.7	14.3	26.1	28.3
Kano	7.6	38.8	35.0	6.2	35.4	30.1	15.2	6.5	12.0
Katsina	12.1	47.6	19.1	7.6	41.8	16.8	25.0	0.0	0.0
Kebbi	7.1	14.3	22.7	7.1	4.8	19.9	100.0	0.0	16.1
Sokoto	0.0	8.8	23.3	0.0	4.4	20.8	0.0	0.0	9.5
Zamfara	13.3	7.0	32.9	13.3	7.0	27.9	0.0	0.0	14.3
<b>Subtotal North West</b>	<b>10.5</b>	<b>31.9</b>	<b>30.2</b>	<b>8.8</b>	<b>27.5</b>	<b>26.4</b>	<b>16.3</b>	<b>7.8</b>	<b>13.4</b>
Abia	50.0	100.0	92.5	50.0	100.0	85.9	25.7	70.3	50.0
Anambra	53.1	97.1	94.5	53.1	90.7	87.4	38.2	35.7	52.1
Ebonyi	38.4	34.7	36.1	36.5	29.7	33.0	33.4	8.8	60.6
Enugu	47.6	86.7	65.1	42.8	73.7	52.3	42.4	61.3	10.5
Imo	50.0	100.0	98.6	50.0	100.0	87.1	100.0	66.7	53.9
<b>Subtotal South East</b>	<b>45.4</b>	<b>88.4</b>	<b>85.4</b>	<b>43.8</b>	<b>84.0</b>	<b>77.8</b>	<b>36.5</b>	<b>57.2</b>	<b>48.6</b>
Akwa Ibo	50.0	100.0	83.8	43.8	100.0	81.1	22.2	0.0	40.0
Bayelsa	36.4	-	36.8	36.4	-	31.0	0.0	-	19.2
Cross River	41.7	81.9	80.8	33.6	73.6	64.7	26.2	51.7	66.7
Delta	54.1	84.2	81.8	54.1	84.2	77.3	29.6	51.3	47.1
Edo [Benin]	44.7	89.6	85.6	43.0	89.6	81.9	23.2	38.5	43.1
Rivers	43.9	90.6	81.4	28.1	82.5	70.0	25.0	54.4	66.7
<b>Subtotal South South</b>	<b>47.0</b>	<b>87.9</b>	<b>78.9</b>	<b>42.6</b>	<b>84.7</b>	<b>71.5</b>	<b>25.1</b>	<b>41.8</b>	<b>51.5</b>
Ekiti	58.5	100.0	82.8	41.8	100.0	72.2	0.0	0.0	60.5
Lagos	48.0	84.3	85.4	41.8	81.6	79.5	43.3	44.8	57.8
Ogun	44.5	70.7	73.3	43.6	68.3	67.2	37.2	68.0	36.4
Ondo	48.6	87.4	69.7	41.0	80.2	64.4	82.5	51.9	50.0
Osun	29.0	93.3	93.3	26.9	93.3	89.1	0.0	37.3	63.2
Oyo [Ibadan]	48.3	96.6	83.6	39.6	85.3	73.7	21.0	21.8	51.4
<b>Subtotal South West</b>	<b>46.2</b>	<b>86.9</b>	<b>84.1</b>	<b>40.4</b>	<b>82.6</b>	<b>77.5</b>	<b>35.7</b>	<b>39.7</b>	<b>55.7</b>
<b>Overall Urban Nigeria</b>	<b>33.8</b>	<b>58.5</b>	<b>65.4</b>	<b>30.6</b>	<b>54.2</b>	<b>59.4</b>	<b>28.2</b>	<b>25.2</b>	<b>38.0</b>
<b>Overall rural Nigeria</b>	<b>20.1</b>	<b>25.7</b>	<b>27.7</b>	<b>18.0</b>	<b>23.8</b>	<b>24.7</b>	<b>10.3</b>	<b>7.4</b>	<b>16.2</b>
<b>Overall Nigeria</b>	<b>23.9</b>	<b>35.2</b>	<b>38.9</b>	<b>21.4</b>	<b>32.6</b>	<b>35.0</b>	<b>15.1</b>	<b>13.0</b>	<b>22.8</b>

\* ANC by qualified health professional refers to both doctor and nurse/midwife/auxiliary midwife.

† Full immunization refers to children aged 12-23 months who had received BCG, measles, polio (3) and DPT (3) as reported by mother or on card.

**Table A.10:** Number of Sampled Households and Women Respondents Aged 15-49; Urban Nigeria DHS 1999, 2003 and 2008

	Households			Women respondents		
	1999	2003	2008	1999	2003	2008
Abuja (FCT) [Abuja]	23	22	593	26	24	596
Benue	54	70	140	50	83	151
Kogi	84	111	368	115	112	319
Kwara [Ilorin]	61	127	327	98	110	291
Nassarawa	18	19	149	22	24	148
Niger	102	73	216	114	80	217
Plateau	49	54	187	56	66	224
<b>Subtotal North Central</b>	<b>391</b>	<b>476</b>	<b>1980</b>	<b>481</b>	<b>499</b>	<b>1946</b>
Adamawa	44	75	187	47	84	210
Bauchi	17	94	232	23	121	258
Borno	66	164	358	85	208	366
Gombe	17	38	144	23	54	188
Taraba	103	35	116	90	32	171
Yobe	39	57	227	55	62	269
<b>Subtotal North East</b>	<b>286</b>	<b>463</b>	<b>1264</b>	<b>323</b>	<b>561</b>	<b>1462</b>
Jigawa	10	19	78	11	19	80
Kaduna [Kaduna & Zaria]	86	86	315	87	99	335
Kano	175	231	326	188	256	333
Katsina	67	49	198	67	59	215
Kebbi	13	16	153	12	18	189
Sokoto	16	35	116	22	47	137
Zamfara	16	35	70	19	28	71
<b>Subtotal North West</b>	<b>383</b>	<b>471</b>	<b>1256</b>	<b>406</b>	<b>526</b>	<b>1360</b>
Abia	34	64	366	46	65	370
Anambra	57	112	651	77	116	510
Ebonyi	60	89	199	68	89	238
Enugu	52	145	210	43	155	189
Imo	18	18	104	19	15	106
<b>Subtotal South East</b>	<b>221</b>	<b>428</b>	<b>1530</b>	<b>253</b>	<b>440</b>	<b>1413</b>
Akwa Ibo	56	17	78	54	17	84
Bayelsa	17	0	203	26	0	190
Cross River	30	45	176	47	41	195
Delta	54	112	321	69	91	310
Edo [Benin]	91	128	419	115	103	428
Rivers	42	85	266	42	86	251
<b>Subtotal South South</b>	<b>290</b>	<b>387</b>	<b>1463</b>	<b>353</b>	<b>338</b>	<b>1458</b>
Ekiti	45	50	409	34	43	290
Lagos	343	360	1180	367	383	1157
Ogun	181	64	282	170	53	196
Ondo	58	46	393	46	34	336
Osun	79	55	605	87	56	592
Oyo [Ibadan]	205	131	362	177	124	279
<b>Subtotal South West</b>	<b>911</b>	<b>706</b>	<b>3231</b>	<b>881</b>	<b>693</b>	<b>2850</b>
<b>Overall Urban Nigeria</b>	<b>2482</b>	<b>2931</b>	<b>10724</b>	<b>2697</b>	<b>3057</b>	<b>10489</b>
<b>Overall rural Nigeria</b>	<b>5165</b>	<b>4294</b>	<b>23346</b>	<b>5502</b>	<b>4563</b>	<b>22896</b>
<b>Overall Nigeria</b>	<b>7647</b>	<b>7225</b>	<b>34070</b>	<b>8199</b>	<b>7620</b>	<b>33385</b>

## Appendix B: The Bill & Melinda Gates Foundation's Family Planning Strategy Overview

BILL & MELINDA  
GATES foundation

# FAMILY PLANNING

## STRATEGY OVERVIEW

### OUR MISSION

Guided by the belief that all lives have equal value, the Bill & Melinda Gates Foundation works to help all people lead healthy, productive lives. Our Global Health Program supports this mission by harnessing advances in science and technology to save lives in poor countries.

We focus on problems that have a major impact on people in the developing world but get too little attention and funding. Where proven tools exist, we support sustainable ways to improve their delivery. Where they don't, we invest in research and development of new interventions, such as vaccines, drugs, and diagnostics.

Our financial resources, while significant, represent a very small fraction of the overall funding needed to improve global health on a large scale. We therefore advocate for the policies and resources needed to provide people with greater access to health solutions. Strong partnerships are also essential to our success in making a difference and saving lives.

### THE OPPORTUNITY

In recent decades, there have been tremendous improvements in the reproductive health (RH) of men and women in the developing world. From 1965 to 2005, contraceptive use rose from less than 10 percent to 60 percent.<sup>1</sup>

However, in many low income countries, women and men do not have access to the basic supplies and services they need, whether to prevent unwanted pregnancies, ensure safe deliveries, or manage and treat sexually transmitted infections.

More than 200 million women in developing countries do not have access to effective contraception, even while family planning (FP) is one of the most cost-effective ways to reduce maternal, infant, and child mortality.<sup>2</sup> It is estimated that family planning could prevent as many as one in every three maternal deaths and one in every 11 child deaths by allowing women to delay motherhood,

space births, avoid unintended pregnancies and abortions, and stop childbearing when they have reached their desired family size.<sup>1</sup>

Family planning also enhances social development by alleviating poverty; improving the environment, agriculture, water, and sanitation; and increasing access to primary education. Through these many corollary benefits, family-planning programs are essential to achieving development targets, including the Millennium Development Goals (MDGs).<sup>3,4</sup>

Sub-Saharan Africa and South Asia have the highest rates of maternal and infant mortality, and the lowest use of contraception. Early marriage and childbearing before age 18 are also serious public-health problems in many countries, leading to increased maternal and newborn death and disability. Married and unmarried youths have problems accessing contraception information and services. Further, the sexual debut for many African girls is linked to sexual violence, rape, and coercion.<sup>5</sup> New programs must be designed to meet the needs of young men and women in the developing world.

### OUR STRATEGY

**Family planning is a cost-effective way to save the lives of women and children, and it empowers families to determine the optimal timing and spacing of births. Our vision of success is that all women, men, and adolescents in developing countries know about and have access to quality family planning. We support voluntary family planning as a means to meet the reproductive health needs of men and women and significantly reduce maternal and infant deaths.**

At the global level, our strategy seeks to revitalize interest in family planning and broader reproductive health issues as indispensable to achieving the MDGs. Our work in this area complements our other areas of focus, which include nutrition; maternal, neonatal, and child health; and vaccine-preventable diseases. We are investing in raising

awareness of the need for family planning among donors, country governments, and the private sector; enhancing the efficiency of contraceptive procurement and distribution; and engaging donors, governments, and civil society to better coordinate efforts and increase resources to fund family planning and reproductive health.

Our strategy at a country level is focused on building cost-effective urban supply, demand, and advocacy interventions to increase contraceptive use and improve care. We also will use the evidence we gather to help municipalities provide better family planning and related services, with a focus on the poorest and most vulnerable. Our strategy also prioritizes leveraging private-sector strengths and resources to increase the availability of high-quality and affordable contraceptives.

## INTERVENTION AREAS

### Advocate for sustained funding, improved policies and coordination, and enhanced efficiency in contraceptive procurement at the global level

Globally, there are significant challenges in financing and procuring contraceptives and other reproductive health supplies and services. Decreased donor support for contraceptives, a lack of agreement among stakeholders about the amount of funding needed to achieve gains in family planning, volatile and unpredictable donor funding, and uncoordinated and antiquated global procurement processes—all create inefficiencies, add to costs, and lead to stockouts of contraceptives, wastage of products, poorly managed in-country supply chains, and variable product quality.

Our strategy addresses these challenges by advocating for increased funding for family planning, better coordination among donors and governments to deliver products, services, and enhanced efficiency of contraceptive procurement. Our investments to support these goals include the following initiatives:

- **Countdown 2015 Europe**, a partnership of 17 European nongovernmental organizations (NGOs), to advocate for increased European investment in reproductive health and supplies
- **Reproductive Health Supplies Coalition**, a 78-member organization that includes major donors, technical agencies, and advocates that develop joint strategies and activities to secure reliable contraceptive supplies for developing countries

- **RHInterchange**, a web-based tool that supports contraceptive commodity security by managing inventory and making available accurate and timely information on contraceptive orders and shipments for more than 140 countries
- **Mobilizing for RH/HIV Integration**, a Population Action International program to support advocacy for RH/HIV integration with the Country Coordinating Mechanisms for the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund)
- a grant to the **United Nations Foundation** to boost U.S. support for global family planning and reproductive health

We are monitoring the progress of our work in advocacy, coordination, and procurement by tracking the number of new donors contributing to funding, the increase in funding for family planning and reproductive health from donor countries, and the number of donors and countries providing data to the RHInterchange.

### Increase contraceptive prevalence in urban areas, with a focus on the poor and vulnerable

In 2008, the urban share of the world's population reached 50 percent for the first time.<sup>6</sup> It is predicted that nearly all future global population growth will occur in towns and cities in developing countries. In particular, urban populations in Africa and South Asia—the most rapidly growing regions in the world—are projected to double between 2000 and 2030.<sup>6</sup> Urban births are concentrated among the poorest populations, a significant number of these births are unintended, and the maternal, infant, and reproductive health status of the urban poor is comparable to—or worse than—that of rural residents.<sup>7</sup>

Our strategy focuses on enhancing the delivery of family-planning services to people living in impoverished urban areas. Our main investment in this area is the **Urban Reproductive Health Initiatives**, which aims to significantly increase access to contraceptives in four countries in Sub-Saharan Africa and South Asia: India, Nigeria, Kenya, and Senegal. The initiative will test, validate, and share cost-effective integrated urban interventions to improve RH outcomes among the urban poor.

The overall goal of the Urban Reproductive Health Initiatives grant is to build a robust evidence and knowledge base for designing, implementing, and evaluating the impact of urban RH programs in Sub-Saharan Africa and South Asia in order to enhance global knowledge and inform future FP and RH programs

globally. We will test such key strategic approaches as supply, demand, and advocacy interventions.

Our country programs are driven by locally based organizations and government, centrally involve community leaders and residents in all phases of project planning and administration, and are closely aligned with government and other country activities targeting women's and children's health.

Key outcome measures we are monitoring for this initiative include improved quality of care, increased communication between couples regarding family planning, increased private-sector provision, and increased contraceptive use.

#### Develop innovative contraceptive technologies

Many women and men do not use contraception because current methods are often unaffordable, have undesirable side effects, require a skilled health provider to administer them, or can be inconvenient to use.

Our investments focus on identifying new methods that are easy to access and use, for both women and men. We are currently investing in the quality assurance, regulatory approval, and careful introduction of two products in selected countries of Sub-Saharan Africa and South Asia: a long-acting implant that costs 70 percent less than current implants, and a three-month hormonal contraceptive, DMPA-SC in the Uniject™ device. Currently, DMPA is delivered through intramuscular injection, necessitating a health worker to provide the method in most countries. The new DMPA-SC is delivered subcutaneously and thus has the potential to be delivered by non-medical health workers, such as trained community health workers. Implants and DMPA are especially popular in Sub-Saharan Africa, and we are hopeful that these less expensive and more convenient new methods can rapidly increase coverage and use of family planning.

Other methods are needed to address the diverse needs of communities around the world. We are currently investing in an analysis of contraceptive technology needs, forming a global alliance to improve contraceptives for users in developing countries, establishing a contraceptive research agenda, and considering support for an initiative to support young research scientists who specialize in contraceptive discovery and development.

Key outcome measures for this initiative include the development of at least 10 contraceptive candidate leads as well as evidence of increased private-sector participation in contraceptive technology development.

#### Close key knowledge gaps in family planning

There remain several critical knowledge gaps for increasing access to family planning and reproductive health. Our strategy supports investments to address these gaps by conducting intensive research and development (R & D) to:

- identify best approaches to support the delay of first birth among young adolescent girls
- develop models to integrate reproductive health and HIV prevention and care services, to increase access for HIV-positive men and women
- develop effective models to integrate family planning into maternal, newborn, and child health programs
- study the roles of diffusion and social norms in sustainable programs

We will measure progress in this area by monitoring the number of proofs-of-concept tested for early adolescent interventions and the number of optimal RH/HIV integration models documented and taken to scale. We are also documenting the diffusion of ideas, products, and services from urban to rural areas and working to understand the role of social norms in sustaining programs.

#### PROGRESS

Our partners have had successes in strengthening both donor contributions and coordination efforts affecting contraceptive supply. Some examples of this include:

- With support for a secretariat, the Reproductive Health Supplies Coalition grew from 18 members to a 78-member organization that addresses the fundamental technical and advocacy issues regarding contraceptive supplies.
- The RHInterchange has captured procurement data on more than \$1 billion (U.S.) worth of shipments of contraceptive supplies, including purchases by the United States Agency for International Development (USAID), United Nations Population Fund (UNFPA), International Planned Parenthood Federation, and Ministries of Health.
- With partners, we developed a contraceptive financing mechanism to smooth out volatility in donor funding flows.
- Civil society groups from eight countries were trained to apply for funds from the Global Fund, and successfully secured more than \$100 million (U.S.) for contraceptive supplies.
- We have seen increased funding for international family planning and reproductive health from European institutions, bilateral donors, and the U.S. government.

At the country level, several recently launched projects show promise for improving reproductive health for the poor and vulnerable:

- Consortia in India and Nigeria have recently launched Urban Reproductive Health Initiatives with a focus on the urban poor and most vulnerable. Similar initiatives in Senegal and Kenya will be launched later in 2009.
- A Measurement, Learning, and Evaluation (MLE) grant will work closely with country consortia implementing Urban Reproductive Health Initiatives in India, Senegal, Nigeria, and Kenya. MLE and its country partners are developing tools and methodologies to track and measure program impact in urban slums, building host-country capacity, and ensuring that all lessons learned and tools and materials developed will be globally accessible. The goal of MLE is to build a robust evidence and knowledge base for designing, implementing, and evaluating the impact of urban RH programs in Sub-Saharan Africa and South Asia, and then disseminate best practices in order to enhance global knowledge and use.

## CHALLENGES

The global community, including both private- and public-sector stakeholders, is not sufficiently galvanized to focus on improving family planning and reproductive health. Governments and other donors are focused on other health priorities, and family planning is competing for scarce monetary and human resources, both at country and global levels. We are working hard to hold both national governments and the global donor community accountable for their own pledges to improve family planning by communicating its importance in reducing maternal and child deaths, enhancing the livelihood of women, and reducing poverty.

An overarching challenge is the persistence of cultural and social barriers that prevent men and women from using effective contraceptive methods and weaken the demand for birth spacing and family planning. In addition to supporting the discovery and development of new family-planning products and services, activities to generate demand for contraceptives are critical features of our country initiatives.

## WHAT WE'RE LEARNING

The need to increase contraceptive R & D is a priority for our strategy, but we are increasingly aware that support for young scientists may be insufficient to reinvigorate a field that private companies have left. On September 2, 2009, we opened a Request for Proposal to develop contraceptive technologies as part of our Grand Challenges Explorations initiative. This program awards small grants of \$100,000 (U.S.) each to support early-stage research projects. Our hope is that we will tap into some new ideas that will support family-planning efforts in the future.

To have a sustained impact on contraceptive R & D, we need to develop a complete understanding of the product cycle in order to identify all the areas that need support. We are also examining the potential for working with new partners in India, China, and South Africa, where private companies, manufacturers, and scientists may be able to support a strong contraceptive development program.

## THE WAY FORWARD

Over the course of developing this strategy, we received input from dozens of experts who helped us make strategic choices to maximize the impact of our efforts and resources. To ensure our strategy is targeted and effective, we look to outside experts for honest feedback and input.

By focusing on increasing women's access to contraceptives in Sub-Saharan Africa and South Asia, we strive to maximize our impact on the health of mothers and children. Reaching the millions of women and couples who desire contraceptives requires the dedication of all our government, donor, private-sector, research, nongovernmental, and community partners. Because our resources are limited in relation to what is needed to address unmet needs globally, we work closely with other foundations and existing and emerging donors to ensure funds are spent well, improve policies, enhance the efficiency of services procurement and delivery, and, ultimately, save and improve lives.

## TO LEARN MORE

About the Global Health Program:  
[www.gatesfoundation.org/global-health](http://www.gatesfoundation.org/global-health)

About Family Planning:  
[www.gatesfoundation.org/familyplanning](http://www.gatesfoundation.org/familyplanning)

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Guided by the belief that every life has equal value, the Bill & Melinda Gates Foundation works to help all people lead healthy, productive lives. In developing countries, it focuses on improving people's health and giving them the chance to lift themselves out of hunger and extreme poverty. In the United States, it seeks to ensure that all people—especially those with the fewest resources—have access to the opportunities they need to succeed in school and life. Based in Seattle, Washington, the foundation is led by CEO Jeff Raikes and Co-chair William H. Gates Sr., under the direction of Bill and Melinda Gates and Warren Buffett.

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## Appendix C: About the Nigeria Urban Reproductive Health Initiative

### Context

The Nigerian Urban Reproductive Health Initiative (NURHI) is part of a broader strategic Urban Reproductive Health Initiative (URHI) being piloted and funded by the Bill & Melinda Gates Foundation in the four countries of Nigeria, India, Kenya and Senegal. The URHI is intended to build a robust evidence and knowledge base for future urban family planning and reproductive health programs worldwide.

### Goal

NURHI was awarded in September 2009. The five-year Initiative (2009-2014) aims at eliminating the supply and demand barriers to contraceptive use in Nigeria. The goal of the project is to increase the contraceptive prevalence rate (CPR) by 20 percentage points in six selected Nigerian urban cities of Ibadan, Ilorin, Kaduna, Zaria, Abuja, and Benin. The project targets and intends to meet the contraceptive needs of the marginalized urban poor populations in the cities. By 2035, 50 percent of Nigeria's poor are projected to live in urban areas.

### Objectives

The NURHI project aims to achieve its goal by concentrating on the following key objectives:

- Develop cost-effective interventions for integrating quality family planning with maternal and newborn health, HIV and AIDS, post-partum and post-abortion care programs.
- Improve the quality of FP services for the urban poor with emphasis on high volume clinical settings.
- Test novel public-private partnerships and innovative private-sector approaches to increase access to and use of family planning by the urban poor.
- Develop interventions for creating demand for and sustaining use of contraceptives among marginalized urban populations.
- Increase funding and financial mechanisms and a supportive policy environment for ensuring access to family planning supplies and services for the urban poor.

### Contributions to National Strategic Health Development Plan and MDG

NURHI envisions a Nigeria where family planning use is commonplace and is highly valued by individuals, couples, and the extended families, and communities in which they live; family planning products and services are readily available; and the public and private sectors are partnering effectively with civil society and donor organizations to support, sustain and strengthen reproductive health programs. The NURHI project and its vision contribute to the achievement of the Millennium Development Goals number 4 and number 5, and the Federal Ministry of

Health National Strategic Health Development Plan (NSHDP), recently approved by the nation's national council on health. NURHI intends to positively impact more than six million people across the 22 local government areas (LGAs) that make up the six cities.

### Guiding Principles

In its implementation, NURHI will be guided by the following key principles:

- seeing family planning through the eyes of the consumer, the family and the community;
- driving the supply side, to respond to the needs of the poorest and the most vulnerable;
- building on what works, testing and rewarding innovations; and
- commit to partnership, participation and capacity building.

### Strategic Approach

The project's strategic approach will be based on the Gates Foundation hypothesis that "if a choice of modern contraceptives is consistently available in urban settings to population groups...and if a social environment is created that supports and lowers barriers to contraceptive use, then contraceptive prevalence will increase and knowledge and practice will diffuse to rural areas." The NURHI's strategic approach will create a new set of social norms for both family planning consumers and providers in the country; using evidence-based advocacy to address regulatory, financing, systems and medical issues; and creating demand that will drive supply.

Through this approach, NURHI intends to:

- create demand for family planning services through innovative, consumer-first campaigns and activities based on a socio-ecological approach and a focus on those in the 3rd, 4th and 5th SES quintiles in urban areas;
- incentivize the supply side, particularly the private sector, to improve quality and meet the demands of the urban poor by providing training, resources, and marketing support;
- link supply and demand through a network approach, e.g. through the creation of an effective family planning providers' networks;
- implement advocacy efforts to increase commitment and socio-political support for family planning, particularly at the state and LGA levels, and
- test, validate, document, and replicate models for family planning integration, quality improvement and demand that effectively reach and respond to the needs of the urban poor.

**Proof of Concept**

Testing the proof of concept is integral to the NURHI project. Specifically, NURHI intends to address the following high-level assumptions as part of testing the proof of concept:

1. Contraceptive prevalence among the urban poor of Nigeria will increase in response to the implementation of three closely-coordinated strategies:
  - a. improving awareness, acceptability and access to FP by integrating FP into new sites (MCH, HIV/AIDS, PAC, and postpartum) using MCH as a platform;
  - b. improving quality of clinical FP services, especially in high volume settings through a standard package of resources, technical assistance, and tools; and
  - c. generating demand for FP service utilization and contraceptive use.
2. Systematically addressing the major barriers to family planning use among the urban poor in Nigeria will positively influence social norms for contraceptive use.
3. Strategically designed advocacy efforts will improve political will and financial support for family planning in Nigeria.
4. The lessons learned from testing strategies to strengthen FP service delivery will facilitate the process during replication in the two additional sites.

**Implementation**

Year one of NURHI (September 2009 to September 2010) is the discovery phase. It covers key pre-project take-off activities, including conducting baseline surveys, formative research, private sector contraceptive assessments, and stakeholders' briefings and buy-ins. The analysis of the results or outcomes of these series of activities in the discovery year will be used to design project interventions for years two and three, called the "implementation phase" of the project.

The Measurement, Learning & Evaluation (MLE) Project is specifically tasked to ensure a strong evidence and knowledge base for the design, implementation, and impact evaluation of the Gates Urban Reproductive Health Initiatives in the four countries. NURHI will work closely with MLE to design data collection methods that are relevant and sensitive to the culture and context in Nigeria. MLE will design and implement quasi-experimental activities including longitudinal study of women (3,000 women per city) from each of the four intervention cities (Abuja, Ibadan, Ilorin and Kaduna) and two comparison cities (delayed interventions) Zaria and Benin City. The longitudinal study will assess the impacts of the NURHI program activity by city and will include married and unmarried women ages 15-49, followed at two-year intervals (baseline, midterm, and end-line). A baseline survey of health facilities in the four project start-up cities of Ibadan, Kaduna, Abuja and Ilorin-will be conducted. On

its own, and working through competent local research institutions, Johns Hopkins University Center for Communication Programs (CCP) will conduct a comprehensive formative research, in year one, to add to the body of knowledge and evidence on family planning practices in the project Nigeria. In years four and five, NURHI will continue with project implementation and scale-up to Zaria and Benin City.

**The NURHI Consortium**

The NURHI project consortium/team is made up of four key partners: CCP, Johns Snow, Inc. (JSI), the Association for Reproductive and Family Health (ARFH) and the Center for Communication Programs Nigeria (CCPN).

CCP leads the partnership and is responsible for demand and advocacy strategy development, service promotion, research and coordination with the external partners. JSI oversees the systems strengthening strategy, and the private sector, logistics, and grants management. ARFH provides technical assistance and on the ground support for implementation of activities focusing on clinical training and training of non-clinical providers. CCPN is responsible for the development of materials, including the toolkit, FPPN demand, and Behavior Change Communication (BCC) capacity building. Other agencies, projects, and private companies will contribute technical expertise in their respective areas and/or undertake specific scopes of work.

## Appendix D: Study Design for the Measurement, Learning &amp; Evaluation Project



Policy Brief

## Study Design for the Measurement, Learning & Evaluation Project

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20 October 2009

Family planning has widespread positive effects on health and wellbeing. Contraceptive use not only decreases unintended pregnancy and reduces infant and maternal mortality and morbidity, but it is critical to the achievement of Millennium Development Goals (MDGs). However, despite the expansion of family planning in many developing countries, contraceptive use remains critically low in much of sub-Saharan Africa and parts of South Asia, particularly among the urban poor. In cities in these regions, people living in poverty have limited access to family planning and other basic services; in many countries more than half of city residents live in urban slums that lack necessary amenities such as clean water, trash removal, and electricity. These urban environments provide an opportunity to target family planning interventions towards populations that have high unmet need for contraception through integrating family planning services into maternal, newborn, child health, and HIV/AIDS services, improving service quality, increasing private sector initiatives, and advocating for small family size.

The Bill & Melinda Gates Foundation created the Urban Reproductive Health Initiative (URHI) to promote innovative family planning programs in four countries: India (focusing on the state of Uttar Pradesh), Nigeria, Kenya, and Senegal. Targeting the urban poor, the URHI aims to develop cost-effective interventions that increase access to and demand for high quality family planning. To evaluate the impact of the URHI interventions, the Gates Foundation concurrently initiated the Measurement, Learning & Evaluation (MLE) Project for the URHI, an independent evaluation team that will conduct an impact assessment of the URHI programs. A key

objective of the MLE project is to undertake a rigorous impact evaluation of the URHI country programs, identifying the most effective and cost-efficient programmatic approaches to improving contraceptive use among the urban poor. Specifically, the MLE project will evaluate the success of both *demand-side* URHI interventions (those that increase the desire for family planning services) and *supply-side* URHI interventions (those that increase the quality of and access to family planning services). The MLE project will also undertake a cost-effectiveness analysis of specific programmatic approaches, where feasible. This policy brief outlines the project's hybrid study design and its intended impact.

### Three Evaluation Design Elements

The MLE project evaluation comprises three design elements that allow researchers to measure programmatic impact across cities, over time, and among the urban poor and non-poor.

**Impact Across Cities.** The MLE project will take advantage of the delayed implementation of programmatic activities in some cities to develop a *quasi-experimental* design. In each country, researchers will evaluate four URHI-targeted cities that will receive immediate interventions and two cities that will receive URHI interventions during the third or fourth year of the project. This latter group of cities with delayed URHI interventions will serve as comparison cities. An assessment of these cities with the original set of intervention cities will add variation that will provide more precise measures of program impact.

*This policy brief is based on the Technical Working Paper, "Study Design for the Measurement, Learning & Evaluation Project"*  
[www.cpc.unc.edu/urbanreproductivehealth/publications/Technical\\_Working\\_Paper\\_Study\\_Design.pdf](http://www.cpc.unc.edu/urbanreproductivehealth/publications/Technical_Working_Paper_Study_Design.pdf)

**Impact Over Time.** The MLE project will use a combination of repeated cross-sectional data (surveying a new representative sample of respondents at multiple points in time) and longitudinal data (surveying the same respondents at multiple points in time) in a *hybrid study design*. This hybrid approach maximizes the strengths of both types of data; rigorous cross-sectional surveys provide the attitudes and behaviors of a representative sample of the cities' population at a given point in time, while longitudinal data measure the causal impact of program components on outcomes of interest. The project will also collect longitudinal data from a sample of health and family planning facilities that provide services to women and men – service delivery points (SDPs) – and examine access to and quality of family planning services at these facilities over the study period.

**Impact Among the Urban Poor.** To identify the impact of URHI interventions among the urban poor, the MLE project will structure the sampling of respondents to identify programmatic outcomes among both slum and non-slum populations.

### Study Tools

**Individual Surveys.** The MLE project will conduct confidential surveys with women and men of reproductive age. Women and men will provide their basic demographic characteristics (such as age, ethnicity, family structure, and migration practices), their experience with family planning methods, their awareness of family planning messages, and their fertility desires. In addition, respondents will discuss their current health care experiences, including how they pay for health care and when and where they seek care for themselves and their children. At baseline, the women's survey will also collect information on how to locate these women at mid-term and endline for follow-up surveys. This will permit an examination of how fertility desires and family planning behaviors change over time with increasing program activities and exposure.

**SDP Surveys.** MLE researchers will also collect data at a wide range of public and private SDPs. In facilities with licensed health care providers, the MLE team will conduct facility audits to determine

### *Identifying the Urban Poor*

To ensure that the urban poor are fully represented in this study, MLE researchers will utilize Geographic Information System (GIS) data to map the location of urban slums and non-slum areas onto maps of the study cities using country-specific definitions of what constitutes a slum. Because the residents of urban slums are predominantly poor, this geographic data will serve as an approximate measure of where poor populations live. From the GIS data, researchers will design sampling frames (a snapshot of the full population of each city) that capture both urban poor and non-poor populations, and they will randomly select members from both groups as survey respondents from these geographically-determined sampling frames.

the services that are provided at each location and the availability of family planning methods and prescription requirements. Fieldwork staff will conduct surveys with health care providers in these facilities to identify their training, standard operating procedures with clients, and referral mechanisms. In addition, the MLE team will conduct exit interviews with women who are leaving these facilities to evaluate satisfaction with health care services. Because family planning services are often available outside health care facilities, the MLE project will also collect data from local pharmacies and other retail outlets that offer contraceptives. In these locations, field workers will take an audit of available contraceptive methods, educational materials, and counseling opportunities, as well as identify the requirements women must meet to obtain a method and the cost of contraceptives.

**Program Cost Analysis.** Impact evaluations also provide an opportunity to determine the cost-effectiveness of different programmatic approaches to ensure that scarce resources are used most efficiently. To conduct these cost analyses, the MLE project will collect detailed information on program costs (including financial contributions and in-kind expenses) over the course of the project. Where possible, this information will contribute to an impact analysis that captures the cost of individual interventions.

### Hybrid Study Design

**Cross-Sectional Data.** The MLE project will conduct cross-sectional surveys with women at two points in time – at baseline prior to the implementation of the URHI programs and at endline of the interventions, four years later. These data will allow the MLE team to determine if the overall contraceptive prevalence rate changes significantly in cities during this period. The MLE team will also collect cross-sectional surveys with men in intervention cities at baseline, mid-term, and endline of the project to measure men’s contraceptive attitudes and behaviors, gender attitudes, and identify any changes in men’s perspectives over time. Because these surveys are cross-sectional, baseline, mid-term, and endline respondents will differ and it will not be possible to attribute changes in knowledge, attitudes, and behaviors directly to program exposure at the individual level.

Cross-sectional data collection requires that researchers use an updated sampling frame to randomly select respondents at each survey round. A sampling frame is a snapshot of the entire population of a study area, in this case, each city, at a given point in time. With an accurate sampling frame, every adult in each city has the same chance of random selection into the study. Because urban populations are quite dynamic – urban migration can change the characteristics of cities quite rapidly – MLE researchers will identify, to the extent possible, updated sampling frames at baseline, mid-term, and endline. By randomly selecting respondents from these sampling frames, each cross-sectional survey will represent the entire population of men or women living in each city at the time of the survey. Thus, the MLE team will assess men’s family planning attitudes and behaviors at three points in time and the contraceptive prevalence rate of each city (calculated from the women’s cross-sectional surveys) at baseline and endline of the study.

**Longitudinal Data.** The MLE project will also collect longitudinal data from women and SDPs. Field workers will first conduct surveys with women and SDPs at baseline of the study, and then follow-up with the same women and SDPs at mid-term and endline. Because longitudinal data permit researchers to measure change over time, this study component will allow the MLE project to identify the causal

impact of the URHI family planning interventions on women’s family planning attitudes and behaviors and also determine if URHI interventions activities improve the quality of family planning services in urban areas.

To maximize the significant resources required to collect both cross-sectional and longitudinal data, the women who are randomly selected as respondents to the baseline cross-sectional survey will become the participants in the longitudinal study. These women will receive follow-up surveys at mid-term and endline. Dovetailing the cross-sectional and longitudinal data collection conserves project resources and ensures that the longitudinal surveys with women represent the larger population of study cities at baseline (as researchers will randomly select these women from a current sampling frame).

One of the challenges of collecting longitudinal data is respondent attrition. Over time, individuals may move households or migrate to other cities or regions, limiting the ability of researchers to conduct follow-up surveys. To mitigate this, MLE researchers will collect detailed tracking information for each woman in the longitudinal survey. This information will include addresses and cell phone numbers for the respondent, as well as the names and contact information for her household members, community leaders, landlords, and friends. If a respondent changes residence before a follow-up survey, the MLE team will use this detailed tracking information to locate the respondent and determine the feasibility of conducting follow-up surveys at her new location.

The longitudinal component of the hybrid study design also includes data collection from a wide range of public and private SDPs. At baseline, MLE researchers will randomly select health care providers offering family planning services, pharmacies, and other retail outlets that offer contraceptives within each study city. Additionally, the sample will include all SDPs that respondents identify in the baseline survey as their preferred location for family planning services. Field workers will conduct follow-up surveys with the same SDPs at mid-term and endline. To track the location of the facilities, researchers will note the GPS coordinate of each SDP during the baseline survey and use this information to easily identify the same facilities upon return visits.

### Data Collection Plan

The MLE project will use a comprehensive evaluation strategy that includes data collection at three time points (baseline, mid-term, and endline), each separated by two years. The MLE team will collect data with women and men using both longitudinal and cross-sectional samples.

At *baseline*, field workers will conduct the first cross-sectional surveys of women and men and the first longitudinal surveys with the SDPs. Respondents to the baseline cross-sectional survey of women will also become the respondents to the longitudinal survey of women; these respondents will receive follow-up surveys at the mid-term and endline.

At *mid-term*, researchers will survey a new, random sample of men for the second cross-sectional men's survey. Field workers will also conduct follow-up surveys with the women interviewed for the baseline cross-sectional survey. These follow-up surveys with women constitute the longitudinal survey of women. Field workers will also conduct the mid-term surveys with the SDPs surveyed at baseline.

At *endline*, field workers will conduct follow-up longitudinal surveys with women and SDPs. The MLE research team will also survey a new, random sample of women and men for the endline cross-sectional surveys. These surveys will represent the larger population of each city at this point in time.

### Conclusion

The MLE project is a quasi-experimental study that includes four intervention cities where the URHI will implement innovative family planning programming, and two comparison cities where programming is delayed in each URHI-supported country. The study design is a hybrid design that integrates cross-

<i>Data Collection Plan</i>		
	<b>Cross-Sectional Surveys</b>	<b>Longitudinal Surveys</b>
Baseline	Women <sup>1</sup> Men	SDPs <sup>2</sup>
Mid-term	Men	Women <sup>1</sup> SDPs <sup>2</sup>
Endline	Women Men	Women <sup>1</sup> SDPs <sup>2</sup>
<sup>1</sup> Women in these surveys are the same <sup>2</sup> SDPs in these surveys are the same		

sectional and longitudinal data to assess the direct impact of innovative family planning programs and identify any change in the contraceptive prevalence rate and behavioral and attitudinal norms in intervention cities over the course of the URHI. To identify the specific reproductive health needs of the urban poor, the MLE project will structure the sampling of respondents to identify outcomes among both slum and non-slum populations. These design elements allow the MLE project to measure programmatic impact across cities, over time, and among the urban poor and non-poor.

Identifying the successes of family planning interventions – assessing supply-side programs that increase access to quality family planning and demand-side programs that change behaviors among individuals, households, and communities – requires that evaluation occur concurrently with programs. Because very few evaluations of family planning programs are conducted in this way, policymakers have few evidence-based recommendations to inform the allocation of scarce family planning resources. The MLE project will provide critical evidence-based findings to inform policymakers and improve the design of integrated family planning and reproductive health interventions that target the urban poor in South Asia and sub-Saharan Africa.

The Measurement, Learning & Evaluation (MLE) Project for the Urban Reproductive Health Initiative (URHI) identifies approaches that increase contraceptive prevalence rates in rapidly growing cities in India, Nigeria, Kenya, and Senegal. The MLE project serves as the technical resource for local efforts to monitor and evaluate URHI programs in these countries and documents evidence-based best practices for health services that target the urban poor. The MLE project shares promising approaches with policy makers, program managers, and researchers globally and builds local capacity to undertake rigorous measurement and evaluation of population, family planning, and integrated reproductive health activities targeting vulnerable urban populations.

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## Appendix E: About the Nigeria National Population Commission

The National Population Commission was established by Section 153 of the 1999 Constitution of the Federal Republic of Nigeria. It is composed of 38 members: a Chairman and one person representing each of the 36 states and the Federal Capital Territory. There is also a Director General who is an Ex-officio member.

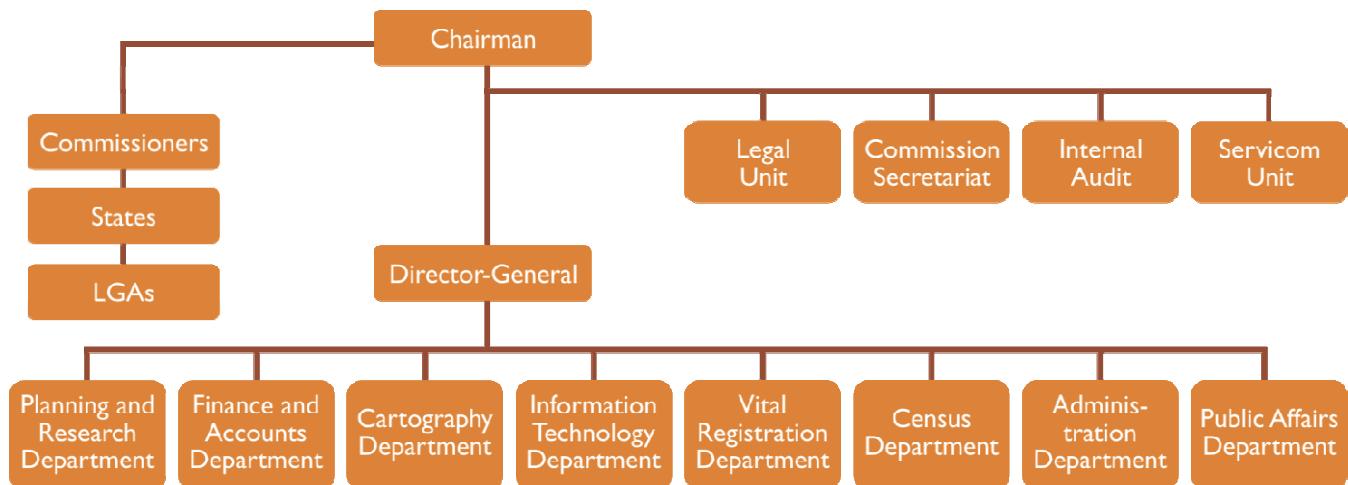
The Commission which has offices in all the 774 Local Government Areas of the Federation has the constitutional mandate to:

- Undertake periodic enumeration of population through censuses, sample surveys, etc;

- Establish and maintain machinery for continuous and universal registration of births throughout the federation;
- Publish and provide information/data on population for the purpose of facilitating economic and development planning;
- Advise the President on population and population-related matters.

By administrative fiat, the coordination of all population activities in the country was added to the functions of the Commission in 2004. The Commission consists of 8 Departments and 4 Units as shown below:

**Structure of the Commission** The Commission consists of 8 Departments and 4 Units



The 8 Departments and 4 Units of the Commission contribute in the following ways to ensure that the Commission achieves its mandate:

- **Planning & Research Dept.** - conducts research on various aspects of Nigeria's population, plans the Commission's programs and ensures that the Commission effectively coordinates all population activities in the country;
- **Cartography Dept.** - delineates and prepares national frame used in the conduct of censuses and surveys;
- **Census Dept.** - undertakes technical preparations for the conduct of censuses and the analysis and interpretation of data emanating from these;
- **Vital Registration Dept.** - generates data on vital events, i.e., births, deaths and migration;
- **Information Technology Dept.** - processes data emanating from censuses, surveys and vital registration;
- **Public Affairs Dept.** - publicises the activities of the Commission and enlightens the public on same;
- **Finance & Accounts Dept.** - disburses funds for these activities;
- **Administration and Supply Dept.** - coordinates the general administration of the Commission.
  - **Commission's Secretariat** - records and circulates proceedings, and keeps all documents of the Commission.
  - **Legal Unit** - advises and defends the Commission on legal matters;
  - **Audit Unit** - ensures due process in utilization of the Commission's funds;
  - **Servicom Unit** - ensures the delivery of services to which citizens are entitled, timely, fairly, honestly, effectively and transparently.

The Commission has conducted two successful national censuses, 1991 Population Census and 2006 Population and Housing Census. An Analytical Report of the 1991 Population Census was published. Monographs were also produced from further analyses of the 1991 Population Census data on the following issues: Gender and Sustainable Development; Children, Adolescents and Youth; The Elderly; Relevance of Population Census to

Public and Business Administration; Data Needs for Sustainable Development in the 21<sup>st</sup> Century; and National and State Population Projections. These publications have been widely circulated. Priority Tables from the 2006 Population and Housing Census data have been published on the following:

1. National and State Population and Housing Tables (Priority Tables, Vol.1)
2. Housing Characteristics and Amenities Tables- Priority Tables (LGA), Vol. II
3. Population Distribution by Age and Sex (State and LGA) Table DS5, Priority Tables, Vol. IV
4. Population Distribution by Age, Sex and Marital status (State and LGA) Table DS7 Priority Tables, Vol. V
5. Population Distribution by Age, Sex and Schooling Status (State and Local Government Area)-Table ED6- Priority Tables, Vol. VI
6. Population Distribution by Age, Sex and Educational Attainment (State and LGA) Table ED10- Priority Tables, Vol. VII
7. Population Distribution by Sex and Type of Household (State and LGA) Table HH1- Priority Tables, Vol. VIII
8. Population Distribution by Sex and Class-Size of Household (State and LGA) Table HH-ADD1, Priority Tables Vol. IX
9. Population Distribution by Age, Sex and Relationship to Head of Household (State and LGA) Table HH(ADD2)-Priority Tables Vol. X
10. Population Distribution by Age, Sex and Disability Status (State and LGA)-Table HH (ADD2), Priority Tables Vol. XI
11. Population Distribution by Age, Sex and Place of Birth and Sex (State and LGA) Table PO7A- Priority tables Vol.XIV

The Commission has also conducted numerous sample surveys prominent among which are: Nigeria Demographic and Health Surveys (NDHS) in 1999,

2003 and 2008; Nigeria Education Data Survey (EdData) in 2004; and Sentinel Surveys in 2000 and 2007. Data/information emanating from the conduct of these surveys have been published and disseminated at national, zonal and state levels. The 2010 Nigeria Education Data Survey (NEDS) is also being conducted by the Commission the results of which will be ready for dissemination by the first quarter of 2011. In addition, the Commission has been collaborating with other organizations to conduct small-scale surveys for them, for example, Schools Census Validation Survey of ESSPIN/Department for International Development in 2010.

As adviser to the President on population matters, the Commission coordinates all population and related matters in Nigeria, and is the Chair to the Population Advisory Group (PAG) which meets bi-annually to discuss population policy coordination reports and advice the President through the National Council on Population Management (NCPM). The Commission has established 2,370 functional registration centres for births and deaths, at least 3 in each LGA. A report on the registration of live births, deaths and stillbirths for the year 1994-2007 has been published. Data for 2008/2009 is being processed.