Ghana

Demographic and Health Survey

2003

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Ghana Demographic and Health Survey 2003

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Ghana Statistical Service

Noguchi Memorial Institute for Medical Research

MEASURE *DHS+*

This report highlights the findings of the 2003 Ghana Demographic and Health Survey (GDHS), a nationally representative survey of 5,691 women age 15-49 and 5,015 men age 15-59. The primary purpose of the GDHS is to generate recent and reliable information on fertility, family planning, infant and child mortality, maternal and child health, and nutrition. In addition, the survey collected information on malaria treatment and prevention, anaemia and HIV prevalence. This information is essential for making informed policy decisions, planning, monitoring, and evaluating programmes on health in general and reproductive health in particular, at both the national and regional levels. This survey is the fourth in a series of population and health surveys conducted in Ghana as part of the global Demographic and Health Surveys (DHS) programme.

The 2003 GDHS was implemented by the Ghana Statistical Service (GSS) in collaboration with the Noguchi Memorial Institute for Medical Research (NMIMR) and the Ghana Health Service. Technical assistance was provided by ORC Macro through the MEASURE DHS programme. Financial support for the survey was provided by the U.S. Agency for International Development (USAID) and the Government of Ghana.

Additional information about the GDHS may be obtained from the Ghana Statistical Service, P.O. Box 1098, Accra, Ghana (Telephone: (233-21) 671-732 and Fax: (233-21) 671-731). Information about the DHS project may be obtained from ORC Macro, 11785 Beltsville Drive, Calverton, MD (Telephone: 301-572-0200; Fax: 301-572-0999; E-mail: reports@orcmacro.com; Internet: http://www.measuredhs.com).

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FOREWORD

The 2003 Ghana Demographic and Health Survey (GDHS) is a nationwide sample survey carried out to provide information on population, family planning, maternal and child health, nutrition, childhood mortality, and AIDS and sexually transmitted infections (STIs). This is the fourth survey of its kind to be undertaken in Ghana, others being in 1988, 1993, and 1998. This latest GDHS included, for the first time, testing of blood samples to provide national rates of anaemia and HIV. All four demographic and health surveys have been implemented by the Ghana Statistical Service, in close collaboration with other stakeholders.

The Statistical Service of Ghana acknowledges the invaluable assistance given by a number of organisations and individuals both local and international towards the successful implementation of the 2003 GDHS.

The Service is grateful to the Ministry of Health and the Ghana Health Service for releasing nurses for the survey fieldwork and personnel for training the interviewers. Our appreciation also goes to the Ghana AIDS Commission for their support at the time of training and in helping to set up VCT centres as a follow-on to the HIV testing in the survey.

We sincerely thank the Ghana Registered Midwives Association (GRMA) and the National Population Council (NPC) for providing vehicles for the data collection.

We are very grateful to all members of the National Steering Committee, the Ethics Committee and the project personnel for their immense support and contribution during the different phases of the survey.

We appreciate the work done by the Noguchi Memorial Institute for Medical Research on HIV testing, and especially commend the laboratory team assigned to work on the blood samples for their tireless efforts in getting the testing done successfully.

The Service is particularly thankful to the United States Agency for International Development (USAID) for funding the survey through its mission in Ghana, and to ORC Macro for providing technical assistance.

We thank the authors of this report. They are mentioned specifically by name at the beginning of this report.

We owe an immense gratitude to the field coordinators, interviewers, nurses, laboratory personnel, supervisors, field editors, regional statisticians, and drivers for their hard work and dedication. We have printed the names of all survey personnel in Appendix D as a sign of our appreciation for their valuable assistance.

Most of all, we truly appreciate the co-operation of all survey respondents in making the 2003 GDHS a success.

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SUMMARY OF FINDINGS

The 2003 Ghana Demographic and Health Survey (2003 GDHS) is a nationally representative survey of 5,691 women age 15-49 and 5,015 men age 15-59 from 6,251 households covering 412 sample points (clusters) throughout Ghana. This survey is the fourth in a series of national-level population and health survey conducted as part of the global Demographic and Health Surveys (DHS) program and is designed to provide data to monitor the population and health situation in Ghana as a follow-up of the 1988, 1993 and 1998 GDHS surveys. The survey utilised a two-stage sample based on the 2000 Population and Housing Census and was designed to produce separate estimates for key indicators for each of the ten regions in Ghana. Data collection took place over a three-month period, from late July to late October 2003.

The survey obtained detailed information on fertility levels, marriage, sexual activity, fertility preferences, awareness and use of family planning methods, breastfeeding practices, nutritional status of women and young children, childhood mortality, maternal and child health, awareness and behaviour regarding HIV/AIDS, and other sexually transmitted infections (STIs). In addition, the 2003 GDHS collected information on malaria and use of mosquito nets, and carried out anaemia testing in children and women and HIV testing in adults.

The 2003 GDHS was implemented by the Ghana Statistical Service (GSS) in collaboration with the Noguchi Memorial Institute for Medical Research (NMIMR) and the Ghana Health Service. Technical assistance was provided by ORC Macro through the MEASURE DHS programme. Financial support for the survey was provided by the U.S. Agency for International Development (USAID) and the Government of Ghana.

FERTILITY

Fertility Levels and Trends. Comparison of the data from the 2003 GDHS with the three earlier DHS surveys indicates that the dramatic decline in fertility experienced in the eighties and nineties appears to have slowed down. The TFR, estimated for the three years preceding each survey, declined dramatically from 6.4 children per woman in 1988 to 5.2 children per woman in 1993, and to 4.4 children in 1998, a nearly 2-child drop in fertility over the decade. However, the demographic transition experienced in Ghana seems to have stalled in the last three years even though contraceptive use has continued to rise. Nevertheless, with a current TFR of 4.4, Ghana's fertility rate is one of the lowest in sub-Saharan Africa.

Fertility Differentials. Differentials by background characteristics are marked. Rural women have nearly twice as many children (5.6 children per woman) as urban women (3.1 children per woman). The total fertility rate is highest in the Northern Region (7.0 children per woman) and lowest in Greater Accra (2.9 children per woman). As expected, women's education is strongly associated with lower fertility, decreasing from 6.0 children per woman among those with no education to 2.5 children per woman among those with at least secondary education. Similar differentials are observed by wealth quintile, with TFR decreasing from 6.4 children per woman among women in the lowest wealth quintile to 2.8 children per woman among those in the highest wealth quintile.

Unplanned Fertility. Despite a steady rise in the level of contraceptive use over the last fifteen years, the 2003 GDHS data indicate that unplanned pregnancies are common in Ghana. Overall, 16 percent of births in Ghana are unwanted, while 24 percent are mistimed (wanted later). The proportion of unplanned births declined slightly from 42 percent in 1993 to 36 percent in 1998 but rose again to 40 percent in 2003. What is more troubling, however, is the fact that the proportion of births that are unwanted has increased rather dramatically from the 1993 level of 9 percent to 16 percent in 2003.

Fertility Preferences. There is considerable desire among currently married Ghanaians to control the timing and number of births. Thirty-eight percent of currently married women would like to wait for two years or more for the next birth, and 36 percent do not want to have another child. About a fifth (18 percent) would like to have a child soon (within two years). A comparison of the data over the four DHS surveys show that the desire to space births among currently married women has declined in the last 15 years, from 45 percent in 1988 to 38 percent in 2003. On the other hand, the desire to limit has increased from 23 percent in 1988 to 34 percent in 2003. However, this change has been minimal in the last ten years.

There has been a decline in ideal family size among currently married women over time, from a mean of 5.5 children in 1988 to 4.8 children in 2003. There has been little change in the ideal number of children over the last 10 years.

FAMILY PLANNING

Knowledge of Contraception. Knowledge of family planning is nearly universal, with 98 percent of all women age 15 to 49 and 99 percent of all men age 15 to 59 knowing at least one modern method of family planning. Among all women, the most widely known methods of family planning are the male condom (95 percent), injectables (89 percent), the pill (88 percent) and female condom (83 percent). Seventy percent of all women have heard of female sterilisation, while 61-65 percent have heard of the IUD, implants, and periodic abstinence.

There has been an increase in levels of awareness of contraceptive methods over time. Among all women, the proportions who know any method has risen since 1988 for all methods (from 76 percent in 1988, 91 percent in 1993, 93 percent in 1998 and 98 percent in 2003). The proportions who know of implants has risen steeply since 1993 (from 4 percent in 1993, 21 percent in 1998 and 62 percent in 2003). A similar trend is seen among men with remarkable increases in knowledge of IUD, male sterilisation and LAM.

Use of Contraception. The contraceptive prevalence rate among married women is 25 percent. The most commonly used modern method among married women is the pill (6 percent), followed closely by injectables (5 percent). Male condoms and female sterilisation are used by 3 percent and 2 percent of married women, respectively, while implants and IUD are used by 1 percent each. The most commonly used traditional method is periodic abstinence, used by 5 percent of married women.

Trends in Contraceptive Use. Current use of contraception by married women has increased from 13 percent in 1988, 20 percent in 1993, 22 percent in 1998 and 25 percent in 2003. There has been a steady increase in the use of modern methods from 5 percent in 1988 to 19 percent in 2003. However, while there was an increase in the use of traditional methods from 8 percent in 1988 to 10 percent in 1993, use of these methods have since decreased to 9 percent in 1998 and to 7 percent in 2003. Use of male condoms, pills, injectables and implants has increased.

Differentials in Contraceptive Use. Women in urban areas are more likely to use contraceptive methods (31 percent) than their rural counterparts (21 percent). Male condoms, IUD, and female sterilisation use in urban areas is two to three times higher than in rural Ghana. The more urbanised regions such as Greater Accra and Brong-Ahafo have contraceptive prevalence rates above 30 percent. Two of the three northern regions (Upper East and Northern) report low levels of contraceptive use (12 percent each). Women with at least some secondary education are more than twice as likely to use contraception as women with no education. The proportion currently using contraception generally increases with increasing number of children. Fourteen percent of women without children are currently using contraceptive methods, compared with 26 percent of women with five or more children. Wealth and current use of contraception is positively related, increasing from 14 percent among currently married women in the lowest quintile to 35 percent in the highest quintile.

Source of Modern Methods. In Ghana, both the public and private sectors are important sources of supply for users of modern methods (41 percent and 54 percent, respectively). The most common public sector source are government hospitals and polyclinics, which provide most of the services (26 percent), while government health centres and family planning clinics provide 11 percent and 4 percent of users, respectively.

In the last five years, there has been a shift in the source of modern contraceptive methods from the public to the private sector. The proportion of current users relying on private medical sources has increased from 45 percent in 1998 to 54 percent in 2003, while the reliance on public sources for all modern methods decreased from 47 percent in 1998 to 41 percent in 2003.

Unmet Need for Family Planning. Thirty-four percent of married women have an unmet need for family planning. Unmet need for spacing is higher than unmet need for limiting children (22 percent and 12 percent, respectively), unchanged since 1998. Only 43 percent of the demand for family planning is currently being met, implying that the needs of more than one in two Ghanaian women are currently not being met.

MATERNAL HEALTH

Antenatal Care. A relatively high percentage of women received antenatal care from a trained health professional (21 percent from a doctor and 71 percent from a nurse/midwife). One percent of mothers received antenatal care from a traditional birth attendant (TBA) and 6 percent received no antenatal care. A comparison of the 2003 GDHS data with data from the three earlier DHS surveys show that there has been an improvement in the utilization of antenatal services in the last fifteen years from 82 percent of mothers receiving care for their most recent birth in the five-year period preceding the survey in 1988, to 92 percent in 2003.

Half of women received at least two doses of tetanus toxoid for their most recent birth in the five years preceding the survey, a third of women received only one tetanus toxoid injection and 14 percent received none. The data show that there has been an improvement in tetanus toxoid coverage, for the most recent birth in the five years preceding the survey, over the last fifteen years, from 70 percent in 1988 to 83 percent in 2003.

With regard to anti-malarial indicators, the data show that 10 percent of pregnant women slept under a net, 4 percent slept under an ever-treated net, and 3 percent slept under an insecticide treated net (ITN), the night before the interview with no difference in the use of nets between pregnant and non-pregnant women. The data show that 58 percent of mothers reported that they received anti-malarial drugs for the prevention of malaria during pregnancy. It also shows that chloroquine is more frequently (12 percent) taken than SP/Fansidar (1 percent), presumably because the old programme was still in force during the fielding of the survey. The 1 percent of women who used SP/Fansidar received the drug during an antenatal visit.

Delivery Care. Nationally, 46 percent of births in the last five years are delivered in health facilities, with 36 percent in public health facilities and 9 percent in private health facilities. About half of births (53 percent) occur at home. The data also show that medically trained providers assisted with 47 percent of deliveries, TBAs assisted with 31 percent of deliveries and relatives or friends attended 19 percent of deliveries. Medically assisted deliveries continue to be low in Ghana, with less than fifty percent benefiting from professional delivery assistance over the last fifteen years.

Postnatal Care. One in four women who had a non-institutional live birth in the five years preceding the survey received postnatal care within two days of delivery, one in ten women received postnatal care 3-6 days after delivery and one in eight received postnatal care 7-41 days after delivery. More than half of women who had a non-institutional birth in the five years preceding the survey did not receive postnatal care at all.

CHILD HEALTH

Childhood Mortality. Data from the 2003 GDHS show that there has been a slowing down in the mortality decline over the last five years. Data for the most recent five-year period suggests that one in every nine Ghanaian children dies before reaching age five. Nearly three in five of these deaths occur in the first year of life—infant mortality is 64 deaths per 1,000 live births and child mortality is 50 deaths per 1,000 children age one. Neonatal mortality is 43 deaths per 1,000 live births in the most recent five-year period, while postneonatal mortality is 21 deaths per 1,000 live births. Neonatal deaths account for two-thirds of the deaths in infancy.

Childhood Vaccination Coverage. Sixty-nine percent of Ghanaian children age 12-23 months are fully immunised, while 5 percent received no vaccinations at all. Nine in ten children have received the BCG and first dose of DPT and polio vaccines. While the coverage for the first dose of DPT and polio is high, coverage declines for subsequent doses of DPT and polio, with only about 80 percent of children receiving the recommended three doses of these vaccines. Eighty-three percent of children received the measles vaccine and 77 percent have been vaccinated against yellow fever. The percentage of children age 12-23 months who have been fully vaccinated has increased over the last twenty years, from 47 percent in 1988 to 69 percent in 2003.

Child Illness and Treatment. Among children under five years of age, 10 percent were reported to have had symptoms of acute respiratory illness in the two weeks preceding the survey. Of these, 44 percent were taken to a health facility or provider for treatment. Fifteen percent of children under five years had diarrhoea in the two weeks preceding the survey. Twenty-six percent of children with diarrhoea were taken to a health provider. Just over a third of children with diarrhoea (39 percent) were given a solution made from oral rehydration salts (ORS), 11 percent received recommended home fluids (RHF) and 40 percent were given increased fluids. Overall, 63 percent received ORS, RHF, or increased fluids.

Twenty-one percent of children under five years had a fever in the two weeks preceding the survey. Of these, 63 percent took an anti-malarial drug. Forty-four percent of children took the anti-malarial drug on the same day or the next after the onset of the illness. Chloroquine is by far the most common anti-malarial drug taken for fever (59 percent), followed by Amodiaquine and Quinine (2 percent each) and SP/Fansidar (less than 1 percent).

NUTRITION

Breastfeeding Practices. The data indicate that almost all (97 percent) Ghanaian children are breastfed for some period of time. Forty-six percent of infants were put to the breast within one hour of birth, and 75 percent started breastfeeding within the first day. The data from 2003 can be compared with similar data collected five years ago. The data show that over the last five years, there was little difference in the percent of children ever breastfed.

The 2003 GDHS data indicate that supplementary feeding of children begins early. For example, among newborns less than two months of age, 38 percent are receiving supplementary foods or liquids other than water. The median duration of breastfeeding in Ghana is 23 months.

Twelve percent of children under six months are given a feeding bottle with a nipple. Bottle-feeding reaches its peak (15 percent) at age 4-5 months. The percentage of young children bottle-fed has declined markedly over the last five years.

Iodisation of household salt. Ninety percent of the households interviewed in the 2003 GDHS had their salt tested for iodine, while 9 percent had no salt available in the household. Fifty-nine percent of households are consuming salt that is not iodised, 13 percent of households are consuming inadequately iodised salt (<15 ppm) and only 28 percent are consuming adequately iodised salt (15+ ppm).

Intake of Vitamin A. Ensuring that children between six months and 59 months receive enough vitamin A may be the single most effec-

tive child survival intervention, since deficiencies in this micronutrient can cause blindness and can increase the severity of infections, such as measles and diarrhoea. Seventy-eight percent of children 6-59 months are reported to have received a vitamin A supplement in the 6 months preceding the survey. Forty-one percent of children under three who live with their mothers consume fruits and vegetables rich in vitamin A.

Forty-three percent of mothers with a birth in the last five years reported receiving a vitamin A dose postpartum. Eight percent of interviewed women reported night blindness during pregnancy. When adjusted for blindness not attributed to vitamin A deficiency during pregnancy, the data show only two percent of women reported night blindness during their last pregnancy.

Prevalence of anaemia. Iron-deficiency anaemia is a major threat to maternal health and child health. Overall, more than three-quarters of Ghanaian children 6-59 months old have some level of anaemia, including 23 percent of children who are mildly anaemic, 47 percent who are moderately anaemic and 6 percent who are severely anaemic.

The prevalence of anaemia is less pronounced among women than among children. Forty-five percent of Ghanaian women age 15-49 are anaemic, with 35 percent mildly anaemic, 9 percent moderately anaemic, and less than 1 percent severely anaemic.

Nutritional Status of Children. According to the 2003 GDHS, 30 percent of children under five are stunted and 11 percent severely stunted. Seven percent of children under five are wasted and 1 percent severely wasted. Weight-for-age results show that 22 percent of children under five are underweight, with 5 percent severely underweight. Children whose biological mothers were not in the household are more likely to be malnourished (34 percent stunted, and 25 percent underweight) than children whose mothers were interviewed.

The proportion of children under five who are stunted has increased from 26 percent in 1998 to 30 percent in 2003. The proportion underweight decreased from 10 percent in 1998 to 7 percent in 2003. The proportion of children who are wasted also decreased from 25 percent in 1998 to 22 percent in 2003.

Nutritional Status of Women. The mean height of Ghanaian women is 159 centimetres, which is above the critical height of 145 centimetres. Only 1 percent are below 145 centimetres. Nine percent of women were found to be chronically malnourished (BMI less than 18.5), while 25 percent are overweight or obese. There has been little change in the percentage of mothers whose height is below 145 centimetres and in the mean BMI over the last ten years from 1993 to 2003.

HIV/AIDS

Awareness of AIDS. Almost all (98 percent) women and men (99 percent) have heard of AIDS indicating that awareness of AIDS in Ghana is universal. Thirty-seven percent of women and 38 percent of men age 15-49, know someone personally who has the virus that causes AIDS or who has died of AIDS. Seventy-three percent of women and 82 percent of men know that condom use is a major prevention method. Eighty-six percent and 90 percent of women and men, respectively, know that limiting sex to only one uninfected partner is vital to the prevention of HIV. Sixty-nine percent of women and 78 percent of men know that these two preventive measures in combination can reduce the risk of HIV infection. In addition, 79 percent of women and 83 percent of men know that abstinence can prevent HIV infection.

About four in five women and men correctly know that a healthy looking person can have the AIDS virus. Fifty-five percent of women and sixty percent of men know that AIDS cannot be transmitted through mosquito bites. Less than half of women and three-fifths of men know that AIDS cannot be transmitted by supernatural means. More than 70 percent of women and men know that a person cannot be-

come infected with HIV/AIDS by sharing food with someone who has AIDS.

General knowledge on HIV transmission during pregnancy, delivery and breastfeeding is relatively high and ranges between 69 and 75 percent among women and 74 to 82 percent among men. However, few women and men (16 percent each) know that the risk of MTCT can be reduced if a mother takes special drugs during her pregnancy.

Attitudes Towards People Living with HIV/AIDS. It is encouraging to see that more than two-thirds of women and men age 15-49 are willing to care for a family member with HIV in their own household, and that three-fifths of women and two-thirds of men do not believe that the HIV positive status of a family member should be kept a secret. Two-fifths of women and half of men also believe that an HIV positive female teacher should be allowed to continue teaching. However, only one in four women and one in three men say that they would buy fresh vegetables from a vendor with AIDS.

HIV-Related Behavioural Indicators. One of the strategies for reducing the risk of contracting an STI is for young persons to delay the age at which they become sexually active. Seven percent of women and 4 percent of men had sex by exact age 15. Forty-six percent of women and 27 percent of men first had sex by exact age 18.

Sexual intercourse with a non-marital or non-cohabiting partner is associated with an increased risk of contracting sexually transmitted diseases. One in five women and two in five men age 15-49 reported engaging in higher-risk sexual behaviour. Even more disturbing is the fact that half of women age 15-24 and more than four-fifths of men in the same age cohort engage in risky sexual behaviour.

Sexual intercourse with more than one partner is also associated with a high risk of exposure to sexually transmitted diseases. One percent of women and 10 percent of men age 15-49 report having had sexual intercourse with more than one partner in the twelve months prior to the survey.

Promoting the use of condoms is an important strategy in the fight against HIV/AIDS transmission. Overall, only 28 percent of women and 45 percent of men age 15-49 used a condom during their last episode of higher-risk sex.

HIV Prevalence. HIV tests were conducted for 89 percent of the 5,949 eligible women and 80 percent of the 5,345 eligible men. Results from the 2003 GDHS indicate that 2 percent of Ghanaian adults are HIV positive. HIV prevalence in women age 15-49 is nearly 3 percent, while for men 15-59, it is under 2 percent. This female-to-male ratio of 1.8 to 1 is higher than that found in most population-based studies in Africa and implies that young women are particularly vulnerable to HIV infection compared with young men. Prevalence among females is consistently higher than among males at all age groups except at ages 40-44, where male prevalence is higher. The female-male gap is particularly large among women and men age 25-29, where women are nearly three and a half times as likely to be HIV positive as men. The peak prevalence among women is at age 35-39 (5 percent), while prevalence rises gradually with age among men to peak at age 40-44 (4 percent).

Patterns of HIV Prevalence. Urban residents have only a slightly higher risk of being HIV positive than rural residents with the urban-rural difference among women slightly higher than among men. Overall prevalence is highest in the Eastern Region (4 percent), followed by the Western and Brong Ahafo regions (3 percent each). Prevalence is lowest in the Northern, Central and Volta regions (1 percent each). Gender differences are apparent in all the regions. Those who have completed primary and middle/JSS education are more likely to be HIV positive than those with either no education or at least secondary education. Work status is related to HIV prevalence among both women and men, with prevalence twice as high among those currently working than those not currently working. Prevalence is highest among both women and men in the middle wealth quintile.

Prevalence is significantly higher among widowed women (7 percent), followed closely by divorced or separated women (6 percent). Among men, prevalence is markedly higher among divorced or separated men (6 percent).

Results from the 2003 GDHS indicate that, for the vast majority (96 percent) of cohabiting couples, both partners are HIV negative, while only in 1 percent of couples, are both partners HIV positive. There is discordance in the HIV positive status in under 2 percent of couples, where one partner is infected and the other is not.

GHANA

N
Burkina Faso
Upper East
Upper West
Northern
Togo
Côte d'Ivoire
Brong Ahafo
Ghana
Lake Volta
Volta
Ashanti
Eastern
Western
Central
Accra
Gulf of Guinea
1:3,430,433

INTRODUCTION 1

1.1 GEOGRAPHY, HISTORY, AND ECONOMY

1.1.1 Geography

The Republic of Ghana is centrally located in West Africa and has a total land area of 238,537 square kilometres. It is bordered by French-speaking countries, on the east by the Republic of Togo, on the north and northwest by Burkina Faso, and on the west by Côte d'Ivoire. The Gulf of Guinea lies to the south and stretches across the 560 kilometres of the country's coastline.

Ghana is a lowland country, except for a range of hills that lie on the eastern border and Mt. Afadjato, the highest point of about 884 metres above sea level, which is to the west of the Volta River. Ghana can be divided into three distinguishable ecological zones: the sandy coastline backed by a coastal plain that is crossed by several rivers and streams; the middle belt and western parts of the country, heavily forested with many streams and rivers; and an undulating savannah to the north that is drained mainly by the Black and White Volta Rivers. The Volta Lake, created as a result of a hydroelectric dam in the east, is one of the largest artificial lakes in the world.

The climate of Ghana is tropical, but temperatures and rainfall vary by distance from the coast and elevation. The average annual temperature is about 26ºC (79º F). There are two distinct rainy seasons, April to June and September to November. In the north, however, the rainy season begins in March and lasts until September. Annual rainfall ranges from about 1,015 millimetres (40 inches) in the north to about 2,030 millimetres (80 inches) in the southwest. The *harmattan*, a dry desert wind, blows from the northeast between December and March, lowering the humidity and creating very warm days and cool nights in the north. In the south, the effects of the harmattan are felt mainly in January.

1.1.2 History

Ghana gained its independence from British rule on 6 March 1957, and on 1 July 1960 became a sovereign state in the British Commonwealth of Nations. The administrative and political capital of the country is Accra, with a population of 1.7 million (GSS, 2002). Ghana is a constitutional democracy and currently operates a multi-party democratic presidential system of government following the promulgation of the 1992 fourth Republic Constitution of Ghana. The country has an Executive Presidency elected for four years with a maximum of two terms. There is a parliament elected every four years, an independent judiciary, and a vibrant media.

The population is made up of several ethnic groups. The Akans constitute the largest ethnic group (49 percent) followed by the Mole-Dagbon (17 percent), Ewe (13 percent), and Ga/Dangme (8 percent). Various smaller ethnic groups can also be found in many parts of the country (GSS, 2002).

Ghana is divided into 10 administrative regions, Western, Central, Greater Accra, Volta, Eastern, Ashanti, Brong Ahafo, Northern, Upper East, and Upper West. The regions are further divided into 138 districts to ensure efficient and effective administration at the local levels.

1.1.3 Economy

The structure of the economy has not changed much over the past two decades. Agriculture, mining, logging, and retail trade are still the most important areas of economic activity. Agriculture is the main sector and employs about 50 percent of the population (GSS, 2002). High proportions of the working population in Ghana are concentrated in the informal sector, made up largely of self-employed persons.

The leading exports of the country are cocoa, gold, and timber. In recent times, the economy has diversified and includes exports of non-traditional commodities such as pineapples, bananas, yams, and cashew nuts. Tourism is fast gaining prominence as a foreign exchange earner.

The overriding objective of the Government of Ghana's (GoG) economic development programme is poverty reduction and general improvement in the welfare of all Ghanaians. In 1995, the GoG developed the Vision 2020 strategy for poverty reduction, which emphasises economic growth, integrated rural development, expansion of employment opportunities, and improved access, especially by the rural and urban poor, to basic public services such as education, health care, water and sanitation, and family planning services (World Bank, 2003). Under this strategy, it is envisaged that national income will grow by at least 8 percent from the current 4-5 percent.

1.2 DEMOGRAPHIC PROFILE

Ghana has undertaken four censuses since independence in 1957. The first was conducted in 1960, recording a population of 6.7 million. The 1970 Census reported Ghana's population as 8.6 million with an intercensal growth rate of 2.4 percent. The 1984 and 2000 censuses put the population at 12.3 million and 18.9 million, respectively, with an average growth rate of 2.7 percent between the two census periods (Table 1.1). The population density per square kilometre has more than doubled from 36 persons in 1970 to 79 persons in 2000. The proportion urban increased significantly from 29 percent in 1970 to 44 percent in 2000.

Table 1.1 Basic demographic indicators

Selected demographic indicators for Ghana, 1970, 1984, 2000

Indicator	1970	1984	2000
Population (millions)	8.6	12.3	18.9
Intercensal growth rate (percent)	2.4	2.6	2.7
Density (pop./km^2)	36.0	52.0	79.3
Percent urban	28.9	32.0	43.8
Sex ratio	98.5	97.3	97.9
Proportion age 0-14 years	46.9	45.0	41.3
Proportion age 65+	3.6	4.0	5.3
Life expectancy (years)			
Male	u	50.3	55.4
Female	u	53.8	59.6

u=Unknown (Not available)
Source: GSO, 1979; GSS, 1985; GSS, 2002

The sex ratio over the last 30 years has fallen slightly from 98.5 males per 100 females in 1970 to 97.9 in 2000. The proportion of the population under 15 years however, has decreased from 47 percent in 1970 to 41 percent in 2000, while the proportion 65 years and older increased from less than 4 percent to a little more than 5 percent over the same period. The changes observed in the age structure may be attributed to

declining fertility and improvements in the health conditions of the people. Life expectancy at birth has increased from 50 years among males in 1984 to 55 years in 2000 and among females from 54 years to 60 years over the same period.

1.3 POPULATION POLICY AND REPRODUCTIVE HEALTH PROGRAMMES

Ghana's population policy was formulated and adopted in 1969 in recognition of the high population growth and fertility rates observed at the time. After 25 years of implementation, however, the 1969 population policy made only a modest impact. It was therefore revised in 1994 to take into account emerging issues such as HIV/AIDS, population and the environment, concerns about the elderly and children, and also to develop new strategies that would ensure the achievement of the revised policy objectives. This meant ensuring the systematic integration of population issues in all areas of development planning.

Major targets aimed at achieving these objectives include the following: the reduction of the total fertility rate from 5.5 in 1993 to 5.0 by the year 2000; the achievement of a contraceptive prevalence rate of 15 percent for modern methods by the year 2000, and 50 percent by the year 2020; and the reduction in the annual population growth rate from about 3 percent per annum to 2 percent by the year 2020 (World Bank, 2003). The attainment of these policy goals is recognised as integral components of the national strategy to accelerate the pace of economic development, eradicate poverty, and enhance the quality of life of all citizens as outlined in the Vision 2020 Plan of Action. It is expected that these goals would propel Ghana into middle-income country status by the year 2020.

The National Population Council and its Secretariat were established in 1992 as the highest statutory body to advise the government on population related issues as well as to facilitate, monitor, coordinate, and evaluate the implementation of population programmes of other organisations both public and private within the country.

Ghana, in collaboration with the United Nations Fund for Population Activities (UNFPA), the United States Agency for International Development (USAID), the World Bank, and other development partners, has implemented several projects aimed at reducing reproductive health problems among the population. The support from these agencies is geared towards strategies on policy coordination and implementation as well as service delivery.

The government is committed to improving access and equity of access to essential health care, and ensuring that the health sector plays a key role in the Ghana Poverty Reduction Strategy (GPRS). The priority health intervention areas identified include addressing the problems of HIV/AIDS and other sexually transmitted infections (STIs), malaria, tuberculosis, guinea worm disease, poliomyelitis, reproductive health, maternal and child health, accidents and emergencies, non-communicable diseases, oral health and eye care, and specialised services.

The spread of HIV/AIDS is currently receiving considerable attention from the government and its development partners, with the immediate challenges including ensuring implementation of the Ghana HIV/AIDS Strategic Framework: 2001-2005 (World Bank, 2003). The objectives of the framework include reducing new HIV infections among the 15-49 age group and other vulnerable groups, and especially among the youth by the year 2005, improving service delivery and mitigating the impact of HIV/AIDS on individuals, the family, and the community by the year 2005, reducing individual and societal vulnerability and susceptibility to HIV/AIDS through the creation of an enabling environment for the implementation of the national response, and establishing a well managed multi-sectoral and multi-disciplinary institutional framework for the coordination and implementation of HIV/AIDS programmes in the country.

The government recognises that a critical constraint to poverty reduction is the limited choice of contraceptives especially to poor families. A two-pronged strategy will be employed to address this issue. The first is to decentralise service delivery and expand the sale of contraceptives through community agents, including maternity homes and field workers. The second, a national campaign on fertility regulation, will be instituted and will include a comprehensive, systematic, and culturally sensitive information, education, and communication programme to promote the use of family planning (World Bank, 2003).

In addition, the GPRS emphasises cost-effective interventions on immunisations and supervised delivery; a high impact and rapid delivery programme to reduce under-five and maternal mortality and malnutrition, especially in the three northern and central regions of the country; prevention and effective treatment of malaria and the availability and use of insecticide-treated bed nets; and the eradication of guinea worm (World Bank, 2003).

1.4 OBJECTIVES AND ORGANISATION OF THE SURVEY

The principal objective of the 2003 Ghana Demographic and Health Survey (GDHS) is to provide data to monitor the population and health situation in the country. This is the fourth round in a series of national-level population and health surveys conducted in Ghana under the worldwide Demographic and Health Surveys Program. The primary objective is to provide current and reliable data on fertility and family planning behaviour, infant and child mortality, breastfeeding, antenatal care, children's immunisations and childhood diseases, nutritional status of mothers and children, use of maternal and child health services, and awareness and behaviour regarding AIDS and other STIs. New features of the 2003 GDHS include the collection of information on female and male circumcision, information on malaria and ownership and use of insecticide-treated bed nets, and haemoglobin and HIV testing.

The long-term objective of the survey includes strengthening the technical capacity of major government institutions, including the Ghana Statistical Service (GSS). The 2003 GDHS also provides comparable data for long-term trend analyses in Ghana, since the surveys were implemented by the same organisation, using similar data collection procedures. It also contributes to the ever-growing international database on demographic and health-related information.

The 2003 GDHS was conducted by the Ghana Statistical Service in collaboration with the Noguchi Memorial Institute for Medical Research (NMIMR) and the Ghana Health Service. ORC Macro provided technical support for the survey through the MEASURE *DHS+* programme. Funding for the survey came from the U.S. Agency for International Development (USAID), through its office in Ghana, and the Government of Ghana.

1.5 SAMPLE DESIGN

The sample for the 2003 GDHS covered the population residing in private households in the country. A representative probability sample of about 6,600 households was selected nationwide. The list of enumeration areas (EAs) from the 2000 Ghana Population and Housing Census was used as a frame for the sample. The frame was first stratified into the 10 administrative regions in the country, then into rural and urban EAs. The sample was selected in such a manner as to allow for separate estimates for key indicators for the country as a whole, for each of the 10 regions in Ghana, as well as for urban and rural areas separately.

The 2003 GDHS used a two-stage stratified sample design. At the first stage of sampling, 412 sample points or EAs were selected, each with probability proportional to size, based on the number of households. A complete household listing exercise was carried out between May and June 2003 within all the selected EAs (clusters). The second stage of selection involved systematic sampling of households from this list. The sample selected per EA varied by region depending on the population size. Fifteen households per EA were

selected in all the regions except in Brong Ahafo, Upper East, and Upper West regions, where 20 households per EA were selected, and in the Northern region, where 16 households per EA were selected. The objective of this exercise was to ensure adequate numbers of complete interviews to provide estimates for important population characteristics with acceptable statistical precision. Due to the disproportional number of EAs and different sample sizes selected per EA among regions, the household sample for the 2003 GDHS is not self-weighted at the national level. The sample design is discussed in detail in Appendix A, and the methodology used in estimating sampling errors together with a list of sampling errors for key variables are provided in Appendix B.

1.6 QUESTIONNAIRES

All women age 15-49 and all men age 15-59 who were either usual residents of the households in the GDHS sample or visitors present in the household the night before the survey were eligible to be interviewed in the survey.

Three questionnaires were used for the 2003 GDHS: the Household Questionnaire, the Women's Questionnaire, and the Men's Questionnaire. The contents of these questionnaires were based on the model questionnaires developed by the MEASURE *DHS+* programme and were designed to provide information needed by health and family planning programme managers and policymakers. The questionnaires were adapted to the Ghanaian situation and a number of questions pertaining to ongoing health, HIV, and family planning programmes were added. These questionnaires were translated from English into the five major languages (Akan, Nzema, Ewe, Ga, and Dagbani). The questionnaires are attached in Appendix E.

The Household Questionnaire was used to list all the usual members and visitors in the selected households. Information was collected on the characteristics of each person listed, including the age, sex, education, and relationship to the head of household. The main purpose of the Household Questionnaire was to identify eligible women and men for the individual interview. The Household Questionnaire collected information on characteristics of the household's dwelling unit, such as the source of drinking water, type of toilet facilities, flooring materials, ownership of various consumer goods, and ownership and use of mosquito nets. It was also used to record height and weight measurements of women 15-49 and children under the age of 5, and to record the respondents' consent to the haemoglobin and HIV testing.

The Women's Questionnaire was used to collect information from all women age 15-49. These women were asked questions on the following topics: respondent's background characteristics, such as education, residential history, media exposure, knowledge and use of family planning methods, fertility preferences, antenatal and delivery care, breastfeeding and infant and child feeding practices, vaccinations and childhood illnesses, childhood mortality, marriage and sexual activity, woman's work and husband's background characteristics, and awareness and behaviour regarding AIDS and other STIs.

The Men's Questionnaire was administered to all men age 15-59 in every household in the GDHS sample. The Men's Questionnaire collected much of the same information found in the Women's Questionnaire, but was shorter because it did not contain a reproductive history or questions on maternal and child health and nutrition.

1.7 HAEMOGLOBIN AND HIV TESTING

In all households selected for the 2003 GDHS, women age 15-49 and children under age 5 were tested for anaemia. In addition, all eligible women and men were tested for HIV. Anaemia and HIV testing were only carried out if consent was provided by the respondents and in the case of a minor, by the parent or guardian. The protocol for haemoglobin and HIV testing was approved by the Ghana Health Service Ethical Review Committee in Accra and the ORC Macro Institutional Review Board in Calverton, Maryland, USA.

1.7.1 Haemoglobin Testing

Haemoglobin testing is the primary method of anaemia diagnosis. In the GDHS, testing was done using the HemoCue system. A consent statement was read to the eligible woman and to the parent or responsible adult for young children and women age 15-17. This statement explained the purpose of the test, informed prospective subjects tested and/or their caretakers that the results would be made available as soon as the test was completed, and also requested permission for the test to be carried out, as well as the consent to report their names to health personnel in the local health facility if their haemoglobin level was low (severe).

Before the blood was taken, the finger was wiped with an alcohol prep swab and allowed to air-dry. Then the palm side of the end of a finger (in case of adults and children six months of age and older) was punctured with a sterile, non-reusable, self-retractable lancet and a drop of blood collected on a HemoCue microcuvette and placed in a HemoCue photometer, which displays the result. For children under six months of age (or for children under one year of age who were particularly undernourished and bony) a heel puncture was made to draw a drop of blood. The results were recorded in the Household Questionnaire, as well as on a brochure, which was given to each woman, parent, or responsible adult, that explained what the results meant. For each person whose haemoglobin level was low (severe), and who agreed to have the condition reported, a referral was given to the respondent to be taken to a health facility.

1.7.2 HIV/AIDS Testing

All eligible women and men who were interviewed were asked to voluntarily provide a few drops of blood for HIV testing. The protocol for the blood specimen collection and analysis was based on the anonymous linked protocol developed for DHS. The protocol allows for the merging of the HIV results to the socio-demographic data collected in the individual questionnaires, provided that information that could potentially identify an individual is destroyed before the linking takes place. This required that identification codes be deleted from the data file and that the back page of the Household Questionnaires that contain the bar code labels and names of respondents be destroyed prior to merging the HIV results with the individual data file.

If, after explaining the procedure, the confidentiality of the data, and the fact that the test results would not be made available to the subject, a respondent consented to the HIV testing, a dried blood spot (DBS) specimen was obtained from a finger prick. Each respondent who consented to being tested for HIV was given an information brochure on AIDS, a list of fixed sites providing voluntary counseling and testing (VCT) services throughout the country, and a voucher to access free VCT services at any of these sites for the respondent and/or the partner.

Each DBS sample was given a bar code label, with a duplicate label attached to the Household Questionnaire on the line showing consent for that respondent. A third copy of the same bar code label was affixed to a Blood Sample Transmittal Form in order to track the blood samples from the field to the laboratory. Filter papers were dried overnight in a plastic drying box, after which the nurse packed them in individual Ziploc bags for that particular sample point. Blood samples were periodically collected in the field along with the completed questionnaires and transported to the GSS headquarters in Accra for logging in, after which they were taken to the Noguchi Memorial Institute for Medical Research (NMIMR) at Legon, for HIV testing.

In preparation for carrying out the HIV testing, a consultant from the Kenya Medical Research Institute was contracted by ORC Macro to spend a couple of weeks at NMIMR to assess their equipment and staff capacity. In addition, an ORC Macro official worked with laboratory scientists at NMIMR to conduct a validation study and set up the dried blood spot methodology to test for HIV using two Enzyme-Linked Immunosorbent Assay (ELISA) tests from different manufacturers that would also allow for sero-typing.

Several meetings with ORC Macro staff, NMIMR staff, and staff of GSS, were then held to discuss the monitoring of sample collection in the field, the collection of samples from the field, and the delivery of the samples to the laboratory, with built-in checks to verify the samples collected and delivered. It was also emphasized at the meeting that the period between the collecting of blood samples in the field and the time of refrigeration should not exceed 14 days. The DBS filter paper samples with bar codes were received by NMIMR. Upon receipt, the samples were counted and checked against the transmittal sheet to verify the bar code identifications and kept in a cold room at 4 degrees centigrade until testing was started in September.

Samples were taken out of the cold room and kept for at least 30 minutes at room temperature before testing. One-quarter-inch disks were punched from the dried blot spots and were submerged in phosphate buffered saline and Tween 20 for overnight elution at 4 degrees centigrade. The following day, serum was eluted and appropriate dilutions were made according to the testing protocol for the test kits used in the GDHS. These dilutions were determined following the validation study on the same test kits for both the DBS and venous blood samples. Eluted serum was tested following the manufacturer's recommendations for each of the test kits used in the GDHS.

All specimens were tested with a screening test, Vironostika HIV Uni-Form Plus O (ELISA I). All samples positive on the first screening test as well as 10 percent of the negatives were further tested in parallel with Wellcozyme HIV-1 Recombinant and Murex HIV-2 (ELISA II) for serotyping. Results for all the ELISAs were obtained by relating the absorbance value or optical density (OD) of a specimen to the OD of the serum controls. According to the testing algorithm, samples positive on the first ELISA and positive on both the second ELISAs were regarded as postivie for HIV-1 and HIV-2; samples positive on the first ELISA and positive on Wellcozyme HIV-1 Recombinant and negative on Murex HIV-2 were categorized as positive for HIV-1; similarly, samples that were positive on the first ELISA and negative on Wellcozyme HIV-1 Recombinant and positive on Murex HIV-2 were categorized as positive for HIV-2. Samples negative on the first ELISA and negative on ELISAs for serotyping were regarded as negative. Samples that had discordant results on ELISA I and ELISA II were tested again with ELISA I and ELISA II.

The results were obtained and interpreted in the same manner as indicated above for the repeat ELISA testing. Discordant samples from the repeat ELISAs, were tested with a confirmatory test, PEPTI-LAV 1-2. In addition, all samples that tested positive on ELISAs and samples whose repeat ELISA results were discordant were also tested with PEPTI-LAV 1-2. Samples with "grey zone" or discordant results on the two assays (i.e., repeat ELISA's and PEPTI-LAV 1-2) were tested by immunoblotting (Western Blot) with NEW LAV-BLOT I and NEW LAV-BLOT II using appropriate interpretative criteria based on the test kit. There were some indeterminate samples from the first round of testing that were also included for immunoblotting. The result on immunoblotting (Western Blot) was regarded as the final result.

1.8 PRETEST, TRAINING, AND FIELDWORK

1.8.1 Pretest

A pretest of the Household, Women's, and Men's questionnaires used in the GDHS was conducted in May 2003 in English and five major local languages. The pretest training was conducted by GSS staff for two weeks from 5-17 May 2003. In addition, nurses recruited from the Ghana Health Service were trained in testing for haemoglobin and collecting blood samples for HIV/AIDS. Five teams were formed to conduct the pretest. Each team consisted of a supervisor, four interviewers, and a nurse. Urban and rural areas were chosen for the pretest to get a better overall sense of the response level and acceptance of HIV/AIDS testing. The lessons learned from the pretest were used to finalize the survey instruments and logistical arrangements.

1.8.2 Training and Fieldwork

A total of 102 interviewers, 23 nurses, and 12 data entry operators participated in the main survey training that took place from 6-27 July 2003. All participants were trained in interviewing techniques and the contents of the GDHS questionnaires. The training was conducted following the standard DHS training procedures, including class presentations, mock interviews, and tests using the Household, Women's, and Men's Questionnaires. All interviewers were trained in taking height and weight measurements. In addition to interviewer training, 23 persons (most of whom were nurses from the Ghana Health Service) were trained for a period of 10 days in anaemia testing, collection of blood samples for the HIV testing, and in informed consent procedures. An additional 20 interviewers were also trained in blood collecting techniques. In addition to in-class practice, the nurses were taken to the local health clinic to practice blood-collecting techniques on women, men, and children.

Interviewers and nurses were selected based on their in-class participation, performance in the field practices, fluency in the Ghanaian languages, and assessment tests. The most experienced trainees, those who took part in the pretest, and those who did extremely well, were selected to be supervisors and editors. Trainees selected as supervisors and field editors were given an additional two-days training on how to supervise fieldwork and edit questionnaires. In addition, there was one standby supervisor and nine interviewers ready for relief assignment whenever necessary. Ten regional statisticians acted as regional coordinators, and GSS staff coordinated and supervised fieldwork activities.

Fifteen teams were constituted for data collection. Each team was made up of a supervisor, an editor, a nurse, four interviewers, and a driver. Fieldwork lasted for three months from late July to late October.

ORC Macro provided technical assistance on all aspects of the survey; staff from ORC Macro participated in field supervision of interviews, height and weight measurements, and blood sample collection.

1.9 DATA PROCESSING

The processing of the GDHS results began shortly after the fieldwork commenced. Completed questionnaires were returned periodically from the field to the GSS headquarters in Accra, where they were entered and edited by data processing personnel who were specially trained for this task. Twelve data entry operators from GSS were trained for one week on data entry procedures using CSPro. All data were entered twice (100 percent verification). In addition, tables were run periodically to monitor the quality of the data collected. The concurrent processing of the data was an advantage for data quality because field coordinators were able to advise teams of problems detected during the data entry. The data entry and editing phase of the survey was completed in mid-December 2003.

1.10 RESPONSE RATES

Table 1.2 shows response rates for the 2003 GDHS. Response rates are important because high non-response may affect the reliability of the results. A total of 6,628 households were selected in the sample, of which 6,333 were occupied at the time of fieldwork. The difference between selected and occupied households is largely due to structures being vacant or destroyed. Successful interviews were conducted in 6,251 households, yielding a response rate of 99 percent.

Table 1.2 Results of the household and individual interviews

Number of households, number of interviews, and response rates, according to residence, Ghana 2003

Result	Residence		Total
	Urban	Rural	
Household interviews			
Households selected	2,720	3,908	6,628
Households occupied	2,571	3,762	6,333
Households interviewed	2,517	3,734	6,251
Household response rate	97.9	99.3	98.7
Interviews with women			
Number of eligible women	2,500	3,449	5,949
Number of eligible women interviewed	2,374	3,317	5,691
Eligible woman response rate	95.0	96.2	95.7
Interviews with men			
Number of eligible men	2,063	3,282	5,345
Number of eligible men interviewed	1,903	3,112	5,015
Eligible man response rate	92.2	94.8	93.8

In the households interviewed in the survey, a total of 5,949 eligible women age 15-49 were identified; interviews were completed with 5,691 of these women, yielding a response rate of 96 percent. In the same households, a total of 5,345 eligible men age 15-59 were identified and interviews were completed with 5,015 of these men, yielding a male response rate of 94 percent. The response rates are slightly lower for the urban than rural sample, and among men than women. The principal reason for non-response among both eligible women and men was the failure to find individuals at home despite repeated visits to the household. The lower response rate for men reflects the more frequent and longer absences of men from the household, principally related to their employment and life style.

Response rates for the HIV testing component were lower than those for the interviews. Details of the HIV testing response rates are discussed in Chapter 13.

HOUSEHOLD POPULATION AND HOUSING CHARACTERISTICS 2

This chapter provides a descriptive summary of the social, economic, and demographic characteristics of households sampled in the survey with a focus on some basic background characteristics such as age, sex, education, place of residence, and socio-economic condition of households. This information is crucial for the interpretation of key demographic and health indicators from which to draw meaningful policies and programmes for intervention. This information is also a basis for gauging the representativeness of the survey.

The basic characteristics of the sampled population, that is, age, sex, education, and place of residence, form the basis of the background information by which most key demographic and health indices are analysed throughout this report. New to the DHS in general, and the 2003 GDHS in particular, is the wealth quintile, which is an indicator of the level of wealth that is consistent with expenditure and income measures. The wealth quintile was constructed using information on household ownership of a number of consumer items, ranging from a television to a bicycle or car, as well as dwelling characteristics, such as source of drinking water, sanitation facilities, and type of material used for flooring. Each asset was assigned a weight (factor score) generated through principal components analysis, and the resulting asset scores were standardised in relation to a normal distribution with a mean of zero and standard deviation of one. Each household was then assigned a score for each asset, and the scores were summed for each household; individuals were ranked according to the total score of the household in which they resided. The sample was then divided into quintiles from one (lowest) to five (highest). A single asset index was developed for the whole sample; separate indices were not prepared for the urban and rural population.

In the 2003 GDHS, a household is defined as a person or a group of persons, related or unrelated, who live together in the same house or compound, share the same housekeeping arrangements, and are catered for as one unit. The Household Questionnaire was used to collect information on all usual residents and visitors who spent the night preceding the survey in the household. This mode of data collection allows the analysis of either the de jure (usual residents) or de facto (those who are present at the time of the interview) populations.

2.1 HOUSEHOLD POPULATION BY AGE AND SEX

Age and sex are important variables in analysing demographic trends. Table 2.1 presents the distribution of the de facto household population in the 2003 GDHS survey by five-year age groups, according to sex and urban-rural residence. Figure 2.1 and Table 2.1 show the population by sex for Ghana. The data show that there are slightly more women (53 percent) than men (47 percent) in the overall population. There is a slightly higher concentration of women in the urban than rural areas (55 and 51 percent). The age structure is typical of a young population characterised by high fertility. This type of population structure imposes a heavy burden on the social and economic assets of a country. Ghana's population is still young, with 44 percent of the population under 15 years, with the percentage in the older age groups (65 years and above) constituting just 5 percent of the population.

Figure 2.1 Population Pyramid

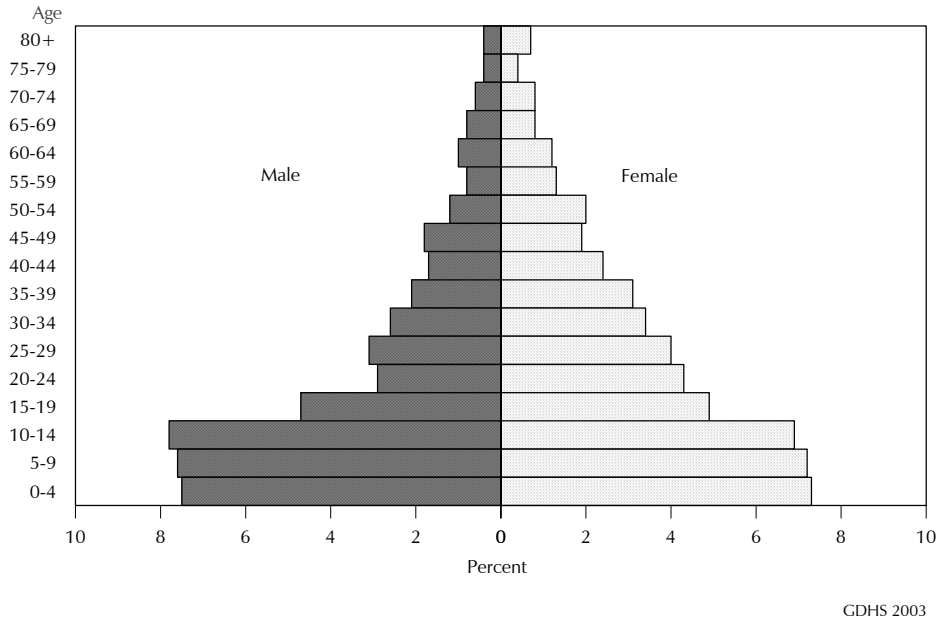


Table 2.1 Household population by age, sex, and residence

Percent distribution of the de facto household population by five-year age groups, according to sex and residence, Ghana 2003

	Urban			Rural			Total		
Age	Male	Female	Total	Male	Female	Total	Male	Female	Total
<5	13.3	10.7	11.9	17.5	16.2	16.8	15.8	13.9	14.8
5-9	14.0	11.8	12.8	17.5	15.0	16.2	16.1	13.6	14.8
10-14	16.1	12.8	14.3	16.9	13.3	15.0	16.6	13.1	14.7
15-19	11.5	11.5	11.5	9.0	7.5	8.2	10.0	9.3	9.6
20-24	7.8	10.1	9.1	5.0	6.8	5.9	6.2	8.2	7.2
25-29	8.0	8.3	8.2	5.6	7.1	6.4	6.6	7.6	7.1
30-34	6.4	6.7	6.5	5.0	6.1	5.6	5.5	6.4	6.0
35-39	4.9	5.9	5.4	4.3	5.8	5.1	4.5	5.9	5.2
40-44	3.6	4.6	4.2	3.7	4.4	4.0	3.7	4.5	4.1
45-49	3.7	3.8	3.7	4.0	3.5	3.7	3.9	3.6	3.7
50-54	2.7	3.7	3.3	2.5	3.9	3.2	2.6	3.8	3.3
55-59	1.7	2.4	2.1	1.7	2.6	2.1	1.7	2.5	2.1
60-64	2.3	2.3	2.3	2.1	2.3	2.2	2.2	2.3	2.3
65-69	1.5	1.5	1.5	1.9	1.6	1.7	1.7	1.6	1.6
70-74	1.1	1.7	1.4	1.3	1.5	1.4	1.2	1.6	1.4
75-79	0.7	0.7	0.7	0.9	1.0	0.9	0.8	0.8	0.8
80 +	0.6	1.3	1.0	0.9	1.3	1.1	0.8	1.3	1.0
Don't know/missing	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	4,575	5,539	10,115	6,925	7,326	14,250	11,500	12,865	24,365

Data from the GDHS show an excess of males in the 10-14 age group, and a deficit in the 20-24 and 40-44 age groups. The excess of males in the 10-14 age group could be the effect of age shifting by interviewers in the DHS, out of the eligible age range (15-59) for the individual interviews, to reduce their workload. This effect is also obvious for females in the 50-54 age group, who are not eligible for the individual interview. The deficit of males in the 20-24 and 40-44 age groups is also reflected in the 2000 Census (GSS, 2002), and may be attributable to differential outmigration of males in search of jobs.

2.2 HOUSEHOLD COMPOSITION

The size and composition of households and the sex of the head of household are important aspects that impact on household welfare. Table 2.2 shows information collected in the 2003 GDHS on sex composition and household size. The mean household size is 4.0, with household size in rural areas (4.3) larger than in urban areas (3.6).

Two-thirds (66 percent) of households are headed by males, while a third (34 percent) are headed by females. The percentage of female-headed households is higher in urban (40 percent) than in rural areas (29 percent).

Single-person households are more common in urban (25 percent) than rural areas (18 percent). This may be due to an influx of unmarried young persons migrating to urban areas in search of employment or to further their education.

Table 2.2 Household composition

Percent distribution of households by sex of head of household and by household size, according to residence, Ghana 2003

Characteristic	Residence		Total
	Urban	Rural	
Sex of head of household			
Male	60.3	71.1	66.2
Female	39.7	28.9	33.8
Total	100.0	100.0	100.0
Number of usual members			
1	24.5	17.5	20.7
2	14.2	11.3	12.6
3	14.2	13.1	13.6
4	15.4	14.5	14.9
5	11.4	13.6	12.6
6	8.3	10.6	9.5
7	5.3	7.9	6.7
8	2.7	4.3	3.6
9+	4.0	6.9	5.6
Total	100.0	100.0	100.0
Number of households	2,870	3,381	6,251
Mean size	3.6	4.3	4.0

Note: Table is based on de jure members, i.e., usual residents.

2.3 EDUCATIONAL ATTAINMENT OF HOUSEHOLD MEMBERS

Education is important in that it helps individuals to make informed decisions that impact their health and well-being. Ghana's system of education has undergone several stages of restructuring over the past 25 years (Sedgwick, 2000). The current system of formal education was introduced in 1989. It is based on a three-tier system: six years of primary education, followed by three years of junior secondary school (JSS), and a further three years at the senior secondary school (SSS) level. From the mid-1970s till the introduction of the current system of education, the six years of primary education was followed by five years of secondary education—three years of JSS and two years of SSS. Prior to the mid-1970s, students who completed six years of primary education had a choice. They could attend four years of middle school or attend five years of secondary school with a small group having the further option to pursue an additional two years of pre-university education. Upon completion of formal schooling, a student could choose to further his or her education at the tertiary level. In addition to university education, there are a host of institutions offering vocational, technical, and professional training that may be tertiary or non-tertiary. The different systems of formal education have been taken into account in tabulating the educational attainment of women and men interviewed in the 2003 GDHS.

Table 2.3.1 shows the percent distribution of the de facto female household population age six years and over by highest level of education attended or completed, according to background characteristics. Thirty-seven percent of women have never been to school, about 30 percent have some primary or have completed primary school, 31 percent have some secondary or have completed secondary school, and about 2 percent have more than secondary school education.

The data reveal that the proportion of women with no education is higher among older women, suggesting some improvement in education over the years. This may be due to the impact of the Free Compulsory Universal Basic Education (fCUBE) programme introduced in 1996. Education varies by place of residence. Urban women are more likely to be educated than rural women. For example, 26 percent of urban females have no education, compared with 47 percent of rural females. The proportion of urban females with some secondary education or higher (47 percent) is more than twice as high as that of rural females (21 percent).

It is notable that females in the northern half of the country (Northern, Upper East, and Upper West regions) are seriously disadvantaged educationally. More than two-thirds of women in these regions have never been to school, compared with one-fifth in the Greater Accra region. In addition, 13 percent of females in Greater Accra have completed secondary education or higher, compared with less than 2 percent in the Northern and Upper West regions. With the exception of the three northern regions, the majority of females in all regions have been to school.

It is worth noting that the proportion of female household members who have never attended school decreases with higher wealth status. Sixty-five percent of women in the lowest wealth quintile have no education compared with only 15 percent in the highest quintile.

Table 2.3.2 shows that 26 percent of males have never been to school, 33 percent have had some primary or have completed primary education, 37 percent have had some secondary or completed secondary education, and about 4 percent have more than secondary education. One-third of males in rural areas have no education compared with only 15 percent in urban areas. There is a marked urban-rural differential in secondary and higher education: 16 percent of males in urban areas have completed secondary or higher education compared with only 4 percent in rural areas.

Table 2.3.1 Educational attainment of household population: women

Percent distribution of the de facto female household population age six and over by highest level of education attended or completed, according to background characteristics, Ghana 2003

Background characteristic	No education	Some primary	Completed primary[1]	Some secon-dary	Completed secondary[2]	More than secon-dary	Don't know/ missing	Total	Number	Median years of schooling
Age										
6-9	47.5	51.6	0.0	0.0	0.0	0.0	0.9	100.0	1,457	0.0
10-14	15.2	65.0	6.3	13.3	0.0	0.0	0.3	100.0	1,685	3.0
15-19	14.7	15.3	7.5	58.3	3.9	0.1	0.1	100.0	1,191	6.8
20-24	21.6	11.8	6.3	44.8	11.5	3.9	0.0	100.0	1,053	8.0
25-29	33.9	11.3	6.1	36.5	9.8	2.3	0.1	100.0	981	5.7
30-34	35.5	13.1	4.5	41.0	2.6	3.3	0.0	100.0	821	5.3
35-39	41.6	14.2	5.7	33.6	2.7	2.2	0.1	100.0	756	3.0
40-44	35.3	12.9	3.9	41.6	3.0	2.6	0.7	100.0	577	5.4
45-49	40.2	15.4	2.0	37.5	0.7	4.0	0.1	100.0	465	3.3
50-54	61.3	8.5	2.6	23.5	0.4	2.6	1.1	100.0	492	0.0
55-59	68.0	9.3	1.4	16.4	1.1	2.5	1.4	100.0	320	0.0
60-64	81.1	3.7	2.6	11.2	0.0	1.0	0.4	100.0	297	0.0
65+	86.6	5.2	0.2	6.6	0.3	0.9	0.4	100.0	674	0.0
Residence										
Urban	25.9	22.5	4.6	38.1	5.8	2.8	0.4	100.0	4,841	5.3
Rural	46.8	27.8	4.0	19.5	0.9	0.6	0.4	100.0	5,944	0.0
Region										
Western	29.5	30.8	5.7	29.0	2.8	2.0	0.1	100.0	960	3.3
Central	39.1	29.1	4.6	23.7	2.2	1.2	0.2	100.0	904	1.6
Greater Accra	20.3	21.9	4.6	40.1	9.2	3.6	0.2	100.0	1,547	6.4
Volta	31.2	33.0	4.8	26.9	2.3	1.6	0.3	100.0	1,023	2.5
Eastern	29.6	27.0	6.2	32.4	1.9	2.2	0.6	100.0	1,166	3.7
Ashanti	28.3	25.7	4.1	37.7	2.7	1.1	0.4	100.0	2,154	4.1
Brong Ahafo	37.0	27.5	5.2	27.4	1.8	0.6	0.4	100.0	1,061	2.4
Northern	74.4	16.4	1.3	6.2	0.9	0.7	0.1	100.0	989	0.0
Upper East	71.1	18.3	1.1	6.7	1.3	1.0	0.6	100.0	661	0.0
Upper West	66.1	19.2	2.8	8.7	1.5	0.3	1.3	100.0	321	0.0
Wealth quintile										
Lowest	65.1	22.7	2.5	8.8	0.2	0.1	0.6	100.0	1,992	0.0
Second	47.2	29.6	3.8	18.4	0.4	0.2	0.4	100.0	2,046	0.0
Middle	36.5	28.9	5.5	27.4	1.2	0.2	0.3	100.0	2,172	2.1
Fourth	28.0	26.3	5.4	35.9	3.2	0.9	0.3	100.0	2,204	4.1
Highest	15.4	20.1	3.9	44.8	9.5	6.0	0.3	100.0	2,372	7.9
Total	37.4	25.4	4.3	27.8	3.1	1.6	0.4	100.0	10,785	2.1

Note: Total includes 13 women with missing information on age who are not shown separately.
[1] Completed grade 6 at the primary level
[2] Completed grade 12 at the secondary level

Across the regions the pattern among the male population is similar to that exhibited by the females. Males in the three northern regions are disadvantaged, with 54-59 percent never having been to school compared with less than 20 percent in the other regions, except Brong Ahafo (24 percent) and the Central (21 percent) regions. The variation in education among the male population according to wealth quintile is similar to that among the female population. Wealthy males are less likely to have no education. For example, 7 percent of males in the highest wealth quintile have no education compared with 53 percent in the lowest.

Table 2.3.2 Educational attainment of household population: men

Percent distribution of the de facto male household population age six and over by highest level of education attended or completed, according to background characteristics, Ghana 2003

Background characteristic	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary	Don't know/ missing	Total	Number	Median years of schooling
Age										
6-9	45.2	53.6	0.1	0.1	0.0	0.0	1.0	100.0	1,544	0.0
10-14	14.8	67.7	6.1	11.1	0.0	0.0	0.3	100.0	1,907	2.7
15-19	9.3	18.9	7.9	60.8	3.7	0.0	0.1	100.0	1,148	6.9
20-24	12.9	8.7	5.6	50.5	17.6	4.7	0.0	100.0	707	8.4
25-29	15.6	9.1	4.7	43.6	16.3	10.3	0.3	100.0	758	8.5
30-34	21.4	7.5	4.0	48.5	13.1	5.2	0.5	100.0	634	9.0
35-39	25.4	8.4	4.1	46.7	7.7	6.6	1.1	100.0	522	9.1
40-44	24.4	6.3	2.1	50.9	6.8	9.3	0.3	100.0	420	9.3
45-49	26.3	9.0	4.2	45.9	6.0	8.5	0.2	100.0	445	9.2
50-54	25.7	7.6	3.5	48.2	4.8	9.3	0.9	100.0	301	9.1
55-59	34.7	5.6	3.2	35.9	4.7	15.4	0.6	100.0	197	9.0
60-64	52.7	8.2	3.3	27.6	3.5	4.1	0.5	100.0	253	0.0
65+	66.3	6.8	1.7	20.6	2.1	2.3	0.2	100.0	523	0.0
Residence										
Urban	15.2	25.5	4.4	38.1	9.7	6.6	0.5	100.0	3,865	6.9
Rural	33.3	31.4	4.0	26.9	2.5	1.5	0.4	100.0	5,511	2.2
Region										
Western	14.5	32.5	6.8	37.3	5.9	2.9	0.0	100.0	817	5.4
Central	21.0	34.4	3.7	35.1	2.6	3.2	0.0	100.0	719	4.1
Greater Accra	12.8	21.9	3.7	37.0	15.4	8.4	0.8	100.0	1,194	8.5
Volta	18.0	30.7	5.2	37.5	3.6	4.7	0.3	100.0	825	5.2
Eastern	18.9	28.0	6.7	37.9	3.2	4.6	0.8	100.0	1,031	5.4
Ashanti	16.4	29.1	3.0	43.0	5.6	2.4	0.4	100.0	1,773	5.8
Brong Ahafo	23.5	34.6	4.3	29.4	4.6	3.4	0.2	100.0	1,020	3.6
Northern	58.6	25.3	2.2	9.0	3.2	1.4	0.2	100.0	1,060	0.0
Upper East	54.1	28.3	3.8	10.2	1.6	0.6	1.3	100.0	651	0.0
Upper West	54.2	26.3	2.6	11.3	2.5	2.8	0.4	100.0	286	0.0
Wealth quintile										
Lowest	52.6	28.8	3.4	12.8	1.1	0.6	0.7	100.0	1,865	0.0
Second	30.4	35.3	4.8	26.6	1.7	0.7	0.5	100.0	1,899	2.3
Middle	22.5	33.4	5.0	35.3	2.3	1.1	0.3	100.0	1,911	3.8
Fourth	16.5	26.1	4.6	40.7	7.4	4.4	0.3	100.0	1,855	6.3
Highest	7.0	20.8	3.0	42.4	15.1	11.3	0.4	100.0	1,846	8.9
Total	25.9	29.0	4.2	31.5	5.5	3.6	0.4	100.0	9,376	3.9

Note: Total includes 18 men with missing information on age who are not shown separately.
[1] Completed grade 6 at the primary level
[2] Completed grade 12 at the secondary level

Men are more educated than women at all levels of education, implying that females continue to lag behind males in education. The median number of years of schooling completed is twice as high among men (3.9 years) as among women (2.1 years). It is disappointing to note that the level of education has deteriorated over the last five years for both women and men. The proportion of women with no education rose from 34 percent in 1998 (GSS and MI, 1999) to 37 percent in 2003, with the median number of years of schooling falling slightly from 2.3 to 2.1 over the five years. Similarly, the proportion

of men with no education rose from 21 percent (GSS and MI, 1999) to 26 percent with the median number of years of schooling falling from 4.9 to 3.9 over the last five years. Nevertheless, the male-female gap in educational attainment has narrowed over the same period.

The 2003 GDHS collected information on school attendance among the population 6-24 years that allows the calculation of net attendance ratios (NARs) and gross attendance ratios (GARs). The NAR for primary school is the percentage of the primary-school-age (6-11 years) population that is attending primary school. The NAR for secondary school is the measure of the secondary-school-age (12-18 years) population that is attending secondary school. By definition, the NAR cannot exceed 100 percent. The GAR however, measures participation at each level of schooling among persons age 6-24. The GAR is almost always higher than the NAR for the same level because the GAR includes participation by those who may be older, because they may have started school late, may have repeated one or more grades in school, or may have dropped out of school and later returned, or may be younger than the official age range for that level.

Table 2.4 presents data on NAR and GAR for the de jure household population by level of schooling and sex, according to place of residence and wealth quintile. Sixty percent of children age 6-11, who should be attending primary school, are currently doing so. At the same time, the GAR at the primary school level is 95 percent, indicating that more than a third (35 percent) of young Ghanaians attending primary school are above or below primary school age. Not surprisingly, both the NAR and GAR are much lower at the secondary than at the primary school level. Slightly more than one-third of students age 12-18 who should be attending secondary school are in school at that level. The GAR for secondary school is 41 percent, indicating that the proportion of underage or overage youths in secondary school is not so large. The results show similar proportions of NAR for females and males at primary and secondary school level, indicating that there is no gender gap in school attendance among the Ghanaian school age population who should be attending school at a given level. However, the GARs at primary and secondary school levels are slightly higher for males than females, indicating a relatively higher overage or underage attendance among males than females.

As expected, school attendance ratios at both the primary and secondary levels are lower in rural than in urban areas. For instance, the NAR at the primary school level in rural areas is 56 percent compared with 68 percent in urban areas. Similarly, the GAR at secondary school is 31 percent in rural areas compared with 53 percent in urban areas. Regional differences are obvious for the NAR and GAR with attendance ratios notably lower among the three northern regions (Northern, Upper East, and Upper West) compared with all other regions, and especially in the case of the GAR at the primary school level.

There is a strong relationship between household economic status and school attendance that can be seen at both the primary and secondary levels and among males and females. For example, the NAR increases from 43 percent among students from poorer households (lowest wealth quintile) in primary school to 78 percent among students from richer households (highest wealth quintile). Similarly, the GAR rises three-fold from 20 percent among secondary school attendees in the lowest wealth quintile to 63 percent among those in the highest wealth quintile.

The Gender Parity Index (GPI) represents the ratio of the GAR for females to the GAR for males. It is presented at both the primary and secondary levels and offers a summary measure of gender differences in school attendance rates. A GPI less than 1 indicates that a smaller proportion of females than males attend school. In Ghana, the GPI is slightly less than 1 (0.9) for both primary and secondary school attendance, indicating that the gender gap is relatively small. There are no marked differences in the GPI by place of residence. The Northern Region has the widest gap (0.8) for primary school attendance and the Brong Ahafo Region has the widest gap (0.7) for secondary school attendance.

Table 2.4 School attendance ratios

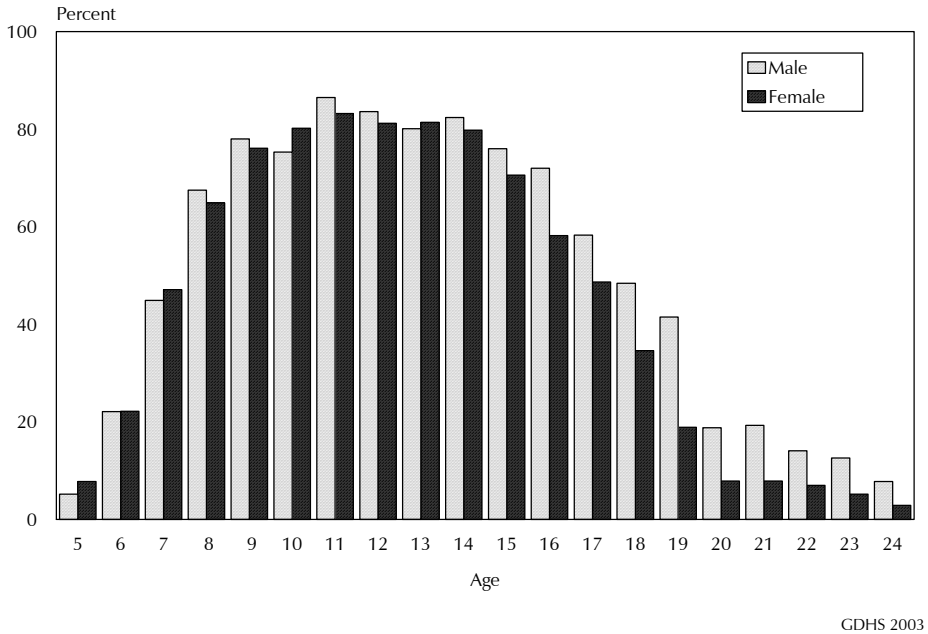
Net attendance ratios (NAR), gross attendance ratios (GAR), and gender parity index for the de jure household population by level of schooling and sex, according to background characteristics, Ghana 2003

Background characteristic	Net attendance ratio[1]			Gross attendance ratio[2]			Gender parity index[3]
	Male	Female	Total	Male	Female	Total	
PRIMARY SCHOOL							
Residence							
Urban	69.9	66.7	68.3	110.0	100.4	105.2	0.91
Rural	56.2	55.2	55.8	92.0	86.8	89.6	0.94
Region							
Western	70.6	68.2	69.4	109.3	102.8	106.1	0.94
Central	61.3	60.6	61.0	98.5	99.5	99.0	1.01
Greater Accra	72.3	71.1	71.7	108.9	102.9	105.9	0.95
Volta	60.7	66.1	63.5	106.9	107.0	106.9	1.00
Eastern	58.9	60.9	59.8	99.6	92.0	96.1	0.92
Ashanti	69.0	65.9	67.5	104.8	98.5	101.7	0.94
Brong Ahafo	66.3	56.5	62.0	119.8	109.0	115.1	0.91
Northern	47.4	39.5	43.8	70.8	55.1	63.7	0.78
Upper East	42.4	46.4	44.2	70.3	61.0	66.0	0.87
Upper West	41.9	41.2	41.5	74.9	68.2	71.5	0.91
Wealth quintile							
Lowest	43.8	41.8	42.9	72.6	66.7	69.9	0.92
Second	57.9	53.6	55.9	100.9	89.4	95.5	0.89
Middle	66.0	62.4	64.4	107.9	101.3	104.8	0.94
Fourth	67.6	68.3	67.9	109.2	101.5	105.4	0.93
Highest	78.9	77.0	77.9	109.2	105.7	107.4	0.97
Total	61.0	59.6	60.4	98.4	92.0	95.4	0.94
SECONDARY SCHOOL							
Residence							
Urban	45.4	44.8	45.1	55.3	50.1	52.6	0.90
Rural	26.8	25.9	26.4	33.0	28.3	30.8	0.86
Region							
Western	36.8	41.9	39.3	41.9	44.3	43.1	1.06
Central	34.3	30.5	32.4	39.6	34.9	37.2	0.88
Greater Accra	47.7	48.6	48.2	59.2	56.6	57.7	0.96
Volta	36.2	35.4	35.8	50.5	38.7	44.6	0.77
Eastern	37.8	35.6	36.8	45.8	37.2	41.6	0.81
Ashanti	42.8	39.2	40.9	48.1	42.2	45.1	0.88
Brong Ahafo	32.8	26.6	30.0	40.5	29.9	35.7	0.74
Northern	17.4	15.8	16.7	24.6	19.2	22.4	0.78
Upper East	16.5	23.2	19.4	24.1	26.6	25.2	1.11
Upper West	20.2	22.5	21.2	27.4	26.4	27.0	0.96
Wealth quintile							
Lowest	15.4	15.2	15.3	22.1	17.0	19.8	0.77
Second	27.3	19.7	23.9	33.6	21.5	28.2	0.64
Middle	34.5	34.7	34.6	40.8	36.7	38.8	0.90
Fourth	40.4	42.3	41.4	51.0	47.1	49.0	0.92
Highest	57.5	53.6	55.3	66.6	60.8	63.3	0.91
Total	34.6	35.0	34.8	42.4	38.8	40.6	0.91

[1] The NAR for primary school is the percentage of the primary-school age (6-11 years) population that is attending primary school. The NAR for secondary school is the percentage of the secondary-school age (12-18 years) population that is attending secondary school. By definition the NAR cannot exceed 100 percent.
[2] The GAR for primary school is the total number of primary school students, expressed as a percentage of the official primary-school-age population. The GAR for secondary school is the total number of secondary school students, expressed as a percentage of the official secondary-school-age population. If there are significant numbers of overage and underage students at a given level of schooling, the GAR can exceed 100 percent.
[3] The Gender Parity Index for primary school is the ratio of the primary school GAR for females to the GAR for males. The Gender Parity Index for secondary school is the ratio of the secondary school GAR for females to the GAR for males.

Figure 2.2 shows the age-specific attendance rates (ASAR) for the de jure household population age 6-24 by sex. The ASAR shows participation in schooling at any level, from primary through higher education. The closer the ASAR is to 100, the higher the participation of a given age population at that level. Less than 50 percent of children age seven and below are attending school. School attendance rises markedly up to age 11, remains high up to age 14, and then gradually declines. There are no marked differences in the proportion of males and females attending school up to age 15, after which there are significantly higher proportions of males than females attending school.

Figure 2.2 **Age-Specific Attendance Rates**



2.4 HOUSING CHARACTERISTICS

There is a strong correlation between the socio-economic condition of households and the vulnerability of its members, and especially children, to common diseases. The amenities and assets available to households are important in determining the general socio-economic status of the population. The GDHS included questions on a household's access to electricity, source of drinking water, type of sanitation facilities, flooring materials, and ownership of durable goods. Table 2.5 presents the distribution of households by household characteristics, according to residence.

One in two households in Ghana has electricity. Three-fourths of households in urban areas (77 percent) have electricity compared with one-fourth (24 percent) of rural households. The 2003 data show an increase in the use of electricity among rural households over the last five years (GSS and MI, 1999), while access to electricity in urban households has declined over the same time period. The decline in the use of electricity by urban households may be attributed to the rapid development in housing projects, some of which are not yet connected to the national power grid.

The availability of and accessibility to potable water may, to a large extent, minimise the prevalence of water-borne diseases among household members, especially young children. The source of drinking water is important because potentially fatal diseases, such as diarrhoeal diseases, guinea worm, bilharzia, typhoid, cholera, and dysentery, are common in the country. The main sources of drinking water are piped, protected well or borehole, and rivers or streams. Sixteen percent of households have

access to piped water in their dwelling, yard or plot, while 23 percent access drinking water from a public tap. Twelve percent of households get their drinking water from open wells, and 28 percent obtain drinking water from protected wells or boreholes. Fourteen percent of households obtain drinking water from rivers and streams. Not surprisingly, rural households have less access to clean drinking water than urban households. For example, one in three urban households have piped water in their dwelling, yard or plot, compared with 2 percent of rural households. The major source of drinking water for rural households is a well or borehole. For example, two-fifths of rural households get their drinking water from a protected public well or borehole, compared with one-tenth of urban households. The overall access to piped drinking water has remained the same over the last five years (GSS and MI, 1999). It takes eight in ten urban households and about half of rural households less than 15 minutes to reach their nearest source of drinking water. The median time to source in urban households is 4 minutes compared with 14 minutes among rural households. The vast majority of households have access to water all the time. Rural households are more likely than urban households to have access to water all the time.

The availability of toilet facilities in households ensures a more efficient and hygienic method of human waste disposal. Most households in Ghana (42 percent) have traditional pit latrines, 26 percent have improved ventilated pit latrines (KVIP), and 11 percent have flush toilets. One-fifth of households have no toilet facility. Lack of a toilet facility is more common in rural areas (31 percent) than in urban areas (7 percent). Two-fifths of urban households have KVIP toilets, compared with 14 percent of households in rural areas. Traditional pit toilets are twice as common in rural areas (54 percent) as in urban areas (27 percent). Flush toilets are more common in urban households

Table 2.5 Household characteristics

Percent distribution of households by household characteristics, according to residence, Ghana 2003

Household characteristic	Residence		
	Urban	Rural	Total
Electricity			
Yes	76.9	24.1	48.3
No	23.1	75.8	51.6
Missing	0.0	0.1	0.1
Total	100.0	100.0	100.0
Source of drinking water			
Piped into dwelling	11.5	0.7	5.7
Piped into compound/plot	21.9	1.2	10.7
Public tap	39.1	8.9	22.8
Open well in dwelling/yard	2.5	1.3	1.9
Open public well	5.9	12.8	9.6
Protected well in dwelling/yard	2.4	1.7	2.0
Protected public well	7.8	41.1	25.8
Spring	0.3	0.9	0.6
River, stream	2.0	24.3	14.1
Pond, lake	0.5	2.4	1.5
Dam	0.1	3.7	2.0
Rainwater	0.5	0.2	0.3
Tanker truck	2.3	0.4	1.3
Satchel water	3.0	0.3	1.5
Other	0.4	0.0	0.2
Missing	0.0	0.1	0.1
Total	100.0	100.0	100.0
Time to water source			
Percentage <15 minutes	79.8	46.5	61.8
Median time to source	4.3	14.3	9.4
Water availability			
All the time	75.9	91.9	84.5
Several hours per day	11.4	4.8	7.8
A few times a week	9.1	1.7	5.1
Less frequently	2.7	1.0	1.8
Not at all	0.7	0.4	0.5
Don't know	0.1	0.0	0.1
Missing	0.1	0.2	0.2
Total	100.0	100.0	100.0
Sanitation facility			
Flush toilet	21.2	1.7	10.7
Traditional pit toilet	26.7	54.0	41.5
Ventilated improved pit latrine	40.8	13.5	26.0
No facility, bush, field	6.7	30.6	19.6
Bucket, pan	4.5	0.2	2.2
Missing	0.1	0.1	0.1
Total	100.0	100.0	100.0
Sharing toilet facilities			
No	14.6	8.6	11.4
Yes	78.5	60.8	68.9
No facility	6.7	30.6	19.6
Missing	0.1	0.1	0.1
Total	100.0	100.0	100.0
Flooring material			
Earth/sand/mud	3.2	17.8	11.1
Mud mixed with dung	0.1	2.4	1.3
Wood/palm/bamboo/parquet	0.4	0.1	0.2
Linoleum	19.5	5.7	12.0
Ceramic tiles/terrazo	3.9	0.3	2.0
Cement	54.5	71.5	63.7
Carpet	18.4	2.1	9.6
Missing	0.1	0.1	0.1
Total	100.0	100.0	100.0

Continued…

(21 percent) than in rural households (2 percent). Access to flush toilets has risen over the last five years, from 8 percent in 1998 (GSS and MI, 1999) to 11 percent in 2003. The majority of households (69 percent) share toilet facilities with one or more households.

The type of flooring material used in dwellings is a proxy indicator of the socio-economic status of the household as well as its likely exposure to disease-causing agents. Most households in Ghana (87 percent) have finished floors (terrazzo, tiles, cement, carpet, and linoleum), with only 12 percent of households having rudimentary or natural flooring material (earth, sand, mud or mud mixed with dung). There has been little change over the last five years in the percentage of households with finished flooring. Rural households are much more likely to have cement floors (72 percent) than urban households (55 percent). The second most common flooring material in rural areas is earth, sand, or mud (18 percent). About one-fifth of urban households have linoleum floors and almost the same proportion have carpeted floors.

Table 2.5—*Continued*

Household characteristic	Residence		Total
	Urban	Rural	
Cooking fuel			
Electricity	0.6	0.1	0.3
LPG, natural gas	14.6	1.4	7.4
Biogas	0.7	0.0	0.3
Kerosene	1.3	0.4	0.8
Coal, lignite	0.7	0.0	0.3
Charcoal	54.1	10.1	30.3
Firewood, straw	25.6	87.4	59.0
Dung	0.0	0.1	0.1
Other	2.3	0.4	1.3
Total	100.0	100.0	100.0
Disposal of household waste			
Collected by government	30.6	0.4	14.2
Collected by community assoc.	4.2	3.9	4.0
Collected by private company	4.8	0.3	2.3
Dumped in compound	2.5	5.9	4.3
Dumped in street/empty plot	47.3	74.0	61.7
Burned	7.7	6.4	7.0
Buried	2.5	3.5	3.0
Composted	0.2	5.3	3.0
Other	0.2	0.1	0.1
Missing	0.1	0.2	0.3
Total	100.0	100.0	100.0
Possibility of eviction			
Very likely	21.0	4.9	12.3
Somewhat likely	20.7	10.9	15.4
Not at all likely	56.7	83.6	71.3
Don't know	1.5	0.6	1.0
Total	100.0	100.0	100.0
Member of HIS			
Yes	3.5	2.8	3.1
No	95.9	96.3	96.2
Don't know	0.6	0.8	0.7
Missing	0.0	0.2	0.1
Total	100.0	100.0	100.0
Number of households	2,870	3,381	6,251

HIS = Health Insurance Scheme

Two common sources of cooking fuel in the country are firewood (59 percent) and charcoal (30 percent). One in four urban households uses firewood, while 87 percent of rural households depend on firewood as their main source of cooking fuel. On the other hand, more than 50 percent of urban households use charcoal compared with 10 percent of rural households. Liquified petroleum gas (LPG) or natural gas is used more commonly by urban households (15 percent) than households in rural areas (1 percent). However, even in urban areas, few households use electricity for cooking (1 percent), presumably because of the higher cost.

The GDHS also included questions pertaining to disposal of household waste, possibility of eviction, and membership in mutual health organisations (MHO) or health insurance schemes (HIS). Data on these are also shown in Table 2.5. The majority of households (62 percent) dispose of their household waste in the street or an empty plot, with a much higher proportion of rural households than urban households disposing of household waste in this manner. Fourteen percent of households have their waste collected by the government and this is predominantly done in urban areas. Seven percent of households burn their waste, 4 percent have their waste collected by a community association, 4 percent dump it in their compound, while 3 percent each bury or compost their household waste.

When asked about the possibility of eviction, most household respondents said that this was not likely at all (71 percent). Twelve percent of households mentioned that it was very likely that they could

be evicted, while 15 percent of households mentioned that it was somewhat likely. Urban households are more likely to report that they face possible eviction than rural households. A very small percentage of households in Ghana (3 percent) belong to an HIS. Among those who belong to an HIS, the majority belong to an MHO (43 percent) or have government health coverage (20 percent), with 29 percent belonging to a private health insurance scheme (data not shown). About half of those who belong to any kind of insurance scheme mentioned that they have benefited from it in the past, and a large majority (91 percent) of those who are not members of an insurance scheme indicate that they would consider joining one in the future (data not shown).

2.6 HOUSEHOLD DURABLE GOODS

Respondents were asked about ownership of particular household goods such as radios and television sets (access to media), refrigerators (access to food storage), telephones (access to other means of communication), and modes of transport (bicycle, motorcycle, car, or truck). Ownership of these items is also indicative of the household's social and economic well-being. Table 2.6 presents data on the percentage of households possessing various durable consumer goods, by residence. The results show that 71 percent of households own a radio, 26 percent have a television, 23 percent have bicycles, and 19 percent own refrigerators. It is striking to note that nearly one in four households possess none of the durable items identified. There has been a noticeable rise in ownership of consumer durable goods over the last five years, with the most marked increase in the ownership of refrigerators, which increased from 2 percent in 1998 (GSS and MI, 1999) to 19 percent in 2003.

Table 2.6 Household durable goods

Percentage of households possessing various durable consumer goods, by residence, Ghana 2003

	Residence		
Durable consumer goods	Urban	Rural	Total
Radio	76.1	66.6	71.0
Television	44.9	9.9	26.0
Telephone	14.3	0.7	6.9
Refrigerator	34.6	5.5	18.8
Video deck	20.6	2.2	10.6
Bicycle	16.0	29.1	23.1
Motorcycle	2.6	1.7	2.1
Car/truck	9.0	2.4	5.4
Tractor	0.4	0.2	0.3
Horse/cart	0.3	1.4	0.9
None of the above	18.3	27.1	23.1
Number of households	2,870	3,381	6,251

Sixty-seven percent of households in rural areas have a radio. Smaller proportions, however, own consumer items such as televisions, telephones, refrigerators, and cars. Twenty-nine percent of rural households own bicycles, compared with 16 percent of urban households. Televisions, refrigerators, telephones, and cars or trucks are mostly restricted to urban areas, presumably due to the lack of electricity or affordability in rural areas.

CHARACTERISTICS OF SURVEY RESPONDENTS 3

The purpose of this chapter is to provide a descriptive summary of the demographic and socio-economic profile of respondents in the 2003 GDHS. This basic information on women and men in the reproductive age group is crucial for the interpretation of the 2003 GDHS findings within the context of reproduction, health, and women's status and empowerment. The percent distribution of respondents by the various demographic and socio-economic characteristics can also be used as an approximate indicator of the representativeness of the survey sample to the general population. The main background characteristics described in detail that will be used in subsequent chapters on reproduction and health are: age at the time of the survey, marital status, residence, education, and wealth quintiles. This chapter also includes information on literacy, exposure to mass media, employment and earnings, and women's position and decisionmaking power in relation to others in the household.

3.1 BACKGROUND CHARACTERISTICS OF RESPONDENTS

Table 3.1 shows data on the background characteristics of the 5,691 female respondents age 15-49 and the 5,015 male respondents age 15-59, interviewed in the 2003 GDHS, by background characteristics, including age, marital status, urban-rural residence, region, education, religion, and ethnicity.

The age distribution shows that more than one in two females (55 percent) and males (51 percent) are under age 30. The proportion in each age group tends to decrease with increasing age for both sexes. The data show that most of the respondents are currently married or living together, although the proportion of women (62 percent) who are married or living together is higher than men (53 percent). Four in ten men (41 percent) have never married, compared with only about three in ten women (28 percent). Nine percent of women and 6 percent of men are divorced, separated, or widowed.

The distribution of respondents by urban-rural residence shows that men are slightly more likely to live in rural areas (55 percent) than women (52 percent). By region, the distribution of respondents varies markedly. For example, about one-fifth of respondents are from the Ashanti Region, about one-sixth are from Greater Accra, and about one-tenth each are from the Western, Eastern, Brong Ahafo, and Northern regions. Less than 3 percent of women and men are from the Upper West Region.

Twenty-eight percent of women and 18 percent of men have no education. About one-fifth of women and one-sixth of men have only primary education and two-fifths have only middle/JSS level of education. Men are twice as likely to have attained the secondary level of education as women (23 and 12 percent, respectively).

The majority of respondents are Christians—77 percent of women and 70 percent of men. Sixteen percent of women and 19 percent of men are Moslems. The ethnic composition shows that Akans are the predominant group, with 51 percent of women and 47 percent of men, followed by the Mole Dagbon (13 percent of women and 18 percent of men).

Table 3.1 Background characteristics of respondents

Percentage distribution of women and men by background characteristics, Ghana 2003

Background characteristic	Weighted percent	Number of women		Weighted percent	Number of men	
		Weighted	Unweighted		Weighted	Unweighted
Age						
15-19	20.2	1,148	1,113	22.1	1,107	1,095
20-24	17.8	1,012	997	13.6	684	692
25-29	16.7	951	966	15.0	754	727
30-34	14.1	802	818	12.6	633	633
35-39	12.7	722	724	9.9	498	518
40-44	10.2	579	572	8.2	412	411
45-49	8.4	477	501	8.8	441	441
50-54	na	na	na	5.9	294	300
55-59	na	na	na	3.8	192	198
Marital status						
Never married	28.4	1,616	1,509	40.7	2,042	2,002
Married	54.2	3,087	3,273	48.6	2,439	2,514
Living together	8.1	462	421	4.6	233	212
Divorced/separated	7.3	416	368	5.4	272	257
Widowed	1.9	110	120	0.6	29	30
Residence						
Urban	48.4	2,755	2,374	44.9	2,250	1,903
Rural	51.6	2,936	3,317	55.1	2,765	3,112
Region						
Western	9.7	553	524	9.5	476	457
Central	7.6	431	352	7.4	370	300
Greater Accra	16.6	942	835	14.6	733	621
Volta	8.6	492	442	8.8	440	386
Eastern	10.6	601	506	10.7	539	453
Ashanti	20.1	1,142	927	19.1	956	785
Brong Ahafo	10.0	569	638	10.5	528	593
Northern	8.8	499	610	10.5	527	638
Upper East	5.4	310	395	6.3	317	395
Upper West	2.7	153	462	2.6	130	387
Education						
No education	28.2	1,608	1,917	17.6	881	1,118
Primary	20.0	1,135	1,112	16.0	803	857
Middle/JSS	40.0	2,279	2,044	43.2	2,165	1,967
Secondary+	11.8	669	618	23.2	1,165	1,073
Religion						
Roman Catholic	13.9	788	905	14.6	731	794
Anglican/Methodist/Presbyt.	17.8	1,016	907	15.9	799	709
Other Christian	45.6	2,597	2,352	39.4	1,978	1,785
Moslem	15.6	887	1,013	18.7	939	1,050
Traditional/spiritualist	2.7	152	210	4.7	238	317
No religion	4.4	250	302	6.5	327	355
Other/Missing	0.0	1	2	0.0	4	5
Ethnicity						
Akan	50.7	2,885	2,481	47.3	2,370	2,025
Ga/Dangme	8.2	465	437	7.5	374	338
Ewe	13.1	745	698	13.0	654	614
Guan	2.6	145	159	3.7	186	191
Mole-Dagbani	12.8	730	1,119	17.5	878	1,235
Grussi	2.4	134	171	2.4	121	157
Gruma	2.5	142	178	3.0	151	188
Hausa	1.3	74	62	1.1	56	50
Other	6.4	362	380	4.4	223	214
Missing	0.2	9	6	0.1	3	3
Total	100.0	5,691	5,691	100.0	5,015	5,015

Note: Education categories refer to the highest level of education attended, whether or not that level was completed.
na = Not applicable

3.2 EDUCATIONAL ATTAINMENT AND LITERACY

Education provides people with the knowledge and skills that can lead to a better quality of life. The level of education has been found to be highly associated with the health of mothers and their children and on their reproductive health behaviours. Tables 3.2.1 and 3.2.2 present the distribution of women and men by highest level of schooling attended or completed, and the median number of years of schooling, according to background characteristics. The data show that 28 percent of women have never been to school, 14 percent have some primary education only, while 6 percent have completed primary education. In addition, 44 percent have some secondary education, 8 percent have completed secondary school, with 3 percent having attained higher than secondary education. The data also show that men are more educated than women at all levels of education. For example, about twice as many men as women have completed secondary education or gone on to a higher level. On average, men have two more years of schooling than women—the median years of schooling among women and men is 6.2 and 8.3 years,

Table 3.2.1 Educational attainment by background characteristics: women

Percent distribution of women by highest level of schooling attended or completed, and median number of years of schooling, according to background characteristics, Ghana 2003

Background characteristic	Highest level of schooling attended or completed						Total	Number of women	Median years of schooling
	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary			
Age									
15-19	12.3	15.7	7.7	59.4	4.8	0.1	100.0	1,148	6.9
20-24	19.6	13.8	6.4	45.5	9.6	5.1	100.0	1,012	8.0
25-29	32.2	11.9	6.9	38.0	8.9	2.1	100.0	951	5.8
30-34	33.9	15.3	5.4	39.6	2.7	3.2	100.0	802	5.1
35-39	40.4	12.7	5.5	36.4	2.4	2.6	100.0	722	4.2
40-44	35.9	12.3	4.6	42.8	2.2	2.2	100.0	579	5.4
45-49	39.9	15.7	3.0	36.0	1.3	4.1	100.0	477	3.4
Residence									
Urban	16.3	10.6	5.4	54.5	8.9	4.3	100.0	2,755	8.3
Rural	39.5	17.1	6.6	34.1	1.7	1.1	100.0	2,936	3.5
Region									
Western	22.3	17.3	7.2	45.8	4.5	2.9	100.0	553	6.5
Central	25.2	20.7	7.3	41.0	3.5	2.2	100.0	431	5.5
Greater Accra	12.4	11.2	5.2	54.0	12.0	5.2	100.0	942	8.5
Volta	20.7	21.9	5.4	44.2	5.1	2.8	100.0	492	6.3
Eastern	15.9	14.4	9.1	53.4	3.9	3.3	100.0	601	7.3
Ashanti	16.8	12.4	6.6	57.5	5.1	1.5	100.0	1,142	7.9
Brong Ahafo	27.4	15.5	7.4	45.3	2.7	1.7	100.0	569	6.0
Northern	78.8	6.2	2.3	9.2	2.0	1.5	100.0	499	0.0
Upper East	72.4	9.8	2.0	12.3	1.9	1.6	100.0	310	0.0
Upper West	63.3	11.5	3.7	18.3	2.3	0.8	100.0	153	0.0
Wealth quintile									
Lowest	63.6	14.1	4.8	16.5	0.6	0.3	100.0	970	0.0
Second	37.8	21.6	6.3	32.9	1.0	0.4	100.0	949	3.2
Middle	26.0	16.0	8.0	47.5	2.0	0.5	100.0	1,071	5.9
Fourth	18.6	14.0	6.9	53.9	5.3	1.3	100.0	1,245	7.6
Highest	8.4	7.2	4.4	58.5	13.2	8.3	100.0	1,457	9.0
Total	28.2	13.9	6.0	44.0	5.2	2.6	100.0	5,691	6.2

[1] Completed grade 6 at the primary level
[2] Completed grade 12 at the secondary level

Table 3.2.2 Educational attainment by background characteristics: men

Percent distribution of men by highest level of schooling attended or completed, and median number of years of schooling, according to background characteristics, Ghana 2003

Background characteristic	Highest level of schooling attended or completed						Total	Number of men	Median years of schooling
	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary			
Age									
15-19	8.1	17.9	8.8	60.3	4.8	0.1	100.0	1,107	7.1
20-24	10.8	9.6	5.8	51.2	17.6	5.0	100.0	684	8.4
25-29	14.5	8.3	5.6	44.4	16.6	10.6	100.0	754	8.5
30-34	19.5	8.1	4.5	49.8	11.9	6.1	100.0	633	9.0
35-39	26.6	8.7	4.5	46.6	7.4	6.2	100.0	498	9.0
40-44	23.4	6.3	2.6	53.6	6.0	8.1	100.0	412	9.3
45-49	26.3	10.2	4.0	43.8	6.1	9.6	100.0	441	9.1
50-54	25.0	8.4	3.4	49.9	3.2	10.1	100.0	294	9.2
55-59	34.5	5.3	4.3	35.4	6.8	13.8	100.0	192	9.0
Residence									
Urban	8.0	6.3	4.9	54.6	15.7	10.4	100.0	2,250	9.2
Rural	25.4	13.9	6.0	47.0	4.8	2.9	100.0	2,765	6.7
Region									
Western	7.3	11.0	9.2	58.3	9.4	4.8	100.0	476	8.5
Central	9.3	14.8	5.8	60.3	4.6	5.2	100.0	370	8.3
Greater Accra	5.8	5.1	2.8	50.4	22.6	13.3	100.0	733	9.9
Volta	7.9	13.7	5.9	58.4	6.1	8.0	100.0	440	8.5
Eastern	7.9	8.9	8.5	62.3	5.0	7.4	100.0	539	8.8
Ashanti	9.4	7.0	5.0	63.8	10.6	4.2	100.0	956	8.7
Brong Ahafo	14.2	12.2	5.2	53.2	8.9	6.3	100.0	528	8.3
Northern	59.5	11.6	4.0	14.6	7.3	3.0	100.0	527	0.0
Upper East	48.9	18.8	5.6	21.7	3.6	1.4	100.0	317	0.0
Upper West	44.9	16.4	4.2	23.4	5.5	5.5	100.0	130	2.2
Wealth quintile									
Lowest	47.9	16.5	5.7	26.1	2.6	1.3	100.0	872	0.8
Second	22.2	18.4	6.9	47.6	3.6	1.2	100.0	903	6.2
Middle	14.7	10.6	7.7	60.5	4.4	2.0	100.0	975	8.0
Fourth	8.7	6.8	5.3	59.2	12.7	7.3	100.0	1,060	8.9
Highest	2.2	3.5	2.8	54.2	21.0	16.3	100.0	1,204	9.9
Total	17.6	10.5	5.5	50.4	9.7	6.3	100.0	5,015	8.3

[1] Completed 6 grade at the primary level
[2] Completed 12 grade at the secondary level

respectively. High dropout of girls at primary and secondary levels may explain some of the differences in educational attainment between women and men. The Ghanaian government has been considering measures to enhance girls' retention rates in schools. One such measure allows girls who drop out of school due to pregnancy to continue with their education after delivery.

The data show that the educational attainment among both women and men has improved over time, as seen by the changes between age cohorts. For example, 40 percent of women in the oldest age cohort (45-49) have no education compared with 12 percent among those age 15-19, while the corresponding percentages for men are 35 and 8 percent, respectively.

Tables 3.2.1 and 3.2.2 also show that educational attainment varies greatly by urban-rural residence. Respondents in rural areas have substantially lower levels of educational attainment than their urban counterparts. Forty percent of women and 25 percent of men in the rural areas have never been to school in contrast to 16 percent of women and 8 percent of men in urban areas.

Educational attainment is highest in Greater Accra and lowest in the Northern region. This is not surprising because Greater Accra is the most urbanized region in the country and has better educational opportunities. Nevertheless, even in this region, twice as many women as men have no education.

Not surprisingly, there is a direct relationship between educational attainment and wealth. Women and men in the highest wealth quintile are most educated, in contrast to respondents with little or no education who are concentrated in the lowest wealth quintile. For example, 8 percent of women and 2 percent of men from the highest wealth quintile have no education, in contrast to 64 and 48 percent of women and men, respectively, in the lowest wealth quintile.

Literacy is widely acknowledged as benefiting both the individual and society and, in particular among women, is associated with a number of positive outcomes, including intergenerational health and nutrition benefits. In the 2003 GDHS, literacy was ascertained by a respondent's ability to read none, part, or all of a simple statement in any language that the respondent is likely to be able to read. The questions on literacy were asked only of respondents who had not attended school or attended primary or middle/JSS only. Respondents for whom no card with the required language was available, and those who were blind or visually impaired, are excluded from the estimation of percent literate, because their literacy cannot be gauged.

Tables 3.3.1 and 3.3.2 show the percent distribution of women and men by level of schooling attended and by level of literacy. More than half (55 percent) of women and nearly three-quarters (73 percent) of men are literate, while 45 percent of women and 27 percent of men cannot read at all. As in the case of educational attainment, men are more likely to be literate than women. Forty percent of rural women compared with 71 percent of urban women are literate. Similarly, 62 percent of rural men compared with 87 percent of urban men are literate.

Regional variations in the level of literacy are marked, ranging from a high of 75 percent among women in Greater Accra to a low of 14 percent among women in the Northern region. Almost nine in ten men in Greater Accra (89 percent) are literate, compared with one in three in the Northern and Upper East regions.

There is a strong relationship between wealth and literacy levels. Women (83 percent) and men (95 percent) categorised in the highest wealth quintile are literate compared with only 20 percent of women and 37 percent of men in the lowest wealth quintile. Four in five women and three in five men in the lowest quintile cannot read at all.

Table 3.3.1 Literacy: women

Percent distribution of women by level of schooling attended and by level of literacy, and percent literate, according to background characteristics, Ghana 2003

Background characteristic	Secondary school or higher	No schooling or primary school: Can read a whole sentence	Can read part of a sentence	Cannot read at all	No card/ visually impaired	Missing	Total	Number of women	Percent literate[1]
Age									
15-19	64.3	4.7	3.4	27.6	0.0	0.0	100.0	1,148	72.4
20-24	60.2	1.2	1.0	37.4	0.0	0.1	100.0	1,012	62.5
25-29	49.0	0.6	0.3	49.9	0.2	0.0	100.0	951	50.0
30-34	45.4	1.1	1.1	52.1	0.0	0.3	100.0	802	47.7
35-39	41.4	0.4	0.9	57.2	0.1	0.0	100.0	722	42.7
40-44	47.1	1.0	0.7	51.0	0.2	0.0	100.0	579	48.9
45-49	41.4	1.4	1.8	55.4	0.0	0.0	100.0	477	44.6
Residence									
Urban	67.7	2.0	1.2	28.9	0.1	0.0	100.0	2,755	71.0
Rural	36.9	1.4	1.6	60.1	0.0	0.1	100.0	2,936	39.9
Region									
Western	53.2	1.1	2.3	43.4	0.0	0.0	100.0	553	56.6
Central	46.7	2.0	1.4	49.9	0.0	0.0	100.0	431	50.1
Greater Accra	71.2	2.2	1.0	25.5	0.1	0.0	100.0	942	74.5
Volta	52.0	2.6	1.5	43.9	0.0	0.0	100.0	492	56.1
Eastern	60.6	2.0	1.5	35.9	0.0	0.0	100.0	601	64.1
Ashanti	64.2	1.5	1.5	32.6	0.0	0.1	100.0	1,142	67.4
Brong Ahafo	49.7	2.0	2.4	45.6	0.3	0.0	100.0	569	54.3
Northern	12.7	0.6	0.3	86.0	0.1	0.4	100.0	499	13.6
Upper East	15.8	0.7	0.1	83.4	0.0	0.0	100.0	310	16.6
Upper West	21.5	1.7	1.1	75.7	0.0	0.0	100.0	153	24.3
Wealth quintile									
Lowest	17.4	1.0	1.1	80.2	0.1	0.2	100.0	970	19.6
Second	34.3	1.3	2.0	62.3	0.2	0.0	100.0	949	37.6
Middle	50.0	1.3	1.6	47.1	0.0	0.0	100.0	1,071	52.9
Fourth	60.5	2.4	1.7	35.1	0.1	0.1	100.0	1,245	64.8
Highest	80.0	2.1	0.7	17.2	0.0	0.0	100.0	1,457	82.8
Total	51.8	1.7	1.4	45.0	0.1	0.1	100.0	5,691	55.0

[1] Refers to women who attended secondary school or higher and women who can read a whole sentence or part of a sentence Excludes from the denominator those women for whom no card with required language was available and those who are blind or visually impaired.

Table 3.3.2 Literacy: men

Percent distribution of men by level of schooling attended and by level of literacy, and percent literate, according to background characteristics, Ghana 2003

Background characteristic	Secondary school or higher	No schooling or primary school: Can read a whole sentence	Can read part of a sentence	Cannot read at all	No card/ visually impaired	Missing	Total	Number of men	Percent literate[1]
Age									
15-19	65.2	8.5	5.6	20.6	0.0	0.1	100.0	1,107	79.4
20-24	73.8	1.6	3.6	20.6	0.3	0.0	100.0	684	79.3
25-29	71.7	0.9	1.6	25.7	0.0	0.1	100.0	754	74.2
30-34	67.8	1.1	2.0	27.9	1.0	0.1	100.0	633	71.8
35-39	60.2	1.8	2.1	34.8	1.1	0.0	100.0	498	64.8
40-44	67.7	0.8	1.7	28.8	0.8	0.2	100.0	412	70.9
45-49	59.5	2.2	2.0	35.3	1.2	0.0	100.0	441	64.3
50-54	63.2	3.0	1.6	31.2	1.0	0.0	100.0	294	68.5
55-59	56.0	2.9	2.2	38.1	0.8	0.0	100.0	192	61.6
Residence									
Urban	80.7	2.4	3.1	13.0	0.8	0.0	100.0	2,250	86.9
Rural	54.8	3.7	2.8	38.3	0.3	0.1	100.0	2,765	61.5
Region									
Western	72.4	4.1	2.7	20.4	0.3	0.0	100.0	476	79.5
Central	70.1	2.6	2.5	24.9	0.0	0.0	100.0	370	75.1
Greater Accra	86.3	1.2	1.0	10.9	0.6	0.0	100.0	733	89.1
Volta	72.5	5.0	2.5	19.9	0.2	0.0	100.0	440	80.1
Eastern	74.8	3.4	3.2	18.7	0.0	0.0	100.0	539	81.3
Ashanti	78.6	2.4	3.0	15.9	0.1	0.0	100.0	956	84.1
Brong Ahafo	68.4	3.8	4.6	23.2	0.0	0.0	100.0	528	76.8
Northern	24.9	4.5	4.1	65.8	0.2	0.6	100.0	527	33.7
Upper East	26.7	2.2	2.9	62.5	5.8	0.0	100.0	317	33.7
Upper West	34.5	2.6	4.4	58.2	0.2	0.0	100.0	130	41.6
Wealth quintile									
Lowest	29.9	3.7	3.1	62.3	0.6	0.3	100.0	872	37.1
Second	52.5	5.4	3.5	38.3	0.3	0.0	100.0	903	61.6
Middle	67.0	3.1	3.5	25.9	0.6	0.0	100.0	975	74.0
Fourth	79.2	2.8	3.2	14.3	0.5	0.0	100.0	1,060	85.6
Highest	91.5	1.3	1.8	4.9	0.6	0.0	100.0	1,204	95.1
Total	66.4	3.1	2.9	27.0	0.5	0.1	100.0	5,015	72.9

[1] Refers to men who attended secondary school or higher and men who can read a whole sentence or part of a sentence. Excludes from the denominator those men for whom no card with required language was available and those who are blind or visually impaired.

3.3 ACCESS TO MASS MEDIA

The 2003 GDHS collected information on respondents' exposure to both broadcast and print media. This information is a means of assessing the potential effectiveness of using these media to broadcast messages on such important topics as reproductive health and HIV/AIDS. Tables 3.4.1 and 3.4.2 show that access to mass media, especially the broadcast media, is generally high in Ghana. Seventy-four percent of women and 89 percent of men listen to the radio at least once a week, and 44 percent of women and 51 percent of men watch television at least once a week. Exposure to the print

Table 3.4.1 Exposure to mass media: women

Percentage of women who usually read a newspaper at least once a week, watch television at least once a week, and listen to the radio at least once a week, by background characteristics, Ghana 2003

Background characteristic	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	All three media	No media	Number of women
Age						
15-19	19.6	54.5	73.0	14.7	18.5	1,148
20-24	14.3	51.9	78.0	11.4	16.5	1,012
25-29	9.6	43.7	75.7	8.3	20.5	951
30-34	7.7	36.8	72.0	6.7	25.9	802
35-39	9.3	35.9	71.0	7.8	25.2	722
40-44	9.9	37.3	74.2	7.6	22.4	579
45-49	11.7	33.6	73.3	9.3	23.7	477
Residence						
Urban	21.3	66.0	80.9	17.6	12.2	2,755
Rural	4.0	23.1	67.7	2.6	29.6	2,936
Region						
Western	16.7	45.5	76.0	12.8	19.4	553
Central	7.5	35.2	61.2	4.7	31.5	431
Greater Accra	26.7	74.4	85.4	22.6	8.3	942
Volta	10.9	26.5	73.9	6.4	21.2	492
Eastern	10.3	44.5	80.4	8.8	15.9	601
Ashanti	12.9	54.0	81.6	10.6	13.2	1,142
Brong Ahafo	7.0	40.9	80.0	5.4	16.1	569
Northern	3.0	15.6	45.9	2.5	51.4	499
Upper East	2.3	16.8	62.6	2.1	34.7	310
Upper West	2.4	10.7	46.7	1.1	51.7	153
Education						
No education	0.0	18.4	56.7	0.0	40.1	1,608
Primary	1.4	34.4	70.6	0.6	24.8	1,135
Middle/JSS	12.6	56.1	82.8	9.4	11.8	2,279
Secondary+	60.1	79.7	92.2	51.0	1.7	669
Wealth quintile						
Lowest	1.4	7.2	51.2	0.1	47.1	970
Second	1.9	16.5	69.0	1.2	29.0	949
Middle	4.3	33.4	74.2	2.5	22.0	1,071
Fourth	10.0	53.6	79.4	6.5	14.2	1,245
Highest	34.5	85.5	88.1	30.3	4.2	1,457
Total	12.4	43.9	74.1	9.9	21.2	5,691

media is relatively low. Twelve percent of women and 28 percent of men read a newspaper at least once a week. Men are twice as likely as women to be exposed to all three media sources (23 and 10 percent, respectively).

Media exposure is higher among younger women (age 15-24) than older women (25 years and above). However, among men, exposure is lowest among those age 15-19 and highest among those age 20-29. Urban women and men tend to have greater exposure to all three media sources than their rural counterparts. The high level of illiteracy among rural women is reflected in the lower proportion of these women (4 percent) exposed to the print media than urban women (21 percent).

Table 3.4.2 Exposure to mass media: men

Percentage of men who usually read a newspaper at least once a week, watch television at least once a week, and listen to the radio at least once a week, by background characteristics, Ghana 2003

Background characteristic	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	All three media	No media	Number of men
Age						
15-19	21.8	55.2	84.0	18.5	12.2	1,107
20-24	30.4	60.3	91.8	24.5	5.0	684
25-29	33.4	57.2	93.2	28.1	4.9	754
30-34	30.0	48.4	90.4	24.0	7.1	633
35-39	28.7	44.1	89.8	22.7	8.6	498
40-44	31.0	41.4	89.7	23.0	8.9	412
45-49	30.0	43.9	87.5	22.4	9.0	441
50-54	25.3	38.8	90.7	19.6	7.9	294
55-59	30.0	41.7	92.8	24.6	7.2	192
Residence						
Urban	46.4	76.3	92.4	40.7	3.7	2,250
Rural	13.8	29.7	86.9	8.4	11.7	2,765
Region						
Western	31.4	52.6	90.5	21.7	4.7	476
Central	21.4	37.3	82.3	12.2	13.2	370
Greater Accra	55.9	78.8	95.2	49.6	2.1	733
Volta	20.7	33.5	89.0	13.6	8.5	440
Eastern	27.2	53.6	95.9	23.3	2.8	539
Ashanti	35.8	66.8	97.5	30.3	1.6	956
Brong Ahafo	24.4	51.5	94.0	20.4	4.6	528
Northern	8.0	22.6	67.7	5.6	28.7	527
Upper East	8.1	28.9	80.9	6.1	14.5	317
Upper West	9.0	12.8	74.9	3.5	24.3	130
Education						
No education	0.4	17.8	75.4	0.4	22.9	881
Primary	3.6	34.0	82.0	2.2	14.5	803
Middle/JSS	25.5	56.2	94.0	19.7	3.5	2,165
Secondary+	72.2	76.7	96.4	60.0	1.1	1,165
Wealth quintile						
Lowest	4.4	10.4	73.8	1.3	24.9	872
Second	8.9	20.4	89.2	3.7	9.7	903
Middle	16.0	44.5	91.6	9.5	5.0	975
Fourth	37.1	67.9	92.2	28.3	4.2	1,060
Highest	63.0	92.3	96.3	58.9	0.7	1,204
Total	28.4	50.6	89.3	22.9	8.1	5,015

More than one in five women and one in two men in Greater Accra are exposed to all three media sources. Media exposure is markedly lower in the three northern regions and is especially low in the Upper West, where only 1 percent of women and 4 percent of men are exposed to all three media sources. Exposure to mass media is closely related to the level of education of respondents. Half of all women and three-fifths of all men with at least secondary education are exposed to all three media sources. Three-fifths and nearly three-quarters of highly educated women and men read a newspaper at least once a week.

There is a high correlation between wealth and media exposure, with the gap between those in the highest quintile and all other quintiles being especially wide. For example, 30 percent of women in the highest wealth quintile are exposed to all three media compared with 7 percent or less of women in the other four quintiles.

Since 1998, the proportions of both women and men who have no media exposure have declined markedly, from 30 percent to 21 percent among women and 15 percent to 8 percent among men (GSS and MI, 1999). However, the proportion of women and men who report reading the newspaper and watching television at least once a week has declined, while the proportion who reported listening to the radio has increased. Some of these reported differences by type of media source may be due to a change in the way the questions were worded between the two surveys.

3.4 EMPLOYMENT

3.4.1 Employment Status

Tables 3.5.1 and 3.5.2 present the percent distribution of women and men by employment status, according to background characteristics. There is little difference in the overall employment status of women and men. Three-fourths of women and men reported being currently employed, while 3 percent reported being employed in the 12 months preceding the survey, but not employed at the time the survey was fielded. About one-fifth of women and men were not employed in the 12 months prior to the survey.

Current employment increases with age from 33 and 26 percent among the youngest cohort of women and men, respectively, to about 95 percent among the oldest cohort of respondents. Low current employment among young women and men may be due to the fact that a proportionately larger number of young people are still in school. Currently and formerly married women are more likely to be currently employed than never married women. However, among men, married men are more likely to be employed than formerly married men and those never married.

Current employment rises with the number of living children. For example, about one in two respondents with no children are currently employed compared with 94 percent of women and 98 percent of men with five or more children. Current employment is also higher among rural respondents than urban respondents. This could be due to the fact that it is easier to find employment in the largely informal sector in the rural areas than in urban areas. Unemployment could also be higher in the urban areas because there is greater demand for skilled labour, which is harder to acquire.

There is little variation in employment status of respondents by region. More than 80 percent of women in the Upper West and Volta regions and men in the Upper East and Northern regions are currently employed compared with about 70-80 percent of respondents in all other regions.

Current employment is inversely related to education, falling from 86 percent among women with no education to 60 percent among women with at least secondary education. The corresponding data for men is 97 and 67 percent, respectively. A similar pattern is seen by wealth quintile for both women and men.

Table 3.5.1 Employment status: women

Percent distribution of women by employment status, according to background characteristics, Ghana 2003

Background Characteristic	Employed in the 12 months preceding the survey		Not employed in the 12 months preceding the survey	Total	Number of women
	Currently employed	Not currently employed			
Age					
15-19	33.0	3.3	63.6	100.0	1,148
20-24	66.5	4.7	28.8	100.0	1,012
25-29	86.8	2.6	10.5	100.0	951
30-34	90.4	2.1	7.4	100.0	802
35-39	94.7	1.5	3.6	100.0	722
40-44	92.3	1.9	5.8	100.0	579
45-49	94.8	0.5	4.7	100.0	477
Marital status					
Never married	42.0	3.8	54.2	100.0	1,616
Married or living together	88.3	2.2	9.4	100.0	3,549
Divorced/separated/widowed	87.7	2.4	10.0	100.0	526
Number of living children					
0	48.2	3.7	48.1	100.0	1,872
1-2	82.2	3.3	14.6	100.0	1,602
3-4	91.3	1.5	7.0	100.0	1,227
5+	94.3	1.3	4.4	100.0	990
Residence					
Urban	69.2	3.4	27.4	100.0	2,755
Rural	80.6	2.0	17.3	100.0	2,936
Region					
Western	72.3	1.1	26.6	100.0	553
Central	79.1	5.9	15.0	100.0	431
Greater Accra	71.1	4.2	24.7	100.0	942
Volta	82.2	1.2	16.6	100.0	492
Eastern	73.0	1.7	25.3	100.0	601
Ashanti	71.3	4.0	24.6	100.0	1,142
Brong Ahafo	79.2	1.1	19.7	100.0	569
Northern	79.5	0.8	19.7	100.0	499
Upper East	73.7	2.5	23.7	100.0	310
Upper West	85.1	1.0	13.9	100.0	153
Education					
No education	86.2	1.6	12.1	100.0	1,608
Primary	76.5	3.3	20.1	100.0	1,135
Middle/JSS	70.9	2.9	26.2	100.0	2,279
Secondary+	60.3	3.3	36.4	100.0	669
Wealth quintile					
Lowest	83.5	1.3	15.0	100.0	970
Second	82.4	2.1	15.5	100.0	949
Middle	76.5	1.8	21.8	100.0	1,071
Fourth	71.9	3.8	24.3	100.0	1,245
Highest	66.4	3.7	29.9	100.0	1,457
Total	75.1	2.7	22.2	100.0	5,691

Table 3.5.2 Employment status: men

Percent distribution of men by employment status, according to background characteristics, Ghana 2003

Background characteristic	Employed in the 12 months preceding the survey: Currently employed	Employed in the 12 months preceding the survey: Not currently employed	Not employed in the 12 months preceding the survey	Missing/ don't know	Total	Number of men
Age						
15-19	26.0	4.3	68.3	1.5	100.0	1,107
20-24	66.8	5.5	27.4	0.3	100.0	684
25-29	88.8	4.6	6.6	0.0	100.0	754
30-34	94.8	2.6	2.4	0.2	100.0	633
35-39	97.0	1.6	1.4	0.0	100.0	498
40-44	97.7	0.9	1.4	0.0	100.0	412
45-49	96.7	1.4	1.9	0.0	100.0	441
50-54	96.7	2.1	1.2	0.0	100.0	294
55-59	94.4	1.0	4.6	0.0	100.0	192
Marital status						
Never married	45.9	5.3	47.9	0.9	100.0	2,042
Married or living together	96.9	1.6	1.5	0.0	100.0	2,671
Divorced/separated/widowed	88.1	4.5	7.4	0.0	100.0	302
Number of living children						
0	50.8	5.3	43.1	0.8	100.0	2,300
1-2	95.1	2.2	2.7	0.0	100.0	981
3-4	96.4	1.6	1.8	0.1	100.0	816
5+	98.3	0.8	0.9	0.0	100.0	917
Residence						
Urban	69.4	4.1	25.9	0.6	100.0	2,250
Rural	80.6	2.6	16.6	0.3	100.0	2,765
Region						
Western	73.3	3.8	22.7	0.2	100.0	476
Central	74.4	2.9	21.4	1.3	100.0	370
Greater Accra	72.3	5.2	21.9	0.6	100.0	733
Volta	73.3	2.7	23.6	0.4	100.0	440
Eastern	76.9	2.0	20.8	0.2	100.0	539
Ashanti	74.6	2.7	22.2	0.5	100.0	956
Brong Ahafo	70.6	3.3	25.8	0.3	100.0	528
Northern	85.6	2.7	11.6	0.0	100.0	527
Upper East	82.5	2.5	15.0	0.0	100.0	317
Upper West	78.3	6.2	15.4	0.0	100.0	130
Education						
No education	97.4	1.2	1.4	0.0	100.0	881
Primary	71.6	2.6	25.7	0.2	100.0	803
Middle/JSS	73.0	3.1	23.3	0.5	100.0	2,165
Secondary +	66.6	5.5	27.3	0.6	100.0	1,165
Wealth quintile						
Lowest	85.6	3.0	11.4	0.0	100.0	872
Second	80.4	2.1	17.4	0.1	100.0	903
Middle	74.6	2.4	22.3	0.7	100.0	975
Fourth	69.8	4.1	25.9	0.2	100.0	1,060
Highest	70.7	4.2	24.3	0.8	100.0	1,204
Total	75.6	3.3	20.8	0.4	100.0	5,015

3.4.2 Occupation

Tables 3.6.1 and 3.6.2 show data on employed women and men by their occupation, according to background characteristics. More than one-third of working women (36 percent) and half of men (50 percent) are employed in the agricultural (Figure 3.1). Four times as many women (42 percent) as men (11 percent) work in sales and services. Sixteen percent of employed women and 23 percent of employed men are skilled manual workers. Three times as many men (10 percent) as women (3 percent) are engaged in professional, technical, and managerial positions.

Occupation varies by age groups. Among women, the proportion engaged in agriculture or in professional, technical, or managerial occupations, increases with age. For example, one in four working women age 15-19 are in agricultural occupations compared with nearly one in two women age 45-49. On the other hand, the proportion engaged in sales and services and in skilled manual labour decreases with age. A similar pattern is observed for men for skilled manual labour only.

A higher proportion of never-married women than ever-married women are engaged in most occupations with the exception of agriculture, which accounts for two in five currently married women who are working compared with more than one in four formerly married women and 12 percent of never-married women. There is no clear pattern in occupation by marital status among men. Among working men, about half of those who are currently or formerly married are engaged in the agricultural sector compared to two in five never-married men. Three-tenths of never-married men are engaged as skilled manual labour, compared with one-fifth of ever married men. There is a direct relationship between the number of living children and agricultural occupation among both women and men. The proportion engaged in agriculture increases with the number of living children. Among women, the proportion engaged in all other occupations is higher among those with no children than among those with one or more children.

Not surprisingly, most working women and men in rural areas are engaged in the agricultural sector, in contrast to women and men in urban areas, who are mostly engaged in sales and service and skilled manual work. Agriculture is the predominant occupation among women in the Northern, Upper East, Brong Ahafo, and Upper West regions. In addition to these regions, the majority of men in the Eastern, Volta, and Central regions are also employed in the agricultural sector. In contrast, the majority of working women living in Greater Accra, Ashanti, and Eastern regions are in sales and service jobs. Among working men, the highest proportions engaged in the professional, technical and managerial, clerical, sales and service, and skilled manual work are from Greater Accra.

Education is related to the type of occupation of respondents. Fifty-nine percent of working women and 83 percent of working men who have never been to school are engaged in agriculture. On the other hand, the majority of women and men with secondary or higher education are employed in non-agricultural occupations. Women and men in the lowest quintile are predominantly engaged in agriculture, while those in the highest wealth quintile are mostly engaged in sales and service, skilled manual, or professional, technical, and managerial work.

Table 3.6.1 Occupation: women

Percent distribution of women employed in the 12 months preceding the survey by occupation, according to background characteristics, Ghana 2003

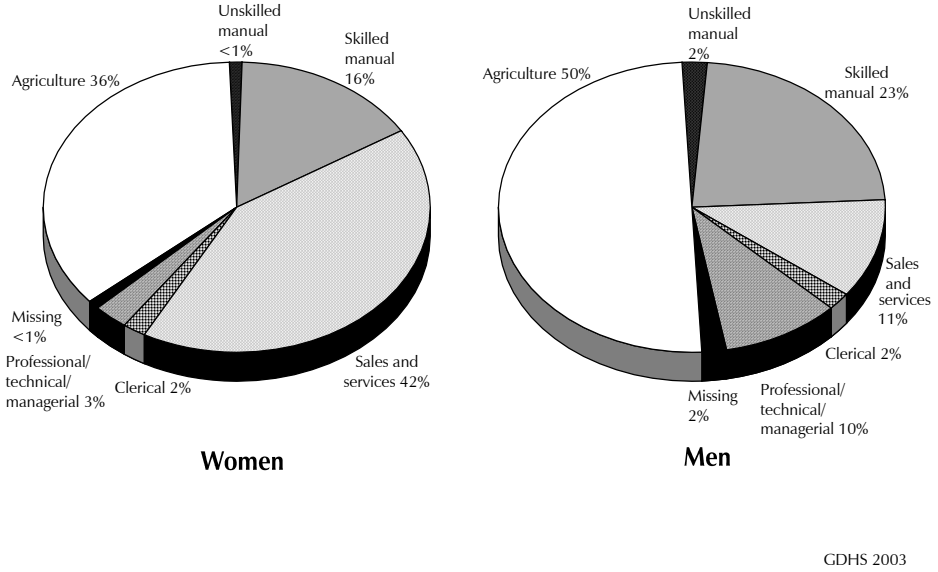
Background characteristic	Professional/ technical/ managerial	Clerical	Sales and services	Skilled manual	Unskilled manual	Agriculture	Missing	Total	Number of women
Age									
15-19	0.6	1.5	50.2	21.2	0.0	25.9	0.5	100.0	417
20-24	1.9	3.8	46.2	20.8	0.0	26.6	0.8	100.0	721
25-29	2.4	1.2	43.6	18.3	0.8	33.2	0.6	100.0	851
30-34	3.3	0.9	43.3	14.2	0.7	37.1	0.5	100.0	743
35-39	4.1	1.2	40.5	14.0	0.1	39.1	0.9	100.0	694
40-44	4.1	1.0	36.5	13.9	0.4	43.2	0.9	100.0	545
45-49	5.6	1.0	31.8	12.0	0.1	48.0	1.6	100.0	455
Marital status									
Never married	4.0	4.7	55.2	22.3	0.6	12.2	0.9	100.0	740
Married or living together	2.9	1.0	38.0	14.6	0.3	42.4	0.8	100.0	3,213
Dvorced/separated/widowed	2.9	0.6	48.4	19.4	0.3	27.5	0.8	100.0	473
Number of living children									
0	4.8	4.5	52.5	21.9	0.4	15.5	0.5	100.0	971
1-2	2.3	0.9	48.6	17.7	0.2	29.6	0.7	100.0	1,369
3-4	3.7	0.9	38.8	14.8	0.5	40.8	0.6	100.0	1,140
5+	1.9	0.2	25.8	10.9	0.3	59.5	1.4	100.0	947
Residence									
Urban	4.5	3.1	61.3	21.0	0.3	9.4	0.4	100.0	2,001
Rural	1.9	0.2	26.1	12.7	0.4	57.5	1.1	100.0	2,425
Region									
Western	4.4	1.4	31.6	21.6	0.0	39.8	1.2	100.0	406
Central	1.9	0.3	40.7	19.6	0.0	37.5	0.0	100.0	366
Greater Accra	5.0	4.9	60.0	24.3	0.0	5.3	0.4	100.0	709
Volta	2.3	0.7	36.8	17.8	0.3	41.5	0.7	100.0	410
Eastern	4.7	1.5	50.8	9.4	0.3	33.3	0.0	100.0	449
Ashanti	2.3	1.5	52.3	13.1	0.5	28.2	2.1	100.0	860
Brong Ahafo	2.3	0.8	34.2	8.6	0.0	53.3	0.8	100.0	457
Northern	2.5	0.0	18.1	17.1	1.2	60.5	0.5	100.0	401
Upper East	2.0	0.0	30.6	12.3	0.0	55.1	0.0	100.0	236
Upper West	0.6	0.5	21.1	23.6	3.1	51.1	0.0	100.0	131
Education									
No education	0.1	0.0	24.4	14.8	0.6	59.1	0.9	100.0	1,412
Primary	0.3	0.1	41.3	15.7	0.1	41.6	0.8	100.0	906
Middle/JSS	1.7	0.6	56.8	18.8	0.3	21.2	0.8	100.0	1,683
Secondary+	24.7	13.6	43.7	14.1	0.0	3.3	0.6	100.0	425
Wealth quintile									
Lowest	0.3	0.0	14.9	11.9	1.0	71.5	0.5	100.0	823
Second	1.0	0.0	24.3	11.0	0.2	63.1	0.5	100.0	802
Middle	1.6	0.4	36.8	16.0	0.0	43.7	1.4	100.0	838
Fourth	3.4	1.4	61.0	21.8	0.6	10.9	1.0	100.0	943
Highest	8.0	5.1	64.7	19.7	0.0	1.8	0.7	100.0	1,020
Total	3.1	1.5	42.0	16.4	0.3	35.8	0.8	100.0	4,426

Table 3.6.2 Occupation: men

Percent distribution of men employed in the 12 months preceding the survey by occupation, according to background characteristics, Ghana 2003

Background characteristic	Professional/ technical/ managerial	Clerical	Sales and services	Skilled manual	Unskilled manual	Agriculture	Missing	Total	Number of men
Age									
15-19	2.6	0.3	8.1	25.2	2.0	57.6	4.1	100.0	335
20-24	7.2	2.3	11.1	33.0	3.0	40.1	3.2	100.0	494
25-29	10.5	2.2	12.7	27.8	1.7	41.9	3.2	100.0	705
30-34	8.7	2.6	13.5	27.3	1.0	46.2	0.6	100.0	617
35-39	10.5	1.4	10.9	20.9	1.9	51.6	2.8	100.0	491
40-44	13.7	2.8	7.3	16.1	0.4	59.6	0.3	100.0	406
45-49	14.1	2.1	8.3	18.8	0.5	55.0	1.3	100.0	433
50-54	13.1	2.3	12.5	13.7	1.4	55.4	1.6	100.0	290
55-59	17.7	1.0	13.9	7.9	1.2	57.2	1.1	100.0	183
Marital status									
Never married	9.6	2.6	11.6	29.6	2.2	40.1	4.3	100.0	1,045
Married or living together	11.1	1.8	10.4	20.9	0.9	53.7	1.2	100.0	2,630
Divorced/separated/widowed	6.7	2.3	14.6	20.7	4.1	49.5	2.1	100.0	279
Number of living children									
0	9.9	2.5	12.2	28.6	2.5	40.5	3.8	100.0	1,291
1-2	10.1	1.6	12.2	27.2	1.5	45.2	2.1	100.0	955
3-4	10.7	2.0	11.9	21.0	0.7	53.0	0.7	100.0	800
5+	11.1	1.8	7.3	13.1	0.6	65.2	1.0	100.0	909
Residence									
Urban	18.0	3.8	21.4	36.4	2.1	14.9	3.5	100.0	1,654
Rural	4.9	0.7	3.5	13.7	1.1	74.9	1.1	100.0	2,300
Region									
Western	7.2	2.4	11.4	26.2	1.8	45.8	5.0	100.0	367
Central	9.5	1.4	4.5	29.5	1.0	52.0	2.0	100.0	286
Greater Accra	15.3	6.1	25.2	36.6	2.6	10.6	3.7	100.0	568
Volta	11.8	1.1	4.9	20.7	1.2	58.2	2.1	100.0	334
Eastern	14.0	1.3	9.0	21.7	0.5	52.5	0.9	100.0	425
Ashanti	12.6	1.8	11.5	31.7	3.0	37.6	1.9	100.0	739
Brong Ahafo	9.8	1.4	8.0	12.5	0.9	65.6	1.7	100.0	390
Northern	4.5	0.4	5.6	8.4	0.4	80.2	0.4	100.0	465
Upper East	4.0	0.7	12.2	13.0	0.0	69.0	1.1	100.0	270
Upper West	8.1	0.0	6.8	7.5	1.0	75.3	1.3	100.0	110
Education									
No education	0.5	0.3	7.4	6.5	0.8	83.1	1.3	100.0	869
Primary	0.8	0.7	4.8	22.1	0.7	67.1	3.8	100.0	595
Middle/JSS	4.8	1.7	11.3	33.7	2.5	43.7	2.3	100.0	1,649
Secondary+	38.4	5.3	18.6	20.4	0.8	15.1	1.3	100.0	840
Wealth quintile									
Lowest	2.5	0.1	2.0	5.4	0.3	88.8	0.9	100.0	772
Second	2.8	0.3	2.6	9.3	0.7	82.8	1.5	100.0	745
Middle	5.6	0.7	6.0	20.2	1.7	63.3	2.6	100.0	751
Fourth	14.9	3.2	15.5	40.4	2.5	20.2	3.2	100.0	784
Highest	23.5	5.2	26.0	37.3	2.0	3.8	2.2	100.0	902
Total	10.4	2.0	11.0	23.2	1.5	49.8	2.1	100.0	3,954

Figure 3.1 **Occupation of Women Age 15-49 and Men Age 15-59**



3.4.3 Type of Employer, Form of Earnings, and Continuity of Employment

Tables 3.7.1, 3.7.2, and Figure 3.2, present data on women and men by type of employment. The majority of women and men (about 60 percent) who work receive cash earnings. A significant proportion of women (25 percent) and men (30 percent) receive earnings in cash and in-kind. Eight percent of women and 5 percent of men are not paid at all.

Three-quarters of women in both agricultural and non-agricultural occupations are self-employed, 14 percent are employed by a non-family member, and 10 percent are employed by a family member. Three-quarters of employed women work all year, while one in five works seasonally. Most women in both agricultural and non-agricultural occupations work all year; however, one in three women who work in agriculture and 13 percent of women engaged in non-agricultural occupations work seasonally. Similar information was not collected for men.

Table 3.7.1 Type of employment: women

Percent distribution of women employed in the 12 months preceding the survey by type of earnings, type of employer, and continuity of employment, according to type of employment (agricultural or non-agricultural), Ghana 2003

Employment characteristic	Agricultural work	Non-agricultural work	Total
Type of earnings			
Cash only	30.9	78.2	61.0
Cash and in-kind	48.4	12.2	25.3
In-kind only	12.2	2.4	6.0
Not paid	8.5	7.3	7.7
Total	100.0	100.0	100.0
Type of employer			
Employed by family member	17.3	5.5	9.8
Employed by non-family member	5.5	18.1	13.9
Self-employed	77.0	75.8	75.9
Missing	0.2	0.6	0.5
Total	100.0	100.0	100.0
Continuity of employment			
All year	65.3	83.1	76.6
Seasonal	34.0	12.9	20.5
Occasional	0.6	3.9	2.8
Missing	0.1	0.0	0.1
Total	100.0	100.0	100.0
Number of women	1,583	2,809	4,426

Note: Total includes 30 women with missing information on type of employment who are not shown separately.

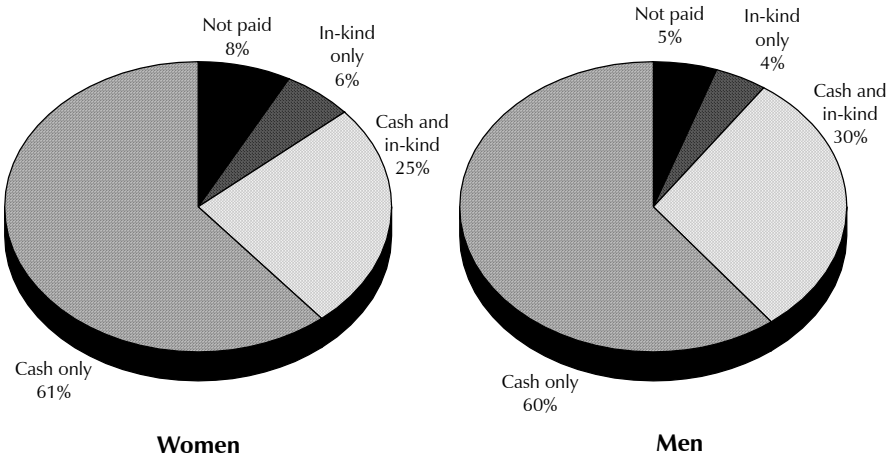
Table 3.7.2 Type of employment: men

Percent distribution of men employed in the 12 months preceding the survey by type of earnings, according to type of employment (agricultural or non-agricultural), Ghana 2003

Type of Earnings	Agricultural work	Non-agricultural work	Total
Cash only	36.0	84.3	60.2
Cash and in-kind	51.6	8.6	29.9
In-kind only	7.5	1.5	4.4
Not paid	5.0	5.7	5.2
Missing	0.0	0.0	0.2
Total	100.0	100.0	100.0
Number of men	1,970	1,901	3,954

Note: Total includes 78 men with missing information on type of employment who are not shown separately.

Figure 3.2 **Type of Earnings of Employed Women Age 15-49 and Men Age 15-59**



Note: Total may not add to 100 due to rounding.

GDHS 2003

3.4.4 Control Over Earnings and Women's Contribution to Household Expenditures

Women's autonomy is dependent not only on their access to income but also on the amount of control they have over their earnings. Employed women who earn cash were asked about who mainly decides how their income is used. Table 3.8 shows that women in Ghana have considerable autonomy over the use of their earnings. Nearly three-fourths of women who earn cash report that they are solely responsible for decisions on the use of their earnings, while 18 percent report that they jointly decide how the money should be spent either with their husband or someone else. Almost one in ten women stated that they have no say in how their earnings are spent.

Sole decisionmaking rises with age. One in five never-married women have no say in how their earnings are used, while a similar proportion of currently married women report that they make joint decision. There is little difference in sole decisionmaking by the number of children, but joint decisionmaking rises with the number of children women have. On the other hand, there is an inverse relationship between the number of children women have and the percentage who have no say in how their earnings are spent. For example, twice as many women who have no children have no say in how their earnings are spent compared with women with one or more children.

Autonomy over cash earnings is higher among urban than rural women, and relatively high among women residing in Greater Accra, Western, and Upper East regions, and lowest among women in the Central region. Education and wealth exert only a small influence on control over earnings. For example, 78 percent of women with at least secondary education or in the highest wealth quintile compared with 70 percent of women with no education or in the lowest wealth quintile have the sole say in how their earnings are spent.

Table 3.8 Decision on use of earnings and contribution of earnings to household expenditures

Percent distribution of women employed in the 12 months preceding the survey receiving cash earnings by person who decides how earnings are to be used and by proportion of household expenditures met by earnings, according to background characteristics, Ghana 2003

Background characteristic	Person who decides how earnings are used				Proportion of household expenditures met by earnings					
	Woman only	Jointly[1]	Someone else only[2]	Total	Almost none/none	Less than half	About half or more than half	All	Total	Number of women
Age										
15-19	62.6	9.3	28.1	100.0	47.6	27.2	21.6	3.5	100.0	228
20-24	69.9	16.7	13.3	100.0	19.9	34.0	39.3	6.9	100.0	584
25-29	72.1	18.3	9.5	100.0	11.9	37.0	44.2	6.8	100.0	776
30-34	75.4	17.3	7.3	100.0	9.1	26.3	52.1	12.5	100.0	682
35-39	71.2	20.9	7.7	100.0	4.4	26.0	52.6	16.8	100.0	638
40-44	75.2	19.1	5.7	100.0	4.6	22.1	56.1	17.1	100.0	497
45-49	81.0	15.5	3.2	100.0	3.4	20.9	60.8	14.8	100.0	417
Marital status										
Never married	75.5	5.4	19.1	100.0	37.3	26.8	27.9	8.1	100.0	498
Married or living together	69.1	22.0	8.8	100.0	7.8	31.6	51.4	9.2	100.0	2,887
Divorced/separated/widowed	96.2	2.1	1.7	100.0	8.1	10.2	50.7	31.1	100.0	436
Number of living children										
0	75.2	8.4	16.4	100.0	30.5	28.3	32.4	8.7	100.0	695
1-2	74.9	16.3	8.8	100.0	10.5	32.0	48.3	9.2	100.0	1,246
3-4	71.2	21.4	7.4	100.0	6.4	26.5	54.0	13.1	100.0	1,027
5+	70.8	22.4	6.7	100.0	4.3	26.0	54.3	15.3	100.0	853
Residence										
Urban	78.0	12.9	9.0	100.0	14.5	27.9	46.1	11.5	100.0	1,782
Rural	68.7	21.7	9.6	100.0	9.1	29.1	50.2	11.5	100.0	2,039
Region										
Western	82.7	9.6	7.7	100.0	12.6	25.1	55.4	6.9	100.0	371
Central	54.0	34.9	11.1	100.0	11.7	21.8	45.4	21.0	100.0	308
Greater Accra	84.8	4.6	10.6	100.0	12.9	24.0	49.7	13.4	100.0	616
Volta	76.1	10.9	13.0	100.0	6.4	22.6	56.8	14.3	100.0	378
Eastern	77.3	19.0	3.7	100.0	7.5	14.9	60.0	17.7	100.0	418
Ashanti	66.1	25.3	8.4	100.0	16.4	34.1	42.3	7.2	100.0	791
Brong Ahafo	59.4	33.8	6.5	100.0	12.2	28.5	45.7	13.3	100.0	390
Northern	79.0	9.8	11.2	100.0	4.6	47.6	41.9	5.9	100.0	310
Upper East	82.1	3.7	14.2	100.0	19.2	45.5	30.6	4.7	100.0	165
Upper West	66.3	16.0	17.7	100.0	4.6	42.7	46.6	6.2	100.0	74
Education										
No education	70.3	18.9	10.8	100.0	8.3	32.9	49.1	9.7	100.0	1,144
Primary	72.7	18.1	9.1	100.0	12.0	25.0	50.5	12.4	100.0	785
Middle/JSS	73.9	17.5	8.3	100.0	13.5	26.4	46.9	13.1	100.0	1,499
Secondary+	78.0	13.0	9.1	100.0	13.4	30.9	46.8	8.9	100.0	393
Wealth quintile										
Lowest	70.2	17.7	12.1	100.0	8.1	33.5	50.4	8.0	100.0	610
Second	63.8	24.6	11.4	100.0	10.3	29.0	49.5	11.0	100.0	707
Middle	74.6	17.9	7.5	100.0	10.7	27.1	48.0	14.3	100.0	746
Fourth	75.6	15.2	9.0	100.0	12.9	25.8	49.4	11.9	100.0	837
Highest	78.3	14.0	7.7	100.0	14.7	28.5	45.2	11.6	100.0	921
Total	73.0	17.6	9.3	100.0	11.6	28.5	48.3	11.5	100.0	3,821

Note: Percentages may not add to 100 due to the exclusion of women with missing information.
[1] With husband or someone else
[2] Includes husband

Information on the contribution of respondent's income to household expenditures was also gathered in the 2003 GDHS. It is expected that employment and earnings are more likely to empower women if their earnings are important for meeting the needs of their households. However, often women's income is so small that it can barely meet household needs. Table 3.8 shows that the earnings of very young women (age 15-19) are less likely to contribute a major share of household expenditures than those of older women (20-49). Not surprisingly, working women who are divorced, separated, or widowed tend to contribute to a major portion of household expenditure. Women's contribution to household expenditure increases with the number of children they have. There is little difference between urban and rural women's contribution to household expenditure. The majority of working women in all regions except Upper East, Northern, and Ashanti regions meet half or more or all of household expenditure with their earnings. There is no clear relationship between women's contribution to household expenditure and education or wealth.

Table 3.9 shows the relationship between women's control over their earnings and their contribution to household expenditure by marital status. The table shows that women who are not currently married (that is, those who have never married, or are divorced, separated, or widowed) are somewhat more likely (85 percent) than currently married women (69 percent) to make sole decisions on how their earnings are spent. Nine percent of married women do not have a say in how their earnings are spent, with 8 percent reporting that their husbands alone decide on how their earnings are spent. On the other hand, 11 percent of unmarried women have no say in how their earnings are used. The data also show that among unmarried women earning cash, the greater a woman's contribution to household expenditure, the more likely is she to make sole decisions on how her earnings are spent. Nevertheless, 8 percent of married women who contribute all of their earnings to household expenditure report that their husband or someone else makes sole decisions on how their earnings are spent, whereas only 3 percent of unmarried women who contribute all their earnings to household expenditure report that they have no say in how it is spent.

Table 3.9 Women's control over earnings

Percent distribution of women who received cash earnings for work in the past 12 months by person who decides how earnings are used, and the proportion of household expenditures met by earnings, according to current marital status, Ghana 2003

	Currently married or living together							Not married[1]				
Contribution to household expenditures	Woman only	Jointly with husband	Jointly with someone else	Husband only	Some-one else only	Total	Number of women	Woman only	Jointly with someone else	Someone else only	Total	Number of women
Almost none/ none	74.5	15.8	0.5	6.8	2.4	100.0	224	71.1	7.1	21.9	100.0	221
Less than half	66.9	22.8	0.3	9.3	0.6	100.0	912	84.0	3.6	12.4	100.0	178
Half or more	68.2	22.6	0.9	7.6	0.7	100.0	1,485	89.6	2.9	7.5	100.0	360
All	77.2	15.3	0.0	7.1	0.4	100.0	265	95.1	2.2	2.6	100.0	176
Total	69.1	21.4	0.6	8.0	0.8	100.0	2,887	85.2	3.9	10.9	100.0	934

Note: Total includes 1 woman (currently married or living together) with missing information on contribution to household expenditures, who is not shown separately. Percentages for currently married women may not add to 100 due to exclusion of women with missing information.

[1] Never-married, divorced, separated, or widowed women

3.5 WOMEN'S EMPOWERMENT

In addition to information on women's education, employment status, and control over earnings, the 2003 GDHS collected information from both women and men on other measures of women's empowerment. Respondents were asked about women's role in household decisionmaking, their acceptance of wife-beating, and their opinions about whether a wife can deny sex to her husband for certain specified reasons. Such information provides insight into women's control over their environment and their attitudes towards gender roles, both of which are relevant to understanding women's ability to make independent decisions about their own health care and that of their children's.

3.5.1 Women's Participation in Decisionmaking

In order to assess women's weight in household decisionmaking, women were asked who in their family usually has the final say on five different types of decisions, namely: their own health care, large household purchases, daily household purchases, visits to family or relatives, and what food to cook each day. The percent distribution of women according to the person who usually has the final say in different decisions is shown in Table 3.10. The data are presented separately for women who are currently married and women who have never married or who are divorced, separated, or widowed.

Table 3.10 Women's participation in decisionmaking

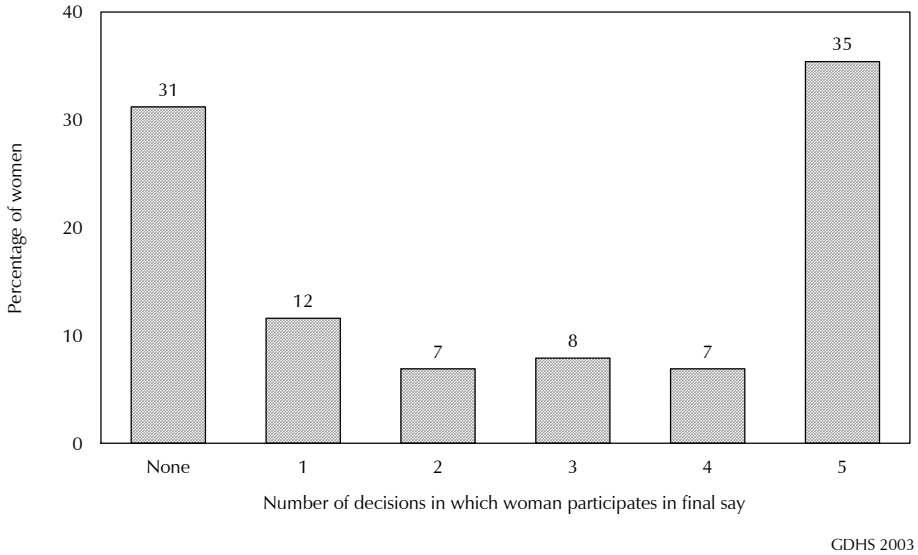
Percent distribution of women by person who has the final say in making specific decisions, according to current marital status and type of decision, Ghana 2003

	Currently married or living together								Not married[1]					
Decision	Woman only	Jointly with husband	Jointly with someone else	Husband only	Someone else only	Decision not made/not applicable	Total	Number of women	Woman only	Jointly with someone else	Someone else only	Decision not made/not applicable	Total	Number of women
Own health care	37.0	20.6	0.9	34.9	6.6	0.0	100.0	3,549	33.1	7.3	58.6	1.0	100.0	2,142
Large household purchases	20.9	30.2	1.5	40.9	6.3	0.2	100.0	3,549	25.5	5.9	66.4	2.2	100.0	2,142
Daily household purchases	28.8	32.3	1.4	31.8	5.5	0.2	100.0	3,549	26.5	5.8	65.4	2.3	100.0	2,142
Visits to family or relatives	20.9	37.9	1.5	33.7	5.4	0.5	100.0	3,549	29.6	6.1	62.0	2.3	100.0	2,142
What food to cook each day	39.9	26.5	1.7	26.1	5.6	0.2	100.0	3,549	27.0	7.8	63.1	2.1	100.0	2,142

Note: Percentages may not add to 100 due to the exclusion of women with missing information.
[1] Never-married, divorced, separated or widowed women

The data show that the majority of Ghanaian women, irrespective of their marital status, do not have sole authority over any of the five main household decisions. Thirty-one percent of all women, irrespective of their marital status, have no final say in any of the decisions, while 35 percent of women have a final say in all the five decisions (Figure 3.3). Among unmarried women, decisionmaking is highly dominated by someone else (59-66 percent), while among married women, decisionmaking is somewhat dominated by husbands (26-41 percent). Married women also report that decisionmaking is made jointly with their husband (21-38 percent). Especially disconcerting is the fact that most women do not have sole authority over their own health care. Only about one-third of married and unmarried women make sole decisions about their own health care. A third of married women report that their husbands make sole decisions about their health care and three-fifths of unmarried women report that someone else makes

Figure 3.3 **Women's Participation in Decisionmaking: Number of Decisions in Which Women Participate in the Final Say, Based on Five Household Decisions**



sole decisions about their health care. One-fifth of married women report that decisions on their own health care are made jointly with their husbands. Forty-one percent of married women report that their husbands alone decide on large household purchases compared with 21 percent of women who report that they alone are the sole decisionmakers on large household purchases, and 30 percent of women who report it to be a joint decision. Among the five decisions, married women seem to have the greatest say over what to cook each day (40 percent), while unmarried women have the greatest say over their own health care (33 percent). Joint decisions with husbands are especially important when it comes to visiting family or relatives (38 percent).

Table 3.11 shows the percentage of women who say that they alone or jointly with someone else have the final say in the five specific household decisions, by background characteristics. More than one-third of women say that they alone or jointly with someone else have the final say in all five decisions. The data show that women's participation in decisionmaking rises with age. Women who are divorced, separated, or widowed are more likely to participate in decisionmaking than currently married women. Decisionmaking among women also rises with the number of children she has, indicating her greater involvement in decisions that may have an impact on the welfare of her children. There are no significant differences in decisionmaking by urban-rural place of residence and women's education. Women's involvement in decisionmaking is highest in the Central region and lowest in the Upper East. Employed women who receive cash earnings are more likely to have a greater say in all five decisions than unemployed women and those who are employed but not for cash. Women in the lowest wealth quintile are least likely to report involvement in all five decisions, but beyond that there is little difference among higher wealth quintiles.

Table 3.11 Women's participation in decisionmaking by background characteristics

Percentage of women who say that they alone or jointly have the final say in specific decisions, by background characteristics, Ghana 2003

Background characteristic	Alone or jointly has final say in: Own health care	Making large purchases	Making daily purchases	Visits to family or relatives	What food to cook each day	All specified decisions	None of the specified decisions	Number of women
Age								
15-19	18.1	8.8	9.4	11.5	13.1	6.8	75.9	1,148
20-24	44.7	32.8	38.4	41.4	42.3	25.3	39.5	1,012
25-29	58.6	49.3	58.3	59.1	64.9	37.6	18.8	951
30-34	65.0	59.3	67.0	65.3	71.8	46.4	14.8	802
35-39	65.0	62.8	73.6	69.8	76.6	51.3	12.5	722
40-44	67.6	65.9	72.5	70.9	76.3	53.1	12.3	579
45-49	71.3	67.7	78.1	74.3	82.6	57.7	9.8	477
Marital status								
Never married	26.6	16.0	16.5	21.0	19.2	13.5	67.8	1,616
Married or living together	58.5	52.6	62.5	60.4	68.1	39.9	17.7	3,549
Divorced/separated/ widowed	82.8	78.4	80.9	80.8	82.4	72.6	9.8	526
Number of living children								
0	30.9	20.1	22.5	26.5	25.2	16.7	60.5	1,872
1-2	58.1	52.0	59.4	58.3	64.9	40.5	21.6	1,602
3-4	63.5	58.5	67.5	63.9	72.0	44.9	14.5	1,227
5+	65.8	61.6	71.7	70.0	77.2	50.9	12.2	990
Residence								
Urban	51.6	45.9	49.9	50.0	52.5	37.3	34.9	2,755
Rural	51.7	43.3	52.3	52.0	58.4	33.7	27.7	2,936
Region								
Western	51.4	43.3	50.3	52.4	63.2	35.4	27.6	553
Central	69.7	63.5	66.1	64.4	68.1	57.3	23.2	431
Greater Accra	49.1	45.5	48.8	51.0	50.4	38.9	39.8	942
Volta	27.2	32.9	41.3	43.2	44.0	17.7	40.6	492
Eastern	69.7	60.6	62.8	64.4	66.5	55.3	23.2	601
Ashanti	56.8	51.0	56.0	56.2	60.8	37.8	26.8	1,142
Brong Ahafo	53.1	51.9	54.9	54.8	55.8	43.9	36.5	569
Northern	34.9	26.9	49.8	43.9	53.4	13.6	28.6	499
Upper East	53.2	9.3	14.0	10.3	24.4	6.1	29.8	310
Upper West	32.7	18.5	42.8	35.9	47.0	13.7	40.7	153
Education								
No education	53.1	41.1	53.6	51.0	60.3	31.5	22.5	1,608
Primary	52.2	47.4	52.7	53.0	57.1	38.6	32.7	1,135
Middle/JSS	50.9	47.2	50.9	50.5	53.6	37.2	34.8	2,279
Secondary+	49.8	39.2	43.4	49.7	47.7	33.4	37.4	669
Employment								
Not employed	27.0	17.1	19.5	23.9	25.8	13.5	62.4	1,412
Employed for cash	63.8	58.7	67.1	65.4	70.2	46.9	16.3	3,708
Employed not for cash	33.2	20.3	25.5	24.8	33.3	14.5	51.0	565
Wealth quintile								
Lowest	46.4	33.0	45.2	41.4	50.3	25.0	30.5	970
Second	53.5	46.5	54.6	55.2	61.2	36.8	27.6	949
Middle	55.4	47.7	52.9	53.7	58.0	37.5	28.9	1,071
Fourth	51.3	48.9	54.7	54.0	57.7	39.7	31.3	1,245
Highest	51.5	45.0	48.5	50.3	51.6	36.3	35.7	1,457
Total	51.7	44.6	51.2	51.1	55.5	35.4	31.2	5,691

Note: Total includes 6 women with missing information on employment who are not shown separately.

3.5.2 Attitudes toward Wife-beating

Violence against women is receiving considerable attention because it has serious consequences for mental and physical well-being, including their reproductive and sexual health (WHO, 1999). To assess the acceptability of domestic violence, respondents interviewed in the 2003 GDHS were asked whether they thought a husband is justified in hitting or beating his wife for any of the following reasons: if she burns the food, if she argues with him, if she goes out without telling him, if she neglects the children, and if she refuses to have sexual relations with him.

The data on attitude toward wife-beating are shown in Tables 3.12.1 and 3.12.2 for women and men, respectively. Nearly one in two women believe that a husband is justified in beating his wife for at least one of the specified reasons (Table 3.12.1). Thirty-seven percent of women believe that a husband is justified in beating his wife if she neglects the children, while one in three women think wife-beating is justified if a wife goes out without telling her husband, and 30 percent believe that wife-beating is justified if she argues with her husband. Twenty percent and 14 percent of women, respectively, believe that a man is justified in beating his wife if she burns the food or refuses to have sex with him.

Surprisingly, younger women, who are presumably more educated, are more likely than older women to agree with at least one reason for wife-beating. Currently married women are slightly more likely than never-married or formerly married women to accept wife-beating. Women who reside in rural areas and in the more conservative northern regions are much more likely than urban women and women in the other regions to accept wife-beating for at least one reason. As a woman's level of education or wealth rises, she is less likely to agree that wife-beating is justified for any reason. There is no clear relationship between attitudes towards wife-beating and women's employment status or decisionmaking power.

Men were also asked their opinions about wife-beating to understand attitudes that may prompt male violence against women (Table 3.12.2). Interestingly, men (32 percent) are less likely than women (49 percent) to feel that wife-beating is justified for at least one reason, and are much less likely to agree that wife-beating is justified for each of the five specific reasons.

Table 3.12.1 Women's attitude toward wife-beating

Percentage of women who agree that a husband is justified in hitting or beating his wife for specific reasons, by background characteristics, Ghana 2003

Background characteristic	Husband is justified in hitting or beating his wife if she: Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sex with him	Percentage who agree with at least one of the specified reasons	Number of women
Age							
15-19	13.2	27.0	34.5	36.7	16.4	50.6	1,148
20-24	14.2	29.7	34.5	38.1	19.1	48.4	1,012
25-29	13.9	30.9	33.9	39.3	20.8	51.0	951
30-34	15.7	32.3	37.3	39.4	24.5	50.4	802
35-39	13.9	30.0	31.6	36.7	20.8	47.9	722
40-44	11.2	26.8	32.8	32.9	19.5	42.9	579
45-49	14.8	29.5	31.5	33.3	20.1	43.6	477
Marital status							
Never married	10.5	22.0	29.2	32.0	13.8	44.1	1,616
Married or living together	15.8	33.1	36.6	39.9	23.0	51.0	3,549
Divorced/separated/widowed	11.6	28.0	31.2	33.6	18.2	45.5	526
Number of living children							
0	11.0	24.1	30.2	32.3	15.0	45.0	1,872
1-2	15.6	32.3	36.1	39.5	20.7	50.8	1,602
3-4	14.8	30.8	36.5	39.9	22.8	49.6	1,227
5+	15.4	33.2	34.7	38.6	24.5	50.5	990
Residence							
Urban	8.9	24.3	28.4	30.8	15.5	41.6	2,755
Rural	18.5	34.3	39.2	42.9	24.1	55.1	2,936
Region							
Western	16.5	29.8	37.0	38.7	20.6	52.9	553
Central	6.1	39.9	38.7	48.0	19.8	56.2	431
Greater Accra	5.7	13.5	20.1	23.3	8.1	30.3	942
Volta	9.4	16.4	20.0	26.2	9.7	37.6	492
Eastern	12.7	28.3	30.6	31.3	14.6	46.4	601
Ashanti	7.5	27.9	30.5	33.5	17.8	44.2	1,142
Brong Ahafo	8.9	19.6	27.8	19.7	13.3	38.5	569
Northern	37.4	53.1	62.0	68.4	48.5	76.3	499
Upper East	41.3	56.7	61.5	70.0	50.7	81.2	310
Upper West	29.2	59.1	56.0	65.6	30.0	80.6	153
Education							
No education	23.9	43.4	46.7	51.4	33.0	62.3	1,608
Primary	15.4	30.8	37.8	40.6	20.3	54.4	1,135
Middle/JSS	8.9	23.3	29.0	31.0	13.9	42.8	2,279
Secondary+	4.0	14.6	13.7	17.5	8.5	25.0	669
Employment							
Not employed	12.6	26.7	31.2	34.3	16.5	47.2	1,412
Employed for cash	13.2	29.4	33.2	36.0	19.9	46.9	3,708
Employed not for cash	21.6	36.9	46.2	51.3	28.2	62.9	565
Number of decisions in which woman has final say[1]							
0	14.0	26.8	32.5	36.4	16.9	48.1	1,777
1-2	21.6	36.9	41.5	46.5	26.0	58.2	1,055
3-4	14.1	30.8	36.4	39.1	22.1	50.0	842
5	9.7	27.3	30.3	32.0	18.5	43.3	2,017
Wealth quintile							
Lowest	28.5	45.0	49.2	54.0	35.5	67.2	970
Second	17.3	32.3	40.4	41.7	22.4	55.2	949
Middle	12.9	29.8	33.8	37.7	18.8	49.6	1,071
Fourth	10.3	27.6	30.4	34.0	16.8	46.6	1,245
Highest	5.7	18.6	22.9	25.0	11.5	32.7	1,457
Total	13.9	29.5	34.0	37.1	19.9	48.5	5,691

Note: Total includes 6 women with missing information on employment who are not shown separately.
[1] Either by herself or jointly with others

Table 3.12.2 Men's attitude toward wife-beating

Percentage of men who agree that a husband is justified in hitting or beating his wife for specific reasons, by background characteristics, Ghana 2003

Background characteristic	Husband is justified in hitting or beating his wife if she: Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sex with him	Percentage who agree with at least one of the specified reasons	Number of men
Age							
15-19	12.3	21.4	26.3	32.6	14.3	43.8	1,107
20-24	9.8	17.0	21.0	23.9	12.0	34.7	684
25-29	6.4	16.2	21.1	26.2	8.7	34.1	754
30-34	8.3	14.2	18.9	21.4	9.3	28.7	633
35-39	5.7	12.6	16.6	21.1	7.8	27.5	498
40-44	4.0	11.7	12.7	14.9	6.5	21.8	412
45-49	6.2	12.7	15.8	17.4	8.0	23.3	441
50-54	4.9	11.7	15.3	17.7	8.3	23.6	294
55-59	5.6	14.0	15.6	15.0	9.4	24.3	192
Marital status							
Never married	9.9	18.2	22.2	26.8	12.1	36.7	2,042
Married or living together	6.9	14.4	18.3	21.6	9.1	28.9	2,671
Divorced/separated/widowed	4.8	12.2	16.8	19.0	6.2	28.3	302
Number of living children							
0	9.8	17.9	22.3	27.2	12.3	36.8	2,300
1-2	6.9	14.8	19.6	21.8	7.9	30.5	981
3-4	5.0	11.8	15.5	19.5	7.4	24.9	816
5+	7.4	15.2	17.7	19.8	9.4	27.9	917
Residence							
Urban	5.2	12.0	15.3	17.5	7.1	25.0	2,250
Rural	10.3	18.9	23.5	28.5	12.6	37.8	2,765
Region							
Western	12.7	25.3	25.1	30.7	14.2	41.7	476
Central	6.0	12.5	20.3	20.5	7.8	29.8	370
Greater Accra	3.0	7.9	9.1	12.0	4.7	16.5	733
Volta	4.8	6.6	10.3	12.7	3.5	18.5	440
Eastern	5.1	12.3	14.9	17.9	5.8	23.1	539
Ashanti	3.3	9.0	12.1	13.4	5.9	21.6	956
Brong Ahafo	5.0	13.0	19.5	18.0	6.2	29.8	528
Northern	22.9	34.4	45.7	54.8	32.0	65.4	527
Upper East	14.1	27.7	28.1	41.2	14.3	54.3	317
Upper West	19.0	37.8	44.5	59.0	20.8	69.2	130
Education							
No education	15.1	27.4	33.4	41.2	22.0	50.9	881
Primary	13.1	23.8	29.3	32.6	15.4	46.4	803
Middle/JSS	5.7	13.3	16.7	19.6	6.6	27.8	2,165
Secondary+	3.4	6.2	8.6	11.3	4.0	15.7	1,165
Employment							
Not employed	8.9	15.3	20.0	25.7	11.0	35.4	1,224
Employed for cash	7.1	14.9	18.7	21.5	9.0	29.0	3,448
Employed not for cash	13.9	27.3	29.7	36.7	18.2	50.2	341
Number of decisions in which wife has say[1]							
0	9.4	17.6	21.8	25.8	11.7	35.3	3,386
1-2	7.4	15.5	18.6	24.5	10.2	32.0	713
3-4	3.3	9.2	13.2	14.1	4.9	19.0	674
5	3.2	9.6	13.7	16.5	2.3	22.2	242
Wealth index							
Lowest	16.4	27.0	32.1	41.2	19.1	52.8	872
Second	8.5	17.3	22.7	25.4	12.3	35.0	903
Middle	8.9	16.8	23.3	25.0	9.9	33.8	975
Fourth	5.6	12.8	14.6	18.9	7.4	27.3	1,060
Highest	2.9	8.3	10.4	12.4	4.5	17.4	1,204
Total	8.0	15.8	19.8	23.6	10.1	32.0	5,015

Note: Total includes 2 men with missing information on employment who are not shown separately.
[1] Either by herself or jointly with others

3.5.3 Attitudes toward Refusing Sex

Women's rights and control over their own sexuality are important aspects of their empowerment. In addition, their control over when and with whom they have sex has an impact on their health, especially with respect to the transmission of STIs such as HIV/AIDS. Respondents in the GDHS were asked whether a wife is justified in refusing sex when: she knows that her husband has a sexually transmitted disease; she knows that her husband has sex with other women; she has recently given birth; and when she is tired or not in the mood for sex. Tables 3.13.1 and 3.13.2 show the percentage of women and men who believe that a wife is justified in refusing to have sex with her husband for these specified reasons, by background characteristics.

Sexual autonomy is relatively high among Ghanaian women. Nearly two-thirds of women and men agree that women are justified in denying sex to their husbands for all four reasons, with little variation between women and men by background characteristics. Women and men who reside in rural areas, those who live in the Upper West region, poorly educated respondents, and respondents from the lowest wealth quintile are somewhat less likely than their counterparts to agree that a woman is justified in refusing sex with her husband for all four reasons. There is no clear relationship between women's sexual autonomy and her decisionmaking power or beliefs about wife-beating.

Male respondents in the 2003 GDHS were also asked whether they thought that a husband had the right to take specific actions—get angry and reprimand her, to refuse to give her money or other means of financial support, to use force and have sex with her even if she does not want to, and to have sex with another woman—if his wife refused to have sex with him.

Table 3.14 shows that one in four men agree with at least one of the four specified actions. Fifteen percent of men say it is justifiable for men to get angry and reprimand the wife, 12 percent say it is okay to have sex with another woman, 10 percent say it is justifiable to refuse financial support, and 5 percent say it is acceptable to use force if she refuses to have sex with him. Differences by background characteristics are not large. However, men in the youngest cohort (15-19), rural men, men in the Upper West and Northern regions, men with no education, men who are employed but not for cash, and men in the lowest wealth quintile are less tolerant of women's sexual autonomy than other men.

Table 3.13.1 Women's attitude toward wives refusing sex with husbands

Percentage of women who believe that a wife is justified in refusing to have sex with her husband for specific reasons, by background characteristics, Ghana 2003

Background characteristic	Wife is justified in refusing sex with husband if she: Knows husband has a sexually transmitted disease	Knows husband has sex with other women	Has recently given birth	Is tired or not in the mood	Percentage who agree with all of the specified reasons	Percentage who agree with none of the specified reasons	Number of women
Age							
15-19	84.7	79.1	79.1	73.1	63.0	9.8	1,148
20-24	86.5	81.8	85.0	75.2	62.5	6.2	1,012
25-29	86.4	78.8	84.4	74.4	62.4	8.0	951
30-34	84.9	76.8	84.5	74.9	61.1	6.0	802
35-39	86.5	76.7	82.8	72.6	62.1	8.7	722
40-44	88.6	79.7	86.4	76.8	65.9	6.2	579
45-49	87.4	79.4	86.1	74.7	63.4	7.6	477
Marital status							
Never married	86.0	80.2	80.3	72.7	62.7	8.8	1,616
Married or living together	85.8	77.8	84.1	74.4	61.8	7.5	3,549
Divorced/separated/widowed	89.6	83.5	90.3	79.6	69.6	4.8	526
Number of living children							
0	86.4	80.8	82.3	74.0	63.3	7.8	1,872
1-2	85.8	78.3	84.3	75.5	62.1	7.2	1,602
3-4	86.1	77.9	84.1	73.3	62.2	7.9	1,227
5+	86.6	78.0	84.1	74.7	63.5	7.8	990
Residence							
Urban	88.1	81.2	84.4	76.3	63.9	6.6	2,755
Rural	84.4	76.9	82.8	72.6	61.7	8.6	2,936
Region							
Western	92.3	85.3	90.4	79.4	68.9	2.8	553
Central	87.4	88.5	87.2	60.9	51.9	4.6	431
Greater Accra	87.7	81.5	86.0	77.9	67.5	7.2	942
Volta	82.9	76.3	76.9	74.5	61.3	12.8	492
Eastern	80.3	81.2	83.7	75.8	66.3	10.0	601
Ashanti	85.9	74.7	81.2	74.6	62.1	9.4	1,142
Brong Ahafo	84.4	80.4	83.8	78.6	67.6	8.2	569
Northern	83.3	72.9	79.7	68.8	54.5	7.7	499
Upper East	95.5	72.9	88.0	79.2	63.1	0.9	310
Upper West	83.7	73.5	74.9	57.8	45.5	8.3	153
Education							
No education	84.5	73.2	81.7	69.4	56.0	8.2	1,608
Primary	83.3	78.9	82.1	74.2	63.0	9.8	1,135
Middle/JSS	88.0	82.0	84.6	77.2	66.5	6.9	2,279
Secondary+	88.8	82.6	87.0	77.0	65.9	4.9	669
Employment							
Not employed	86.7	80.8	82.9	75.1	63.6	7.3	1,412
Employed for cash	86.3	79.5	84.6	75.1	63.6	7.5	3,708
Employed not for cash	84.2	71.3	78.6	67.8	55.2	8.9	565
Number of decisions in which woman has final say[1]							
0	84.9	78.2	79.8	73.6	62.8	9.5	1,777
1-2	84.4	73.0	83.2	72.0	57.8	7.9	1,055
3-4	87.0	78.6	81.8	70.3	59.2	7.4	842
5	87.9	83.0	87.8	78.0	66.9	5.9	2,017
Number of reasons wife-beating is justified							
0	85.3	79.5	83.4	74.5	64.5	8.9	2,928
1-2	85.8	77.0	81.3	73.5	59.7	7.7	1,279
3-4	88.2	77.1	85.4	72.2	58.0	4.7	1,047
5	88.4	85.7	87.3	81.1	71.5	5.9	437
Wealth quintile							
Lowest	86.2	75.3	83.6	73.0	60.7	7.1	970
Second	83.7	76.0	80.7	72.4	62.0	9.7	949
Middle	83.5	80.0	81.8	72.2	62.1	9.4	1,071
Fourth	86.2	79.5	82.8	74.7	62.0	8.0	1,245
Highest	89.7	82.2	87.4	78.0	65.8	5.0	1,457
Total	86.2	79.0	83.6	74.4	62.8	7.6	5,691

Note: Total includes 6 women with missing information on employment who are not shown separately.
[1] Either by herself or jointly with others

Table 3.13.2 Men's attitude toward wives refusing sex with husbands

Percentage of men who believe that a wife is justified in refusing to have sex with her husband for specific reasons, by background characteristics, Ghana 2003

Background characteristic	Wife is justified in refusing sex with husband if she: Knows husband has a sexually transmitted disease	Knows husband has sex with other women	Has recently given birth	Is tired or not in the mood	Percentage who agree with all of the specified reasons	Percentage who agree with none of the specified reasons	Number of men
Age							
15-19	85.8	78.9	82.4	73.6	60.3	5.8	1,107
20-24	91.6	80.8	87.1	78.2	63.4	3.9	684
25-29	91.9	85.2	91.1	83.1	68.8	1.5	754
30-34	93.4	86.9	90.7	84.4	73.0	2.2	633
35-39	93.2	82.7	89.2	81.8	68.4	1.4	498
40-44	95.3	86.2	90.8	80.8	68.7	0.9	412
45-49	88.0	82.0	88.3	82.3	66.2	2.9	441
50-54	90.9	80.3	88.4	82.6	68.5	3.0	294
55-59	89.1	81.7	90.0	76.1	66.1	4.1	192
Marital status							
Never married	88.5	81.0	85.1	76.2	62.9	4.6	2,042
Married or living together	92.1	84.1	90.1	82.5	69.2	2.0	2,671
Divorced/separated/widowed	91.3	79.2	88.1	80.6	63.9	3.1	302
Number of living children							
0	89.1	81.1	85.7	76.7	62.7	4.1	2,300
1-2	92.3	83.2	89.6	82.6	69.5	2.4	981
3-4	93.1	84.7	91.3	84.0	71.4	1.3	816
5+	90.4	83.4	88.7	80.8	67.4	3.0	917
Residence							
Urban	92.1	84.4	89.6	83.2	69.9	2.5	2,250
Rural	89.4	81.0	86.5	77.1	63.4	3.6	2,765
Region							
Western	88.2	81.4	87.9	79.7	63.4	2.9	476
Central	95.0	83.4	86.9	77.6	64.9	3.3	370
Greater Accra	93.0	86.4	92.7	84.4	73.5	2.3	733
Volta	92.2	80.4	90.2	78.7	61.1	1.3	440
Eastern	89.2	88.2	94.1	88.1	78.9	3.1	539
Ashanti	90.8	82.1	87.0	83.6	70.4	3.1	956
Brong Ahafo	89.3	83.9	87.9	76.4	64.5	3.2	528
Northern	88.8	77.9	80.1	69.6	55.6	5.8	527
Upper East	88.3	79.9	84.5	79.7	60.9	2.9	317
Upper West	90.5	69.5	77.7	57.8	40.0	3.5	130
Education							
No education	88.1	76.5	83.4	71.8	57.7	4.5	881
Primary	88.2	78.6	83.5	74.0	60.2	4.6	803
Middle/JSS	90.6	84.3	89.3	81.7	68.0	2.8	2,165
Secondary+	94.1	86.5	91.9	86.3	73.9	1.6	1,165
Employment							
Not employed	88.6	81.9	85.8	77.2	64.1	3.6	1,224
Employed for cash	91.8	83.5	89.2	81.4	68.2	2.6	3,448
Employed not for cash	85.0	75.6	82.3	72.8	55.9	6.7	341
Number of decisions in which woman has final say[1]							
0	89.3	81.1	85.6	77.7	63.6	3.9	3,386
1-2	92.1	80.6	91.0	78.3	63.6	1.9	713
3-4	94.0	88.9	93.9	88.9	78.2	1.0	674
5	94.6	90.4	94.8	88.1	78.5	0.8	242
Number of reasons wife-beating is justified							
0	91.6	84.1	89.9	83.6	70.5	2.8	3,409
1-2	88.8	77.9	83.6	72.2	56.9	3.5	930
3-4	87.4	80.5	83.3	70.6	55.2	3.2	516
5	91.3	84.0	85.0	73.5	66.7	5.8	160
Wealth quintile							
Lowest	86.3	77.9	82.6	72.8	58.7	5.9	872
Second	90.8	82.2	87.2	76.7	64.3	2.9	903
Middle	91.0	82.7	86.9	78.6	64.9	2.4	975
Fourth	89.5	82.3	86.7	80.1	65.7	3.6	1,060
Highest	94.1	86.2	94.2	88.0	75.0	1.4	1,204
Total	90.6	82.5	87.9	79.8	66.3	3.1	5,015

Note: Total includes 2 men with missing information on employment who are not shown separately.
[1] Either by herself or jointly with others

Table 3.14 Men's attitudes towards justifiable actions if wife refuses sex

Percentage of men who believe a wife's refusal of sex justifies specific actions, by background characteristics, Ghana 2003

Background characteristic	Husband's justifiable actions if wife refuses sex: Getting angry	Refusing money	Using force	Having sex with another woman	Percentage who agree with at least one of the specified reasons	Number of men
Age						
15-19	16.4	12.6	5.4	14.6	29.2	1,107
20-24	15.3	7.5	3.3	10.6	25.2	684
25-29	14.2	9.6	4.1	11.6	23.0	754
30-34	16.2	9.0	4.6	9.2	25.4	633
35-39	13.8	7.3	6.3	9.3	22.6	498
40-44	15.6	9.1	3.2	10.7	24.8	412
45-49	15.6	9.2	3.7	10.8	25.1	441
50-54	14.6	10.4	5.2	11.9	24.6	294
55-59	14.2	6.0	7.0	12.8	24.3	192
Marital status						
Never married	15.7	10.2	4.4	12.5	26.1	2,042
Married or living together	15.1	9.1	5.0	10.7	24.9	2,671
Divorced/separated/ widowed	15.0	8.0	2.6	12.6	25.1	302
Number of living children						
0	15.5	9.7	4.4	12.1	25.7	2,300
1-2	16.1	8.7	4.3	10.6	25.8	981
3-4	14.2	9.8	5.1	11.3	24.6	816
5+	15.1	9.5	5.1	11.3	25.0	917
Residence						
Urban	12.5	6.7	2.6	8.7	20.0	2,250
Rural	17.6	11.8	6.3	13.8	29.8	2,765
Region						
Western	23.2	10.4	3.5	11.9	31.4	476
Central	9.6	4.2	1.7	7.9	15.4	370
Greater Accra	12.0	5.0	1.9	5.5	17.1	733
Volta	17.3	6.6	1.1	9.5	25.1	440
Eastern	10.4	8.2	5.9	10.7	18.1	539
Ashanti	8.2	9.3	2.8	8.3	18.7	956
Brong Ahafo	15.5	11.2	8.5	18.3	35.5	528
Northern	27.0	18.1	12.1	22.6	41.4	527
Upper East	17.0	12.4	5.4	10.9	28.4	317
Upper West	35.7	14.1	5.0	17.7	47.2	130
Education						
No education	20.6	15.7	9.5	17.6	35.0	881
Primary	19.1	11.4	6.9	15.4	32.3	803
Middle/JSS	13.4	8.5	3.4	9.7	22.8	2,165
Secondary +	12.3	5.4	1.7	7.6	18.3	1,165
Employment						
Not employed	14.5	10.2	3.4	12.6	26.2	1,224
Employed for cash	14.8	8.8	4.8	10.5	24.1	3,448
Employed not for cash	23.3	14.5	6.9	17.9	35.3	341
Wealth quintile						
Lowest	22.0	15.8	9.6	18.3	37.8	872
Second	16.3	12.2	6.1	13.2	29.6	903
Middle	15.5	9.4	4.2	11.4	25.2	975
Fourth	12.3	7.9	2.4	10.7	20.8	1,060
Highest	12.3	4.4	2.2	6.2	17.5	1,204
Total	15.3	9.5	4.6	11.5	25.4	5,015

Note: Total includes 2 men with missing information on employment who are not shown separately.

FERTILITY 4

One of the main challenges facing Ghana in the 1950s was high fertility. Ghana introduced its first Population Policy in 1969 to address the problem of high fertility and escalating growth rates in the face of declining mortality. After 25 years of little progress, the Population Policy was revised in 1994 to include a systematic integration of population in development planning with renewed emphasis on fertility deceleration to keep pace with resource generation. Since then, Ghana has made significant progress in reducing its fertility. An important aspect of the demographic and health surveys conducted in the country has been the collection of birth history information to enhance data availability for monitoring the progress in fertility decline.

This chapter presents the 2003 GDHS results on fertility levels, trends, and differentials. The analysis is based on the birth histories collected from women age 15-49 interviewed during the survey. To obtain this information, women were first asked a series of questions to determine the total number of live births they had in their lifetime. For each live birth, information was then collected on the age, sex, and survival status of the child. For dead children, age at death was recorded. Information from the birth history is used to assess current and completed fertility and to look at other factors related to fertility, including age at first birth, birth intervals, and teenage childbearing.

The following measures of current fertility are derived from birth history data:

- **Age-specific fertility rates** (ASFR) are expressed as the number of births per thousand women in the age group and represent a valuable measure for assessing the current age pattern of childbearing. They are defined in terms of the number of live births during a specified period to women in the particular age group divided by the number of woman-years lived in that age group during the specified period.

- **Total fertility rate** (TFR) is defined as the total number of births a woman would have by the end of her childbearing period if she were to pass through those years bearing children at the currently observed rates of age-specific fertility. The TFR is obtained by summing the age-specific fertility rates and multiplying by five.

- **General fertility rate** (GFR) is the number of live births occurring during a specified period per 1,000 women age 15-44.

- **Crude birth rate** (CBR) is the number of births per 1,000 population during a specified period.

The various measures of current fertility are calculated for the three-year period preceding the survey, which roughly corresponds to the calendar period 2001-2003. A three-year period was chosen because it reflects the current situation, while also allowing the rates to be calculated on a sufficient number of cases so as not to compromise the statistical precision of estimates.

4.1 FERTILITY LEVELS AND TRENDS

4.1.1 Fertility Levels

Table 4.1 presents information on the current fertility levels for Ghana as a whole and for urban and rural areas. The table shows that the prime reproductive years among Ghanaian women are during

their twenties and early thirties. Urban-rural differences in childbearing rates are evident for all age groups, but are especially large in the 20s.

With a TFR of 4.4, Ghana's fertility rate is one of the lowest in sub-Saharan Africa, as the comparison in Figure 4.1 indicates. On average, a Ghanaian woman who is at the beginning of her childbearing years will give birth to 4.4 children by the end of her reproductive period if fertility levels remain constant at the levels observed in the three-year period before the 2003 GDHS. The TFR for rural areas (5.6 births) is more than two births higher than the rate for urban areas (3.1 births).

The general fertility rate is 146. This means that there were 146 births for every 1,000 women during the three-year period preceding the survey. The table also shows a crude birth rate of 33 per 1,000 population for the period under review.

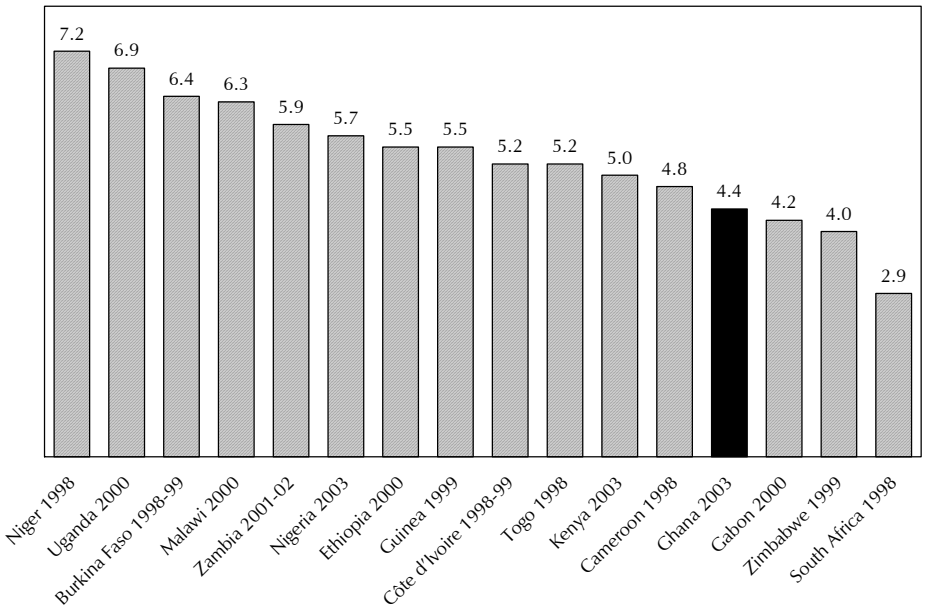
Table 4.1 Current fertility

Age-specific and cumulative fertility rates, the general fertility rate, and the crude birth rate for the three years preceding the survey, by urban-rural residence, Ghana 2003

	Residence		
Age group	Urban	Rural	Total
15-19	42	113	74
20-24	128	225	176
25-29	157	256	210
30-34	145	213	182
35-39	95	179	141
40-44	39	95	70
45-49	18	49	36
TFR	3.1	5.6	4.4
GFR	102	188	146
CBR	26.6	36.7	32.6

Note: Rates for age group 45-49 may be slightly biased due to truncation.
TFR: Total fertility rate for ages 15-49, expressed per woman
GFR: General fertility rate (births divided by the number of women age 15-44), expressed per 1,000 women
CBR: Crude birth rate, expressed per 1,000 population

Figure 4.1 **Total Fertility Rates, Ghana and Selected Sub-Saharan Countries**



4.1.2 Differentials in Current and Completed Fertility

Table 4.2 presents differentials in the TFR and the percentage of women who are currently pregnant, by key background characteristics. The percentage currently pregnant provides a useful measure of

current fertility. However, it may not capture all pregnant women since some women may be unaware of their pregnancy, or reluctant to disclose a pregnancy in its early stages. The table also shows differentials in the mean number of children ever born to women age 40-49, that is, to women who are at the end of their childbearing years, which is a measure of completed or past fertility. The mean number of children ever born can be compared with the current TFR in order to assess the extent of fertility change over the last two decades in Ghana.

Table 4.2 and Figure 4.2 show that regional variations in fertility are marked, ranging from a high of 7.0 births in the Northern region to a low of 2.9 births in Greater Accra. The TFR is inversely related to the level of education. On average, women with no education (6.0) give birth to more than twice as many children as women with at least secondary education (2.5). Fertility also decreases with increasing wealth, from 6.4 births among women in the lowest wealth quintile to 2.8 births among women in the highest wealth quintile.

Seven percent of women are currently pregnant. Rural women are almost twice as likely to be pregnant at the time of the interview as urban women. Current pregnancy is highest in the Northern region and lowest in Greater Accra. The percentage of women currently pregnant declines as level of education rises and is highest among the poorest segment of women and lowest among the richest.

Table 4.2 Fertility by background characteristics

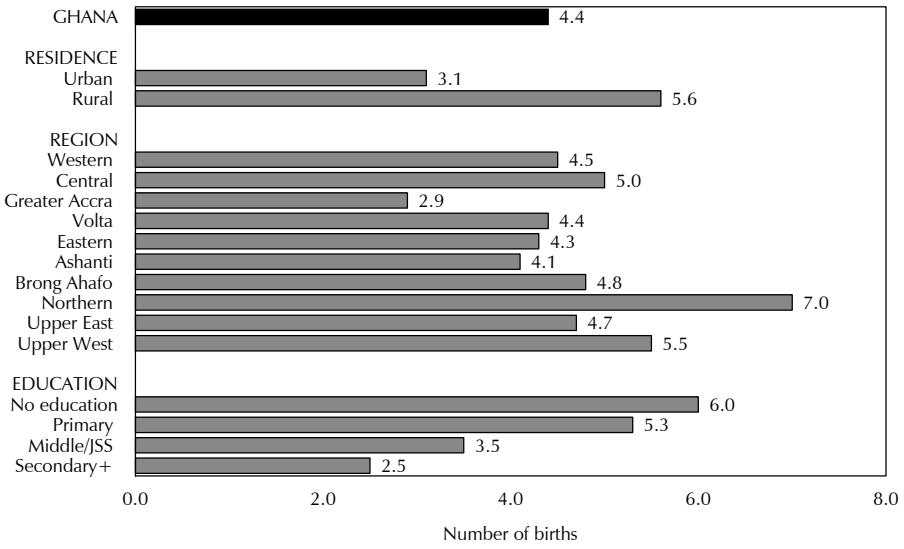
Total fertility rate for the three years preceding the survey, percentage of women 15-49 currently pregnant, and mean number of children ever born to women age 40-49 years, by background characteristics, Ghana 2003

Background characteristic	Total fertility rate[1]	Percentage currently pregnant[1]	Mean number of children ever born to women age 40-49
Residence			
Urban	3.1	5.1	4.8
Rural	5.6	9.5	6.1
Region			
Western	4.5	7.1	5.5
Central	5.0	8.3	6.5
Greater Accra	2.9	4.0	3.9
Volta	4.4	6.9	5.3
Eastern	4.3	7.3	5.8
Ashanti	4.1	7.6	5.7
Brong Ahafo	4.8	7.0	5.6
Northern	7.0	13.0	6.7
Upper East	4.7	7.9	5.7
Upper West	5.5	8.7	6.4
Education			
No education	6.0	10.1	6.3
Primary	5.3	8.3	6.0
Middle/JSS	3.5	6.1	5.0
Secondary+	2.5	3.6	3.1
Wealth quintile			
Lowest	6.4	10.5	6.3
Second	5.9	8.1	6.6
Middle	4.9	9.3	5.9
Fourth	3.3	6.8	5.3
Highest	2.8	3.9	3.8
Total	4.4	7.4	5.5

[1] Women age 15-49 years

Women age 40-49 have given birth to an average of 5.5 children. A comparison of the TFR and cumulative fertility indicates that there has been a decrease in fertility over time among women in all groups except among women in the Northern region and women in the lowest wealth quintile.

Figure 4.2 Total Fertility Rate by Background Characteristics



GDHS 2003

4.1.3 Trends in Fertility

Besides the comparison of current and completed fertility, fertility trends in Ghana can be assessed in several other ways. Fertility trends can be observed using retrospective data from the birth histories collected from respondents in a single survey. The TFR from the 2003 GDHS can also be compared with estimates obtained in earlier surveys or censuses.

Table 4.3 presents the trend in age-specific fertility rates for successive five-year periods before the survey, generated from the birth history data collected in the 2003 GDHS. The numerators of the births are classified by five-year segments of time preceding the survey and the mother's age at the time of birth. Because women 50 years and over were not interviewed in the survey, the rates for older age groups become progressively more truncated for periods more distant from the survey date. For example, rates cannot be calculated for women age 45-49 for the period 5-9 years and more prior to the survey, because women in that age group would have been 50 years or older at the time of the survey. Partially truncated rates are enclosed in brackets in the table.

Table 4.3 Trends in age-specific fertility rates

Age-specific fertility rates for five-year periods preceding the survey, by mother's age at the time of the birth, Ghana 2003

Mother's age at birth	Number of years preceding survey 0-4	5-9	10-14	15-19
15-19	74	84	117	116
20-24	183	200	228	242
25-29	214	227	253	244
30-34	183	208	233	(239)
35-39	146	162	(201)	
40-44	77	(101)		
45-49	(40)			

Note: Age-specific fertility rates are per 1,000 women. Estimates in brackets are truncated.

Table 4.3 confirms the substantial decline in fertility over the last two decades. This decline is most obvious in the last three five-year periods preceding the survey, with the largest decline observed between the 10-14 year and 5-9 year periods before the survey. Fertility decline was steepest among the youngest cohort.

A comparison of the TFRs obtained from the three earlier GDHS surveys conducted in 1988, 1993, and 1998, with the TFR obtained from the 2003 GDHS is shown in Table 4.4 and Figure 4.3. Direct estimates of fertility for the three years preceding the survey have been used in this comparison, because a three-year rate is more robust than rates based on a shorter period of time. Hence, these rates may be slightly different from published rates for 1988, 1993, and 1998, which are based on the five years preceding the survey. Fertility trends have to be interpreted within the context of data quality and sample size. A discussion of these issues in relation to earlier surveys is beyond the scope of this report. As such, the fertility trend shown in Figure 4.3 and Table 4.4 should be interpreted with caution. The TFR has declined dramatically from 6.4 children per woman in 1988 to 5.2 children per woman in 1993, and to 4.4 children in 1998, a nearly 2-child drop in fertility over the decade. However, the demographic transition experienced in Ghana in the 1980s and 1990s seems to have slowed in the last three years even though contraceptive use has continued to rise. Further investigation, outside the scope of this report, is necessary to examine the underlying causes for this unexpected trend. Table 4.4 shows that since 1988, fertility has fallen in every age group, with fertility levels among women under age 35 declining by around 25 percent during the decade between the 1988 and 1998 surveys.

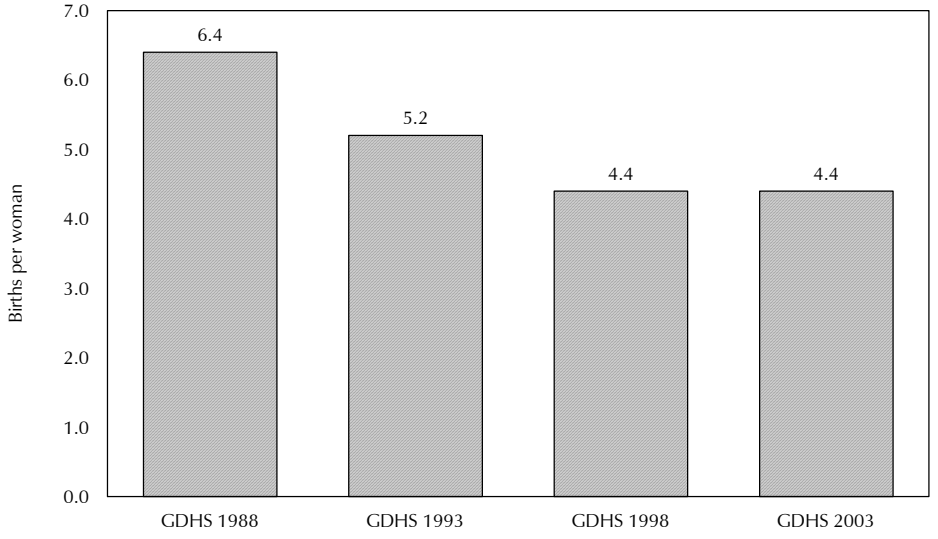
Table 4.4 Trends in fertility

Age-specific fertility rates and total fertility rates for GDHS surveys, 1988-2003

Age group	GDHS 1988	GDHS 1993	GDHS 1998	GDHS 2003
15-19	125	116	88	74
20-24	260	221	197	176
25-29	280	233	203	210
30-34	249	209	177	182
35-39	189	143	136	141
40-44	117	87	74	70
45-49	61	22	11	36
15-49	6.4	5.2	4.4	4.4

Note: Rates are per 1,000 women and refer to the three-year period preceding the survey

Figure 4.3 **Trends in Total Fertility Rate Ghana 1988-2003**



Note: Rates are per 1,000 women and refer to the three-year period preceding the survey.

GDHS 1988-2003

4.2 CHILDREN EVER BORN AND CHILDREN SURVIVING

Table 4.5 presents the distribution of all women and currently married women by the mean number of children ever born and the mean number of children surviving, by five-year age groups. Lifetime fertility reflects the accumulation of births over the past 30 years and, therefore, its relevance to the current situation is limited; nevertheless, information on the mean number of children ever born is useful in examining the variation among different age groups.

The distribution of children ever born by age shows that early childbearing is not common in Ghana; nearly 90 percent of women age 15-19 have never given birth. However, this proportion declines to 18 percent for women age 25-29, and to 7 percent or less among women age 30 and older. Ghanaian women attain a parity of 5.9 children by the end of their reproductive age, which is 1.5 children more than the total fertility rate, a difference brought about by the dramatic decline in fertility in the 1980s and 1990s. Although the pattern is similar for currently married women, less than half (44 percent) of women age 15-19 have not borne a child, and this proportion declines rapidly to less than 4 percent by age 30-34. This discrepancy between all women and currently-married women is attributable to the sizeable proportion of young and unmarried women in the former category who exhibit lower fertility. Currently married women reported higher fertility at all ages, and especially at younger ages, and have had an average of 3.5 children compared with 2.5 children among all women. Nevertheless, this one-child difference between currently married women and all women indicates that childbearing outside of marriage is not uncommon in Ghana. Consonant with expectations, the mean number of children ever born and mean number of living children rise monotonically with increasing age of women, thus presupposing minimal or no recall lapse, which heightens confidence in the birth history reports.

Table 4.5 Children ever born and living

Percent distribution of all women and currently married women by number of children ever born, and mean number of children ever born and mean number of living children, according to age group, Ghana 2003

	Number of children ever born														
Age	0	1	2	3	4	5	6	7	8	9	10+	Total	Number of women	Mean number of children ever born	Mean number of living children
ALL WOMEN															
15-19	89.7	9.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	1,148	0.11	0.10
20-24	47.2	30.5	18.2	3.6	0.4	0.1	0.0	0.0	0.0	0.0	0.0	100.0	1,012	0.80	0.72
25-29	18.1	21.1	25.8	20.5	8.7	4.0	1.4	0.3	0.2	0.0	0.0	100.0	951	2.01	1.81
30-34	7.0	10.4	16.5	23.7	18.1	12.9	7.7	1.8	1.7	0.2	0.1	100.0	802	3.26	2.90
35-39	5.1	6.1	8.4	14.4	18.6	16.2	14.5	9.2	4.4	2.6	0.6	100.0	722	4.38	3.84
40-44	2.8	2.9	6.3	13.3	14.7	16.4	14.4	12.8	8.2	4.6	3.6	100.0	579	5.18	4.41
45-49	1.6	4.3	6.6	8.2	10.6	11.0	14.7	12.9	13.5	9.9	6.8	100.0	477	5.88	5.00
Total	31.6	13.8	12.2	11.3	8.8	7.1	5.8	3.8	2.8	1.7	1.0	100.0	5,691	2.53	2.22
CURRENTLY MARRIED WOMEN															
15-19	44.0	53.2	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	137	0.59	0.54
20-24	18.0	43.7	31.0	6.8	0.5	0.1	0.0	0.0	0.0	0.0	0.0	100.0	530	1.28	1.17
25-29	7.0	20.8	30.1	24.7	10.9	4.3	1.6	0.4	0.2	0.0	0.0	100.0	739	2.34	2.11
30-34	3.4	8.4	15.9	25.4	19.2	14.6	9.0	2.1	1.7	0.2	0.1	100.0	671	3.52	3.13
35-39	2.6	5.4	7.7	15.0	19.0	16.9	15.3	9.8	4.7	2.9	0.7	100.0	621	4.58	4.03
40-44	1.8	2.7	5.3	12.6	13.2	16.7	15.5	14.0	9.0	5.4	3.9	100.0	473	5.41	4.65
45-49	0.9	3.1	5.5	7.7	9.6	11.0	16.2	13.5	15.8	8.5	8.3	100.0	377	6.14	5.24
Total	7.3	16.1	16.6	16.1	12.1	10.0	8.5	5.5	4.1	2.2	1.5	100.0	3,549	3.54	3.11

Voluntary childlessness is uncommon and currently married women with no live births are likely to be those who are unable to bear children. The level of childlessness among married women at the end of their reproductive lives can be used as an indicator of the level of primary sterility. In Ghana, primary sterility among older currently married women is less than 2 percent.

4.3 BIRTH INTERVALS

Information on birth intervals provides valuable insight into birth spacing patterns. Short birth intervals, that is, births that occur less than 24 months apart, are detrimental to the health of both the mother and her child.

Table 4.6 shows the distribution of non-first births in the five years preceding the survey by the number of months since the previous birth, according to selected demographic and socio-economic variables. First births are omitted from the table because there is no prior birth with which to measure an interval.

Fourteen percent of all non-first births occur less than 24 months after an earlier birth. The median birth interval is 38 months, that is, half of non-first births to women in Ghana occur more than three years after a previous birth. There has been little change in birth spacing patterns over the last five years.

The median birth interval increases with age from 35 months for births to women age 20-29 to 46 months for births to women age 40-49. The longer birth interval among older women may be attributed to the decline in fecundity as women grow older. There are no significant differences in the median birth interval by birth order and sex of the child. However, the median birth interval is markedly shorter if the previous child has died. Among births following a child who has died, 34 percent occur at intervals of less than 24 months. This may be due to the desire of parents to replace dead children, as well as the impact of the loss of the fertility-delaying effects of breastfeeding.

The median interval between births to urban women is seven months longer (44 months) than for rural women (37 months). The median birth interval ranges from a low of 34 months in the Western region to 42 months in Greater Accra and Upper East regions. Education and wealth status are not strongly related to median birth interval, except for births to the most educated and the wealthiest group of women. The median birth interval is longer among non-first births to women with at least secondary education than among women with lower levels of education, and among women in the highest wealth quintile than women in the other wealth quintiles.

Table 4.6 Birth intervals

Percent distribution of non-first births in the five years preceding the survey by number of months since preceding birth, according to background characteristics, Ghana 2003

Background characteristic	Months since preceding birth					Total	Number of non-first births	Median number of months since preceding birth
	7-17	18-23	24-35	36-47	48+			
Age								
20-29	6.9	8.7	37.0	24.7	22.7	100.0	983	35.1
30-39	4.1	9.1	28.3	23.3	35.2	100.0	1,375	39.8
40-49	3.0	7.1	23.2	21.0	45.5	100.0	445	45.5
Birth order								
2-3	5.1	8.5	29.3	22.9	34.3	100.0	1,259	38.8
4-6	5.0	8.2	29.8	24.9	32.2	100.0	1,100	38.7
7+	4.3	11.0	35.5	21.5	27.8	100.0	449	35.7
Sex of preceding birth								
Male	4.1	8.8	29.3	24.2	33.6	100.0	1,453	39.0
Female	5.8	8.7	31.7	22.6	31.1	100.0	1,354	37.9
Survival of preceding birth								
Living	3.2	8.1	30.8	24.0	33.9	100.0	2,517	39.1
Dead	19.9	14.2	27.5	18.5	19.8	100.0	290	31.5
Residence								
Urban	5.2	7.0	25.2	20.5	42.1	100.0	856	43.6
Rural	4.8	9.5	32.8	24.8	28.1	100.0	1,951	37.2
Region								
Western	4.5	13.3	37.3	16.9	27.9	100.0	280	33.9
Central	2.9	12.0	35.6	24.4	25.2	100.0	239	35.8
Greater Accra	4.3	7.5	24.4	21.3	42.4	100.0	278	41.8
Volta	3.4	4.6	29.5	25.0	37.6	100.0	217	40.7
Eastern	4.0	9.7	36.4	12.2	37.7	100.0	281	36.0
Ashanti	7.5	9.7	27.3	23.8	31.8	100.0	536	38.6
Brong Ahafo	6.1	8.8	29.1	22.8	33.1	100.0	284	37.7
Northern	5.1	7.6	29.9	29.1	28.3	100.0	420	39.1
Upper East	1.6	2.9	27.8	34.9	32.8	100.0	177	41.9
Upper West	6.4	7.9	29.8	30.2	25.7	100.0	95	37.6
Education								
No education	4.5	8.0	31.8	26.4	29.3	100.0	1,258	38.2
Primary	6.6	10.4	31.3	22.2	29.5	100.0	641	36.6
Middle/JSS	4.0	8.7	28.3	21.1	37.9	100.0	802	39.8
Secondary+	6.0	8.4	26.3	14.3	45.0	100.0	106	43.6
Wealth quintile								
Lowest	4.0	6.2	33.4	28.7	27.7	100.0	778	38.3
Second	4.7	14.6	31.8	22.5	26.5	100.0	665	35.7
Middle	6.7	6.7	30.9	22.5	33.2	100.0	536	38.1
Fourth	4.7	7.5	28.3	24.3	35.3	100.0	443	39.6
Highest	5.0	8.1	24.4	14.7	47.8	100.0	385	46.0
Total	4.9	8.7	30.5	23.4	32.4	100.0	2,807	38.4

Note: First-order births are excluded. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth. Total includes 6 non-first births to women age 15-19, which are not shown separately.

4.4 AGE AT FIRST BIRTH

One of the factors that determines the level of fertility in a population is the age at first birth. Women who marry early are typically exposed to the risk of pregnancy for a longer period, especially when there is little or no contraceptive use. Thus, early childbearing generally leads to a larger family size than later onset of childbearing. A rise in the median age at first birth is typically a sign of transition from high to low fertility. Table 4.7 shows the percentage of women who have given birth by specific ages and the median age at first birth, according to current age.

Table 4.7 Age at first birth

Percentage of women who gave birth by specific exact ages, and median age at first birth, by current age, Ghana 2003

Current age	Percentage who gave birth by exact age					Percentage who have never given birth	Number of women	Median age at first birth
	15	18	20	22	25			
15-19	0.6	na	na	na	na	89.7	1,148	a
20-24	1.4	14.9	34.6	na	na	47.2	1,012	a
25-29	3.3	22.0	40.8	56.4	76.2	18.1	951	21.1
30-34	4.7	28.6	47.6	65.5	80.5	7.0	802	20.2
35-39	4.1	24.2	44.4	64.4	82.1	5.1	722	20.5
40-44	4.4	28.2	48.5	70.8	84.1	2.8	579	20.1
45-49	3.4	24.7	44.9	67.7	85.8	1.6	477	20.4

na = Not applicable
a = Omitted because less than 50 percent of women had a birth before reaching the beginning of the age group

The median age at first birth for the youngest cohort of women age 25-29, for whom a median could be calculated, is 21. For all other age groups, the median age at first birth is around 20 years, suggesting that age at first birth has increased in the most recent period. Further evidence of this trend is observed by the fact that the percentage of first births occurring at age 18 or less has fallen from 25 percent among the oldest cohort of women (age 45-49) to 15 percent among the youngest cohort for whom complete information is available (age 20-24). This reduction in the percentage of women giving birth early implies that more young women are postponing childbearing. A comparison of data from the 1993, 1998, and 2003 GDHS for the same age groups reinforces the conclusion that there has been a trend towards a rising age at first birth.

4.5 MEDIAN AGE AT FIRST BIRTH BY BACKGROUND CHARACTERISTICS

Age at first birth tends to vary by demographic and socio-economic characteristics of women. Table 4.8 shows the median age at first birth among women by selected background characteristics. The median age at first birth for women age 25-49 in Ghana is 20.5 years. Urban women have their first birth a year later than their rural counterparts. Across regions, the median age at first birth ranges from a low of 19.9 years in the Upper East to a high of 21.8 years in Greater Accra.

Age at first birth by education does not appear to vary substantially between education categories, although the median age at first birth for the highest level of education (Middle/JSS) for which a median could be estimated is somewhat higher than that at lower levels. The data also show that women who belong to the wealthiest quintile have their first child about two years later than women in all the other wealth quintiles.

Table 4.8 Median age at first birth by background characteristics

Median age at first birth among women age 25-49 years, by current age and background characteristics, Ghana 2003

Background characteristic	Current age 25-29	30-34	35-39	40-44	45-49	Women age 25-49
Residence						
Urban	22.9	21.1	21.2	20.0	20.3	21.1
Rural	20.1	19.8	20.0	20.3	20.5	20.1
Region						
Western	21.6	19.4	21.2	(18.7)	(19.1)	20.0
Central	19.8	(19.4)	(20.3)	(19.9)	(20.6)	20.1
Greater Accra	23.6	22.6	21.5	20.9	20.9	21.8
Volta	22.4	20.3	20.3	19.6	(21.2)	20.7
Eastern	20.7	19.6	20.2	21.0	(20.4)	20.3
Ashanti	20.8	19.7	20.6	20.3	19.5	20.2
Brong Ahafo	20.8	21.3	19.2	19.1	21.1	20.2
Northern	20.9	20.7	21.4	(21.3)	(22.0)	21.1
Upper East	18.7	19.5	(19.9)	(20.2)	(21.4)	19.9
Upper West	21.0	21.0	19.9	(21.2)	20.3	20.5
Education						
No education	19.8	19.7	20.2	20.1	20.4	20.1
Primary	19.4	19.8	19.7	19.0	19.7	19.5
Middle/JSS	22.0	20.3	20.6	20.2	20.3	20.6
Secondary+	a	25.8	(25.2)	(23.3)	(21.7)	a
Wealth quintile						
Lowest	20.0	20.0	20.0	20.2	21.2	20.2
Second	19.5	19.3	20.0	20.0	20.3	19.7
Middle	20.7	19.5	20.0	20.2	19.7	19.9
Fourth	21.5	20.0	20.1	19.3	19.7	20.2
Highest	23.9	23.5	22.4	21.0	21.1	22.6
Total	21.1	20.2	20.5	20.1	20.4	20.5

Note: Figures in parentheses are based on 25-49 unweighted cases.
a = Omitted because less than 50 percent of women had a birth before reaching the beginning of the age group

4.6 TEENAGE FERTILITY

Adolescent childbearing has potentially negative demographic and social consequences. Births that occur to teenage mothers (less than 20 years) have been found to have the highest infant and child mortality in Ghana (GSS and MI, 1994 and 1999). This may be due to the fact that teenage mothers are more likely to suffer from pregnancy and delivery complications than older mothers, resulting in higher morbidity and mortality for both themselves and their children. In addition, early childbearing may foreclose a teenager's ability to pursue educational or job opportunities. Table 4.9 shows the percentage of adolescent women (age 15-19) who are mothers or pregnant with their first child, by background characteristics. One in ten teenagers has already had a child (10 percent) and another 4 percent are pregnant with their first child.

Table 4.9 Teenage pregnancy and motherhood

Percentage of women age 15-19 who are mothers or pregnant with their first child, by background characteristics, Ghana 2003

Background characteristic	Percentage who are: Mothers	Pregnant with first child	Percentage who have begun childbearing	Number of women
Age				
15	0.6	2.7	3.3	238
16	3.9	2.5	6.4	243
17	9.8	2.0	11.8	229
18	16.5	8.0	24.5	250
19	23.0	1.8	24.8	188
Residence				
Urban	5.7	1.5	7.2	629
Rural	15.8	6.0	21.8	519
Region				
Western	10.2	4.0	14.2	122
Central	13.7	10.5	24.1	93
Greater Accra	8.4	1.1	9.5	203
Volta	14.3	2.7	17.1	88
Eastern	9.5	3.7	13.2	108
Ashanti	8.1	2.2	10.3	255
Brong Ahafo	10.7	2.9	13.6	112
Northern	15.7	7.9	23.6	76
Upper East	9.1	3.5	12.6	62
Upper West	8.5	1.3	9.8	29
Education				
No education	19.1	6.8	26.0	141
Primary	15.5	5.3	20.8	269
Middle/JSS	7.6	2.8	10.4	588
Secondary+	3.0	0.0	3.0	150
Wealth quintile				
Lowest	18.5	7.6	26.1	166
Second	16.6	6.3	23.0	170
Middle	15.0	5.1	20.1	221
Fourth	7.4	2.3	9.7	261
Highest	1.9	0.0	1.9	331
Total	10.3	3.5	13.8	1,148

Urban teenagers differ substantially from their rural counterparts with respect to childbearing. Seven percent of adolescents in urban areas have begun childbearing, compared with 22 percent of their counterparts residing in rural areas. By region, the percentage of women age 15-19 who have begun childbearing ranges from a low of 10 percent in the Greater Accra, Upper West, and Ashanti regions to a high of 24 percent in the Central and Northern regions. It is also clear that childbearing among adolescents decreases with higher education (26 percent among adolescents with no education and 3 percent among those with at least secondary education). Childbearing decreases from 26 percent among adolescents in the lowest wealth quintile to just 2 percent among those in the highest wealth quintile. Poverty is quite plausibly an important consideration in understanding adolescent childbearing in Ghana (Nabila and Fayorsey, 1996). There has been no change in the overall percentage of teenage women who have begun childbearing over the last five years (GSS and MI, 1999).

FAMILY PLANNING 5

This chapter presents the 2003 GDHS findings on contraceptive knowledge and use, attitudes, and sources, as well as exposure to media messages about family planning. The information is particularly useful for policymakers, programme managers, and researchers in population and family planning, and provides a means to assess the success of the Ghanaian family planning programme. Although the focus is on women, some results from the male survey are also presented, since men play an important role in realising women's reproductive goals. Comparisons are also made, where feasible, with findings from previous surveys in order to evaluate trends occurring in Ghana over the last fifteen years.

5.1 KNOWLEDGE OF CONTRACEPTIVE METHODS

Acquiring knowledge about fertility control is an important step toward gaining access to and then using a suitable contraceptive method in a timely and effective manner. Information on knowledge of contraception was collected in two ways. Respondents were asked to mention all ways or methods couples can use to avoid or delay pregnancy. When a respondent failed to mention a particular method spontaneously, the interviewer described the method and asked whether the respondent knew of it. Using this approach, information was collected for 12 modern family planning methods: female and male sterilisation, the pill, the IUD, injectables, implants, male and female condoms, diaphragm, foam tablets and jelly, the lactational amenorrhoea method (LAM), and emergency contraception. Information was also collected on two traditional methods: rhythm or periodic abstinence, and withdrawal. Provision was also made in the questionnaire to record any other methods named spontaneously by respondents and this was coded as "folk methods." This report combines both prompted and unprompted knowledge. Thus, knowledge of a family planning method in the GDHS is defined simply as having heard of a method.

Tables 5.1.1 and 5.1.2 show the percentage of women age 15-49 and men age 15-59 who have heard of contraceptive methods among all women and men, currently married women and men, sexually active unmarried women and men, sexually inactive unmarried women and men, and for unmarried women and men with no sexual experience, by specific method.

The data show that knowledge of any contraceptive method is almost universal in Ghana, with 98 percent of all women and 99 percent of all men knowing at least one method of contraception. Modern methods are more widely known than traditional methods. Ninety-eight percent of all women know of a modern method compared with 75 percent who know of a traditional method. Among women, the male condom is the most commonly known (95 percent), followed by injectables (89 percent), the pill (88 percent), and the female condom (83 percent). Emergency contraception is the least known, reported by 28 percent of all women. Among the traditional methods, periodic abstinence is the most commonly known (65 percent), followed closely by withdrawal (61 percent), a small proportion (4 percent) mentioned folk methods.

Currently married women have a somewhat similar pattern of knowledge, especially with regard to level of knowledge. Among currently married women, 98 percent know at least one method of contraception or a modern method, and 78 percent know a traditional method. Among modern methods, the most commonly known method is the male condom (95 percent), followed by injectables (92 percent), the pill (90 percent), and the female condom (82 percent). Emergency contraception is the least known modern method (29 percent).

Table 5.1.1 Knowledge of contraceptive methods: women

Percentage of all women, of currently married women, of sexually active unmarried women, of sexually inactive unmarried women, and of women with no sexual experience who know any contraceptive method, by specific method, Ghana 2003

Method	All women	Currently married women	Unmarried women who have ever had sex: Sexually active[1]	Unmarried women who have ever had sex: Not sexually active[2]	Unmarried women who have never had sex
Any method	97.7	98.0	99.5	99.2	94.2
Any modern method	97.5	97.8	99.5	99.2	94.0
Female sterilisation	70.2	74.3	70.7	69.9	53.9
Male sterilisation	42.8	45.4	41.7	44.1	31.1
Pill	87.5	89.7	90.1	89.9	75.0
IUD	61.3	65.1	62.2	64.1	42.4
Injectables	88.9	91.8	91.7	90.5	74.5
Implants	61.5	66.7	62.5	61.8	39.8
Male condom	95.3	94.7	98.9	98.3	93.1
Female condom	83.2	81.6	88.5	90.0	80.1
Diaphragm	35.4	38.4	38.3	37.3	20.7
Foam/jelly	40.1	42.9	47.8	43.6	22.6
Lactational amenorrhoea (LAM)	32.1	37.3	26.2	30.3	14.9
Emergency contraception	28.2	28.8	36.5	33.1	17.5
Any traditional method	75.4	77.6	84.1	83.9	54.2
Periodic abstinence	65.4	67.1	71.8	72.5	48.7
Withdrawal	61.3	65.2	73.7	70.3	31.4
Folk method	3.8	4.3	3.9	4.1	1.2
Mean number of methods known	8.6	8.9	9.0	9.0	6.5
Number of women	5,691	3,549	257	1,002	884

[1] Had sexual intercourse in the month preceding the survey
[2] Did not have sexual intercourse in the month preceding the survey

Contraceptive knowledge is highest among sexually active unmarried women (almost 100 percent) and lowest among unmarried women who have never had sex (94 percent). Unmarried women reported the male condom to be the most commonly known method and are more likely to report knowledge of emergency contraception than LAM, regardless of their sexual activity status. Among the unmarried women who have never had sex, the female condom was the second most frequently mentioned method (80 percent) after the male condom (93 percent).

Knowledge of contraception is higher among men—99 percent know of at least one method of contraception (Table 5.1.2). Like women, a larger proportion of men (99 percent) know a modern method than a traditional method (80 percent). The most commonly known modern method is the male condom (98 percent). Similarly, periodic abstinence is the most commonly known traditional method (71 percent). It is worth noting that knowledge of implants and IUD is lower for men than for women.

Table 5.1.2 Knowledge of contraceptive methods: men

Percentage of all men, of currently married men, of sexually active unmarried men, of sexually inactive unmarried men, and of men with no sexual experience who know any contraceptive method, by specific method, Ghana 2003

Method	All men	Currently married men	Unmarried men who have ever had sex: Sexually active[1]	Unmarried men who have ever had sex: Not sexually active[2]	Unmarried men who have never had sex
Any method	98.9	99.6	99.6	99.4	96.6
Any modern method	98.9	99.6	99.6	99.4	96.5
Female sterilisation	73.3	80.2	75.6	75.7	54.7
Male sterilisation	53.5	59.6	58.8	56.4	35.6
Pill	86.8	92.1	87.3	89.7	72.5
IUD	56.6	63.5	56.3	57.4	40.3
Injectables	86.8	93.1	88.0	86.3	72.0
Implants	50.0	58.0	48.0	47.0	33.9
Male condom	98.0	98.7	99.3	98.9	95.2
Female condom	86.2	87.9	91.5	91.1	77.2
Diaphragm	36.5	41.0	39.0	37.3	24.5
Foam/jelly	47.5	55.1	52.2	48.2	27.6
Lactational amenorrhoea (LAM)	32.1	39.6	29.8	30.2	16.7
Emergency contraception	29.7	33.6	31.1	36.8	16.0
Any traditional method	79.7	88.0	85.4	86.6	53.8
Periodic abstinence	71.2	79.9	74.6	76.3	46.4
Withdrawal	68.1	76.6	81.3	77.3	37.3
Folk method	1.9	2.4	2.0	1.6	1.0
Mean number of methods known	8.8	9.6	9.1	9.1	6.5
Number of men	5,015	2,671	485	707	1,154

[1] Had sexual intercourse in the month preceding the survey
[2] Did not have sexual intercourse in the month preceding the survey

Looking at the number of methods known, it is clear that knowledge of specific methods is lowest among both women and men who never had sex. For example, while married women have heard of an average of 8.9 methods and married men 9.6 methods, unmarried women and unmarried men who have never had sex report knowing only an average of 6.5 methods.

There has been an increase in levels of awareness of contraceptive methods over time. Among all women, the proportion who know any method has risen since 1988 for all methods (from 76 percent in 1988, 91 percent in 1993, 93 percent in 1998, to 98 percent in 2003), with the exception of knowledge of the diaphragm, which is no longer available in the country. The proportion who know of implants has risen steeply since 1993 (from 4 percent in 1993, 21 percent in 1998, to 62 percent in 2003). There is a similar trend for men. There are also remarkable increases in knowledge of IUD, male sterilisation, and LAM by men. The mean number of methods known has increased since 1998 from 5.8 to 8.6 for women and from 5.6 to 8.8 for men. This increase could be attributed partly to the fact that female condoms and injectables and training on emergency contraception were introduced into the national family planning programme in 2000.

5.2 EVER USE OF CONTRACEPTION

All women interviewed in the survey who said they had heard of a method of family planning were asked whether they had ever used that method. Men were asked if they had ever used "male-oriented" methods, i.e., male sterilisation, condoms, rhythm method, and withdrawal. Tables 5.2.1 and 5.2.2 show the percentages of women and men who have ever used family planning by specific method and age.

Forty-seven percent of all women report having used a method of contraception at some time, 39 percent have used a modern method, and 26 percent have used a traditional method. Of the modern methods, the male condom (18 percent) is the most commonly used method, followed by the pill (16 percent). Diaphragm and male sterilisation are the least used methods, with less than 1 percent reporting use of these methods. Of the traditional methods, periodic abstinence (19 percent) is the method most commonly used followed by withdrawal (14 percent). Emergency contraception has been used by 1 percent of all women.

Fifty-five percent of currently married women have used a method of contraception at some time, 45 percent have used a modern method, while 30 percent have used a traditional method. The pill is the most commonly used method (20 percent) followed by the male condom (17 percent) and injectables (13 percent). Use is particularly high among sexually active unmarried women, 73 percent of whom have used contraception. Sexually active unmarried women tend to use temporary methods of contraception rather than long-term or permanent methods. Forty-five percent of these women have used a male condom compared with only 17 percent of married women. Also, compared with currently married women, ever use of emergency contraception, the pill and the female condom is higher among sexually active unmarried women.

Table 5.2.2 shows the percentage of all men, currently married men and sexually active unmarried men who reported having ever used one of four male methods of contraception—male sterilisation, male condom, periodic abstinence or withdrawal. The most popular male method, the condom, has been used by 39 percent of all men, 47 percent of currently married men, and 70 percent of sexually active unmarried men. Male sterilisation is practically non-existent in Ghana. Of the two traditional methods, periodic abstinence is reported as used more often than withdrawal by all men (30 percent) and currently married men (43 percent) but is less popular than withdrawal among sexually active unmarried men (36 percent).

Table 5.2.1 Ever use of contraception: women

Percentage of all women, of currently married women, and of sexually active unmarried women who have ever used any contraceptive method, by specific method and age, Ghana 2003

			Modern method													Traditional method			
Age	Any method	Any modern method	Female sterilisation	Male sterilisation	Pill	IUD	Injectables	Implants	Male condom	Female condom	Diaphragm	Foam/jelly	LAM	Emergency contraception	Any traditional method	Periodic abstinence	Withdrawal	Folk method	Number of women
ALL WOMEN																			
15-19	19.4	16.1	0.0	0.0	2.8	0.0	0.5	0.0	14.0	0.8	0.0	0.4	0.1	0.7	9.7	6.9	5.3	0.3	1,148
20-24	51.1	42.1	0.4	0.0	14.3	0.3	5.4	1.0	28.6	1.9	0.2	1.4	1.8	1.8	30.9	22.3	18.9	1.0	1,012
25-29	58.0	46.8	0.0	0.0	19.9	1.2	11.4	1.0	24.1	0.9	0.4	3.7	5.4	1.3	34.4	24.0	18.8	2.1	951
30-34	60.0	50.2	0.9	0.0	22.3	3.1	15.1	2.2	18.7	1.7	1.0	4.7	6.6	1.0	31.2	21.3	17.1	2.1	802
35-39	53.4	44.3	1.6	0.0	22.0	4.7	13.5	1.1	13.6	0.4	0.7	4.2	6.4	0.9	27.0	19.7	14.5	1.7	722
40-44	54.3	44.9	4.2	0.1	20.0	5.0	13.1	1.4	12.4	0.1	0.5	6.2	6.3	1.3	27.3	20.6	12.0	1.0	579
45-49	47.2	36.2	5.3	0.1	16.2	4.2	12.0	1.5	8.9	0.6	0.2	4.4	4.6	0.3	25.2	20.9	9.1	1.4	477
Total	47.4	38.9	1.3	0.0	15.8	2.1	9.1	1.1	18.3	1.0	0.4	3.2	4.0	1.1	25.9	18.7	13.8	1.3	5,691
CURRENTLY MARRIED WOMEN																			
15-19	38.7	33.6	0.0	0.0	8.6	0.0	2.8	0.2	26.5	0.0	0.0	3.6	1.0	1.8	17.3	11.5	9.1	0.8	137
20-24	54.4	43.3	0.8	0.0	17.2	0.4	8.7	1.4	25.9	1.3	0.5	1.8	3.0	1.7	34.0	24.2	20.2	1.1	530
25-29	58.5	46.8	0.0	0.0	21.8	1.5	13.8	1.2	20.4	0.5	0.2	3.5	6.5	1.0	34.1	23.3	16.7	2.5	739
30-34	60.8	51.3	0.9	0.0	23.1	3.2	16.2	2.2	17.9	1.8	1.0	4.7	7.3	1.1	31.3	21.4	17.0	2.3	671
35-39	54.4	45.6	1.9	0.0	21.5	5.1	13.6	1.3	12.8	0.5	0.8	4.0	6.8	0.9	27.4	19.6	14.9	1.9	621
40-44	55.3	45.7	4.9	0.1	20.3	6.2	13.9	1.5	12.2	0.0	0.2	7.1	5.8	1.6	27.9	20.8	12.1	1.3	473
45-49	47.6	38.6	5.6	0.1	17.4	5.0	12.8	1.7	9.0	0.7	0.2	4.9	5.5	0.3	24.3	20.3	8.7	1.5	377
Total	55.3	45.4	1.9	0.0	20.1	3.2	12.9	1.5	17.3	0.8	0.5	4.2	5.8	1.1	29.9	21.3	15.2	1.8	3,549
SEXUALLY ACTIVE UNMARRIED WOMEN[1]																			
Total	72.6	64.4	0.0	0.0	26.6	3.0	7.3	1.3	44.9	4.9	0.5	4.2	1.2	3.2	38.3	29.6	24.5	1.0	257

LAM = Lactational amenorrhoea method

[1] Women who had sexual intercourse in the month preceding the survey

Table 5.2.2 Ever use of male method of contraception: men

Percentage of all men, of currently married men, and of sexually active unmarried men who have ever used a male method of contraception, by specific method and age, Ghana 2003

Age	Any method	Any modern method	Modern method		Any traditional method	Traditional method		Number of men
			Male sterilisation	Male condom		Periodic abstinence	Withdrawal	
ALL MEN								
15-19	12.8	10.5	0.0	10.5	6.2	4.1	3.9	1,107
20-24	54.7	48.0	0.0	48.0	32.9	22.2	25.0	684
25-29	72.6	60.0	0.0	60.0	51.4	40.1	34.7	754
30-34	71.7	55.7	0.0	55.7	53.5	39.6	35.3	633
35-39	63.4	45.8	0.0	45.8	50.0	40.3	31.1	498
40-44	69.8	46.0	0.0	46.0	55.7	44.9	35.9	412
45-49	59.5	36.8	0.3	36.5	50.4	40.9	32.2	441
50-54	57.5	29.6	0.2	29.6	44.9	37.4	27.7	294
55-59	55.0	29.4	0.0	29.4	44.1	36.8	19.1	192
Total	53.0	39.3	0.0	39.3	38.6	29.8	25.2	5,015
CURRENTLY MARRIED MEN								
15-19	*	*	*	*	*	*	*	7
20-24	73.7	63.8	0.0	63.8	55.0	41.4	36.3	128
25-29	76.6	61.4	0.0	61.4	58.4	45.5	36.1	398
30-34	72.8	55.1	0.0	55.1	54.8	42.9	35.2	500
35-39	64.7	46.9	0.0	46.9	50.6	41.4	30.3	424
40-44	70.2	45.6	0.0	45.6	57.7	46.7	37.3	375
45-49	61.4	37.8	0.3	37.5	52.6	42.9	32.8	396
50-54	58.2	30.2	0.2	30.2	45.3	38.1	27.5	272
55-59	56.8	30.7	0.0	30.7	46.3	38.2	21.4	171
Total	67.6	47.2	0.1	47.1	53.3	42.8	32.9	2,671
SEXUALLY ACTIVE UNMARRIED MEN[1]								
Total	81.3	70.0	0.0	70.0	52.5	35.9	42.0	485

Note: Male respondents were not asked about methods that are female controlled, such as the pill or IUD. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Men who had sexual intercourse in the month preceding the survey

5.3 CURRENT USE OF CONTRACEPTIVE METHODS

The level of current use of contraceptive methods is one of the indicators most frequently used to assess the success of family planning programme activities. It is also widely used as a measure in analysing the determinants of fertility. This section focuses on the levels and differentials in current use of family planning.

Table 5.3 shows the percent distribution of women who are currently using specific family planning methods by age. One in five women is currently using any contraceptive method. The use of any contraceptive method increases with age, reaching its peak at age group 30-34 (28 percent), and then starts to decline. Modern methods are used by 15 percent of women, while only 5 percent are using traditional methods. Male condoms, pills, and injectables are the most commonly used methods (4 percent each). Female sterilisation, implants, and IUD are used by roughly 1 percent each, while female

condoms, foam/jelly, and diaphragms[1] are the least used modern methods (less than 1 percent each). Of the traditional methods, periodic abstinence is the most commonly used (4 percent), while withdrawal is used by 1 percent. Less than 1 percent use folk methods.

The contraceptive prevalence rate among currently married women is 25 percent. Among currently married women, the pill (6 percent) is the most commonly used modern method, followed closely by injectables (5 percent). Male condoms and female sterilisation are used by 3 percent and 2 percent of currently married women, respectively, while implants and IUD are used by 1 percent each. The most commonly used traditional method is periodic abstinence, used by 5 percent of currently married women. After the male condom (18 percent), the most commonly used modern method among sexually active unmarried women is the pill (8 percent), while periodic abstinence (9 percent) is the most widely used traditional method. Sexually active unmarried women are nearly twice as likely to report use of both any modern and any traditional method than currently married women. The difference may be due to the greater use of male condoms by sexually active unmarried women. This group is six times as likely to use male condoms as currently married women.

Table 5.4 and Figure 5.1 show the percent distribution of currently married women by current use of family planning methods, according to background characteristics. Current use of contraception varies

Table 5.3 Current use of contraception

Percent distribution of all women, of currently married women, and of sexually active unmarried women by contraceptive method currently used, according to age, Ghana 2003

			Modern method											Traditional method					
Age	Any method	Any modern method	Female sterilisation	Pill	IUD	Injectables	Implants	Male condom	Female condom	Diaphragm	Foam/jelly	LAM	Any traditional method	Periodic abstinence	Withdrawal	Folk method	Not currently using	Total	Number of women
ALL WOMEN																			
15-19	8.5	6.4	0.0	1.0	0.0	0.1	0.0	5.2	0.1	0.0	0.0	0.0	2.1	1.6	0.3	0.2	91.5	100.0	1,148
20-24	21.4	15.4	0.4	3.3	0.2	2.9	0.6	7.7	0.3	0.0	0.0	0.1	6.0	4.7	0.9	0.4	78.6	100.0	1,012
25-29	25.4	18.5	0.0	6.9	0.2	5.5	0.5	5.0	0.1	0.0	0.1	0.2	6.8	5.2	1.1	0.5	74.6	100.0	951
30-34	27.5	20.6	0.9	5.7	0.8	6.4	1.4	3.7	0.4	0.1	0.5	0.6	6.9	5.0	1.3	0.7	72.5	100.0	802
35-39	26.1	19.6	1.6	6.5	1.3	4.9	0.7	3.1	0.0	0.1	1.0	0.3	6.6	5.1	0.7	0.8	73.9	100.0	722
40-44	24.7	18.6	4.2	4.6	1.9	4.9	1.0	1.3	0.0	0.1	0.2	0.3	6.1	5.1	0.6	0.4	75.3	100.0	579
45-49	14.5	10.5	5.3	1.1	0.6	2.2	1.1	0.2	0.0	0.0	0.0	0.0	4.0	3.4	0.4	0.2	85.5	100.0	477
Total	20.7	15.3	1.3	4.1	0.6	3.7	0.7	4.3	0.2	0.0	0.2	0.2	5.4	4.2	0.8	0.4	79.3	100.0	5,691
CURRENTLY MARRIED WOMEN																			
15-19	8.4	6.9	0.0	3.3	0.0	0.8	0.0	2.7	0.0	0.0	0.0	0.0	1.6	0.6	0.2	0.8	91.6	100.0	137
20-24	22.8	16.9	0.8	4.1	0.3	4.8	1.1	5.6	0.0	0.0	0.0	0.1	6.0	4.7	0.8	0.4	77.2	100.0	530
25-29	25.8	18.7	0.0	7.4	0.3	7.0	0.6	3.3	0.0	0.0	0.0	0.3	7.1	5.3	1.1	0.6	74.2	100.0	739
30-34	29.7	22.3	0.9	6.6	0.7	7.0	1.5	3.7	0.5	0.1	0.6	0.7	7.4	5.5	1.1	0.8	70.3	100.0	671
35-39	28.1	20.9	1.9	6.8	1.5	5.2	0.8	3.1	0.0	0.1	1.2	0.3	7.2	5.5	0.8	1.0	71.9	100.0	621
40-44	28.7	21.6	4.9	5.4	2.4	5.4	1.1	1.6	0.0	0.1	0.3	0.4	7.1	6.1	0.6	0.4	71.3	100.0	473
45-49	16.0	11.5	5.6	1.2	0.8	2.5	1.1	0.3	0.0	0.0	0.0	0.0	4.5	4.0	0.2	0.2	84.0	100.0	377
Total	25.2	18.7	1.9	5.5	0.9	5.4	1.0	3.1	0.1	0.1	0.4	0.3	6.5	5.1	0.8	0.6	74.8	100.0	3,549
SEXUALLY ACTIVE UNMARRIED WOMEN[1]																			
Total	43.4	31.6	0.0	8.2	1.1	3.5	0.3	18.0	0.5	0.0	0.0	0.0	11.8	8.7	3.1	0.0	56.6	100.0	257

Note: If more than one method is used, only the most effective method is considered in this tabulation.
LAM = Lactational amenorrhoea method
[1] Women who have had sexual intercourse in the month preceding the survey

[1] Diaphragms are no longer available in Ghana.

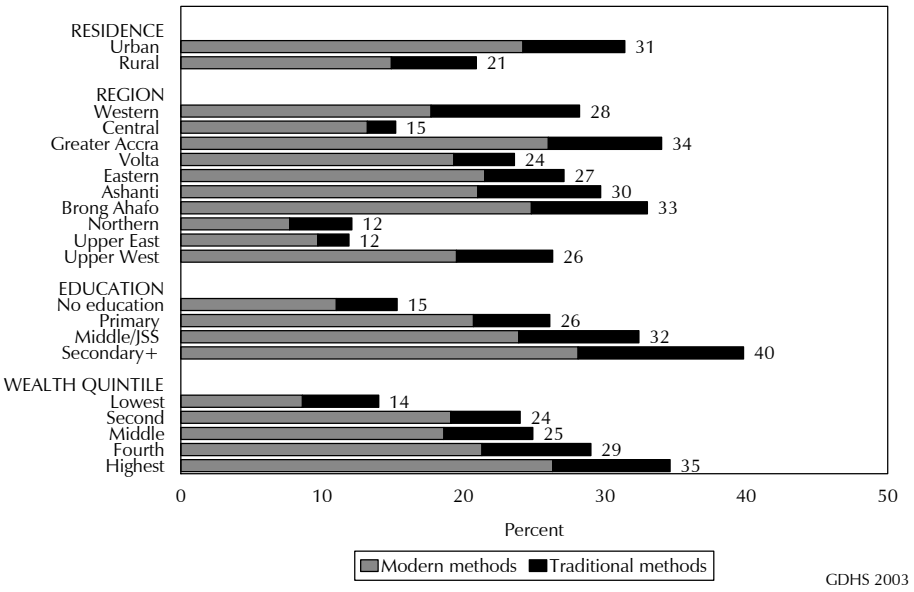
Table 5.4 Current use of contraception by background characteristics

Percent distribution of currently married women by contraceptive method currently used, according to background characteristics, Ghana 2003

			Modern method										Any	Traditional method					
Background characteristic	Any method	Any modern method	Female sterilisation	Pill	IUD	Injectables	Implants	Male condom	Female condom	Diaphragm	Foam/jelly	LAM	traditional method	Periodic abstinence	Withdrawal	Folk method	Not currently using	Total	Number of women
Residence																			
Urban	31.4	24.2	2.8	6.5	1.5	6.0	1.3	5.2	0.2	0.1	0.4	0.3	7.2	6.1	0.9	0.2	68.6	100.0	1,436
Rural	20.9	14.9	1.2	4.9	0.5	5.1	0.8	1.7	0.1	0.1	0.3	0.4	6.0	4.4	0.7	0.9	79.1	100.0	2,113
Region																			
Western	28.2	17.7	1.9	4.3	1.0	3.7	0.9	3.1	0.0	0.0	2.0	0.7	10.6	7.3	2.3	0.9	71.8	100.0	319
Central	15.2	13.2	0.0	2.3	0.0	5.8	2.1	3.0	0.0	0.0	0.0	0.0	2.0	0.9	1.0	0.0	84.8	100.0	274
Greater Accra	34.0	26.0	3.6	5.2	1.3	6.8	1.0	6.4	0.0	0.0	1.0	0.7	8.0	6.0	1.6	0.4	66.0	100.0	476
Volta	23.6	19.3	0.8	3.6	0.2	9.9	1.0	3.7	0.0	0.0	0.0	0.0	4.3	4.1	0.0	0.3	76.4	100.0	304
Eastern	27.1	21.5	2.7	7.7	0.7	4.2	1.5	3.5	0.3	0.2	0.4	0.3	5.6	4.6	1.0	0.0	72.9	100.0	354
Ashanti	29.7	21.0	3.7	8.7	1.6	2.8	0.3	2.8	0.4	0.1	0.0	0.5	8.8	8.0	0.4	0.4	70.3	100.0	643
Brong Ahafo	33.0	24.8	1.1	10.0	1.8	7.7	1.0	3.0	0.0	0.1	0.0	0.0	8.2	7.2	0.9	0.1	67.0	100.0	398
Northern	12.1	7.7	0.4	2.6	0.4	2.5	1.0	0.8	0.0	0.0	0.0	0.0	4.4	1.1	0.3	3.1	87.9	100.0	431
Upper East	11.9	9.7	0.0	2.0	0.4	6.4	0.0	0.9	0.0	0.0	0.0	0.0	2.2	2.2	0.0	0.0	88.1	100.0	236
Upper West	26.3	19.5	0.9	1.6	0.0	11.1	2.4	2.2	0.0	0.0	0.2	1.0	6.9	6.2	0.4	0.3	73.7	100.0	113
Education																			
No education	15.3	11.0	0.9	3.0	0.5	4.6	0.6	1.0	0.1	0.0	0.2	0.1	4.2	2.6	0.6	1.1	84.7	100.0	1,354
Primary	26.1	20.7	2.2	6.3	1.0	6.5	0.7	2.7	0.0	0.2	0.9	0.2	5.3	3.8	0.8	0.7	73.9	100.0	710
Middle/JSS	32.4	23.9	1.8	8.2	1.2	6.1	1.3	4.1	0.2	0.0	0.3	0.5	8.6	7.3	1.1	0.2	67.6	100.0	1,205
Secondary+	39.8	28.1	5.8	4.4	1.2	4.0	2.3	9.9	0.0	0.0	0.0	0.6	11.7	11.0	0.7	0.0	60.2	100.0	280
Number of living children																			
0	14.4	8.6	0.0	1.2	0.0	0.6	0.5	6.4	0.0	0.0	0.0	0.0	5.8	4.4	1.0	0.4	85.6	100.0	307
1-2	22.7	17.0	0.7	5.1	0.3	5.7	0.7	4.1	0.0	0.0	0.2	0.3	5.7	4.5	0.7	0.4	77.3	100.0	1,280
3-4	30.5	22.1	2.5	7.4	1.8	6.6	0.9	1.9	0.3	0.1	0.5	0.2	8.4	6.7	1.0	0.7	69.5	100.0	1,073
5+	26.1	20.4	3.5	5.5	1.1	5.3	1.7	2.0	0.0	0.1	0.5	0.6	5.7	4.1	0.7	0.9	73.9	100.0	888
Wealth quintile																			
Lowest	14.0	8.6	0.4	2.3	0.0	4.0	0.5	0.7	0.0	0.1	0.5	0.0	5.4	3.3	0.5	1.5	86.0	100.0	753
Second	24.0	19.1	1.5	5.8	0.6	6.4	0.9	2.9	0.0	0.1	0.2	0.6	4.8	3.5	0.8	0.5	76.0	100.0	687
Middle	24.9	18.6	1.8	7.1	0.5	5.2	1.6	1.5	0.3	0.0	0.2	0.3	6.3	5.0	0.7	0.7	75.1	100.0	692
Fourth	29.0	21.3	2.3	6.6	1.2	5.5	0.8	4.3	0.0	0.1	0.3	0.1	7.7	6.4	1.0	0.3	71.0	100.0	695
Highest	34.6	26.3	3.4	6.1	2.2	6.0	1.1	6.2	0.2	0.0	0.5	0.6	8.3	7.2	1.0	0.0	65.4	100.0	721
Total	25.2	18.7	1.9	5.5	0.9	5.4	1.0	3.1	0.1	0.1	0.4	0.3	6.5	5.1	0.8	0.6	74.8	100.0	3,549

Note: If more than one method is used, only the most effective method is considered in this tabulation.
LAM = Lactational amenorrhoea method

Figure 5.1
Current Use of Family Planning Among Currently Married Women Age 15-49



with urban-rural and regional residence, education level, and number of living children. Women in urban areas are more likely to use contraceptive methods (31 percent) than their rural counterparts (21 percent). Male condoms, IUD, and female sterilisation use in urban areas is two to three times higher than in rural Ghana. The more urbanised regions such as Greater Accra, Brong-Ahafo, and Ashanti, have contraceptive prevalence rates of 30-34 percent. Two of the three northern regions (Upper East and Northern) and Central Region report the lowest levels of contraceptive use (12 percent each in the Northern and Upper East regions, and 15 percent in the Central Region). Women with at least some secondary education are more than twice as likely to use contraception as women with no education. Use of female sterilisation, implants, male condoms, IUD, LAM, and periodic abstinence all increase with education.

The proportion currently using contraception generally increases with increasing number of children. Fourteen percent of women without children are currently using contraceptive methods, compared with 26 percent of women with five or more children. Current use of contraception is, however, highest among women who have three or four children (31 percent). Use of female sterilisation, implants, and LAM increases with increasing number of children.

Wealth and current use of contraception is positively related, increasing from 14 percent among currently married women in the lowest quintile to 35 percent in the highest quintile. The gap in use is especially large between women in the lowest wealth quintile and all other wealth quintiles, and is obvious for all methods with the exception of female sterilisation, which shows an isotonic increase from lowest to highest wealth quintile.

The pattern of current use of modern and traditional methods of contraception is generally similar across subgroups. Use of both modern and traditional methods are more common in urban than rural areas, increases with increasing education and wealth quintile.

5.4 TRENDS IN THE USE OF FAMILY PLANNING

Table 5.5 and Figure 5.2 show the trend in the use of family planning among currently married women based on data from the 1988, 1993, 1998, and 2003 GDHS surveys.

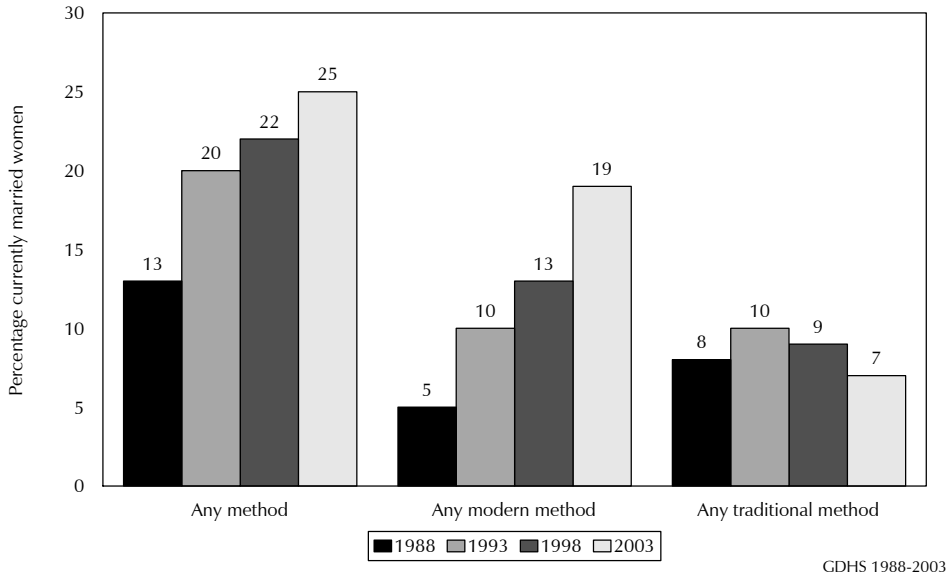
Table 5.5 Trends in the use of family planning

Percentage of currently married women age 15-49 who are currently using specific family planning methods, Ghana 1988, 1993, 1998, 2003

Method	GDHS 1988	GDHS 1993	GDHS 1998	GDHS 2003
Any method	12.9	20.3	22.0	25.2
Any modern method	5.2	10.1	13.3	18.7
Pill	1.8	3.2	3.9	5.5
IUD	0.5	0.9	0.7	0.9
Injectable	0.3	1.6	3.1	5.4
Diaphragm/foam/Jelly	1.3	1.2	0.9	0.5
Male condom	0.3	2.2	2.7	3.1
Female condom	u	u	u	0.1
Female sterilisation	1.0	0.9	1.3	1.9
Implants	u	0.0	0.1	1.0
LAM	u	u	0.5	0.3
Any traditional method	7.7	10.1	8.7	6.5
Periodic abstinence	6.2	7.5	6.6	5.1
Withdrawal	0.9	2.1	1.5	0.8
Other	0.6	0.5	0.6	0.6
Number of women	3,156	3,204	3,131	3,549

u = Unknown (not available)

Figure 5.2
Trends in Current Use of Contraceptive Methods
Ghana, 1988-2003



The current use of contraception among currently married women shows an increase from 13 percent in 1988, 20 percent in 1993, 22 percent in 1998, to 25 percent in 2003. There has been a steady increase in the use of modern methods from 5 percent in 1988, 10 percent in 1993, 13 percent in 1998 to 19 percent in 2003. However, while there was an increase in the use of traditional methods from 8 percent in 1988 to 10 percent in 1993, use of these methods have since decreased to 9 percent in 1998 and 7 percent in 2003. Use of male condoms, pills, injectables, and implants have increased markedly. For example, pill use more than doubled, use of injectables increased from less than 1 percent to 5 percent, and male condom use increased from less than 1 percent to 3 percent, between 1988 and 2003. A major IEC campaign called *Life Choices,* which aimed at repositioning family planning (from being a purely clinical or health issue to being a choice one makes in life according to personal reproductive goals), may have contributed significantly to the increased use of modern methods.

5.5 CURRENT USE OF CONTRACEPTION BY WOMEN'S STATUS

Women's status plays a very important role in access to and use of family planning services as well as other reproductive and child health services and is a determinant of contraceptive use. Table 5.6 presents the distribution of currently married women by contraceptive method currently used, according to selected indicators of women's status.

A woman's desire and ability to manage her fertility and her choice of contraceptive methods are in part affected by her status, self-image, and sense of empowerment. A woman who feels that she does not have much control over basic aspects of her life may be less likely to feel she can make and carry out decisions about her fertility. She may also feel the need to choose methods that are less obvious or that do not depend on her husband's cooperation.

There does not appear to be a clear relationship between the three measures of women's status and current contraceptive use among currently married women. Nevertheless, women who believe that wife-beating is not justified for any reason at all seem to be slightly more likely to use contraceptives than other women.

Table 5.6 Current use of contraception by women's status

Percent distribution of currently married women by contraceptive method currently used, according to indicators of women's status, Ghana 2003

			Modern method										Traditional method						
Women's status indicator	Any method	Any modern method	Female sterili-sation	Pill	IUD	Inject-ables	Implants	Male condom	Female condom	Dia-phragm	Foam/ jelly	LAM	Any traditional method	Periodic absti-nence	With-drawal	Folk method	Not currently using	Total	Number of women
Number of decisions in which woman has final say[1]																			
0	23.6	19.4	0.8	4.4	1.0	6.6	1.3	4.3	0.0	0.0	0.4	0.6	4.3	3.2	0.7	0.3	76.4	100.0	630
1-2	19.5	14.3	1.4	3.7	0.3	4.9	0.7	2.8	0.0	0.2	0.2	0.0	5.3	3.9	0.5	0.9	80.5	100.0	760
3-4	28.6	18.8	1.3	8.2	1.1	4.3	1.3	1.5	0.3	0.0	0.4	0.4	9.8	7.7	0.9	1.3	71.4	100.0	742
5	27.1	20.6	3.0	5.7	1.0	5.7	0.8	3.6	0.1	0.1	0.4	0.3	6.4	5.1	1.0	0.3	72.9	100.0	1,417
Number of reasons to refuse sex with husband																			
0	23.5	18.7	0.5	9.0	0.1	3.4	2.3	2.3	0.5	0.0	0.5	0.0	4.9	4.2	0.0	0.7	76.5	100.0	267
1-2	25.0	17.6	1.6	4.5	1.8	4.0	1.1	2.7	0.5	0.0	0.3	1.1	7.4	6.4	0.5	0.5	75.0	100.0	461
3-4	25.4	18.8	2.0	5.4	0.8	5.8	0.8	3.2	0.0	0.1	0.4	0.2	6.5	4.9	0.9	0.6	74.6	100.0	2,821
Number of reasons wife - beating is justified																			
0	27.5	19.8	2.3	6.2	0.8	4.9	1.3	3.5	0.1	0.1	0.3	0.3	7.6	6.4	0.8	0.4	72.5	100.0	1,738
1-2	22.3	16.9	1.4	5.5	1.3	5.4	0.8	2.1	0.2	0.0	0.2	0.1	5.4	4.1	0.7	0.6	77.7	100.0	755
3-4	26.0	19.9	1.9	4.7	1.2	7.0	0.8	3.3	0.0	0.0	0.6	0.5	6.1	4.0	0.9	1.2	74.0	100.0	717
5	18.0	14.0	0.9	4.2	0.0	5.1	0.4	2.6	0.0	0.0	0.4	0.5	4.0	2.5	0.7	0.8	82.0	100.0	339
Total	25.2	18.7	1.9	5.5	0.9	5.4	1.0	3.1	0.1	0.1	0.4	0.3	6.5	5.1	0.8	0.6	74.8	100.0	3,549

Note: If more than one method is used, only the most effective method is considered in this tabulation.
LAM = Lactational amenorrhoea method
[1] Either by herself or jointly with others

5.6 NUMBER OF CHILDREN AT FIRST USE OF CONTRACEPTION

The decision to initiate family planning use differs according to the circumstances of couples and individuals concerned. Contraceptive methods may be used for limiting births when they have already had the desired number of children (i.e., to stop having children), or spacing births (i.e., to delay the interval between births), or postpone a first birth. In the 2003 GDHS, women were asked how many children they had at the time they first used a method of family planning. The number of living children at the time of first use of contraception is a measure of willingness to postpone the first birth and of a deliberate effort at spacing births. Thus, differences in fertility-controlling behaviour of different cohorts of women can be observed by examining the number of living children at first use of contraceptives by age of the woman.

Table 5.7 shows the percent distribution of women who have ever used contraception by number of living children at the time of first use of contraception, according to current age. Two in five women age 15-49 years report first use of contraception before the birth of their first child. Younger women (age 15-34) reported first use of contraceptives at lower parities than older women. Among older women, those who ever used contraception tended to start only when they had at least four children. In contrast, younger users tend to start when they had only one child or none. For example, 93 percent of women 15-19 who have used contraception started before they had any children, compared with 12 percent of women age 45-49. In a culture where smaller family size is becoming a norm, young women adopt family planning at an earlier age than their older counterparts. The data suggests a move towards the early use of contraceptives among younger Ghanaian women to delay childbearing. On the other hand, older women initiate contraceptive use at a later age primarily to limit rather than space births.

Table 5.7 Number of children at first use of contraception

Percent distribution of women who have ever used contraception by number of living children at the time of first use of contraception, according to current age, Ghana 2003

Current age	Number of living children at time of first use of contraception						Total	Number of women
	0	1	2	3	4+	Missing		
15-19	92.9	6.8	0.3	0.0	0.0	0.0	100.0	222
20-24	68.7	24.2	5.6	1.0	0.0	0.5	100.0	518
25-29	38.2	31.9	17.7	8.0	3.2	1.0	100.0	551
30-34	21.4	29.1	21.4	12.1	15.7	0.2	100.0	481
35-39	15.2	18.9	17.2	18.5	29.8	0.4	100.0	385
40-44	13.7	18.2	10.4	14.7	42.2	0.8	100.0	315
45-49	12.3	15.6	12.4	10.9	47.7	1.0	100.0	225
Total	37.3	23.0	13.3	9.3	16.6	0.6	100.0	2,698

5.7 USE OF SOCIAL MARKETING BRANDS

It is important for programme purposes to get a sense of whether the social marketing of contraceptives is successful. Questions on social marketing in Ghana were restricted to the use of the pill and condom, since they are the most commonly used modern methods of contraception. Pill and condom users were asked for the brand name and the cost.

Secure is the brand of oral contraceptive pill that is socially marketed by the Ghana Social Marketing Foundation (GSMF). Ovrette, Microgynon, Micronor, and Lo-femenal are brands provided by the public sector and at the Planned Parenthood Association of Ghana (PPAG) clinics. The other brands

are mainly sold in the private commercial sector. Table 5.8 shows that the brand marketed by GSMF is by far the most popular brand of pill used in Ghana. One in two women use *Secure*, compared with one in eight women using brands marketed by the public sector. The most common, Lo-femenal, is used by 8 percent of pill users. One in six women use brands marketed by the private sector—the most common, Duofem, is used by 7 percent of pill users. Table 5.8 also shows the average cost of a cycle of pills by brand name for women who know the cost. The average cost of a cycle of pills is 1,366 cedis[2] irrespective of the brand, but cost varies markedly by the brand type, ranging from a high of 1,667 cedis for Micronor to a low of 935 cedis for Ovrette.

Table 5.8 Pill brand and cost

Percent distribution of pill users and average cost per cycle, by brand of pill according to source, Ghana 2003

Brand by source	Users	Cost per cycle (cedis[1])
GSMF		
Secure	50.3	1,087
Public		
Ovrette	3.1	935
Microgynon	0.8	1,000
Lo-femenal	8.4	1,252
Micronor	0.4	1,667
Private		
Duofem	6.5	999
Other	10.5	2,800
Don't know/Missing	19.9	1,616
Average cost per cycle	na	1,366
Total	100.0	na
Number	235	216

[1]One US$ is equivalent to 8,992 cedis. Excludes users who don't know cost.
GSMF = Ghana Social Marketing Foundation
na=Not applicable

As seen in Table 5.9, GSMF plays an important role in the marketing of condoms too. Sixty-three percent of men who report use of condom mention using brands marketed by GSMF (Protector, Champion, and Panther), 16 percent use a privately marketed brand (Rough Rider or other), and 4 percent used a brand marketed by the public sector (no brand name/no logo). Table 5.9 also shows the average cost of condoms by brand name among men who knew the cost of condoms. The most popular condom, Champion, is also the cheapest. Condoms marketed by the private sector are much more expensive than those marketed by GSMF or the public sector.

[2] One US$ is equivalent to 8,992 cedis.

Table 5.9 Condom brand and cost

Percent distribution of condom users and average cost per condom by brand of condom according to source, Ghana 2003

Brand name	Users	Cost per condom (cedis[1])
GSMF		
Protector	5.6	388
Champion	35.5	254
Panther	21.8	322
Public		
No brand name/no logo	3.6	260
Private		
Rough rider	1.3	1,266
Other	15.1	649
Don't know/Missing	17.0	358
Average cost per condom	na	368
Total	100.0	na
Number	1,981	1,838

[1]One US$ is equivalent to 8,992 cedis. Excludes users who don't know cost.
GSMF = Ghana Social Marketing Foundation
na=Not applicable

The market share of socially marketed pills and condoms has increased in the last five years. GSMF brands of pills and condoms increased by 35 percent and 27 percent, respectively, in the five years between 1998 and 2003. In 1998, pills marketed by GSMF accounted for 37 percent of current users, while condoms sold by GSMF accounted for 50 percent of current users (GSS and MI, 1999).

5.8 KNOWLEDGE OF FERTILE PERIOD

A basic knowledge of reproductive physiology is especially useful for the successful practice of coitus-related methods such as withdrawal, condom, vaginal methods, and other fertility-awareness-based methods collectively called periodic abstinence. Knowledge of the fertile period is particularly critical in the case of periodic abstinence. The successful practice of natural family planning depends on an understanding of when during the menstrual cycle a woman is most likely to conceive.

All women and men in the 2003 GDHS were asked about their knowledge of a woman's fertile period. The results are presented in Table 5.10 for users and non-users of periodic abstinence. Only about three-tenths of all women and all men (29 and 28 percent, respectively) reported correct knowledge of a woman's fertile period, that is, that a woman is most likely to conceive half way between two periods. Users of natural family planning methods are more knowledgeable about their ovulatory cycle; 62 percent of female users of natural family planning correctly identified the middle of the cycle as the fertile time compared with 28 percent of non-users of the method. Knowledge of the fertile period among men was lower than for women. Forty-five percent of male users of natural family planning correctly identified the middle of the cycle as the fertile time, compared with 27 percent of non-users of the method. One-third of women wrongly reported that the fertile period occurs right after a woman's period has ended, with 30 percent of users of periodic abstinence reporting so. Nineteen percent reported not having any knowledge of the fertile period. This is an improvement over the results of the 1993 GDHS,

where nearly half of all women did not have correct knowledge of the fertile period. In that survey, 28 percent of all women and 55 percent of users of periodic abstinence correctly knew of the fertile period, while 20 percent of all women reported that the fertile period is right after the period has ended. Comparable data were not available for the 1998 GDHS.

Table 5.10 Knowledge of fertile period

Percent distribution of women and men by knowledge of the fertile period during the ovulatory cycle, according to current use/non-use of periodic abstinence, Ghana 2003

	Women			Men		
Perceived fertile period	Users of periodic abstinence	Non-users of periodic abstinence	All women	Users of periodic abstinence	Nonusers of periodic abstinence	All men
Just before her period begins	4.1	4.8	4.7	7.5	7.0	7.0
During her period	0.6	2.1	2.1	3.2	3.9	3.9
Right after her period has ended	30.0	35.2	35.0	41.0	27.8	28.4
Halfway between two periods	62.1	28.0	29.4	45.1	27.2	28.1
Other	0.0	0.1	0.1	0.0	0.1	0.1
No specific time	0.3	9.7	9.3	0.2	12.9	12.3
Don't know	3.0	20.0	19.2	2.6	20.8	19.9
Missing	0.0	0.2	0.2	0.4	0.2	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of respondents	238	5,453	5,691	261	4,754	5,015

5.9 SOURCE OF SUPPLY

Information on sources of modern contraception is important to family planning programme management. In Ghana, both public and private sectors are strategically important in the provision of family planning services. Non-clinical short-term methods such as the pill and condoms are widely distributed by the private sector. Ghana has a vibrant social marketing programme that networks with pharmacies and chemical sellers, private clinics and maternity homes as well as major NGOs, such as the PPAG, which provide both clinical and non-clinical methods. The public sector provides the full range of clinical and non-clinical methods mainly through health facilities and also supports major partners such as PPAG.

In the 2003 GDHS, all current users of modern contraceptive methods were asked the most recent source of their methods. Interviewers were instructed to record the name of the source or facility, because respondents may not always be able to accurately categorise a source as public or private. Supervisors and editors then verified this information. This procedure helped in improving the accuracy of the information.

The results are shown in Table 5.11 and Figure 5.3 and indicate that in Ghana both the public and private sectors are important sources of supply for users of modern methods (41 and 54 percent, respectively). The most common public sector sources are government hospitals and polyclinics, which provide most of the services (26 percent), while government health centres and family planning clinics provide 11 and 4 percent, respectively. Within the private sector, pharmacies, chemists, and drug stores are the largest source, supplying 43 percent of all current users. Seven percent of users also mentioned private hospitals or clinics and 3 percent mentioned maternity homes and PPAG clinics. Other sources such as family, relatives, and shops are the least common (2 percent).

Table 5.11 Source of contraception

Percent distribution of current users of modern contraceptive methods by most recent source of method, according to specific method, Ghana 2003

Source	Female sterilisation	Pill	IUD	Inject-ables	Implants	Male condom	Total
Public sector	68.9	19.5	(78.2)	86.9	(92.0)	5.2	41.0
Government hospital/ polyclinic	67.5	9.9	(63.6)	43.6	(69.0)	3.3	25.7
Government health centre	0.0	7.0	(7.0)	31.1	(18.0)	0.2	10.6
FP clinic	1.4	2.3	(7.5)	9.5	(2.9)	0.4	3.6
Mobile clinic	0.0	0.0	(0.0)	0.4	(0.0)	0.0	0.1
Fieldworker	0.0	0.3	(0.0)	1.0	(2.0)	1.2	0.8
Other	0.0	0.0	(0.0)	1.4	(0.0)	0.0	0.3
Private medical sector	29.3	76.8	(21.8)	12.6	(8.0)	82.4	53.7
Private hospital/clinic	29.3	4.2	(12.6)	6.2	(5.9)	1.7	6.5
Private doctor	0.0	0.6	(0.0)	0.0	(0.0)	0.0	0.2
Pharmacy/chemist/ drug store	0.0	66.1	(0.0)	0.9	(0.0)	80.0	43.1
Mobile clinic	0.0	0.5	(0.0)	0.0	(0.0)	0.0	0.1
Fieldworker	0.0	1.1	(0.0)	0.0	(0.0)	0.7	0.7
FP/PPAG clinic	0.0	1.4	(3.1)	2.6	(2.1)	0.0	1.3
Maternity home	0.0	2.8	(6.1)	3.0	(0.0)	0.0	1.7
Other	0.0	0.2	(0.0)	0.0	(0.0)	0.0	0.0
Other source	0.0	1.3	(0.0)	0.0	(0.0)	6.1	2.4
Shop	0.0	0.0	(0.0)	0.0	(0.0)	1.0	0.3
Friend/relative	0.0	1.3	(0.0)	0.0	(0.0)	5.2	2.1
Other	0.0	2.4	(0.0)	0.5	(0.0)	2.7	1.7
Missing	1.8	0.0	(0.0)	0.0	(0.0)	3.5	1.2
Total	100.0	100.0	(100.0)	100.0	(100.0)	100.0	100.0
Number of women	72	235	35	208	37	246	858

Note: Table excludes lactational amenorrhoea method (LAM). Figures in parentheses are based on 25-49 unweighted cases. Total includes 7 users of female condom, 3 users of the diaphragm and 12 users of foam/jelly.

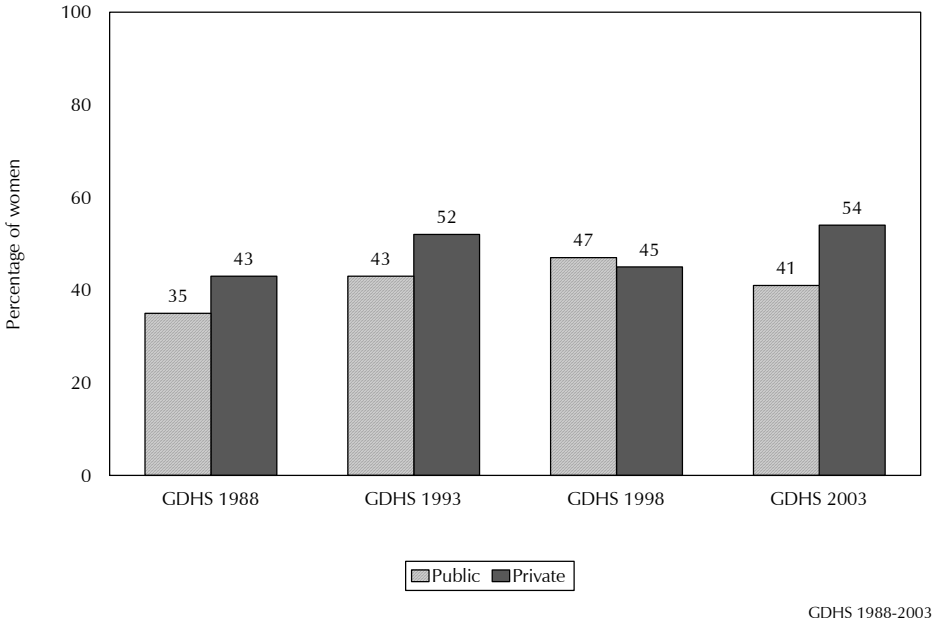
In the last fifteen years, there has been a shift in the source of modern contraceptive methods from the public to the private sector (Figure 5.3). The proportion of current users relying on private medical sources has increased from 43 percent in 1988 to 52 percent in 1993, declined to 45 percent in 1998 and then increased to 54 percent in 2003. Reliance on public sources for all modern methods increased from 35 percent in 1988, 43 percent in 1993, to 47 percent in 1998, with a decline (41 percent) in 2003.

There are differences by method among the sectors. Male condoms and pills are commonly obtained from private sources (82 and 77 percent, respectively), while clinic-based methods such as IUD, injectables, and implants are provided predominantly by public facilities. Female sterilisation requires medical personnel and is available mostly in public sector hospitals (69 percent) and some private hospitals and clinics (29 percent).

5.10 INFORMED CHOICE

Informed choice is an important aspect of the delivery of family planning services. Family planning providers should inform all method users of potential side effects, what they should do if they

Figure 5.3 **Trends in Source of Modern Contraceptive Methods, Ghana 1988-2003**



encounter signs of a problem, and alternate options. This information assists users in coping with side effects and decreases unnecessary discontinuation of temporary methods.

Table 5.12 shows that about half of family planning clients receive relevant information to make informed choices. Health providers are somewhat more likely to inform users of modern methods about side effects or problems of method used (54 percent) and about what other methods could be used (53 percent) than about what to do if they experienced side effects (50 percent). Information varies by type of method, being least likely to be provided to users of female sterilization (24 percent).

Public sector clients received more information than private sector clients (seven and four in ten, respectively). Pharmacy, chemist, and drug store clients received the least information (three in ten). Slightly higher proportions of urban residents received relevant information than their rural counterparts, particularly with respect to information on other methods that could be used (59 and 48 percent, respectively). Most of the regional information is based on small numbers of users. There appears to be no major differentials in informed choice by educational level. Among wealth quintiles the least informed are women in the middle quintile with the women from the highest quintile receiving the most information.

Table 5.12 Informed choice

Among current users of modern contraceptive methods who adopted the current method in the five years preceding the survey, percentage who were informed about the side effects of the method used, percentage who were informed what to do if side effects were experienced, and percentage who were informed of other methods that could be used for contraception, by specific method, initial source of method, and background characteristics, Ghana 2003

Method/source/ background characteristic	Informed about side effects or problems of method used[1]	Informed what to do if experienced side effects[1]	Informed of other methods that could be used[2]
Method			
Female sterilisation	23.2	20.1	23.7
Pill	40.7	37.3	43.5
IUD	(51.6)	(52.7)	(50.8)
Injectables	74.1	68.0	73.5
Implants	(79.9)	(82.5)	(79.2)
Other[3]	na	na	(36.9)
Initial source of method[4]			
Public sector	71.3	65.4	72.1
Government hospital/polyclinic	66.1	63.7	68.1
Government health centre	77.9	64.6	78.9
FP clinic	(79.5)	(71.3)	(78.1)
Private medical sector	41.0	39.7	42.2
Private hospital/clinic	(49.6)	(44.8)	(57.4)
Pharmacy/chemist/drug store	31.3	29.7	28.4
Residence			
Urban	58.2	54.1	59.0
Rural	48.8	45.6	47.9
Region			
Western	(69.1)	(67.3)	61.7
Central	(66.4)	(70.1)	(75.5)
Greater Accra	47.8	39.9	48.7
Volta	(58.2)	(49.7)	(54.8)
Eastern	41.1	44.2	47.5
Ashanti	51.0	46.5	47.4
Brong Ahafo	57.6	59.2	60.9
Northern	(41.4)	(38.2)	(44.8)
Upper East	(63.9)	(33.3)	(50.6)
Upper West	49.7	46.0	49.2
Education			
No education	56.4	49.7	56.0
Primary	55.3	50.9	52.8
Middle/JSS	51.3	48.3	51.8
Secondary+	(52.0)	(55.1)	56.4
Wealth quintile			
Lowest	54.6	46.0	49.4
Second	53.7	48.7	54.0
Middle	49.5	46.0	48.6
Fourth	52.6	50.5	49.3
Highest	56.8	54.7	61.7
Total	53.5	49.8	53.4

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indictes that a figure is based on fewer than 25 unweighted cases and has been suppressed.
na = Not applicable
[1] Among users of female sterilisation, pill, IUD, injectables and implants
[2] Among users of female sterilisation, pill, IUD, injectables, implants, female condom, diaphragm, foam or jelly, and lactational amenorrhoea method (LAM)
[3] Female condom, diaphragm, foam, jelly and lactational amenorrhoea method (LAM)
[4] Source at start of current episode of use

5.11 FUTURE USE OF CONTRACEPTION

Intention to use family planning is an important indicator of the potential demand for services. Currently married women who were not using contraceptives at the time of the survey were asked about their intention to use family planning in the future. The results are shown in Table 5.13. The table reveals that of the currently married female non-users, 54 percent intend to use a method of contraception in the future, while 42 percent have no intention to use any method. Four percent are not sure of their contraceptive use intention.

Table 5.13 Future use of contraception

Percent distribution of currently married women who are not using a contraceptive method by intention to use in the future, according to number of living children, Ghana 2003

	Number of living children[1]					
Intention	0	1	2	3	4+	Total
Intends to use	56.6	59.3	54.9	58.2	49.0	54.1
Unsure	5.2	4.6	4.8	5.5	2.8	4.1
Does not intend to use	38.2	36.0	39.7	35.8	48.1	41.5
Missing	0.0	0.2	0.6	0.5	0.2	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	190	491	488	451	1,035	2,655

[1] Includes current pregnancy

There has been an increase in the percentage of currently married non-users who intend to use family planning in the future (including those who intend to use but are not sure of timing), from 37 percent in 1988, to 51 percent in 1993, followed by a slight decline to 48 percent in 1998, and then an increase to 58 percent in 2003.

5.12 REASONS FOR NOT INTENDING TO USE CONTRACEPTION

Table 5.14 presents the main reasons for not intending to use contraception given by currently married women age 15-29 and 30-49 years who do not intend to use a contraceptive method in the future.

The main reasons for not intending to use any contraception in the future among currently married women are fertility-related issues (41 percent), followed by method-related reasons (37 percent). Among fertility-related reasons, 17 percent of younger women state that they want as many children as possible, while older women (20 percent) do not intend to use because they are subfecund or infecund.

Fear of side effects was the most cited method-related reason for non-use among all women (26 percent). This reason is particularly cited by younger women (34 percent) than women 30 years and older (23 percent). This calls for a continued intensification of information and counseling on side effects of contraceptive methods by the family planning programme in Ghana. Younger women are also more likely to be opposed to family planning than older women (9 and 5 percent, respectively). Fear of side effects has increased in importance as a reason for non-use since 1998, from 18 to 26 percent.

Table 5.14 Reason for not intending to use contraception

Percent distribution of currently married women who are not using a contraceptive method and who do not intend to use in the future by main reason for not intending to use, according to age, Ghana 2003

Reason	Age 15-29	Age 30-49	Total
Fertility-related reasons	20.3	47.7	40.5
Infrequent sex/no sex	1.4	7.0	5.5
Menopausal/had hysterectomy	0.0	8.5	6.3
Subfecund/infecund	1.4	19.7	14.9
Wants as many children as possible	17.4	12.5	13.8
Opposition to use	16.9	10.7	12.3
Respondent opposed	8.9	4.7	5.8
Husband/partner opposed	3.3	2.9	3.0
Religious prohibition	4.7	3.1	3.5
Lack of knowledge	8.5	4.7	5.7
Knows no method	5.9	3.9	4.4
Knows no source	2.6	0.8	1.3
Method-related reasons	47.5	33.8	37.3
Health concerns	9.1	7.0	7.6
Fear of side effects	34.2	22.5	25.6
Lack of access/too far	0.8	0.5	0.6
Costs too much	1.5	1.1	1.2
Inconvenient to use	1.0	1.0	1.0
Interferes with body's normal processes	0.9	1.6	1.4
Other	2.1	1.2	1.4
Don't know	3.0	1.6	2.0
Missing	1.8	0.4	0.8
Total	100.0	100.0	100.0
Number of women	288	815	1,102

5.13 PREFERRED METHOD OF CONTRACEPTION FOR FUTURE USE

Asking non-users who say they intend to use a family planning method in the future for the type of method they would prefer to use is a way to assess the potential demand for specific methods of family planning.

Table 5.15 shows that among currently married women, the contraceptive method most commonly preferred for future use is injectables (43 percent), followed by the pill (15 percent) and implants (11 percent). There has been a slight change in the order of preferred methods by currently married women since the 1998 GDHS. The proportion of non-users preferring the injectable increased from 36 percent in 1998 to 43 percent in 2003, while the proportion of non-users who prefer to use the pill has decreased from 21 percent in 1998 to 15 percent in 2003. Preference for implants increased from 4 percent in 1998 to 11 percent in 2003. Intention to use the IUD also increased from 2 percent in 1998 to 4 percent in 2003 and is the same among both younger and older women. Older respondents are more likely to intend to use permanent methods than younger ones. For example, among respondents in the age group 30-49, 5 percent say they would prefer female sterilisation compared with 2 percent among those in the age group 15-29.

Table 5.15 Preferred method of contraception for future use

Percent distribution of currently married women who are not using a contraceptive method but who intend to use in the future by preferred method, according to age, Ghana 2003

Method	Age 15-29	Age 30-49	Total
Female sterilisation	2.0	5.3	3.6
Pill	17.2	13.4	15.4
IUD	3.9	3.9	3.9
Injectables	45.8	39.0	42.5
Implants	10.1	12.1	11.1
Condom	3.0	2.9	2.9
Female condom	0.6	0.7	0.6
Diaphragm	0.2	0.9	0.5
Foam/jelly	0.0	0.1	0.1
Lactational amenorrhoea method (LAM)	0.2	0.2	0.2
Periodic abstinence	4.3	4.5	4.4
Withdrawal	0.2	0.2	0.2
Other	2.5	2.3	2.4
Unsure	10.3	14.4	12.3
Total	100.0	100.0	100.0
Number of women	748	689	1,437

5.14 EXPOSURE TO FAMILY PLANNING MESSAGES

The media is seen as an effective means to disseminate family planning information. To assess the extent to which media serve as sources of family planning messages, respondents were asked whether they had heard or seen a message about family planning on the radio, television, newspapers or magazines, posters, leaflets or brochures, from health workers, and community meetings in the few months preceding the survey. The results are shown in Table 5.16.1 for women and Table 5.16.2 for men and in Figure 5.4.

Radio is the most frequent source of family planning messages for both women (77 percent) and men (86 percent). Fifty-two percent of women and 58 percent of men saw a family planning message on the television in the few months preceding the survey. About half of women and men are also exposed to family planning messages through posters. Health workers are also mentioned as an important source by 47 percent of women and 44 percent of men, while 34 percent of women and 36 percent of men mentioned hearing about family planning at community meetings. Newspapers and magazines are the least common source of family planning messages for both women (20 percent) and men (33 percent). About one in five women and one in nine men were not exposed to a family planning message through the radio, television, or newspaper/magazine in the few months prior to the survey. Thirteen percent of women and 9 percent of men have had no exposure to family planning messages from any media source.

Exposure to family planning messages is more common among men than women and in urban than rural areas, and increases with increasing level of education and wealth quintile. Among the regions, women in the Upper East, Brong-Ahafo, Eastern, and Ashanti regions and men in the Western, Central and Greater Accra regions have by far the highest exposure to family planning messages through any media, while respondents in the Upper West and Northern regions have the lowest.

Table 5.16.1 Exposure to family planning messages: women

Percentage of women who heard or saw a family planning message on various media sources in the past few months, according to background characteristics, Ghana 2003

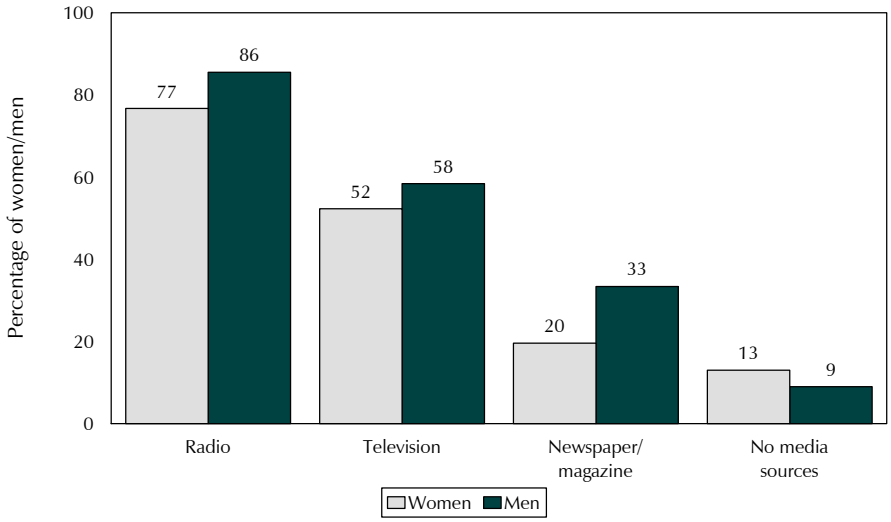
Background characteristic	Radio	Television	Newspaper/ magazine	None of the three media sources	Poster	Leaflet/ brochure	Health worker	Community meetings	No exposure to any source of media	Number of women
Age										
15-19	67.3	55.3	21.5	25.1	47.2	20.4	26.7	24.9	18.4	1,148
20-24	75.5	59.9	22.3	19.2	49.0	23.0	45.3	31.5	11.7	1,012
25-29	80.0	51.3	18.4	17.7	51.9	22.0	54.6	36.6	11.0	951
30-34	81.2	48.2	18.0	17.6	50.3	19.6	57.1	34.6	9.6	802
35-39	78.0	49.0	15.8	20.2	46.3	17.7	55.5	37.4	12.0	722
40-44	80.9	49.0	19.9	15.9	49.9	19.3	54.3	35.1	10.0	579
45-49	80.6	46.2	19.2	18.4	49.5	19.1	49.4	44.0	11.5	477
Residence										
Urban	82.7	73.9	30.8	11.7	59.8	28.8	46.4	36.2	7.5	2,755
Rural	71.1	31.9	9.1	27.0	39.0	12.6	48.2	31.2	17.2	2,936
Region										
Western	72.6	54.1	16.2	21.9	58.3	20.4	53.6	36.4	12.1	553
Central	71.6	47.2	9.6	23.4	52.1	13.2	35.8	26.4	14.7	431
Greater Accra	79.4	77.3	33.9	13.9	57.3	29.3	36.8	33.7	10.8	942
Volta	63.4	27.7	15.7	31.2	44.0	16.5	61.6	28.4	17.0	492
Eastern	88.7	59.3	18.9	9.7	40.4	18.7	59.1	47.8	7.0	601
Ashanti	84.7	65.5	27.1	12.1	66.5	29.7	44.5	36.4	8.9	1,142
Brong Ahafo	87.4	58.1	21.0	11.1	59.9	27.4	58.2	46.5	6.2	569
Northern	51.0	16.1	4.4	47.6	18.1	3.2	42.7	18.1	32.5	499
Upper East	87.1	23.6	5.5	11.6	10.8	3.7	31.1	20.4	5.1	310
Upper West	48.8	11.9	2.8	50.2	15.9	1.3	57.7	12.7	25.1	153
Education										
No education	65.4	24.9	2.3	32.9	24.3	4.7	40.6	21.5	21.6	1,608
Primary	75.0	44.3	7.7	22.5	42.1	11.1	44.0	27.9	15.0	1,135
Middle/JSS	82.7	66.4	24.6	12.6	61.9	26.7	50.8	39.7	7.4	2,279
Secondary+	86.2	83.4	64.1	6.8	76.8	52.9	57.3	51.6	3.6	669
Wealth quintile										
Lowest	60.8	15.0	3.3	38.0	22.8	5.4	44.1	22.0	23.3	970
Second	73.4	27.0	5.5	25.1	38.2	10.5	46.3	28.9	16.9	949
Middle	77.3	45.5	11.5	20.2	47.4	15.4	51.1	37.6	13.1	1,071
Fourth	80.9	65.6	21.3	14.9	55.7	23.1	48.3	36.2	8.6	1,245
Highest	85.4	87.1	44.0	7.4	69.3	38.5	46.4	39.3	5.3	1,457
Total	76.7	52.3	19.6	19.6	49.1	20.4	47.3	33.6	12.5	5,691

Table 5.16.2 Exposure to family planning messages: men

Percentage of men who heard or saw a family planning message on the radio or television, or in a newspaper/magazine in the past few months, according to background characteristics, Ghana 2003

Background characteristic	Radio	Television	Newspaper/ magazine	None of the three media sources	Poster	Leaflet/ brochure	Health worker	Community meetings	No exposure to any source of media	Number of men
Age										
15-19	74.7	56.7	23.2	19.5	49.8	17.5	28.4	21.0	16.5	1,107
20-24	84.4	66.0	36.2	11.8	56.1	27.7	45.3	36.5	8.6	684
25-29	90.8	66.0	38.3	6.9	60.9	27.7	45.1	40.2	5.3	754
30-34	90.5	60.5	35.5	8.3	59.1	26.3	50.6	42.5	5.5	633
35-39	88.1	52.7	34.7	11.4	57.2	26.4	50.2	42.1	7.2	498
40-44	89.6	50.9	36.3	8.7	55.8	26.1	51.0	44.7	6.4	412
45-49	89.1	56.1	36.4	9.1	56.2	28.1	52.9	41.9	8.0	441
50-54	89.1	52.9	35.2	9.4	59.2	23.2	52.3	40.3	7.8	294
55-59	85.8	50.2	35.9	13.3	45.1	26.9	46.9	38.8	11.4	192
Residence										
Urban	87.6	78.6	48.1	8.4	67.4	34.6	44.1	39.4	6.5	2,250
Rural	83.8	42.1	21.4	14.4	46.2	16.8	44.4	34.0	11.3	2,765
Region										
Western	83.9	66.7	34.0	10.6	65.3	26.5	46.8	38.9	7.1	476
Central	88.6	55.4	22.8	9.1	43.0	15.5	29.2	21.1	7.7	370
Greater Accra	90.3	82.2	55.7	6.8	68.1	38.5	38.0	38.9	5.4	733
Volta	81.4	50.2	29.0	14.7	59.6	24.6	49.8	42.5	10.6	440
Eastern	92.0	62.5	32.6	6.6	53.2	27.3	42.0	48.3	5.5	539
Ashanti	87.2	67.0	44.2	8.9	65.8	33.4	48.2	41.1	8.2	956
Brong Ahafo	91.7	62.7	32.4	7.3	72.7	22.3	47.6	26.9	6.5	528
Northern	71.6	25.0	10.7	26.7	30.6	6.0	40.5	26.7	19.3	527
Upper East	83.1	38.9	16.6	14.7	24.4	13.8	59.8	42.1	10.2	317
Upper West	67.6	17.4	10.1	31.3	18.1	6.8	39.9	16.2	26.6	130
Education										
No education	75.9	22.5	5.3	23.4	22.2	3.2	36.0	22.1	18.1	881
Primary	77.6	42.6	11.4	18.9	35.9	8.8	34.5	25.0	15.8	803
Middle/JSS	88.7	65.4	32.6	8.4	62.8	25.3	43.7	36.2	6.7	2,165
Secondary+	92.4	83.6	71.1	4.0	81.5	51.1	58.3	55.5	2.4	1,165
Wealth quintile										
Lowest	74.3	21.6	10.1	24.7	28.7	7.6	43.2	26.4	18.3	872
Second	87.4	36.4	19.2	11.7	44.9	14.2	39.8	30.7	9.8	903
Middle	86.8	55.7	22.9	10.8	53.8	18.2	43.2	34.6	8.3	975
Fourth	86.9	74.4	39.1	9.5	63.7	29.9	45.0	39.1	8.0	1,060
Highest	90.0	89.8	64.2	5.0	77.8	45.8	48.7	47.1	3.7	1,204
Total	85.5	58.4	33.4	11.7	55.7	24.8	44.3	36.4	9.2	5,015

Figure 5.4 **Percentage of Women and Men Exposed to Family Planning Messages in the Media**



Note: No media sources refers to nonexposure to radio, television, newspaper/magazine, poster, leaflet/brochure, health worker, and community meetings.

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5.15 EXPOSURE TO SPECIFIC RADIO MESSAGES ON FAMILY PLANNING

The 2003 GDHS survey collected information from women and men about whether they had heard specific radio adverts and slogans on family planning from the *Life Choices* campaign in the few months before the survey. The slogans included the following: *Life Choices: It's your life, it's your choice; Make the choice that is best for you; Contraceptives are safe and effective;* and *Obra ni wora bo*[3]. Table 5.17 shows the percentages of women and men who have heard the specific radio messages and slogans of Life Choices in the few months preceding the survey, by background characteristics.

Of the four slogans asked about, the most common is *Obra ni wora bo*, heard by 68 percent of women and 75 percent of men. The remaining messages were heard in the following order: *Life Choices: It's your life. It's your choice*, *"Make the choice that is best for you"* with "*Contraceptives are safe and effective"* being the least heard message, by both sexes. Men are more likely than women to have heard each of the messages.

The percentage of women and men who have been exposed to specific radio messages generally decreases with age, is higher among urban residents than rural residents, and increases with increasing level of education and wealth. Never-married women and, in some cases, men are more likely to have heard specific slogans on family planning than those currently in union or formerly married.

The national-level campaign was launched in Greater Accra in 2001, followed by the regional campaigns. Exposure to the first three specific radio messages is highest in Greater Accra, while exposure to *Obra ni wora bo* is highest in the Ashanti Region and in the other predominantly Akan-speaking regions. Exposure to family planning messages and specifically these four messages is particularly low in the three northern regions.

[3] *Obra ni wora bo* is an Akan phrase that translates to "Life is what you make of it." In terms of the Life Choices campaign, therefore, it implies "Your (reproductive) life depends on the choices you make."

Table 5.17 Exposure to specific radio shows on family planning

Percentage of all women and men who have heard specific radio shows on family planning, by background characteristics, Ghana 2003

Background characteristic	Women					Men				
	Life Choices: It's your life. It's your choice.	Make the choice that is best for you	Contra-ceptives are safe and effective	Obra ni wora bo	Number of respondents	Life Choices: It's your life. It's your choice.	Make the choice that is best for you	Contra-ceptives are safe and effective	Obra ni wora bo	Number of respondents
Age										
15-19	64.4	52.6	41.8	71.5	1,148	67.0	53.4	44.2	72.0	1,107
20-24	60.1	50.6	42.6	72.1	1,012	76.5	65.3	56.6	76.7	684
25-29	51.6	44.5	39.5	67.3	951	72.1	62.1	54.4	80.1	754
30-34	44.1	37.4	33.6	64.6	802	70.3	64.3	54.0	77.4	633
35-39	41.3	34.8	31.1	63.5	722	63.3	58.8	54.7	74.0	498
40-44	44.7	38.6	35.8	67.9	579	69.2	58.7	58.0	75.1	412
45-49	41.2	38.1	30.8	63.7	477	60.0	55.5	53.5	71.3	441
50-54	na	na	na	na	na	64.9	59.9	53.9	72.8	294
55-59	na	na	na	na	na	59.6	52.5	46.9	73.7	192
Residence										
Urban	68.3	58.4	52.3	81.1	2,755	81.6	70.3	65.1	84.1	2,250
Rural	36.2	30.2	23.7	55.5	2,936	57.4	50.1	41.9	67.7	2,765
Region										
Western	57.0	40.9	35.7	79.8	553	70.5	60.7	53.2	89.6	476
Central	40.4	33.1	27.3	80.8	431	64.5	56.8	45.6	85.5	370
Greater Accra	74.3	61.7	59.1	82.5	942	82.5	71.4	69.2	86.6	733
Volta	46.5	42.9	35.8	40.2	492	69.8	58.9	48.0	44.4	440
Eastern	60.4	58.1	35.0	81.8	601	75.8	64.3	54.4	91.3	539
Ashanti	57.1	48.0	42.9	86.2	1,142	76.6	66.1	59.9	92.0	956
Brong Ahafo	58.1	52.8	50.7	80.9	569	75.0	66.4	59.2	90.8	528
Northern	15.6	13.5	11.1	14.8	499	33.8	30.1	27.3	29.2	527
Upper East	25.3	16.2	8.3	21.0	310	60.5	54.6	44.1	52.6	317
Upper West	16.3	13.2	10.8	14.6	153	24.3	20.7	17.1	14.6	130
Education										
No education	16.0	10.5	9.0	37.7	1,608	30.1	23.3	19.7	43.9	881
Primary	40.5	33.1	26.0	67.7	1,135	45.8	37.4	28.9	67.3	803
Middle/JSS	70.3	60.4	50.6	82.8	2,279	78.3	67.3	57.4	84.2	2,165
Secondary +	93.5	86.0	80.7	89.7	669	93.9	86.4	83.7	86.9	1,165
Current marital status										
Never in union	71.8	61.0	50.3	78.4	1,616	71.7	59.1	51.3	75.0	2,042
Currently in union	43.3	36.7	32.1	62.5	3,549	66.0	59.4	53.2	74.9	2,671
Formerly in union	46.8	39.7	34.5	72.0	526	64.8	57.9	52.0	77.0	302
Wealth index										
Poorest	17.9	15.0	11.6	31.3	970	39.5	34.5	28.1	46.3	872
Poorer	34.1	28.8	22.0	57.7	949	58.2	49.6	40.4	72.9	903
Middle	47.8	39.2	29.4	69.4	1,071	66.8	55.4	47.0	77.4	975
Richer	59.9	50.8	44.5	77.5	1,245	77.8	66.9	59.5	81.3	1,060
Richest	81.7	70.3	64.9	89.6	1,457	89.5	80.7	76.9	90.1	1,204
Total	51.7	43.9	37.5	67.9	5,691	68.3	59.2	52.3	75.1	5,015

na = Not applicable

5.16 CONTACT OF NON-USERS WITH FAMILY PLANNING PROVIDERS

In the 2003 GDHS, women who were not using contraception were asked whether they had attended a health facility in the last year for any reason and, if so, whether a staff person at that facility spoke to them about family planning methods. This information is important for determining whether non-users of family planning in Ghana have had an opportunity to receive information about family planning from providers.

Table 5.18 shows that 15 percent of non-users reported that they had visited a health facility and discussed family planning, while 11 percent of women were visited by a fieldworker who discussed

Table 5.18 Contact of non-users with family planning providers

Percentage of women who are not using contraception who were visited by a fieldworker who discussed family planning, who visited a health facility and discussed family planning, and who visited a health facility but did not discuss family planning, in the 12 months preceding the survey, by background characteristics, Ghana 2003

Background characteristic	Women who were visited by a fieldworker who discussed family planning	Women who visited a health facility and discussed family planning	Women who visited a health facility and did not discuss family planning	Women who did not discuss family planning with a fieldworker or at a health facility	Number of women
Age					
15-19	4.7	3.2	19.6	92.9	1,050
20-24	10.3	15.0	30.8	78.3	796
25-29	12.5	20.7	31.6	72.9	710
30-34	13.6	20.3	28.9	71.6	582
35-39	13.6	22.5	28.5	69.0	533
40-44	15.0	18.4	26.0	73.6	436
45-49	12.7	10.8	26.0	80.3	408
Residence					
Urban	8.6	13.0	29.8	81.5	2,126
Rural	12.8	16.1	24.3	76.1	2,388
Region					
Western	7.9	12.2	29.0	81.4	436
Central	5.4	7.6	37.7	87.3	371
Greater Accra	8.6	13.7	37.2	81.1	721
Volta	23.5	28.8	24.6	59.6	394
Eastern	9.4	9.8	20.6	83.7	468
Ashanti	6.4	13.0	25.2	82.3	869
Brong Ahafo	11.9	13.7	14.6	78.3	413
Northern	19.5	20.7	28.0	69.5	445
Upper East	12.1	12.9	18.0	79.9	278
Upper West	8.5	21.0	27.6	74.3	120
Education					
No education	12.9	17.2	23.4	75.8	1,389
Primary	9.3	12.5	27.2	82.0	907
Middle/JSS	9.9	14.2	26.7	78.9	1,735
Secondary+	11.2	13.3	37.1	79.5	483
Wealth quintile					
Lowest	14.0	18.1	22.2	74.7	848
Second	11.1	12.6	22.8	79.8	747
Middle	12.5	15.6	26.5	75.9	860
Fourth	10.7	14.1	24.3	79.5	961
Highest	7.0	13.2	36.0	82.2	1,099
Total	10.8	14.7	26.9	78.6	4,514

family planning in the 12 months preceding the survey. Roughly one in four women (27 percent) visited a health facility but did not discuss family planning. The majority of the women did not discuss family planning with a fieldworker or at a health facility.

Women age 20-44 are more likely to have discussed family planning at a health facility than women age 15-19 and 45-49.

Urban women are less likely to have discussed family planning with health staff than rural women, as are highly educated women compared with women with no education, and women in the highest wealth quintile as compared with women in the lowest wealth quintile. It could be that these groups are already using the methods or already have information and therefore do not feel the need to discuss family planning with providers or are less likely to have visited a facility. Discussion of family planning with staff at health facilities or in the field is highest in the Volta region (29 and 24 percent, respectively) and lowest in the Central region (8 and 5 percent, respectively).

5.17 DISCUSSION ABOUT FAMILY PLANNING WITH HUSBAND

Although discussion of family planning between husband and wife is not a precondition for adoption of contraception, its absence may be an impediment to use. Inter-spousal communication is thus an important intermediate step along the path to eventual adoption and especially continuation of contraceptive use. Lack of discussion may reflect a lack of personal interest, hostility to the subject, or customary reticence in talking about sex-related matters. To explore this subject, women interviewed in the 2003 GDHS were asked the number of times they discussed family planning with their husband in the 12 months preceding the survey.

Table 5.19 provides information for currently married women who know of at least one contraceptive method about the number of times family planning was discussed with their husbands in the past year, according to age. The data indicate that 37 percent of women reported having discussed family planning with their husbands once or twice, and 21 percent discussed family planning with their husbands at least three times. About two in five (41 percent) never discussed family planning with their husbands in the past year. Women age 25-29 are the most likely to report frequent discussions (three or more times) with their husbands (25 percent), while women 15-19 are least likely (9 percent).

Table 5.19 Discussion of family planning with husband

Percent distribution of currently married women who know a contraceptive method by the number of times they discussed family planning with their husband in the past year, according to current age, Ghana 2003

	Number of times family planning was discussed with husband					
Age	Never	One or two	Three or more	Missing	Total	Number of women
15-19	59.8	30.7	8.8	0.7	100.0	133
20-24	39.8	39.0	20.7	0.6	100.0	517
25-29	33.9	40.4	24.9	0.8	100.0	724
30-34	36.6	38.8	24.1	0.5	100.0	657
35-39	40.0	37.4	21.6	1.0	100.0	614
40-44	44.3	37.5	17.1	1.1	100.0	466
45-49	55.9	29.2	14.6	0.3	100.0	367
Total	41.1	37.4	20.8	0.7	100.0	3,479

The results indicate that there has been an increase over the past ten years in the proportion of couples who discuss family planning. The proportion of couples who discussed family planning at least once has increased steadily from 42 percent in 1988, 46 percent in 1993, 54 percent in 1998, to 58 percent in 2003.

5.18 ATTITUDES OF MEN TOWARDS FAMILY PLANNING

The 2003 GDHS included questions in the male survey to illicit information on men's attitudes towards contraception in general. This information is useful in formulating family planning programmes and policies because men play a key role in their own as well as in women's reproductive health and behaviour. This information is useful in formulating educational activities geared towards addressing some misconceptions and fears. It will be useful in the future to examine men's attitude towards male methods.

To get a sense of their attitudes toward contraception in general, men were asked their opinion on a number of questions pertaining to contraception and its use. The questions addressed whether men perceived contraception to be a woman's business, whether women who use contraception may become promiscuous, and whether a woman should be sterilised because she is the one who gets pregnant. Table 5.20 presents the results by background characteristics. About one in three men (35 percent) consider contraception to be a woman's business, while roughly half of the men (53 percent) feel that women who use contraception may become promiscuous, and 41 percent of men feel that a woman should get sterilised since she is the one who becomes pregnant.

There is no uniform pattern in men's attitudes about family planning by background characteristics. However, some general comments can be made. Men in the youngest cohort (15-19), never-married men, men in the Volta re-

Table 5.20 Men's attitudes towards contraception

Percentage of men 15-59 who know of a method of family planning and who agree with specific statements about contraceptive use, by background characteristics, Ghana 2003

Background characteristic	Contraception is women's business	Women who use contraception may become promiscuous	A woman should get sterilised because she is the one who becomes pregnant	Number of men
Age				
15-19	32.3	48.0	35.4	1,071
20-24	36.3	52.8	44.1	680
25-29	37.1	55.4	42.0	751
30-34	34.6	54.6	41.6	630
35-39	37.1	50.5	43.6	495
40-44	31.2	57.5	43.0	411
45-49	35.4	52.4	39.5	439
50-54	38.4	60.7	44.5	292
55-59	33.6	53.2	40.4	191
Marital status				
Never married	31.2	48.0	35.9	1,997
Married	36.1	55.2	43.6	2,429
Living together	47.0	61.2	53.3	233
Divorced/separated	41.8	60.4	41.6	272
Widowed	(33.5)	(75.8)	(51.7)	29
Residence				
Urban	33.5	53.3	38.9	2,244
Rural	36.1	52.7	42.5	2,716
Region				
Western	40.2	61.1	46.9	474
Central	23.0	63.7	36.6	368
Greater Accra	18.2	40.8	26.2	729
Volta	14.9	25.4	30.5	434
Eastern	40.4	59.9	42.0	533
Ashanti	55.9	78.8	52.6	952
Brong Ahafo	29.5	47.8	32.0	525
Northern	31.5	33.5	46.5	508
Upper East	53.2	53.6	57.5	308
Upper West	27.6	31.9	32.8	127
Education				
No education	40.6	45.1	47.7	858
Primary	39.4	52.2	41.6	779
Middle/JSS	37.6	58.2	44.1	2,157
Secondary+	22.8	49.7	29.5	1,165
Wealth quintile				
Lowest	36.1	42.2	43.4	839
Second	36.4	55.3	42.9	891
Middle	40.5	56.6	42.1	970
Fourth	36.4	59.3	42.4	1,057
Highest	27.4	50.4	35.4	1,203
Total	35.0	53.0	40.9	4,960

Note: Figures in parentheses are based on 25-49 unweighted cases.

gion, men with secondary education and higher, and men in the highest wealth quintile are generally less likely to have negative attitudes about family planning than other men. The results indicate a larger scope for dissemination of family planning messages to improve men's attitude towards family planning.

5.19 ATTITUDES OF COUPLES TOWARDS FAMILY PLANNING

When couples have a positive attitude towards family planning, they are more likely to adopt a family planning method. In the 2003 GDHS, married women were asked whether they approved of couples using family planning and what they perceived as their husband's attitude towards family planning. Men were also asked whether they approved of couples using family planning. This information is important in the formulation of family planning policies because it indicates the extent to which further education and publicity are needed to increase acceptance of family planning.

Tables 5.21.1 and 5.21.2 show the percent distribution of currently married women and men who know a contraceptive method, by approval of family planning, according to background characteristics. An overwhelming majority of married women and men (87 and 89 percent, respectively) approve of family planning. Eleven percent of women and 10 percent of men disapprove of couples using family planning, while 2 percent each of women and men are unsure about their attitude towards use of family planning by couples. Approval of family planning among respondents is higher in urban than rural areas and increases with increasing level of education and wealth.

Table 5.21.1 also shows women's perception of their husband's attitude towards family planning, Two-thirds of married women who approve of family planning believe that their husband also approves. Women in the youngest cohort, rural women, women from the Northern region, women with no education, and women in the poorest wealth quintile are more likely than other women to not know their husbands' attitudes towards family planning.

Table 5.21.1 Approval of family planning: women

Percent distribution of currently married women who know a method of family planning by approval of family planning and their perception of their husband's attitude toward family planning, according to background characteristics, Ghana 2003

Background characteristic	Woman approves of family planning			Woman disapproves of family planning					
	Husband approves	Husband disapproves	Husband's attitude unknown, missing	Husband approves	Husband disapproves	Husband's attitude unknown, missing	Woman unsure[1]	Total	Number of women
Age									
15-19	56.4	6.1	20.2	0.9	5.9	5.3	5.2	100.0	133
20-24	68.5	5.9	14.4	2.2	4.9	2.0	2.1	100.0	517
25-29	70.7	9.9	8.6	0.9	5.3	2.5	2.0	100.0	724
30-34	64.7	11.5	10.7	2.0	7.4	1.7	2.1	100.0	657
35-39	65.3	10.9	11.4	0.5	7.4	2.6	1.9	100.0	614
40-44	62.8	10.0	11.6	1.4	8.8	2.3	3.1	100.0	466
45-49	55.4	14.4	13.7	1.9	9.2	3.3	2.1	100.0	367
Residence									
Urban	69.6	9.8	9.2	1.4	6.1	1.9	2.1	100.0	1,430
Rural	61.9	10.4	13.5	1.4	7.5	2.9	2.5	100.0	2,049
Region									
Western	66.6	7.0	15.7	1.4	3.7	2.9	2.8	100.0	317
Central	70.6	8.5	16.2	0.4	2.2	0.8	1.2	100.0	274
Greater Accra	59.1	9.7	14.0	2.5	7.9	2.6	4.0	100.0	473
Volta	57.7	12.3	14.7	3.2	5.2	3.0	3.9	100.0	300
Eastern	76.4	6.4	7.7	0.4	5.6	1.1	2.4	100.0	350
Ashanti	73.7	10.8	4.5	0.6	8.2	1.6	0.5	100.0	637
Brong Ahafo	82.8	5.9	4.1	1.3	4.7	0.2	1.0	100.0	387
Northern	41.6	10.1	22.4	2.0	12.0	7.9	4.1	100.0	400
Upper East	57.5	20.9	10.3	0.5	9.1	1.3	0.4	100.0	230
Upper West	45.1	19.3	17.2	2.1	9.3	3.0	3.9	100.0	110
Education									
No education	51.5	12.8	14.9	1.3	11.2	4.2	4.1	100.0	1,290
Primary	67.0	8.7	14.0	2.0	4.5	1.7	2.1	100.0	705
Middle/JSS	76.9	8.0	7.6	0.9	4.4	1.4	0.8	100.0	1,204
Secondary+	71.6	10.6	9.3	2.5	4.1	0.8	1.1	100.0	280
Wealth quintile									
Lowest	53.5	12.1	15.5	1.4	9.9	3.5	4.0	100.0	713
Second	65.8	8.9	12.1	1.0	7.4	2.7	2.0	100.0	666
Middle	67.3	8.9	11.6	1.7	5.5	2.6	2.4	100.0	687
Fourth	69.2	9.3	11.2	1.4	5.5	2.2	1.3	100.0	693
Highest	69.8	11.3	8.4	1.6	6.1	1.2	1.8	100.0	720
Total	65.1	10.1	11.7	1.4	6.9	2.5	2.3	100.0	3,479

[1] Includes missing

Table 5.21.2 Approval of family planning: men

Percent distribution of currently married men who know a method of family planning by approval of family planning, according to background characteristics, Ghana 2003

Background characteristic	Approves of family planning	Disapproves of family planning	Unsure	Total	Number of men
Age					
15-19	100.0	0.0	0.0	100.0	7
20-24	94.3	3.4	2.3	100.0	127
25-29	90.1	8.6	1.2	100.0	397
30-34	90.7	8.3	1.0	100.0	498
35-39	89.2	8.9	1.9	100.0	422
40-44	87.1	10.4	2.5	100.0	375
45-49	89.3	9.9	0.8	100.0	395
50-54	84.5	12.9	2.6	100.0	270
55-59	80.9	17.2	1.9	100.0	171
Marital status					
Married	88.1	10.1	1.8	100.0	2,429
Living together	93.7	6.0	0.4	100.0	233
Residence					
Urban	91.3	7.5	1.2	100.0	1,042
Rural	86.9	11.2	1.9	100.0	1,621
Region					
Western	96.0	4.0	0.0	100.0	254
Central	90.2	9.0	0.8	100.0	195
Greater Accra	88.8	8.5	2.7	100.0	345
Volta	87.1	12.5	0.3	100.0	227
Eastern	91.0	7.5	1.5	100.0	305
Ashanti	93.7	5.6	0.7	100.0	500
Brong Ahafo	90.2	9.8	0.0	100.0	270
Northern	76.3	19.8	3.9	100.0	323
Upper East	85.9	10.9	3.2	100.0	171
Upper West	72.1	20.0	7.9	100.0	73
Education					
No education	78.4	17.3	4.3	100.0	631
Primary	85.8	13.3	0.9	100.0	350
Middle/JSS	91.8	7.2	1.0	100.0	1,113
Secondary +	95.3	4.3	0.4	100.0	568
Wealth index					
Lowest	77.6	18.7	3.7	100.0	507
Second	90.9	8.4	0.7	100.0	525
Middle	90.3	8.8	0.9	100.0	531
Fourth	90.6	7.0	2.4	100.0	516
Highest	92.8	6.5	0.7	100.0	583
Total	88.6	9.8	1.6	100.0	2,662

From data gathered in the 2003 GDHS survey, information on attitude towards family planning can be tabulated for the 1,949 couples. Table 5.22 shows the percent distribution of couples by husband's actual attitude towards family planning according to wife's perception of husband's attitude and is a

measure of the percentage of couples with discordant attitudes towards family planning and of the extent of knowledge of each other's attitude.

The data indicate that wives are generally accurate when they report on their husband's approval of family planning. Wives' perceptions of their husbands' approval of family planning is consistent with husbands' actual attitudes in the majority of cases (88 percent). However, in 78 percent of cases when the wife reported that her husband disapproved of family planning, the opposite was true and the husband actually approved. At the same time, in 8 percent of cases the wife perceived that her husband approved of family planning when he actually disapproved. This information reinforces the importance of spousal communication and shows that there is a potential for the Ghanaian family planning programme to benefit from greater male involvement.

Table 5.22 Wife's perception of husband's attitude toward family planning

Percent distribution of couples by husband's actual attitude toward family planning, according to wife's perception of husband's attitude, Ghana 2003

Wife's perception of husband's attitude towards family planning	Husband's actual attitude towards family planning			Total	Number of couples
	Approves	Disapproves	Don't know		
Approves	91.3	7.9	0.8	100.0	1,509
Disapproves	77.7	19.3	3.0	100.0	335
Don't know	(79.8)	(11.5)	(8.7)	100.0	26
Total	88.3	10.2	1.5	100.0	1,949

Note: Figures in parentheses are based on 25-49 unweighted cases.

OTHER PROXIMATE DETERMINANTS OF FERTILITY 6

This chapter addresses the principal factors, other than contraception, which affect a woman's risk of becoming pregnant. These factors include marriage, polygyny, sexual intercourse, postpartum amenorrhoea, abstinence from sexual relations, and termination of exposure to pregnancy. Direct measures of the onset of exposure to the risk of pregnancy and the level of exposure are also discussed in this chapter.

6.1 CURRENT MARITAL STATUS

Table 6.1 shows data on the current marital status of women and men interviewed in the 2003 GDHS. In this report, the term "currently married" refers to both women in a formal union and women in an informal union. Marriage and cohabitation are generally considered to be primary indicators of exposure to the risk of pregnancy. In Ghana, however, a union is not a prerequisite to childbearing as some childbearing occurs outside union.

Table 6.1 shows that 28 percent of women age 15-49 have never married, 54 percent are formally married, 8 percent are living together, and 9 percent are divorced, separated, or widowed. Marriage occurs relatively early in Ghana, and two in every five women age 20-24 are currently married. Less than 1 percent of women age 40 and over have never married. The proportion separated is highest among women age 30-34. The proportion divorced or widowed generally increases with age.

Table 6.1 Current marital status

Percent distribution of women and men by current marital status, according to age, Ghana 2003

	Marital status							
Age	Never married	Married	Living together	Divorced	Separated	Widowed	Total	Number of women/men
				WOMEN				
15-19	86.3	7.3	4.7	0.0	1.7	0.0	100.0	1,148
20-24	42.1	40.2	12.1	0.9	4.6	0.1	100.0	1,012
25-29	14.4	66.4	11.3	2.4	4.9	0.6	100.0	951
30-34	5.1	75.4	8.2	4.1	5.5	1.8	100.0	802
35-39	2.3	79.0	7.1	4.6	4.4	2.6	100.0	722
40-44	0.6	76.4	5.3	8.4	4.2	5.1	100.0	579
45-49	0.4	72.9	6.3	8.3	3.7	8.4	100.0	477
Total	28.4	54.2	8.1	3.3	4.0	1.9	100.0	5,691
				MEN				
15-19	99.0	0.3	0.4	0.0	0.4	0.0	100.0	1,107
20-24	75.8	11.5	7.2	0.2	5.1	0.2	100.0	684
25-29	39.2	42.2	10.6	1.0	6.9	0.1	100.0	754
30-34	13.5	71.5	7.5	3.0	4.1	0.5	100.0	633
35-39	5.6	81.0	4.2	4.7	3.9	0.5	100.0	498
40-44	2.1	88.8	2.2	2.4	3.0	1.5	100.0	412
45-49	1.7	87.3	2.6	5.1	2.5	0.8	100.0	441
50-54	0.6	88.9	3.7	2.6	2.2	2.0	100.0	294
55-59	0.0	88.9	0.3	5.1	2.5	3.2	100.0	192
Total	40.7	48.6	4.6	2.0	3.4	0.6	100.0	5,015

A greater proportion of men (41 percent) than women (28 percent) have never married. Almost half of men (49 percent) are married, 5 percent are living together, and another 6 percent are divorced, separated, or widowed. Men tend to marry at older ages than women. While two in three women age 25-29 are married, the proportion of men married in the same age group is two in five.

Data from earlier DHS surveys show that there has been a noticeable increase in the proportion of women and men never married. Twenty percent of women age 15-49 were never married in 1993 (GSS and MI, 1994) and 24 percent in 1998 (GSS and MI, 1999) compared with 28 percent in 2003. Even more impressive is the marked increase in the percentage of women never-married in the cohort age 20-24, from 29 percent in 1998 to 42 percent in 2003. The proportion of never-married men age 15-59 increased only between 1993 and 1998, with little difference between 1998 and 2003. The proportion divorced has decreased for women over the past five years, from 5 percent in 1998 (GSS and MI, 1999) to 3 percent in 2003, while the proportion separated decreased from 5 percent in 1998 to 4 percent in 2003.

6.2 POLYGYNY

Polygyny (the practice of having more than one wife at the same time) has implications for the frequency of sexual activity and fertility. Married women were asked whether their husbands had other wives and, if so, how many. Married men were asked whether they had one or more wives or partners.

Table 6.2 shows that 23 percent of married women in Ghana are in polygynous unions compared with 13 percent of men. Ten percent of women say they have one co-wife, while 13 percent say they have two or more co-wives. Married men are less likely to report having multiple wives. This discrepancy between the number of wives and co-wives reported by men and women may be due to definitional or conceptual problems of who is a wife. By definition, it is higher among women than men because if a man has two wives, both have co-wives, while he is only one man reporting more than one wife. Conceptual differences may arise because of the tendency for women to describe their husband's mistresses or girlfriends as wives, whereas men are less likely to classify girlfriends as wives.

The level of polygyny increases with age for both women and men. Rural women and men are more likely to be in polygynous unions than their urban counterparts. Regional variations are also noticeable. Women and men in the Northern, Upper East, and Upper West regions are more likely to report being in a polygynous union than those in other regions (Figure 6.1). Married women in Greater Accra (13 percent) and married men in the Ashanti Region (7 percent) are least likely to be in a polygynous union.

There is an inverse relationship between respondent's education and polygyny. Thirty-six percent of women with no education are in a polygynous union compared with 9 percent of women with secondary and higher education. The corresponding data for men are 28 percent and 7 percent, respectively.

The level of polygyny among women has decreased from 28 percent in 1993 (GSS and MI, 1994) to 23 percent in both 1998 and 2003. Comparable information for men is not available for 1993, but data for 1998 (13 percent) show that there has been no change in the percentage of men who report being in a polygynous relationship over the last five years.

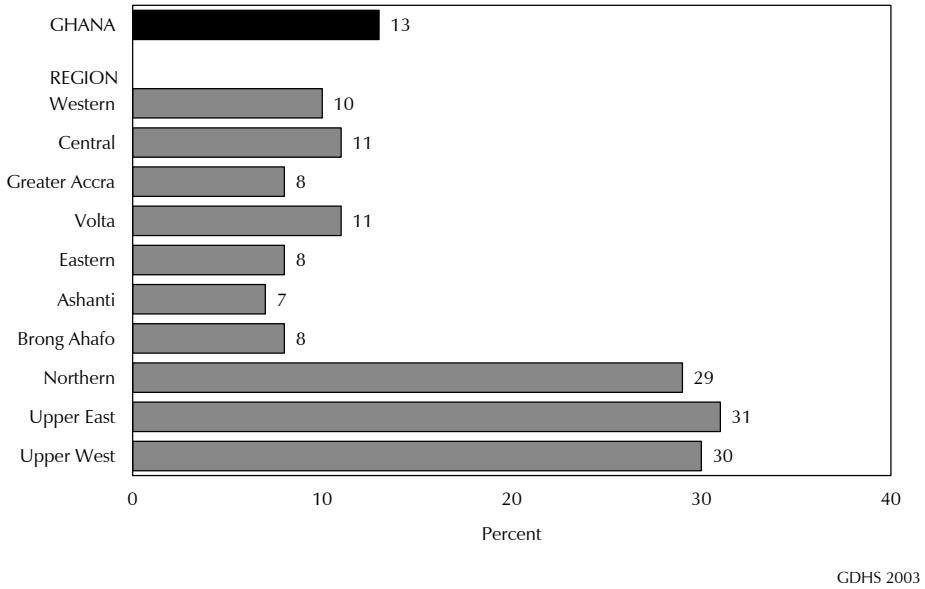
Table 6.2 Polygyny

Percent distribution of currently married women by number of cowives and currently married men by number of wives, according to background characteristics, Ghana 2003

Background characteristic	Women						Men			
	Number of cowives					Number	Number of wives			Number
	0	1	2+	Missing	Total	of women	1	2+	Total	of men
Age										
15-19	90.1	5.8	4.1	0.0	100.0	137	*	*	*	7
20-24	85.1	7.5	6.6	0.8	100.0	530	94.1	5.9	100.0	128
25-29	84.2	6.9	8.3	0.6	100.0	739	92.5	7.5	100.0	398
30-34	78.3	12.4	9.4	0.0	100.0	671	92.0	8.0	100.0	500
35-39	69.5	10.2	19.7	0.6	100.0	621	88.7	11.3	100.0	424
40-44	71.8	11.1	17.1	0.0	100.0	473	86.1	13.9	100.0	375
45-49	62.8	13.5	22.7	1.0	100.0	377	79.6	20.4	100.0	396
50-54	na	na	na	na	na	na	82.8	17.2	100.0	272
55-59	na	na	na	na	na	na	78.1	21.9	100.0	171
Residence										
Urban	82.7	6.4	10.1	0.8	100.0	1,436	91.9	8.1	100.0	1,042
Rural	73.0	12.2	14.6	0.2	100.0	2,113	84.1	15.9	100.0	1,629
Region										
Western	82.6	6.4	11.1	0.0	100.0	319	90.4	9.6	100.0	255
Central	84.3	10.1	5.3	0.3	100.0	274	89.4	10.6	100.0	195
Greater Accra	84.6	4.4	8.7	2.3	100.0	476	92.5	7.5	100.0	345
Volta	73.2	14.4	12.0	0.5	100.0	304	89.0	11.0	100.0	227
Eastern	86.0	1.1	12.5	0.3	100.0	354	92.3	7.7	100.0	306
Ashanti	83.9	6.6	9.5	0.0	100.0	643	93.4	6.6	100.0	500
Brong Ahafo	81.9	6.4	11.4	0.2	100.0	398	92.3	7.7	100.0	271
Northern	56.1	17.1	26.6	0.2	100.0	431	71.2	28.8	100.0	328
Upper East	55.0	27.3	17.8	0.0	100.0	236	69.5	30.5	100.0	171
Upper West	59.6	22.7	17.0	0.6	100.0	113	70.0	30.0	100.0	74
Education										
No education	63.2	16.5	19.9	0.4	100.0	1,354	72.0	28.0	100.0	638
Primary	81.2	8.0	10.5	0.2	100.0	710	88.9	11.1	100.0	352
Middle/JSS	86.8	4.9	7.8	0.5	100.0	1,205	92.2	7.8	100.0	1,113
Secondary+	89.4	3.3	5.8	1.5	100.0	280	93.5	6.5	100.0	568
Wealth quintile										
Lowest	63.0	19.8	16.9	0.3	100.0	753	74.9	25.1	100.0	514
Second	75.3	9.4	15.1	0.2	100.0	687	87.1	12.9	100.0	527
Middle	75.1	9.9	14.8	0.2	100.0	692	86.9	13.1	100.0	531
Fourth	83.6	5.9	10.5	0.0	100.0	695	92.7	7.3	100.0	516
Highest	88.2	3.5	6.6	1.7	100.0	721	93.4	6.6	100.0	583
Total	76.9	9.8	12.8	0.5	100.0	3,549	87.2	12.8	100.0	2,671

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. na = Not applicable

Figure 6.1 **Percentage of Married Men with Two or More Wives, by Region**



6.3 AGE AT FIRST MARRIAGE

Marriage marks the point in a woman's life at which childbearing becomes socially acceptable in Ghana. Marriage is, therefore, closely associated with fertility because women who marry early will, on average, have a longer exposure to the probability of becoming pregnant. Early age at first marriage is an important fertility indicator because it not only affects the length of time a woman is exposed to the risk of pregnancy, but also tends to lead to early childbearing and to higher fertility. Information on age at first marriage was obtained by asking respondents the month and year, or age, at which they started living with their first partner. Older respondents are less likely to recall with accuracy marriage dates and ages, therefore, the data for older respondents should be interpreted with caution.

Table 6.3 shows that the median age at marriage among women age 20-49 is 19.6, a slight increase over the past five years from 19.1 years. There is a general trend towards later marriage. More than one-third of women (35 percent) age 25-49 are married by exact age 18 compared with 38 percent of women in the same age group five years ago (GSS and MI, 1999). By age 20, more than half (56 percent) of women age 25-49 were married and by age 25 the proportion married among the same age group is 85 percent. It is to be noted that the median age at first marriage for women age 25-49 is 19.4 years and is only slightly lower (0.5 years) among women age 45-49 years than among those age 25-29 years.

Table 6.3 also provides information about age at first marriage among men. Men tend to marry at a later age than women. For example, the median age at first marriage for those age 30-34 years is 25.0 years compared with 19.1 years for women in the same age group. About half of men are married by age 25 compared with more than four in five (85 percent) women.

Table 6.3 Age at first marriage

Percentage of women and men who were first married by specific exact ages and median age at first marriage, according to current age, Ghana 2003

WOMEN

Current age	Percent first married by exact age: 15	18	20	22	25	Percentage never married	Number of women	Median age at first marriage
15-19	2.5	na	na	na	na	86.3	1,148	a
20-24	5.9	27.9	46.8	na	na	42.1	1,012	a
25-29	7.6	31.3	50.4	65.7	82.1	14.4	951	20.0
30-34	10.2	40.5	59.5	71.3	83.7	5.1	802	19.1
35-39	9.3	34.9	56.8	71.0	84.2	2.3	722	19.4
40-44	10.6	37.7	62.1	75.3	89.0	0.6	579	19.0
45-49	10.0	33.1	53.7	71.6	86.7	0.4	477	19.5
20-49	8.6	33.8	54.1	na	na	13.8	4,543	19.6
25-49	9.3	35.4	56.1	70.4	84.6	5.6	3,531	19.4

MEN

Current age	Percent first married by exact age: 20	22	25	28	30	Percentage never married	Number of men	Median age at first marriage
20-24	13.3	na	na	na	na	75.8	684	a
25-29	13.9	27.6	49.5	na	na	39.2	754	a
30-34	15.8	27.7	49.6	70.9	80.4	13.5	633	25.0
35-39	16.2	28.4	51.9	71.6	79.8	5.6	498	24.7
40-44	17.6	35.3	58.7	75.2	84.5	2.1	412	23.9
45-49	15.2	30.0	57.2	74.4	82.6	1.7	441	24.3
50-54	11.3	26.4	49.7	69.1	77.2	0.6	294	25.0
55-59	6.9	15.5	40.2	62.7	74.0	0.0	192	26.1
25-59	14.6	28.2	51.6	na	na	13.2	3,224	24.8
30-59	14.9	28.4	52.2	71.5	80.5	5.3	2,470	24.7

Note: The age at first marriage is defined as the age at which the respondent began living with first spouse/partner.
na = Not applicable
a = Omitted because less than 50 percent of the respondents began living with their first spouse/partner for the first time before reaching the beginning of the age group

Table 6.4 examines differences in the median age at first marriage for women and men by background characteristics. Rural women and men marry about one year earlier than urban women and men. Regional differentials show that women in the Upper East Region and men in the Volta Region marry about three years earlier than women and men in Greater Accra. Education has a marked impact on the age at marriage. For example, women age 25-49 with no education marry six years earlier than women with at least some secondary education. The same pattern is observed for men, although the educational difference among men is not as marked as among women. Women and men in the highest wealth quintile tend to marry later than their counterparts in the lower wealth quintiles.

Table 6.4 Median age at first marriage

Median age at first marriage among women age 20-49, by current age and background characteristics, and among men age 30-59, Ghana 2003

Background characteristic	Age 25-29	30-34	35-39	40-44	45-49	Women age 20-49	Women age 25-49	Men age 30-59
Residence								
Urban	21.7	20.0	20.1	19.2	19.9	a	20.2	25.5
Rural	19.0	18.3	18.7	18.8	19.3	18.8	18.8	24.1
Region								
Western	21.1	18.3	20.3	(18.7)	(18.5)	19.7	19.5	23.7
Central	19.1	(18.7)	(18.9)	(18.5)	(20.6)	18.8	19.1	23.9
Greater Accra	22.8	21.2	20.4	20.0	20.4	a	20.9	26.5
Volta	20.3	18.8	19.0	18.9	(20.5)	19.7	19.5	23.6
Eastern	19.9	19.2	20.1	19.6	(20.4)	a	19.8	24.9
Ashanti	19.3	18.6	19.1	19.1	18.6	19.3	18.9	24.5
Brong Ahafo	20.0	19.7	18.4	17.9	19.2	19.0	18.9	24.8
Northern	19.4	18.7	19.2	(19.5)	(18.9)	18.9	19.2	25.7
Upper East	17.6	18.1	(18.2)	(18.2)	(20.0)	18.5	18.3	24.1
Upper West	19.5	19.5	19.0	(19.1)	18.3	19.2	19.1	25.2
Education								
No education	18.8	18.1	19.2	18.6	v19.5	18.7	18.8	24.6
Primary	18.6	19.1	18.2	18.2	18.8	18.7	18.6	25.2
Middle/JSS	20.5	19.1	19.6	18.9	19.1	19.8	19.5	23.8
Secondary+	a	26.5	(25.0)	(23.1)	(22.7)	a	24.8	26.6
Wealth quintile								
Lowest	18.6	18.7	18.5	18.5	19.6	18.6	18.7	24.8
Second	18.7	17.9	19.3	18.9	18.8	18.8	18.7	23.9
Middle	19.3	18.2	19.0	19.0	19.8	19.0	18.9	23.9
Fourth	20.5	18.8	19.1	18.3	18.9	19.6	19.3	24.6
Highest	22.7	22.4	21.3	19.9	21.1	a	21.7	26.2
All women	20.0	19.1	19.4	19.0	19.5	19.6	19.4	na
All men	a	25.0	24.7	23.9	24.3	na	na	24.7

Note: The age at first marriage is defined as the age at which the respondent began living with first spouse/partner. Figures in parentheses are based on 25-49 unweighted cases.

a = Omitted because less than 50 percent of the respondents began living with their first spouse/partner for the first time before reaching the beginning of the age group

na = Not applicable

6.4 AGE AT FIRST SEXUAL INTERCOURSE

Age at first marriage is sometimes seen as a proxy for a woman's first exposure to intercourse but the two events need not occur at the same time. Since women and men may engage in sexual relations prior to marriage, the age at first sexual intercourse is a more reliable estimate of a woman's exposure to the risk of pregnancy. In the survey, women and men were asked how old they were when they first had sexual intercourse.

Table 6.5 shows that the median age at first sexual intercourse for women age 25-49 years is 18.2 years and for men age 25-59 years it is 20.2 years. Nine percent of women and 4 percent of men reported having sexual intercourse by age 15. By age 18, almost half of women (48 percent) and one-fourth of men (25 percent) have had sexual intercourse. Sixty-one percent of women and 80 percent of men age 15-19

have never had sex. After age 24, nearly all women are sexually active. The 2003 GDHS data indicate that there has been little change over time in the median age at first sexual intercourse among women. However, age at first sexual intercourse among men has decreased. For example, the cohort of men age 20-24 had first sexual intercourse two years earlier (19.6 years) than the cohort of men age 55-59 (21.8 years).

Table 6.5 Age at first sexual intercourse

Percentage of women and men who had first sexual intercourse by specific exact ages and median age at first intercourse, according to current age, Ghana 2003

Current age	Percentage who had first sexual intercourse by exact age					Percentage who never had intercourse	Number of respondents	Median age at first intercourse
	15	18	20	22	25			
WOMEN								
15-19	7.4	na	na	na	na	61.0	1,148	a
20-24	7.5	43.1	70.5	na	na	15.7	1,012	18.4
25-29	8.2	45.4	69.3	82.9	89.4	2.1	951	18.3
30-34	10.5	51.3	71.5	83.5	88.2	0.3	802	17.9
35-39	10.5	49.3	73.0	83.6	87.9	0.3	722	18.0
40-44	10.4	47.1	69.5	82.3	86.8	0.1	579	18.2
45-49	7.0	44.3	68.9	82.0	88.2	0.0	477	18.4
20-49	9.0	46.7	70.5	na	na	4.0	4,543	18.2
25-49	9.4	47.7	70.6	83.0	88.2	0.7	3,531	18.2
MEN								
15-19	3.9	na	na	na	na	80.0	1,107	a
20-24	3.9	25.7	54.5	na	na	29.2	684	19.6
25-29	6.2	29.2	53.9	73.5	86.5	7.3	754	19.6
30-34	4.4	25.4	48.9	69.2	83.1	1.5	633	20.1
35-39	5.5	27.7	49.4	68.6	83.4	0.5	498	20.0
40-44	3.1	21.6	44.7	70.9	85.1	0.0	412	20.3
45-49	3.4	21.4	43.2	65.9	82.2	0.0	441	20.4
50-54	2.7	18.5	37.4	61.5	77.6	0.3	294	20.8
55-59	0.6	17.3	31.3	51.2	75.1	0.0	192	21.8
20-59	4.2	24.7	48.1	na	na	6.9	3,908	a
25-59	4.3	24.5	46.7	68.1	83.1	2.1	3,224	20.2

na = Not applicable
a = Omitted because less than 50 percent of the respondents had intercourse for the first time before reaching the beginning of the age group

Table 6.6 shows differentials in median age at first sex by background characteristics. Urban women experience sexual intercourse for the first time about one year after their rural counterparts, but there is no difference in age at first sexual intercourse between urban and rural men. Women and men living in the Upper West Region experience first sexual intercourse at a later age than their counterparts in the other regions. Educated women and men and women who fall in the highest wealth quintile are also seen to initiate sexual intercourse at a later age than women and men with little or no education and women in the other wealth quintiles. In contrast, there is little difference in the age at first sexual intercourse among men by wealth quintile.

Table 6.6 Median age at first intercourse

Median age at first sexual intercourse among women age 20-49, by current age and background characteristics, and median age among men age 25-59, by background characteristics, Ghana 2003

Background characteristic	Current age						Women age 20-49	Women age 25-49	Men age 25-29
	20-24	25-29	30-34	35-39	40-44	45-49			
Residence									
Urban	19.0	18.9	18.3	18.6	18.5	18.5	18.7	18.6	20.3
Rural	17.7	17.7	17.6	17.5	18.0	18.3	17.8	17.8	20.1
Region									
Western	18.6	18.1	16.7	17.8	17.6	(18.4)	17.9	17.7	20.0
Central	17.6	18.4	16.9	(17.1)	(16.8)	(17.4)	17.5	17.5	19.5
Greater Accra	a	18.9	18.6	19.0	19.4	18.7	19.1	18.9	19.6
Volta	17.6	18.1	17.6	16.9	17.4	(18.6)	17.7	17.8	19.5
Eastern	18.4	18.8	18.0	18.1	18.5	(18.3)	18.4	18.3	20.0
Ashanti	18.7	18.0	17.9	18.4	18.4	18.3	18.3	18.2	20.4
Brong Ahafo	18.1	18.0	18.5	17.7	17.8	(18.5)	18.1	18.1	20.5
Northern	17.1	18.4	18.2	18.0	(18.8)	(18.5)	18.1	18.3	20.9
Upper East	18.5	17.0	17.5	(16.5)	(17.8)	(17.9)	17.6	17.4	20.9
Upper West	18.5	19.6	20.3	19.7	(19.0)	(20.2)	19.3	19.6	22.2
Education									
No education	17.3	17.6	17.4	17.6	18.0	18.4	17.7	17.7	20.7
Primary	17.6	17.6	18.0	17.0	17.5	17.4	17.5	17.5	20.0
Middle/JSS	18.4	18.6	17.9	18.5	18.3	18.6	18.4	18.4	20.0
Secondary+	a	20.1	19.7	(19.9)	(20.1)	(19.7)	a	20.0	20.2
Wealth quintile									
Lowest	17.2	17.2	18.0	17.2	17.8	18.5	17.6	17.6	20.3
Second	17.8	17.8	17.1	17.9	17.9	18.1	17.7	17.7	20.2
Middle	18.0	17.8	17.8	17.5	18.0	18.1	17.9	17.8	20.0
Fourth	18.3	18.6	17.6	18.0	17.5	18.4	18.2	18.2	20.3
Highest	a	19.2	18.8	18.9	19.2	18.7	19.3	19.0	20.2
All women	18.4	18.3	17.9	18.0	18.2	18.4	18.2	18.2	na
All men	19.6	19.6	20.1	20.0	20.3	20.4	na	na	20.2

Note: Figures in parentheses are based on 25-49 unweighted cases.
a = Omitted because less than 50 percent of the men had intercourse for the first time before reaching the beginning of the age group
na = Not applicable

6.5 RECENT SEXUAL ACTIVITY

In the absence of contraception, the probability of pregnancy is related to the frequency of intercourse. Information on sexual activity, therefore, can be used to refine measures of exposure to pregnancy. Women and men were asked how long ago their last sexual activity occurred, to assess whether they had a sexual encounter in the last four weeks. The results are shown in Table 6.7.1 for women and Table 6.7.2 for men.

About two in five women age 15-49 were sexually active in the four weeks before the survey, 26 percent had been sexually active in the previous year but not in the previous month, and 13 percent had not been sexually active for one or more years. An additional 16 percent of women have never had sex.

The proportion of women who were sexually active in the four weeks before the survey increases with age from 14 percent at age 15-19 to 56 percent by age 40-44 and decreases thereafter to 48 percent among women age 45-49. Teenagers and women who are not currently in a marital union were less likely to be sexually active in the four weeks preceding the survey than older women and women who are married or living with a man. Three in five women who have been married 10 to 24 years were sexually active in the past four weeks. The proportion is slightly lower for those married less than 10 years or 25 or more years. Women who have been married more than once are more likely to have been sexually active in the past four weeks than women who have been married only once.

Women in urban areas are less likely to be sexually active over the past four weeks (38 percent) than those in rural areas (46 percent). The proportion of women who are sexually active in the four weeks preceding the survey is highest in the Eastern Region (48 percent) and lowest in Greater Accra (36 percent). Women with at least some secondary education are less likely to be sexually active than less educated women. As expected, women who are using a contraceptive method are more likely to be sexually active than women who are not using any method. Obviously, women who are sexually active are more likely to use a method, but it is also true that those who are using contraception probably feel freer to engage in sex because they are at a lower risk of pregnancy. Women in the highest wealth quintile are least likely to be sexually active in the past four weeks.

Almost half (45 percent) of the men interviewed were sexually active in the four weeks before the survey, while 22 percent had sex in the previous year but not in the previous month (Table 6.7.2). Ten percent had not been sexually active in the previous year and 23 percent had never had sex. As with women, sexual activity increases with age among men, with the highest level among men in their mid-40s and early 50s. Men in union are much more likely to be sexually active than those never in union. Fewer urban men (41 percent) reported recent sexual activity than rural men (48 percent). Recent sexual activity is highest in the Eastern Region (51 percent) and lowest in the Upper East (31 percent). Education and wealth do not appear to be related to recent sexual activity.

A comparison of data between the 2003 GDHS and the 1998 GDHS (GSS and MI, 1999) shows that there has been a decline in recent sexual activity among young men age 15-24 but an increase in recent sexual activity among older men. There has been little change in recent sexual activity among women over the past five years.

Table 6.7.1 Recent sexual activity: women

Percent distribution of women by timing of last sexual intercourse, according to background characteristics, Ghana 2003

Background characteristic	Timing of last sexual intercourse: Within the past 4 weeks	Within the past year[1]	One or more years	Missing	Never had sexual intercourse	Total	Number of women
Age							
15-19	14.1	17.7	6.3	0.9	61.0	100.0	1,148
20-24	36.8	31.2	13.0	3.3	15.7	100.0	1,012
25-29	48.8	32.8	12.9	3.4	2.1	100.0	951
30-34	54.8	26.3	14.4	4.2	0.3	100.0	802
35-39	55.2	28.1	12.9	3.5	0.3	100.0	722
40-44	55.6	23.7	18.4	2.2	0.1	100.0	579
45-49	48.2	24.8	25.9	1.1	0.0	100.0	477
Marital status							
Never married	11.4	21.0	12.1	0.9	54.6	100.0	1,616
Married or living together	60.0	28.4	8.4	3.1	0.0	100.0	3,549
Divorced/separated/widowed	14.0	29.2	51.3	5.5	0.0	100.0	526
Marital duration[2]							
Married only once							
0-4 years	55.0	33.4	7.0	4.6	0.1	100.0	645
5-9 years	56.7	31.2	9.0	3.0	0.0	100.0	562
10-14 years	62.8	26.2	7.6	3.4	0.0	100.0	489
15-19 years	60.4	25.8	9.8	4.1	0.0	100.0	397
20-24 years	62.3	25.1	11.8	0.8	0.0	100.0	301
25+ years	56.8	22.6	18.0	2.6	0.0	100.0	227
Married more than once	64.0	27.8	5.6	2.6	0.0	100.0	929
Residence							
Urban	38.0	24.7	14.4	2.0	20.9	100.0	2,755
Rural	45.7	27.9	12.6	3.3	10.5	100.0	2,936
Region							
Western	42.2	26.6	11.4	2.7	17.0	100.0	553
Central	46.8	22.9	13.2	2.8	14.4	100.0	431
Greater Accra	35.7	27.3	13.9	1.4	21.7	100.0	942
Volta	40.6	30.7	12.3	2.9	13.5	100.0	492
Eastern	47.6	25.3	11.5	3.1	12.5	100.0	601
Ashanti	41.6	25.8	13.5	2.1	17.0	100.0	1,142
Brong Ahafo	46.1	28.3	9.8	2.9	12.8	100.0	569
Northern	42.6	26.9	17.0	5.5	8.1	100.0	499
Upper East	40.0	21.2	19.6	2.9	16.4	100.0	310
Upper West	37.2	25.6	18.6	3.3	15.4	100.0	153
Education							
No education	46.4	28.1	15.6	4.5	5.3	100.0	1,608
Primary	44.9	24.5	12.4	2.9	15.4	100.0	1,135
Middle/JSS	40.9	25.8	12.1	1.9	19.3	100.0	2,279
Secondary+	29.8	27.3	14.5	1.0	27.5	100.0	669
Current contraceptive method							
Female sterilisation	68.6	17.8	11.1	2.6	0.0	100.0	72
Pill	81.7	16.2	1.5	0.7	0.0	100.0	235
IUD	(91.0)	(5.3)	(3.7)	(0.0)	(0.0)	(100.0)	35
Condom	53.6	45.6	0.7	0.0	0.0	100.0	246
Periodic abstinence	65.9	28.3	5.0	0.6	0.2	100.0	238
Other method	75.1	19.0	5.1	0.8	0.0	100.0	351
No method	34.6	26.6	16.0	3.2	19.6	100.0	4,514
Wealth quintile							
Lowest	40.9	27.9	16.6	4.9	9.7	100.0	970
Second	47.7	29.9	10.0	2.9	9.5	100.0	949
Middle	44.6	27.9	12.3	3.2	12.0	100.0	1,071
Fourth	42.5	25.9	12.3	2.1	17.2	100.0	1,245
Highest	36.5	22.3	15.5	1.2	24.4	100.0	1,457
Total	42.0	26.4	13.4	2.7	15.5	100.0	5,691

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Excludes women who had sexual intercourse within the past 4 weeks
[2] Excludes women who are not currently married

Table 6.7.2 Recent sexual activity: men

Percent distribution of men by timing of last sexual intercourse, according to background characteristics, Ghana 2003

Background characteristic	Timing of last sexual intercourse: Within the past 4 weeks	Within the past year[1]	One or more years	Missing	Never had sexual intercourse	Total	Number of men
Age							
15-19	6.1	8.6	5.3	0.0	80.0	100.0	1,107
20-24	27.5	29.0	14.2	0.1	29.2	100.0	684
25-29	51.1	27.8	13.8	0.0	7.3	100.0	754
30-34	58.8	27.9	11.8	0.0	1.5	100.0	633
35-39	65.1	24.3	10.0	0.2	0.5	100.0	498
40-44	67.4	23.3	9.3	0.0	0.0	100.0	412
45-49	67.1	22.4	10.5	0.0	0.0	100.0	441
50-54	70.9	21.0	7.8	0.0	0.3	100.0	294
55-59	60.2	24.8	14.8	0.2	0.0	100.0	192
Marital status							
Never married	13.6	17.3	12.6	0.0	56.4	100.0	2,042
Married or living together	70.2	24.3	5.3	0.0	0.1	100.0	2,671
Divorced/separated/widowed	26.1	33.9	39.8	0.2	0.0	100.0	302
Marital duration[2]							
Married only once							
0-4 years	62.6	32.3	4.8	0.0	0.3	100.0	429
5-9 years	65.2	27.3	7.3	0.0	0.1	100.0	394
10-14 years	71.2	22.2	6.3	0.3	0.0	100.0	324
15-19 years	71.2	24.0	4.8	0.0	0.0	100.0	250
20-24 years	73.2	22.1	4.7	0.0	0.0	100.0	237
25+ years	73.7	19.8	6.4	0.1	0.0	100.0	200
Married more than once	74.2	21.4	4.4	0.0	0.0	100.0	836
Residence							
Urban	40.9	23.0	11.8	0.0	24.3	100.0	2,250
Rural	47.5	21.3	9.2	0.0	22.0	100.0	2,765
Region							
Western	44.9	24.6	8.6	0.0	22.0	100.0	476
Central	48.9	18.4	7.1	0.0	25.5	100.0	370
Greater Accra	45.6	21.4	13.0	0.1	19.8	100.0	733
Volta	48.5	21.1	6.6	0.0	23.8	100.0	440
Eastern	50.7	23.7	6.0	0.0	19.7	100.0	539
Ashanti	46.6	21.1	10.2	0.0	22.2	100.0	956
Brong Ahafo	41.8	23.8	8.1	0.0	26.3	100.0	528
Northern	38.5	24.0	15.7	0.1	21.7	100.0	527
Upper East	31.4	21.4	17.1	0.0	30.1	100.0	317
Upper West	39.2	17.1	14.0	0.3	29.3	100.0	130
Education							
No education	47.3	23.0	16.3	0.2	13.2	100.0	881
Primary	37.7	20.3	7.4	0.0	34.6	100.0	803
Middle/JSS	46.5	19.7	8.6	0.0	25.1	100.0	2,165
Secondary+	43.5	26.8	11.1	0.0	18.6	100.0	1,165
Wealth quintile							
Lowest	41.1	22.5	11.8	0.0	24.6	100.0	872
Second	48.4	20.3	8.2	0.0	23.1	100.0	903
Middle	46.4	21.6	8.5	0.0	23.4	100.0	975
Fourth	42.0	22.5	12.2	0.0	23.3	100.0	1,060
Highest	44.8	22.9	10.9	0.1	21.3	100.0	1,204
Total	44.5	22.0	10.4	0.0	23.0	100.0	5,015

[1] Excludes men who had sexual intercourse within the past 4 weeks
[2] Excludes men who are not currently married

6.6 POSTPARTUM AMENORRHOEA, ABSTINENCE, AND INSUSCEPTIBILITY

Postpartum amenorrhoea is the interval between the birth of a child and the return of the menstrual cycle. It is the period during which the woman becomes temporarily and involuntarily infecund following childbirth. Postpartum protection from conception can be prolonged by breastfeeding, which can lengthen the duration of amenorrhoea. Delaying the resumption of postpartum sexual relations can also prolong protection. The period of voluntary sexual inactivity after childbirth is referred to as postpartum abstinence. A woman is said to be insusceptible to the risk of pregnancy if she is either amenorrhoeic or abstaining from sexual intercourse following childbirth. Women who gave birth during the three years prior to the survey were asked about their breastfeeding practices, the duration of amenorrhoea, and postpartum sexual abstinence.

Table 6.8 shows that the median duration of amenorrhoea is 11 months, of abstinence 9 months, and of insusceptibility 14 months. The data show that all women are insusceptible to pregnancy during the first two months after a birth due to both postpartum amenorrhoea and postpartum abstinence. However, the contribution of abstinence to the period of insusceptibility starts decreasing after the second month after birth. At 10 to 11 months after birth, about half of all women are still amenorrhoeic, but only 41 percent are abstaining. By 14 to 15 months, a third of women are still amenorrhoeic, another third are abstaining, and only half are insusceptible because of the reduced combined effect of amenorrhoea and abstinence. At 20 to 21 months postpartum, mothers are just amenorrhoeic in one in ten births and the number abstaining is about a quarter (23 percent). By 34-35 months, the effect of postpartum amenorrhoea is almost completely wiped out and insusceptibility to pregnancy becomes low.

Table 6.8 Postpartum amenorrhea, abstinence and insusceptibility

Percentage of births in the three years preceding the survey for which mothers are postpartum amenorrhoeic, abstaining, and insusceptible, by number of months since birth, and median and mean durations, Ghana 2003

Months since birth	Percentage of births for which the mother is:			Number of births
	Amenorrhoeic	Abstaining	Insusceptible	
< 2	98.1	100.0	100.0	97
2-3	87.6	86.8	95.5	95
4-5	77.5	71.1	87.1	136
6-7	60.3	61.5	74.6	152
8-9	67.4	49.9	76.6	108
10-11	49.9	40.8	64.8	137
12-13	40.7	38.7	55.8	128
14-15	32.2	34.7	48.6	148
16-17	24.8	20.8	36.0	129
18-19	13.4	21.3	28.7	111
20-21	13.3	22.9	29.3	114
22-23	6.1	20.4	22.4	90
24-25	5.0	11.8	15.5	104
26-27	3.3	10.1	11.7	138
28-29	4.3	11.6	15.0	120
30-31	5.3	10.8	13.8	106
32-33	3.5	8.2	9.6	104
34-35	1.2	4.5	4.5	114
Total	33.3	34.7	44.4	2,130
Median	10.8	8.8	13.8	na
Mean	12.1	12.8	16.0	na

Note: Estimates are based on status at the time of the survey.
na = Not applicable

A comparison of data from the 1993, 1998, and 2003 GDHS surveys indicates that the median duration of postpartum amenorrhoea, abstinence, and insusceptibility decreased between 1993 (GSS and MI, 1994) and 1998 (GSS and MI, 1999) but remained unchanged between 1998 and 2003.

Table 6.9 shows the median durations of postpartum amenorrhoea, abstinence, and insusceptibility by background characteristics. Postpartum insusceptibility is shorter among urban than rural women. Postpartum insusceptibility is highest among women in the Upper East Region, due more to postpartum abstinence than amenorrhoea. In contrast, women from the Central Region are postpartum insusceptible primarily due to amenorrhoea rather than abstinence. There is an inverse relationship between the level of education and wealth on the one hand and women's insusceptibility to pregnancy on the other.

Table 6.9 Median duration of postpartum insusceptibility by background characteristics

Median number of months of postpartum amenorrhoea, postpartum abstinence, and postpartum insusceptibility following births in the three years preceding the survey, by background characteristics, Ghana 2003

Background characteristic	Postpartum amenorrhoea	Postpartum abstinence	Postpartum insusceptibility	Number of births
Age				
15-29	9.6	8.9	14.1	1,129
30-49	11.7	8.7	13.6	1,001
Residence				
Urban	7.8	7.2	11.3	722
Rural	11.7	9.7	15.7	1,408
Region				
Western	8.4	7.3	13.1	206
Central	16.8	7.9	17.4	181
Greater Accra	8.6	7.1	10.1	225
Volta	10.8	11.0	12.6	180
Eastern	11.5	6.5	13.3	211
Ashanti	7.5	6.2	10.0	404
Brong Ahafo	9.0	6.6	12.4	234
Northern	14.5	15.8	21.6	291
Upper East	13.7	22.7	23.0	129
Upper West	13.2	15.6	19.8	68
Education				
No education	13.6	13.6	17.7	848
Primary	9.9	8.0	12.5	497
Middle/JSS	7.6	7.3	11.3	662
Secondary+	7.4	4.4	7.5	123
Wealth quintile				
Lowest	13.8	14.9	17.7	535
Second	10.7	9.0	14.7	469
Middle	10.3	8.5	13.0	438
Fourth	8.0	7.4	12.6	356
Highest	8.1	4.4	9.3	333
Total	10.8	8.8	13.8	2,130

Note: Medians are based on current status.

6.7 MENOPAUSE

Menopause marks the onset of infecundity and is another factor influencing the risk of pregnancy. Women are considered menopausal if they are neither pregnant nor postpartum amenorrhoeic, and have not had a menstrual period in the six months preceding the survey (Table 6.10). Nine percent of women age 30 and over are menopausal. As expected, the proportion of women who are menopausal increases with age from 2 percent among women age 30-34 to 47 percent among women age 48-49. The prevalence of menopause increases sharply after age 43.

Table 6.10 Menopause

Percentage of women age 30-49 who are menopausal, by age, Ghana 2003

Age	Percentage menopausal[1]	Number of women
30-34	2.2	802
35-39	1.2	722
40-41	3.7	269
42-43	11.3	233
44-45	22.8	223
46-47	32.6	179
48-49	46.5	151
Total	9.4	2,580

[1] Percentage of all women who are not pregnant and not postpartum amenorrhoeic whose last menstrual period occurred six or more months preceding the survey

FERTILITY PREFERENCES 7

Information on the fertility preferences of men and women provide a measure of the overall attitude of society towards childbearing and the general course of future fertility. This type of data is useful for family planning programmers to assess the need for contraception and the extent of unwanted and mistimed pregnancies. Data on fertility preferences can also be used to facilitate the objectives of the Ghana National Family Planning Programme, which was established to promote and facilitate couples' desires for the number of children they want to bear, with births spaced according to their preferences (Republic of Ghana, 1969).

In the 2003 GDHS, both women and men were asked a series of questions to ascertain their fertility preferences. Specific questions were asked about the desire to have another child, the length of time they would like to wait before having another child, and what they considered to be the ideal number of children. The information collected makes it possible to quantify fertility preferences and, in combination with data on contraceptive use, allow the estimation of unmet need for family planning, both for spacing and for limiting births.

7.1 DESIRE FOR MORE CHILDREN

Table 7.1 shows fertility preferences among currently married women and men by the number of living children at the time of the survey. There is considerable desire among currently married Ghanaians to control the timing and number of births. Thirty-eight percent of currently married women would like to wait for two years or more for the next birth, and 36 percent do not want to have another child or are sterilised. About a fifth (18 percent) would like to have a child soon (within two years). The remaining women are uncertain about their fertility desires or say they are unable to get pregnant (infecund). A similar pattern is observed for currently married men.

Table 7.1 also shows that fertility preferences are closely related to the number of children a woman has. The vast majority (63 percent) of currently married women without a child would like to have one soon. Nevertheless, they show a greater interest in controlling the pace of childbearing once they have a child; almost two-thirds (63 percent) of women with one child want to delay their next birth. Interest in controlling the number of births grows rapidly as the number of children increases; the proportion of married women wanting no more children or who are sterilised rises from 4 percent among women with one child to 75 percent among women with six or more children. Men without a child are twice as likely to want a child later than women. At the same time, women who have not started childbearing are much more likely to want a child within two years than men (63 and 47 percent, respectively).

Table 7.1 Fertility preferences by number of living children

Percent distribution of currently married women and men by desire for children, according to number of living children, Ghana 2003

Desire for children	Number of living children[1] 0	1	2	3	4	5	6+	Total
				WOMEN				
Have another soon[2]	62.8	26.4	19.0	16.7	9.7	7.0	4.9	18.0
Have another later[3]	22.5	62.8	55.6	40.9	28.7	23.6	7.8	37.5
Have another, undecided when	9.5	4.1	3.7	1.0	0.5	0.3	0.5	2.4
Undecided	1.3	1.8	1.7	5.0	4.9	3.5	3.8	3.2
Want no more	1.3	3.4	17.6	33.9	48.9	58.9	71.7	34.1
Sterilised	0.0	0.4	1.0	1.8	3.0	2.8	3.7	1.9
Declared infecund	2.6	0.9	1.3	0.8	4.4	3.9	7.6	2.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	234	618	652	623	495	369	558	3,549
				MEN				
Have another soon[2]	46.7	25.6	21.2	16.0	10.3	14.4	12.6	19.0
Have another later[3]	43.5	65.0	53.8	40.7	33.0	23.1	17.7	38.5
Have another, undecided when	1.4	2.0	1.1	1.7	1.4	0.8	1.3	1.4
Undecided	4.4	1.8	4.5	6.7	7.0	4.3	4.9	4.8
Want no more	2.4	5.2	17.2	33.2	45.3	54.4	59.2	33.8
Declared infecund	1.3	0.3	1.9	1.6	2.7	3.0	4.1	2.3
Missing	0.3	0.0	0.2	0.2	0.4	0.0	0.3	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of men	214	388	424	426	330	286	603	2,671

[1] Includes current pregnancy
[2] Wants next birth within two years
[3] Wants to delay next birth for two or more years

A comparison of the data over the four GDHS surveys show that the desire to space births among currently married women has declined in the past 15 years, from 45 percent in 1988 (GSS and IRD, 1989) to 38 percent in 2003. However, this change has been minimal in the past ten years. On the other hand, the desire to limit (excluding sterilised women) has increased from 23 percent in 1988 to 34 percent in 2003. Again this change has been minimal over the past ten years.

Table 7.2 shows the percentage of currently married women and men who want no more children (or are sterilised) by the number of living children and background characteristics. Urban women are more likely than rural women to want no more children regardless of the number of children they already have, although the overall urban-rural difference is slightly less then one percentage point, a pattern that is similar for men as well.

Table 7.2 Desire to limit childbearing

Percentage of currently married women and men who want no more children, by number of living children and background characteristics, Ghana 2003

Background characteristic	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
WOMEN								
Residence								
Urban	2.3	4.3	23.6	46.6	60.8	74.6	76.8	36.4
Rural	0.0	3.6	14.0	28.0	45.8	55.6	74.9	35.6
Region								
Western	*	2.6	15.7	32.1	(58.5)	(70.0)	75.2	37.6
Central	*	(2.6)	(11.1)	(48.9)	(69.6)	*	(100.0)	43.7
Greater Accra	(6.8)	9.7	36.3	56.7	80.8	(91.6)	*	45.7
Volta	*	3.8	31.5	(39.7)	(64.3)	(81.7)	(87.7)	45.6
Eastern	*	(8.9)	(23.3)	53.9	(54.7)	(79.8)	80.7	46.7
Ashanti	(0.0)	1.1	13.8	35.9	53.9	65.2	74.0	37.1
Brong Ahafo	(0.0)	3.4	16.8	29.6	57.3	(56.7)	79.3	33.5
Northern	(0.0)	1.3	0.9	10.9	17.9	24.4	51.3	15.1
Upper East	*	(0.0)	(7.4)	14.4	24.5	(48.6)	(50.7)	21.9
Upper West	*	0.0	7.9	(8.1)	20.3	(50.4)	65.0	23.2
Education								
No education	0.0	4.9	8.7	17.1	35.8	49.1	68.7	31.5
Primary	(0.0)	5.0	19.7	40.1	62.7	63.2	81.3	40.5
Middle/JSS	0.0	3.7	23.2	44.6	62.4	78.9	82.7	38.2
Secondary+	(6.6)	0.0	30.2	69.0	*	*	*	36.7
Wealth quintile								
Lowest	(0.0)	4.1	8.0	13.5	28.4	45.5	61.5	26.4
Second	(0.0)	3.5	16.5	29.8	45.3	62.0	78.7	40.0
Middle	(0.0)	3.3	22.3	36.2	59.3	61.7	77.3	40.8
Fourth	(0.0)	3.7	18.7	43.9	60.4	73.4	85.1	36.6
Highest	3.9	4.7	24.6	52.4	69.3	(78.2)	(88.1)	36.8
Total	1.3	3.9	18.6	35.7	51.9	61.7	75.4	36.0
MEN								
Residence								
Urban	2.6	5.4	24.7	44.8	53.5	64.8	65.9	36.3
Rural	2.2	5.0	11.7	23.3	40.6	48.1	56.9	32.1
Region								
Western	*	(4.0)	(18.4)	(39.2)	(52.1)	(63.6)	78.5	42.4
Central	*	*	(19.2)	*	*	*	(74.9)	45.6
Greater Accra	(7.4)	(1.9)	34.7	62.1	(78.7)	*	(83.5)	46.1
Volta	*	(3.9)	(22.2)	*	(57.9)	(65.6)	(68.3)	38.8
Eastern	*	(3.1)	(18.4)	46.3	(57.2)	(59.9)	68.8	42.6
Ashanti	(3.8)	7.7	14.6	25.5	40.9	50.1	59.5	32.3
Brong Ahafo	*	11.4	(9.6)	(29.3)	(37.6)	(65.5)	78.0	37.3
Northern	(2.3)	3.1	(0.0)	4.0	(4.9)	(8.4)	(23.4)	(8.3)
Upper East	*	(2.7)	(1.5)	(2.1)	*	*	(30.6)	(15.2)
Upper West	*	(0.0)	(0.0)	*	*	(31.9)	(30.6)	(15.6)
Education								
No education	0.0	2.1	1.1	7.7	11.8	15.7	36.3	16.7
Primary	(0.0)	0.3	9.1	25.0	(43.1)	43.2	59.9	27.0
Middle/JSS	1.9	9.9	22.9	37.2	55.7	68.7	72.8	42.0
Secondary+	6.1	3.2	23.9	52.9	66.5	(80.4)	78.4	41.0
Wealth quintile								
Lowest	0.0	9.6	0.0	7.4	14.7	30.0	40.8	19.1
Second	(3.0)	5.3	6.9	25.0	41.8	47.8	57.0	33.9
Middle	(4.1)	4.8	18.2	25.8	55.1	56.1	67.1	38.4
Fourth	2.8	5.1	24.7	36.0	(43.2)	(55.7)	72.9	34.9
Highest	2.4	2.3	28.3	55.2	65.9	79.0	72.0	41.3
Total	2.4	5.2	17.2	33.2	45.3	54.4	59.2	33.8

Note: Women and men who have been sterilised are considered to want no more children. An asterisk indicates that a figure is based on fewer than 25 un-weighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.
[1] Includes current pregnancy

Women and men residing in the Eastern, Volta, Greater Accra, Central, and Western regions are more likely than women and men in the other regions to want to limit the number of children they have (38-47 percent). The desire to limit childbearing among women is lowest in the Northern Region (15 percent).

The percentage of men who do not want any more children increases with the level of education. For example, the desire to limit childbearing rises from 17 percent among men with no education to more than 40 percent among men with at least Middle/JSS education; however, educational difference among women is marked only between women with no education (32 percent) and those with some education (37-41 percent). Educational differences among women are, however, striking when the number of living children is taken into account. For example, among women with three children, only 17 percent of women with no education want no more children compared with 69 percent of women with secondary or higher schooling.

A similar male-female pattern is observed by wealth quintiles. In general, women and men who are from the lowest wealth quintile are least likely to want to limit the number of children that they want, with quintile differentials more striking among men than women.

7.2 NEED FOR FAMILY PLANNING SERVICES

Currently married women who say that they do not want any more children or that they want to wait two or more years before having another child, but are not using contraception, are considered to have an unmet need for family planning. Women who are using family planning methods are said to have a met need for family planning. Women with unmet need and met need together constitute the total demand for family planning.

Table 7.3 shows the need for family planning among currently married women by background characteristics. Thirty-four percent of married women have an unmet need for family planning. Unmet need for spacing is higher than unmet need for limiting children (22 and 12 percent, respectively). Table 7.3 also shows that one in four currently married women is using a method of contraception, with 14 percent using for spacing and 11 percent using for limiting. The total demand for family planning among women is 59 percent, 36 percent with a need for spacing and 24 percent with a need for limiting. Forty-three percent of the demand for family planning is currently being met, implying that the needs of more than one in two women are currently not being met.

Comparison of data from the 1998 and 2003 GDHS surveys suggests that there has been little change in the unmet need among currently married women over the past five years. The total demand for family planning and the percentage of demand satisfied increased by 7 percent, each, over the five-year period.

Table 7.3 Need for family planning

Percentage of currently married women with unmet need for family planning, with met need for family planning, and the total demand for family planning, by background characteristics, Ghana 2003

Background characteristic	Unmet need for family planning[1]			Met need for family planning (currently using)[2]			Total demand for family planning			Percentage of demand satisfied	Number of women
	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total		
Age											
15-19	52.9	3.9	56.8	8.4	0.0	8.4	61.3	3.9	65.2	12.9	137
20-24	39.2	2.0	41.1	21.1	1.7	22.8	60.2	3.7	63.9	35.7	530
25-29	28.9	7.0	36.0	22.0	3.8	25.8	50.9	10.8	61.8	41.8	739
30-34	20.3	10.4	30.7	19.6	10.0	29.7	39.9	20.5	60.4	49.1	671
35-39	14.7	18.1	32.8	8.4	19.8	28.1	23.1	37.9	61.0	46.1	621
40-44	7.3	22.1	29.5	3.3	25.4	28.7	10.6	47.6	58.2	49.4	473
45-49	3.9	21.6	25.5	0.6	15.4	16.0	4.5	37.0	41.5	38.6	377
Residence											
Urban	17.3	10.7	28.0	17.6	13.8	31.4	34.8	24.5	59.4	52.9	1,436
Rural	24.7	13.4	38.1	11.1	9.8	20.9	35.9	23.2	59.1	35.5	2,113
Region											
Western	22.6	10.1	32.7	13.0	15.3	28.2	35.6	25.4	61.0	46.3	319
Central	31.2	18.6	49.9	6.4	8.7	15.2	37.7	27.4	65.0	23.3	274
Greater Accra	14.6	16.7	31.2	15.1	18.9	34.0	29.6	35.6	65.2	52.1	476
Volta	21.1	19.4	40.5	13.3	10.3	23.6	34.5	29.6	64.1	36.8	304
Eastern	17.5	16.3	33.9	13.2	13.9	27.1	30.7	30.2	60.9	44.4	354
Ashanti	17.6	11.0	28.5	17.3	12.4	29.7	34.9	23.4	58.2	51.0	643
Brong Ahafo	22.5	8.9	31.4	19.5	13.5	33.0	41.9	22.4	64.4	51.2	398
Northern	28.8	5.0	33.8	8.9	3.2	12.1	37.7	8.2	46.0	26.4	431
Upper East	29.1	10.0	39.1	8.6	3.3	11.9	37.7	13.3	51.0	23.3	236
Upper West	19.7	4.8	24.5	19.2	7.1	26.3	38.9	12.0	50.9	51.7	113
Education											
No education	24.1	11.1	35.1	7.8	7.5	15.3	31.8	18.6	50.4	30.3	1,354
Primary	24.3	15.3	39.6	13.6	12.4	26.1	37.9	27.7	65.6	39.7	710
Middle/JSS	19.3	12.5	31.8	18.6	13.8	32.4	37.9	26.3	64.2	50.5	1,205
Secondary+	14.2	9.9	24.1	21.9	17.8	39.8	36.2	27.7	63.9	62.2	280
Wealth quintile											
Lowest	29.6	11.1	40.7	8.7	5.3	14.0	38.3	16.5	54.8	25.6	753
Second	23.7	14.1	37.7	12.2	11.7	24.0	35.9	25.8	61.7	38.9	687
Middle	21.9	12.6	34.5	11.9	13.0	24.9	33.8	25.7	59.4	41.9	692
Fourth	20.3	12.8	33.0	17.0	12.0	29.0	37.3	24.7	62.0	46.8	695
Highest	12.8	11.0	23.9	19.1	15.5	34.6	31.9	26.5	58.4	59.1	721
Total	21.7	12.3	34.0	13.7	11.4	25.2	35.5	23.7	59.2	42.5	3,549

[1] Unmet need for spacing includes pregnant women whose pregnancy was mistimed, amenorrhoeic women who are not using family planning and whose last birth was mistimed, and fecund women who are neither pregnant nor amenorrhoeic and who are not using any method of family planning and say they want to wait 2 or more years for their next birth. Also included in unmet need for spacing are fecund women who are not using any method of family planning and say they are unsure whether they want another child or who want another child but are unsure when to have the birth unless they say it would not be a problem if they discovered they were pregnant in the next few weeks. Unmet need for limiting refers to pregnant women whose pregnancy was unwanted, amenorrhoeic women whose last child was unwanted, and fecund women who are neither pregnant nor amenorrhoeic and who are not using any method of family planning and who want no more children. Excluded from the unmet need category are pregnant and amenorrhoeic women who became pregnant while using a method (these women are in need of a better method of contraception).

[2] Using for spacing is defined as women who are using some method of family planning and say they want to have another child or are undecided whether to have another. Using for limiting is defined as women who are using and who want no more children. Note that the specific methods used are not taken into account here.

Unmet need generally declines with age, with the decline sharper among younger (15-29) than older (35-49) women. As can be seen from the table, younger women have a higher unmet need for spacing, while older women have a greater unmet need for limiting. Rural women have a higher unmet need for family planning than their urban counterparts (38 percent compared with 28 percent). It is also interesting to note that rural women have higher unmet need for both spacing and limiting than their urban counterparts. Unmet need is highest in the Central Region (50 percent) and lowest in the Upper West (25 percent). Not surprisingly, the percentage of demand satisfied is highest in Greater Accra (52 percent) and lowest in the Upper East and Central regions (23 percent each). With the exception of Greater Accra, the unmet need for spacing is higher than the unmet need for limiting in all regions.

Women with secondary or higher education have a lower unmet need for family planning (24 percent) than women with primary education and those with no education whose unmet need for family planning is 40 and 35 percent, respectively. Total demand for family planning is highest for women with primary education rather than women with no education, 66 percent compared with 50 percent. The percentage of demand satisfied ranges from 30 percent among women with no education to 62 percent for women with secondary or higher level education.

The unmet need for family planning is highest among women in the lowest wealth quintile and lowest among women in the highest wealth quintile (41 and 24 percent, respectively). For all the five wealth quintiles, the unmet need for spacing is higher than the unmet need for limiting. Also, the percentage of demand satisfied ranges from 26 percent for women in the lowest wealth quintile to 59 percent for women in the highest wealth quintile.

7.3 IDEAL FAMILY SIZE

Information on what men and women believe to be their ideal family size was elicited through two questions. Respondents who had no living children were asked, "If you could choose exactly the number of children to have in your whole life, how many would that be?" Respondents who had children were asked, "If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be?" These questions are based on hypothetical situations; therefore, the responses to them are expected to in part reflect societal norms prevalent in the past as well as at present. Nevertheless, even though these questions are based on hypothetical situations, they give an idea of the total number of children women who have not started childbearing will have in the future, while among older and high parity women, these data provide a measure of the level of unwanted fertility.

Table 7.4 shows that 98 percent of women and men gave a numeric response to the questions on ideal number.

Table 7.4 Ideal number of children

Percent distribution of all women and all men by ideal number of children, and mean ideal number of children for all women and men and for currently married women and men, according to number of living children, Ghana 2003

Ideal number of children	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
WOMEN								
0	0.8	0.2	0.1	0.3	0.5	0.2	0.9	0.5
1	0.4	0.9	0.8	0.4	0.7	0.1	0.0	0.5
2	14.8	10.6	6.2	3.8	4.3	3.7	3.5	8.6
3	32.3	30.0	19.3	15.8	7.0	6.8	6.0	20.9
4	32.4	36.8	45.7	40.3	37.7	25.5	28.1	35.4
5	9.2	8.0	11.3	13.7	11.6	17.9	8.1	10.6
6+	8.1	12.1	16.1	24.4	35.7	41.0	50.0	21.5
Non-numeric responses	1.9	1.4	0.5	1.3	2.4	4.7	3.3	2.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	1,774	848	766	710	562	412	618	5,691
Mean ideal number of children for:[2]								
All women	3.7	4.0	4.3	4.7	5.1	5.5	5.8	4.4
Number	1,740	836	763	701	548	393	597	5,579
Currently married women	4.1	4.1	4.3	4.7	5.1	5.6	5.7	4.8
Number	227	609	648	614	483	351	539	3,471
MEN								
0	0.7	0.2	0.4	0.1	0.4	0.3	0.2	0.4
1	0.7	0.2	0.6	0.4	0.4	0.5	0.3	0.5
2	12.5	9.0	6.0	5.0	6.9	4.6	3.7	8.9
3	28.2	29.1	19.8	17.1	8.9	12.1	7.6	21.6
4	29.0	35.1	39.2	28.5	29.4	15.4	22.2	28.9
5	13.5	11.6	13.9	21.8	15.3	21.7	12.2	14.6
6+	13.9	13.4	19.2	25.4	35.5	42.4	48.3	22.9
Non-numeric responses	1.6	1.4	0.9	1.7	3.1	3.0	5.5	2.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of men	2,300	510	471	458	358	300	617	5,015
Mean ideal number of children for:[2]								
All men	4.1	4.4	4.7	5.0	5.2	6.2	7.1	4.8
Number	2,264	503	467	450	347	291	583	4,906
Currently married men	4.4	4.5	4.7	5.1	5.1	6.2	7.2	5.4
Number	211	383	420	418	319	278	570	2,599

[1] Includes current pregnancy
[2] Means are calculated excluding the women and men giving non-numeric responses

The mean ideal number of children for all women is 4.4, while for men it is 4.8, indicating that men's ideal number of children is slightly larger than women's. Both currently married women and men prefer a larger ideal family size than all women and men. There may be two principal reasons for this pattern. To the extent that women and men are able to implement their fertility desires, those who want smaller families will tend to achieve smaller families. Some women and men who have children may have difficulty admitting that they would like to have fewer children than they actually have and are likely to report their actual number of children as their preferred number. For the most part, the pattern in expressed desire by ideal number is similar among women and men. However, the percentages for

women and men diverge beyond an ideal number of three children. Thirty-five percent of all women express a desire for four children compared with 29 percent of all men. On the other hand 11 percent of women prefer an ideal number of 5 children compared with 15 percent of men.

The preference for a larger number of children is higher for men than women irrespective of the number of living children. Ideal number increases with the number of living children and ranges from 3.7 for all women without any children to 5.8 for those with at least 6 children. As with women, the mean ideal number of children among all men increases with the number of children and ranges from 4.1 among those without a child to 7.1 among those who already have 6 or more children.

Data from GDHS surveys conducted over the past 15 years shows that, although there has been a decline in ideal family size among currently married women over time, from a mean of 5.5 children in 1988 (GSS and MI, 1989) to 4.8 children in 2003, there has been little change in the past 10 years. In fact, there appears to be a slight increase in the ideal family size desired by both women and men over the past five years (GSS and MI, 1999).

Table 7.5 shows the mean ideal number of children for all women and men by age according to background characteristics. The ideal family size increases with age, from 3.8 children among women age 15-19 to 5.4 among women age 45-49. For men in these age groups, the mean ideal number ranges from 4.2 to 6.1. This pattern suggests a trend towards lower ideal family size. The ideal family size for both women and men is higher in rural than urban areas. The ideal size is highest in the Northern Region (6.9 for women and 8.2 for men) and relatively high for the other two northern regions. This confirms the findings that women and men residing in the three northern regions have a preference for large families. Women and men residing in Greater Accra have the lowest ideal family size. There are also variations in the ideal family size by level of education. Across all age groups, the ideal family size decreases with increasing

Table 7.5 Mean ideal number of children by background characteristics

Mean ideal number of children for all women, by age and mean ideal number of children for all men, according to background characteristics, Ghana 2003

Background characteristic	Age							All women	All men
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	15-49	15-59
Residence									
Urban	3.5	3.4	3.8	4.0	4.2	4.5	5.0	3.9	4.1
Rural	4.1	4.2	4.9	5.3	5.5	5.6	5.7	4.9	5.5
Region									
Western	3.8	3.7	4.1	4.6	4.7	(4.8)	(4.9)	4.2	4.3
Central	3.4	3.6	4.2	(3.9)	(4.1)	(4.2)	(4.5)	3.9	4.1
Greater Accra	3.2	3.1	3.2	3.8	3.6	4.5	3.8	3.5	3.4
Volta	3.0	3.3	3.6	4.0	4.2	4.5	(4.3)	3.8	4.4
Eastern	3.7	3.4	3.8	4.1	4.4	3.9	(5.1)	4.0	4.3
Ashanti	3.8	3.7	4.3	4.9	5.2	5.4	5.7	4.5	4.6
Brong Ahafo	3.7	3.8	4.1	4.4	4.9	5.4	(6.1)	4.4	4.5
Northern	6.1	5.9	6.5	7.2	7.4	(8.3)	(8.1)	6.9	8.2
Upper East	4.9	5.6	5.8	5.8	(6.0)	(6.3)	(6.9)	5.8	7.0
Upper West	4.2	5.0	6.0	5.4	6.1	(6.9)	6.2	5.6	6.2
Education									
No education	5.0	5.0	5.5	5.8	6.0	6.2	6.5	5.7	7.8
Primary	3.9	3.9	4.3	4.6	4.7	4.7	4.9	4.3	5.0
Middle/JSS	3.6	3.5	3.8	4.1	4.0	4.5	4.8	3.9	4.2
Secondary +	3.2	3.2	3.1	3.7	(3.6)	(3.8)	(4.0)	3.3	3.8
Wealth quintile									
Lowest	4.9	5.0	5.8	6.2	6.2	6.3	6.7	5.8	6.9
Second	3.9	4.2	4.8	5.1	5.5	5.3	5.5	4.8	5.3
Middle	3.9	3.7	4.5	4.5	5.0	5.2	5.2	4.5	4.7
Fourth	3.6	3.7	3.8	4.2	4.4	4.7	5.4	4.0	4.3
Highest	3.3	3.2	3.5	3.9	3.8	4.3	4.4	3.6	3.7
All women	3.8	3.8	4.3	4.7	4.9	5.1	5.4	4.4	na
All men	4.2	4.1	4.4	4.9	5.1	5.5	6.1	na	4.8

Note: Figures in parentheses are based on 25-49 unweighted cases.
na = Not applicable

levels of education. A similar pattern is observed by wealth quintiles.

7.4 FERTILITY PLANNING

Wanted fertility can be measured in two ways. Responses to a question about children born in the five years preceding the survey (and any current pregnancy) are used to determine whether the pregnancy was planned (wanted then), wanted but at a later time (mistimed), or unwanted (not wanted at all). The answers to these questions provide some insight into the degree to which couples are able to control fertility. Wanted fertility is calculated in the same manner as the actual total fertility rate, but unwanted births are excluded from the numerator.

Table 7.6 shows the percent distribution of births (including current pregnancy) in the five years preceding the survey by fertility planning status, according to birth order and mother's age at birth. The data show that two-fifths of births in the five years preceding the survey are unplanned—24 percent were mistimed (wanted later) and 16 percent were unwanted. The proportion of planned births increases between the first and second birth and then declines for subsequent births.

Table 7.6 Fertility planning status

Percent distribution of births in the five years preceding the survey (including current pregnancy), by fertility planning status, according to birth order and mother's age at birth, Ghana 2003

Birth order and mother's age at birth	Planning status of birth			Missing	Total	Number of births
	Wanted then	Wanted later	Wanted no more			
Birth order						
1	57.9	25.7	16.2	0.2	100.0	910
2	66.3	25.8	7.3	0.6	100.0	785
3	63.1	26.2	9.4	1.3	100.0	640
4+	55.8	21.7	21.7	0.8	100.0	1,723
Mother's age at birth						
<20	42.0	37.0	20.7	0.3	100.0	458
20-24	58.9	29.8	10.7	0.5	100.0	989
25-29	66.9	21.6	11.1	0.5	100.0	1,025
30-34	64.4	21.7	13.2	0.7	100.0	772
35-39	58.1	16.8	23.8	1.3	100.0	546
40-44	50.8	12.7	35.0	1.5	100.0	222
45-49	53.0	12.8	32.1	2.1	100.0	47
Total	59.4	24.1	15.7	0.7	100.0	4,058

The proportion of unplanned births has slightly decreased from 42 percent in 1993 to 36 percent in 1998 but increased to 40 percent in 2003. What is more troubling, however, is the fact that the proportion of births that are unwanted has increased rather dramatically from the 1993 and 1998 level of 9 percent to 16 percent in 2003.

Table 7.7 provides information on total wanted fertility rates and the actual total fertility rates for the three years preceding the survey, by select background characteristics. Unwanted births are defined as births that exceed the number considered ideal. Women who did not report a numeric ideal family size were assumed to want all their births. The total wanted fertility rate represents the level of fertility that would have prevailed in the three years preceding the survey if all unwanted births were prevented. A

comparison of the total wanted fertility and actual total fertility rate suggests the potential demographic impact of the elimination of unwanted births.

The total wanted fertility rate, which stood at 4.2 in 1993, fell to 3.7 in 1998 and remained at 3.7 in the three years preceding the 2003 survey. During the same period, the total fertility rate fell from 5.2 children per woman in 1993 to 4.4 in 1998 and remained unchanged at 4.4 in 2003 suggesting a narrowing between desired and actual fertility over the past 10 years.

The wanted fertility rate in rural areas is two children more than in urban areas. The gap between wanted and realised fertility in rural areas is larger than in urban areas, suggesting that urban women may be better able to translate their ideal family size to realised family size.

At the regional level, women in Greater Accra desire the least number of children (2.4) in contrast to their counterparts in the Northern Region who want 6.5 children. However, the gap between desired and actual fertility is the same between these two regions. The largest gap between wanted and realised fertility is observed in the Central and Eastern regions (about 1.5 children), suggesting that women in these regions are less able to translate their desired family size in practice.

Women's education has an inverse relationship with levels of both wanted and actual fertility, although the difference between the two is higher among those with primary education (1.3) than among those with no education (0.8). There is also an inverse relationship between wealth and wanted fertility, with the gap between wanted and actual fertility widest among women who belong to the second wealth quintile.

Table 7.7 Wanted fertility rates

Total wanted fertility rates and total fertility rates for the three years preceding the survey, by background characteristics, Ghana 2003

Background characteristic	Total wanted fertility rate	Total fertility rate
Residence		
Urban	2.6	3.1
Rural	4.6	5.6
Region		
Western	3.5	4.5
Central	3.5	5.0
Greater Accra	2.4	2.9
Volta	3.3	4.4
Eastern	2.9	4.3
Ashanti	3.5	4.1
Brong Ahafo	3.8	4.8
Northern	6.5	7.0
Upper East	4.5	4.7
Upper West	5.0	5.5
Education		
No education	5.2	6.0
Primary	4.0	5.3
Middle/JSS	2.7	3.5
Secondary+	2.3	2.5
Wealth quintile		
Lowest	5.7	6.4
Second	4.4	5.9
Middle	4.1	4.9
Fourth	2.6	3.3
Highest	2.4	2.8
Total	3.7	4.4

Note: Rates are calculated based on births to women age 15-49 in the period 1-36 months preceding the survey. The total fertility rates are the same as those presented in Table 4.2.

7.5 IDEAL FAMILY SIZE AND UNMET NEED BY WOMEN'S STATUS

An increase in women's status and empowerment is recognised as important in the effort to reduce fertility through at least two main pathways: its association with desired family size and its positive association with women's ability to meet their own family-size goals through the effective use of contraception. Table 7.8 shows how women's ideal family size and their unmet need for contraception vary by the three indicators of women's empowerment—number of decisions in which the respondent has final say, number of reasons for which a woman can refuse to have sexual relations with her husband, and number of reasons for which the respondent feels a husband is justified in beating his wife.

Table 7.8 shows that the mean ideal number of children is lowest among women who believe that wife-beating is not justified for any reason at all and progressively increases with the number of reasons women believe that it can be justified. Unmet need is also lowest among women who believe that wife-

beating is not justified for any reason at all. There is no clear pattern between ideal family size or unmet need and the other two measures of women's status.

Table 7.8 Ideal number of children and unmet need by women's status

Mean ideal number of children and unmet need for spacing and limiting among all women, by women's status indicators, Ghana 2003

Women's status indicator	Mean ideal number of children[1]	Number of women	Unmet need for family planning[2] For spacing	For limiting	Total	Number of women
Number of decisions in which oman has final say[3]						
0	4.9	611	24.9	8.1	33.0	630
1-2	5.0	734	27.6	11.1	38.6	760
3-4	5.1	723	19.2	9.2	28.4	742
5	4.5	1,403	18.5	16.4	35.0	1,417
Number of reasons to refuse sex with husband						
0	4.9	262	25.9	14.9	40.9	267
1-2	5.3	431	20.7	10.1	30.8	461
3-4	4.7	2,778	21.5	12.4	33.9	2,821
Number of reasons wife-beating is justified						
0	4.5	1,709	17.8	13.7	31.5	1,738
1-2	4.8	733	25.3	13.5	38.9	755
3-4	5.2	698	24.5	9.3	33.8	717
5	5.8	331	27.9	8.7	36.6	339
Total	4.8	3,471	21.7	12.3	34.0	3,549

[1] Totals are calculated excluding the women giving non-numeric responses
[2] See Table 7.3 for definition of unmet need for family planning
[3] Either by herself or jointly with others

INFANT AND CHILD MORTALITY 8

Chapter 8 deals with levels, trends, and differentials in neonatal, postneonatal, infant, child, and under-five mortality in Ghana. The data used in measuring these childhood mortality rates were collected from the birth history section of the Women's Questionnaire in the 2003 GDHS. Women of reproductive age (15-49) were asked the number of biological sons and daughters who live with them, the number living elsewhere, and the number who have died. In addition, for each live birth, women were asked for the sex, date of birth, whether the birth was single or multiple, and the survival status. Information about age for living children, and for deceased children, age at death, was also collected.

Measures of childhood mortality are used for a number of purposes. For instance, childhood mortality in general and infant mortality in particular are often used as broad indicators of social development or as more specific indicators of health status. Measures of childhood mortality are also useful in population projections. Studies of its characteristics such as age pattern and socio-economic and demographic differentials are used to highlight factors that promote child survival as well as those that are detrimental to it. Consequently, mortality analyses are helpful in identifying promising directions for health programmes and advancing child survival efforts.

8.1 DEFINITION, DATA QUALITY AND METHODOLOGY

Childhood mortality estimates measure the risk of dying from birth up to age five. The rates of childhood mortality presented in this chapter are defined as follows:

Neonatal mortality (NN): the probability of dying between birth and the first month of life

Postneonatal mortality (PNN): the difference between infant and neonatal mortality

Infant mortality ($_1q_0$): the probability of dying between birth and exact age one

Child mortality ($_4q_1$): the probability of dying between exact ages one and five

Under-five mortality ($_5q_0$): the probability of dying between birth and exact age five.

All rates are expressed per 1,000 live births, except child mortality, which is expressed per 1,000 children surviving to 12 months of age.

The reliability of mortality estimates depends on the sampling variability of the estimates and on nonsampling errors. Sampling errors are presented in Appendix B. Nonsampling errors arise from problems associated with the quality of data collection and include the completeness with which births and deaths are reported and recorded. The most common problems are misreporting of age at death, misreporting of dates of birth, and event underreporting (of both the birth and death of a child). The possible occurrence of these data problems in the 2003 GDHS is discussed with reference to the data quality tables in Appendix C.

A typical problem with survey data is the misreporting of infant deaths, that occur in the late postneonatal period, as deaths at 12 months or one year of age (digit preference in the reporting of age). Such misreporting results in underestimation of the infant mortality rates and overestimation of child mortality rates. Table C.6 in Appendix C displays some digit preferences in reported deaths at 12 months

or one year. This "heaping" took place in spite of the care taken in the GDHS to minimise errors of this nature by insisting that age at death be recorded in days if the death took place within one month after birth, in months if the child died within 24 months of birth, and in years if the child died between ages two and five. Nevertheless, age heaping at 12 months is not markedly different from the level seen in the data collected in the previous GDHS surveys.

Misreporting of the date of birth of children is common in many surveys that include both demographic and health information for children born since a specified date. The effect of such an error is to distort time trends in fertility and mortality. In the 2003 GDHS, the cutoff date for asking health questions was 1998, that is, for births since January 1998. An examination of Table C.4 suggests that there is evidence of misreporting of dates of birth for both living and deceased children. The calendar year ratios for living and deceased children are 82 and 48 percent, respectively, for 1998, compared with 116 and 153 percent, respectively, in 1997. The deficit in calendar year 1998 is believed to be the result of "aging" of children by interviewers who want to avoid collecting health data information for children. The transference of children and especially deceased children out of the five-year period preceding the survey is likely to understate the true level of childhood mortality for that period. The data also show heaping in 1999 and 2000, although this is not as severe as in 1997.

Event underreporting is usually more severe for deaths that occur early in infancy. Omission of deaths may also be more common among women who have had several children, or in cases where the death took place a long time ago. In order to assess the impact of omission on measures of child mortality, two indicators are used: the percentage of deaths that occurred under seven days to the number that occurred under one month and the percentage of neonatal to infant deaths. It is hypothesised that omission will be more prevalent among those who died immediately after birth than those who lived longer and that it will be more serious for events that took place in the distant past rather than those in the more recent past. Table C.5 shows that the percentage of early neonatal deaths ranges from 77 percent for the 15-19 years prior to the survey to 85 percent for the 5-9 years before the survey and 83 percent for the period 0-4 years before the survey. These results are similar to those found in the 1988 (GSS and MI, 1998), 1993 (GSS and MI, 1994), and 1998 (GSS and MI, 1999) GDHS surveys. Similarly, Table C.6 shows that neonatal deaths comprise 57 to 69 percent of all infant deaths. This is considered plausible.[1] Over time, the figures vary within a narrow range for the 20 years prior to the survey, suggesting that there has not been selective omission of early infant deaths.

In addition to recall errors for the more distant retrospective periods, there are structural reasons for limiting mortality estimation to recent periods, preferably to the 0-4, 5-9, and 10-14 years before the survey. In fact, except for the first period, the others are slightly biased estimates because they are based on child mortality experience of women age 15-44 and 15-39 respectively instead of women age 15-49 as in the 0-4 years prior to the survey period. Therefore, estimating mortality for the periods further than 10-15 years before the survey is not advisable.

8.2 LEVELS AND TRENDS IN INFANT AND CHILD MORTALITY

Table 8.1 shows mortality rates for the 15 years preceding the survey in three five-year periods. Under-five mortality in Ghana is 111 deaths per 1,000 live births in the most recent five-year period. This means one in every nine Ghanaian children dies before reaching age five. Nearly three in five of these deaths occur in the first year of life—infant mortality is 64 deaths per 1,000 live births and child mortality

[1] There are no model mortality patterns for the neonatal period. However, one review of data from several developing countries concluded that at levels of neonatal mortality of 20 per 1,000 or higher, approximately 70 percent of neonatal deaths occur within the first six days of life (Boerma, 1988).

is 50 deaths per 1,000 children age one year. Neonatal mortality is 43 deaths per 1,000 live births in the most recent five-year period, while postneonatal mortality is 21 deaths per 1,000 live births. Neonatal deaths account for two-thirds of the deaths in infancy.

Table 8.1 Early childhood mortality rates

Neonatal, postneonatal, infant, child, and under-five mortality rates for five-year periods preceding the survey, Ghana 2003

Years preceding the survey	Neonatal mortality (NN)	Postneonatal mortality[1] (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
0-4	43	21	64	50	111
5-9	39	26	65	46	108
10-14	38	26	64	43	104

[1] Computed as the difference between the infant and neonatal mortality rates

Mortality trends can be examined in two ways: by comparing mortality rates for three five-year periods preceding a single survey, and by comparing mortality estimates obtained from various surveys. However, mortality data have to be interpreted with caution since sampling errors associated with mortality estimates are large.

Data from the 2003 GDHS show that infant mortality has remained constant over the 15-year period preceding the survey at about 64-65 deaths per 1,000 live births. However, there is substantial variation when the infant mortality rates are split into their component neonatal and postneonatal mortality rates. Postneonatal mortality declined slightly from 26 per 1,000 in the 5-14 years before the survey to 21 per 1,000 live births in the 0-4 years before the survey. Over the same period, neonatal mortality increased from 38 per 1,000 live births to 43 per 1,000 live births. Both child mortality and under-five mortality increased from 43 per 1,000 children to 50 per 1,000 children, and from 104 per 1,000 births to 111 per 1,000 births, over the same period, respectively. All these changes are very small and are not statistically significant. In other words, according to these figures, childhood mortality has remained more or less constant over the 1988 to 2003 period. With declining infant mortality, the proportion of neonatal to infant mortality is expected to increase. However, in the case of the 2003 GDHS data, contrary to expectation, infant mortality remained constant over the 15-year period, while the proportion of neonatal to infant mortality increased. A reduction in postneonatal mortality may reflect an improvement in the socio-economic situation of the population, leading to increased vaccination coverage and improved maternal and child health care. The deterioration in neonatal mortality is, however, more difficult to explain.

When data from the four GDHS surveys (conducted in 1988, 1993, 1998, and 2003) are compared (Table 8.2 and Figure 8.1), for the most recent five-year period, the marked decline in both infant and under-five mortality observed in the three earlier surveys (1984-1998) appears to have halted during the period 1999-2003. This is caused principally by an increase in the neonatal mortality rate from about 30 per 1,000 for the 0-4 years preceding the 1998 GDHS to 43 per 1,000 during the same period prior to the 2003 GDHS (GSS and MI, 1999). It is reassuring that the under-five mortality rate for the period 5-9 years before the 2003 GDHS (108) is identical to the rate 0-4 years before the 1998 GDHS.

The apparent slowing down in mortality decline signifies the difficulties the socio-economic situation in general and the health system in particular are facing in achieving the Ghana Poverty Reduction Strategy, which targets an infant mortality rate of 50 per 1,000 and an under-five mortality rate of 95 by 2005 (World Bank, 2003).

Figure 8.1 **Trends in Infant and Under-five Mortality Rates Ghana 1988-2003**

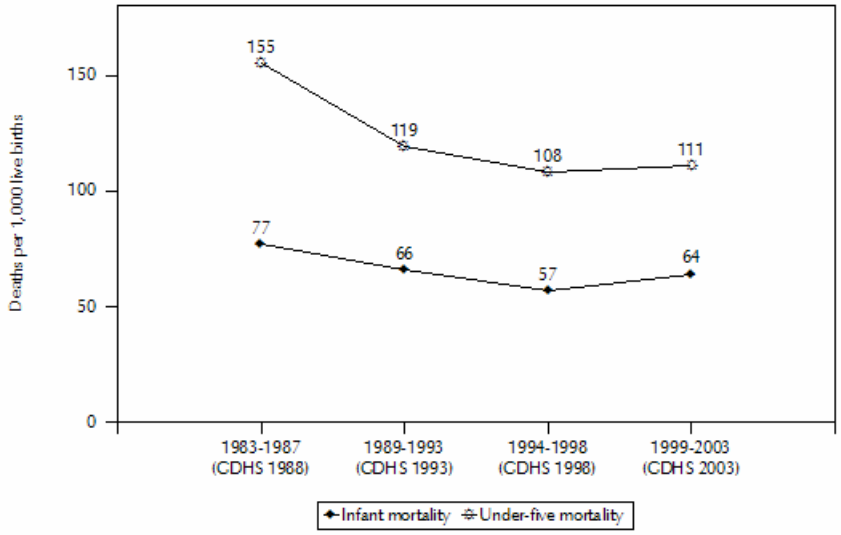


Table 8.2 Trends in early childhood mortality rates

Infant and under-five mortality, Ghana 1983-2003

Survey year	Approximate calendar period	Infant mortality ($_1q_0$)	Under-five mortality ($_5q_0$)
1988	1983-1987	77	155
1993	1989-1993	66	119
1998	1994-1998	57	108
2003	1999-2003	64	111

8.3 SOCIO-ECONOMIC DIFFFERENTIALS IN MORTALITY

Table 8.3 and Figure 8.2 show differentials in childhood mortality by four socio-economic variables: residence, region, mother's education, and wealth quintile. When interpreting mortality data, it is useful to bear in mind that sampling errors are quite large. To ensure a sufficient number of cases for statistical reliability, mortality rates are calculated for a ten-year period.

Socio-economic characteristics are highly correlated with one another and with bio-behavioural characteristics, and their impact is better analysed within a multivariate framework. However, such an analysis is beyond the scope of this report. Therefore, caution must be exercised in interpreting the bivariate results shown in Table 8.3.

Place of residence, whether urban or rural, is defined at the time of interview. Where internal migration is high, births of migrants may have occurred in the place of previous residence. The mortality estimates of the current place of residence are, therefore, likely to be slightly biased. In the absence of data that would allow the classification of exposure and deaths according to the place of residence at the time of the event, the assumption is made that the extent of bias is marginal.

Table 8.3 Early childhood mortality rates by socio-economic characteristics

Neonatal, postneonatal, infant, child, and under-five mortality rates for the ten-year period preceding the survey, by background characteristic, Ghana 2003

Background characteristic	Neonatal mortality (NN)	Postneonatal mortality[1] (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
Residence					
Urban	38	17	55	40	93
Rural	43	27	70	52	118
Region					
Western	37	30	66	46	109
Central	(37)	(13)	(50)	(41)	(90)
Greater Accra	29	16	45	31	75
Volta	44	31	75	41	113
Eastern	42	22	64	33	95
Ashanti	57	22	80	40	116
Brong Ahafo	36	22	58	35	91
Northern	38	32	69	90	154
Upper East	22	11	33	48	79
Upper West	62	43	105	115	208
Mother's education					
No education	37	29	66	63	125
Primary	49	27	76	48	120
Middle/JSS	43	18	60	34	92
Secondary+	(27)	(2)	(29)	(5)	(34)
Wealth quintile					
Lowest	37	25	61	70	128
Second	40	23	64	44	105
Middle	49	25	73	40	111
Fourth	38	28	66	45	108
Highest	42	15	58	33	88

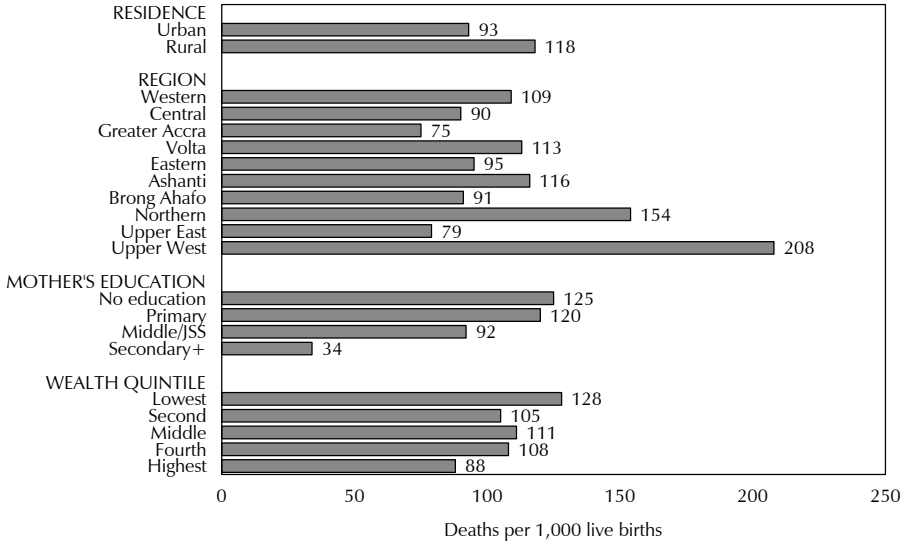
Note: Rates based on 250 to 499 exposed persons are in parentheses.
[1] Computed as the difference between the infant and neonatal mortality rates

Mortality levels in rural areas are considerably and consistently higher than in urban areas. For instance, under-five mortality in rural areas is 118 per 1,000 live births compared with 93 for urban areas. The urban-rural gap is most notable for postneonatal mortality, which is considerably higher in rural areas (27 per 1,000 births) than in urban areas (17 per 1,000 births).

Marked regional differentials in under-five mortality are also observed in Table 8.3. For example, under-five mortality ranges from a low of 75 per 1,000 live births in Greater Accra to a high of 208 per 1,000 live births in the Upper West Region.

As expected, mother's education is inversely related to a child's risk of dying. Under-five mortality among mothers with no education (125 per 1,000 live births) is noticeably higher than among women with middle/JSS level of education (92 per 1,000 live births). The direct association observed between education and under-five mortality is, however, not reproduced at the infant mortality level. Children of women with no education appear to have a lower risk of dying than those with primary education.

Figure 8.2
Under-Five Mortality by Background Characteristics



Note: Rates are for the 10-year period preceding the survey.

GDHS 2003

Children in the highest wealth quintile exhibit the lowest mortality rate for all categories of mortality, with the exception of neonatal mortality, which is lowest among the poorest segment of the population.

8.4 DEMOGRAPHIC CHARACTERISTICS AND CHILD MORTALITY

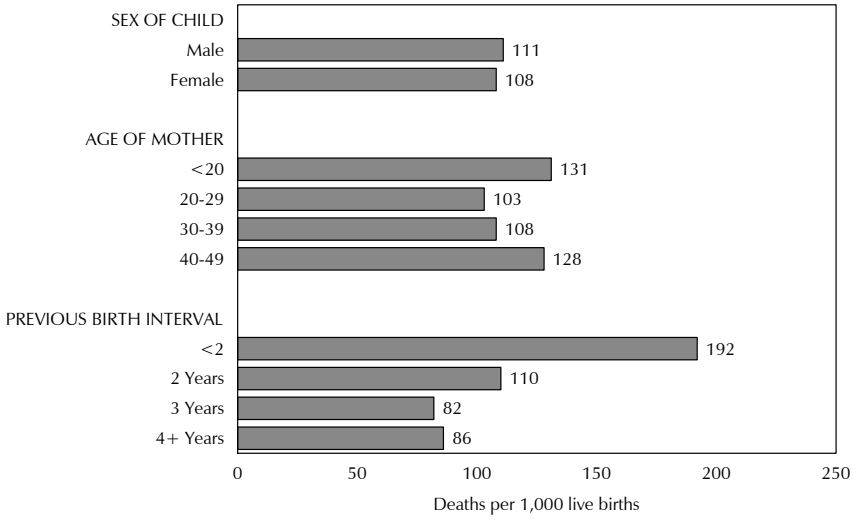
Studies have shown that a number of demographic factors are strongly associated with the survival chances of young children. These factors include sex of the child, age of the mother at birth, birth order, length of the preceding birth interval, and the size of the child at birth. Table 8.4 shows the relationship between childhood mortality and these demographic variables. Again, for all variables except birth size, mortality estimates are calculated for a ten-year period before the survey to reduce sampling variability. However, mortality rates by birth size are for the five years preceding the survey since information on birth size was collected only for children born in the last five years.

Childhood mortality rates are generally higher for males than females (Figure 8.3). With the exception of child mortality, male mortality exceeds female mortality at all levels (Table 8.4). Data from World Fertility Surveys and DHS surveys indicate that births to young mothers (under age 20 years) and older mothers (35 years and over) experience an elevated risk of mortality. Data from the 2003 GDHS confirm the expected curvilinear relationship between mother's age at birth and mortality.

First births and higher order births generally face an elevated risk of mortality. Data from the 2003 GDHS confirm this pattern for the most part. With the exception of postneonatal mortality, births of order seven and higher experience the highest levels of childhood mortality. Neonatal, infant, and under-five mortality is lowest for second and third order births.

Mortality among children is negatively associated with the length of the previous birth interval and this is especially the case when the birth interval is less than two years. As seen from the data, this is

Figure 8.3
Under-Five Mortality by Socio-Economic Characteristics



Note: Previous birth interval excludes first-order births; rates are for the 10-year period preceding the survey.

GDHS 2003

Table 8.4 Early childhood mortality rates by demographic characteristics

Neonatal, postneonatal, infant, child, and under-five mortality rates for the ten-year period preceding the survey, by demographic characteristics, Ghana 2003

Demographic characteristic	Neonatal mortality (NN)	Postneonatal mortality[1] (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
Child's sex					
Male	46	24	70	44	111
Female	36	23	59	52	108
Mother's age at birth					
<20	54	23	77	58	131
20-29	35	25	61	45	103
30-39	42	22	64	48	108
40-49	(62)	(19)	(81)	(51)	(128)
Birth order					
1	46	20	66	42	105
2-3	34	21	55	43	96
4-6	40	29	69	50	116
7+	56	23	79	72	145
Previous birth interval[2]					
<2	83	48	131	69	192
2 years	28	26	53	60	110
3 years	25	18	43	41	82
4+ years	40	15	55	32	86
Birth size[3]					
Small/very small	61	19	81	na	na
Average or larger	33	21	54	na	na

Note: Rates based on 250 to 499 exposed persons are in parentheses.
na = Not applicable
[1] Computed as the difference between the infant and neonatal mortality rates
[2] Excludes first-order births
[3] Rates for the five-year period before the survey

true at all levels of mortality. For example, neonatal mortality for children born at less than a two-year interval is two to three times higher than for children born after an interval of two years or more.

A child's size at birth has often been found to be an important determinant of its survival chances in infancy. The majority of births in Ghana take place outside a health facility. Babies born in a non-institutional setting are seldom weighed at birth, and the only measure of their size at birth is the mother's assessment of their size. The data show that infant mortality is 50 percent higher among babies assessed as small or very small than babies assessed as average or larger at birth. The difference in infant mortality is predominantly due to neonatal mortality, which is almost twice as high among small or very small babies as among average or larger babies.

8.5 WOMEN'S STATUS AND CHILD MORTALITY

In Ghana, as in most societies, women are the primary child caregivers. As such, their status can have a direct impact on the health status and survival of their children. Empowered women are in a better position to make informed decisions about their own and their children's health. The 2003 GDHS included three proxy measures of women's status: their participation in household decisionmaking, their attitude towards a woman's ability to refuse sex with her husband, and their attitude towards wife-beating.

Table 8.5 shows childhood mortality rates tabulated by the three measures of women's status. Mortality rates are consistently higher for children whose mothers have no say in any household decision-making. For example, under-five mortality is 133 deaths per 1,000 births among women who have no say in any household decisions compared with 104 deaths per 1,000 births among women who have a say in all five household decisions. Infant mortality and its two component rates are higher among women who believe that a wife cannot refuse sex with her husband for any reason, but this relationship is not clear for

Table 8.5 Early childhood mortality rates by women's status

Neonatal, postneonatal, infant, child, and under-five mortality rates for the ten-year period preceding the survey, by women's status indicators, Ghana 2003

Women's status indicator	Neonatal mortality (NN)	Postneonatal mortality[1] (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
Number of decisions in which woman has final say[2]					
0	46	31	77	61	133
1-2	31	24	56	43	96
3-4	44	22	66	56	118
5	42	21	63	43	104
Number of reasons to refuse sex with husband					
0	54	28	82	42	121
1-2	40	20	59	69	124
3-4	40	24	64	45	106
Number of reasons wife-beating is justified					
0	41	20	61	39	98
1-2	46	27	73	42	112
3-4	41	28	69	61	126
5	32	23	55	76	126

[1] Computed as the difference between the infant and neonatal mortality rates
[2] Alone or jointly with others

child and under-five mortality. Postneonatal, child, and under-five mortality rates are also clearly lower among women who believe that wife-beating is not justified for any reason at all, but this relationship is not clear for neonatal and infant mortality.

8.6 PERINATAL MORTALITY

Women in the 2003 GDHS were asked to report on any pregnancy loss that occurred in the five years preceding the survey. For each pregnancy that did not end in a live birth, the duration of pregnancy was recorded. In this report, perinatal deaths include pregnancy losses of at least seven months' gestation (stillbirths) and deaths to live births within the first seven days of life (early neonatal deaths). The perinatal mortality rate is the sum of stillbirths and early neonatal deaths divided by the sum of all stillbirths and live births. Information on stillbirths and deaths to infants within the first week of life are highly susceptible to omission and misreporting. Nevertheless, retrospective surveys in developing countries provide more representative and accurate perinatal death rates than the vital registration system.

The perinatal mortality rate serves as a good indicator of the state of health in general and at delivery in particular. It reflects the level of utilisation of health services and the ability to cope with demands of childbirth and thereby delivery of a healthy baby. Data in Table 8.6 show that out of the 3,679 reported pregnancies of at least seven months' gestation, 40 were stillbirths and 129 were early neonatal deaths, yielding an overall perinatal mortality rate of 46 per 1,000 pregnancies.

Perinatal mortality is highest among mothers age 30-39 (58 per 1,000 pregnancies) and lowest among mothers age 20-29 (37 per 1,000 pregnancies). Perinatal mortality is also relatively higher among teenage mothers (52 per 1,000 pregnancies). The higher perinatal mortality among both young and older women may be a reflection of accessing antenatal services later rather than early in their pregnancy, women's inability to use antenatal services effectively either because they lack the social and financial means to enable them to use the existing facilities, or in the case of very young women, because they are less biologically ready for safe childbearing.

Perinatal mortality is highest when the previous pregnancy interval is less than 15 months (90 per 1,000 pregnancies). Perinatal mortality is also higher among women residing in rural than urban areas (51 and 37 per 1,000 pregnancies, respectively). A wide regional variation in perinatal mortality is also evident with women in the Western, Ashanti, Volta, and Central regions experiencing levels higher than the national average. Surprisingly, women in the Upper East and Northern regions reported the lowest rates (26 and 29 per 1,000 pregnancies, respectively). Contrary to expectations, there is no clear relationship between perinatal mortality and women's education or the wealth index.

8.7 HIGH-RISK FERTILITY BEHAVIOUR

Children's survival chances are associated with certain characteristics of fertility behaviour. These characteristics are of particular importance in this section because they are easily avoidable at a relatively low cost. Infants and children have an elevated risk of dying if their mothers are too young (under 18 years of age) or too old (over 35 years old), if they are born after too short a birth interval (less than 24 months), and if they are of high birth order (has three or more children). Although first births are commonly associated with higher mortality risk, they are not included in the high-risk category because the risks associated with first births are unavoidable.

Table 8.7 shows the percent distribution of children born in the five years preceding the survey and the percent distribution of currently married women, by risk factors. The table also shows the risk ratio of dying for children, by comparing the proportion of dead children in each risk category with the proportion of dead children not in any high-risk category.

Table 8.6 Perinatal mortality

Number of stillbirths and early neonatal deaths, and the perinatal mortality rate for the five-year period preceding the survey, by background characteristics, Ghana 2003

Background characteristic	Number of stillbirths[1]	Number of early neonatal deaths[2]	Perinatal mortality rate[3]	Number of pregnancies of 7+ months duration
Mother's age at birth				
<20	8	13	52	420
20-29	12	54	37	1,826
30-39	18	51	58	1,190
40-49	2	10	49	244
Previous pregnancy interval in months				
First pregnancy	13	23	47	762
<15	1	13	90	162
15-26	8	22	52	573
27-38	5	21	29	896
39+	14	49	49	1,287
Residence				
Urban	11	34	37	1,215
Rural	30	95	51	2,465
Region				
Western	11	14	66	378
Central	6	11	55	310
Greater Accra	5	9	37	395
Volta	1	16	58	300
Eastern	0	11	30	362
Ashanti	9	33	61	694
Brong Ahafo	3	14	43	404
Northern	3	12	29	502
Upper East	0	6	26	215
Upper West	1	4	40	119
Mother's education				
No education	8	45	36	1,474
Primary	9	40	58	853
Middle/JSS	18	39	49	1,157
Secondary+	5	5	51	196
Wealth quintile				
Lowest	8	26	36	949
Second	5	30	44	815
Middle	15	33	64	735
Fourth	5	16	34	622
Highest	7	24	56	558
Total	40	129	46	3,679

[1] Stillbirths are fetal deaths in pregnancies lasting seven or more months
[2] Early neonatal deaths are deaths at age 0-6 days among live-born children
[3] The sum of the number of stillbirths and early neonatal deaths divided by the number of pregnancies of seven or more months' duration

Table 8.7 High-risk fertility behaviour

Percent distribution of children born in the five years preceding the survey by category of elevated risk of mortality and the risk ratio, and percent distribution of currently married women by category of risk if they were to conceive a child at the time of the survey, Ghana 2003

Risk category	Births in the 5 years preceding the survey		Percentage of currently married women[1]
	Percentage of births	Risk ratio	
Not in any high-risk category	28.4	1.00	20.6[a]
Unavoidable risk category			
First order births between ages 18 and 34 years	18.7	1.25	5.8
Single high-risk category			
Mother's age <18	3.8	1.36	0.6
Mother's age >34	1.8	1.95	5.3
Birth interval <24 months	4.4	2.05	9.0
Birth order >3	20.7	1.35	13.4
Subtotal	30.8	1.49	28.3
Multiple high-risk category			
Age <18 & birth interval <24 months[2]	0.1	0.00	0.3
Age >34 & birth interval <24 months	0.2	0.00	0.1
Age >34 & birth order >3	16.0	1.33	30.6
Age >34 & birth interval <24 months & birth order >3	1.8	3.67	6.0
Birth interval <24 months & birth order >3	4.1	2.07	8.3
Subtotal	22.1	1.64	45.3
In any avoidable high-risk category	52.9	1.55	73.6
Total	100.0	na	100.0
Number of births	3,639	na	3,549

Note: Risk ratio is the ratio of the proportion dead among births in a specific high-risk category to the proportion dead among births not in any high-risk category.
na = Not applicable
[1] Women are assigned to risk categories according to the status they would have at the birth of a child if they were to conceive at the time of the survey: current age less than 17 years and 3 months or older than 34 years and 2 months, latest birth less than 15 months ago, or latest birth being of order 3 or higher
[2] Includes the category age <18 and birth order >3
[a] Includes sterilised women

The first column in Table 8.7 shows the percentage of births occurring in the five years before the survey that fall into the various risk categories. Slightly more than half (53 percent) of births in Ghana have elevated mortality risks, which are avoidable, and almost three in ten (28 percent) were not in any high-risk category. Among those who are at risk, 31 percent of births are in a single high-risk category,

while 22 percent of births are in a multiple high-risk category. In general, risk ratios are higher for children in a multiple high-risk category than for those in a single high-risk category.

The most vulnerable births are those to women who are age 35 or older, with a birth interval less than 24 months and birth order three or higher. These children are nearly four times more likely to die than children not in any high-risk category. Fortunately, less than 2 percent of births fall into this category. Twenty-one percent of births occur to mothers who have three or more births, and another 16 percent of births occur to mothers who are 35 years or older and have had three or more children. These children are about one and a half times as likely to die as children without any risk.

The last column of Table 8.7 shows the distribution of currently married women who have the potential for having a high-risk birth by category. This column is purely hypothetical and does not take into consideration the protection provided by family planning, postpartum insusceptibility, and prolonged abstinence. However, it provides an insight into the magnitude of high-risk fertility behaviour. Three in four women are potentially at risk of giving birth to a child with an elevated risk of mortality. Nearly one in three of these women is or would be too old, and have or would have too many children. A substantially higher proportion of women have the potential of having a birth in a multiple high-risk category than in a single high-risk category.

MATERNAL AND CHILD HEALTH 9

This chapter presents findings from the 2003 GDHS in three areas of importance to maternal and child health, including information on antenatal, delivery, and postnatal care, children's vaccinations, and common childhood illnesses and their treatment. Combined with information on childhood mortality, this information can be used to identify subgroups of women and children who face increased risk because of non-use of maternal and child health (MCH) services, and to provide information to assist in the planning of appropriate improvements in services. Data were obtained for all live births that occurred in the five years preceding the survey. Wherever possible, data from the 2003 GDHS are compared with data from the three earlier DHS surveys in Ghana, conducted in 1988, 1993, and 1998. However, analysis of trends in maternity care indicators is complicated by the fact that previous GDHS surveys asked questions on antenatal care and tetanus injections for all births, whereas the 2003 survey confined these questions to only the most recent birth. In addition, the questions on maternity care and children's health referred to varying periods (sometimes five and sometimes three years) preceding the survey. While it is possible to adjust for some of these inconsistencies, it is not possible to correct them all. Caution has to be exercised in interpreting trend data.

9.1 MATERNITY CARE

Early and regular checkups by health professionals are very important in assessing the physical status of women during pregnancy and ensuring appropriate interventions during delivery. The 2003 GDHS obtained information from women on both the coverage of antenatal care and of key elements of the care received for the last birth during the five-year period before the survey.

9.1.1 Antenatal Care

Antenatal Care Coverage

Table 9.1 shows the percent distribution of women who had a live birth in the five years preceding the survey by the source of antenatal care for the most recent birth. In obtaining the information on source, interviewers recorded all persons a woman had seen for antenatal care. However, for cases where more than one person was seen, only the provider with the highest qualifications was considered in the analysis. Table 9.1 indicates that a relatively high percentage of women received antenatal care from a trained health professional, that is, a doctor, nurse, midwife or auxiliary midwife (21 percent from a doctor and 71 percent from a nurse/midwife). One percent of mothers received antenatal care from a traditional birth attendant (TBA) and 6 percent received no antenatal care.

Older women are less likely to receive antenatal care from a trained health professional than younger women. Women are also less likely to obtain care from a trained health professional for births of order six and higher. Ninety-eight percent of urban residents and 89 percent of rural residents got antenatal care from a trained heath professional. Urban residents are also more likely to receive antenatal care from doctors (34 percent) than rural residents (14 percent). Regional variations in antenatal care from a health professional is marked. Care from a doctor, for example, ranges from a high of 45 percent in Greater Accra to a low of 3 percent in the Upper East. In fact, less than 10 percent of women living in the three northern regions received antenatal care from a doctor, and one in six mothers in the Northern Region and one in seven mothers in the Upper East did not receive any antenatal care. Nevertheless, care from a nurse/midwife is encouragingly high in these regions

Table 9.1 Antenatal care

Percent distribution of women who had a live birth in the five years preceding the survey by antenatal care (ANC) provider during pregnancy for the most recent birth, according to background characteristics, Ghana 2003

Background characteristic	Doctor	Nurse/ midwife/ auxiliary midwife	Traditional birth atten-dant/ other	No one	Missing	Total	Number of women
Age at birth							
<20	17.8	76.0	1.6	4.4	0.1	100.0	297
20-34	21.6	71.1	0.9	5.9	0.4	100.0	1,762
35-49	20.4	68.2	1.6	8.4	1.4	100.0	586
Birth order							
1	21.8	73.8	0.8	3.5	0.1	100.0	565
2-3	23.9	69.2	1.1	5.0	0.8	100.0	940
4-5	21.3	69.8	1.0	6.7	1.3	100.0	582
6+	14.5	72.6	1.8	11.0	0.1	100.0	558
Residence							
Urban	33.7	64.2	0.4	1.2	0.6	100.0	946
Rural	13.7	74.9	1.6	9.2	0.6	100.0	1,699
Region							
Western	21.6	73.3	1.5	3.6	0.0	100.0	246
Central	19.8	74.8	0.8	4.6	0.0	100.0	211
Greater Accra	45.1	51.2	0.6	2.8	0.3	100.0	303
Volta	22.5	67.0	0.6	9.6	0.3	100.0	220
Eastern	20.2	71.5	3.2	4.0	1.0	100.0	266
Ashanti	28.3	65.9	1.2	3.5	1.2	100.0	507
Brong Ahafo	12.7	83.0	1.7	1.7	0.9	100.0	297
Northern	8.4	74.3	0.7	16.3	0.2	100.0	346
Upper East	2.6	82.8	0.0	13.5	1.2	100.0	166
Upper West	3.7	87.2	0.0	8.5	0.6	100.0	83
Education							
No education	11.4	74.7	0.7	12.5	0.7	100.0	1,025
Primary	17.4	75.2	1.8	5.0	0.6	100.0	589
Middle/JSS	28.6	68.3	1.4	1.1	0.6	100.0	879
Secondary+	53.5	46.5	0.0	0.0	0.0	100.0	153
Wealth quintile							
Lowest	8.8	74.5	1.4	14.3	0.9	100.0	648
Second	10.8	80.5	1.3	6.9	0.4	100.0	557
Middle	19.0	75.7	0.6	4.4	0.3	100.0	534
Fourth	24.1	71.2	2.2	2.1	0.3	100.0	474
Highest	50.6	47.6	0.0	0.6	1.2	100.0	433
Total	20.9	71.0	1.2	6.3	0.6	100.0	2,645

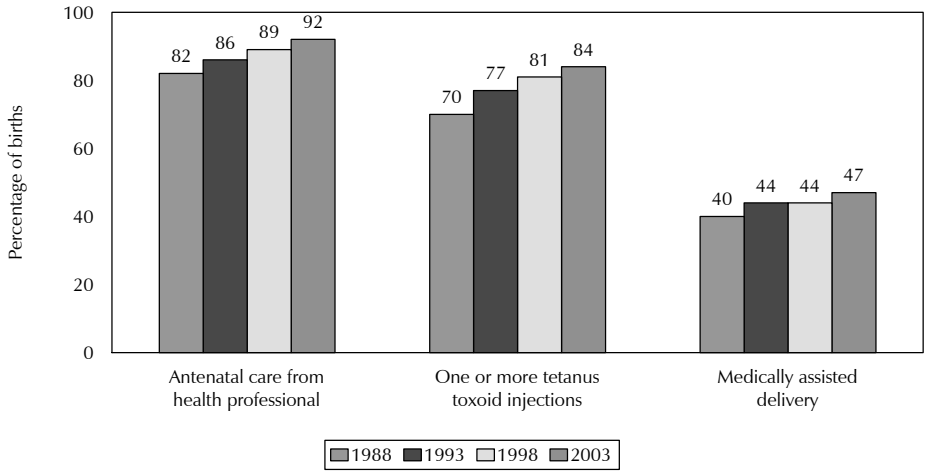
Note: If more than one source of ANC was mentioned, only the provider with the highest qualifications is considered in this tabulation.

Women's education is strongly associated with receipt of antenatal care from a health professional. As a woman's education increases, the likelihood that she will receive antenatal care from a health professional increases from 86 percent among women with no education to 100 percent among women

with at least some secondary. More than half (54 percent) of women with secondary and higher education saw a doctor for antenatal care compared with 11 percent of women with no education.

A comparison of the 2003 GDHS data with data from the three earlier GDHS surveys show that there has been an 11 percent improvement in the utilization of antenatal services in the past 15 years (Figure 9.1) from 82 percent of mothers receiving care for their most recent birth in the five-year period preceding the survey in 1988, to 92 percent in 2003.

Figure 9.1
Trends in Maternity Care Indicators
Ghana 1988-2003



Note: Data for 1988, 1993, and 1998 are with reference to births, whereas data for antenatal care and tetanus toxoid for 2003 are with reference to women who had a live birth. The reference period is five years preceding the survey except for 1993, which refers to the three years preceding the survey.

GDHS 1988-2003

Women who had a live birth in the five years preceding the survey were also asked about the source of antenatal care for their most recent birth. The majority of women (88 percent) seek antenatal care from a public source (data not shown). Government hospitals and clinics are by far the most common source providing antenatal care to 62 percent of women, followed by health centres, 25 percent. Twelve percent of women received antenatal care from a private facility, with most of them receiving care from private hospitals or clinics (9 percent).

Number and Timing of Antenatal Care Visits

Antenatal care can be more effective in preventing adverse pregnancy outcomes when it is sought early in the pregnancy and continued through to delivery. Obstetricians generally recommend that expectant mothers should begin antenatal attendance as early as possible in the first trimester. Monthly antenatal visits are recommended up to the seventh month of pregnancy, after which visits every two weeks are recommended up to the eighth month, when the visits should be weekly until delivery. If the first antenatal visit is made at the third month of pregnancy, this optimum schedule translates to a total of at least 12-13 visits during the duration of the pregnancy. The World Health Organisation (WHO) recommends a minimum of four visits per pregnancy. Early detection of problems in pregnancy leads to more timely referrals in case of complications and this is of particular importance in some remote regions of Ghana, where basic health services are few and present a challenge to the health care delivery system. Women who do not receive antenatal care during pregnancy are at a higher risk of obstetric emergencies and ad-

verse outcomes. In an effort to bridge the gap and provide health care as close to the family as possible, the District Health Management Teams have trained traditional birth attendants to recognise the danger signs during pregnancy and refer women early to health centres. This may explain the high percentage receiving antenatal care through facility-based health professionals. Table 9.2 provides the percentage distribution of women who had a live birth in the five years preceding the survey by the number of antenatal care (ANC) visits for the most recent birth, and by the timing of the first visit, according to residence.

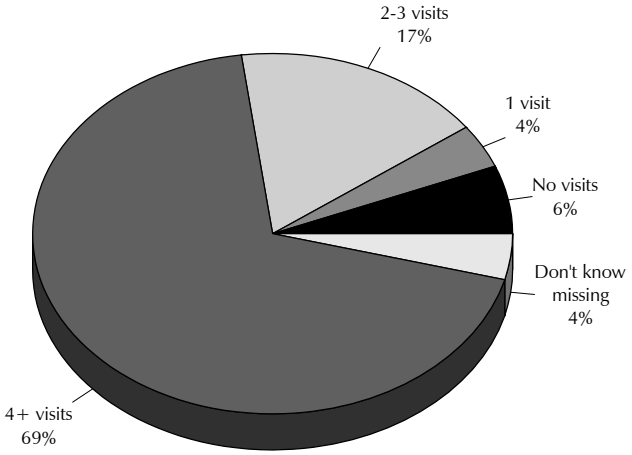
Table 9.2 Number of antenatal care visits and timing of first visit

Percent distribution of women who had a live birth in the five years preceding the survey by number of antenatal care (ANC) visits for the most recent birth, and by the timing of the first visit according to residence, Ghana 2003

Number and timing of ANC visits	Residence		Total
	Urban	Rural	
Number of ANC visits			
None	1.2	9.2	6.3
1	0.9	5.7	4.0
2-3	8.3	21.3	16.7
4+	84.3	61.0	69.4
Don't know/missing	5.3	2.8	3.7
Total	100.0	100.0	100.0
Number of months pregnant at time of first ANC visit			
No antenatal care	1.2	9.2	6.3
<4	56.0	41.0	46.4
4-5	34.4	34.9	34.7
6-7	7.7	12.4	10.7
8+	0.2	1.7	1.2
Don't know/missing	0.5	0.8	0.7
Total	100.0	100.0	100.0
Median months pregnant at first visit (for those with ANC)	3.8	4.2	4.0
Number of women	946	1,699	2,645

Most women (69 percent) have made at least four ANC visits for their most recent birth in the five years preceding the survey (Figure 9.2). Eighty-four percent of urban Ghanaians and 61 percent of rural Ghanaians report visiting antenatal clinics at least four times during their pregnancy. The median number of months pregnant at first visit among women who received antenatal care is 3.8 among urban residents and 4.2 among rural residents. More than half the women in urban areas and about two-fifths of women in rural areas make their first antenatal visit before their fourth month of pregnancy, while 34 percent of urban women and 35 percent of rural women make their first visit between the fourth and fifth month of pregnancy.

Figure 9.2 **Number of Antenatal Care Visits**



GDHS 2003

Components of Antenatal Care

Complications during pregnancy are an important cause of maternal and child morbidity and mortality. Detecting and monitoring these complications is a crucial component of safe motherhood. In order to gauge the quality of care received during pregnancy, the 2003 GDHS questioned women on whether ANC services included information about signs of pregnancy complications, blood pressure measurement, the testing of urine and blood samples, and the provision of iron supplements and anti-malarial prophylaxis tablets.

Some caution should be exercised in considering the information on the content of antenatal care. The information is dependent on a woman's understanding of the questions, for example, her understanding of what blood pressure measurement involves. It is also dependent on her recall of events during antenatal visits that may have taken place a number of years before the interview. Nonetheless, the results are useful in providing insights into the content of antenatal care for Ghanaian women.

Table 9.3 shows the percentage of women with a live birth in the five years preceding the survey who received antenatal care for the most recent birth, by content of antenatal care, and percentage of women with a live birth in the five years preceding the survey who received iron tablets or anti-malarial drugs for the most recent birth by background characteristics. As discussed earlier, antenatal care from a health professional is high in Ghana, and this may be reflected in the quality of care that expectant mothers receive. Three in five women (61 percent) are informed about the signs of complications during pregnancy. In addition, more than four in five women have their weight, blood pressure, and heights measured and have urine and blood samples taken. Although encouraging, programme managers need to ensure that all women coming for ANC services receive the full benefit of the services. Four in five women (whether or not they received ANC) are given iron tablets and three in five (58 percent) receive antimalarial drugs.

In general, the quality of antenatal care varies little by background characteristics, with the sharpest variation seen by education level and wealth status. Women with secondary education or higher (75 percent) are more likely than women with less education to be informed about signs of complications as are women in the highest wealth quintile (74 percent). Women with no education are also less likely to have a blood or urine sample taken or receive iron tablets than women with at least some education. For example, only 71 percent of women with no education received iron tablets compared with 85 percent of women with middle school education or higher.

Tetanus Toxoid Immunisation

An important component of antenatal care in Ghana is ensuring that pregnant women and children are adequately protected against tetanus. Tetanus toxoid injections are given during pregnancy for prevention of neonatal tetanus, an important cause of death among infants. Five doses given at specified periods provide lifetime protection. However, for full antenatal protection, a pregnant woman should receive two doses of tetanus toxoid. If a woman has been vaccinated during a previous pregnancy, then she may only require one dose during the current pregnancy.

Table 9.4 shows the percent distribution of women who had a live birth in the five years preceding the survey by number of tetanus toxoid injections received during the most recent pregnancy, according to background characteristics. The data show that half of women received at least two doses of tetanus toxoid, a third of women received only one tetanus toxoid injection, and 14 percent received none. There is little variation in tetanus toxoid coverage by age at birth and birth order. Urban women are three times as likely as rural women to have received tetanus toxoid injections.

Table 9.3 Components of antenatal care

Percentage of women with a live birth in the five years preceding the survey who received antenatal care for the most recent birth, by content of antenatal care, and percentage of women with a live birth in the five years preceding the survey who received iron tablets or anti-malarial drugs for the most recent birth, according to background characteristics, Ghana 2003

	Women who received antenatal care									
Background characteristic	Informed of signs of pregnancy complica-tions	Weight measured	Height measured	Blood pressure measured	Urine sample taken	Blood sample taken	Number of women	Received iron tablets	Received anti-malarial drugs	Number of women
Age at birth										
<20	55.3	93.4	85.1	94.7	81.8	84.6	283	79.9	57.1	297
20-34	62.6	94.2	84.8	95.9	86.0	86.8	1,650	79.7	58.5	1,762
35-49	60.3	95.9	88.3	96.3	83.4	88.2	529	76.6	57.6	586
Birth order										
1	60.8	93.8	84.5	96.3	87.1	88.9	544	82.0	61.0	565
2-3	62.1	94.9	85.9	95.6	87.1	86.9	886	80.2	57.7	940
4-5	61.3	94.2	86.0	95.8	83.8	85.5	535	77.7	58.7	582
6+	60.2	94.7	85.6	95.7	80.2	85.8	496	75.6	55.4	558
Residence										
Urban	69.3	97.1	88.4	98.2	95.6	95.5	929	85.1	66.7	946
Rural	56.4	92.9	83.8	94.4	78.5	81.5	1,532	75.7	53.4	1,699
Region										
Western	59.9	89.1	83.6	92.1	88.6	90.9	237	77.1	54.7	246
Central	71.4	91.5	81.2	95.2	86.6	84.4	202	82.6	67.9	211
Greater Accra	61.7	97.2	84.4	97.4	96.3	95.1	293	82.2	65.4	303
Volta	41.0	96.9	83.1	99.0	89.8	89.9	199	84.4	66.3	220
Eastern	60.5	86.7	81.2	90.7	87.2	88.0	253	76.2	46.9	266
Ashanti	74.6	96.9	90.3	97.3	94.4	93.4	483	83.5	64.3	507
Brong Ahafo	68.6	97.0	92.1	97.0	97.1	96.8	289	91.4	72.0	297
Northern	47.3	95.3	81.7	95.5	54.8	66.4	289	65.2	39.7	346
Upper East	59.0	97.1	88.0	97.7	63.9	71.8	141	72.6	58.7	166
Upper West	37.6	95.0	84.5	95.5	53.3	61.9	76	59.0	20.5	83
Education										
No education	54.8	94.2	84.4	95.6	72.3	78.1	890	70.6	47.9	1,025
Primary	59.8	92.1	83.6	94.2	87.7	87.3	556	82.0	59.1	589
Middle/JSS	66.4	95.7	87.4	96.3	93.8	93.5	863	86.0	68.1	879
Secondary+	75.0	97.7	89.3	100.0	98.8	97.9	153	84.6	65.9	153
Wealth quintile										
Lowest	51.5	92.8	82.0	93.4	64.7	71.9	550	68.1	45.1	648
Second	55.0	93.2	82.8	95.3	83.1	84.6	516	79.4	58.7	557
Middle	61.1	93.7	85.7	94.3	88.5	89.5	509	82.3	57.1	534
Fourth	68.5	96.0	89.3	97.9	95.4	94.4	463	83.9	67.5	474
Highest	73.9	97.4	89.3	99.1	97.8	97.2	425	85.7	68.1	433
Total	61.3	94.5	85.6	95.8	85.0	86.8	2,462	79.1	58.1	2,645

Table 9.4 Tetanus toxoid injections

Percent distribution of women who had a live birth in the five years preceding the survey by number of tetanus toxoid injections received during pregnancy for the most recent birth, according to background characteristics, Ghana 2003

Background characteristic	No injections	One injection	Two or more injections	Don't know/ missing	Total	Number of women
Age at birth						
<20	15.4	33.4	48.6	2.6	100.0	297
20-34	14.1	33.4	50.5	2.0	100.0	1,762
35-49	14.4	31.9	50.9	2.9	100.0	586
Birth order						
1	11.6	31.1	54.4	2.9	100.0	565
2-3	14.4	32.1	51.1	2.4	100.0	940
4-5	14.6	34.4	48.5	2.5	100.0	582
6+	16.5	35.3	47.0	1.1	100.0	558
Residence						
Urban	5.6	33.8	56.8	3.7	100.0	946
Rural	19.1	32.6	46.8	1.4	100.0	1,699
Region						
Western	10.6	36.8	51.6	1.0	100.0	246
Central	11.9	28.3	59.3	0.5	100.0	211
Greater Accra	9.5	33.3	51.8	5.4	100.0	303
Volta	16.9	32.3	49.3	1.5	100.0	220
Eastern	16.7	35.2	43.0	5.1	100.0	266
Ashanti	11.2	38.7	49.0	1.0	100.0	507
Brong Ahafo	8.0	33.1	57.1	1.9	100.0	297
Northern	25.9	24.3	47.7	2.1	100.0	346
Upper East	18.7	34.3	45.6	1.5	100.0	166
Upper West	18.7	27.7	50.0	3.6	100.0	83
Education						
No education	21.5	33.5	43.0	2.0	100.0	1,025
Primary	14.7	31.0	51.9	2.4	100.0	589
Middle/JSS	7.5	34.5	55.8	2.3	100.0	879
Secondary+	3.8	29.8	63.0	3.4	100.0	153
Wealth quintile						
Lowest	22.6	33.5	42.0	1.8	100.0	648
Second	18.2	33.0	47.4	1.4	100.0	557
Middle	14.0	32.7	52.7	0.6	100.0	534
Fourth	7.5	35.2	54.6	2.7	100.0	474
Highest	4.5	30.7	59.2	5.6	100.0	433
Total	14.3	33.1	50.4	2.3	100.0	2,645

Coverage among mothers residing in the Northern, Upper West, and Upper East regions is lower than coverage in the other regions. Education is positively related to tetanus toxoid coverage — women with at least secondary education are six times more likely to have received tetanus toxoid injections as women with no education.

GDHS data show that there has been an improvement in tetanus toxoid coverage, for the most recent birth in the five years preceding the survey, from 70 percent in 1988 to 84 percent in 2003 (Figure 9.1).

9.1.2 Delivery Care

Place of Delivery

Traditionally, children in Ghana are delivered at home with the assistance of birth attendants or elderly women of the community. An important component of efforts to reduce the health risks of mothers and children is to increase the proportion of babies delivered under medical supervision. Proper medical attention and hygienic conditions during delivery can reduce the risk of complications and infections that can cause the death or serious illness of the mother and or the baby. Women interviewed in the 2003 GDHS were asked to report the place of birth of all children born in the five years before the survey.

Table 9.5 shows the percent distribution of live births in the five years preceding the survey by place of delivery according to background characteristics. Nationally, 46 percent of births are delivered in health facilities, with 36 percent in public health facilities and 9 percent in private health facilities. More than half of births (53 percent) occur at home. Mother's age at birth does not affect the place of delivery. First births and births of order two and three are more likely than higher order births to be delivered in a health facility. A child born in an urban area is two and a half times more likely to have been delivered at a health facility than a rural-born child. Four in five births in Greater Accra are delivered in a health facility compared with one in six births in the Northern region. As expected, a woman's education and wealth are strong determinants of institutional deliveries. For example, 89 percent of births to women with at least secondary education occurred in a health facility compared with 28 percent of births to women with no education. Eighty-nine percent of women in the highest wealth quintile had an institutional delivery compared with 19 percent of women in the lowest wealth quintile.

Antenatal care attendance has an impact on the proportion of births delivered in a health facility. Only 10 percent of births to women who did not receive antenatal care were delivered at a health facility compared with 59 percent of those to women with four or more antenatal visits.

Assistance at Delivery

The level of assistance a woman receives during the birth of her child also has important health consequences for both mother and child. Births delivered at home are more likely to be delivered without professional assistance, whereas births delivered at a health facility are more likely to be delivered by trained medical personnel. Table 9.6 shows the percent distribution of live births in the five years preceding the survey by the person who provided assistance during delivery according to background characteristics of the woman. The data show that medically trained providers assisted with 47 percent of deliveries, traditional birth attendants (TBA) assisted with 31 percent of deliveries, and relatives or friends attended 19 percent of deliveries.

First births are more likely to be delivered by a medically trained provider than those of second or higher order. Urban births are more likely (80 percent) to receive assistance from a medically trained provider compared with rural births (31 percent). Most births in Greater Accra (81 percent) receive assistance from medical personnel. Also, as seen with place of delivery, births to educated and wealthy women are more likely to be assisted at delivery by a medically trained professional.

Medically assisted deliveries continue to be low in Ghana, with less than 50 percent benefiting from professional delivery assistance over the past 15 years (Figure 9.1).

The 2003 GDHS included a question to determine if births in Ghana are registered with the government or local authority. The majority of births in the five years before the survey were not registered (54 percent), 44 percent were registered with the government or local authority, and the status was not known for 2 percent of births (data not shown).

Table 9.5 Place of delivery

Percent distribution of live births in the five years preceding the survey by place of delivery, according to background characteristics, Ghana 2003

Background characteristic	Health facility: Public sector	Health facility: Private sector	Home	Other	Missing	Total	Number of births
Mother's age at birth							
<20	35.7	10.9	52.8	0.3	0.4	100.0	411
20-34	36.7	9.5	52.9	0.4	0.5	100.0	2,507
35-49	35.1	8.0	55.4	0.3	1.2	100.0	720
Birth order							
1	45.7	12.6	41.2	0.3	0.2	100.0	820
2-3	35.7	11.1	51.8	0.4	0.9	100.0	1,271
4-5	33.2	7.5	58.2	0.1	1.1	100.0	822
6+	30.1	4.8	64.4	0.6	0.1	100.0	726
Residence							
Urban	61.0	17.6	20.4	0.4	0.6	100.0	1,204
Rural	24.0	5.3	69.7	0.3	0.6	100.0	2,435
Region							
Western	24.0	11.4	63.9	0.7	0.0	100.0	367
Central	27.7	10.1	61.6	0.5	0.0	100.0	304
Greater Accra	58.5	21.1	19.6	0.2	0.5	100.0	390
Volta	40.8	4.1	54.6	0.3	0.2	100.0	298
Eastern	36.3	7.9	54.1	0.7	1.0	100.0	362
Ashanti	46.3	13.7	38.8	0.3	0.9	100.0	685
Brong Ahafo	47.0	9.0	42.6	0.2	1.1	100.0	401
Northern	14.7	1.7	83.1	0.1	0.5	100.0	500
Upper East	23.2	2.5	73.3	0.0	1.0	100.0	215
Upper West	32.0	1.6	65.0	0.5	0.8	100.0	118
Mother's education							
No education	22.9	4.9	71.0	0.5	0.7	100.0	1,466
Primary	35.4	7.5	56.4	0.2	0.5	100.0	843
Middle/JSS	50.1	13.3	35.5	0.3	0.8	100.0	1,139
Secondary+	60.2	28.8	11.0	0.0	0.0	100.0	191
Antenatal care visits[1]							
None	8.1	2.3	89.0	0.5	0.0	100.0	167
1-3	16.4	4.3	78.9	0.4	0.0	100.0	546
4+	46.5	12.7	40.5	0.3	0.0	100.0	1,834
Wealth quintile							
Lowest	17.0	2.4	79.6	0.3	0.7	100.0	941
Second	24.1	6.0	69.0	0.6	0.4	100.0	809
Middle	32.8	7.9	58.5	0.2	0.7	100.0	721
Fourth	57.3	15.5	26.4	0.6	0.2	100.0	617
Highest	68.0	21.4	9.2	0.0	1.4	100.0	551
Total	36.3	9.4	53.4	0.4	0.6	100.0	3,639

[1] Includes only the most recent birth in the five years preceding the survey

Table 9.6 Assistance during delivery

Percent distribution of live births in the five years preceding the survey by person providing assistance during delivery, according to background characteristics, Ghana 2003

Background characteristic	Doctor	Nurse/ midwife/ auxiliary midwife	Traditional birth attendant	Relative/ other	No one	Don't know/ missing	Total	Number of births
Mother's age at birth								
<20	6.1	42.3	30.1	20.4	0.8	0.4	100.0	411
20-34	6.5	41.2	30.7	18.7	2.4	0.6	100.0	2,507
35-49	7.1	36.9	32.5	20.1	2.1	1.3	100.0	720
Birth order								
1	8.7	51.2	24.3	15.1	0.4	0.3	100.0	820
2-3	7.3	40.9	30.5	18.4	1.9	0.9	100.0	1,271
4-5	4.8	36.8	33.1	20.7	3.3	1.2	100.0	822
6+	5.0	31.8	36.8	23.2	3.2	0.1	100.0	726
Residence								
Urban	14.6	65.1	12.1	6.2	1.5	0.6	100.0	1,204
Rural	2.6	28.3	40.3	25.5	2.5	0.7	100.0	2,435
Region								
Western	3.5	35.1	47.0	12.6	1.8	0.0	100.0	367
Central	3.5	34.9	55.7	3.5	2.4	0.0	100.0	304
Greater Accra	24.0	57.4	10.6	6.3	1.1	0.5	100.0	390
Volta	7.4	37.6	19.0	33.1	2.6	0.2	100.0	298
Eastern	2.6	43.9	42.0	9.5	0.6	1.3	100.0	362
Ashanti	8.4	51.5	25.8	11.8	1.6	0.9	100.0	685
Brong Ahafo	4.3	54.1	19.2	18.9	2.5	1.1	100.0	401
Northern	2.3	16.0	43.3	33.8	4.1	0.5	100.0	500
Upper East	0.5	27.3	15.9	54.6	0.4	1.2	100.0	215
Upper West	3.4	29.9	25.7	32.9	6.9	1.1	100.0	118
Mother's education								
No education	3.5	26.2	35.6	30.8	3.0	0.8	100.0	1,466
Primary	6.8	37.6	38.5	15.1	1.5	0.5	100.0	843
Middle/JSS	7.9	56.4	23.1	9.9	1.9	0.8	100.0	1,139
Secondary+	21.3	68.1	8.5	2.1	0.0	0.0	100.0	191
Wealth quintile								
Lowest	1.6	19.0	37.8	37.5	3.3	0.8	100.0	941
Second	3.0	28.9	44.3	21.1	2.4	0.4	100.0	809
Middle	3.4	39.9	37.2	16.7	2.0	0.8	100.0	721
Fourth	10.5	62.6	19.2	5.9	1.7	0.2	100.0	617
Highest	20.2	70.2	4.7	2.9	0.6	1.4	100.0	551
Total	6.6	40.5	31.0	19.1	2.2	0.7	100.0	3,639

Note: If the respondent mentioned more than one person attending during delivery, only the most qualified person is considered in this tabulation.

Delivery Characteristics

The 2003 GDHS enquired about some characteristics related to delivery. Table 9.7 shows the percentage of live births in the five years preceding the survey delivered by caesarean section and the percent distribution of the babies by birth weight and by mother's estimate of baby's size at birth, according to background characteristics. Only 4 percent of live births are delivered by caesarean section. This has not changed since 1998 (GSS and MI, 1999). Caesarean sections (C-sections) are highest among births to mothers in the oldest age cohort, first order births, urban births, births in Greater Accra, births to mothers who have at least secondary education, and births to mothers in the highest wealth quintile.

Table 9.7 Delivery characteristics

Percentage of live births in the five years preceding the survey delivered by caesarean section, and percent distribution by birth weight and by mother's estimate of baby's size at birth, according to background characteristics, Ghana 2003

		Birth weight					Size of child at birth					
Background characteristic	Delivery by C-section	Not weighed	Less than 2.5 kg	2.5 kg or more	Don't know/ missing	Total	Very small	Smaller than average	Average or larger	Don't know/ missing	Total	Number of births
Mother's age at birth												
<20	3.2	58.8	2.4	22.6	16.3	100.0	9.3	13.6	76.7	0.4	100.0	411
20-34	3.3	56.7	2.0	27.3	14.0	100.0	6.3	11.5	80.9	1.4	100.0	2,507
35-49	5.2	56.7	1.9	25.0	16.3	100.0	6.2	10.4	81.8	1.5	100.0	720
Birth order												
1	5.2	49.2	3.2	31.5	16.1	100.0	8.4	13.6	77.4	0.6	100.0	820
2-3	4.7	55.9	1.8	28.0	14.3	100.0	5.5	10.6	82.3	1.6	100.0	1,271
4-5	2.0	59.0	1.7	25.2	14.1	100.0	5.9	11.5	80.7	1.9	100.0	822
6+	2.2	65.2	1.6	18.7	14.4	100.0	7.5	10.8	81.0	0.8	100.0	726
Residence												
Urban	7.6	28.8	3.1	48.3	19.8	100.0	6.2	8.3	84.6	1.0	100.0	1,204
Rural	1.8	70.9	1.5	15.4	12.2	100.0	6.9	13.1	78.6	1.4	100.0	2,435
Region												
Western	2.2	70.5	1.2	16.4	12.0	100.0	9.3	9.3	81.2	0.3	100.0	367
Central	1.0	78.2	0.4	11.5	9.8	100.0	3.4	13.8	79.1	3.8	100.0	304
Greater Accra	12.0	20.7	3.2	51.9	24.2	100.0	5.0	6.4	87.1	1.5	100.0	390
Volta	3.7	65.0	2.2	17.1	15.7	100.0	2.4	6.6	89.9	1.0	100.0	298
Eastern	3.9	46.7	2.8	36.4	14.1	100.0	6.6	14.0	78.1	1.4	100.0	362
Ashanti	4.4	42.6	4.1	38.1	15.2	100.0	6.2	14.9	77.7	1.2	100.0	685
Brong Ahafo	2.6	48.0	1.7	32.1	18.1	100.0	9.5	10.5	78.4	1.6	100.0	401
Northern	1.6	78.4	0.4	8.8	12.4	100.0	6.8	11.1	81.7	0.5	100.0	500
Upper East	0.5	80.4	0.0	14.0	5.5	100.0	13.2	13.9	71.9	1.0	100.0	215
Upper West	1.8	71.3	2.2	11.3	15.3	100.0	3.1	16.2	80.1	0.5	100.0	118
Mother's education												
No education	1.7	72.3	1.3	13.4	13.0	100.0	7.2	12.5	79.3	1.0	100.0	1,466
Primary	2.9	57.1	1.5	24.9	16.6	100.0	6.6	12.4	79.7	1.3	100.0	843
Middle/JSS	4.9	43.2	2.6	37.7	16.5	100.0	6.1	10.0	82.3	1.6	100.0	1,139
Secondary+	15.9	20.5	6.4	64.5	8.7	100.0	6.0	9.2	83.8	0.9	100.0	191
Wealth quintile												
Lowest	1.5	79.8	1.3	7.9	11.1	100.0	6.8	13.9	78.3	1.0	100.0	941
Second	1.7	70.5	1.8	17.6	10.1	100.0	5.0	13.3	80.8	0.9	100.0	809
Middle	1.9	61.9	1.0	22.8	14.4	100.0	10.2	11.0	77.4	1.4	100.0	721
Fourth	4.1	36.6	2.4	39.7	21.3	100.0	6.8	10.3	81.6	1.2	100.0	617
Highest	12.2	14.6	4.6	60.1	20.6	100.0	4.0	6.7	87.1	2.2	100.0	551
Total	3.7	57.0	2.0	26.3	14.7	100.0	6.6	11.5	80.6	1.3	100.0	3,639

Babies weighing less than 2.5 kilogrammes at birth are regarded as small or of low birth weight. Information on birth weight is known for only 28 percent of babies born in the five years preceding the survey. In the 2003 GDHS, 2 percent of all births weighed less than 2.5 kilogrammes at birth.

Since many respondents did not deliver in health facilities and would not have had their babies weighed at birth, women were also asked for their own subjective assessment of whether their babies were average or larger than average, smaller than average, or very small at birth. Although information of this type is subject to considerable error for individual births, in general, the proportion of births reported as very small or smaller than average has a high correlation to the prevalence of low birth weight. About one in five babies was assessed by their mothers as being very small or smaller than average. Births to mothers age less than 20 at birth, first order births, rural births, births in the Upper East Region, births to mothers with little or no education, and births to mothers in the lowest and middle wealth quintiles, are more likely to be reported as very small or smaller than average.

9.1.3 Postnatal Care

Another crucial component of safe motherhood is postnatal care. Postnatal check-ups provide an opportunity to assess and treat delivery complications and to counsel new mothers on how to care for themselves and their children. The timing of postnatal care is important. Since most maternal and neonatal deaths occur within two days of delivery, postnatal care should be received immediately following the birth, during this critical period. In the 2003 GDHS, questions on postnatal check-ups were asked only of women who had a non-institutional delivery, as it is assumed that women who delivered within a medical facility would have received care within the crucial first two days following delivery.

Table 9.8 shows the percent distribution of women who had a non-institutional live birth in the five years preceding the survey by timing of postnatal care for the most recent non-institutional birth, according to background characteristics. One in four women received postnatal care within two days of delivery, one in ten women received postnatal care 3-6 days after delivery, and one in eight received postnatal care 7-41 days after delivery. More than half of women who had a noninstitutional birth in the five years preceding the survey did not receive postnatal care.

There is little variation by mother's age at birth and urban-rural residence in postnatal care received; however, mothers of second and third order births, mothers with some education, and mothers in the middle and higher wealth quintiles are more likely than their counterparts to receive postnatal care. Wide regional variation also exists. Mothers residing in Greater Accra, Volta, Upper East, and Upper West regions are less likely than mothers residing in the other regions to have received postnatal care. The surprisingly low percentage in Greater Accra may be due to the small number of mothers with a noninstitutional delivery.

Table 9.8 Postnatal care by background characteristics

Percent distribution of women who had a non-institutional live birth in the five years preceding the survey by timing of postnatal care for the most recent non-institutional birth, according to background characteristics, Ghana 2003

Background characteristic	Timing of first postnatal check-up: Within 2 days of delivery	3-6 days after delivery	7-41 days after delivery	Don't know/ missing	Did not receive post-natal checkup[1]	Total	Number of women
Age at birth							
<20	26.2	12.1	13.0	0.7	47.9	100.0	153
20-34	25.4	8.8	13.5	0.3	52.0	100.0	896
35-49	23.8	9.0	7.9	0.5	58.8	100.0	334
Birth order							
1	23.5	12.5	14.0	0.5	49.5	100.0	226
2-3	28.9	9.8	11.8	0.4	49.0	100.0	466
4-5	22.0	8.3	12.7	0.0	56.9	100.0	329
6+	24.0	7.0	10.8	0.8	57.4	100.0	362
Residence							
Urban	26.3	10.0	23.4	0.9	39.4	100.0	200
Rural	24.9	9.0	10.2	0.4	55.5	100.0	1,184
Region							
Western	43.5	7.2	14.8	0.0	34.5	100.0	156
Central	32.1	27.8	19.4	0.0	20.7	100.0	130
Greater Accra	17.3	6.1	7.0	2.0	67.5	100.0	57
Volta	10.1	7.4	3.3	0.0	79.2	100.0	118
Eastern	28.5	8.3	9.7	0.6	52.9	100.0	140
Ashanti	33.0	7.0	15.5	0.6	43.9	100.0	181
Brong Ahafo	23.9	4.4	18.9	0.0	52.8	100.0	129
Northern	24.1	7.6	9.5	0.6	58.2	100.0	294
Upper East	7.9	9.6	10.3	0.8	71.5	100.0	124
Upper West	9.4	6.0	8.5	0.3	75.8	100.0	54
Education							
No education	19.8	8.1	11.2	0.4	60.5	100.0	729
Primary	28.6	12.6	10.3	0.3	48.1	100.0	332
Middle/JSS	33.1	8.4	14.3	0.3	44.0	100.0	307
Secondary+	*	*	*	*	*	100.0	16
Wealth quintile							
Lowest	21.4	7.3	7.6	0.2	63.4	100.0	530
Second	23.0	10.4	15.8	0.0	50.9	100.0	381
Middle	31.4	10.8	11.1	1.6	45.1	100.0	300
Fourth	29.0	11.2	17.8	0.0	42.0	100.0	128
Highest	(33.5)	(4.2)	(24.7)	(0.0)	(37.5)	100.0	44
Total	25.1	9.2	12.1	0.4	53.2	100.0	1,383

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.
[1] Includes women who received the first postnatal checkup after 41 days

9.2 REPRODUCTIVE HEALTH CARE AND WOMEN'S STATUS

A woman's status has a direct impact on her health and health-seeking behaviour. Table 9.9 shows the percentage of woman with a live birth in the five years preceding the survey who received antenatal care from health professionals, the percentage of women who received postnatal care within the first two days of delivery, and the percentage of births for whom mothers received delivery care from a trained health professional, according to three measures of women's status: number of decisions in which a woman, either alone or jointly with others, has a final say; number of reasons women believe that a woman can refuse sex with her husband; and the number of reasons a woman believes that wife-beating is justified.

In general, women's status is positively related to women's reproductive health. However, information from the data gives a mixed picture. Table 9.9 shows that there is a clear positive relationship between qualified reproductive health care and women's attitude towards wife-beating. Women who believe that wife-beating is not justified for any reason are most likely to have received professional medical assistance for antenatal and delivery care and to have received postnatal care within the first two days of delivery. The percentage of women who receive reproductive health care from medical professionals declines as the number of reasons women believe wife-beating is justified increases. Table 9.9 also shows that women who have the final say in all five household decisionmaking processes are most likely to have received maternity care from a health professional. However, the differences are less obvious for antena-

Table 9.9 Reproductive health care by women's status

Percentage of women with a live birth in the five years preceding the survey who received antenatal and postnatal care from a health professional for the most recent birth, and percentage of births in the five years preceding the survey for which mothers received professional delivery care, by women's status indicators, Ghana 2003

Women's status indicator	Percentage of women who received antenatal care from doctor, nurse/midwife or auxiliary midwife	Percentage of women who received postnatal care within first two days of delivery[1]	Number of women	Percentage of births for which mother received delivery care from doctor, nurse/ midwife or auxiliary midwife	Number of births
Number of decisions in which woman has final say[2]					
0	92.1	61.1	523	47.6	694
1-2	86.9	49.1	578	38.2	809
3-4	91.9	58.0	510	42.8	726
5	94.7	68.6	1,034	54.1	1,410
Number of reasons to refuse sex with husband					
0	93.2	59.7	219	44.3	314
1-2	88.7	52.6	352	40.7	476
3-4	92.3	62.3	2,074	48.4	2,849
Number of reasons wife-beating is justified					
0	94.2	69.4	1,208	56.4	1,636
1-2	91.3	56.6	614	43.9	873
3-4	90.6	54.5	554	39.9	759
5	86.1	45.0	269	28.2	371
Total	91.9	60.8	2,645	47.1	3,639

[1] Includes mothers who delivered in a health facility
[2] Either by herself or jointly with others

tal care than for delivery and postnatal care. In addition, this relationship does not hold true for all the subcategories of decisionmaking. For example, a higher percentage of women who have no say in any of the five major household decisions have received medical reproductive health care than their counterparts who have a say in one to four of the five decisions. This same pattern is also observed for women who believe that a woman is justified in refusing sex with her husband.

9.3 CHILD HEALTH

9.3.1 Vaccination of Children

The 2003 GDHS collected information on immunisation coverage for all children born in the five years before the survey. The Government of Ghana has adopted the World Health Organisation (WHO) and UNICEF guidelines for vaccinating children. According to these guidelines, to be considered fully vaccinated, a child should receive the following vaccinations: one dose each of BCG and measles, three doses of the polio vaccine, and three doses of DPT. In addition, in Ghana a vaccine against yellow fever is also recommended for children. BCG, which protects against tuberculosis, should be given at birth or at first clinical contact. DPT protects against diphtheria, pertussis (whooping cough), and tetanus. A dose of polio vaccine is given at birth (Polio 0) or within 13 days of birth. DPT and polio vaccine guidelines require three vaccinations at approximately 6, 10, and 14 weeks of age. The measles and yellow fever vaccines should be given at nine months of age. Currently, the pentavalent vaccine "DPT/HepB/HiB", introduced in 2002, has replaced the DPT vaccine. This vaccine contains in addition to DPT, the hepatitis B vaccine and a vaccine against *Haemophilus* influenza type B. It is recommended that children receive the complete schedule of vaccinations before 12 months of age.

In the GDHS, information on vaccination coverage was obtained in two ways—from health cards and from mother's verbal reports. All mothers were asked to show the interviewer the health cards on which the child's immunisations are recorded. If the card was available, the interviewer copied the dates on which each vaccination was received. If a vaccination was not recorded on the card, the mother was asked to recall whether that particular vaccination had been given. If the mother was not able to present a card for a child at all, she was asked to recall whether the child had received BCG, polio, DPT, measles, and yellow fever vaccinations. If she recalled that the child had received the polio or DPT vaccines, she was asked about the number of doses that the child received.

The data presented here are for children age 12-23 months, the youngest cohort of children who have reached the age by which they should be fully vaccinated, and are restricted to children who were alive at the time of the survey. Table 9.10 shows the percentage of children age 12-23 months who received specific vaccines at any time before the survey by source of information. Sixty-nine percent of Ghanaian children age 12-23 months are fully immunised, while 5 percent received no vaccinations[1] (Figure 9.3). Fifty-eight percent of children 12-23 months were fully vaccinated by 12 months of age.

[1] Data for polio vaccinations were adjusted for a likely underreporting. It appeared that for some children who did not receive polio at birth, interviewers may have mistakenly written the date polio 1 was given in the space for recording the date of polio 0. To correct for any such errors, the total number of doses of DPT and polio was checked, since the two vaccines are usually given at the same time. For children reported as having received all three doses of DPT and polio 0, polio 1, and polio 2 only, it was assumed that polio 0 was in fact polio 1, polio 1 was in fact polio 2, and polio 2 was in fact polio 3.

Table 9.10 Vaccinations by source of information

Percentage of children age 12-23 months who received specific vaccines at any time before the survey, by source of information (vaccination card or mother's report), and percentage vaccinated by 12 months of age, Ghana 2003

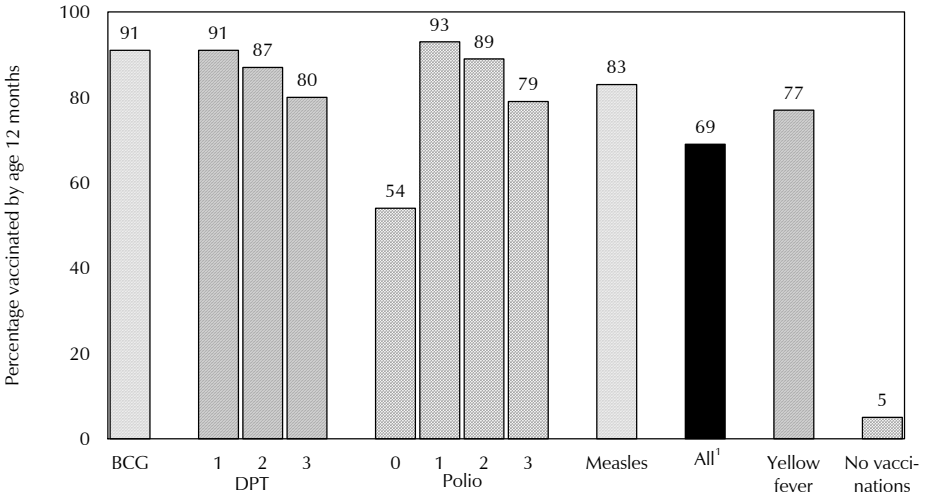
Source of of information	BCG	DPT 1	DPT 2	DPT 3	Polio[1] 0	Polio[1] 1	Polio[1] 2	Polio[1] 3	Measles	All[2]	Yellow fever	No vacci-nations	Number of chil-dren
Vaccinated at any time before survey													
Vaccination card	79.2	80.5	77.7	74.5	49.6	81.5	79.1	74.3	74.0	66.5	68.6	0.0	577
Mother's report	12.0	10.4	8.8	5.0	4.1	11.5	9.6	4.9	9.2	2.9	8.0	4.8	118
Either source	91.1	90.8	86.5	79.5	53.7	93.0	88.7	79.2	83.2	69.4	76.6	4.8	695
Vaccinated by 12 months of age[3]	90.0	90.0	85.3	76.9	53.6	92.2	87.2	75.9	68.8	58.0	58.5	6.1	695

[1] Polio 0 is the polio vaccination given at birth

[2] BCG, measles and three doses each of DPT (DPT/HepB/HiB) and polio vaccine (excluding polio vaccine given at birth)

[3] For children whose information was based on the mother's report, the proportion of vaccinations given during the first year of life was assumed to be the same as for children with a written record of vaccination

Figure 9.3
Percentage of Children Age 12-23 Months with Specific Vaccinations



Note: Based on health cards and mothers' reports

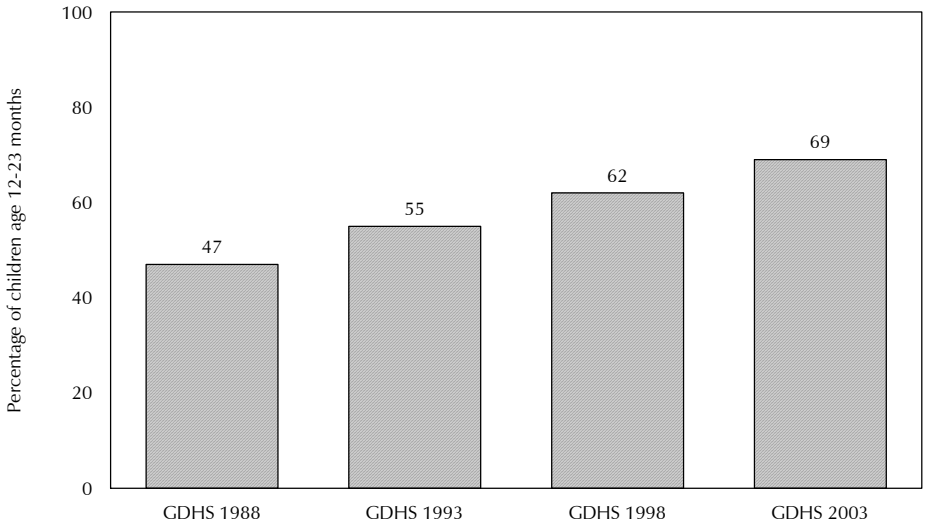
[1] BCG, measles, and three doses each of DPT and polio vaccine (excluding polio 0)

GDHS 2003

Nine in ten children received the BCG and first dose of DPT and polio vaccines at some time before the survey. While the coverage for the first dose of DPT and polio is high, coverage declines for subsequent doses of DPT and polio, with only about 80 percent of children receiving the recommended three doses of these vaccines. The drop-out rate represents the proportion of children who receive the first dose of a vaccine but do not go on to get the third dose. Dropout rates are 12 percent and 15 percent for DPT and polio, respectively. This is an improvement from 1998 when drop-out rates for DPT and polio were 19 percent and 22 percent, respectively (GSS and MI, 1999). Eighty-three percent of children received the measles vaccine and 77 percent have been vaccinated against yellow fever. Ideally, measles and yellow fever should be given on the same day and the difference in vaccination coverage poses a challenge for

health professionals. The percentage of children age 12-23 months who have been fully vaccinated has increased over the past fifteen years, from 47 percent in 1988 (GSS and IRD, 1989), to 69 percent in 2003 (Figure 9.4).

Figure 9.4
Trends in Vaccination Coverage, Ghana 1988-2003



Note: Children age 12-23 months fully vaccinated, i.e., have received BCG, measles, and three doses of DPT and polio (excluding polio 0).

GDHS 1988-2003

Table 9.11 shows the percentage of children age 12-23 months who received specific vaccines at any time before the survey (according to a vaccination card or the mother's report), and the percentage with a vaccination card by background characteristics.

The gender and birth order of the child has little effect on vaccination status. Urban children are more likely than their rural counterparts to be fully immunised. Apart from the Northern region, where less than half of the children are fully immunised, at least three in five children in each of the other regions are fully immunised. Children of women with no education were less likely (57 percent) to be fully immunised than children of educated mothers. Similarly, children in households in the lowest wealth quintile (54 percent) are least likely to be fully immunised.

Table 9.12 provides the percentage of children age 12-59 months at the time of the survey who received specific vaccines by 12 months of age, and the percentage with a vaccination card, by current age of child. Half of the children received all vaccines by 12 months of age. Children in the older cohort (48-59 months) were less likely (42 percent) to have received all their vaccines compared with those age 12-23 months (58 percent). This pattern was consistent for each vaccine but more marked when all the vaccines are considered together. This corroborates the trend towards higher immunisation coverage in 2003 than in 1998.

Table 9.11 Vaccinations by background characteristics

Percentage of children age 12-23 months who received specific vaccines at any time before the survey (according to a vaccination card or the mother's report), and percentage with a vaccination card, by background characteristics, Ghana 2003

Background characteristic	BCG	DPT 1	DPT 2	DPT 3	Polio[1] 0	Polio[1] 1	Polio[1] 2	Polio[1] 3	Measles	All[2]	Yellow fever	No vaccinations	Percentage with a vaccination card seen	Number of children
Sex														
Male	92.5	91.6	87.3	81.3	50.9	93.8	89.7	80.4	83.2	70.3	77.3	4.3	84.9	375
Female	89.5	90.0	85.6	77.3	57.0	92.0	87.6	77.7	83.2	68.3	75.9	5.4	80.7	321
Birth order														
1	91.0	94.3	90.9	81.3	61.1	94.5	89.2	77.2	85.7	70.6	80.9	3.8	81.5	159
2-3	89.5	88.0	83.5	77.5	52.0	91.1	87.2	78.7	82.1	67.1	74.3	5.7	82.4	257
4-5	92.3	92.8	88.8	83.0	56.0	94.3	89.9	82.3	83.0	71.7	74.3	3.4	86.0	150
6+	93.3	89.9	84.3	77.1	45.3	93.1	89.8	78.8	82.7	69.8	78.8	5.9	82.2	129
Residence														
Urban	95.9	94.0	91.5	86.2	77.6	95.1	91.4	82.8	85.8	75.5	83.0	3.3	84.6	248
Rural	88.5	89.1	83.7	75.8	40.4	91.8	87.3	77.1	81.8	66.0	73.1	5.6	82.0	447
Region														
Western	92.5	91.1	86.7	78.9	44.3	95.7	93.2	83.7	76.4	60.4	76.6	4.3	87.4	59
Central	95.2	95.2	92.6	87.9	25.5	95.2	95.2	89.0	86.5	82.1	70.7	2.6	84.0	68
Greater Accra	91.0	91.4	84.5	78.7	81.7	90.3	87.0	77.4	87.8	69.1	73.7	4.5	82.6	75
Volta	91.2	95.6	91.4	89.3	47.5	95.6	91.4	90.3	89.4	82.3	86.4	4.4	85.5	66
Eastern	88.8	91.8	82.5	77.0	57.0	89.9	79.5	73.1	79.1	65.6	73.9	8.2	84.8	77
Ashanti	92.8	91.7	90.7	82.4	60.0	94.5	89.8	79.7	82.2	71.6	78.7	5.5	76.5	123
Brong Ahafo	91.1	91.5	89.5	85.3	70.0	94.0	91.7	83.4	87.1	79.0	82.4	4.5	87.5	75
Northern	84.1	77.9	70.0	62.2	48.6	87.3	81.4	62.5	76.0	48.0	68.6	5.1	80.9	92
Upper East	97.8	99.1	97.8	77.8	30.0	97.8	95.0	84.1	91.2	77.0	82.7	0.9	87.9	39
Upper West	91.4	89.7	87.8	75.5	49.9	93.0	89.9	74.1	79.5	60.3	75.4	7.0	75.6	21
Education														
No education	89.2	86.7	78.7	68.5	46.1	91.1	84.9	69.8	78.2	57.3	71.3	5.1	80.5	244
Primary	88.5	87.5	85.2	77.1	42.5	89.8	85.2	75.9	79.5	66.8	71.8	8.7	75.9	155
Middle/JSS	93.6	95.7	93.5	89.2	61.6	96.5	93.6	88.4	88.0	79.2	81.5	2.5	88.5	256
Secondary+	(97.6)	(97.6)	(94.3)	(94.3)	(93.5)	(94.3)	(94.3)	(90.6)	(97.6)	(90.6)	(96.8)	(2.4)	(90.6)	39
Wealth quintile														
Lowest	86.5	83.8	75.3	64.5	35.0	88.4	81.1	67.8	75.0	53.7	68.6	7.5	79.7	177
Second	90.8	91.9	87.8	81.4	41.2	92.9	89.9	81.1	82.8	72.4	77.8	4.9	83.8	153
Middle	90.3	95.1	91.6	85.8	53.8	96.1	92.6	86.0	87.2	74.2	76.6	3.1	86.9	122
Fourth	96.2	91.4	90.4	84.7	63.1	96.1	92.3	81.7	86.1	73.9	77.4	2.9	79.8	121
Highest	94.1	94.9	92.0	87.4	86.8	93.4	90.9	84.0	88.8	79.1	85.9	4.4	85.8	123
Total	91.1	90.8	86.5	79.5	53.7	93.0	88.7	79.2	83.2	69.4	76.6	4.8	83.0	695

Note: Figures in parentheses are based on 25-49 unweighted cases.

[1] Polio 0 is the polio vaccination given at birth

[2] BCG, measles and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth)

Table 9.12 Vaccinations in first year of life

Percentage of children age 12-59 at the time of the survey who received specific vaccines by 12 months of age, and percentage with a vaccination card, by current age of child, Ghana 2003

Current age of child in months	BCG	DPT			Polio[1]				Measles	All[2]	Yellow fever	No vaccinations	Percentage with a vaccination card seen	Number of children
		1	2	3	0	1	2	3						
12-23	90.0	90.0	85.3	76.9	53.6	92.2	87.2	75.9	68.8	58.0	58.5	6.1	83.0	695
24-35	86.6	87.4	82.0	72.6	46.1	91.1	86.2	71.0	67.8	52.2	51.9	7.6	73.3	649
36-47	86.1	85.2	78.1	69.0	45.8	88.4	80.9	65.6	61.0	46.3	52.1	10.1	64.9	695
48-59	84.4	82.8	76.5	65.3	42.6	87.8	79.7	63.5	59.9	41.7	50.5	9.9	60.2	612
Total	86.9	86.6	80.8	71.3	47.2	90.1	83.8	69.4	64.9	50.0	53.9	8.3	70.6	2,652

Note: Information was obtained from the vaccination card or if there was no written record, from the mother. For children whose information was based on the mother's report, the proportion of vaccinations given during the first year of life was assumed to be the same as for children with a written record of vaccinations.

[1] Polio 0 is the polio vaccination given at birth

[2] BCG, measles, and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth)

9.3.2 Acute Respiratory Infections

Pneumonia and other respiratory tract infections are leading causes of death among young children in Ghana. In cases of pneumonia, early diagnosis and treatment with antibiotics can prevent a large proportion of deaths due to acute respiratory infections (ARI). The prevalence of ARI in the 2003 GDHS was estimated by asking mothers whether their children under age five had been ill with a cough accompanied by short, rapid breathing in the two weeks preceding the survey. These symptoms, though compatible with pneumonia, are subjective (i.e., mother's perception of illness) and not validated by a medical examination. Table 9.13 shows the percentage of children under five years who had a cough accompanied by short rapid breathing (symptoms of ARI) and the percentage of children with symptoms of ARI taken to a health facility or provider.

Mothers reported that 10 percent of children under five had symptoms of ARI in the two weeks prior to the survey. Of these, 44 percent were taken to a health facility or provider. Differentials in the prevalence of ARI by background characteristics are minimal. However, it is worthwhile to note that symptoms of ARI are particularly high among children age 6-23 months and among children living in the Volta region.

Treatment patterns vary by background characteristics. Children age 12-35 months, urban children, and children of mothers with middle/JSS level of education are more likely than other children to be taken to a health provider for treatment. Differentials by region are hard to interpret due to the small number of cases.

Table 9.13 Prevalence and treatment of symptoms of ARI

Percentage of children under five years who had a cough accompanied by short, rapid breathing (symptoms of acute respiratory infection (ARI)), and among children who had symptoms of ARI, the percentage for whom treatment was sought from a health facility or provider, by background characteristics, Ghana 2003

Background characteristic	Percentage of children with symptoms of ARI	Number of children	Among children with symptoms of ARI, percentage for whom treatment was sought from a health provider[1]	Number of children
Age in months				
<6	7.5	314	(35.7)	23
6-11	15.8	374	43.4	59
12-23	13.5	695	49.8	94
24-35	8.7	649	52.0	57
36-47	8.6	695	34.8	60
48-59	6.9	612	(38.8)	42
Sex				
Male	10.9	1,686	43.7	183
Female	9.2	1,654	44.3	152
Residence				
Urban	8.9	1,114	53.0	99
Rural	10.6	2,225	40.2	236
Region				
Western	12.5	332	(41.4)	41
Central	10.6	280	(22.7)	30
Greater Accra	8.1	366	(57.9)	30
Volta	20.0	269	(29.0)	54
Eastern	10.4	337	(42.7)	35
Ashanti	8.0	622	(57.1)	50
Brong Ahafo	10.1	366	(49.9)	37
Northern	7.0	457	(39.4)	32
Upper East	9.2	206	(64.8)	19
Upper West	7.5	104	(50.8)	8
Education				
No education	9.7	1,339	35.3	130
Primary	10.7	761	37.7	81
Middle/JSS	10.1	1,055	54.5	107
Secondary+	9.3	185	*	17
Wealth quintile				
Lowest	11.4	864	31.1	98
Second	9.9	740	40.0	73
Middle	10.4	656	47.2	68
Fourth	10.3	572	50.8	59
Highest	7.3	507	(68.9)	37
Total	10.0	3,340	44.0	335

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.
[1]Excludes pharmacy, shop, and traditional practitioner

9.3.3 Diarrhoeal Diseases

Dehydration caused by severe diarrhoea is a major cause of morbidity and mortality among young children in Ghana. Exposure to diarrhoeal-causing agents is frequently related to use of contaminated water and unhygienic practices related to food preparation, hand-washing, and excreta disposal. For health purposes, it is essential that each household have a specific area designated for hand washing where water, soap, ash, or other cleansing agent as well as a basin for containing clean water are present. This is more likely to ensure regular hand-washing.

Hand-washing

In the GDHS, respondents were asked where they usually washed their hands. Interviewers were then asked to observe for various hand-washing items for those households that mentioned having an area 'designated,' or set aside specifically for hand-washing 'in the dwelling, yard or plot.' In each household, interviewers were instructed to circle the following items as present or absent: water or a tap in the designated location where members of the household usually washed their hands, cleansing agent such as soap or ash, and a basin to hold clean water. Table 9.14 shows the percentage of households with hand-washing materials in a designated area within the dwelling, yard, or plot by background characteristics. It is surprising to note that 67 percent of households did not have any hand-washing items in the designated place for hand-washing. This may not mean that hand-washing items are uncommon in Ghana, but may in part be a reflection of the absence of a designated place for hand-washing. Moreover, in some parts of the country, many households live in compound houses where washing areas may be shared between several households, and personal use items such as soap, may not be kept at the designated washing bay for others to use. Twenty-nine percent of households had water or a tap, 14 percent had soap, ash, or other cleansing agent, and 16 percent had a basin in the designated area for hand-washing. Only 8 percent of households had all three hand-washing materials in the designated area for hand-washing within the dwelling, yard, or plot.

Households in urban areas, those in Greater Accra, those with piped water or with a water source within the dwelling, and households in the highest wealth quintile are more likely than other households to have all three hand-washing materials in a place designated for hand-washing.

Table 9.14 Hand-washing materials in household

Percentage of households with hand-washing materials in a designated place within dwelling/yard/plot, by background characteristics, Ghana 2003

Background characteristic	Water/ tap	Soap, ash, or other cleansing agent	Basin	All three hand-washing materials	No hand-washing materials	Number of households
Residence						
Urban	27.2	17.2	18.3	12.0	69.6	2,870
Rural	30.2	10.5	13.5	3.7	64.6	3,381
Region						
Western	61.4	13.6	16.0	7.4	37.3	612
Central	39.4	9.7	16.7	5.5	56.5	587
Greater Accra	22.0	24.2	23.4	19.4	74.0	890
Volta	7.9	8.3	11.1	6.1	87.8	538
Eastern	57.5	34.7	24.1	15.7	41.1	732
Ashanti	20.3	3.9	8.9	2.0	76.6	1,313
Brong Ahafo	4.4	4.0	4.1	1.5	93.0	665
Northern	26.6	9.2	21.3	3.7	62.4	487
Upper East	36.0	25.4	27.3	7.1	51.1	280
Upper West	8.2	0.0	10.5	0.0	81.6	147
Source of drinking water						
Piped	29.0	17.9	19.0	12.8	68.2	2,445
Protected well	33.0	11.4	15.0	4.2	61.4	1,737
Open well	25.5	10.0	11.0	3.7	70.8	720
Surface	25.3	8.3	11.1	2.7	70.1	1,140
Other	23.5	22.2	24.2	14.2	67.2	205
Time to water source						
In dwelling	34.7	26.3	26.0	20.1	61.6	1,393
<5 minutes	12.0	4.5	5.7	1.4	86.0	219
5 to 9 minutes	27.5	11.4	15.2	5.2	68.4	1,100
10+ minutes	28.0	9.8	12.4	3.8	67.3	3,535
Wealth quintile						
Lowest	28.9	9.7	16.3	3.0	62.9	971
Second	30.6	10.3	10.7	2.9	65.4	1,168
Middle	28.0	8.4	10.9	3.0	69.4	1,315
Fourth	21.8	9.2	11.3	4.8	74.7	1,452
Highest	35.8	28.8	28.9	22.3	60.3	1,345
Total	28.9	13.6	15.7	7.6	66.9	6,251

Note: Total includes 7 cases with missing information on source of drinking water and 5 cases with missing information on time to water source.

Disposal of Stool

Table 9.15 shows the percent distribution of mothers, whose youngest child under five years is living with her, by the way in which the child's faecal matter is disposed of, according to background characteristics and type of toilet facilities in the household.

Table 9.15 Disposal of children's stools

Percent distribution of mothers whose youngest child under five years is living with her by way in which child's faecal matter is disposed of, according to background characteristics and type of toilet facilities in household, Ghana 2003

	Children's stools contained			Children's stools uncontained									
								Uses diapers					
Background characteristic	Child always uses toilet/latrine	Thrown into toilet/latrine	Buried in yard	Thrown outside dwelling	Thrown outside yard	Rinsed away	Not disposed of	Disposable	Washable	Other	Missing	Total	Number of mothers
Residence													
Urban	8.8	57.2	1.6	5.0	8.8	6.9	0.0	1.0	8.7	1.5	0.5	100.0	868
Rural	4.5	39.6	4.1	11.7	26.1	5.8	0.0	0.0	4.9	2.5	0.6	100.0	1,591
Region													
Western	3.9	61.1	2.7	4.3	5.3	0.6	0.0	0.0	11.5	10.0	0.5	100.0	223
Central	8.0	62.0	1.6	1.9	12.9	8.2	0.0	0.0	2.5	0.6	2.3	100.0	202
Greater Accra	9.7	50.1	2.1	10.4	6.6	12.1	0.0	1.4	4.2	3.1	0.3	100.0	278
Volta	2.9	35.1	9.5	14.7	21.0	15.0	0.0	0.8	0.0	0.7	0.4	100.0	202
Eastern	3.8	73.4	0.5	3.2	5.3	5.6	0.0	0.4	3.7	3.6	0.5	100.0	245
Ashanti	8.0	61.1	1.1	0.9	13.4	2.3	0.0	0.2	12.4	0.3	0.3	100.0	462
Brong Ahafo	6.2	58.8	2.0	6.7	13.6	4.0	0.1	0.0	7.8	0.5	0.2	100.0	280
Northern	6.3	7.3	4.8	17.2	48.9	8.4	0.0	0.0	4.4	2.5	0.2	100.0	327
Upper East	4.3	2.5	9.2	39.8	39.0	1.3	0.0	0.9	2.7	0.0	0.3	100.0	162
Upper West	0.0	0.2	3.6	8.7	73.4	6.4	0.0	0.2	5.7	0.3	1.6	100.0	77
Education													
No education	5.0	25.4	4.7	15.4	34.6	6.7	0.0	0.1	4.7	2.9	0.5	100.0	970
Primary	6.0	53.2	3.6	7.6	13.2	6.7	0.0	0.1	6.0	2.9	0.7	100.0	541
Middle/JSS	6.4	62.6	1.6	4.2	9.7	5.5	0.0	0.2	8.1	1.3	0.5	100.0	803
Secondary+	11.0	61.8	1.5	3.7	4.4	4.6	0.0	4.1	8.3	0.0	0.8	100.0	144
Toilet facilities													
None	2.0	8.6	6.8	21.4	44.3	6.7	0.1	0.1	5.5	4.0	0.5	100.0	709
Pit latrine	6.4	59.8	2.3	4.9	13.0	5.5	0.0	0.1	5.6	1.6	0.8	100.0	1,017
Improved latrine	8.6	63.9	1.4	4.5	8.2	6.5	0.0	0.4	4.8	1.4	0.3	100.0	518
Flush toilet	13.8	60.0	0.0	2.3	0.9	6.6	0.0	2.9	12.9	0.5	0.0	100.0	179
Other	(0.0)	(53.2)	(0.0)	(1.9)	(0.0)	(10.6)	(0.0)	(0.0)	(32.1)	(2.2)	(0.0)	100.0	32
Wealth quintile													
Lowest	3.6	20.0	4.7	18.8	37.8	6.7	0.1	0.0	4.7	3.0	0.6	100.0	618
Second	4.1	47.3	4.1	7.8	25.5	4.3	0.0	0.0	4.7	1.2	1.0	100.0	517
Middle	6.1	52.0	3.9	6.2	15.2	5.8	0.0	0.1	7.1	3.4	0.3	100.0	497
Fourth	7.5	57.2	1.7	6.4	9.0	9.6	0.0	0.3	5.7	1.8	0.8	100.0	437
Highest	10.8	64.4	0.6	3.7	2.8	4.4	0.0	1.9	10.5	0.9	0.0	100.0	389
Total	6.1	45.8	3.2	9.3	20.0	6.2	0.0	0.4	6.3	2.2	0.6	100.0	2,459

Note: Figures in parentheses are based on 25-49 unweighted cases.
Total includes 4 cases with missing information on toilet facilities.

More than half of mothers (55 percent) report that their child's stool is contained in the toilet or latrine or buried in the yard. Thirty-six percent of mothers report that their child's stool is uncontained, that is, thrown outside the dwelling or yard, rinsed away, or not disposed of. Seven percent of mothers reported using diapers. Children's stools are more likely to be contained in urban than in rural areas, in the Eastern Region, by highly educated mothers, in households with improved latrines or flush toilets, and among mothers in the highest wealth quintile.

Incidence of Diarrhoea

In the 2003 GDHS, mothers were asked whether any of their children under five years of age had diarrhoea at any time during the two-week period prior to the survey. If any child had diarrhoea, the

mother was asked about feeding practices during the diarrhoeal episode and about what actions were taken to treat the diarrhoea. Since the prevalence of diarrhoea varies seasonally, the results, which only pertain to the period of fieldwork from late July to late October, should be interpreted with caution. Table 9.16 shows that 15 percent of children under five years had diarrhoea in the two weeks preceding the survey. Not surprisingly, very young children are least likely to have had diarrhoea, presumably because most of them are exclusively breastfed and hence less exposed to contaminated food. Children residing in the Upper East and Upper West regions have a much higher prevalence of diarrhoea than children in the other regions. Prevalence of diarrhoea is lowest among children of highly educated mothers. Not surprisingly, diarrhoea prevalence is lowest among children who live in households that have all three hand-washing materials, households that have piped water, and households that are in the wealthiest quintile.

Use of Oral Rehydration Therapy

A simple and effective response to dehydration associated with diarrhoea is a prompt increase in the child's fluid intake through food and oral rehydration therapy (ORT). ORT may include the use of a solution prepared from commercially produced packets of oral rehydration salts (ORS) or a homemade mixture usually prepared from sugar, salt, and water (recommended home fluids, RHF). Table 9.17 shows the percentage of mothers with births in the five years preceding the survey who know about ORS packets for treatment of diarrhoea, by background characteristics.

Ninety percent of mothers with births in the five years preceding the survey know about ORS. Younger mothers are slightly less likely to know about ORS than older mothers. Knowledge among urban women is higher than among rural women. Knowledge of ORS is lowest among young mothers in the Upper West Region, among mothers with no education, and among mothers in the lowest wealth quintile.

Table 9.16 Prevalence of diarrhoea

Percentage of children under five years with diarrhoea in the two weeks preceding the survey, by background characteristics, Ghana 2003

Background characteristic	Diarrhoea in the two weeks preceding the survey	Number of children
Age in months		
<6	5.0	314
6-11	21.2	374
12-23	24.2	695
24-35	17.0	649
36-47	11.5	695
48-59	9.1	612
Sex		
Male	15.9	1,686
Female	14.6	1,654
Residence		
Urban	13.6	1,114
Rural	16.1	2,225
Region		
Western	14.4	332
Central	15.9	280
Greater Accra	12.8	366
Volta	13.3	269
Eastern	15.7	337
Ashanti	14.3	622
Brong Ahafo	13.9	366
Northern	15.3	457
Upper East	20.8	206
Upper West	26.9	104
Mother's education		
No education	15.7	1,339
Primary	16.6	761
Middle/JSS	14.5	1,055
Secondary+	11.1	185
Hand-washing materials in household		
Water/tap	13.6	908
Soap/ash/other cleansing agent	10.7	373
Basin	12.4	515
All three hand-washing materials	7.5	196
None	15.9	2,256
Source of drinking water		
Piped	12.9	986
Protected well	16.6	1,043
Open well	17.9	451
Surface	14.9	790
Other	(13.6)	66
Wealth quintile		
Lowest	19.7	864
Second	14.2	740
Middle	13.9	656
Fourth	15.2	572
Highest	10.9	507
Total	15.2	3,340

Note: Figures in parentheses are based on 25-49 unweighted cases. Total includes 4 cases with missing information on source of drinking water.

Table 9.17 Knowledge of ORS packets

Percentage of mothers with births in the five years preceding the survey who know about ORS packets for treatment of diarrhoea, by background characteristics, Ghana 2003

Background characteristic	Percentage of mothers who know about ORS packets	Number of mothers
Age		
15-19	81.4	118
20-24	89.7	507
25-29	92.4	651
30-34	90.0	575
35-49	90.2	794
Residence		
Urban	96.3	946
Rural	86.8	1,699
Region		
Western	94.6	246
Central	92.7	211
Greater Accra	92.9	303
Volta	80.0	220
Eastern	90.8	266
Ashanti	96.7	507
Brong Ahafo	92.0	297
Northern	79.8	346
Upper East	96.9	166
Upper West	70.1	83
Education		
No education	83.4	1,025
Primary	89.8	589
Middle/JSS	97.3	879
Secondary+	97.1	153
Wealth quintile		
Lowest	81.5	648
Second	86.3	557
Middle	93.2	534
Fourth	96.5	474
Highest	97.8	433
Total	90.2	2,645

ORS = Oral rehydration salts

Mothers of children who had diarrhoea in the two weeks preceding the survey were asked what was done to manage or treat the illness. Table 9.18 shows the percentage of children under five years who had diarrhoea in the two weeks preceding the survey taken for treatment to a health provider, the percentage who received ORT, and the percentage given other treatments, according to background characteristics. Mothers reported that 26 percent of their children with diarrhoea were taken to a health provider. More than a third of the children (39 percent) were given a solution made from ORS, 11 percent received

Table 9.18 Diarrhoea treatment

Percentage of children under five years who had diarrhoea in the two weeks preceding the survey taken for treatment to a health provider, percentage who received oral rehydration therapy (ORT), and percentage given other treatments, according to background characteristics, Ghana 2003

		Oral rehydration therapy (ORT)					Other treatments					
Background characteristic	Percentage taken to a health provider[1]	ORS packets	RHF	Either ORS or RHF	Increased fluids	ORS, RHF, or increased fluids	Pill/syrup	Injection	Intra-venous solution	Home remedy/ other	No treatment	Number of children
Age in months												
<6	*	*	*	*	*	*	*	*	*	*	*	16
6-11	31.8	31.9	9.8	41.7	29.8	53.8	37.0	3.3	0.9	10.6	18.9	79
12-23	26.3	44.5	14.0	52.6	38.8	66.9	36.1	1.4	1.0	11.7	12.2	168
24-35	25.5	40.7	13.6	50.9	48.7	72.2	29.9	0.0	0.0	13.5	8.4	110
36-47	22.8	41.6	9.3	46.1	46.8	68.2	30.6	0.0	0.0	10.5	16.1	80
48-59	21.9	31.0	5.4	34.5	31.4	49.0	34.1	0.0	2.0	16.8	17.5	56
Sex												
Male	27.4	41.4	11.5	48.4	36.5	63.7	34.2	0.7	1.0	10.3	16.7	268
Female	23.4	35.5	11.3	44.3	43.0	62.9	32.8	1.4	0.3	14.8	11.0	241
Residence												
Urban	35.5	47.1	6.7	50.3	47.6	67.8	34.1	1.6	0.7	12.9	12.3	152
Rural	21.3	35.0	13.4	44.8	36.2	61.4	33.3	0.7	0.7	12.2	14.8	357
Region												
Western	(27.2)	(37.0)	(11.4)	(48.4)	(37.5)	(63.3)	(40.4)	(0.0)	(0.0)	(14.6)	(6.3)	48
Central	(23.8)	(45.2)	(8.4)	(46.8)	(29.5)	(62.3)	(19.7)	(0.0)	(0.0)	(15.2)	(19.0)	45
Greater Accra	(15.5)	(28.7)	(16.1)	(40.8)	(41.3)	(54.6)	(30.7)	(3.1)	(0.0)	(23.5)	(15.4)	47
Volta	(9.8)	(36.5)	(25.0)	(51.5)	(47.5)	(70.9)	(12.9)	(0.0)	(7.0)	(15.3)	(21.7)	36
Eastern	(17.0)	(32.6)	(4.5)	(37.0)	(33.1)	(56.7)	(38.8)	(0.0)	(0.0)	(3.6)	(23.3)	53
Ashanti	26.7	41.3	6.2	46.4	40.1	64.2	42.1	0.0	0.0	10.0	12.9	89
Brong Ahafo	28.5	43.5	9.4	46.8	45.8	65.3	35.4	1.9	2.1	4.9	9.4	51
Northern	29.0	32.4	17.8	45.8	37.8	59.4	41.2	2.3	0.0	16.0	11.5	70
Upper East	43.0	58.4	12.4	64.8	52.7	82.7	21.3	2.3	0.0	13.3	7.6	43
Upper West	32.8	29.7	7.0	35.8	30.2	55.7	33.5	0.0	0.0	9.5	18.2	28
Mother's education												
No education	26.8	37.2	12.4	45.6	38.2	62.7	33.9	1.3	0.0	12.7	12.0	210
Primary	26.3	34.3	11.0	44.0	27.3	57.4	22.0	0.8	0.9	13.5	21.7	126
Middle/JSS	22.8	43.9	11.9	50.4	50.2	69.1	41.2	0.9	0.5	10.6	11.1	153
Secondary+	*	*	*	*	*	*	*	*	*	*	*	21
Wealth quintile												
Lowest	21.0	32.6	14.6	42.5	36.3	59.6	34.7	1.5	0.4	14.2	14.9	170
Second	23.8	34.2	12.7	44.8	35.2	61.3	28.6	0.0	1.0	11.3	17.2	105
Middle	24.3	43.5	12.6	50.0	40.0	66.6	29.7	0.0	0.7	13.1	9.0	91
Fourth	27.3	38.7	6.3	44.0	42.6	60.1	30.1	2.7	0.0	12.9	19.4	87
Highest	41.6	57.4	5.2	59.3	52.7	78.3	50.8	0.0	1.9	7.1	5.1	55
Total	25.5	38.6	11.4	46.4	39.6	63.3	33.5	1.0	0.7	12.4	14.0	509

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases. ORT includes solution prepared from oral rehydration salt (ORS) packets, recommended home fluids (RHF), or increased fluids.

[1] Excludes pharmacy, shop and traditional practitioner

recommended home fluids (RHF), and 40 percent were given increased fluids. Overall, 63 percent received ORS, RHF, or increased fluids. One-third of children with diarrhoea were given pills or syrup, 1 percent received injections, less than 1 percent received intravenous medication, and 12 percent were given home remedies. One in seven children with diarrhoea were given no treatment at all.

Children age 6-11 months are slightly more likely to be taken to a health facility for treatment (32 percent) than those over one year (22-26 percent). Male children (27 percent) are slightly more likely than female children (23 percent) to be taken to a provider for treatment of diarrhoea. Children of women in the highest wealth index were also more likely (42 percent) to be taken to a health provider than children from poorer households. Very young children (6-11 months) and older children (48-59 months) are less likely than other children to receive ORT. Rural children and children in the lowest wealth quintile are also less likely to receive ORT.

Feeding Practices

Mothers are encouraged to continue feeding their children normally when they suffer from diarrhoea and to increase the amount of fluids given. These practices help to reduce the likelihood of dehydration and also minimise the adverse consequences of diarrhoea on the child's nutritional status. Table 9.19 presents data on the percent distribution of children under five years who had diarrhoea in the two weeks preceding the survey by the amount of liquids and food offered compared with normal practice. Most children are given either the same amount of fluids (32 percent) or more fluids than usual (40 percent) when they have diarrhoea. Fourteen percent of children are given somewhat less fluids than usual, while 12 percent are given much less. One percent of children receive no fluids.

Twenty-seven percent of children are offered the same amount of food and 6 percent are offered more food than usual. Thirty percent receive somewhat less food and 26 percent receive much less food than usual, while 7 percent receive no food at all.

Men are beginning to play a more important role in child caring. In order to ascertain men's knowledge about feeding practices, the 2003 GDHS asked all men about what they should do when a child had diarrhoea. Forty percent of men mentioned that they would give a child with diarrhoea more fluids to drink, while 13 percent mentioned that they would give the same amount of fluid to drink (data not shown). More than a third of men (35 percent) stated that they would give a child less than usual to drink in the event of diarrhoea.

Table 9.19 Feeding practices during diarrhoea

Percent distribution of children under five years who had diarrhoea in the two weeks preceding the survey by amount of liquids and food offered, compared with normal practice, Ghana 2003

Liquid/food offered	Percent
Amount of liquids offered	
Same as usual	32.3
More	39.6
Somewhat less	13.9
Much less	12.3
None	1.0
Don't know	0.9
Total	100.0
Amount of food offered	
Same as usual	26.7
More	6.0
Somewhat less	29.6
Much less	25.6
None	6.8
Never gave food	5.4
Total	100.0
Number of children	509

9.4 CHILD HEALTH CARE AND WOMEN'S STATUS

A woman's status could have an impact on the level of health care her child receives. Table 9.20 shows the percentage of children age 12-23 months who were fully vaccinated and the percentage of children under five years who were ill with a fever and/or who had symptoms of ARI and/or diarrhoea in the two weeks preceding the survey who were taken to a health provider for treatment, by women's status indicators.

Table 9.20 Children's health care by women's status

Percentage of children age 12-23 months who were fully vaccinated, and percentage of children under five years who were ill with a fever, symptoms of ARI and/or diarrhoea, in the two weeks preceding the survey taken to a health provider for treatment, by women's status indicators, Ghana 2003

Women's status indicator	Percentage of children 12-23 months fully vaccinated[1]	Number of children	Percentage of children with fever and/or symptoms of ARI taken to health provider[2]	Number of children	Percentage of children with diarrhoea taken to a health provider[2]	Number of children
Number of decisions in which woman has final say[3]						
0	58.5	136	47.6	175	32.0	114
1-2	68.9	157	44.8	187	24.7	125
3-4	75.8	132	44.2	149	17.7	96
5	72.0	270	43.2	328	26.2	175
Number of reasons to refuse sex with husband						
0	65.3	54	48.5	55	28.3	35
1-2	67.0	95	37.0	129	26.2	74
3-4	70.2	547	45.8	655	25.1	400
Number of reasons wife-beating is justified						
0	73.9	323	48.9	385	23.0	211
1-2	79.3	166	41.0	196	24.1	119
3-4	55.9	138	41.0	200	25.9	116
5	51.5	68	41.1	57	35.9	62
Total	69.4	695	44.6	839	25.5	509

[1] Those who have received BCG, measles, and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth)
[2] Excludes pharmacy, shop, and traditional practitioner
[3] Either by herself or jointly with others

The relationship between child health care and women's status is mixed. The data show that the percentage of children 12-23 months fully vaccinated is higher among children of mothers who have a higher status as measured by all three measures of women's status. For example, a higher percentage of children of mothers who have a greater say in household decisionmaking (3-5 decisions) are fully immunised than children of mothers who have little or no say (72-75 and 59 percent, respectively). Children of mothers who believe that wife-beating is not justified for any reason at all are also more likely than their counterparts to be taken to a health care provider for treatment of fever and/or ARI. However, there is no clear relationship between the other two women's status indicators and the care children receive for childhood illnesses.

9.5 WOMEN'S PERCEPTIONS OF PROBLEMS IN OBTAINING HEALTH CARE

The 2003 GDHS included a series of questions aimed at obtaining information on the problems women perceive as barriers to accessing health care for themselves. This information is particularly important in understanding and addressing the barriers women may face in seeking care in general. To ob-

tain this information, all GDHS respondents were asked whether each of the following factors would pose a big problem in obtaining medical advice or treatment when they are sick: knowing where to go; getting permission to go; getting money for treatment; distance to the health facility; having to take transport; not wanting to go alone; and concern that there may not be a female provider. Table 9.21 shows the percentage of women who reported that they have big problems in accessing health care for themselves when they are sick, by type of problem and background characteristics.

Clearly, women have problems in accessing health care services, with 68 percent of all women citing at least one of the specified problems. The majority of women said that difficulty in getting money for treatment was a big problem (55 percent), followed by problems with transport and distance to a health facility (33 percent each). Sixteen percent of women were concerned that there may not be a female health provider. Few women (about one in ten) cited knowing where to go for treatment or getting permission to go as big problems in accessing health care for themselves.

Women who have five or more children, divorced, separated or widowed women, rural women, women residing in the Upper East Region, women with no education, women who work but not for cash, and women who fall in the lowest wealth quintile are more likely to mention a problem in accessing health care than other women.

9.6 USE OF SMOKING TOBACCO

Smoking has a negative effect on the health of a person. Women and men interviewed in the 2003 GDHS were asked about their smoking habits. The data show that very few women in Ghana (less than 1 percent) smoke (data not shown).

Table 9.22 indicates the percentage of men who smoke cigarettes or tobacco and the percent distribution of cigarette smokers by number of cigarettes smoked in the preceding 24 hours, according to background characteristics.

Smoking is not common in Ghana. Only 9 percent of men smoke cigarettes, a negligible percent smoke a pipe, and 2 percent use other tobacco products. Cigarette smoking is more common among older men (16 percent), men in rural areas (11 percent), men living in the Northern Region (18 percent), men with no education (20 percent), and men in the lowest wealth quintile (15 percent). The majority (78 percent) of men smoke 1-5 cigarettes a day. Heavy smoking (six or more cigarettes a day) is concentrated in Greater Accra, Ashanti, and Northern regions, and among wealthier men (fourth and highest wealth quintiles).

Table 9.21 Problems in accessing health care

Percentage of women who reported they have big problems in accessing health care for themselves when they are sick, by type of problem and background characteristics, Ghana 2003

Background Characteristic	Problems in accessing health care							Any of the specified problems	Number of women
	Knowing where to go for treatment	Getting permission to go for treatment	Getting money for treatment	Distance to health facility	Having to take transport	Not wanting to go alone	Concern there may not be a female provider		
Age									
15-19	14.4	12.1	49.6	31.2	30.3	28.1	22.3	67.7	1,148
20-29	11.5	9.0	52.8	31.9	32.6	20.0	16.2	67.1	1,963
30-39	9.5	7.7	56.9	32.7	34.2	17.3	13.2	68.0	1,524
40-49	10.2	7.3	60.9	36.0	35.6	19.7	12.8	71.4	1,056
Number of living children									
0	12.7	10.4	47.0	26.0	25.9	24.3	19.6	64.3	1,872
1-2	11.6	9.7	54.8	34.7	34.1	19.3	14.9	67.7	1,602
3-4	9.7	6.9	59.1	34.8	36.5	17.5	12.3	69.4	1,227
5+	10.1	7.6	63.9	39.8	41.2	21.0	15.6	75.0	990
Marital status									
Never married	12.5	11.0	46.1	25.4	24.9	24.5	19.0	63.6	1,616
Married or living together	10.7	8.1	57.0	36.8	37.3	19.4	15.1	69.4	3,549
Divorced, separated, widowed	11.6	8.6	66.2	27.8	30.6	19.8	12.9	74.8	526
Residence									
Urban	8.9	7.5	43.6	16.8	16.1	16.4	12.9	56.1	2,755
Rural	13.6	10.3	65.2	47.7	49.2	25.0	18.9	79.6	2,936
Region									
Western	13.1	8.2	52.3	32.8	36.8	23.8	23.9	72.4	553
Central	13.4	7.3	66.8	44.4	44.6	20.9	17.0	80.4	431
Greater Accra	6.2	4.9	31.8	12.4	10.7	12.0	8.2	45.9	942
Volta	9.5	12.3	58.0	32.4	36.0	23.5	16.0	73.7	492
Eastern	19.3	18.1	57.2	30.4	26.6	25.0	22.9	69.6	601
Ashanti	9.6	9.4	50.2	23.2	24.6	21.0	14.6	59.9	1,142
Brong Ahafo	15.0	9.2	65.5	39.4	38.3	20.7	15.3	77.2	569
Northern	11.9	7.7	70.9	55.0	58.7	24.2	15.3	82.2	499
Upper East	9.0	4.6	65.6	63.8	62.5	29.6	18.5	88.2	310
Upper West	5.9	3.7	70.6	46.9	44.6	10.8	15.0	77.5	153
Education									
No education	12.3	9.8	70.5	50.7	51.3	24.1	17.8	82.9	1,608
Primary	13.5	9.6	57.8	32.3	34.1	24.0	19.0	71.8	1,135
Middle/JSS	11.3	9.6	49.5	25.0	25.0	18.3	15.1	62.6	2,279
Secondary+	5.1	3.7	29.5	16.9	15.6	16.1	9.6	46.1	669
Employment									
Not employed	12.5	10.9	48.8	28.2	27.6	24.9	18.8	66.0	1,265
Working for cash	10.8	8.3	55.7	32.8	33.5	18.5	14.4	67.8	3,821
Not working for cash	12.3	9.2	61.0	42.1	42.4	27.3	20.3	75.9	604
Wealth quintile									
Lowest	14.1	11.0	73.7	60.1	63.3	30.7	22.6	88.0	970
Second	15.0	11.7	67.5	51.7	53.7	26.1	21.0	82.0	949
Middle	13.0	9.1	60.1	31.7	31.5	19.4	13.4	72.9	1,071
Fourth	10.1	8.1	50.8	20.3	19.1	15.5	13.1	63.4	1,245
Highest	6.9	6.5	33.2	13.6	12.9	16.4	12.7	46.8	1,457
Total	11.3	9.0	54.7	32.7	33.1	20.8	16.0	68.2	5,691

Note: Total includes 1 case with missing information on employment.

Table 9.22 Use of smoking tobacco

Percentage of men who smoke cigarettes or tobacco and percent distribution of cigarette smokers by number of cigarettes smoked in preceding 24 hours, according to background characteristics, Ghana 2003

Background characteristic	Uses tobacco: Cigarettes	Uses tobacco: Pipe	Uses tobacco: Other tobacco	Does not use tobacco	Number of men	Number of cigarettes: 0	1-2	3-5	6-9	10+	Don't know/ missing	Total	Number of cigarette smokers
Age													
15-19	0.7	0.0	0.0	99.3	1,107	*	*	*	*	*	*	*	8
20-34	7.0	0.0	0.9	92.2	2,071	8.3	40.9	41.0	6.1	3.7	0.0	100.0	146
35+	16.4	0.2	3.2	80.5	1,837	3.3	33.5	42.9	10.4	9.7	0.2	100.0	300
Residence													
Urban	6.8	0.1	0.2	93.0	2,250	6.5	27.2	41.7	11.2	13.0	0.4	100.0	154
Rural	10.8	0.1	2.7	86.7	2,765	4.9	40.4	42.2	7.7	4.8	0.0	100.0	300
Region													
Western	6.3	0.0	0.3	93.5	476	(13.4)	(37.3)	(38.9)	(3.3)	(7.0)	(0.0)	(100.0)	30
Central	5.6	0.3	0.3	93.9	370	*	*	*	*	*	*	*	21
Greater Accra	6.8	0.1	0.0	93.1	733	(16.4)	(18.0)	(42.0)	(13.6)	(10.0)	(0.0)	(100.0)	50
Volta	7.5	0.1	0.1	92.2	440	(0.0)	(29.9)	(59.9)	(1.7)	(8.4)	(0.0)	(100.0)	33
Eastern	7.4	0.0	0.2	92.4	539	(0.0)	(45.1)	(50.4)	(1.4)	(3.2)	(0.0)	(100.0)	40
Ashanti	8.1	0.0	0.1	91.8	956	1.3	50.1	28.0	12.3	8.4	0.0	100.0	77
Brong Ahafo	10.2	0.2	0.6	89.0	528	6.6	34.3	48.0	7.4	3.7	0.0	100.0	54
Northern	17.7	0.1	6.2	76.5	527	4.1	33.6	37.5	14.7	10.1	0.0	100.0	93
Upper East	11.4	0.3	11.1	79.2	317	6.0	30.3	49.0	6.2	8.7	0.0	100.0	36
Upper West	15.3	0.1	1.8	83.2	130	5.9	38.8	52.2	0.0	3.1	0.0	100.0	20
Education													
No education	20.3	0.3	6.4	73.7	881	4.7	37.4	41.2	7.8	8.9	0.0	100.0	178
Primary	9.2	0.0	1.8	89.2	803	1.1	42.5	35.7	12.3	8.4	0.0	100.0	74
Middle/JSS	6.6	0.1	0.2	93.1	2,165	4.7	37.0	42.3	8.9	6.6	0.4	100.0	143
Secondary+	5.0	0.0	0.2	94.9	1,165	14.9	20.4	52.1	7.5	5.1	0.0	100.0	58
Wealth quintile													
Lowest	15.2	0.1	7.1	78.4	872	5.4	39.2	42.2	6.4	6.8	0.0	100.0	133
Second	11.7	0.3	1.0	87.0	903	7.1	36.8	42.7	10.2	3.2	0.0	100.0	106
Middle	8.2	0.0	0.5	91.5	975	0.0	30.7	50.1	11.4	7.0	0.8	100.0	80
Fourth	6.5	0.1	0.1	93.4	1,060	1.4	44.6	33.2	10.4	10.3	0.0	100.0	68
Highest	5.6	0.0	0.1	94.3	1,204	13.3	25.6	40.1	6.9	14.1	0.0	100.0	67
Total	9.0	0.1	1.6	89.5	5,015	5.4	35.9	42.0	8.9	7.6	0.1	100.0	454

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

NUTRITION 10

Malnutrition plays an important role in the health and welfare of children and women in Ghana. Poor nutrition results in morbidity, mortality, poor education, and fewer opportunities for economic development. Poor education, low socio-economic status, and high fertility are factors that may influence the nutritional status of an individual. In Ghana, children under five years and women of reproductive age are the most vulnerable. Economic evidence also suggests that life expectancy is directly related to poverty and nutrition (Sachs, 1999). Adequate food and sound nutrition are essential to good health. They are crucial not only for human survival, but also for prevention of and recovery from illness.

The 2003 GDHS collected data from respondents in order to evaluate the nutritional status of women and young children. For infants and young children, this included information on breastfeeding and complementary feeding. For micronutrients like iron, vitamin A, and iodine, information was collected on intake levels from supplementation and food. Anthropometric measurements (height and weight) were taken for women 15-49 years and children under age five to determine their nutritional status.

10.1 BREASTFEEDING

Appropriate feeding practices are of fundamental importance for the survival, growth, development, health, and nutrition of infants and children and for the well being of mothers. Feeding practices are one of the underlying determinants of children's nutritional status, which in turn influence the risk of illness and ultimately death. Breastfeeding benefits depend on the length of time a child is breastfed, and the frequency and intensity of breastfeeding. Breastfeeding also affects the mother in other ways. The physiological suppression of fertility as a result of intensive breastfeeding influences the length of the interval between pregnancies.

10.1.1 Initiation of Breastfeeding

Breastfeeding is sufficient and beneficial for infant nutrition in the first six months of life. Early initiation of breastfeeding (breastfeeding within one hour) facilitates the newborn's innate sucking reflex, which helps to stimulate breast milk production and provides all of the nutritional requirements of a young infant (Righard and Alade, 1990). The high concentration of antibodies in colostrum, the first yellowish, highly nutritious milk that is present right after delivery, protects the child from infection before the child's immune system has matured. Early initiation also encourages the bond between mother and baby and helps to maintain the baby's body temperature. Breastfeeding also helps the uterus to retract, hence reducing postpartum blood loss of the mother. Prelacteal feeding (giving something other than breast milk in the first three days of life) is generally discouraged since it may inhibit breastfeeding and expose the newborn infant to illness.

The Baby Friendly Hospital Initiative (BFHI) started in health facilities in Ghana in 1993. This may have had an impact on breastfeeding initiation and the giving of prelacteal feeds among children of mothers assisted at delivery by medically trained health professionals and those delivered in a health facility.

Table 10.1 shows the percentage of children born in the five years preceding the survey who were ever breastfed and among children ever breastfed, the proportion who started breastfeeding within one

Table 10.1 Initial breastfeeding

Percentage of children born in the five years preceding the survey who were ever breastfed, and among children ever breastfed, percentage who started breastfeeding within one hour and within one day of birth and percentage who received a prelacteal feed, by background characteristics, Ghana 2003

	All children		Children ever breastfed			
Background characteristic	Percentage ever breastfed	Number of children	Percentage who started breastfeeding within 1 hour of birth	Percentage who started breastfeeding within 1 day of birth[1]	Percentage who received a prelacteal feed[2]	Number of children ever breastfed
Sex						
Male	96.9	1,841	46.8	76.0	18.6	1,784
Female	97.2	1,798	45.8	74.4	20.6	1,748
Residence						
Urban	97.8	1,204	47.2	76.7	14.3	1,178
Rural	96.7	2,435	45.9	74.5	22.2	2,354
Region						
Western	96.9	367	35.7	66.9	29.2	356
Central	97.9	304	14.2	82.6	11.1	298
Greater Accra	96.7	390	45.7	68.1	12.8	377
Volta	97.9	298	47.1	79.3	12.3	292
Eastern	97.0	362	39.9	76.2	26.2	351
Ashanti	95.6	685	51.8	74.6	20.4	655
Brong Ahafo	96.9	401	54.3	79.3	24.5	388
Northern	97.9	500	54.1	70.5	24.8	489
Upper East	98.4	215	86.3	92.9	8.6	212
Upper West	97.1	118	17.9	69.7	8.6	114
Mother's education						
No education	97.7	1,466	48.3	72.7	21.0	1,433
Primary	95.2	843	44.2	74.3	20.3	803
Middle/JSS	97.3	1,139	45.3	78.6	16.9	1,108
Secondary+	98.2	191	46.4	79.0	21.4	187
Assistance at delivery						
Health professional[3]	96.5	1,713	51.4	80.4	14.1	1,652
Traditional birth attendant	97.4	1,127	38.7	71.1	24.5	1,097
Other	97.7	696	50.0	73.2	25.0	680
No one	98.6	78	26.5	63.6	26.4	77
Place of delivery						
Health facility	96.5	1,661	51.6	80.4	13.8	1,602
At home	97.5	1,942	42.5	71.8	24.6	1,894
Wealth quintile						
Lowest	97.6	941	46.6	71.7	24.0	919
Second	97.0	809	47.1	78.0	23.8	785
Middle	95.7	721	44.1	72.3	18.5	690
Fourth	97.9	617	46.0	76.9	16.7	604
Highest	96.9	551	48.1	79.3	10.4	534
Total	97.0	3,639	46.3	75.2	19.6	3,532

Note: Table is based on all births whether the children are living or dead at the time of interview. Total includes 27 children with missing information on assistance at delivery, 24 persons with missing information on place of delivery, and 14 persons with 'other' place of delivery, who are not shown separately. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Includes children who started breastfeeding within one hour of birth

[2] Children given something other than breast milk during the first three days of life before the mother started breastfeeding regularly

[3] Doctor, nurse/midwife, or auxiliary midwife

hour and within one day of birth, and those who received a prelacteal feed. The data indicate that almost all (97 percent) Ghanaian children are breastfed for some period of time. Forty-six percent of infants were put to the breast within one hour of birth, and 75 percent started breastfeeding within the first day. The data from 2003 can be compared with similar data collected five years ago. The data show that over the past five years, there was little difference in the percentage of children ever breastfed. However, the percentage breastfed within one hour of birth and one day of birth for children born in the five years preceding the survey (46 and 75 percent, respectively) is noticeably higher than the 1998 levels (25 and 54 percent, respectively) (GSS and MI, 1999).

There are no marked differences in the proportion of children ever breastfed by background characteristics. Children of mothers assisted at delivery by medically trained health professionals (doctors, nurse/midwives, or auxiliary nurses) and children delivered in a health facility are more likely to be breastfed immediately after birth or within one day of birth.

Initiation of breastfeeding varies among regions. The proportion of infants that are breastfed within one hour of birth ranges from 14 percent in the Central Region to 86 percent in the Upper East Region. The Western Region has the lowest percentage of children who started breastfeeding within one day of birth (67 percent), while the Upper East Region has the highest (93 percent).

Prelacteal feeding, something other than breast milk given to newborns prior to the regular flow of breastmilk, is not widely practised in Ghana. Only 20 percent of children born in the five years preceding the survey received a prelacteal feed. Prelacteal feeding is more widely practiced in rural areas (22 percent) than urban areas (14 percent). The Western Region (29 percent) has the highest reported percentage of prelacteal feeding. Children of mothers assisted at delivery by medically trained health professionals have a lower reported rate of receiving prelacteal feeds (14 percent). Women who delivered at home have higher reported rates of prelacteal feeding (25 percent) than those who delivered in a health facility (14 percent). The practice decreases from 24 percent among children of women in the lowest wealth quintile to 10 percent among children of women in the highest wealth quintile.

10.1.2 Age Pattern of Breastfeeding

Breast milk is safe, convenient, uncontaminated, and contains all the nutrients needed by the baby in the first six months of life. In Ghana, all women are encouraged to breastfeed their infants exclusively for the first six months and then complement the breastfeeding with nutritious foods for at least two years. Breast milk provides protection against infection through the mother's antibodies. Supplementing breast milk before 6 months is unnecessary and is strongly discouraged because of the likelihood of contamination, the unaffordability of breast milk substitutes, and the resulting increased risk of diarrhoeal disease. The early introduction of liquids and solids reduces breast milk output because the production and release of milk is influenced by the frequency and intensity of suckling. Breastfeeding remains the best nutrition even for infants of HIV-positive mothers and mothers whose HIV status is unknown, as it provides resistance to opportunistic diseases.

Table 10.2 shows the percent distribution of youngest children under three years living with the mother by breastfeeding status and percentage of children under three years using a bottle with a nipple, according to age in months. Based on information about feeding practices in the 24 hours preceding the survey, almost all children are breastfed for at least one year, with only 4 percent of children aged 12-15 months who are not breastfed. By age 16-19 months, 14 percent of children are no longer breastfeeding. Breastfeeding decreases rapidly late in the second year of life, and by 32-35 months of age, virtually all children (94 percent) are weaned.

Table 10.2 Breastfeeding status by age

Percent distribution of youngest children under three years living with the mother by breastfeeding status and percentage of children under three years using a bottle with a nipple, according to age in months, Ghana 2003

			Breastfeeding and consuming:							
Age in months	Not breast-feeding	Exclusively breastfed	Plain water only	Water-based liquids/ juice	Other milk	Comple-mentary foods	Total	Number of children	Percentage using a bottle with a nipple[1]	Number of children
<2	1.3	62.4	31.1	1.5	1.4	2.3	100.0	92	9.4	94
2-3	0.0	64.9	22.4	0.0	7.0	5.7	100.0	88	9.7	90
4-5	0.0	38.9	19.9	1.8	7.3	32.0	100.0	127	15.1	129
6-7	0.8	14.3	27.1	2.7	3.1	52.1	100.0	137	12.9	139
8-9	0.0	3.2	17.0	1.9	2.1	75.8	100.0	102	11.1	102
10-11	1.3	3.4	8.4	0.7	0.0	86.2	100.0	131	7.5	134
12-15	4.2	0.7	7.3	0.0	1.0	86.8	100.0	258	8.9	270
16-19	14.2	0.5	5.5	0.6	0.0	79.2	100.0	224	9.1	230
20-23	33.3	0.0	2.9	0.0	0.7	63.1	100.0	181	5.4	195
24-27	70.1	0.2	0.4	1.0	0.0	28.4	100.0	202	5.3	227
28-31	82.2	0.4	0.5	0.0	0.0	16.9	100.0	158	6.4	212
32-35	93.8	0.0	0.0	0.0	0.0	6.2	100.0	146	6.0	210
<6	0.4	53.4	24.0	1.2	5.5	15.6	100.0	308	11.8	314
6-9	0.4	9.6	22.8	2.4	2.7	62.2	100.0	239	12.2	241

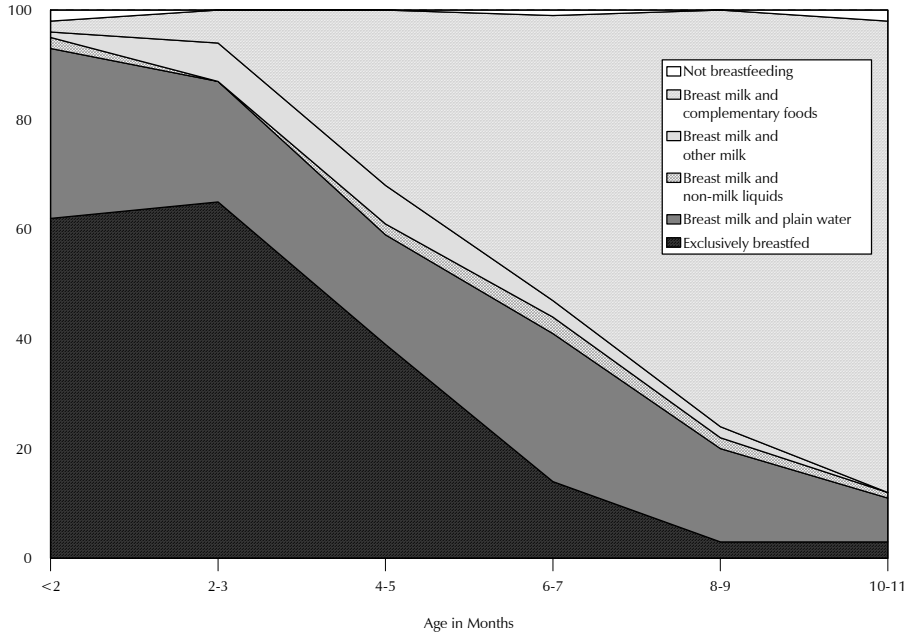
Note: Breastfeeding status refers to a "24-hour" period (yesterday and last night). Children classified as *breastfeeding and consuming plain water only* consume no supplements. The categories of not breastfeeding, exclusively breastfed, breastfeeding and consuming plain water, water-based liquids/juice, other milk, and complementary foods (solids and semi-solids) are hierarchical and mutually exclusive, and their percentages add to 100 percent. Thus children who receive breast milk and water-based liquids and who do not receive complementary foods are classified in the water-based liquid category even though they may also get plain water. Any children who get complementary food are classified in that category as long as they are breastfeeding as well.

[1] Based on all children under three years

Despite the high breastfeeding prevalence (97 percent) in Ghana, the majority of infants are not fed in compliance with the WHO/UNICEF recommendations (World Health Assembly, 2001). These recommendations call for a period of exclusive breastfeeding for 6 months and the introduction of complementary foods after the age of 6 months. Fifty-three percent of children under 6 months of age are exclusively breastfed in Ghana. This is a slight increase over the proportion reported in the 1998 GDHS (GSS and MI, 1999).

Exclusive breastfeeding drops sharply from 65 percent at age 2-3 months to 39 percent at age 4-5 months (Figure 10.1). Six percent of children age 2-3 months and 32 percent of children age 4-5 months are receiving complementary foods in addition to breast milk. This indicates that there are many infants who are at risk of being exposed to bacterial contamination and poor quality foods, even if they started out well with early initiation of breastfeeding. The duration of paid maternity leave in Ghana is 12 weeks; hence, a majority of women return to work when their children are three months old. This may account for the sharp decline in exclusive breastfeeding rates between 2-3 months and 4-5 months.

Figure 10.1 **Breastfeeding Practices by Age, Ghana 2003**



The use of a feeding bottle with a nipple is discouraged in Ghana. HIV-positive mothers are told not to use feeding bottles even when they choose to use formula as their feeding option. The use of a bottle with a nipple, regardless of the contents (formula or any other liquid), requires hygienic handling. As a result of inadequate and insufficient cleaning and ease of recontamination after cleaning, the nipple may house disease-causing agents transferable to the baby. Table 10.2 indicates that 12 percent of children under six months and the same proportion of children age 6-9 months are given a feeding bottle with a nipple. Bottle-feeding reaches its peak (15 percent) at age 4-5 months. The percentage of children who are bottle-fed declines to 5 percent by the age of two years. It however increases slightly after that to 6 percent by 28 months. It is assumed that by two years most children are eating solid foods, which does not require feeding by bottle. The percentage of young children bottle-fed has declined markedly over the past five years. For example, bottle-feeding at age 4-5 months has declined from 26 percent in 1998 (GSS and MI, 1999) to 15 percent in 2003.

Table 10.3 presents information on the median duration of any breastfeeding, exclusive breastfeeding, and predominant breastfeeding among children born in the three years preceding the survey, the percentage of breastfeeding children under six months living with the mother who were breastfed six or more times in the 24 hours preceding the survey, and the mean number of feeds (day and night), by background characteristics.

The median duration of any breastfeeding in Ghana is 23 months. Regional differences in breastfeeding prevalence are minimal, with the longest duration being 28 months in the Northern Region and the lowest (19 months) in Greater Accra. The median duration of exclusive breastfeeeding is 2 months and the median duration of predominant breastfeeding is 5 months. Children are considered predominantly breastfed when they are either exclusively breastfed or receive breast milk and plain water, water-based liquids, and/or juice only (excluding other milk and solids).

Frequent breastfeeding improves the production of breast milk. It is also a benefit for some mothers who breastfeed exclusively as it delays the return of fertility.

Table 10.3 indicates that almost all breastfed children under 6 months (97 percent) are breastfed six or more times in the past 24 hours, with an average of 7 daytime feeds and 5 nighttime feeds.

Table 10.3 Median duration and frequency of breastfeeding

Median duration of any breastfeeding, exclusive breastfeeding, and predominant breastfeeding among children born in the three years preceding the survey, percentage of breastfeeding children under six months living with the mother who were breastfed six or more times in the 24 hours preceding the survey, and mean number of feeds (day/night), by background characteristics, Ghana 2003

					Breastfeeding children under six months[2]			
	Median duration (months) of breastfeeding[1]							
Background characteristic	Any breast-feeding	Exclusive breastfeeding	Predominant breastfeeding[3]	Number of children	Percentage breastfed 6+ times in last 24 hours	Mean number of day feeds	Mean number of night feeds	Number of chil-dren
Sex								
Male	22.8	2.8	5.1	1,090	96.0	7.7	4.6	168
Female	22.3	1.2	5.1	1,085	97.9	7.1	4.4	143
Residence								
Urban	20.4	4.1	5.0	732	99.3	8.1	4.3	97
Rural	23.3	1.4	5.1	1,442	95.8	7.1	4.6	214
Region								
Western	20.2	0.6	2.4	215	(100.0)	(7.8)	(4.9)	34
Central	21.3	0.5	6.3	184	*	*	*	22
Greater Accra	19.3	5.7	6.9	229	(100.0)	(7.7)	(4.9)	28
Volta	22.9	3.2	4.1	184	*	*	*	27
Eastern	21.2	2.9	3.4	220	*	*	*	23
Ashanti	20.6	1.9	3.2	407	(96.3)	(7.8)	(4.4)	59
Brong Ahafo	22.6	3.5	6.2	240	(100.0)	(9.0)	(4.3)	39
Northern	28.2	0.7	7.4	297	92.5	6.2	3.5	47
Upper East	26.4	1.4	8.3	129	(97.2)	(4.8)	(4.7)	20
Upper West	27.4	5.1	7.0	70	(84.3)	(10.0)	(4.7)	13
Mother's education								
No education	25.3	2.0	6.4	863	94.5	7.2	4.3	139
Primary	21.6	1.9	4.1	511	98.2	7.4	5.0	66
Middle/JSS	20.8	2.6	4.2	676	99.0	7.6	4.5	96
Secondary +	17.4	2.9	4.1	124	*	*	*	11
Wealth quintile								
Lowest	26.8	2.4	6.9	548	96.0	6.9	4.7	76
Second	22.8	0.7	5.2	477	94.4	7.4	4.5	81
Middle	21.6	1.8	4.6	450	97.2	7.9	4.6	78
Fourth	20.6	3.0	3.9	364	(100.0)	(7.5)	(4.3)	42
Highest	19.2	3.7	4.4	336	(100.0)	(7.8)	(4.3)	34
Total	22.5	2.3	5.1	2,175	96.9	7.4	4.5	312
Mean for all children	22.2	3.8	6.9	na	na	na	na	na

Note: Median and mean durations are based on current status. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Percentages in parentheses are based on 25-49 unweighted cases.
na = Not applicable
[1] It is assumed that non-last-born children or last born child not living with the mother are not currently breastfeeding
[2] Excludes children who do not have a valid answer on the number of times breastfed
[3] Either exclusively breastfed or received breast milk and plain water, water-based liquids, and/or juice only (excludes other milk)

Although the median duration of breastfeeding is slightly longer in the rural areas (23 months) than in the urban areas (20 months), exclusive breastfeeding is somewhat shorter in rural areas (1 month) than in urban areas (4 months). Exclusive breastfeeding rates increase with increases in mother's level of education and wealth quintile.

10.2 COMPLEMENTARY FEEDING

10.2.1 Types of Complementary Foods

In line with the WHO/UNICEF global strategy on infant and young child feeding, the Ghana Health Service recommends 6 months as the optimal age to introduce complementary foods. This is because after 6 months of age, breast milk alone is not sufficient to meet all the nutritional requirements of the infant. The period after 6 months of age is a crucial time for children because they are being introduced to the family diet, and a number of issues come into force. These include income, hygiene, general care, and choice of complementary foods. The spread of HIV/AIDS has created another challenge for breastfeeding.

Ghana has in place legislation under the Food and Drugs Law to control the marketing of breast milk substitutes by baby food manufacturers. The legislative instrument Breastfeeding Promotions Regulation 2000 (L.I.1667) went into effect in May 2000. The purpose is to prevent the aggressive marketing of breast milk substitutes, hence protecting breastfeeding practices.

Table 10.4 shows the percentage of youngest children under three years of age living with the mother who consumed specific foods in the day or night preceding the interview, by breastfeeding status and age. It is important to note that the categories presented in Table 10.4 are not mutually exclusive. The child who consumed milk could also have consumed semi-solid foods. The data show that among breastfeeding infants in Ghana, very few receive infant formula. Forty-seven percent of breastfeeding children age 4-5 months are introduced to solid or semi-solid foods and 30 percent are introduced to foods made from grains.

Table 10.4 also shows that at the age of 6-9 months, more than 70 percent of breastfeeding infants received solid foods in the 24 hours before the survey. The majority (53 percent) consumed food made from grains, 29 percent received fruits and vegetables, and 21 percent received animal products (in addition to breast milk). Foods rich in vitamin A were consumed by only 24 percent of breastfeeding infants 6-9 months, and fats by only 8 percent. The findings indicate that, in terms of nutrition, the food mixtures given during this transition period are somewhat limited. By 10-11 months, almost all (91 percent) infants are receiving solids foods. This is a marked improvement over the 1998 GDHS figure of 73 percent for this age group (GSS and MI, 1999). By that same age, 10-11 months, a larger proportion are consuming grains (76 percent), fruits and vegetables (53 percent), and foods rich in vitamin A (46 percent). Although animal products (a major source of iron and vitamin A) are consumed by 46 percent of children in this age group, consumption of animal products is not as prevalent as the other foods. By 20-23 months, grains (84 percent), fruits and vegetables (62 percent), and foods rich in vitamin A (53 percent) are consumed by the majority of breastfeeding children; consumption of animal products increases slightly to 58 percent.

Few children under two years of age are not breastfed. For non-breastfeeding children about two years of age, the rates of consumption of food are about the same as for breastfeeding children; however, these children do not have the added nutritional benefit of breast milk, and very few receive other milk, but these children do consume more meat than breastfed children.

Table 10.4 Foods consumed by children in the day or night preceding the interview

Percentage of youngest children under three years of age living with the mother who consumed specific foods in the day or night preceding the interview, by breastfeeding status and age, Ghana 2003

				Solid/semi-solid foods								
Age in months	Infant formula	Other milk/ cheese/ yoghurt	Other liquids[1]	Food made from grains	Fruits/ vegetables[2]	Food made from roots/ tubers	Food made from legumes	Meat/ fish/ shellfish/ poultry/ eggs	Food made with oil/ fat/ butter	Fruits and vegetables rich in vitamin A[3]	Any solid or semi-solid food	Number of children
BREASTFEEDING CHILDREN												
<2	1.4	1.4	2.9	2.3	0.4	0.4	0.0	0.0	0.0	0.4	3.3	91
2-3	1.7	7.8	1.7	5.7	1.1	0.0	0.0	0.0	0.0	1.1	15.6	88
4-5	6.3	9.9	7.1	30.3	3.6	1.7	0.9	0.9	0.0	2.7	46.5	127
6-7	9.9	13.1	15.7	42.9	13.5	6.9	6.7	14.2	6.0	11.6	62.0	136
8-9	12.9	19.4	32.8	66.8	49.5	19.6	14.3	29.9	10.9	39.5	83.2	102
10-11	6.7	13.8	25.2	75.7	53.1	30.4	13.5	46.0	17.1	45.7	90.8	129
12-15	6.3	13.9	26.8	78.9	60.9	33.0	20.3	58.4	19.8	50.2	96.0	247
16-19	4.8	17.0	34.3	79.5	62.2	30.6	22.2	58.1	23.7	48.6	95.7	192
20-23	6.2	14.8	36.9	84.3	61.7	39.6	26.6	58.4	25.3	52.7	99.0	121
24-35	3.1	7.1	34.1	86.5	57.3	39.0	23.9	50.7	23.6	47.5	96.3	98
<6	3.5	6.8	4.3	14.9	1.9	0.9	0.4	0.4	0.0	1.6	24.8	306
6-9	11.2	15.8	23.0	53.1	28.9	12.3	10.0	20.9	8.1	23.5	71.1	238
NON-BREASTFEEDING CHILDREN												
16-19	(17.5)	(37.2)	(39.6)	(95.2)	(72.5)	(53.7)	(30.1)	(83.0)	(42.8)	(45.6)	(100.0)	32
20-23	7.3	25.9	37.4	93.2	70.3	47.4	31.4	78.6	43.9	60.4	100.0	60
24-35	4.5	19.2	43.0	89.2	73.4	49.5	27.1	71.8	28.7	62.0	99.0	409

Note: Breastfeeding status and food consumed refer to a "24-hour" period (yesterday and last night). Percentages in parentheses are based on 25-49 unweighted cases.
[1] Does not include plain water
[2] Includes fruits and vegetables rich in vitamin A
[3] Includes pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, green leafy vegetables, mangoes, papayas, and other locally grown fruits and vegetables that are rich in vitamin A

10.2.2 Frequency of Foods Consumed by Children

Table 10.5 and Figure 10.2 present the mean number of times specific foods were consumed in the day or night preceding the interview by youngest children under three years of age living with the mother, according to breastfeeding status and age. Infants and young children eat small meals and, therefore, frequent meals are necessary to provide them with the required nutrients. It is recommended that children age 6-8 months eat a minimum of 2-3 meals and snacks per day in addition to breast milk. For children over 8 months of age, 3-5 meals should be consumed by breastfed children (WHO, 1998). The number of meals required is based on the energy density of the foods being fed. Consuming an appropriate variety of foods is essential for the child's nutrition.

Table 10.5 shows that on average foods made from grains are given to breastfeeding children only once a day from age 6-9 months, which is the best time for introducing complementary foods. Foods containing grain include flour made from maize, millet, or sorghum, which is used to make a fermented or

Table 10.5 Frequency of foods consumed by children in the day or night preceding the interview

Mean number of times specific foods were consumed in the day or night preceding the interview by youngest children under three years of age living with the mother, according to breastfeeding status and age, Ghana 2003

				Solid/semi-solid foods							
Age in months	Infant formula	Other milk/ cheese/ yoghurt	Other liquids[1]	Food made from grains	Fruits/ vegetables[2]	Food made from roots/ tubers	Food made from leg-umes	Meat/ fish/ shell-fish/ poul-try/ eggs	Food made with oil/ fat/ butter	Fruits and vegetables rich in vitamin A[3]	Number of chil-dren
BREASTFEEDING CHILDREN											
<2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	91
2-3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	88
4-5	0.1	0.2	0.1	0.5	0.1	0.0	0.0	0.0	0.0	0.1	127
6-7	0.1	0.1	0.2	0.8	0.3	0.1	0.1	0.2	0.1	0.2	136
8-9	0.3	0.4	0.6	1.2	1.1	0.2	0.2	0.5	0.2	0.7	102
10-11	0.3	0.4	0.5	1.5	1.3	0.5	0.3	0.7	0.3	0.9	129
12-15	0.1	0.2	0.4	1.4	1.3	0.4	0.3	1.0	0.3	0.9	247
16-19	0.1	0.2	0.5	1.4	1.4	0.4	0.3	1.0	0.3	0.9	192
20-23	0.1	0.3	0.7	1.8	1.5	0.5	0.3	0.9	0.3	1.1	121
24-35	0.0	0.1	0.5	1.8	1.4	0.6	0.3	0.9	0.3	1.0	98
<6	0.1	0.1	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	306
6-9	0.2	0.2	0.4	1.0	0.6	0.1	0.1	0.3	0.1	0.4	238
NON-BREASTFEEDING CHILDREN											
16-19	(0.3)	(0.4)	(0.6)	(2.0)	(1.7)	(0.6)	(0.3)	(1.8)	(0.5)	(1.0)	32
20-23	0.1	0.5	0.6	1.7	2.0	0.7	0.4	1.4	0.5	1.2	60
24-35	0.1	0.3	0.7	1.7	2.0	0.7	0.3	1.4	0.4	1.3	409

Note: Breastfeeding status and food consumed refer to a "24-hour" period (yesterday and last night). Percentages in parentheses are based on 25-49 unweighted cases.

[1] Does not include plain water

[2] Includes fruits and vegetables rich in vitamin A

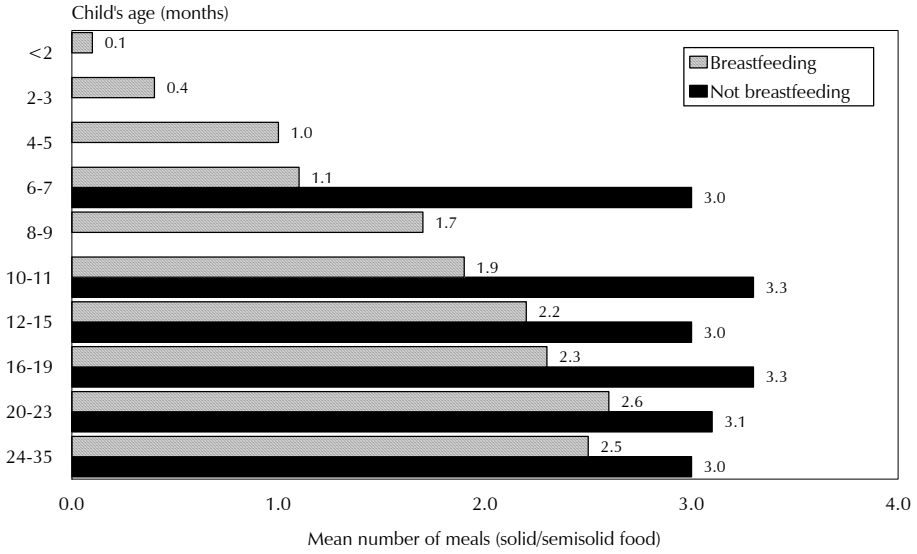
[3] Includes pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, green leafy vegetables, mangoes, papayas, and other locally grown fruits and vegetables rich in vitamin A

unfermented porridge (*koko*). This food is consumed a little more than once a day through one year of age and twice a day at about two years of age for breastfed children.

At two years, non-breastfeeding children are receiving foods made from grain twice a day like breastfeeding children. Fruits and vegetables are consumed about twice a day by both breastfeeding and non-breastfeeding children at about two years. Foods enriched with oil/fat/butter—thereby increasing caloric intake—are consumed less than once a day. Animal products are consumed an average of once a day by both groups of children at two years of age.

Table 10.6 presents the mean number of days specific foods were received in the seven days preceding the interview by youngest children under three years of age, living with the mother, by breastfeeding status and age. Plain water is given almost on a daily basis. It also shows that foods most commonly given to children are those made from grains. They are given about four times a week. Animal products and green leafy vegetables are given three times a week.

Figure 10.2 **Frequency of Meals Consumed by Children under 36 Months of Age Living with Their Mother, by Breastfeeding Status, Ghana 2003**



Note: Data are not shown for groups with fewer than 25 unweighted cases. GDHS 2003

Table 10.6 Frequency of foods consumed by children in preceding seven days

Mean number of days specific foods were received in the seven days preceding the interview by youngest children under three years of age living with the mother, by breastfeeding status and age, Ghana 2003

	Liquids					Solid/semisolid foods							Fruits and vegetables rich in vitamin A			
Age in months	Plain water	Infant formula	Other milk	Fruit juice	Other liquids	Food made from grains	Food made from roots/ tubers	Fruits and vegetables not rich in vitamin A	Food made from leg-umes	Cheese/ yoghurt	Meat/ fish/ shellfish/ poultry/ eggs	Food made with oil/ fat/ butter	Pumpkin/ red or yellow yams/ carrots/ red sweet potatoes	Green leafy vegeta-bles	Mango/ papaya/ other local fruits rich in vitamin A	Num-ber of chil-dren
BREASTFEEDING CHILDREN																
<2	2.2	0.1	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	91
2-3	2.0	0.2	0.4	0.1	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	88
4-5	3.9	0.4	0.7	0.2	0.1	2.0	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.0	127
6-7	5.7	0.8	1.0	0.4	0.4	2.9	0.3	0.3	0.4	0.1	0.6	0.2	0.2	0.4	0.2	136
8-9	6.5	0.9	1.0	1.1	0.5	4.3	1.2	1.5	0.9	0.2	1.6	0.6	0.7	1.6	0.5	102
10-11	6.7	0.5	0.6	0.9	0.7	4.7	1.8	1.5	0.9	0.1	2.8	0.8	0.8	2.0	0.6	129
12-15	6.8	0.4	0.9	1.0	0.7	5.0	1.8	1.8	1.2	0.1	3.6	1.0	1.1	2.3	0.5	247
16-19	6.8	0.3	0.8	1.3	1.0	5.1	1.8	2.1	1.4	0.2	3.9	1.3	1.1	2.4	0.8	192
20-23	6.9	0.4	0.7	1.0	1.6	5.5	2.3	1.9	1.3	0.1	3.5	1.3	1.5	2.4	0.7	121
24-35	6.9	0.2	0.3	0.9	1.3	5.9	2.2	1.8	1.4	0.1	3.2	1.5	1.0	2.6	0.7	98
<6	2.9	0.2	0.5	0.1	0.1	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	306
6-9	6.1	0.8	1.0	0.7	0.5	3.5	0.6	0.9	0.6	0.1	1.1	0.4	0.4	0.9	0.3	238
Total	5.8	0.4	0.7	0.8	0.7	3.9	1.3	1.3	0.8	0.1	2.2	0.7	0.7	1.6	0.4	1,330
NON-BREASTFEEDING CHILDREN																
16-19	(6.9)	(1.3)	(2.0)	(1.4)	(0.9)	(6.0)	(2.9)	(3.2)	(1.5)	(0.2)	(5.4)	(2.3)	(1.1)	(2.6)	(1.2)	32
20-23	6.9	0.6	1.3	1.8	0.9	5.6	2.9	3.4	1.8	0.6	4.9	2.1	2.0	2.3	0.8	60
24-35	6.8	0.3	1.1	1.8	1.3	5.7	2.7	2.6	1.6	0.3	4.6	1.5	1.6	2.6	1.1	409
Total	6.8	0.4	1.2	1.8	1.2	5.7	2.7	2.7	1.6	0.3	4.6	1.7	1.6	2.5	1.0	516

Note: Breastfeeding status refers to a "24-hour" period (yesterday and last night). Percentages in parentheses are based on 25-49 unweighted cases.

10.3 MICRONUTRIENTS

Micronutrients are essential for the metabolic processes in the body and they play a major role in the nutrition and health of an individual. The 2003 GDHS collected various types of data that are useful in assessing the micronutrient status of young children and women.

10.3.1 Iodisation of Household Salt

In Ghana, a number of programmes aim at reducing micronutrient deficiencies. These include salt iodisation and vitamin A supplementation for children under five years of age through mass campaigns linked to national immunisation days. Vitamin A supplementation for children under five years of age and postpartum women (not later than 6 weeks after delivery) through routine health services has also begun but on a limited scale. Women are given vitamin A supplements during the postpartum period to assist both the mother and her breastfeeding children.

Disorders induced by dietary iodine deficiency constitute a major global nutrition concern. A lack of sufficient iodine can lead to goitre, hypothyroidism, impaired mental functions, retarded mental and physical development, and diminished school performance. Iodine deficiency in the foetus leads to increased rates of abortion, stillbirths, congenital anomalies, cretinism, psychomotor defects, and neonatal mortality. Iodine deficiency can be avoided by using salt that has been fortified with iodine (iodised salt).

Table 10.7 presents the percent distribution of households with salt tested for iodine content by level of iodine in salt (parts per million), percentage of households tested, and percentage of households with no salt, according to background characteristics. It shows that 90 percent of the households interviewed in the 2003 GDHS had their salt tested for iodine, while 9 percent had no salt available in the household. Fifty-nine percent of households are consuming salt that is not iodised, 13 percent of households are consuming inadequately iodised salt (<15 ppm), and only 28 percent are consuming adequately iodised salt (15+ ppm). Although Ghana has a salt iodisation law, there is need for more stringent enforcement and monitoring. The proportion of households with adequately iodised salt in rural areas (16 percent) is markedly lower than in the urban areas (44 percent). There are equally marked regional differences in adequacy of iodine levels in salt, ranging from 6 percent of households in the Northern and Upper East regions to 50 percent in the Greater Accra Region.

10.3.2 Micronutrient Intake among Children

Vitamin A is an essential micronutrient for the normal functioning of the visual system, growth and develoment, resistance to disease, and for reproduction. Vitamin A is believed to improve immunity and, hence, reduce mortality rates in children and women.

Table 10.8 shows the percentage of children under age three who consumed fruits and vegetables rich in vitamin A in the seven days preceding the survey, and the percentage of children age 6-59 months who received vitamin A supplements in the 6 months preceding the survey. It also indicates the percentage of children under five living in households that have adequately iodised salt.

Table 10.8 shows that 41 percent of children under three who live with their mothers consume fruits and vegetables rich in vitamin A. The fact that 78 percent of children 6-59 months are reported to have received a vitamin A supplement in the previous 6 months is encouraging. The data indicate that only 23 percent of children under the age of three live in households that use adequately iodised salt.

Consumption of vitamin A supplements is highest in the age group 24-35 months. There are no marked differences between the sexes on the consumption of vegetables and fruits rich in vitamin A, vitamin A supplements, or iodised salt. There is also little difference by birth order in the consumption of

Table 10.7 Iodisation of household salt

Percent distribution of households with salt tested for iodine content by level of iodine in salt (parts per million), percentage of households tested, and percentage of households with no salt, according to background characteristics, Ghana 2003

Background characteristic	Iodine content among households tested: None (0 ppm)	Inadequate (<15 ppm)	Adequate (15+ ppm)	Total	Number of households	Percentage of households tested	Percentage of households with no salt	Number of households
Residence								
Urban	43.9	12.4	43.7	100.0	2,460	85.7	12.8	2,870
Rural	69.9	13.9	16.2	100.0	3,159	93.4	5.2	3,381
Region								
Western	45.5	15.5	39.1	100.0	544	88.9	10.4	612
Central	81.1	3.7	15.1	100.0	541	92.1	7.9	587
Greater Accra	47.0	3.1	49.9	100.0	731	82.2	15.3	890
Volta	78.6	6.7	14.7	100.0	491	91.2	6.3	538
Eastern	73.7	7.7	18.5	100.0	649	88.7	8.0	732
Ashanti	37.0	26.0	36.9	100.0	1,191	90.7	9.0	1,313
Brong Ahafo	43.0	21.9	35.1	100.0	614	92.3	7.2	665
Northern	87.7	6.5	5.8	100.0	462	94.9	4.3	487
Upper East	89.7	4.4	5.9	100.0	259	92.5	5.1	280
Upper West	36.8	35.1	28.1	100.0	137	93.2	1.3	147
Wealth quintile								
Lowest	80.2	11.0	8.8	100.0	932	96.0	2.7	971
Second	73.2	13.8	13.0	100.0	1,100	94.2	4.7	1,168
Middle	63.4	16.5	20.1	100.0	1,186	90.2	7.9	1,315
Fourth	53.4	15.4	31.2	100.0	1,248	85.9	12.9	1,452
Highest	27.5	8.7	63.8	100.0	1,152	85.7	12.5	1,345
Total	58.5	13.2	28.3	100.0	5,619	89.9	8.7	6,251

ppm=parts per million

vitamin A supplements or foods rich in vitamin A. However, children of birth order greater than three are less likely than children of birth order 1-3, to be living in households that use adequately iodised salt. As expected, non-breastfeeding children consume more micronutrient-rich foods than breastfeeding children. There are minimal differences between urban and rural children in the consumption of fruits and vegetables rich in vitamin A and vitamin A supplementation. Data also indicate that the consumption of foods rich in vitamin A is higher for children of women with a secondary or higher education compared with those with primary or no education. There are marked regional differences in micronutrient intake among children. For example, the level of vitamin A supplementation among children ranges from 67 percent in the Central Region to 86 percent in the Upper East Region.

Table 10.8 Micronutrient intake among children

Percentage of youngest children under age three living with the mother who consumed fruits and vegetables rich in vitamin A in the seven days preceding the survey, percentage of children age 6-59 months who received vitamin A supplements in the six months preceding the survey, and percentage of children under five living in households using adequately iodised salt, by background characteristics, Ghana 2003

Background characteristic	Consumed fruits and vegetables rich in vitamin A[1]	Number of children under age three	Consumed vitamin A supplements	Number of children age 6-59 months	Percentage living in households using adequately iodised salt[2]	Number of children under five
Age in months						
<6	1.5	308	na	na	23.7	299
6-9	23.4	239	65.4	241	22.3	230
10-11	46.0	131	74.3	134	16.8	127
12-23	51.4	662	79.1	695	21.5	662
24-35	59.2	507	82.8	649	24.7	620
36-47	na	na	80.8	695	20.2	655
48-59	na	na	75.9	612	25.3	577
Sex						
Male	42.1	934	79.8	1,515	22.2	1,591
Female	40.3	912	76.9	1,511	23.0	1,577
Birth order						
1	41.4	391	77.0	690	27.8	715
2-3	42.5	693	78.1	1,067	26.4	1,118
4-5	39.3	376	78.1	687	17.3	711
6+	40.8	385	80.7	581	15.9	624
Breastfeeding status						
Breastfeeding	33.6	1,330	75.5	1,052	19.9	1,304
Not breastfeeding	60.5	509	79.8	1,930	24.6	1,822
Residence						
Urban	40.8	629	80.6	1,017	42.5	1,037
Rural	41.5	1,217	77.2	2,009	12.9	2,131
Region						
Western	40.5	168	80.1	297	31.5	318
Central	49.6	156	66.8	259	5.6	263
Greater Accra	34.5	194	74.3	339	40.9	328
Volta	39.8	151	82.2	242	13.6	252
Eastern	50.5	184	78.4	313	11.8	320
Ashanti	51.3	345	82.0	563	39.0	588
Brong Ahafo	47.7	206	75.1	328	32.8	353
Northern	27.2	263	78.3	409	4.1	445
Upper East	23.9	120	85.5	186	3.3	202
Upper West	34.1	60	84.8	91	26.0	99
Mother's education						
No education	33.8	744	74.5	1,200	11.8	1,295
Primary	42.5	421	75.0	694	19.0	707
Middle/JSS	47.2	574	84.1	958	31.8	992
Secondary+	56.5	107	86.2	174	64.8	175
Mother's age at birth						
<20	41.1	207	73.9	339	21.2	349
20-24	42.5	447	76.0	765	22.5	774
25-29	39.7	464	79.9	756	24.5	807
30-34	39.5	359	79.3	587	21.7	616
35-49	43.3	370	81.2	579	22.1	622
Wealth quintile						
Lowest	32.7	486	76.3	788	8.2	840
Second	48.0	398	75.6	658	12.7	718
Middle	39.6	369	79.2	576	18.9	603
Fourth	43.8	308	78.2	530	29.6	542
Highest	45.7	284	84.8	474	60.6	466
Total	41.2	1,846	78.4	3,026	22.6	3,169

Note: Information on vitamin A supplements is based on mother's recall. Figures in parentheses are based on 25-49 unweighted cases.
na = Not applicable
[1] Includes pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, green leafy vegetables, mango, papaya, and other fruits and vegetables that are rich in vitamin A
[2] Salt containing 15 ppm of iodine or more. Excludes children in households in which salt was not tested.

10.3.3 Micronutrient Intake Among Mothers

It is recommended that mothers in Ghana be given two doses of vitamin A (24 hours apart) within 8 weeks of delivery. Mothers who deliver at health institutions are to receive a dose of vitamin A before they are discharged from the institution and given the second dose to take at home the following day. This is to boost the vitamin A level for their benefit and, through their breast milk, for the benefit of the child.

Table 10.9 shows the percentage of women with a birth in the five years preceding the survey who received a vitamin A dose in the first two months after delivery, the percentage who experienced night blindness during pregnancy, the percentage who took iron tablets for a specific number of days, and the percentage who live in households using adequately iodised salt, by background characteristics. The table shows that only 43 percent of mothers with a birth in the last five years reported receiving a vitamin A dose postpartum. Vitamin A supplementation is slightly higher among mothers of first births. Vitamin A supplementation among women is higher in urban areas (50 percent) than in rural areas (39 percent). The Upper East Region, where the programme was started before other regions, has the highest level of postpartum supplementation of vitamin A (73 percent), while the Western Region has the lowest (21 percent). This indicates the need for strengthening routine supplementation by health services immediately after a birth, because it is the best opportunity to capture most of the mothers.

Table 10.9 also shows that 8 percent of interviewed women reported night blindness during pregnancy. When the data are adjusted for blindness not attributed to vitamin A deficiency during pregnancy, only 2 percent of women reported night blindness during their last pregnancy. Women age 25-29 and those who have had six or more births are more likely to report a higher prevalence of night blindness associated with vitamin A deficiency during pregnancy. Night blindness is notably higher in the Upper West, Volta, and Northern regions of the country. Prevalence of night blindness is also higher among women with little or no education and women from the two lowest wealth quintiles.

Iron-deficiency anaemia is a major threat to maternal health; it contributes to low birth weight, lowered resistance to infection, poor cognitive development, and decreased work capacity. Furthermore, anaemia increases morbidity from infections because it adversely affects the body's immune response. According to the government policy, all pregnant mothers attending antenatal clinics are supposed to be given iron tablets during their pregnancy. International recommendations are that iron tablets be taken daily for at least three months during pregnancy. It should be noted that although four in five women reported having taken iron tablets during their pregnancy, only 40 percent took them for 90 or more days (Table 10.9).

According to the baseline study on prevalence and etiology of anaemia conducted in 1995 (GHS, 1995), 65 percent of pregnant women, 59 percent of lactating mothers, 71 percent of school-age children and 84 percent of preschool children were found to be anaemic. This situation poses a challenge to the Ghana government if morbidity and mortality due to anaemia and other micronutrient deficiencies is to be reduced.

Table 10.9 shows that only 24 percent of women live in households where adequately iodised salt is used. There are no marked differences in the level of micronutrient supplementation by mother's age at birth or number of children ever born.

Table 10.9 Micronutrient intake among mothers

Percentage of women with a birth in the five years preceding the survey who received a vitamin A dose in the first two months after delivery, percentage who suffered from night blindness during pregnancy, percentage who took iron tablets or syrup for specific number of days, and percentage who live in households using adequately iodised salt, by background characteristics, Ghana 2003

Background characteristic	Received vitamin A dose post-partum[1]	Night blindness during pregnancy		Number of days iron tablets taken during pregnancy						Number of women	Percentage living in households using adequately iodised salt[3]	Number of women
		Reported	Adjusted[2]	None	<60	60-89	90+	Don't know	Missing			
Age at birth												
<20	42.0	6.5	1.4	18.7	21.7	9.5	40.2	9.8	0.1	297	21.9	277
20-24	42.6	7.3	1.7	18.0	22.9	8.8	40.7	9.7	0.0	607	24.3	570
25-29	41.0	8.3	2.5	18.0	19.3	9.6	40.3	12.4	0.4	647	25.1	615
30-34	44.2	5.7	1.5	19.7	18.3	8.2	42.6	9.8	1.3	508	24.5	486
35-49	45.3	9.6	2.1	20.2	21.7	9.0	35.3	12.1	1.8	586	23.3	564
Number of children ever born												
1	47.1	6.9	1.6	16.8	19.1	11.4	42.4	10.2	0.0	565	28.6	538
2-3	41.5	7.3	1.9	17.4	20.9	6.2	42.2	12.2	1.1	940	28.5	887
4-5	42.7	6.6	1.4	19.7	19.3	8.5	41.2	10.0	1.2	582	18.9	548
6+	41.9	10.1	2.8	22.7	23.6	11.8	31.1	10.2	0.5	558	17.5	538
Residence												
Urban	49.7	5.9	2.0	12.6	12.8	6.7	54.9	12.1	0.9	946	43.8	881
Rural	39.3	8.6	1.9	22.4	25.2	10.2	31.2	10.2	0.7	1,699	13.4	1,631
Region												
Western	20.5	7.0	2.3	21.5	17.0	9.2	39.5	12.9	0.0	246	34.8	233
Central	39.7	4.6	1.3	17.0	12.0	13.4	57.2	0.5	0.0	211	6.9	201
Greater Accra	40.5	7.1	2.0	14.1	10.2	4.3	56.4	14.6	0.3	303	42.7	271
Volta	24.1	12.0	5.0	15.3	50.0	13.8	15.6	5.0	0.3	220	12.7	206
Eastern	34.3	6.5	0.5	21.4	26.8	8.9	35.2	5.0	2.7	266	13.0	251
Ashanti	50.7	4.0	0.8	14.4	14.4	13.9	53.9	2.3	1.0	507	39.5	486
Brong Ahafo	53.2	6.7	0.4	6.8	15.0	10.1	39.2	28.6	0.3	297	35.6	285
Northern	46.8	12.8	3.7	31.8	32.2	2.0	11.9	21.4	0.7	346	4.3	338
Upper East	72.9	9.7	0.6	25.6	7.6	4.5	58.0	3.4	0.9	166	3.8	161
Upper West	47.7	12.0	5.6	39.2	33.0	5.7	7.8	13.1	1.1	83	26.2	79
Education												
No education	43.4	11.0	2.4	27.5	23.9	8.1	27.9	12.0	0.7	1,025	11.9	989
Primary	39.2	5.5	1.4	15.9	21.7	8.7	43.2	9.9	0.6	589	20.1	552
Middle/JSS	44.3	5.1	1.9	11.7	18.5	10.2	48.2	10.4	1.1	879	34.1	827
Secondary+	48.0	8.2	0.7	14.5	9.1	8.9	56.7	10.8	0.0	153	65.2	143
Wealth quintile												
Lowest	40.5	10.1	2.1	29.5	24.9	7.7	25.1	12.1	0.7	648	8.0	629
Second	39.5	10.4	2.7	19.2	26.8	12.3	31.8	9.7	0.3	557	12.6	541
Middle	39.4	5.7	1.5	16.7	25.0	10.8	38.6	8.1	0.8	534	20.2	493
Fourth	48.1	6.8	1.5	14.3	13.0	8.2	49.9	14.0	0.5	474	31.0	451
Highest	50.4	3.9	1.5	10.4	10.0	5.3	61.9	10.6	1.7	433	61.9	398
Total	43.0	7.7	1.9	18.9	20.7	9.0	39.7	10.9	0.8	2,645	24.1	2,512

Note: For women with two or more live births in the five-year period, data refer to the most recent birth.
[1] In the first two months after delivery
[2] Women who reported night blindness but did not report difficulty with vision during the day
[3] Salt containing 15 ppm of iodine or more. Excludes women in households in which salt was not tested.

10.3.4 Prevalence of Anaemia in Children

The most common causes of anaemia in Ghana are inadequate dietary intake of iron, malaria, and intestinal worm infestation (GHS, 2003a). Iron and folic acid supplementation and anti-malarial prophylaxis for pregnant women, promotion of the use of insecticide-treated bed nets by pregnant women and children under five, and six-month de-worming for children age two to five years are some of the measures being pursued by the Ghana Health Service to reduce anaemia prevalence among vulnerable groups.

Table 10.10 shows the percentage of children age 6-59 months classified as having anaemia, by background characteristics. Three-quarters of Ghanaian children 6-59 months old have some level of anaemia, including 23 percent of children who are mildly anaemic, 47 percent who are moderately anaemic, and 6 percent who are severely anaemic.

Prevalence of anaemia among children is higher in rural areas (80 percent) than in urban areas (68 percent). The Northern Region has the highest prevalence of anaemia (83 percent), while the Greater Accra Region has the lowest (61 percent). Prevalence of anaemia is also higher among children of mothers with little or no education, young mothers (15-19 years), and children in households in the two poorest wealth quintiles. This indicates the widespread nature of the problem and the need to intensify the various components of the anaemia control strategy.

10.3.5 Prevalence of Anaemia in Women

Table 10.11 presents information on prevalence of anaemia among women age 15-49. The prevalence of anaemia is less pronounced among women than among children. Forty-five percent of women age 15-49 are anaemic, with 35 percent mildly anaemic, 9 percent moderately anaemic, and less than 1 percent severely anaemic. Differences by urban-rural place of residence are not large. About half of women in seven regions in Ghana (including Greater Accra) suffer from some degree of anaemia. Women residing in Brong Ahafo Region are least likely to be anaemic. Lack of education, being pregnant, and living in poor households are also associated with higher prevalence of anaemia in women of childbearing age.

Table 10.10 Prevalence of anaemia in children

Percentage of children age 6-59 months classified as having anaemia, by background characteristics, Ghana 2003

Background characteristic	Any anaemia	Anaemia status: Mild anaemia 10.0-10.9 g/dl)	Moderate anaemia (7.0-9.9 g/dl)	Severe anaemia (below 7.0 g/dl)	Number of children
Age in months					
6-9	74.5	19.5	46.6	8.4	227
10-11	85.7	24.0	48.6	13.0	121
12-23	83.5	19.2	54.2	10.1	661
24-35	76.4	21.3	50.2	5.0	635
36-47	73.5	24.4	45.9	3.2	716
48-59	69.5	28.1	38.8	2.5	632
Sex					
Male	76.2	22.5	47.9	5.8	1,481
Female	75.9	23.5	46.7	5.7	1,511
Birth order[1]					
1	75.4	24.1	46.0	5.2	566
2-3	76.6	23.2	48.5	4.8	935
4-5	76.4	21.0	47.5	7.9	624
6+	78.1	21.4	50.3	6.4	537
Birth interval in months[1]					
First birth[2]	75.1	24.0	45.5	5.5	573
<24	81.6	22.0	50.0	9.6	273
24-47	78.9	21.8	51.1	6.0	1,142
48+	72.0	22.8	44.3	4.9	673
Residence					
Urban	67.8	26.1	37.8	4.0	984
Rural	80.1	21.5	51.9	6.7	2,008
Region					
Western	80.4	23.8	47.6	9.0	293
Central	76.8	24.5	46.4	5.9	267
Greater Accra	61.3	24.0	33.2	4.1	324
Volta	72.7	25.3	45.6	1.8	255
Eastern	74.4	24.2	46.5	3.7	292
Ashanti	79.0	23.1	48.5	7.4	553
Brong Ahafo	74.9	22.4	45.9	6.6	333
Northern	82.5	18.7	58.1	5.7	403
Upper East	79.1	22.2	49.4	7.5	186
Upper West	78.3	23.9	52.0	2.5	86
Mother's education[3]					
No education	81.6	20.4	55.2	6.0	1,097
Primary	77.9	23.6	47.3	7.0	625
Middle/JSS	71.8	24.0	41.7	6.0	859
Secondary+	60.6	27.9	31.8	0.8	154
Mother's age[3]					
15-19	86.5	29.5	47.3	9.7	76
20-24	79.1	17.9	53.0	8.2	490
25-29	77.5	22.8	49.7	5.0	706
30-34	75.1	25.8	44.5	4.9	607
35-49	74.3	22.5	46.0	5.8	857
Mother's status					
Mother interviewed	76.6	22.5	48.1	6.0	2,660
Mother not interviewed but in the household	73.5	27.4	41.5	4.6	75
Mother not in the household[4]	71.2	26.4	40.7	4.1	257
Wealth quintile					
Lowest	82.2	19.2	55.5	7.5	774
Second	81.7	23.0	51.7	7.1	660
Middle	79.2	23.4	50.0	5.8	597
Fourth	68.8	23.5	40.7	4.7	521
Highest	61.1	28.6	30.4	2.1	441
Total	76.1	23.0	47.3	5.8	2,992

Note: Table is based on children who stayed in the household the night before the interview.
g/dl = grams per deciliter
[1] Excludes children whose mothers were not interviewed
[2] First born twins (triplets, etc.) are counted as first births because they do not have a previous birth interval
[3] For women who are not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the household schedules.
[4] Includes children whose mothers are deceased

Table 10.11 Prevalence of anaemia in women

Percentage of women age 15-49 with anaemia, by background characteristics, Ghana 2003

Background characteristic	Any anaemia	Anaemia status: Mild anaemia	Moderate anaemia	Severe anaemia	Number of women
Age[1]					
15-19	45.8	37.2	7.9	0.7	1,060
20-24	45.0	34.1	10.2	0.7	939
25-29	42.5	34.1	8.1	0.2	893
30-34	43.8	35.9	7.1	0.8	729
35-39	47.5	36.1	9.8	1.6	669
40-44	43.9	32.4	10.9	0.6	529
45-49	44.5	32.4	10.5	1.6	454
Children ever born[2]					
None	43.6	34.1	8.6	0.8	1,635
1	45.3	34.6	9.6	1.1	740
2-3	43.6	34.8	8.4	0.4	1,223
4-5	47.2	37.0	9.7	0.5	851
6+	45.6	34.7	9.4	1.4	823
Maternity status[2]					
Pregnant	64.9	37.0	26.7	1.2	400
Breastfeeding	47.9	40.1	7.3	0.5	1,262
Neither	41.4	32.9	7.6	0.9	3,610
Using IUD[2]					
Yes	31.6	27.5	4.2	0.0	31
No	44.8	35.0	9.0	0.8	5,242
Residence					
Urban	41.6	32.4	8.2	1.1	2,524
Rural	47.6	37.2	9.7	0.6	2,748
Region					
Western	39.1	31.9	6.3	0.8	531
Central	38.0	29.4	7.5	1.1	414
Greater Accra	47.0	37.8	8.5	0.7	861
Volta	48.5	36.0	12.2	0.3	468
Eastern	48.4	37.4	10.0	1.0	524
Ashanti	46.2	34.3	10.5	1.4	1,078
Brong Ahafo	33.5	26.3	6.9	0.2	544
Northern	49.8	42.7	6.4	0.6	445
Upper East	51.0	35.0	15.4	0.6	272
Upper West	49.7	44.9	4.5	0.3	136
Education[1]					
No education	48.7	37.9	10.0	0.8	1,485
Primary	44.5	33.9	10.0	0.7	1,059
Middle/JSS	44.5	35.2	8.4	0.9	2,122
Secondary +	36.1	28.4	6.8	0.8	606
Wealth quintile					
Lowest	53.7	42.1	11.1	0.5	899
Second	45.6	35.0	10.1	0.6	893
Middle	47.3	36.4	9.7	1.2	1,012
Fourth	40.7	31.7	8.4	0.5	1,153
Highest	39.6	31.5	6.8	1.2	1,316
Total	44.7	34.9	9.0	0.8	5,272

Note: Table is based on women who stayed in the household the night before the interview. Women with <7.0 g/dl of hemoglobin have severe anaemia, women with 7.0-9.9 g/dl have moderate anaemia, and pregnant women with 10.0-10.9 g/dl and nonpregnant women with 10.0-11.9 g/dl have mild anaemia.
g/dl = grams per deciliter
[1] For women who are not interviewed, information is taken from the Household Questionnaire
[2] Excludes women who were not interviewed

10.3.6 Prevalence of Anaemia in Children by Anaemia Status of Mother

Table 10.12 shows the percentage of children age 6-59 months classified as anaemic, by the anaemia status of the mother. There is not a strong relationship between the anaemia status of mothers and the anaemia status of children except in the case of mothers with moderate anaemia, whose children are more likely to suffer from severe anaemia (9 percent) than children of mothers with no anaemia (5 percent) or those with mild anaemia (6 percent).

Table 10.12 Prevalence of anaemia in children by anaemia status of mother

Percentage of children age 6-59 months classified as having anaemia, by anaemia status of mother, Ghana 2003

		Anaemia status of child			
Anaemia status of mother	Any anaemia	Mild (10.0-10.9 g/dl)	Moderate (7.0-9.9 g/dl)	Severe (below 7.0 g/dl)	Number of children
No anaemia	73.3	23.0	45.0	5.3	1,391
Any anaemia	80.6	22.1	51.7	6.7	1,237
Mild anaemia	80.0	21.5	52.3	6.1	988
Moderate anaemia	83.1	24.2	50.0	8.8	239
Severe anaemia	*	*	*	*	10
Total	76.7	22.6	48.2	6.0	2,629

Note: Table is based on children who stayed in the household the night before the interview. Table includes only cases with anaemia measurements for both mothers and children. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
g/dl = grams per deciliter

10.4 NUTRITIONAL STATUS OF CHILDREN UNDER AGE FIVE

The 2003 GDHS included information on the nutritional status of children under five years of age for three indices, namely, weight-for-age, height-for-age, and weight-for-height.

10.4.1 Measures of Nutritional Status in Childhood

In addition to questions on feeding practices associated with infant and young children, the 2003 GDHS included anthropometric measurements for all children under five years of age. Each interviewing team was equipped with a lightweight electronic SECA scale, designed and manufactured under the guidance of UNICEF, and a measuring board specifically produced by Shorr Productions for use in survey settings. Children younger than 24 months were measured lying down on the board (recumbent length), while standing height was measured for older children. The scale also allowed for the weighing of very young children, with an automatic mother-child adjustment, which eliminated the mother's weight while she stood with her baby on the weighing scale.

In previous GDHS surveys, anthropometric measurements were restricted to children born to women interviewed with the Women's Questionnaire. However, these data are not representative of all children, since they exclude children whose mothers were not in the household (either because they did not live there, or because they had died), children whose mothers were not eligible for the individual interview (i.e., under age 15 or age 50 and over), and children whose mothers did not complete an

individual interview. To overcome these biases, the 2003 GDHS included weight and height measurements of all children who were born in the five years preceding the survey and listed in the Household Questionnaire, irrespective of the interview status of their mother.

As recommended by the World Health Organisation (WHO), the anthropometric measurements of children in the survey are compared with an international reference population defined by the U.S. National Centre for Health Statistics (NCHS) and accepted by the U.S. Centres for Disease Control and Prevention (CDC). Each of the three nutritional status indicators described below are expressed in standard deviation units (Z-scores) from the median for the reference population. The use of this reference population is based on the finding that well nourished young children of all population groups (for which data exist) follow very similar growth patterns. The reference populations serve as a point of comparison, facilitating the examination of differences in the anthropometric status of subgroups in a population and changes in nutritional status over time. In any large population, there is variation in height and weight; this variation approximates a normal distribution.

Each of these indices—height-for-age, weight-for-height, and weight-for-age—gives different information about growth and body composition used to assess nutritional status. The height-for-age index is an indicator of linear growth retardation. Children whose height-for-age Z-score is below minus two standard deviations (-2 SD) from the median of the reference population are considered short for their age (stunted) and are chronically malnourished. Children who are below minus three standard deviations (-3 SD) from the median of the reference population are considered severely stunted. Stunting reflects failure to receive adequate nutrition over a long period of time and is also affected by recurrent and chronic illness. Height-for-age, therefore, represents the long-term effect of malnutrition in a population and does not vary according to recent dietary intake.

The weight-for-height index measures body mass in relation to body length and describes current nutritional status. Children whose Z-scores are below minus two standard deviations (-2 SD) from the median of the reference population are considered thin (wasted) for their height and are acutely malnourished. Wasting represents the failure to receive adequate nutrition in the period immediately preceding the survey and may be the result of inadequate food intake or a recent episode of illness causing loss of weight and the onset of malnutrition. Children whose weight-for-height is below minus three standard deviations (-3 SD) from the median of the reference population are considered severely wasted.

Weight-for-age is a composite index of height-for-age and weight-for-height. It takes into account both acute and chronic malnutrition. Children whose weight-for-age is below minus two standard deviations from the median of the reference population are classified as underweight.

Table 10.13 shows the percentage of children under five years classified as malnourished according to height-for-age, weight-for-height, and weight-for-age, by background characteristics. A total of 3,586 children under five were identified in the households. Eight percent of children had missing information on height or weight, 3 percent had implausibly high or low values for height or weight measures, and less than 1 percent had incomplete age information. The analysis on nutritional status is based on the remaining 89 percent or 3,183 children.

According to the 2003 GDHS, 30 percent of children under five are stunted and 11 percent severely stunted. Seven percent of children under five are wasted and 1 percent severely wasted. Weight-for-age results show that 22 percent of children under five are underweight, with 5 percent severely underweight.

Table 10.13 and Figure 10.3 indicate that stunting is evident among children as young as 6 months of age (6 percent). Stunting increases with the age of the child. This is evidenced by the marked increase in stunting levels from 14 percent at 6-9 months to 35 percent at age 12-23 months. There are no

marked differences between males (33 percent) and females (27 percent) in the levels of stunting among children under five years. Table 10.13 also shows that the longer the birth interval, the lower the stunting levels. Birth size is an important indicator of a child's nutritional status at birth and in the future. According to Table 10.13, a larger percentage of children who were reported to have been small or very small at birth were stunted (40 percent) compared with children who were average or larger in size at birth (27 percent).

Table 10.13 indicates that wasting is more common in the age group 6-23 months and decreases as the child ages. Weight-for-age is an index of chronic or acute malnutrition. It does not distinguish between a child who is underweight because of stunting or wasting. Underweight is very minimal for children less than 6 months of age but becomes more pronounced at age 6 months and above (during the normal complementary feeding period). This may be because most children are still primarily breastfeeding until 6 months of age.

Table 10.13 also shows that rural children are more likely to be stunted and underweight than urban children, while the proportion wasted is almost the same in both rural and urban areas (7 percent). Regional variation in nutritional status of children is substantial. The Central, Northern, Upper East and Upper West regions have stunting levels that are above the national average. Children living in the Upper East, Northern, and Upper West regions also have underweight levels above the national average, in addition to children from the Volta Region. Size at birth is also related to wasting in children; a larger percentage of children reported by mothers as very small at birth are wasted (12 percent), compared with those reported as average or larger (7 percent). Wasting is particularly high in the Volta, Upper East, and Upper West regions.

The percentage of malnourished children decreases with increasing level of mother's education. About a third of children whose mothers have no education are stunted or underweight. The pattern is less clear with levels of wasting. Mother's age has no marked influence on the nutritional status of the child. There are no strong differences by sex and birth order.

Table 10.13 indicates that children whose biological mothers were not in the household are more likely to be malnourished (34 percent stunted and 25 percent underweight) than children whose mothers were interviewed.

Poor nutritional status among children is obvious among those who live in poor households. For example, two-fifths of children who live in households in the lowest wealth quintile are stunted compared with one-eighth of children in the highest wealth quintile. A similar pattern is seen among children who are underweight. The relationship between wasting and wealth is not that strong.

Table 10.13 Nutritional status of children

Percentage of children under five years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by background characteristics, Ghana 2003

	Height-for-age			Weight-for-height			Weight-for-age			
Background characteristic	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score SD	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score SD	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score SD	Number of children
Age in months										
<6	1.0	6.3	0.0	2.0	5.9	0.1	0.0	2.4	0.2	248
6-9	3.0	14.3	(0.3)	3.5	13.5	(0.7)	2.9	13.6	(0.8)	226
10-11	3.6	17.1	(0.9)	3.2	16.3	(0.8)	8.2	35.4	(1.4)	117
12-23	12.3	35.2	(1.6)	1.7	12.6	(0.7)	7.9	30.8	(1.4)	636
24-35	12.8	32.5	(1.5)	1.0	5.5	(0.5)	7.0	26.4	(1.3)	636
36-47	13.3	35.0	(1.5)	0.8	3.8	(0.2)	4.1	21.3	(1.1)	710
48-59	12.5	33.4	(1.5)	0.7	3.4	(0.2)	1.6	18.2	(1.1)	611
Sex										
Male	12.5	32.8	(1.4)	1.7	7.2	(0.4)	4.9	22.6	(1.1)	1,588
Female	9.2	27.0	(1.2)	1.0	7.1	(0.4)	4.5	21.6	(1.1)	1,595
Birth order[2]										
1	9.4	27.2	(1.2)	1.5	7.3	(0.4)	4.4	21.1	(1.1)	613
2-3	10.2	26.5	(1.2)	1.4	7.0	(0.4)	4.2	21.0	(1.1)	1,019
4-5	11.8	32.3	(1.4)	1.4	7.3	(0.4)	4.8	24.3	(1.1)	660
6+	10.9	34.1	(1.4)	1.0	6.9	(0.4)	5.0	21.5	(1.1)	590
Birth interval in months[2]										
First birth[3]	9.4	27.0	(1.2)	1.5	7.4	(0.4)	4.4	21.1	(1.1)	620
<24	16.9	36.8	(1.6)	1.2	5.1	(0.3)	4.7	23.5	(1.2)	291
24-47	12.1	33.1	(1.4)	1.5	7.5	(0.4)	5.3	24.0	(1.2)	1,245
48+	6.3	22.8	(1.1)	1.1	6.9	(0.3)	3.5	18.2	(0.9)	726
Size at birth[2]										
Very small	13.8	39.8	(1.6)	0.7	12.0	(0.6)	8.9	35.4	(1.5)	179
Small	14.8	39.7	(1.6)	1.4	6.2	(0.6)	6.7	31.5	(1.4)	337
Average or larger	9.8	27.4	(1.2)	1.4	6.8	(0.3)	4.0	19.5	(1.0)	2,348
Residence										
Urban	6.8	20.5	(0.9)	1.9	6.6	(0.4)	3.2	15.4	(0.9)	1,050
Rural	12.8	34.5	(1.5)	1.1	7.4	(0.4)	5.4	25.4	(1.2)	2,132
Region										
Western	8.0	28.4	(1.3)	1.1	5.3	(0.3)	2.2	16.5	(1.0)	333
Central	12.5	31.6	(1.4)	0.0	3.0	(0.3)	4.0	22.0	(1.0)	284
Greater Accra	5.5	13.9	(0.6)	2.7	7.2	(0.4)	2.1	11.5	(0.7)	337
Volta	7.8	23.3	(1.1)	3.1	13.9	(0.7)	4.9	25.7	(1.2)	259
Eastern	6.2	27.4	(1.2)	0.7	6.2	(0.3)	3.7	17.3	(1.0)	333
Ashanti	10.2	29.1	(1.3)	0.8	6.7	(0.4)	4.1	20.8	(1.1)	613
Brong Ahafo	10.7	29.4	(1.3)	1.3	5.7	(0.4)	5.5	20.4	(1.1)	356
Northern	21.8	48.8	(1.9)	1.0	6.6	(0.3)	8.7	35.5	(1.5)	415
Upper East	12.1	31.7	(1.3)	2.4	12.9	(0.8)	7.8	32.4	(1.4)	156
Upper West	12.6	34.1	(1.3)	2.6	11.0	(0.3)	6.0	25.9	(1.0)	95
Mother's education[4]										
No education	14.7	38.2	(1.5)	1.4	7.5	(0.4)	6.8	27.5	(1.3)	1,177
Primary	8.2	24.1	(1.1)	1.0	7.8	(0.4)	3.3	18.6	(1.0)	661
Middle/JSS	8.4	25.8	(1.2)	1.5	6.7	(0.4)	3.2	19.7	(1.0)	938
Secondary +	1.8	11.1	(0.5)	1.6	4.6	(0.3)	0.8	7.8	(0.6)	170
Mother's age										
15-19	12.4	30.1	(1.2)	1.4	11.3	(0.5)	4.5	26.4	(1.1)	93
20-24	11.4	28.9	(1.3)	2.1	8.0	(0.5)	5.1	23.6	(1.1)	530
25-29	9.4	28.2	(1.2)	1.2	6.7	(0.4)	4.0	20.6	(1.1)	779
30-34	9.9	28.0	(1.2)	1.2	8.2	(0.4)	4.3	22.7	(1.1)	645
35-49	11.1	32.1	(1.3)	1.1	5.9	(0.3)	4.8	20.9	(1.1)	900
Mother's status										
Mother interviewed	10.5	29.5	(1.3)	1.4	7.1	(0.4)	4.6	21.9	(1.1)	2,882
Mother not interviewed but in household	7.3	30.0	(1.1)	1.1	9.3	(0.6)	2.1	21.3	(1.1)	65
Mother not in household[5]	15.0	34.0	(1.5)	1.3	7.0	(0.5)	7.0	25.1	(1.3)	236
Wealth quintile										
Lowest	16.5	41.8	(1.7)	1.3	8.8	(0.5)	8.7	31.3	(1.4)	799
Second	12.3	31.5	(1.4)	1.1	6.7	(0.4)	4.8	23.9	(1.2)	716
Middle	10.1	30.2	(1.4)	1.3	6.5	(0.4)	2.9	21.5	(1.1)	655
Fourth	6.9	24.2	(1.0)	1.8	6.8	(0.4)	3.6	16.3	(1.0)	541
Highest	4.5	13.2	(0.6)	1.3	6.1	(0.3)	1.5	11.4	(0.7)	471
Total	10.8	29.9	(1.3)	1.3	7.1	(0.4)	4.7	22.1	(1.1)	3,183

Note: Table is based on children who stayed in the household the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the NCHS/CDC/WHO International Reference Population. The percentage of children who are more than three or more than two standard deviations below the median of the International Reference Population (-3 SD and -2 SD) are shown according to background characteristics. Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight. Total includes 2 children with missing information on size at birth.

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

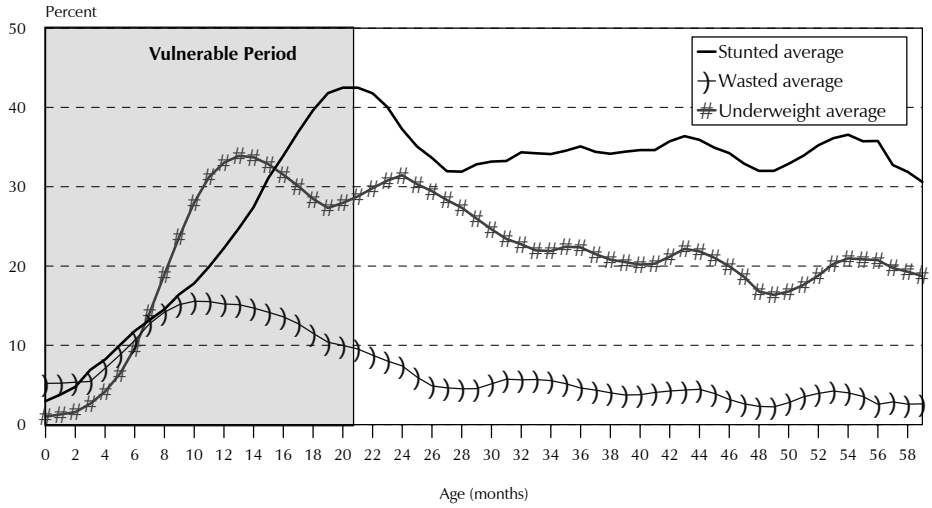
[2] Excludes children whose mothers were not interviewed

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

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

[5] Includes children whose mothers are deceased

Figure 10.3
Stunting, Wasting, and Underweight by Age, Ghana



Note: *Stunting* reflects chronic malnutrition; *wasting* reflects acute malnutrition; *underweight* reflects chronic or acute malnutrition or a combination of both. Plotted values are smoothed by a five-month moving average.

GDHS 2003

10.4.2 Trends in Children's Nutritional Status

An analysis of trends in these data shows an increase in the level of stunting but slight decreases in the proportions of children who are wasted or underweight. Caution has to be exercised when comparing data from the various DHS surveys conducted in Ghana to assess the trend in the nutritional status. This is because information on children's nutritional status was gathered for different age groups from one survey to another. In addition, previous DHS surveys collected anthropometric measurements only for children of interviewed women, whereas the 2003 survey collected nutritional status information from all children under age five living in the household at the time of the interview. While it is possible to adjust for some of these inconsistencies, it is not possible to correct them all. Comparisons are therefore restricted to the last five years.

The proportion of children under five who are stunted has increased from 26 percent in 1998 to 30 percent in 2003. The proportion underweight decreased from 10 percent in 1998 to 7 percent in 2003. The proportion of children who are wasted also decreased from 25 percent in 1998 to 22 percent in 2003 (GSS and MI, 1999). These trends in nutritional status imply that the problem of malnutrition in Ghana may be due to chronic food shortages. This is evidenced by the fact that the three northern regions, which have annual periods of drought, have consistently recorded the highest levels of stunting.

10.5 NUTRITIONAL STATUS OF WOMEN

The 2003 GDHS collected information on the height and weight of women. The data were used to derive two measures of nutritional status, height and body mass index (BMI). A woman's height may be used to predict the risk of difficulty in delivery (given the relationship between height and the size of the pelvis). The risk of giving birth to a low-birth-weight baby is influenced by the mother's nutritional status. The cut-off point for height at which mothers can be considered at risk varies between populations but normally falls between 140 centimetres and 150 centimetres; a cutoff point of 145 centimetres is used here. The index used to measure thinness or obesity is known as the body mass index (BMI), or the

Quetelet index. BMI is defined as weight in kilogrammes divided by height squared in metres (kg/m^2). A cut-off point of 18.5 is used to define thinness or acute undernutrition. A BMI of 25 or above usually indicates overweight or obesity.

The 2003 GDHS collected anthropometric information for all women age 15-49, in contrast to earlier surveys, which restricted anthropometric data collection to women who had a live birth in the five years (or three years) preceding the survey. As such, this is a more representative sample because it includes both younger women who may not yet have given birth and older women who would have stopped childbearing. Women for whom there was no information on height and/or weight and for whom a BMI could not be estimated are excluded from this analysis.

Table 10.14 shows the nutritional status of women in the reproductive ages 15-49. The mean height of women is 159 centimetres, which is above the critical height of 145 centimetres. Nine percent of women are found to be chronically malnourished (BMI less than 18.5), while 25 percent are overweight. Variations between urban and rural women are marked. More women have a BMI less than 18.5 in rural areas (12 percent) than in urban areas (6 percent). The percentage of overweight or obese women is, however, higher in urban areas (35 percent) than in rural areas (16 percent). The Greater Accra Region has the highest percentage of these women (46 percent) and the Upper West Region has the lowest percentage (7 percent). The percentage of overweight or obese women increases with increasing educational level as well as increasing wealth quintile.

Interpretation of trends in women's nutritional status is complicated by the fact that in the 1993 and the 1998 GDHS only mothers of children under five were measured. In 2003, the data refer to all women age 15-49. A comparison, restricting the data for 2003 to mothers of children under five years, shows that there has been little change in the percentage of mothers whose height is below 145 centimetres and in the mean BMI over the past ten years, from 1993 to 2003. However, there has been a small decline in the percentage of mothers who fall below a BMI of 18.5, from 11 percent in 1993 and 1998 to 9 percent in 2003.

Table 10.14 Nutritional status of women by background characteristics

Among women age 15-49, mean height, percentage under 145 cm, mean body mass index (BMI), and percentage with specific BMI levels, by background characteristics, Ghana 2003

	Height			BMI [1] (kg/m²)									
Background characteristic	Mean height in cm	Percentage below 145 cm	Number of women	Mean BMI	18.5-24.9 (normal)	<18.5 (thin)	17.0-18.4 (mildly thin)	16.0-16.9 (moderately thin)	<16.0 (severely thin)	≥25.0 (overweight or obese)	25.0-29.9 (overweight)	≥30.0 (obese)	Number of women
Age													
15-19	157.7	2.0	1,075	21.1	76.8	15.2	10.9	2.8	1.5	8.0	6.9	1.1	1,002
20-24	158.4	1.5	952	22.4	75.6	7.5	5.3	1.7	0.5	16.9	14.7	2.2	830
25-29	159.2	0.8	909	23.0	66.4	8.3	6.7	1.5	0.1	25.3	18.8	6.4	771
30-34	159.5	1.1	762	24.1	59.5	7.1	6.0	0.7	0.4	33.3	21.7	11.7	668
35-39	159.5	0.7	692	24.4	55.2	7.0	5.8	0.9	0.4	37.8	23.9	13.9	611
40-44	159.1	0.9	545	24.8	53.2	7.1	6.0	0.9	0.3	39.7	23.0	16.7	515
45-49	159.2	0.3	451	24.1	56.3	9.7	6.1	2.4	1.2	34.1	20.0	14.0	439
Residence													
Urban	159.2	1.1	2,556	24.2	58.4	6.4	5.4	0.7	0.3	35.1	22.4	12.7	2,378
Rural	158.5	1.2	2,831	22.0	72.2	12.0	8.5	2.5	1.0	15.8	12.2	3.6	2,457
Region													
Western	158.5	1.8	542	22.9	63.0	11.2	9.0	1.5	0.7	25.8	18.8	6.9	498
Central	157.8	2.3	423	23.2	67.1	6.7	4.4	2.0	0.3	26.2	20.5	5.7	380
Greater Accra	159.6	0.7	898	25.3	49.4	4.3	3.9	0.3	0.1	46.3	28.8	17.4	848
Volta	157.6	2.4	475	22.6	71.5	9.7	7.0	2.1	0.6	18.8	12.4	6.4	439
Eastern	158.6	0.7	577	23.3	66.2	8.9	6.6	1.6	0.7	24.8	17.0	7.8	530
Ashanti	158.7	1.3	1,030	23.2	64.3	9.6	7.3	1.6	0.8	26.1	17.3	8.7	917
Brong Ahafo	159.1	0.7	553	22.7	73.0	7.2	4.9	1.4	0.9	19.8	13.7	6.0	485
Northern	159.3	0.5	465	21.1	79.7	12.8	8.9	3.4	0.5	7.5	6.4	1.1	375
Upper East	159.3	0.4	280	20.5	69.5	23.1	17.8	2.6	2.7	7.4	6.9	0.6	239
Upper West	160.2	0.0	142	21.4	82.2	11.3	8.6	1.6	1.1	6.5	5.1	1.4	126
Education													
No education	158.7	0.8	1,526	22.1	71.5	12.1	8.6	2.2	1.2	16.5	11.8	4.6	1,297
Primary	158.1	2.0	1,096	23.0	65.4	10.3	7.4	2.0	0.8	24.3	17.4	6.9	983
Middle/JSS	158.8	1.1	2,151	23.4	64.5	8.2	6.6	1.2	0.4	27.3	18.1	9.2	1,977
Secondary+	160.5	0.6	615	24.7	55.2	5.1	3.8	1.1	0.2	39.7	25.9	13.8	578
Wealth quintile													
Lowest	158.7	1.0	931	21.1	76.7	15.5	11.0	3.1	1.4	7.7	6.4	1.3	794
Second	158.0	1.8	915	21.8	75.5	11.7	8.8	1.9	1.0	12.8	10.8	2.0	805
Middle	158.4	1.0	1,036	22.3	70.4	11.3	8.2	2.3	0.8	18.4	14.2	4.2	906
Fourth	158.7	1.6	1,166	23.6	63.4	6.8	5.5	1.0	0.4	29.8	20.6	9.1	1,062
Highest	159.8	0.6	1,338	25.3	50.2	4.4	3.7	0.5	0.2	45.4	27.3	18.0	1,267
Total	158.8	1.2	5,387	23.1	65.4	9.3	7.0	1.6	0.7	25.3	17.2	8.1	4,835

[1] Excludes pregnant women and women with a birth in the preceding 2 months

MALARIA 11

Malaria is endemic throughout Ghana and continues to be a major public health concern. It is one of the leading causes of morbidity and mortality, especially among pregnant women and children under the age of five. The Ministry of Health (MoH) estimates that over the past ten years, there have been 2-3 million cases of malaria each year, representing 40 percent of outpatient cases, while severe malaria accounts for 33-36 percent of in-patients. Malaria also accounts for 25 percent of the deaths in children under the age of five (GHS, 2001).

Since 1999, Ghana has been involved in the international efforts to control malaria under the Roll Back Malaria (RBM) initiative. The objectives of this initiative are to ensure that by the year 2005 at least 60 percent of those at risk of malaria, particularly pregnant women and children under five, have access to the most suitable and affordable combination of personal and community protective measures such as insecticide treated mosquito nets (ITNs) and prompt, effective treatment for malaria. Another objective is to ensure that at least 60 percent of all pregnant women who are at risk of malaria, especially those in their first pregnancies, have access to chemoprophylaxis or intermittent preventive treatment (IPT).

11.1 MOSQUITO NETS

11.1.1 Ownership of Mosquito Nets

The ownership and use of mosquito nets, both treated and untreated, is the primary health intervention for reducing malaria transmission and morbidity in a community prone to the vector—the Anopheles mosquito. In Ghana, there are various types of ITNs available on the market. They include the long-lasting ones that require re-treatment after about five years and others that need to be re-treated every six months or after three washes.

In an effort to make mosquito nets more affordable, the Government of Ghana has since 2002 waived taxes on the importation of nets into the country. Developmental partners have also contributed by supplying some ITNs for distribution at subsidised costs to pregnant women and children under five in deprived areas of the country. These nets are distributed through routine public health services.

Table 11.1 shows the percentage of households with at least one and more than one mosquito net (treated or untreated), and the percentage of households that have at least one and more than one ITN by their background characteristics. The data show that 18 percent of households in Ghana own a mosquito net whether treated or untreated. About 6 percent of households own more than one net. Only 3 percent of households own at least one currently treated net (ITN). Rural households are more likely to own any kind of net (24 percent) compared with urban households (10 percent). Mosquito net ownership is highest in the Volta Region (46 percent) and lowest in the Central Region (9 percent).

Table 11.1 Ownership of mosquito nets

Percentage of households (HH) with at least one and more than one mosquito net (treated or untreated), percentage of households that have at least one and more than one ever-treated net, and the percentage of households that have at least one and more than one insecticide-treated net (ITN), by background characteristics, Ghana 2003

Background characteristic	Percentage of households that have: At least one net	Percentage of households that have: More than one net	Average number of nets per HH	Percentage of households that have: At least one ever-treated net	Percentage of households that have: More than one ever-treated net	Average number of ever-treated nets per HH	Percentage of households that have: At least one ITN[1]	Percentage of households that have: More than one ITN[1]	Average number of ITNs[1] per HH	Number of households
Residence										
Urban	9.9	2.0	0.1	3.8	0.7	0.0	2.3	0.5	0.0	2,870
Rural	24.2	8.4	0.4	6.3	1.5	0.1	4.0	1.0	0.1	3,381
Region										
Western	14.3	3.7	0.2	3.6	0.5	0.0	1.5	0.2	0.0	612
Central	8.7	1.1	0.1	3.2	0.6	0.0	1.8	0.4	0.0	587
Greater Accra	14.2	4.4	0.2	3.8	0.8	0.0	1.9	0.6	0.0	890
Volta	46.1	25.5	0.9	3.8	1.7	0.1	2.5	1.3	0.0	538
Eastern	10.3	2.5	0.1	0.7	0.0	0.0	0.7	0.0	0.0	732
Ashanti	10.1	1.7	0.1	2.7	0.2	0.0	1.6	0.2	0.0	1,313
Brong Ahafo	20.3	4.6	0.3	4.2	1.0	0.1	1.9	0.3	0.0	665
Northern	20.9	5.1	0.3	11.2	2.5	0.1	7.8	1.9	0.1	487
Upper East	35.9	10.6	0.5	32.2	8.8	0.4	25.1	7.0	0.3	280
Upper West	30.2	6.8	0.4	9.8	1.2	0.1	3.3	0.3	0.0	147
Wealth quintile										
Lowest	27.9	8.7	0.4	10.2	2.0	0.1	7.1	1.3	0.1	971
Second	23.6	9.1	0.4	3.5	1.0	0.0	2.1	0.9	0.0	1,168
Middle	17.1	4.9	0.2	4.0	0.8	0.0	2.0	0.4	0.0	1,315
Fourth	12.1	3.2	0.2	3.1	0.6	0.0	2.2	0.4	0.0	1,452
Highest	11.4	3.0	0.2	6.4	1.5	0.1	3.7	1.1	0.1	1,345
Total	17.6	5.5	0.3	5.2	1.1	0.1	3.2	0.8	0.0	6,251

[1] An insecticide treated net (ITN) is a long lasting net that does not require frequent treatment, a pretreated net obtained within the last six months, or a net that has been soaked with insecticide within the past six months

With regard to ITNs. Households in the Eastern Region report the lowest ownership of ITNs (1 percent), while those in the Upper East Region (25 percent) have the highest level of ITN ownership, followed by the Northern Region (8 percent). The high level of ownership of ITNs in the Northern and Upper East regions may be attributable to the fact that UNICEF has since 2002 been distributing ITNs at highly subsidised costs to pregnant women and children under five in the Northern and Upper East regions as part of its Child Survival and Reproductive Health programmes. Interestingly, although the Northern Region has benefited from the same programme, ownership of ITNs in the region is not that high, though it is still higher than ownership of ITNs recorded in eight other regions.

11.1.2 Use of Mosquito Nets by Children

In the 2003 GDHS, respondents to the Household Questionnaire were asked about the use of mosquito nets by all members of the household the night before the interview.

Table 11.2 presents information on the percentage of de facto children under age five years who slept under a mosquito net the night before the survey and the percentage that slept under an ITN by background characteristics. The data show that 15 percent of children under five years slept under a

mosquito net (treated or untreated) the night before the survey. Five percent of children slept under an ever-treated net while 4 percent are reported as having slept under an ITN the night prior to the survey. Children one year of age and younger are most likely to have slept under any net, an ever-treated net, or an ITN. Children in rural areas are twice as likely to sleep under a mosquito net (18 percent) than their urban counterparts (9 percent). The proportion of children who sleep under any type of mosquito net was highest in the Volta Region (44 percent) and lowest in the Central Region (5 percent) and lowest among children in the highest wealth quintile, presumably because more of these children live in houses that have window netting.

Table 11.2 Use of mosquito nets by children

Percentage of children under age five who slept under a mosquito net the night before the survey, percentage who slept under an ever-treated net, and percentage who slept under an insecticide-treated net (ITN), by background characteristics, Ghana 2003

Background characteristic	Percentage who slept under a net the previous night	Percentage who slept under an ever treated net the previous night	Percentage who slept under an ITN[1] the previous night	Number of children
Age (in years)				
< 1	20.1	6.8	5.9	709
1	14.9	5.2	4.3	711
2	14.0	3.9	3.0	698
3	11.8	4.1	2.8	791
4	12.8	2.5	1.7	685
Sex				
Male	15.3	4.7	3.5	1,811
Female	14.0	4.3	3.5	1,782
Residence				
Urban	9.0	4.5	3.5	1,202
Rural	17.5	4.5	3.5	2,391
Region				
Western	9.2	3.3	1.0	346
Central	5.4	1.4	0.7	306
Greater Accra	14.8	4.5	3.1	390
Volta	43.7	2.5	2.2	303
Eastern	8.2	0.3	0.3	372
Ashanti	8.1	1.5	1.2	661
Brong Ahafo	17.5	3.9	2.1	388
Northern	11.7	7.4	7.0	488
Upper East	24.1	22.7	21.0	231
Upper West	21.7	5.6	1.9	108
Wealth quintile				
Lowest	16.8	7.2	6.2	918
Second	17.1	2.0	1.6	797
Middle	16.0	3.6	1.9	717
Fourth	11.2	3.0	2.6	625
Highest	9.6	6.6	5.0	537
Total	14.7	4.5	3.5	3,593

Note: Based on de facto children in the household.

[1] An insecticide treated net (ITN) is a long lasting net that does not require any treatment, a pretreated net obtained within the last six months, or a net that has been soaked with insecticide within the past six months

ITN use is not affected by residence and shows a U-shaped pattern according to the wealth index. i.e., greatest use of ITNs in households in the lowest and highest wealth quintiles. The percentage of children who sleep under an ever-treated net or ITN is highest in the Upper East Region and lowest in the Eastern Region.

11.1.3 Use of Mosquito Nets by Pregnant Women

Malaria is especially dangerous during pregnancy and this has prompted many advocacy campaigns to educate not only pregnant women, but also the general public on the importance of preventing malaria during pregnancy. Table 11.3 shows the percentage of all de facto women and de facto pregnant women who slept under a mosquito net whether treated or untreated, and the proportion who slept under an ITN the night prior to the survey, by background characteristics. The data show no difference in the use of nets between pregnant and nonpregnant women. Ten percent of pregnant women slept under a net, 4 percent slept under an ever-treated net, and 3 percent slept under an ITN the night before the interview.

Table 11.3 Use of mosquito nets by pregnant women

Percentage of all women and pregnant women age 15-49 who slept under a mosquito net (treated or untreated), who slept under an ever-treated net, and who slept under an insecticide-treated net (ITN) the previous night, by background characteristics, Ghana 2003

	Percentage of women who:				Percentage of pregnant women who:			
Background characteristic	Slept under net the previous night	Slept under ever-treated net the previous night	Slept under ITN[1] the previous night	Number of women	Slept under net the previous night	Slept under ever-treated net the previous night	Slept under ITN[1] the previous night	Number of pregnant women
Residence								
Urban	4.6	1.8	1.4	2,821	5.6	2.9	1.6	137
Rural	15.3	4.0	2.9	3,024	11.5	4.2	3.2	277
Region								
Western	6.0	2.3	1.1	567	(0.0)	(0.0)	(0.0)	39
Central	4.1	1.9	1.4	445	(3.8)	(3.8)	(3.8)	36
Greater Accra	6.6	1.3	1.1	966	(12.1)	(3.0)	(3.0)	35
Volta	34.9	2.6	1.9	513	(14.4)	(0.0)	(0.0)	33
Eastern	5.6	0.0	0.0	617	(6.3)	(0.0)	(0.0)	43
Ashanti	5.3	1.5	0.8	1,170	9.4	1.7	0.0	87
Brong Ahafo	12.1	2.8	1.5	583	(16.5)	(5.6)	(3.9)	40
Northern	9.1	6.0	5.3	510	4.6	4.2	1.7	64
Upper East	18.6	16.5	15.1	318	(28.8)	(26.5)	(23.8)	24
Upper West	15.3	4.9	1.9	157	(14.7)	(4.6)	(2.9)	13
Wealth quintile								
Lowest	16.2	5.8	4.9	996	11.9	6.0	4.7	100
Second	15.9	2.2	1.6	978	8.4	4.7	2.8	76
Middle	11.1	2.6	1.4	1,098	11.7	1.0	1.0	98
Fourth	7.0	2.0	1.4	1,286	8.3	2.8	1.9	84
Highest	4.2	2.6	2.0	1,487	4.9	4.9	3.0	55
Total	10.1	2.9	2.2	5,845	9.5	3.8	2.7	414

Note: Based on de facto women in the household. Figures in parentheses are based on 25-49 unweighted cases.

[1] An insecticide treated net (ITN) is a long lasting net that does not require any treatment, a pretreated net obtained within the last six months, or a net that has been soaked with insecticide within the past six months

Women in rural areas are about three times more likely to sleep under a mosquito net than urban women, while rural pregnant women are about twice as likely to sleep under a net as urban pregnant women. As was seen in the data for children, use of mosquito nets among all women is highest in the Volta Region (35 percent) and lowest in the Central Region (4 percent). In general, the use of mosquito nets (treated and untreated) decreases among women as the level of wealth increases. However, this is not the case among pregnant women. Use of mosquito nets by pregnant women shows a U-shaped pattern by wealth index, although women in the highest wealth quintile are slightly less likely than women in the lowest wealth quintile to sleep under any net, treated or untreated. This could be due in part to the fact that many women from wealthy households and urban dwellers live in houses with mosquito screening on windows and doors, hence the redundancy of mosquito net use.

11.2 EXPOSURE TO MEDIA MESSAGES ON MALARIA

The 2003 GDHS included a series of questions at the household level on media exposure to information on malaria. The respondents to the Household Questionnaire were asked if they had seen or heard any messages about malaria on various media sources or any messages telling them to give a child with fever chloroquine tablets for three days, and if they had specifically listened to the radio program *He Ha Ho*. This information is shown in Table 11.4.

Table 11.4. Exposure to messages on malaria

Percentage of household respondents who heard or saw a message on malaria through various media sources, percentage who heard or saw a message telling them to give a child with fever chloroquine tablets for three days, and percentage who ever listened to the radio program *He Ha Ho*, according to background characteristics, Ghana 2003

Background characteristic	Media sources						No media exposure	Heard/saw message to give a child with fever chloroquine tablets for three days	Ever listened to *He Ha Ho*	Number of household respondents
	TV	Radio	Newspaper/ magazine	Poster	Leaflets/ brochures	Health worker				
Residence										
Urban	71.5	88.0	30.1	51.4	18.8	41.2	7.7	87.0	36.1	2,870
Rural	32.2	81.3	11.3	33.1	9.0	41.2	13.0	77.6	46.5	3,381
Region										
Western	53.4	83.2	20.9	45.6	12.2	42.0	9.3	76.8	45.5	612
Central	38.6	82.9	11.9	26.9	5.9	23.1	14.5	81.3	33.3	587
Greater Accra	77.0	88.5	32.4	46.7	19.3	31.2	7.9	89.8	27.1	890
Volta	32.2	71.6	13.4	38.1	12.6	46.3	16.9	71.8	75.7	538
Eastern	52.7	85.2	21.5	30.4	15.5	40.0	11.4	81.2	28.9	732
Ashanti	58.8	87.5	26.1	51.5	18.3	45.0	9.0	85.2	23.0	1,313
Brong Ahafo	54.8	91.9	17.7	64.7	13.0	46.1	6.2	90.8	47.6	665
Northern	22.2	78.7	8.3	29.3	5.6	43.9	11.9	69.3	70.3	487
Upper East	28.0	85.9	7.5	16.8	7.2	64.6	8.2	80.8	81.7	280
Upper West	13.3	66.4	6.5	11.0	4.9	48.5	22.1	72.0	57.3	147
Wealth quintile										
Lowest	13.6	73.5	4.3	21.2	3.0	40.1	18.4	68.5	51.4	971
Second	25.3	81.9	8.2	31.1	6.9	37.5	14.1	77.2	46.9	1,168
Middle	43.4	83.1	12.1	36.0	8.8	40.3	12.0	80.1	39.7	1,315
Fourth	65.1	86.9	21.7	47.5	15.1	42.0	8.4	85.6	37.2	1,452
Highest	89.0	92.9	47.3	64.0	29.8	45.2	2.8	93.4	37.2	1,345
Total	50.2	84.4	19.9	41.5	13.5	41.2	10.6	81.9	41.7	6,251

The majority of household respondents said they had heard about malaria on the radio (84 percent), half have seen a message about malaria on the television, while more than two-fifths of respondents have seen a poster on malaria or heard about malaria from a health worker. One-fifth of respondents have read about malaria in a newspaper or magazine and 14 percent have seen leaflets or brochures on malaria. One in ten respondents have had no exposure to malaria messages. Eighty-two percent of respondents have heard or seen a message telling them to give a child with fever chloroquine tablets for three days, and 42 percent of them have heard the radio programme *He Ha Ho*. Exposure to media messages on malaria is much higher in urban than rural areas, highest in the Brong Ahafo Region, and among those in the highest wealth quintile.

11.3 MALARIA DIAGNOSIS, CASE MANAGEMENT, AND TREATMENT

11.3.1 Malaria Prophylaxis during Pregnancy

One of the strategies the MoH and the Ghana National Malaria Control Programme has adopted for malaria control is the Intermittent Preventive Treatment (IPT) of pregnant women with sulphadoxine-pyrimethamine (SP), also known as Fansidar. According to this policy, from the second trimester of pregnancy (after quickening), pregnant women are expected to receive three doses of SP, at monthly intervals (GHS, 2003b). This replaces the former policy of giving a full dose of chloroquine for treatment at first antenatal visit followed by two tablets weekly till 6 weeks postpartum (GHS, 2003c). This policy decision was finalised at the end of 2003, hence during the period of data collection for the 2003 GDHS the old policy was still in force. The data on anti-malarial drugs from the 2003 GDHS depend on accurate reporting of types of drugs taken. It is likely that some women are not sure of the type of drug they took during pregnancy or gave to their children.

Table 11.5 shows the percentage of women with a birth in the five years preceding the survey who took any anti-malarial drug two or more times for prevention of malaria during their pregnancy, those who took chloroquine, and those who took Fansidar (SP) by background characteristics. The data show that 58 percent of mothers reported that they took some anti-malarial drug for the prevention of malaria when pregnant. It also shows that chloroquine is more frequently (12 percent) used than SP (1 percent), presumably because the old programme was still in force during the fielding of the survey. The 1 percent of women who used SP received the drug during an antenatal visit. The data imply that the majority of women either took other drugs apart from chloroquine or SP, or did not know whether the drug contained chloroquine or Fansidar. Chloroquine is sold under many different brand names, and women may not realise that the active ingredient in their drug is still chloroquine.

Urban women (67 percent) are more likely to take anti-malarial drugs during pregnancy than rural women (53 percent). The Brong Ahafo Region (72 percent) has the highest percentage of women taking any anti-malarial drug, while Upper West (21 percent) has the lowest. The use of anti-malarial drugs during pregnancy increases with increasing levels of wealth and education.

The use of IPT by pregnant women for the last birth in the year preceding the survey can serve as a baseline for the newly instituted IPT programme. As expected, only 1 percent of women with a birth in the 12 months preceding the survey received Fansidar during their ANC visit. Most of them were from the Upper East Region (data not shown).

Table 11.6 shows, among mothers who took anti-malarial drugs for prevention during the last pregnancy leading to a live birth in the five years preceding the survey, the percentage who took sulfadoxine-pyrimethamine (SP/Fansidar) by background characteristics. Two percent of mothers took Fansidar during their last pregnancy. Among mothers who took Fansidar, most took it more than three times and four in five received it during an antenatal visit (data not shown).

Table 11.5 Use of Intermittent Preventive Treatment (IPT) by pregnant women

Among women who gave birth in the five years preceding the survey, percentage who took anti-malarial drugs for prevention of malaria during the most recent pregnancy leading to a live birth, and percentage who received intermittent preventive treatment (IPT) with chloroquine or sulphadoxine pyrimethamine (SP/Fansidar), by background characteristics, Ghana 2003

Background characteristic	Percentage of pregnant women who took any anti-malarial drug for prevention during their last pregnancy	Use of IPT by pregnant women		Number of women
		Percentage who took chloroquine for protection	Percentage who received at least 2 doses of SP/Fansidar during ANC visit	
Residence				
Urban	66.7	12.8	0.6	946
Rural	53.4	11.8	0.9	1,699
Region				
Western	54.7	12.7	0.4	246
Central	67.9	14.8	0.4	211
Greater Accra	65.4	9.7	1.0	303
Volta	66.3	16.6	1.0	220
Eastern	46.9	10.7	0.5	266
Ashanti	64.3	12.0	1.0	507
Brong Ahafo	72.0	15.5	0.7	297
Northern	39.7	7.9	0.0	346
Upper East	58.7	15.7	3.1	166
Upper West	20.5	5.1	0.9	83
Education				
No Education	47.9	10.3	0.5	1,025
Primary	59.1	13.7	1.0	589
Middle/JSS	68.1	13.3	1.1	879
Secondary+	68.0	13.0	1.0	122
Wealth quintile				
Lowest	45.1	11.0	0.7	648
Second	58.7	12.3	0.7	557
Middle	57.1	12.6	1.0	534
Fourth	67.5	16.2	0.6	474
Highest	68.1	8.6	1.1	433
Total	58.1	12.2	0.8	2,645

Table 11.6 Use of Fansidar for Intermittent Preventive Treatment (IPT)

For mothers who took anti-malarial drugs for prevention of malaria during the last pregnancy leading to a live birth in the five years preceding the survey, percentage who took sulfadoxine-pyrimethamine (SP/Fansidar), by background characteristics, Ghana 2003

Background characteristic	Percentage who took SP/Fansidar	Number of mothers who took anti-malarial drug
Residence		
Urban	1.4	631
Rural	2.1	907
Region		
Western	0.8	135
Central	0.7	143
Greater Accra	2.8	198
Volta	1.5	146
Eastern	1.0	125
Ashanti	2.6	326
Brong Ahafo	1.3	214
Northern	0.0	137
Upper East	5.3	97
Upper West	4.2	17
Education		
No education	1.1	491
Primary	2.0	348
Middle/JSS	2.4	598
Secondary+	1.5	83
Wealth quintile		
Lowest	2.9	292
Second	1.2	327
Middle	1.8	305
Fourth	1.3	320
Highest	2.0	295
Total	1.8	1,538

11.3.2 Prevalence and Management of Childhood Malaria

Since the major manifestation of malaria is fever, in the 2003 GDHS mothers were asked whether their children under age five had a fever in the two weeks preceding the survey. Although fever can occur all year round, malaria is more prevalent during the rainy season, and such temporal factors must be taken into account when interpreting the occurrence of fever as an indicator of malaria prevalence. If a fever was reported, the mother was asked whether treatment was sought at a health facility and whether the child was given any medication and, if so, how soon the medication was taken after the episode of illness started.

Table 11.7 shows the percentage of children under age five with fever in the two weeks preceding the survey, and among children with fever, the percentage who took anti-malarial drugs and the percentage who took anti-malarial drugs the same or next day, by background characteristics. Twenty-one percent of children under five years had a fever in the two weeks preceding the survey. Of these, 63

percent of children took an anti-malarial drug. Forty-four percent of children took the anti-malarial drug on the same or the next day after the onset of the illness.

Table 11.7 Prevalence and prompt treatment of fever

Percentage of children under age five with fever in the two weeks preceding the survey, and among children with fever, percentage who took anti-malarial drugs and percentage who took anti-malarial drugs the same/next day after developing fever, by background characteristics, Ghana 2003

Background characteristic	Percentage of children with fever	Number of children	Percentage who took anti-malarial drug	Percentage who took anti-malarial drug same/next day	Number of children with fever
Age in months					
< 12	18.1	688	66.4	47.3	124
12-23	28.1	695	59.1	42.5	195
24-35	24.5	649	62.1	42.3	159
36-47	17.4	695	70.8	50.9	121
48-59	17.9	612	57.4	39.1	109
Sex					
Male	21.7	1,686	62.1	42.8	366
Female	20.8	1,654	63.5	45.7	344
Residence					
Urban	22.4	1,114	65.2	49.4	250
Rural	20.7	2,225	61.4	41.4	460
Region					
Western	23.2	332	67.3	54.9	77
Central	24.3	280	44.0	37.2	68
Greater Accra	20.9	366	65.5	42.9	77
Volta	30.5	269	67.1	50.0	82
Eastern	19.8	337	66.8	49.8	67
Ashanti	20.4	622	58.7	42.1	127
Brong Ahafo	18.3	366	67.0	55.0	67
Northern	15.5	457	61.0	35.6	71
Upper East	21.3	206	70.5	31.8	44
Upper West	30.1	104	66.5	31.3	31
Education					
No education	19.6	1,339	60.3	34.9	262
Primary	22.7	761	69.9	52.5	173
Middle/JSS	21.2	1,055	57.8	43.7	224
Secondary+	30.9	147	(69.8)	(66.3)	45
Wealth quintile					
Lowest	21.5	864	59.0	37.8	186
Second	19.0	740	55.4	35.6	141
Middle	22.0	656	65.0	46.5	144
Fourth	23.3	572	76.9	55.8	133
Highest	20.9	507	58.3	49.0	106
Total	21.3	3,340	62.8	44.2	710

Note: Figures in parentheses are based on 25-49 unweighted cases..

The highest prevalence of fever is reported among children age 12-23 months (28 percent), followed by those age 24-35 months (25 percent). Fever is less common among children age less than 12

months and those age 48-59 months (18 percent). The proportion of children with fever differs little by gender of the child and urban-rural residence. The Volta and Upper West regions have the highest percentage of children with fever (about 30 percent), while the Northern Region has the lowest (16 percent). There is no clear association between the prevalence of fever and wealth. The prevalence of fever is highest among children of highly educated mothers. It is plausible that highly educated mothers are more likely to recognize and report the prevalence of fever than poorly educated mothers.

Children age 36-47 months are most likely to be given anti-malarial drugs for the treatment of fever and are also most likely to receive the drugs the same or the next day. Differences by gender are minimal. Children living in the urban areas are slightly more advantaged than children in the rural areas to be given anti-malarial drugs and within a day or two. Children living in the Upper East Region are most likely to have been given an anti-malarial drug (71 percent), but together with the Upper West Region, the least likely to have taken the drugs the same or the next day. On the whole, children in the Brong Ahafo Region are most likely to receive anti-malarial drugs within a day or two. There is no clear association between the intake of anti-malarial drugs and wealth; nevertheless, children living in households that are relatively wealthy (fourth wealth quintile) are most likely to be given anti-malarial drugs and within the first day or two of fever. Even though education does not exert a strong positive impact in determining if mothers give children anti-malarial drugs, children of highly educated mothers are much more likely than children of other mothers to be given these drugs the same day or the next.

Table 11.8 presents information on the type and timing of anti-malarial drugs given to children under age five with fever in the two weeks preceding the survey, the percentage who took specific anti-malarial drugs and the percentage who took each type of drug the same or next day after developing fever, by background characteristics. Chloroquine is by far the most common anti-malarial drug given for fever (59 percent), followed by Amodiaquine and Quinine (2 percent each) and Fansidar (less than 1 percent). It is noteworthy that although the use of quinine to treat malaria is relatively low in the country as a whole, one in ten children residing in the Upper West Region has been treated with quinine.

Forty-four percent of children took chloroquine the same or the next day following the onset of fever. Children age 36-47 months are more likely than other children to be treated with chloroquine for malaria. About three in five children in both the urban and rural areas took chloroquine, but urban children are more likely than rural children to have received the drug within a day or two following the onset of fever. About two-thirds of children in the Western, Greater Accra, Volta, Eastern, Brong Ahafo, and Upper East regions received chloroquine and about one in two children residing in the Western, Volta, Eastern, and Brong Ahafo regions took chloroquine the same day or the next. Children in the middle or higher wealth quintiles are more likely than other children to have received chloroquine within a day or two of developing a fever. Children of highly educated mothers also have a slight advantage over other children in receiving some malaria treatment and receiving it promptly.

Table 11.8 Type and timing of anti-malarial drugs

Among children under age five with fever in the two weeks preceding the survey, percentage who took specific anti-malarial drugs and the percentage who took each type of drug the same/next day after developing fever, by background characteristics, Ghana 2003

Background characteristic	Percentage who took chloroquine	Percentage who took chloroquine same/next day	Percentage who took SP/Fansidar	Percentage who took Amodiaquine	Percentage who took Amodiaquine same/next day	Percentage who took quinine	Number of children with fever
Age in months							
< 12	61.8	47.0	0.0	0.3	0.3	4.3	124
12-23	54.5	41.4	0.0	3.8	1.0	1.4	195
24-35	59.6	41.7	0.0	1.6	0.7	0.9	159
36-47	68.1	50.9	0.9	2.2	0.7	0.3	121
48-59	54.4	37.8	0.7	1.3	1.3	2.2	109
Sex							
Male	58.0	42.2	0.5	2.2	0.8	1.9	366
Female	60.5	44.9	0.0	1.8	0.8	1.6	344
Residence							
Urban	61.7	49.0	0.8	1.9	0.7	1.7	250
Rural	57.9	40.6	0.0	2.1	0.8	1.7	460
Region							
Western	64.5	53.1	0.0	2.8	1.9	0.0	77
Central	44.0	37.2	0.0	1.7	0.0	0.0	68
Greater Accra	65.5	42.9	0.0	0.0	0.0	0.0	77
Volta	67.1	50.0	0.0	0.0	0.0	0.0	82
Eastern	66.8	49.8	0.0	0.0	0.0	0.0	67
Ashanti	50.3	41.2	0.9	4.3	0.8	4.3	127
Brong Ahafo	62.6	52.0	0.0	4.4	3.0	0.0	67
Northern	56.7	35.6	1.2	1.2	1.2	3.2	71
Upper East	65.5	31.8	0.0	2.1	0.0	3.0	44
Upper West	53.2	30.2	0.0	2.9	1.2	10.5	31
Education							
No education	54.3	34.1	0.3	1.6	0.7	4.0	262
Primary	67.5	51.0	0.0	2.3	1.5	0.0	173
Middle/JSS	55.4	43.5	0.5	2.2	0.2	0.2	224
Secondary +	(69.5)	(66.3)	(0.0)	(2.2)	(1.8)	(3.0)	45
Wealth quintile							
Lowest	55.2	37.3	0.0	0.5	0.5	3.3	186
Second	52.1	34.6	0.0	3.2	1.0	0.1	141
Middle	64.0	46.5	0.0	0.6	0.0	1.3	144
Fourth	69.6	54.7	0.6	5.1	1.7	3.1	133
Highest	56.3	48.1	1.0	1.0	1.0	0.0	106
Total	59.2	43.5	0.3	2.0	0.8	1.7	710

Note: Figures in parentheses are based on 25-49 unweighted cases.
SP = sulphadoxine pyrimethamine

HIV/AIDS-RELATED KNOWLEDGE, ATTITUDES, AND BEHAVIOR

12

Acquired immune deficiency syndrome (AIDS) was first recognised internationally in 1981. Today it is a serious problem in much of the world, with countries in sub-Saharan Africa, and especially those located in the east, central, and southern parts of the continent, most affected. The growing AIDS epidemic threatens to halt social and economic gains in many countries, especially in Africa. In Ghana, as in the rest of Africa, sexual (especially heterosexual) contact and mother-to-child transmission (MTCT) are the two most common ways HIV/AIDS infections are spread.

HIV was first identified in Ghana in March 1986. Since then the epidemic has spread slowly but steadily. Ghana initially responded to HIV/AIDS as a health rather than a developmental issue and consequently directed the Ministry of Health (MOH) to address the problem. In 1987, the National AIDS Control Programme (NACP) was established under the MOH to implement and coordinate the country's HIV/AIDS programme. In addition, a National HIV/AIDS and STI Policy was developed to guide the national response. The MOH through the NACP has spearheaded various strategies to contain and limit the spread of HIV infection. These strategies include maintaining a safe blood supply, ensuring safe use of needles, and disseminating information through public campaigns to change social attitudes and behaviour. In 2000, when it became apparent that HIV prevalence rates were steadily increasing, the government established the Ghana AIDS Commission (GAC) for effective resource mobilization, management, and co-ordination of HIV/AIDS activities and targeted prevention measures expected to successfully raise awareness and promote behavioural change among the population. The national HIV/AIDS Strategic Framework developed in 2001 provides goals and objectives for a national response to the disease.

Questions in the 2003 GDHS provide a unique opportunity to determine the level of awareness and practice regarding the transmission of the AIDS virus. Both female and male respondents were asked if they have ever heard of AIDS; what a person could do to avoid getting AIDS; if they know a person with AIDS or who died of AIDS; if they are aware of MTCT; and if they ever talked to their spouse about ways of preventing AIDS. Other questions concerned the extent of stigma or discrimination towards people living with HIV/AIDS (PLWHA), attitudes towards teaching children about condom use, testing for HIV/AIDS, knowledge of other sexually transmitted infections (STIs) and infection with STIs.

12.1 HIV/AIDS–RELATED KNOWLEDGE AND ATTITUDES

Table 12.1 shows that 98 percent of women and 99 percent of men have heard of AIDS, indicating that awareness of AIDS in Ghana is universal. There is little variation in knowledge among both men and women by background characteristics; however, awareness is somewhat lower among women in the Northern Region (88 percent).

Although most respondents have heard about AIDS, personal knowledge about PLWHAs or persons who have died of AIDS is low for both men and women. Thirty-seven percent of women and 38 percent of men age 15-49 know someone personally who has the virus that causes AIDS or who has died of AIDS. Women in the Ashanti (49 percent) and Brong Ahafo (48 percent) regions are most likely to know someone personally who has the virus or who has died of AIDS. Fifty-eight percent of men in the Upper East Region know someone personally who has the virus or has died of AIDS. Personal knowledge of someone with AIDS increases with the educational level of respondents from 31 percent among women with no education to 41 percent among those with at least secondary education. Comparable percentages for men are 34 and 44 percent, respectively.

Table 12.1 Knowledge of AIDS

Percentage of women and men age 15-49 who have heard of AIDS and who know someone personally who has the virus that causes AIDS or has died of AIDS, by background characteristics, Ghana 2003

Background characteristic	Women			Men		
	Has heard of AIDS	Percentage who know someone personally who has the virus that causes AIDS or has died of AIDS	Number of respondents	Has heard of AIDS	Percentage who know someone personally who has the virus that causes AIDS or has died of AIDS	Number of respondents
Age						
15-19	98.2	30.3	1,148	98.1	28.3	1,107
20-24	98.6	38.1	1,012	99.6	36.5	684
25-29	98.4	38.1	951	99.8	40.7	754
30-39	98.0	38.4	1,524	99.5	43.6	1,131
40-49	98.7	40.1	1,056	99.8	44.1	853
15-24	98.4	34.0	2,160	98.7	31.5	1,791
Marital status						
Never married	98.9	33.2	1,616	98.9	31.9	2,040
Ever had sex	99.6	38.3	733	99.5	36.9	889
Never had sex	98.4	29.0	883	98.3	28.0	1,151
Married/Living together	97.9	39.2	3,549	99.6	43.9	2,228
Divorced/Separated/Widowed	99.3	33.8	526	100.0	42.5	261
Residence						
Urban	99.7	38.1	2,755	99.7	37.0	2,049
Rural	97.1	36.0	2,936	98.9	39.6	2,480
Region						
Western	99.7	29.1	553	99.5	26.9	435
Central	100.0	33.4	431	99.4	32.6	327
Greater Accra	99.4	31.1	942	100.0	36.5	664
Volta	99.9	31.2	492	100.0	39.9	389
Eastern	99.1	38.9	601	99.3	43.5	484
Ashanti	99.7	48.6	1,142	100.0	42.3	858
Brong Ahafo	99.5	48.1	569	100.0	39.1	483
Northern	87.7	20.2	499	96.3	28.8	489
Upper East	97.8	41.1	310	98.4	58.2	284
Upper West	96.0	42.8	153	97.8	43.5	116
Education						
No education	95.1	30.7	1,608	98.0	33.9	742
Primary	99.0	35.5	1,135	98.5	36.3	750
Middle/JSS	99.8	40.9	2,279	99.7	38.1	1,972
Secondary+	100.0	41.4	669	100.0	43.7	1,065
Wealth quintile						
Lowest	93.8	31.8	970	97.4	36.6	777
Second	97.7	35.8	949	99.8	43.6	802
Middle	99.4	37.8	1,071	99.2	38.0	879
Fourth	99.9	40.4	1,245	99.6	34.1	971
Highest	99.8	37.8	1,457	100.0	40.1	1,100
Total	98.4	37.0	5,691	99.3	38.4	4,529
Total men 15-59	na	na	na	99.2	39.1	5,015

na = Not applicable

12.2 KNOWLEDGE OF PREVENTION METHODS

Controlling the spread of HIV is one of the major objectives in the fight against HIV infection. The challenge is to substantially reduce new HIV infections among the sexually active population and other vulnerable groups. This is done through the promotion of safer sexual behaviour including

abstinence, condom use, and promoting sex with a single partner who is not infected and who has no other partners.

Table 12.2 shows the percentage of women and men age 15-49 who, in response to a prompted

Table 12.2 Knowledge of HIV prevention methods

Percentage of women and men age 15-49 who, in response to a prompted question, say that people can reduce the risk of getting the AIDS virus by using condoms and by having sex with just one partner who is not infected and who has no other partners, by background characteristics, Ghana 2003

	Women					Men				
	Risk of getting AIDS virus can be reduced by:					Risk of getting AIDS virus can be reduced by:				
Background characteristic	Using condoms	Limiting sex to one uninfected partner	Using condoms and limiting sex to one uninfected partner	Abstaining from sex	Number of women	Using condoms	Limiting sex to one uninfected partner	Using condoms and limiting sex to one uninfected partner	Abstaining from sex	Number of men
Age										
15-19	76.4	85.6	71.5	80.2	1,148	77.6	84.8	70.9	80.7	1,107
20-24	76.9	87.4	73.0	78.0	1,012	85.4	91.8	81.8	84.0	684
25-29	73.0	85.8	69.3	78.6	951	83.9	90.3	79.7	82.2	754
30-39	70.0	84.5	65.5	77.2	1,524	83.2	92.4	79.7	84.6	1,131
40-49	69.4	87.9	66.7	80.4	1,056	82.4	91.5	78.7	81.5	853
15-24	76.6	86.4	72.2	79.2	2,160	80.6	87.5	75.1	81.9	1,791
Marital status										
Never married	77.3	87.7	72.6	81.5	1,616	81.5	88.6	76.3	83.3	2,040
Ever had sex	81.8	89.1	76.3	81.3	733	89.4	93.2	85.3	86.5	889
Never had sex	73.5	86.5	69.6	81.7	883	75.4	85.0	69.5	80.9	1,151
Married/living together	70.6	84.6	66.8	76.5	3,549	82.9	91.2	79.1	82.7	2,228
Divorced/separated/ widowed	74.9	91.2	71.7	85.8	526	80.7	89.7	76.2	75.7	261
Residence										
Urban	77.2	89.3	73.2	82.4	2,755	84.0	92.6	80.1	85.0	2,049
Rural	68.9	83.1	64.9	75.4	2,936	80.6	87.7	75.6	80.5	2,480
Region										
Western	77.2	91.7	72.8	86.0	553	83.1	93.9	79.9	83.6	435
Central	79.2	94.5	76.6	87.8	431	79.9	88.1	73.0	80.7	327
Greater Accra	73.4	81.6	67.7	76.7	942	84.5	92.4	80.3	85.1	664
Volta	70.2	82.9	65.0	72.4	492	89.3	93.6	86.2	89.8	389
Eastern	78.1	92.6	75.1	85.5	601	91.9	95.7	89.3	88.8	484
Ashanti	76.4	92.8	73.6	84.4	1,142	81.4	91.8	76.5	83.2	858
Brong Ahafo	75.4	87.0	69.4	79.3	569	89.2	95.2	85.7	88.2	483
Northern	46.4	58.0	42.6	49.0	499	60.9	72.6	55.9	63.2	489
Upper East	80.4	89.7	78.9	84.7	310	85.1	83.7	77.4	82.9	284
Upper West	60.6	85.3	57.7	75.2	153	65.2	82.4	58.3	71.4	116
Education										
No education	62.6	76.0	58.0	69.9	1,608	69.1	77.2	62.2	70.5	742
Primary	72.5	87.5	68.8	80.1	1,135	78.8	85.5	72.5	80.6	750
Middle/JSS	78.7	90.9	75.1	82.4	2,279	85.1	93.6	81.5	85.9	1,972
Secondary+	78.8	91.4	74.4	85.7	669	88.1	95.1	84.9	86.2	1,065
Wealth quintile										
Lowest	63.6	77.7	59.7	68.8	970	74.3	81.1	67.5	74.8	777
Second	69.2	82.4	65.3	74.7	949	82.7	88.6	76.8	81.1	802
Middle	74.2	90.1	71.1	81.1	1,071	82.2	91.0	78.7	85.5	879
Fourth	76.0	87.7	71.1	83.5	1,245	84.4	91.3	80.0	83.3	971
Highest	77.9	89.8	73.9	82.3	1,457	85.2	95.1	82.7	86.1	1,100
Total	72.9	86.1	68.9	78.8	5,691	82.1	89.9	77.7	82.6	4,529
Total men 15-59	na	na	na	na	na	82.1	90.3	78.0	82.8	5,015

na = Not applicable

question, say that people can reduce the risk of getting the AIDS virus by using condoms, by having sex with just one uninfected partner who has no other partners, and by abstaining from sex, by background characteristics.

Knowledge of HIV prevention methods is quite high. Seventy-three percent of women and 82 percent of men know that condom use is a major prevention method. Eighty-six percent and 90 percent of women and men, respectively, know that limiting sex to only one uninfected partner is vital to the prevention of HIV. Sixty-nine percent of women and 78 percent of men know that these two preventive measures in combination can reduce the risk of HIV infection. In addition, 79 percent of women and 83 percent of men know that abstinence can prevent HIV infection. Female respondents who are either married or living together and male respondents who have never had sex are slightly less knowledgeable about the principal ways to prevent HIV transmission than their counterparts.

Knowledge of HIV prevention is higher among urban than rural dwellers. Regional variations range from a low of 43 percent in the Northern Region to a high of 79 percent in the Upper East among women, and from a low of 56 percent in the Northern Region to a high of 89 percent in the Eastern Region among men. Knowledge of HIV prevention rises with education levels and wealth. There is no clear pattern between knowledge of HIV prevention and age.

12.3 BELIEFS ABOUT AIDS

Misconception about AIDS and HIV transmission is one of the factors that influences discrimination and stigmatisation. The 2003 GDHS inquired about common misconceptions in Ghana. Respondents were asked whether they think it is possible for a healthy-looking person to have the AIDS virus; whether AIDS can be transmitted by mosquito bites; whether AIDS can be transmitted by supernatural means; and whether a person can be infected through sharing food with a person who has AIDS. The results are presented in Tables 12.3.1 for women and 12.3.2 for men, by background characteristics.

About four in five women and men correctly know that a healthy looking person can have the AIDS virus. Fifty-five percent of women and 60 percent of men know that AIDS cannot be transmitted through mosquito bites. Less than half of women and three-fifths of men know that AIDS cannot be transmitted by supernatural means. More than 70 percent of women and men know that a person cannot become infected with HIV/AIDS by sharing food with someone who has AIDS. Only 28 percent of women and 39 percent of men believe that a healthy looking person can have the AIDS virus and also reject the two most common misconceptions about AIDS in Ghana (i.e., AIDS can be transmitted by mosquito bites and by supernatural means). It is evident from the survey data that misconceptions about AIDS transmission are high in Ghana.

Beliefs on HIV/AIDS transmission vary by residence. Urban residents are much less likely to have misconceptions about HIV/AIDS transmission than rural residents. For example, 50 percent of urban men age 15-49 compared with 29 percent of men residing in rural areas, believe that a healthy looking person can have the AIDS virus, and that a person cannot become infected with AIDS through mosquito bites and supernatural means. Regional variations are marked, with correct beliefs ranging from a low of 20 percent in the Central and Northern regions to a high of 52 percent in the Upper East Region among women, and from a low of 28 percent in the Northern Region to a high of 53 percent in Greater Accra among men. Education and wealth are positively correlated with correct beliefs.

Table 12.3.1 Beliefs about AIDS: women

Percentage of women age 15-49 who know that a healthy-looking person can have the AIDS virus and who in response to a prompted question, correctly reject local misconceptions about AIDS transmission or prevention, by background characteristics, Ghana 2003

Background characteristic	Percentage of respondents who know that: A healthy-looking person can have the AIDS virus	AIDS cannot be transmitted by mosquito bites	AIDS cannot be transmitted by witchcraft or other supernatural means	A person cannot become infected by sharing food with someone who has AIDS	Percentage who say that a healthy-looking person can have the AIDS virus and who reject the two most common misconceptions	Number of women
Age						
15-19	75.4	65.5	53.9	78.1	32.9	1,148
20-24	81.7	58.3	48.1	78.0	29.8	1,012
25-29	83.3	53.7	45.4	72.3	27.1	951
30-39	79.3	49.3	42.5	66.9	26.0	1,524
40-49	81.0	51.1	43.2	65.6	26.6	1,056
15-24	78.3	62.1	51.2	78.1	31.5	2,160
Marital status						
Never married	81.4	67.6	54.3	81.8	35.1	1,616
Ever had sex	84.7	60.9	46.5	82.2	27.4	733
Never had sex	78.6	73.3	60.7	81.4	41.4	883
Married/living together	78.7	50.7	44.3	67.6	26.2	3,549
Divorced/separated/ widowed	83.8	47.7	36.6	69.8	22.5	526
Residence						
Urban	87.0	65.0	50.8	81.9	34.9	2,755
Rural	73.3	46.1	42.3	62.3	22.3	2,936
Region						
Western	79.3	51.2	39.1	71.6	23.7	553
Central	88.3	44.4	35.3	67.0	20.0	431
Greater Accra	84.4	62.9	49.0	82.1	32.4	942
Volta	79.5	42.1	45.8	58.9	22.3	492
Eastern	83.3	50.8	42.8	72.1	25.8	601
Ashanti	85.7	63.1	44.1	77.2	29.4	1,142
Brong Ahafo	89.1	59.1	46.1	79.6	34.2	569
Northern	44.3	45.0	48.7	45.0	20.1	499
Upper East	75.0	71.7	80.2	85.2	51.8	310
Upper West	68.1	40.2	46.8	53.9	23.6	153
Education						
No education	65.6	43.1	41.7	55.3	21.0	1,608
Primary	77.9	44.7	35.5	64.5	17.1	1,135
Middle/JSS	86.6	60.0	47.9	81.0	29.5	2,279
Secondary+	95.1	85.9	71.1	92.4	61.3	669
Wealth quintile						
Lowest	63.1	43.3	44.9	53.9	22.6	970
Second	73.2	43.8	37.1	61.5	19.4	949
Middle	81.9	50.0	43.3	67.4	23.8	1,071
Fourth	86.2	58.1	45.8	79.0	27.8	1,245
Highest	88.7	72.1	56.3	87.6	42.0	1,457
Total	79.9	55.2	46.4	71.8	28.4	5,691

Note: The two most common local misconceptions involve transmission by mosquito bites and by supernatural means.

Table 12.3.2 Beliefs about AIDS: men

Percentage of men age 15-49 who know that a healthy-looking person can have the AIDS virus and who in response to a prompted question, correctly reject local misconceptions about AIDS transmission or prevention, by background characteristics, Ghana 2003

Background characteristic	Percentage of respondents who know that: A healthy-looking person can have the AIDS virus	AIDS cannot be transmitted by mosquito bites	AIDS cannot be transmitted by witchcraft or other supernatural means	A person cannot become infected by sharing food with someone who has AIDS	Percentage who say that a healthy-looking person can have the AIDS virus and who reject the two most common misconceptions	Number of men
Age						
15-19	79.9	64.3	55.5	75.4	37.1	1,107
20-24	89.3	66.6	62.6	81.3	44.5	684
25-29	87.0	62.8	58.6	77.0	38.9	754
30-39	89.1	54.7	57.6	73.7	37.4	1,131
40-49	87.9	55.0	63.6	72.1	38.1	853
15-24	83.5	65.1	58.2	77.6	39.9	1,791
Marital status						
Never married	84.9	65.6	60.1	79.0	41.6	2,040
Ever had sex	89.1	66.3	61.8	82.5	43.4	889
Never had sex	81.7	65.0	58.8	76.2	40.2	1,151
Married/living together	87.3	55.6	58.9	72.2	36.6	2,228
Divorced/separated/ widowed	88.5	58.4	53.2	76.8	35.1	261
Residence						
Urban	89.8	70.9	67.1	85.1	50.3	2,049
Rural	83.4	51.4	52.6	67.6	29.3	2,480
Region						
Western	87.4	60.2	49.8	78.6	35.6	435
Central	94.2	50.2	45.1	74.3	30.2	327
Greater Accra	91.9	73.2	68.1	86.3	53.1	664
Volta	88.0	55.3	65.1	76.8	40.9	389
Eastern	92.7	55.6	57.1	70.4	39.1	484
Ashanti	85.1	65.2	59.3	81.0	40.1	858
Brong Ahafo	93.2	68.5	53.7	74.9	40.4	483
Northern	69.1	47.3	62.0	56.4	28.0	489
Upper East	79.3	54.5	70.6	76.8	34.3	284
Upper West	66.4	47.8	51.8	61.9	25.0	116
Education						
No education	72.5	39.8	49.4	53.4	19.8	742
Primary	80.9	44.4	44.6	61.2	21.1	750
Middle/JSS	88.7	61.0	57.5	80.5	37.3	1,972
Secondary+	95.4	84.4	79.2	91.7	67.1	1,065
Wealth quintile						
Lowest	75.0	43.0	49.7	59.8	22.0	777
Second	84.2	48.6	47.5	64.0	26.0	802
Middle	87.8	56.9	57.6	75.7	35.5	879
Fourth	89.0	66.1	61.3	80.1	43.4	971
Highest	92.3	78.3	73.5	90.7	58.6	1,100
Total	86.3	60.2	59.1	75.5	38.8	4,529
Total men 15-59	86.1	59.8	59.2	75.2	38.5	5,015

Note: The two most common local misconceptions involve transmission by mosquito bites and by supernatural means.

12.4 STIGMA AND DISCRIMINATION ASSOCIATED WITH HIV/AIDS

The survey indicates that knowledge and beliefs about HIV and AIDS influence how PLWHAs and those affected by HIV/AIDS are treated. The extent of stigma and discrimination associated with HIV/AIDS can be ascertained from four questions included in the GDHS: whether respondents are willing to care for a family member with HIV at home; whether respondents would buy fresh vegetables from a vendor who has the AIDS virus; whether respondents believe that a female teacher who had the AIDS virus should be allowed to continue teaching; and whether respondents would want to keep the HIV positive status of a family member a secret. The results are shown in Tables 12.4.1 and 12.4.2.

It is encouraging to see that more than two-thirds of women and men age 15-49 are willing to care for a family member with HIV in their own household, and that three-fifths of women and two-thirds of men do not believe that the HIV-positive status of a family member should be kept a secret. Two-fifths of women and half of men also believe that an HIV-positive female teacher should be allowed to continue teaching. However, only one in four women and one in three men say that they would buy fresh vegetables from a vendor with AIDS. The four measures can be combined to provide a single measure of the percentage of women and men who exhibit accepting attitudes towards persons who have AIDS. It is disappointing to note that fewer than 10 percent of women and 14 percent of men express accepting attitudes on all four measures. Urban dwellers, those residing in Greater Accra, those with secondary education or higher, and those in the highest wealth quintile are much more likely to express accepting attitudes towards people with AIDS than others.

Table 12.4.1 Accepting attitudes towards those living with HIV: women

Percentage of women age 15-49 who have heard about AIDS expressing accepting attitudes towards people with HIV, by background characteristics, Ghana 2003

Background characteristic	Percentage of respondents who: Are willing to care for a family member with HIV at home	Would buy fresh vegetables from a vendor with AIDS	Believe HIV-positive female teacher should be allowed to continue teaching	Believe HIV-positive status of a family member does not need to remain a secret	Percentage expressing accepting attitudes on all four measures	Number of women who have heard of HIV/AIDS
Age						
15-19	71.4	29.2	43.8	51.6	8.9	1,127
20-24	71.1	30.9	44.4	57.4	10.3	998
25-29	65.0	23.6	38.0	59.4	7.9	936
30-39	67.9	22.2	33.3	62.1	7.9	1,494
40-49	66.3	23.0	32.3	61.4	7.6	1,042
15-24	71.3	30.0	44.0	54.3	9.6	2,125
Marital status						
Never married	72.9	34.7	49.3	53.3	11.4	1,599
Ever had sex	71.3	37.2	48.4	55.2	10.9	730
Never had sex	74.3	32.6	50.1	51.8	11.8	869
Married/living together	66.7	21.2	33.5	60.2	6.9	3,476
Divorced/separated/ widowed	65.9	26.8	33.3	63.7	10.0	522
Residence						
Urban	75.1	33.6	50.0	57.6	12.2	2,748
Rural	62.0	17.8	26.4	59.5	4.9	2,849
Residence						
Western	54.7	30.5	33.2	63.9	9.3	552
Central	50.6	20.2	32.2	44.5	2.8	431
Greater Accra	73.2	37.2	55.4	60.5	16.0	937
Volta	46.2	31.9	28.1	73.8	7.9	491
Eastern	64.0	25.8	37.6	63.6	8.0	595
Ashanti	75.4	27.8	39.6	61.0	9.4	1,139
Brong Ahafo	84.7	20.1	32.0	52.4	7.4	566
Northern	65.1	7.4	32.1	63.1	2.1	437
Upper East	86.6	11.7	32.4	28.3	3.7	303
Upper West	89.6	12.5	37.2	49.2	4.1	146
Education						
No education	66.1	12.3	25.1	56.9	3.3	1,529
Primary	59.2	19.9	29.3	58.1	5.2	1,124
Middle/JSS	70.6	30.2	41.2	60.5	9.8	2,275
Secondary+	81.6	49.9	71.1	56.5	21.2	669
Wealth quintile						
Lowest	61.4	12.6	25.2	54.1	3.0	909
Second	60.0	14.5	20.9	62.5	4.0	927
Middle	64.9	19.4	29.6	58.6	5.4	1,064
Fourth	69.8	29.7	40.2	57.2	7.5	1,244
Highest	79.5	41.7	61.1	59.9	17.9	1,453
Total	68.4	25.6	38.0	58.5	8.5	5,597

Table 12.4.2 Accepting attitudes towards those living with HIV: men

Percentage of men age 15-49 who have heard about AIDS expressing accepting attitudes towards people with HIV, by background characteristics, Ghana 2003

Background characteristic	Percentage of respondents who: Are willing to care for a family member with HIV at home	Would buy fresh vegetables from a vendor with AIDS	Believe HIV-positive female teacher should be allowed to continue teaching	Believe HIV-positive status of a family member does not need to remain a secret	Percentage expressing accepting attitudes on all four measures	Number of men who have heard of HIV/AIDS
Age						
15-19	69.2	35.1	48.4	59.0	11.7	1,087
20-24	76.3	40.3	51.2	62.9	16.7	681
25-29	72.7	34.5	51.1	65.9	14.4	753
30-39	69.9	35.6	46.7	69.8	15.0	1,126
40-49	74.1	35.1	48.8	69.6	15.0	851
15-24	71.9	37.1	49.5	60.5	13.6	1,767
Marital status						
Never married	73.8	38.8	52.3	60.7	15.3	2,016
Ever had sex	77.4	43.2	55.2	63.7	17.6	884
Never had sex	71.0	35.4	50.0	58.4	13.5	1,132
Married/living together	70.4	32.9	45.4	69.2	13.1	2,219
Divorced/separated/ widowed	71.1	39.6	54.0	70.6	17.7	261
Residence						
Urban	76.7	45.3	60.6	60.1	19.3	2,044
Rural	68.0	28.1	39.3	70.0	10.2	2,453
Region						
Western	63.1	32.3	41.7	61.6	9.4	433
Central	72.3	29.2	46.9	66.4	14.9	325
Greater Accra	83.1	49.2	69.4	61.0	24.7	664
Volta	72.5	48.0	44.1	80.4	22.7	389
Eastern	78.0	34.2	44.7	76.7	14.2	480
Ashanti	62.4	38.8	47.9	60.3	10.5	858
Brong Ahafo	63.9	35.2	49.1	55.9	11.9	483
Northern	74.1	20.3	42.1	72.3	8.5	471
Upper East	80.7	28.5	44.8	66.6	14.1	280
Upper West	88.3	21.5	43.7	53.7	7.7	114
Education						
No education	67.9	14.4	32.6	71.1	4.4	727
Primary	61.9	27.0	34.9	65.5	10.1	739
Middle/JSS	72.0	37.8	48.1	63.8	13.0	1,965
Secondary+	81.6	53.3	71.5	64.7	26.6	1,065
Wealth quintile						
Lowest	71.1	21.1	37.6	70.2	8.1	757
Second	63.4	27.7	33.7	68.7	8.6	801
Middle	66.7	31.5	38.0	65.7	9.9	872
Fourth	72.7	38.6	53.4	64.0	14.4	968
Highest	82.3	53.3	72.7	61.0	26.3	1,100
Total	72.0	35.9	49.0	65.5	14.4	4,497
Total men 15-59	71.8	36.3	49.1	66.0	14.8	4,977

12.5 KNOWLEDGE OF PREVENTION OF MOTHER-TO-CHILD TRANSMISSION

More than 80 percent of the transmission of HIV is through sexual intercourse. According to the Ghana HIV/AIDS strategic framework, mother to child transmission (MTCT) is estimated to account for about 15 percent of all HIV transmissions in Ghana. One of the key intervention areas of the HIV/AIDS strategic framework for Ghana is the prevention of new infections. The challenge is to make MTCT prevention services available and utilized. It is therefore important to ascertain the knowledge of respondents on how transmission of HIV from mother to child during pregnancy, delivery, and during breastfeeding can be prevented, and to ascertain whether women and men know that the risk of mother to child transmission of HIV can be reduced by the mother taking special drugs during pregnancy.

Tables 12.5.1 and 12.5.2 show that general knowledge about HIV transmission during pregnancy, delivery, and breastfeeding is relatively high and ranges between 69 and 75 percent among women and 74 to 82 percent among men. However, few women and men (16 percent each) know that the risk of MTCT can be reduced if a mother takes special drugs during her pregnancy. As seen before, urbanization, education, and wealth, have a positive impact on respondent's knowledge of MTCT. Women in the Upper West Region and men in the Northern Region are least likely to know both that HIV can be transmitted through breastfeeding and that the risk of MTCT can be reduced by mothers taking special drugs during pregnancy (a UNAIDS measure).

Table 12.5.1 Knowledge of prevention of mother to child transmission of HIV: women

Percentage of women age 15-49 who know that HIV can be transmitted from mother to child during delivery, during pregnancy and by breastfeeding and that the risk of mother-to-child transmission (MTCT) of HIV can be reduced by the mother taking special drugs during pregnancy, by background characteristics, Ghana 2003

	Percentage who know that:					
Background characteristic	HIV can be transmitted during pregnancy	HIV can be transmitted during delivery	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking drugs during pregnancy	Number of women
Age						
15-19	71.9	65.5	68.0	12.6	11.5	1,148
20-24	76.5	70.0	75.1	19.0	18.0	1,012
25-29	79.8	74.0	76.1	16.8	15.9	951
30-39	73.4	67.6	71.0	16.7	16.2	1,524
40-49	76.7	70.3	74.2	14.6	14.1	1,056
15-24	74.1	67.6	71.3	15.6	14.6	2,160
Marital status						
Never married	78.0	70.7	73.6	15.8	14.6	1,616
Ever had sex	84.6	75.5	79.0	18.0	16.8	733
Never had sex	72.4	66.7	69.2	14.0	12.8	883
Married/living together	73.9	68.0	71.5	16.3	15.7	3,549
Divorced/separated/ widowed	77.2	72.7	76.5	13.7	13.2	526
Residence						
Urban	82.3	76.4	78.9	18.9	17.9	2,755
Rural	68.8	62.3	66.6	13.2	12.5	2,936
Region						
Western	65.4	59.5	65.2	16.6	15.3	553
Central	72.2	65.3	74.4	13.0	13.0	431
Greater Accra	84.4	79.2	81.1	14.4	13.6	942
Volta	78.5	69.4	76.2	9.2	8.7	492
Eastern	88.2	82.9	88.1	13.8	13.1	601
Ashanti	85.4	76.2	78.4	26.5	25.3	1,142
Brong Ahafo	72.9	69.3	70.1	21.5	20.0	569
Northern	46.6	40.7	44.4	6.4	6.0	499
Upper East	55.0	53.5	52.0	10.2	9.8	310
Upper West	72.0	69.7	67.8	4.5	4.5	153
Education						
No education	57.8	53.1	56.1	9.2	9.0	1,608
Primary	73.1	66.9	72.7	13.2	12.7	1,135
Middle/JSS	83.6	76.7	79.8	18.2	17.0	2,279
Secondary+	93.2	86.2	87.1	29.2	27.5	669
Wealth quintile						
Lowest	56.1	52.0	54.1	10.0	9.5	970
Second	69.9	62.6	66.8	12.4	12.1	949
Middle	75.2	70.4	75.5	13.8	13.1	1,071
Fourth	82.3	73.4	78.9	15.9	15.4	1,245
Highest	85.8	80.3	81.0	23.8	22.1	1,457
Total	75.3	69.2	72.6	15.9	15.1	5,691

Table 12.5.2 Knowledge of prevention of mother to child transmission of HIV: men

Percentage of men age 15-49 who know that HIV can be transmitted from mother to child during delivery, during pregnancy, and by breastfeeding and that the risk of mother-to-child transmission (MTCT) of HIV can be reduced by mother taking special drugs during pregnancy, by background characteristics, Ghana 2003

	Percentage who know that:					
Background characteristic	HIV can be transmitted during pregnancy	HIV can be transmitted during delivery	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking drugs during pregnancy	Number of men
Age						
15-19	74.6	65.3	66.5	12.9	11.4	1,107
20-24	84.2	75.7	76.3	14.5	12.1	684
25-29	85.3	75.9	78.2	19.1	16.5	754
30-39	83.6	76.1	77.4	17.3	15.6	1,131
40-49	83.9	76.9	77.9	16.2	14.3	853
15-24	78.2	69.3	70.2	13.5	11.7	1,791
Marital status						
Never married	79.3	70.3	71.4	15.5	13.5	2,040
Ever had sex	85.7	76.0	78.6	18.4	15.8	889
Never had sex	74.3	65.8	65.9	13.3	11.6	1,151
Married/living together	84.2	76.5	78.0	16.5	14.6	2,228
Divorced/separated/ widowed	81.3	73.3	73.7	14.1	12.8	261
Residence						
Urban	86.2	78.5	77.1	20.4	17.3	2,049
Rural	78.2	69.3	72.9	12.2	11.2	2,480
Region						
Western	79.1	68.7	73.5	18.4	16.9	435
Central	78.2	64.5	74.0	7.2	6.8	327
Greater Accra	89.7	83.1	84.0	18.5	16.5	664
Volta	87.3	82.4	85.4	10.8	10.8	389
Eastern	88.9	82.5	83.1	20.9	17.8	484
Ashanti	84.4	76.4	74.8	23.2	19.9	858
Brong Ahafo	86.4	68.7	69.8	15.6	12.8	483
Northern	61.5	56.7	57.9	7.3	6.0	489
Upper East	73.8	70.6	68.5	10.7	9.8	284
Upper West	76.3	71.0	65.6	8.8	8.0	116
Education						
No education	66.1	62.2	61.4	5.8	5.1	742
Primary	73.2	68.6	70.8	11.2	10.5	750
Middle/JSS	85.3	74.8	77.9	16.3	14.5	1,972
Secondary+	92.3	82.5	81.0	25.3	21.6	1,065
Wealth quintile						
Lowest	69.3	63.5	65.1	8.5	7.5	777
Second	78.1	70.6	72.9	10.2	9.3	802
Middle	84.7	73.3	79.3	15.6	14.0	879
Fourth	83.5	73.3	73.3	16.7	14.4	971
Highest	89.6	83.0	80.7	24.8	21.5	1,100
Total	81.8	73.5	74.8	15.9	14.0	4,529
Total men 15-59	81.8	73.9	74.8	16.0	14.2	5,015

12.6 HIV TESTING

Voluntary counselling and testing (VCT) is vital in the fight against HIV/AIDS. The 2003 GDHS asked all respondents who had heard of AIDS whether they had ever been tested for the virus, when they were last tested, whether the test was voluntary or mandatory, whether they received the test results, where they went for the test, and if they have not been tested, whether they would like to be tested, and whether they know where to go for the test.

Table 12.6, which presents results among all respondents, shows that only about one in ten women and men age 15-49 reported that they had ever been tested for AIDS. The majority of women and men who were tested know their HIV status. Two percent of women and 3 percent of men in Ghana have been tested and received their test results within the last 12 months.

Table 12.6 Women and men who had an HIV test and received test results

Percent distribution of women and men age 15-49 by status of HIV testing, and percentage of women and men who were tested for HIV and received test results in the past 12 months, according to background characteristics, Ghana 2003

	Women							Men						
	Ever tested							Ever tested						
Background characteristic	Received results	No results	Never tested	Don't Know/ missing	Total	Percentage tested and received results in past 12 months	Number of women	Received results	No results	Never tested	Don't Know/ missing	Total	Percentage tested and received results in past 12 months	Number of men
Age														
15-19	2.7	1.2	94.3	1.8	100.0	1.0	1,148	2.1	0.7	95.3	1.9	100.0	1.1	1,107
20-24	7.6	2.4	88.4	1.6	100.0	2.6	1,012	4.5	1.1	94.0	0.4	100.0	2.4	684
25-29	11.0	2.9	84.3	1.9	100.0	3.2	951	11.1	1.9	86.7	0.2	100.0	4.9	754
30-39	8.7	3.8	85.4	2.1	100.0	2.9	1,524	10.8	1.9	86.8	0.5	100.0	4.2	1,131
40-49	7.0	2.3	89.5	1.3	100.0	1.8	1,056	9.1	2.8	87.8	0.2	100.0	3.6	853
15-24	5.0	1.8	91.5	1.7	100.0	1.7	2,160	3.0	0.9	94.8	1.3	100.0	1.6	1,791
Marital status														
Never married	4.9	1.2	92.8	1.1	100.0	1.9	1,616	4.5	0.7	93.7	1.1	100.0	2.0	2,040
Ever had sex	8.0	1.7	89.9	0.4	100.0	2.8	733	7.2	0.7	91.6	0.5	100.0	2.7	889
Never had sex	2.4	0.7	95.3	1.6	100.0	1.1	883	2.4	0.7	95.2	1.7	100.0	1.5	1,151
Married/living together	8.4	3.2	86.2	2.3	100.0	2.5	3,549	10.1	2.6	86.9	0.4	100.0	4.0	2,228
Divorced/separated/ widowed	8.0	2.7	88.5	0.7	100.0	2.3	526	8.3	1.4	90.3	0.0	100.0	5.0	261
Residence														
Urban	9.3	3.2	87.1	0.4	100.0	3.1	2,755	10.9	1.4	87.5	0.3	100.0	4.7	2,049
Rural	5.5	2.0	89.4	3.1	100.0	1.5	2,936	4.7	1.9	92.3	1.1	100.0	1.9	2,480
Region														
Western	10.2	1.1	88.4	0.3	100.0	3.5	553	10.9	2.8	85.7	0.5	100.0	4.2	435
Central	2.5	1.1	96.5	0.0	100.0	0.6	431	2.4	0.9	96.0	0.6	100.0	0.8	327
Greater Accra	8.5	2.2	88.7	0.6	100.0	3.2	942	10.9	0.9	88.2	0.0	100.0	5.6	664
Volta	5.1	2.2	92.6	0.1	100.0	2.2	492	4.0	1.6	94.4	0.0	100.0	1.0	389
Eastern	9.3	3.1	86.7	0.9	100.0	2.4	601	6.0	1.9	91.3	0.7	100.0	3.3	484
Ashanti	9.2	1.6	88.6	0.6	100.0	2.2	1,142	10.3	2.3	87.4	0.0	100.0	4.1	858
Brong Ahafo	11.2	8.9	79.1	0.8	100.0	3.6	569	6.4	1.8	91.8	0.0	100.0	2.7	483
Northern	2.7	1.2	83.8	12.3	100.0	1.0	499	4.9	1.0	90.5	3.7	100.0	1.9	489
Upper East	1.8	2.3	93.3	2.7	100.0	0.6	310	5.9	1.3	91.2	1.6	100.0	2.3	284
Upper West	2.0	2.7	91.0	4.3	100.0	1.1	153	5.1	2.1	90.7	2.2	100.0	1.4	116
Education														
No education	2.8	2.2	90.0	5.0	100.0	1.1	1,608	3.0	1.7	93.4	2.0	100.0	1.7	742
Primary	5.5	2.9	90.4	1.3	100.0	1.4	1,135	5.1	1.3	92.1	1.5	100.0	2.3	750
Middle/JSS	9.7	2.7	87.3	0.3	100.0	3.1	2,279	6.4	1.6	91.7	0.3	100.0	2.5	1,972
Secondary+	13.6	2.5	83.9	0.0	100.0	4.0	669	14.3	2.1	83.6	0.0	100.0	5.9	1,065
Wealth quintile														
Lowest	2.9	1.8	88.9	6.4	100.0	0.9	970	2.7	1.3	93.4	2.6	100.0	1.0	777
Second	5.3	2.0	90.3	2.4	100.0	1.5	949	2.7	1.7	95.4	0.2	100.0	1.4	802
Middle	6.0	3.3	89.8	0.8	100.0	2.1	1,071	6.2	1.5	91.5	0.8	100.0	2.5	879
Fourth	8.9	3.0	87.7	0.4	100.0	3.4	1,245	8.6	1.9	89.2	0.4	100.0	3.1	971
Highest	11.3	2.5	85.9	0.2	100.0	2.9	1,457	14.4	1.9	83.7	0.0	100.0	6.6	1,100
Total	7.4	2.6	88.3	1.8	100.0	2.3	5,691	7.5	1.7	90.1	0.7	100.0	3.2	4,529
Total men 15-59	na	na	na	na	na	na	na	7.5	1.6	90.2	0.8	100.0	3.2	5,015

na = Not applicable

12.7 COUNSELLING AND TESTING PREGNANT WOMEN

The need for voluntary counselling before testing for HIV cannot be over-emphasized. An opportunity for counselling pregnant women on HIV/AIDS arises during antenatal visits. The 2003 GDHS asked women who gave birth in the two years preceding the survey whether they were given any information or counselled about HIV/AIDS.

The results in Table 12.7 show that 1,421 women age 15-49 had a birth in the two years preceding the survey. Forty-three percent of these women were counselled during their antenatal visits. Eight percent of these women were voluntarily tested for AIDS, half of whom received their results while half

Table 12.7 Pregnant women counselled and tested for HIV

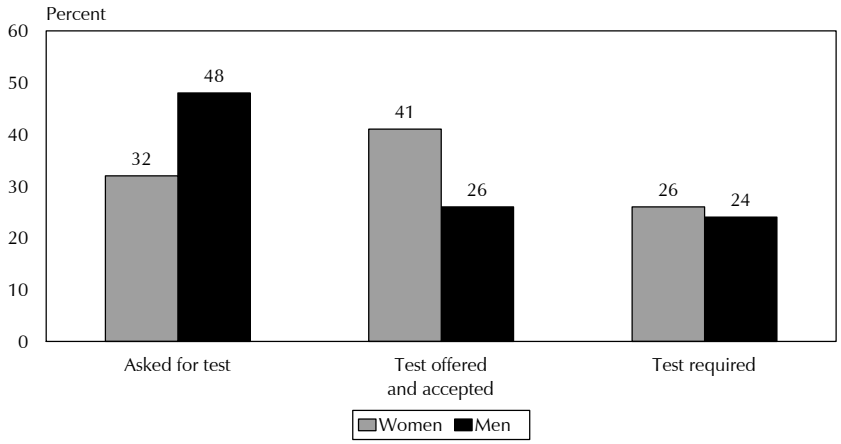
Among women who gave birth in the two years preceding the survey, percentage who were counselled and offered HIV testing during antenatal care for their most recent birth, percentage who accepted an offer of testing, and percentage who received their test results, by background characteristics, Ghana 2003

Background characteristic	Counselled during antenatal visit	Voluntarily tested for HIV during antenatal care visits		Counselled, tested for HIV and know results	Number of women who gave birth in the past 2 years
		Received results	No results		
Age					
15-19	21.5	5.3	3.6	4.0	96
20-24	44.6	6.3	3.4	5.4	308
25-29	45.9	2.3	3.7	1.5	384
30-39	44.6	4.4	4.0	3.3	522
40-49	43.1	3.7	3.7	2.9	112
15-24	39.1	6.1	3.4	5.1	404
Marital status					
Never married	27.3	12.1	1.2	6.5	52
Married/living together	44.3	4.1	3.9	3.3	1,289
Divorced/separated/ widowed	37.4	1.0	2.8	1.0	80
Residence					
Urban	53.9	6.9	6.3	5.1	477
Rural	37.9	2.9	2.4	2.4	944
Region					
Western	48.6	5.9	0.0	3.8	128
Central	42.0	0.0	0.0	0.0	120
Greater Accra	38.8	3.7	2.4	1.1	150
Volta	50.0	0.8	2.5	0.8	134
Eastern	33.5	5.8	4.4	3.6	142
Ashanti	45.5	6.1	2.3	4.8	245
Brong Ahafo	62.6	10.3	16.3	9.8	158
Northern	26.6	2.0	0.7	2.0	208
Upper East	49.8	1.4	5.4	1.4	86
Upper West	41.8	2.5	3.9	2.5	49
Education					
No education	31.5	2.4	3.0	1.5	572
Primary	46.0	3.4	2.8	2.6	322
Middle/JSS	52.9	6.5	4.7	5.4	449
Secondary+	62.8	8.5	6.8	6.6	77
Wealth quintile					
Lowest	37.6	2.8	2.2	2.7	373
Second	37.1	3.1	3.0	2.5	319
Middle	39.8	4.6	4.5	2.7	284
Fourth	46.3	6.1	4.2	4.8	235
Highest	64.1	5.8	5.9	4.6	210
Total	43.3	4.2	3.7	3.3	1,421

did not. Three percent of women who had a birth in the past two years were counselled, tested, and given the results of their test. VCT is more common among urban than rural women, and is highest in the Brong Ahafo Region. The percentage of women receiving VCT is positively related to both education and wealth status.

Among those who were tested for HIV, 32 percent of women and 48 percent of men asked for the test, while 41 percent of women and 26 percent of men were offered the test and accepted (Figure 12.1). About one-fourth of those tested (26 percent of women and 24 percent of men) indicated that the HIV test was required.

Figure 12.1 **Reason for Getting HIV Test among Women and Men Age 15-49 Who Have Ever Been Tested**



GDHS 2003

12.8 ATTITUDES TOWARDS NEGOTIATING SAFER SEX

Respondents in the GDHS were asked about their attitude towards negotiating safer sex. Women and men were asked if a wife is justified in refusing to have sexual intercourse with her husband if she knows that he has an STI. The majority of women (86 percent) and men (91 percent) agreed that a wife is justified in refusing to have sexual intercourse with her husband if he has an STI (Table 12.8). Men were also asked if a wife is justified in asking a man to use a condom if he has an STI. Again, most men (92 percent) agreed with this statement. A similar question was not posed to women. There is little variation by background characteristics.

Table 12.8 Attitudes towards negotiating safer sex with husband

Percentage of women and men age 15-49 who believe that, if a husband has an STI, his wife can refuse to have sex with him and percentage of men who believe that, if a husband has an STI, his wife can either refuse to have sex with him or propose condom use, by background characteristics, Ghana 2003

	Women		Men			
Background characteristic	Refuse sex	Number of women	Refuse sex	Propose condom use	Refuse sex or propose condom use[1]	Number of men
Age						
15-19	84.7	1,148	85.8	87.9	94.4	1,107
20-24	86.5	1,012	91.6	94.1	98.3	684
25-29	86.4	951	91.9	93.8	97.9	754
30-39	85.7	1,524	93.3	91.3	97.3	1,131
40-49	88.1	1,056	91.6	92.6	96.8	853
15-24	85.6	2,160	88.0	90.3	95.9	1,791
Marital status						
Never married	86.0	1,616	88.5	90.7	96.1	2,040
Ever had sex	87.6	733	92.0	94.5	98.7	889
Never had sex	84.7	883	85.8	87.7	94.1	1,151
Married/living together	85.8	3,549	92.6	92.1	97.3	2,228
Divorced/separated/ widowed	89.6	526	91.0	93.9	96.8	261
Residence						
Urban	88.1	2,755	92.2	93.5	97.9	2,049
Rural	84.4	2,936	89.4	89.9	95.8	2,480
Region						
Western	92.3	553	88.7	90.8	95.4	435
Central	87.4	431	94.9	94.5	98.3	327
Greater Accra	87.7	942	92.7	93.7	97.4	664
Volta	82.9	492	91.7	91.2	94.4	389
Eastern	80.3	601	89.6	91.8	96.7	484
Ashanti	85.9	1,142	90.7	93.8	98.5	858
Brong Ahafo	84.4	569	88.9	91.1	97.1	483
Northern	83.3	499	89.6	86.9	95.3	489
Upper East	95.5	310	88.9	88.4	96.1	284
Upper West	83.7	153	89.9	85.7	95.1	116
Education						
No education	84.5	1,608	88.3	85.8	94.2	742
Primary	83.3	1,135	88.2	87.3	94.6	750
Middle/JSS	88.0	2,279	90.5	92.7	97.3	1,972
Secondary+	88.8	669	94.3	96.4	99.1	1,065
Wealth quintile						
Lowest	86.2	970	86.3	86.1	94.0	777
Second	83.7	949	90.6	90.0	96.4	802
Middle	83.5	1,071	91.0	91.0	96.4	879
Fourth	86.2	1,245	90.0	93.0	97.4	971
Highest	89.7	1,457	94.0	95.7	98.6	1,100
Total	86.2	5,691	90.6	91.5	96.8	4,529
Total men 15-59	na	na	90.6	91.2	96.7	5,015

na = Not applicable

12.9 HIGHER-RISK SEX AND CONDOM USE

Sexual intercourse with a non-marital or non-cohabiting partner is associated with an increase in the risk of contracting STIs. Higher-risk sexual behaviour can therefore be defined as having sexual intercourse with any persons other than a spouse or a regular partner. The use of condoms by both men and women during sexual intercourse reduces the risk of contracting HIV. Table 12.9 shows the percentage of women and men age 15-49 who had sexual intercourse with a non-marital, non-cohabiting partner within the 12 months preceding the survey.

The table shows that one in five women and two in five men reported engaging in higher-risk sexual behaviour. Higher-risk sexual behaviour is most common among the youngest cohort of women and men. In fact, it is disturbing to note that half of women age 15-24 and more than four-fifths of men in the same age cohort engage in risky sexual behaviour. Among those who did engage in higher-risk sex, 28 percent of women and 45 percent of men age 15-49 used a condom during their higher-risk sex.

Higher-risk sex is especially common among women and men who have never married or who are currently divorced, separated, or widowed. For example, nearly all sexually active women who have never married engage in higher-risk sex, while only one-third of them used a condom during their last higher-risk sex. Residents of urban areas are also more likely than their rural counterparts to engage in higher-risk sexual behaviour. The percentage engaging in higher-risk sexual behaviour rises with the level of education. Nevertheless, as education level rises, there is a greater likelihood of respondents reporting using a condom during last higher-risk sex. Higher-risk sexual behaviour increases with increasing wealth quintile. Condom use at last higher-risk sex also increases with the level of household wealth.

Table 12.9 Higher-risk sex and condom use at last higher-risk sex among women and men age 15-49

Among women and men age 15-49 reporting sexual activity in the past 12 months, percentage who had sex with a non-marital, non-cohabiting partner (higher-risk sex) in the past 12 months, and among these women and men, percentage who say they used a condom the last time they had sex with a non-marital, non-cohabiting partner, by background characteristics, Ghana 2003

	Women				Men			
Background characteristic	Percentage of women engaging in higher-risk sex in the past 12 months	Number of women sexually active in the past 12 months	Percentage of women who used condom at last higher-risk sex	Number of women who had higher-risk sex in past 12 months	Percentage of men engaging in higher-risk sex in the past 12 months	Number of men sexually active in the past 12 months	Percentage of men who used condom at last higher-risk sex	Number of men who had higher-risk sex in past 12 months
Age								
15-19	72.1	363	33.5	262	97.9	163	46.2	159
20-24	38.0	685	32.0	261	77.3	387	54.7	299
25-29	16.6	770	27.4	128	50.2	595	43.3	299
30-39	7.4	1,241	13.1	92	25.8	993	37.1	256
40-49	7.7	803	11.2	62	13.2	769	37.5	102
15-24	49.8	1,048	32.7	522	83.4	549	51.7	458
Marital status								
Never married	98.5	526	34.1	518	99.9	632	49.3	631
Married/living together	3.7	3,116	15.4	116	15.7	2,109	39.0	332
Divorced/separated/ widowed	76.9	221	17.7	170	91.5	166	39.0	152
Residence								
Urban	27.8	1,730	32.5	481	45.9	1,257	50.3	577
Rural	15.2	2,132	21.2	323	32.6	1,649	38.9	537
Region								
Western	20.3	380	29.0	77	38.0	294	45.1	112
Central	15.2	291	25.1	(44)	37.2	208	40.1	77
Greater Accra	27.3	577	37.6	158	46.7	431	52.6	201
Volta	23.4	343	35.6	80	45.7	260	57.0	119
Eastern	24.4	439	25.7	107	35.5	348	48.3	123
Ashanti	24.9	780	25.0	194	39.9	558	38.4	223
Brong Ahafo	20.1	433	18.1	87	36.5	307	41.7	112
Northern	8.0	339	19.9	(27)	30.6	297	27.6	91
Upper East	11.4	190	20.4	(22)	31.5	142	50.9	45
Upper West	8.4	91	*	8	19.5	63	39.2	(12)
Education								
No education	7.1	1,187	11.1	84	20.7	506	22.8	105
Primary	19.2	776	20.9	149	41.1	420	23.9	173
Middle/JSS	28.0	1,515	26.9	424	40.1	1,252	46.5	502
Secondary+	38.3	384	47.8	147	46.0	728	60.0	335
Wealth quintile								
Lowest	10.4	654	16.0	68	29.8	475	26.1	141
Second	15.8	726	17.2	115	30.6	528	32.6	161
Middle	20.1	775	16.7	156	37.9	576	40.6	218
Fourth	28.3	850	31.0	240	44.0	609	49.2	268
Highest	26.3	858	41.7	225	45.3	719	58.2	326
Total	20.8	3,863	28.0	804	38.4	2,906	44.8	1,115
Total men 15-59	na	na	na	na	35.0	3,339	43.8	1,168

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
na = Not applicable

Sexual intercourse with more than one partner is also associated with a high risk of exposure to STIs. Table 12.10 shows the percentage of women and men age 15-49 who had sexual intercourse with more than one partner in the 12 months preceding the survey. One percent of women and 10 percent of men report having had sexual intercourse with more than one partner in the 12 months preceding the survey. Sexual intercourse with more than one partner is more common among women age 15-24 and

Table 12.10 Multiple sex partners among women and men

Percentage of women and men age 15-49 who have had sex with more than one partner in the past 12 months, by background characteristics, Ghana 2003

	Women		Men	
Background characteristic	Percentage who had 2+ partners in the past 12 months	Number of women	Percentage who had 2+ partners in the past 12 months	Number of men
Age				
15-19	1.5	1,148	2.4	1,107
20-24	1.9	1,012	10.4	684
25-29	0.4	951	13.8	754
30-39	1.0	1,524	13.5	1,131
40-49	0.4	1,056	11.1	853
15-24	1.7	2,160	5.5	1,791
Marital status				
Never married	2.3	1,616	6.1	2,040
Ever married	0.6	4,075	13.0	2,489
Residence				
Urban	1.3	2,755	11.1	2,049
Rural	0.8	2,936	8.9	2,480
Region				
Western	0.9	553	7.3	435
Central	1.5	431	10.7	327
Greater Accra	2.1	942	13.5	664
Volta	0.2	492	12.3	389
Eastern	1.4	601	10.3	484
Ashanti	0.8	1,142	8.7	858
Brong Ahafo	1.2	569	11.4	483
Northern	0.3	499	9.7	489
Upper East	0.6	310	4.7	284
Upper West	0.5	153	4.1	116
Education				
No education	0.6	1,608	9.1	742
Primary	0.9	1,135	7.7	750
Middle/JSS	1.2	2,279	9.5	1,972
Secondary+	1.8	669	12.8	1,065
Wealth quintile				
Lowest	0.2	970	8.4	777
Second	1.4	949	7.4	802
Middle	1.0	1,071	10.3	879
Fourth	0.9	1,245	10.0	971
Highest	1.6	1,457	12.5	1,100
Total	1.1	5,691	9.9	4,529
Total men 15-59	na	na	10.1	5,015

na = Not applicable

men age 25-39, never-married women and ever-married men, urban women and men, women and men residing in Greater Accra, highly educated women and men, and wealthier women and men.

Some of the major strategies for reducing HIV infection among young men and women is to delay the age of first sex, limit the number of sexual partners to one, and encourage and promote consistent and correct use of condoms. Young men and women are the target of most HIV/AIDS interventions aimed at sexual behavioural change. Some of these strategies and interventions seem to have some impact.

12.10 PAID SEX

Sex with commercial sex workers is associated with higher-risk sexual behaviour. According to a second-generation surveillance survey conducted in 2002 in Kumasi and Accra by The West African Project to combat AIDS and STI, HIV/AIDS prevalence among sex workers is 54 percent in Kumasi and 23 percent in Accra.

Table 12.11 shows the percentage of men age 15-49 reporting having had sex with a prostitute in the 12 months preceding the survey. About 2 percent of men reported sex with a prostitute in the last 12 months. Less than half of these men reported using a condom at last sex with a prostitute (data not shown).

Table 12.11 Paid sex in past year

Percentage of men age 15-49 reporting sex with a prostitute in the past 12 months, by background characteristics, Ghana 2003

Background characteristic	Percentage reporting sex with prostitute in the past 12 months	Number of men
Age		
15-19	0.6	1,107
20-24	2.0	684
25-29	2.3	754
30-39	1.8	1,131
40-49	1.4	853
15-24	1.1	1,791
Marital status		
Never married	1.0	2,040
Married/living together	1.3	2,228
Divorced/separated/ widowed	7.6	261
Residence		
Urban	1.2	2,049
Rural	1.8	2,480
Region		
Western	3.6	435
Central	1.3	327
Greater Accra	1.2	664
Volta	1.8	389
Eastern	2.0	484
Ashanti	1.4	858
Brong Ahafo	0.9	483
Northern	1.9	489
Upper East	0.2	284
Upper West	0.0	116
Education		
No education	1.4	742
Primary	1.1	750
Middle/JSS	2.1	1,972
Secondary+	1.0	1,065
Wealth index		
Lowest	1.6	777
Second	2.0	802
Middle	2.0	879
Fourth	1.7	971
Highest	0.8	1,100
Total	1.6	4,529
Total men 15-59	1.5	5,015

12.11 SELF-REPORTING OF SEXUALLY TRANSMITTED INFECTIONS AND SYMPTOMS

There is a strong link between other sexually transmitted infections (STI) and HIV infection. It is believed that people having any other STI apart from HIV infection have a very high likelihood of being infected with HIV. STIs are therefore identified as co-factors in HIV transmission. One of the key interventions of the National Response on HIV/AIDS is to minimise STI transmission by improving the management of STI through strengthening symptomatic management of STIs in both government and private health institutions.

Table 12.12 shows the percentage of women and men who self-reported an STI and/or symptoms of an STI in the 12 months preceding the survey, among those who have ever had sex. Two percent of women and men report having had an STI in the 12 months preceding the survey. A higher percentage of women than men report abnormal genital discharge (7 and versus 3 percent, respectively). Three percent of women and 2 percent of men reported having a genital sore or ulcer.

Eight percent of women and 4 percent of men reported they had an STI, abnormal genital discharge, or genital sores or ulcers. Younger women and men (15-24), those who have never married, urban women and rural men, women from the Volta Region and men from the Northern Region, highly educated women, and the wealthiest respondents are more likely than others to self-report symptoms of an STI, genital discharge, and sore or ulcer.

Table 12.12 Self-reportiing of sexually transmitted infection (STI) and STI symptoms

Among women and men who ever had sex, percentage self-reporting an STI and/or symptoms of an STI in the past 12 months, by background characteristics, Ghana 2003

	Women					Men				
Background characteristic	Percentage with STI	Percentage with abnormal genital discharge	Percentage with genital sore/ulcer	Percentage with STI/discharge/ genital sore/ulcer	Number of women who ever had sex	Percentage with STI	Percentage with abnormal genital discharge	Percentage with genital sore/ulcer	Percentage with STI/discharge/ genital sore/ulcer	Number of men who ever had sex
Age										
15-19	2.2	10.5	5.6	13.6	448	2.2	6.4	3.0	8.3	221
20-24	1.9	10.2	3.0	12.0	853	3.3	4.7	2.7	7.0	484
25-29	2.1	7.6	2.8	9.6	931	2.2	3.5	2.4	4.7	699
30-39	1.1	4.9	2.1	6.4	1,519	1.3	2.6	1.6	3.6	1,119
40-49	1.5	3.5	1.0	4.8	1,056	0.7	1.0	1.2	2.2	853
Marital status										
Never married	1.9	12.4	5.0	15.4	733	2.4	4.2	1.9	5.7	889
Married/living together	1.6	5.6	2.1	7.2	3,548	1.3	2.4	1.6	3.6	2,226
Divorced/separated/ widowed	1.2	5.1	1.5	5.8	526	2.5	3.1	4.2	5.8	261
Residence										
Urban	2.2	7.3	3.1	9.6	2,179	2.0	2.6	1.8	4.0	1,503
Rural	1.2	6.0	2.0	7.3	2,628	1.4	3.2	2.0	4.5	1,873
Region										
Western	0.2	4.0	1.7	5.0	459	1.6	2.5	1.7	4.4	332
Central	0.3	3.3	0.7	3.3	369	2.5	2.5	1.0	2.5	232
Greater Accra	3.2	7.8	3.8	10.4	738	1.9	1.9	2.0	3.6	519
Volta	1.3	12.4	3.3	14.7	425	0.5	0.5	1.4	1.8	284
Eastern	2.0	4.5	3.2	6.5	526	2.8	2.7	2.3	3.7	378
Ashanti	1.6	6.5	2.5	8.9	948	1.9	3.7	1.7	4.6	646
Brong Ahafo	3.2	9.1	2.7	10.8	496	1.0	2.3	2.7	4.8	344
Northern	0.4	4.0	1.8	5.1	459	1.9	6.0	2.0	7.1	375
Upper East	0.9	4.9	0.8	5.4	259	0.0	3.8	2.2	4.5	189
Upper West	0.7	10.9	1.8	11.9	129	1.2	4.2	1.9	6.1	78
Education										
No education	1.2	5.3	2.1	6.3	1,522	0.9	3.3	1.5	4.1	625
Primary	1.2	6.2	2.9	7.9	961	0.9	3.1	3.1	5.4	473
Middle/JSS	2.1	7.3	2.3	9.3	1,839	2.4	3.0	2.0	4.5	1,429
Secondary+	2.1	8.7	3.5	11.7	485	1.6	2.6	1.5	3.5	849
Wealth index										
Lowest	1.1	5.6	1.7	6.7	875	1.5	3.7	2.0	4.8	562
Second	1.3	6.4	2.2	7.7	858	1.6	3.8	1.6	5.1	594
Middle	1.5	5.8	1.9	7.4	943	1.3	2.2	1.5	3.6	652
Fourth	1.8	6.1	3.2	8.4	1,030	2.9	3.7	3.5	5.4	725
Highest	2.3	8.7	3.2	10.8	1,100	1.1	1.8	1.0	3.0	843
Total	1.6	6.6	2.5	8.3	4,807	1.7	3.0	1.9	4.3	3,376
Total men 15-59	na	na	na	na	na	1.6	2.7	1.9	4.0	3,861

na = Not applicable

12.12 STI TREATMENT-SEEKING BEHAVIOUR

Stigma and discrimination can discourage infected persons from seeking professional health care and lead some to resort to self-medication. Table 12.13 shows treatment-seeking behaviour among those who reported an STI or symptoms of an STI, by source of advice or treatment. Just over one-third of women and men sought care. About half (49 percent) of the men who reported an STI or symptoms of an STI sought advice or obtained medicine from a shop or pharmacy. Nearly one-third of men (31 percent) and half of women (44 percent) did not seek any advice or treatment.

Table 12.13 Women and men seeking treatment for STIs

Percentage of women and men age 15-49 reporting a sexually transmitted infection (STI) or symptoms of an STI in the past 12 months who sought care, by source of treatment, Ghana 2003

Source of advice or treatment	Women	Men
Clinic/hospital/health professional[1]	36.5	34.9
Traditional healer	14.1	18.4
Advice or medicine from shop/pharmacy	25.9	49.3
Advice from friends/relatives	14.1	21.9
Advice or treatment from any source	56.2	69.3
No advice or treatment	43.8	30.7
Number with STI and/or symptoms of STI	400	145

Note: Symptoms of an STI are an abnormal genital discharge, a genital sore, or a gential ulcer.

12.13 SEXUAL BEHAVIOUR AMONG YOUNG WOMEN AND MEN

Promoting change in sexual behaviour is an important component of many HIV/AIDS prevention programmes. Those who are not yet sexually active or those who have recently made their sexual debut are thought to be more accepting of programmes focusing on behavioural changes. Subsequent tables in this chapter focus on young women and men age 15-24 and the sexual behaviours that affect their risk of exposure to HIV.

One of the strategies for reducing the risk of contracting an STI is for young persons to delay the age at which they become sexually active. Table 12.14 shows the percentage of young people who have had sex by exact age 15 and 18, by background characteristics. More women than men have had first sex by age 15 and 18. Seven percent of women and 4 percent of men had sex by exact age 15. Forty-six percent of women and 27 percent of men first had sex by exact age 18. Women and men residing in rural areas have sex earlier than urban settlers. Variations by background characteristics are all greater among women than men. Young women in the Northern Region are most likely to initiate sex at an early age. In contrast, young women in Greater Accra are least likely to initiate sex at an early age. Age at first sex increases with educational attainment. Respondents in the two poorest wealth quintiles have first sex earlier than those in higher quintiles.

Table 12.14 Age at first sex among young women and men

Percentage of young women and men age 15-24 and 18-24 who have had sex by exact age 15 and 18, by background characteristics, Ghana 2003

	Women				Men			
Background characteristic	Percentage who had sex by exact age 15	Number of women age15-24	Percentage who had sex by exact age 18	Number of women age18-24	Percentage who had sex by exact age 15	Number of men age 15-24	Percentage who had sex by exact age 18	Number of men age 18-24
Age								
15-17	8.1	710	na	na	3.3	681	na	na
18-19	6.3	438	51.9	438	4.8	427	27.8	427
15-19	7.4	1,148	51.9	438	3.9	1,107	27.8	427
20-22	8.1	645	44.7	645	3.8	441	25.9	441
23-24	6.5	367	40.3	367	4.0	243	25.3	243
20-24	7.5	1,012	43.1	1,012	3.9	684	25.7	684
Marital status								
Never married	4.5	1,417	28.8	755	3.6	1,615	23.5	934
Ever married	13.0	743	64.2	696	6.6	176	42.2	176
Residence								
Urban	5.4	1,160	36.6	772	3.8	859	24.9	571
Rural	9.8	1,000	56.2	679	4.0	932	28.1	539
Region								
Western	9.3	214	43.9	141	5.1	172	34.5	100
Central	6.7	177	57.3	115	2.7	140	27.9	86
Greater Accra	4.9	382	30.9	269	5.9	229	24.7	172
Volta	9.7	180	57.0	117	3.4	173	24.7	115
Eastern	7.0	218	48.7	146	4.9	179	28.9	114
Ashanti	6.4	455	43.1	304	3.6	346	27.7	188
Brong Ahafo	10.0	225	53.9	145	3.7	210	26.7	126
Northern	11.8	150	59.4	109	2.0	159	23.8	99
Upper East	5.3	107	40.1	69	1.9	133	19.4	81
Upper West	3.7	51	38.3	35	5.2	50	23.2	30
Education								
No education	8.8	339	61.2	260	0.8	164	30.7	114
Primary	11.8	473	57.4	276	4.5	401	32.1	184
Middle/JSS	6.7	1,013	43.4	637	5.0	849	27.3	499
Secondary+	2.2	335	25.2	277	2.0	377	20.4	314
Wealth quintile								
Lowest	10.7	303	59.9	201	3.7	302	22.8	175
Second	10.4	330	59.0	231	4.5	313	31.6	167
Middle	8.6	409	56.0	258	3.5	371	31.3	223
Fourth	7.7	516	46.1	348	4.5	408	24.4	271
Highest	3.1	603	24.8	412	3.3	397	23.8	274
Total	7.4	2,160	45.8	1,450	3.9	1,791	26.5	1,110

na = Not applicable

Promoting the use of condoms is an important strategy in the fight against HIV/AIDS transmission. Knowing where to get a condom is therefore essential. Table 12.15 shows the percentage of young people age 15-24 who know at least one source for condoms. Young women and men are more likely to know a source of a male rather than a female condom. Two-thirds of women and four-fifths of men age 15-24 know a source for a male condom, while less than half of youths know a source for female

condom. Knowledge of a source is higher among youth age 20-24 than among those age 15-19. Knowledge of a condom source is also higher among sexually active never-married women and men. Urban women and men are more knowledgeable about a source of condoms. There are also regional variations in the knowledge of a source of condoms, with residents in the three northern regions less knowledgeable of a source than youths in the other regions. Knowledge of a source rises steadily and dramatically with level of education and wealth quintile.

Table 12.15 Knowledge of a source for condoms among young women and men

Percentage of young people age 15-24 who know at least one source of condoms, by background characteristics, Ghana 2003

	Women			Men		
Background characteristic	Know a source for male condom	Know a source for female condom	Number of women age 15-24	Know a source for male condom	Know a source for female condom	Number of men age 15-24
Age						
15-19	59.0	41.1	1,148	75.5	43.1	1,107
20-24	70.2	52.2	1,012	88.4	58.0	684
Marital status						
Never married	66.9	47.9	1,417	79.5	48.5	1,615
Ever had sex	78.6	53.9	559	92.5	60.6	530
Never had sex	59.3	44.0	858	73.1	42.6	1,085
Ever married	59.2	43.3	743	89.2	51.3	176
Residence						
Urban	76.7	56.5	1,160	90.4	61.2	859
Rural	49.8	34.5	1,000	71.3	37.3	932
Region						
Western	61.6	40.9	214	89.8	59.7	172
Central	72.7	59.8	177	77.0	32.2	140
Greater Accra	73.3	54.1	382	91.0	70.4	229
Volta	57.5	36.9	180	80.5	46.8	173
Eastern	77.5	59.2	218	85.5	53.3	179
Ashanti	74.8	48.8	455	87.6	51.0	346
Brong Ahafo	64.0	47.3	225	91.4	60.8	210
Northern	22.0	16.2	150	47.8	24.7	159
Upper East	28.6	28.3	107	58.1	22.4	133
Upper West	51.8	42.3	51	59.1	30.5	50
Education						
No education	28.3	17.8	339	43.6	14.9	164
Primary	51.2	33.6	473	66.1	30.5	401
Middle/JSS	73.5	52.1	1,013	86.7	50.6	849
Secondary+	91.0	75.7	335	97.6	79.0	377
Wealth quintile						
Lowest	33.4	25.1	303	54.8	23.6	302
Second	48.3	31.7	330	68.4	36.3	313
Middle	60.9	42.2	409	84.7	43.8	371
Fourth	75.4	51.6	516	89.9	55.0	408
Highest	81.2	63.2	603	95.8	76.1	397
Total	64.3	46.3	2,160	80.5	48.8	1,791

Note: The following sources are not considered sources for condoms in this table: church, friends, family members and home

Table 12.16 shows the percentage of young women and men who used a condom the first time they had sex. Twenty-two percent of young women and 37 percent of young men reported condom use at

first sex. Condom use at first sex is more common among women age 15-19 than among those age 20-24. Men age 20-24 are slightly more likely than men age 15-19 to use a condom at first sex. Condom use at first sex is more common among young women and men who have never married, those residing in the urban areas, and young women and men living in Greater Accra and the Volta Region. Condom use rises steadily and dramatically with increasing education and wealth quintile among both women and men.

Table 12.16 Condom use at first sex among young women and men

Among women and men age 15-24 who have ever had sex, percentage who used a condom the first time they had sex, by background characteristics, Ghana 2003

	Women		Men	
Background characteristic	Used a condom at first sex	Number of women 15-24 who have ever had sex	Used a condom at first sex	Number of men 15-24 who have ever had sex
Age				
15-19	27.9	448	34.3	221
20-24	19.0	853	38.5	484
Marital status				
Never married	33.8	559	40.1	530
Ever married	13.2	742	28.5	175
Residence				
Urban	27.8	600	42.0	354
Rural	17.1	701	32.4	351
Region				
Western	16.2	127	41.1	70
Central	18.7	115	(32.8)	52
Greater Accra	36.1	183	45.8	105
Volta	35.8	117	40.2	76
Eastern	27.6	146	41.2	74
Ashanti	22.6	265	38.7	147
Brong Ahafo	11.9	153	36.7	75
Northern	5.4	110	12.6	53
Upper East	12.6	58	(35.0)	39
Upper West	18.9	28	(19.9)	15
Education				
No education	8.2	256	15.7	60
Primary	14.3	301	24.1	132
Middle/JSS	27.4	584	37.9	329
Secondary+	39.1	161	52.4	184
Wealth quintile				
Lowest	12.0	213	16.6	99
Second	15.8	239	27.7	112
Middle	16.6	281	34.3	151
Fourth	22.8	310	42.9	175
Highest	41.1	258	52.4	168
Total	22.1	1,301	37.2	705

Note: Figures in parentheses are based on 25-49 unweighted cases.

Table 12.17 shows the percentage of never-married women and men age 15-24, who have had sex in the last 12 months and among those who had premarital sex in the last 12 months, the percentage who used a condom at last sex. Three out of ten women and two out of ten men age 15-24 who have never married have had sex in the last 12 months. Of these, 35 percent of the women and 52 percent of

the men used a condom the last time they had sex. Condom use increases steadily as level of education and wealth quintile increases.

Table 12.17 Premarital sex and use of condom among young women and men

Among never-married women and men age 15-24, percentage who have had sex in the past 12 months, and among those who had premarital sex in the past 12 months, percentage who used a condom at last sex, by background characteristics, Ghana 2003

	Women				Men			
Background characteristic	Had sex in past 12 months	Number of never-married women age 15-24	Used condom at last sex	Number of women age 15-24 sexually active in past 12 months	Had sex in past 12 months	Number of never married men age 15-24	Used condom at last sex	Number of men 15-24 sexually active in past 12 months
Age								
15-19	23.5	991	35.0	232	13.9	1,097	47.0	152
20-24	45.1	426	34.7	192	45.2	518	54.4	234
Residence								
Urban	27.6	890	39.5	246	24.8	789	58.5	195
Rural	33.9	527	28.6	179	23.1	826	44.4	191
Region								
Western	29.8	145	(40.2)	43	21.9	151	(58.0)	33
Central	20.6	93	*	19	23.0	130	*	30
Greater Accra	28.1	315	40.2	89	28.9	222	61.0	64
Volta	34.8	123	(45.3)	43	31.0	161	(67.8)	50
Eastern	40.8	148	31.5	60	27.9	159	(54.9)	44
Ashanti	31.9	330	29.3	105	21.8	296	(38.7)	65
Brong Ahafo	35.2	122	(27.2)	43	24.9	195	47.8	49
Northern	22.5	55	*	12	18.7	135	(33.8)	25
Upper East	8.5	57	*	5	16.5	120	(53.5)	20
Upper West	18.5	29	*	5	15.1	45	*	7
Education								
No education	27.5	125	(14.9)	34	16.6	134	(42.7)	22
Primary	28.0	281	25.1	79	20.1	363	27.1	73
Middle/JSS	30.7	720	33.0	221	22.8	759	49.3	173
Secondary+	31.2	291	55.4	91	32.8	359	71.5	118
Wealth quintile								
Lowest	24.9	136	(18.2)	34	17.9	265	25.1	47
Second	38.0	172	25.8	66	20.7	280	38.5	58
Middle	36.4	238	19.7	86	26.5	328	45.5	87
Fourth	33.5	352	44.1	118	25.8	370	63.2	95
Highest	23.3	519	46.4	121	26.5	372	65.8	98
Total	30.0	1,417	34.9	425	23.9	1,615	51.5	386

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

Table 12.18 shows the percentage of young women and men who had sexual relations with a non-marital, non-cohabiting partner, among those who were sexually active in the last 12 months, and the percentage who say they used a condom the last time they had sex with a non-marital, non-cohabiting partner. One in two young women (50 percent) and more than four in five young men (83 percent) age 15-24 who were sexually active engaged in higher-risk sexual behaviour, that is, they were sexually

active with a non-marital, non-cohabiting partner. Only 33 percent of women and 52 percent of men used a condom during their last higher-risk sexual intercourse.

Table 12.18 Higher-risk sex and condom use at last higher-risk sex

Among sexually active young women and men age 15-24, percentage who had sexual relations with a non-marital, non-cohabiting partner in the past 12 months, and among these women and men, percentage who say they used a condom the last time they had sex with a non-marital, non-cohabiting partner, by background characteristics, Ghana 2003

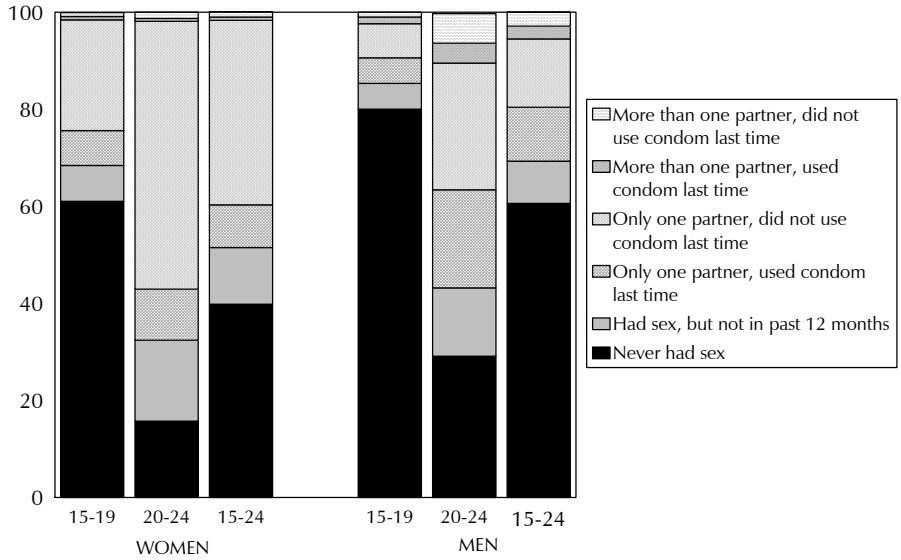
	Women				Men			
Background characteristic	Percentage engaging in higher-risk sex in the past 12 months	Number of women sexually active in the past 12 months	Percentage who used a condom at last higher-risk sex	Number of women age 15-24 who had higher-risk sex the last 12 month	Percentage engaging in higher-risk sex in the past 12 months	Number of men sexually active in the past 12 months	Percentage used condom at last higher-risk sex	Number of men age 15-24 who had higher-risk sex in the last 12 months
Age								
15-19	72.1	363	33.5	262	97.9	163	46.2	159
20-24	38.0	685	32.0	261	77.3	387	54.7	299
Marital status								
Never married	99.5	425	34.9	423	100.0	386	51.5	386
Ever married	16.0	623	23.7	99	44.0	163	52.8	72
Residence								
Urban	61.5	488	36.9	300	88.3	261	57.5	231
Rural	39.6	560	27.1	222	78.9	288	45.8	227
Region								
Western	47.7	100	(36.5)	48	81.6	53	(58.9)	44
Central	29.5	91	*	23	(84.4)	40	(45.4)	34
Greater Accra	66.8	148	38.1	98	91.6	72	59.4	66
Volta	50.9	86	(44.2)	44	91.1	62	(65.7)	56
Eastern	59.2	122	33.3	72	80.6	64	(57.7)	52
Ashanti	63.1	209	30.3	132	82.6	111	42.7	91
Brong Ahafo	46.4	134	24.5	62	91.3	62	46.6	56
Northern	22.4	91	*	23	66.0	45	(32.6)	30
Upper East	28.2	45	*	14	(73.2)	31	(53.8)	22
Upper West	26.7	21	*	16	(70.9)	10	*	7
Education								
No education	20.3	209	(14.4)	43	61.6	48	(39.5)	29
Primary	42.0	239	24.2	100	75.6	109	29.9	83
Middle/JSS	58.1	470	31.0	273	85.8	257	51.6	220
Secondary+	82.3	129	52.7	106	92.9	135	69.1	126
Wealth quintile								
Lowest	28.4	168	20.4	48	71.9	80	32.1	57
Second	42.3	192	22.2	81	77.9	90	39.5	70
Middle	46.5	227	20.4	105	82.1	128	47.7	105
Fourth	53.1	264	38.2	140	88.5	129	60.0	115
Highest	74.9	197	46.2	147	91.0	121	65.0	110
Total	49.8	1,048	32.7	522	83.4	549	51.7	458

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

Figure 12.2 summarises data on the proportion of young women and men age 15-24 who fall into various risk categories for HIV. For example, 40 percent of young women and 61 percent of young men have never had sex, while 12 percent and 9 percent, respectively, have had sex but not in the 12 months

preceding the survey. Nine percent of women and 11 percent of men have had sex with only one partner in the 12 months preceding the survey and used a condom during the most recent sexual encounter. Thirty-eight percent of women and 14 percent of men had sex with only one partner but did not use condoms during the most recent sexual encounter. Less than 1 percent of women and about 3 percent of men had sex with more than one partner in the 12 months preceding the survey and used a condom at last sex. Perhaps the highest risk group is the 1 percent of women and 3 percent of men who had sex with more than one partner in the previous 12 months and did not use a condom during their most recent sex.

Figure 12.2 **Abstinence, Being Faithful, and Using Condoms Among Women and Men Age 15-24**



Note: Refers to partners in the 12 months prior to the survey and condom use at most recent sexual encounter.

GDHS 2003

A practice that can contribute to the spread of HIV is sexual relations between young women and older men. To obtain information on age-discontinuities in sexual relationships, the 2003 GDHS asked sexually active women age 15-19 who had sex with a non-marital partner in the 12 months preceding the survey, whether the man was younger, about the same age, or older than them. If older, they were also asked if they thought he was less than 10 years older or 10 or more years older. Table 12.19 shows that only 5 percent of women age 15-19 who had non-marital sex in the 12 months before the survey had sexual intercourse with a man 10 or more years older than them. There is little variation by background characteristics of respondents.

12.14 ORPHANHOOD AND CHILDREN'S LIVING ARRANGEMENTS

To ascertain if there has been an upsurge in the number of orphans due to death of parents from HIV, the 2003 GDHS sought information on orphanhood and fostering. Table 12.20 shows the percent distribution of children under age 18 by children's living arrangements and survival status of parents, according to background characteristics.

Eighty-two percent of children under age 18 are living with one or both parents, 52 percent of children are living with both parents, 25 percent are living with their mother, and 5 percent are living with their father. Eighteen percent of children do not live with either parent, that is, they are fostered. Younger children, children living in rural areas, those residing in the three northern regions, and those from the lowest wealth quintile are more likely than other children to be living with both parents.

Table 12.19 Age discontinuity in sexual relationships

Among women age 15-19 who had nonmarital sex in the past 12 months, percentage who have had nonmarital sex with a man 10 or more years older than themselves, by background characteristics, Ghana 2003

Background characteristic	Percentage who had nonmarital sex with a man 10+ years older	Number of women age 15-19 who had non-marital sex in past 12 mon-ths
Age		
15-17	1.7	114
18-19	7.9	147
Marital status		
Never married	4.6	231
Ever married	9.9	30
Residence		
Urban	6.3	137
Rural	4.0	125
Region		
Western	(4.4)	28
Central	*	12
Greater Accra	(5.8)	37
Volta	*	21
Eastern	(7.6)	36
Ashanti	3.5	69
Brong Ahafo	(0.0)	33
Northern	*	14
Upper East	*	7
Upper West	*	3
Education		
No education	(4.3)	27
Primary	6.9	54
Middle/JSS	4.7	141
Secondary+	(5.1)	40
Wealth quintile		
Lowest	(2.3)	34
Second	(10.1)	43
Middle	4.1	63
Fourth	5.3	67
Highest	(4.3)	54
Total	5.2	262

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

Table 12.20 also shows that 5 percent of children under 18 years are orphaned, that is, they have lost one or both of their parents, with 4 percent having lost their father, 1 percent having lost their mother, and half a percent having lost both parents. Orphanhood rises with child's age, from less than 1 percent among children under age 2 to 10 percent among those age 15-17. Children living in the Upper West Region are most likely to be orphaned (8 percent).

Table 12.20 Children's living arrangements and orphanhood

Percent distribution of de jure children under age 18 by children's living arrangements and survival status of parents, according to background characteristics, Ghana 2003

Background characteristic	Living with both parents	Living with mother but not mother		Living with father but not mother		Not living with either parent					Total	Number of children
		Father alive	Father dead	Mother alive	Mother dead	Both alive	Only father alive	Only mother alive	Both dead	Missing information on father/ mother		
Age												
<2	67.6	29.6	0.7	0.5	0.1	0.7	0.1	0.1	0.0	0.4	100.0	1,448
2-4	61.1	24.1	2.2	2.5	0.2	8.1	0.5	0.4	0.1	0.8	100.0	2,212
5-9	54.0	20.2	2.8	4.0	0.7	14.7	0.9	1.4	0.4	0.7	100.0	3,664
10-14	42.3	19.9	4.9	6.1	1.4	19.5	1.4	2.4	1.0	1.1	100.0	3,654
15-17	38.3	18.2	7.0	6.3	2.1	19.7	1.0	4.3	1.2	1.7	100.0	1,503
Sex												
Male	53.6	21.1	3.8	5.0	1.0	11.5	0.9	1.6	0.6	0.9	100.0	6,390
Female	49.4	22.3	3.3	3.5	0.8	16.4	1.0	1.8	0.5	0.9	100.0	6,092
Residence												
Urban	41.0	27.5	3.6	3.8	1.0	18.2	1.1	2.3	0.6	0.9	100.0	4,747
Rural	58.0	18.1	3.5	4.5	0.9	11.3	0.8	1.4	0.6	0.9	100.0	7,735
Region												
Western	47.3	21.7	4.6	4.3	1.2	14.5	1.3	4.1	0.4	0.5	100.0	1,149
Central	43.9	32.0	4.3	3.3	0.1	13.3	0.5	1.2	0.5	0.7	100.0	1,047
Greater Accra	40.1	27.0	3.3	4.7	1.0	18.9	1.4	1.9	1.1	0.8	100.0	1,371
Volta	41.5	23.6	2.5	6.4	0.9	19.2	1.1	2.6	0.5	1.6	100.0	1,130
Eastern	50.2	24.9	2.5	3.3	0.9	12.6	1.2	1.2	0.7	2.5	100.0	1,323
Ashanti	44.7	27.4	4.3	4.1	0.9	16.1	0.5	0.7	0.7	0.6	100.0	2,443
Brong Ahafo	50.3	22.8	3.4	4.3	0.4	13.8	1.2	2.8	0.3	0.8	100.0	1,350
Northern	74.7	6.1	1.7	5.2	1.1	8.9	0.7	0.9	0.2	0.5	100.0	1,448
Upper East	75.8	4.7	4.9	2.5	1.8	7.2	0.6	1.3	0.6	0.6	100.0	831
Upper West	68.1	13.5	5.5	2.8	1.6	4.9	0.9	1.4	0.6	0.7	100.0	390
Wealth quintile												
Lowest	65.2	14.4	3.9	4.1	1.0	8.1	0.8	1.3	0.5	0.7	100.0	2,748
Second	54.3	20.0	4.1	3.6	1.1	13.0	0.9	1.3	0.5	1.2	100.0	2,715
Middle	47.2	25.0	3.4	4.9	0.5	14.4	0.8	2.3	0.4	1.1	100.0	2,624
Fourth	41.3	28.3	3.6	4.7	1.2	16.1	1.1	1.9	1.1	0.8	100.0	2,295
Highest	46.8	22.1	2.5	3.8	0.9	19.7	1.0	1.9	0.4	0.9	100.0	2,099
Total	51.5	21.7	3.6	4.2	0.9	13.9	0.9	1.7	0.6	0.9	100.0	12,481
Total age < 15	53.4	22.2	3.1	3.9	0.8	13.1	0.9	1.4	0.5	0.8	100.0	10,978

There has been little change in the percentage of young children fostered or orphaned over the last five years. For example, the percentage of children under 15 years who are fostered has remained unchanged at 13 percent between 1998 and 2003 (GSS and Macro, 1999).

It is generally believed that orphans are more likely to be disadvantaged than children whose parents are both living. To ascertain if this is the case, data from the 2003 GDHS was used to compare school attendance among children whose parents were both alive, children living or not living with at least one

parent, and children who had lost one or both parents. The results indicate that 81 percent of children age 10-14, whose parents are both alive and who are living with one or both parents are in school, compared with 65 percent of children who have lost both parents, with the ratio of school attendance among orphaned to non-orphaned children age 10-14, being 0.8 (data not shown).

HIV PREVALENCE AND ASSOCIATED FACTORS 13

This chapter presents information on the coverage of HIV testing, the prevalence of HIV, and the factors associated with HIV infection among eligible women and men. The 2003 GDHS is the sixth survey (the others being Dominican Republic, Mali, Zambia, Kenya and Burkina Faso) in the international DHS programme to include HIV testing, and the third only (after Kenya and Burkina Faso) to anonymously link the HIV results with key behavioural, social, and demographic factors. The HIV prevalence data provide important information to plan the national response, to evaluate programme impact, and to measure progress on the Ghana HIV/AIDS Strategic Framework: 2001-2005. The understanding of the prevalence of HIV in the population and the analysis of social, biological, and behavioural factors associated with HIV infection provide new insights into the HIV epidemic in Ghana that may enable more precisely targeted messages and interventions.

In Ghana, as in most of sub-Saharan Africa, national HIV prevalence estimates have been derived primarily from HIV sentinel surveillance (HSS) in pregnant women attending antenatal clinics. Currently, the national sentinel surveillance system consists of 30 sites of which 23 are urban and 7 are rural sites strategically located in 28 of the 110 districts, and covering all 10 regions of the country. Since 1992, for 12 weeks each year, pregnant women seeking antenatal care (ANC) for the first time and patients newly diagnosed with sexually transmitted infections (STIs) attending STI clinics in the sentinel sites were tested for HIV using an anonymously unlinked method and the results entered into a database, analysed, and reported by the National AIDS Control Programme (NACP) (Ghana Health Service, 2003d). The latest round of sentinel surveillance was conducted between September and November 2003, and overlapped two of the three months of the GDHS fieldwork.

The rate of HIV infection in pregnant women has been shown to be a reasonable proxy for the prevalance level in the combined male and female adult population (WHO and UNAIDS, 2000). However, there are a number of challenges in using sentinel surveillance estimates derived exclusively from pregnant women attending select antenatal clinics for estimating the HIV rate in the general adult population. The ANC data do not capture information on HIV prevalence in non-pregnant women, nor in women who either do not attend a clinic for pregnancy care or receive ANC at facilities not represented in the surveillance system. Pregnant women are also at a higher risk for HIV infection than women who may be avoiding both HIV and pregnancy through the use of condoms or women who are not sexually active and are therefore less likely to become pregnant or expose themselves to HIV. The rates among pregnant women have also been found to be much higher than male HIV prevalence rates. For example, a World Health Organisation study of four cities in sub-Saharan Africa shows higher risk overall in women compared with men (Buve et al., 2001).

Although the information from the ANC surveillance system has been very useful for monitoring trends in HIV levels, the inclusion of HIV testing in the GDHS offers the opportunity to better understand the magnitude and patterns of infection levels in the general reproductive-age population. The GDHS results are in turn expected to improve the calibration of annual sentinel surveillance data, so that trends in HIV infection can be more accurately measured in the intervals between general population surveys. In addition, the DHS data have the added advantage of providing behavioural data linked to HIV prevalence, which can be used to guide HIV prevention programmes.

13.1 COVERAGE OF HIV TESTING

Table 13.1 shows the percent distribution of women and men eligible for HIV testing by testing status, according to urban-rural residence and region. HIV tests were conducted for 89 percent of the 5,949 eligible women and 80 percent of the 5,345 eligible men. For both sexes combined, coverage was 85 percent, with rural residents more likely to be tested than their urban counterparts (87 and 81 percent, respectively). There were marked differences in HIV testing coverage by region. Coverage was highest in the Central Region where 93 percent of women and men were tested, and lowest in Greater Accra, where 76 percent of eligible women and men were tested. Coverage was higher among women than among men in every region, with the difference between women and men tested being widest in Greater Accra (84 and 65 percent, respectively) and narrowest in the Northern Region (86 and 85 percent, respectively).

Table 13.1 Coverage of HIV testing

Percent distribution of women age 15-49 and men age 15-59 eligible for HIV testing by testing status, according to residence and region (unweighted), Ghana 2003

	Residence		Region										
Testing status	Urban	Rural	Western	Central	Greater Accra	Volta	Eastern	Ashanti	Brong Ahafo	Northern	Upper East	Upper West	Total
						WOMEN							
Tested	87.6	90.5	94.4	94.2	84.4	91.0	85.1	93.4	93.1	85.7	87.6	84.8	89.3
Refused	6.8	4.9	3.0	2.5	7.1	4.3	10.9	4.0	4.2	5.6	5.3	10.1	5.7
Absent for testing	3.8	3.0	2.0	2.5	5.7	3.2	1.9	2.0	1.7	5.0	6.0	3.1	3.3
Interviewed in survey	1.3	0.8	0.0	0.8	0.9	0.9	0.2	1.0	1.1	3.0	2.2	0.2	1.0
Not interviewed	2.6	2.1	2.0	1.7	4.8	2.4	1.7	1.1	0.6	2.0	3.8	2.9	2.3
Other/missing	1.8	1.6	0.6	0.8	2.7	1.5	2.1	0.5	1.1	3.6	1.2	2.1	1.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	2,500	3,449	540	361	913	468	530	946	649	638	418	486	5,949
						MEN							
Tested	73.7	83.9	82.4	91.1	65.3	82.2	71.5	85.7	85.0	84.7	80.4	74.9	80.0
Refused	15.1	7.9	12.0	2.5	16.6	7.1	19.2	9.6	7.8	5.2	7.6	17.0	10.7
Absent for testing	8.8	6.2	4.6	5.4	14.1	8.3	7.3	4.4	5.1	6.3	11.1	4.5	7.2
Interviewed in survey	4.2	2.6	1.3	1.3	6.0	3.6	4.0	1.1	4.1	3.1	5.9	0.7	3.2
Not interviewed	4.7	3.7	3.4	4.1	8.2	4.6	3.3	3.3	1.0	3.2	5.2	3.8	4.0
Other/missing	2.4	2.0	1.1	1.0	3.9	2.4	1.9	0.2	2.1	3.8	0.9	3.6	2.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	2,063	3,282	476	315	721	411	478	819	606	678	423	418	5,345
						TOTAL							
Tested	81.3	87.3	88.8	92.8	76.0	86.9	78.7	89.9	89.2	85.2	83.9	80.2	84.9
Refused	10.6	6.3	7.2	2.5	11.3	5.6	14.9	6.6	5.9	5.4	6.4	13.3	8.1
Absent for testing	6.1	4.6	3.2	3.8	9.4	5.6	4.5	3.1	3.3	5.7	8.6	3.8	5.2
Interviewed in survey	2.6	1.7	0.6	1.0	3.1	2.2	2.0	1.0	2.5	3.0	4.0	0.4	2.0
Not interviewed	3.5	2.9	2.7	2.8	6.3	3.4	2.5	2.1	0.8	2.7	4.5	3.3	3.1
Other/missing	2.0	1.8	0.8	0.9	3.2	1.9	2.0	0.4	1.6	3.7	1.1	2.8	1.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	4,563	6,731	1,016	676	1,634	879	1,008	1,765	1,255	1,316	841	904	11,294

Individuals who were not tested can be categorized into four groups based on the reason for nonresponse. Eight percent of eligible women and men refused testing when asked for informed consent by the health worker (Table 13.1). Five percent were absent for testing: 2 percent were interviewed in the survey, but were not at home when the health worker arrived for testing and were not found on callbacks; 3 percent were not at home for both the interview and testing. Two percent were missing test results for

some other reason, such as they were incapable of giving consent for testing, there was a mismatch between the questionnaire and the blood sample, or there was a technical problem in taking blood.

Refusal is the most important reason for non-response on the HIV testing component, with men nearly twice as likely to refuse testing as women (11 and 6 percent, respectively). Seven percent of men were absent for testing compared with 3 percent of women, with both women and men more likely to be absent for testing and never interviewed, than to have been interviewed but not tested.

The proportions falling into the four non-response categories vary by urban-rural residence, with urban coverage below rural coverage among both women and men in every category. The urban-rural differentials in coverage are most marked for refusal rates, which are 7 percent and 15 percent among urban women and men, respectively, and 5 percent and 8 percent for rural women and men, respectively.

Regionally, refusal is highest in the Eastern Region among both women (11 percent) and men (19 percent). Variation in refusal rates again accounts for much of the regional disparities. Refusal is also higher among both women and men in the Upper West Region (10 and 17 percent, respectively) and in Greater Accra (7 and 17 percent, respectively). For both women and men, absence is relatively high in Greater Accra and the Upper East.

Table 13.2 shows coverage rates for HIV testing by background characteristics. If knowledge of HIV status influenced participation in the testing, coverage would be expected to rise with age because HIV levels increase sharply with age before leveling off or declining at the older ages. In fact, the coverage rate for testing among women is consistent across all age groups (88 to 91 percent). Response rates are somewhat more variable by age among men (77 to 83 percent), but again they do not rise with age as would be expected if they were influenced by HIV status.

To further explore whether non-response might have had an impact on the HIV seroprevalence results, additional analysis was undertaken on the relationships between participation in the HIV testing and a number of other characteristics related to HIV risk. The descriptive tables examined in this analysis are included in Appendix A.

The variation in response rates with these measures indicate that coverage rates are not uniformly lower among those groups considered to be at higher risk for HIV (Tables A.3-A.6). However, there is some indication that some higher-risk groups may have lower response rates. Where response rates are lower for higher-risk groups, the pattern is more obvious for men than women. For example, response rates are slightly lower among divorced or separated men than among those currently in union, and among those who have ever had sex than among those who have never had sex. Similarly, men who sleep away from home—a characteristic assumed to be related to higher HIV risk—is not strongly related to lower coverage, with the exception of men who slept away more than five times in the past year, who have a slightly lower coverage.

The initial descriptive examination of HIV testing coverage levels provided little evidence of a consistent relationship between non-response rate and variables associated with higher HIV risk. Although further analysis is required, this analysis supports the conclusion that the GDHS prevalence rates are a reasonable measure of the actual levels of HIV prevalence in the population.

Table 13.2 Coverage of HIV testing, by background characteristics

Percent distribution of women age 15-49 and men age 15-59 eligible for testing by testing status, according to background characteristics (unweighted), Ghana 2003

	Testing status									
	Tested		Refused		Absent		Other/missing			
Background characteristic	Inter-viewed	Not inter-viewed	Inter-viewed	Not inter-viewed	Inter-viewed	Not inter-viewed	Inter-viewed	Not inter-viewed	Total	Number
WOMEN										
Age										
15-19	88.6	0.3	3.9	0.8	1.6	2.4	0.8	1.7	100.0	1,173
20-24	89.8	0.4	3.4	1.1	1.1	2.4	1.1	0.8	100.0	1,045
25-29	89.8	0.2	4.7	1.3	0.9	2.2	0.8	0.2	100.0	1,005
30-34	89.0	0.2	6.4	0.6	0.8	1.5	0.7	0.7	100.0	844
35-39	87.5	0.1	5.6	1.3	0.5	3.0	0.7	1.3	100.0	768
40-44	87.5	0.2	7.3	0.5	1.4	2.5	0.5	0.2	100.0	592
45-49	91.4	0.2	2.9	1.0	0.6	2.3	1.1	0.6	100.0	522
Education										
No education	87.4	0.5	5.1	0.9	1.2	2.7	1.1	1.0	100.0	2,022
Primary	91.6	0.1	3.8	0.7	0.8	1.7	0.7	0.7	100.0	1,148
Middle/JSS	90.9	0.0	4.3	1.0	0.9	1.7	0.6	0.6	100.0	2,115
Secondary+	83.9	0.2	7.1	1.2	1.1	4.4	1.1	1.2	100.0	664
Wealth quintile										
Lowest	88.3	0.4	5.0	0.4	1.0	2.5	1.4	0.9	100.0	1,398
Second	91.0	0.1	3.7	0.9	0.9	1.9	0.6	1.1	100.0	1,040
Middle	92.2	0.0	3.4	0.7	0.8	1.8	0.4	0.8	100.0	1,023
Fourth	88.9	0.5	5.1	1.1	1.0	2.2	0.5	0.7	100.0	1,131
Highest	86.1	0.1	6.1	1.6	1.4	2.9	1.0	0.7	100.0	1,357
Total	89.0	0.2	4.8	0.9	1.0	2.3	0.8	0.8	100.0	5,949
MEN										
Age										
15-19	83.3	0.3	6.0	0.9	3.5	4.5	0.3	1.0	100.0	1,175
20-24	78.4	0.1	10.7	1.3	2.7	4.5	0.5	1.7	100.0	750
25-29	78.7	0.1	9.4	0.6	3.8	5.0	1.3	1.0	100.0	780
30-34	80.0	0.0	11.0	0.6	2.9	3.0	1.8	0.6	100.0	661
35-39	77.7	0.0	12.3	1.5	2.9	3.3	1.1	1.3	100.0	551
40-44	78.5	0.2	12.7	1.4	2.5	2.8	1.2	0.7	100.0	433
45-49	81.9	0.0	8.2	0.2	3.7	4.7	1.1	0.2	100.0	465
50-54	76.6	0.0	11.9	0.9	3.1	4.1	2.2	1.3	100.0	320
55-59	77.6	0.0	11.0	1.4	2.9	2.4	2.9	1.9	100.0	210
Education										
No education	79.2	0.2	8.5	0.7	3.4	4.1	1.6	2.3	100.0	1,207
Primary	82.4	0.2	7.9	0.9	3.1	2.6	1.8	1.1	100.0	900
Middle/JSS	81.3	0.0	9.2	0.8	2.9	4.6	0.7	0.5	100.0	2,092
Secondary+	76.2	0.1	13.5	1.5	3.6	3.6	0.8	0.7	100.0	1,140
Wealth quintile										
Lowest	84.6	0.1	6.2	0.4	2.8	3.0	1.6	1.5	100.0	1,284
Second	84.8	0.2	6.7	0.5	2.5	3.5	0.9	1.0	100.0	1,005
Middle	81.9	0.1	9.3	0.6	3.0	3.3	0.9	0.9	100.0	929
Fourth	77.1	0.3	11.6	0.7	3.1	5.3	0.9	1.0	100.0	978
Highest	70.8	0.0	15.1	2.4	4.4	5.2	1.1	0.8	100.0	1,149
Total	79.8	0.1	9.7	1.0	3.2	4.0	1.1	1.0	100.0	5,345

13.2 HIV PREVALENCE

13.2.1 HIV Prevalence by Socioeconomic Characteristics

Results from the 2003 GDHS indicate that 2 percent of Ghanaian adults are infected with HIV (Table 13.3).[1] HIV prevalence in women age 15-49 is nearly 3 percent, while for men 15-59, it is under 2 percent. This female-to-male ratio of 1.8 to 1 is higher than that found in most population-based studies in Africa. The high female-to-male ratio implies that young women are particularly vulnerable to HIV infection compared with young men. Prevalence among females is consistently higher than among males at all age groups except at age 40-44, where male prevalence is higher (Figure 13.1). The female-male gap is particularly large among women and men age 25-29, where women are nearly three and a half times as likely to be HIV positive as men. The peak prevalence among women is at age 35-39 (5 percent), while prevalence rises gradually with age among men to peak at age 40-44 (4 percent). These results compare favourably with the HSS and AIDS data available for Ghana.

Table 13.3 HIV prevalence by age

Percentage HIV positive among women 15-49 and men 15-59 who were tested, by age, Ghana 2003

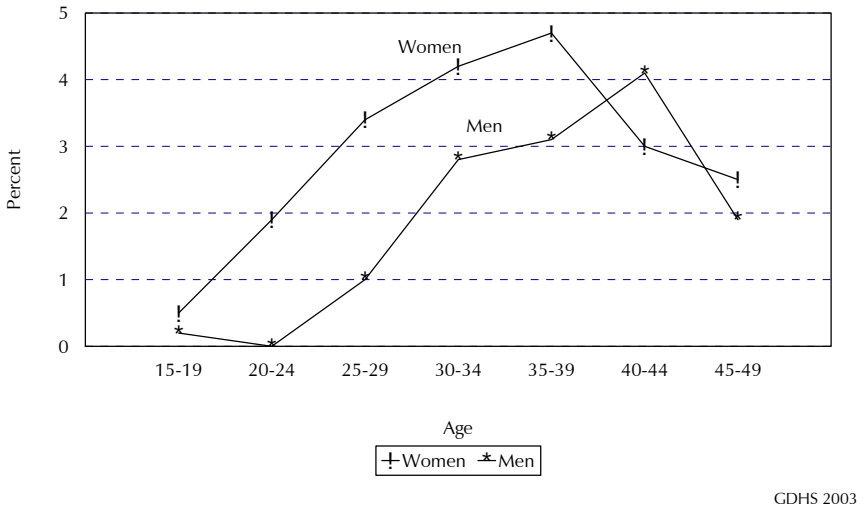
	Women		Men		Total	
Age	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
15-19	0.5	1,035	0.2	1,035	0.3	2,070
20-24	1.9	912	0.0	616	1.2	1,528
25-29	3.4	855	1.0	663	2.3	1,518
30-34	4.2	706	2.8	548	3.6	1,253
35-39	4.7	648	3.1	433	4.0	1,082
40-44	3.0	504	4.1	351	3.5	855
45-49	2.5	437	1.9	401	2.2	838
50-54	na	na	3.6	254	na	na
55-59	na	na	2.8	167	na	na
Total age 15-49	2.7	5,097	1.5	4,047	2.2	9,144
Total age 15-59	na	na	1.6	4,469	na	na

na = Not applicable

Few HIV-infected children survive into their teenage years. As such, infected youth represent more recent cases of HIV infection and serve as an indicator of trends in both prevalence and incidence. The majority of HIV positive persons in the age group 15-24 are women, with less than half a percent among HIV positive men in the same age group. The overall prevalence in youth is under 2 percent. These prevalence levels will provide a baseline for measuring progress toward the goals underlined in the Ghana HIV/AIDS Strategic Framework in future surveys.

[1] The prevalence of HIV 2 was found to be 0.4 percent among women age 15-49 and 0.1 percent among men age 15-59, with an overall prevalence of 0.3. Prevalence in this chapter refers to the overall prevalence of HIV 1, HIV 2, and HIV 1/2.

Figure 13.1 HIV Prevalence by Age Group and Sex



As Table 13.4 shows, urban residents are only slightly more likely to be HIV positive than rural residents with the urban-rural difference among women slightly greater than among men.

The HIV epidemic shows regional variations. Prevalence is highest in the Eastern Region (4 percent), followed by the Western and Brong Ahafo regions (3 percent each). Prevalence is lowest in the Northern, Central, and Volta regions (1 percent each). Gender differences are apparent in all the regions.

Those who have completed primary and middle/JSS education have higher infection levels than those with either no education or at least secondary education. Work status is related to the HIV rate among both women and men, with prevalence twice as high among those currently working than those not currently working. Prevalence is highest among both women and men in the middle wealth quintile.

Table 13.4 HIV prevalence by background characteristics

Percentage HIV positive among women and men age 15-49 who were tested for HIV, by background characteristics, Ghana 2003

Background characteristic	Women		Men		Total	
	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
Residence						
Urban	2.9	2,466	1.5	1,826	2.3	4,292
Rural	2.5	2,630	1.4	2,222	2.0	4,852
Region						
Western	3.9	497	1.8	382	3.0	879
Central	1.7	386	0.3	294	1.1	680
Greater Accra	2.6	842	1.6	585	2.2	1,427
Volta	1.7	440	0.3	346	1.1	786
Eastern	4.4	535	2.9	437	3.7	972
Ashanti	3.0	1,023	1.3	762	2.3	1,784
Brong Ahafo	3.8	512	1.3	440	2.7	952
Northern	0.9	449	1.0	435	1.0	884
Upper East	0.8	277	2.2	259	1.5	535
Upper West	2.0	136	1.6	108	1.8	245
Education						
No education	2.2	1,438	1.2	653	1.9	2,090
Primary	3.3	1,029	1.5	660	2.6	1,689
Middle/JSS	3.1	2,046	1.9	1,794	2.5	3,839
Secondary+	1.6	585	0.7	941	1.0	1,525
Employment						
Currently working	3.0	3,826	1.8	2,920	2.5	6,746
Not currently working	1.8	1,270	0.5	1,127	1.2	2,398
Wealth quintile						
Lowest	1.4	867	1.4	700	1.4	1,567
Second	2.7	853	1.5	729	2.2	1,582
Middle	4.0	977	2.0	786	3.1	1,764
Fourth	2.9	1,117	1.3	884	2.2	2,001
Highest	2.4	1,283	1.1	947	1.9	2,230
Ethnicity						
Akan	2.9	2,592	1.0	1,882	2.1	4,473
Ga/Dangme	6.5	401	4.2	303	5.5	705
Ewe	1.3	665	1.4	539	1.3	1,204
Guan	0.0	133	0.8	146	0.4	279
Mole-Dagbani	1.8	648	1.3	714	1.5	1,362
Grussi	2.6	118	3.8	100	3.2	218
Gruma	0.8	127	0.0	125	0.4	251
Hausa	4.6	71	4.9	(39)	4.7	109
Other	2.4	334	1.7	198	2.2	532
Religion						
Roman Catholic	3.1	701	1.2	571	2.3	1,271
Anglican	1.8	69	0.0	49	1.1	118
Methodist	3.4	382	1.5	255	2.6	637
Presbyterian	3.5	452	3.5	315	3.5	767
Other Christian	2.6	2,322	1.1	1,669	2.0	3,991
Moslem	2.4	816	1.3	772	1.9	1,588
Traditional/spiritualist	1.1	130	2.0	171	1.6	301
No religion	1.7	224	2.4	245	2.0	469
Total	2.7	5,097	1.5	4,047	2.2	9,144

Note: Figures in parentheses are based on 25-49 unweighted cases. Total includes 6 women and 2 men for whom information on ethnicity is missing and 1 woman and 2 men for whom information on religion is missing.

13.2.2 HIV Prevalence by Other Socio-demographic Characteristics

Marital status is related to HIV prevalence (Table 13.5). Prevalence is higher among widowed women (7 percent), followed closely by divorced or separated women (6 percent). Among men, prevalence is higher among divorced or separated men (6 percent). Women who report they have had sex but have never been in a union have a higher risk than men in the same category (3 percent and less than 1 percent, respectively). HIV infection among women and men who have never been in a union and have never had sex is almost non-existent, suggesting that non-sexual transmission of HIV is negligible.

Table 13.5 HIV prevalence by selected socio-demographic characteristics

Percentage HIV positive among women and men age 15-49 who were tested for HIV, by socio-demographic characteristics (marital status, pregnancy status for women, and mobility status for men), Ghana 2003

Socio-demographic characteristic	Women		Men		Total	
	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
Marital status						
Currently in union	2.9	3,192	2.3	1,981	2.7	5,173
Widowed	6.7	95	na	14	6.8	109
Divorced/separated	6.2	368	3.3	96	5.2	564
Never in union	1.1	1,442	0.3	1,856	0.6	3,298
Ever had sex	2.5	651	0.3	787	1.3	1,439
Never had sex	0.0	791	0.2	1,068	0.1	1,859
Type of union						
In polygynous union	3.3	724	1.6	222	2.9	946
Not in polygynous union	2.8	2,468	2.4	1,759	2.6	4,227
Not currently in union	2.4	1,905	0.6	2,066	1.4	3,971
Currently pregnant						
Pregnant	3.6	385	na	na	na	na
Not pregnant/not sure	2.6	4,712	na	na	na	na
Numbers of times slept away						
None	na	na	1.4	1,662	na	na
1-2	na	na	1.3	911	na	na
3-5	na	na	1.2	847	na	na
5+	na	na	2.2	612	na	na
Whether away for more than 1 month in the past 12 months						
Away for more than 1 month	na	na	1.3	813	na	na
Away always less than 1 month	na	na	1.5	1,544	na	na
Never away	na	na	1.4	1,662	na	na
Total	2.7	5,097	1.5	4,047	2.2	9,144

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Total includes cases missing data on number of times slept away and whether away for more than one month.
na = Not applicable

Prevalence is slightly higher among women in a polygynous union than among women not in a polygynous union or not currently in union. Among men, prevalence is higher among those not in a polygynous union.

HIV prevalence among women who are pregnant is 4 percent, providing a useful benchmark to compare with rates for pregnant women tested during sentinel surveillance.

The survey results show that men who have slept away from home more than five times in the 12 months prior to the survey have higher HIV prevalence than men who have not slept away from home or have slept away from home less often. There is little difference in prevalence among men by length of time away from home.

13.2.3 HIV Prevalence by Sexual Risk Behaviour

Table 13.6 examines the prevalence of HIV infection by sexual behaviour indicators among respondents who have ever had sexual intercourse. In reviewing these results, it is important to remember that responses regarding sexual behaviour may be subject to reporting bias. Also, sexual behaviour in the 12 months preceding the survey may not adequately reflect lifetime sexual risk.

There is no clear relationship between age at sexual debut and HIV prevalence. Prevalence is highest among women who first had sexual intercourse before age 16 (5 percent). Prevalence is also relatively high among women whose age at sexual debut is 18-19 (4 percent). Among men, prevalence is highest among those whose age at sexual debut is 18-19 (3 percent).

There is no clear relationship between HIV prevalence and higher-risk sex, that is, sex with a non-marital or non-cohabiting partner. Women who have had higher-risk sex in the past 12 months are only slightly more likely to be HIV positive than women who have had no sex in the past 12 months. Men who have had sex but not higher-risk sex in the past 12 months are slightly more likely to be HIV positive than men who were not sexually active during the period.

Women who report having had sex with two partners and those who have had two higher-risk partners in the past 12 months are three times as likely to be HIV positive as women who have had only one partner or one higher-risk partner. Among men, no significant difference in prevalence can be detected by number of partners in the past 12 months, but those with one higher-risk partner are somewhat more likely to be HIV positive than men with two higher-risk partners.

HIV prevalence is substantially higher among men who paid for sex in the 12 months preceding the survey (7 percent) than among men who paid for sex prior to the past 12 months (3 percent) or who never paid for sex (2 percent).

There is little difference in HIV prevalence among those who used a condom at any time and those who used a condom at last sexual contact, in the 12 months preceding to the survey. However, women who did not use condom at last higher-risk sex in the 12 months preceding the survey are twice as likely to be HIV as women who used a condom. On the other hand, among men, prevalence is slightly lower among the former category of condom users than the latter category. Among men, those who used a condom at last paid sex are more likely to be HIV positive (5 percent) than those who did not use a condom at last paid sex (3 percent).

The discussion above suggests that there is no consistent relationship between HIV prevalence and sexual behavioural risk, particularly among men. However, more sophisticated analysis that is outside the scope of this report will be necessary to fully understand these relationships because they may be complicated by other factors such as age, residence, and educational status that are associated both with behavioural measures and HIV prevalence.

Table 13.6 HIV prevalence by sexual behaviour characteristics

Percentage HIV positive among women and men age 15-49 who ever had sex and were tested for HIV, by sexual behaviour characteristics, Ghana 2003

	Women		Men		Total	
Sexual behaviour characteristic	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
Age at first sex						
<16	4.5	1,103	1.6	431	3.7	1,534
16-17	2.3	1,234	0.6	510	1.8	1,743
18-19	3.6	1,105	2.6	775	3.2	1,880
20+	2.2	859	2.1	1,257	2.1	2,116
Higher-risk sex in past 12 months						
Had higher risk sex	3.8	707	1.2	960	2.3	1,667
Had sex, not higher risk	3.0	2,759	2.4	1,604	2.7	4,363
No sex in past 12 months	3.5	839	1.8	414	2.9	1,253
Number of partners in past 12 months						
1	3.1	3,412	2.0	2,177	2.6	5,589
2	9.4	50	2.0	321	3.0	371
3+	*	5	0.0	66	0.0	70
Number of higher-risk partners in past 12 months						
1	3.4	659	1.4	798	2.3	1,457
2	10.6	44	0.0	122	2.8	167
3+	*	4	(0.0)	40	(0.0)	43
Paid for sex						
In past 12 months	na	na	6.9	62	na	na
Prior to past 12 months	na	na	2.6	181	na	na
Never	na	na	1.7	2,733	na	na
Any condom use						
Used condom at any time	3.5	981	1.9	1,616	2.5	2,596
Never used condom	3.1	3,325	2.0	1,361	2.8	4,686
Condom use at last sex in past 12 months						
Used condom last sex	3.4	285	2.0	526	2.5	811
No condom last sex	3.1	3,181	1.9	2,038	2.6	5,219
Condom use at last higher-risk sex in past 12 months						
Used condom last higher-risk encounter	2.2	190	1.4	444	1.6	634
No condom last higher-risk encounter	4.4	517	1.0	515	2.7	1,032
Condom use first sex[1]						
Used at first sexual encounter	2.1	235	0.0	202	1.1	437
Did not use at first encounter	1.7	803	0.0	339	1.2	1,142
Condom use at last paid sex						
Used	na	na	4.5	108	na	na
Did not use	na	na	3.0	136	na	na
Total	3.2	4,306	1.9	2,977	2.7	7,283

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.
[1]Refers to those age 15-24 only
na = Not available

13.2.4 HIV Prevalence by Other Characteristics Related to HIV Risk

Table 13.7 shows the variation in HIV prevalence by various characteristics related to HIV risk among men and women who have ever had sex. As expected, women and men with history of a sexually transmitted infection (STI) or STI symptoms have higher rates of HIV infection than those with none.

Table 13.7 HIV prevalence by other indicators

Percentage HIV positive among women and men age 15-49 who ever had sex, by whether they had a sexually transmitted infection (STI), whether they had an HIV test, and reason for HIV test, Ghana 2003

	Women		Men		Total	
Characteristic	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
Sexually transmitted infection						
Had STI or STI symptoms	4.9	360	2.2	137	4.2	496
No STI, no symptoms	3.0	3,946	1.9	2,840	2.6	6,786
HIV testing status						
Ever tested	4.6	487	1.4	337	3.3	824
Never tested	3.1	3,746	2.0	2,626	2.6	6,372
Reason for HIV testing						
Asked for test	6.4	150	2.0	149	4.2	299
Offered and accepted	5.2	201	0.0	96	3.5	297
Test required	3.7	68	0.0	87	1.6	155
Total	3.2	4,306	1.9	2,977	2.7	7,283

Note: Total includes 106 women and 17 men with missing information on HIV testing status, and 66 women and 4 men missing information on reason for HIV testing.

Women who have been tested for HIV in the past are more likely to be HIV positive than those who have never been tested. Among women who have ever had sex, the level of HIV infection is 5 percent among those who have ever been tested for HIV in the past and who know their status, compared with 3 percent among those who have never been tested. There is little difference in HIV prevalence and testing status among men.

HIV prevalence varies by reason for HIV testing, increasing from less than 2 percent among those who stated that the test was required, to more than 4 percent among those who asked for the test. The difference is more obvious among women than men, increasing from 4 percent among women for whom the test was required, to 5 percent among women who were offered the test and accepted, to more than 6 percent among women who asked for the test.

Although the individual's HIV status is associated with prior HIV testing, the above results indicate that many individuals who are HIV positive have not been tested. Nine out of ten of those infected with HIV (88 percent of infected women and 92 percent of infected men) do not know their HIV status, either because they were never tested or because they were tested and did not receive their results (Table 13.8). For women, 12 percent of those who are HIV positive have been tested and know the results for their last test, compared with 7 percent of those who are HIV negative. For men, 8 percent of those who are HIV positive know the results for their last test, compared with 7 percent of those who are HIV negative. It should be noted that testing for HIV may depend on a number of factors including access to testing facilities. Since HIV testing is not available universally in the country, where a person lives may influence the likelihood of being tested for HIV.

Table 13.8 HIV prevalence by prior HIV testing

Percent distribution of women and men age 15-49 by HIV testing status prior to the survey, according to whether positive or negative for HIV, Ghana 2003

	Women		Men	
HIV testing status	HIV positive	HIV negative	HIV positive	HIV negative
Ever tested and know results of last test	12.4	7.3	8.2	7.2
Ever tested, does not know results	3.9	2.5	0.0	1.8
Never tested	83.7	90.2	91.8	90.9
Total	100.0	100.0	100.0	100.0
Number	138	4,959	59	3,989

13.2.5 HIV Prevalence and Male Circumcision

Lack of circumcision is considered a risk factor for HIV infection, in part because of physiological differences that increase the susceptibility to HIV infection among uncircumcised men. The 2003 GDHS obtained information on male circumcision status, and these results can be used to examine the relationship between HIV prevalence and male circumcision.

As Table 13.9 shows, the vast majority of Ghanaian men (95 percent) are circumcised. However, the proportions circumcised vary by region, being markedly lower among men in the three northern regions and especially low in the Upper West Region (68 percent). The percent circumcised is also relatively lower among men who have no education (84 percent), among men in the lowest wealth quintile (82 percent), and among men who adhere to traditional or spiritualist religion (68 percent).

The number of men who are not circumcised in the population is rather small and therefore it is difficult to interpret the difference in prevalence between circumcised and uncircumcised men by background characteristics. Caution needs to be exercised when interpreting this table because both the numerators and the denominators on which these percentages are based are quite small. There is little difference in the HIV prevalence by circumcision status; however, some differences by background characteristics are noted.

Table 13.9 HIV prevalence among men by circumcision status

Among men age 15-59 who were tested for HIV, percentage who are circumcised and percentage HIV positive among circumcised and uncircumcised men, according to background characteristics, Ghana 2003

	All men tested for HIV		Circumcised men		Uncircumcised men	
Background characteristic	Percentage circumcised	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
Age						
15-19	95.1	1,035	0.2	985	0.0	50
20-24	96.7	616	0.0	596	(0.0)	20
25-29	97.4	663	0.9	645	(3.1)	17
30-34	95.9	548	2.8	525	(1.8)	23
35-39	93.8	433	3.2	407	1.1	27
40-44	93.7	351	4.4	329	(0.0)	22
45-49	94.5	401	1.5	379	(8.1)	22
50-54	93.9	254	3.9	239	(0.0)	16
55-59	92.0	167	3.0	154	(0.0)	13
Residence						
Urban	98.6	2,006	1.6	1,978	(0.0)	28
Rural	92.6	2,463	1.7	2,280	1.6	183
Region						
Western	99.3	421	1.6	419	*	3
Central	99.2	333	1.5	330	*	3
Greater Accra	99.2	645	1.7	640	*	5
Volta	98.3	390	0.9	384	*	7
Eastern	97.5	476	3.1	464	*	12
Ashanti	98.6	855	1.4	843	*	12
Brong Ahafo	96.3	474	1.8	456	*	17
Northern	85.4	470	1.0	401	0.0	69
Upper East	84.1	285	1.4	240	4.9	45
Upper West	68.2	119	1.5	81	2.1	38
Education						
No education	84.1	774	1.2	651	1.5	123
Primary	94.8	709	1.8	672	3.2	37
Middle/JSS	98.1	1,965	2.1	1,928	0.0	36
Secondary+	98.6	1,022	0.9	1,008	*	14
Wealth quintile						
Lowest	81.7	780	1.2	637	1.6	143
Second	96.4	821	1.9	792	0.0	29
Middle	98.8	872	2.1	861	*	11
Fourth	98.4	966	1.5	951	*	16
Highest	98.9	1,030	1.5	1,018	*	12
Religion						
Roman Catholic	93.9	646	1.2	607	0.0	39
Anglican	92.4	59	2.4	54	0.0	4
Methodist	99.6	292	2.1	291	0.0	1
Presbyterian	97.1	345	3.3	335	0.0	10
Other Christian	97.5	1,800	1.4	1,755	0.9	44
Moslem	98.0	836	1.3	819	*	17
Traditional/spiritualist	67.7	206	2.0	140	3.9	67
No religion	90.3	282	2.3	255	0.0	27
Total	95.3	4,469	1.6	4,258	1.4	210

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases. Total includes 3 men for whom information on ethnicity is missing and 5 men with other religion or missing information on religion.

13.2.6 Prevalence among Couples

About 1,800 cohabiting couples were tested for HIV in the 2003 GDHS. Results shown in Table 13.10 indicate that, for the vast majority (96 percent) of cohabiting couples, both partners are HIV negative, while in only 1 percent of couples are both partners HIV positive. There is discordance in the

Table 13.10 HIV prevalence among couples

Among cohabiting couples both of whom were tested, percent distribution by HIV results, according to background characteristics, Ghana 2003

Background characteristic	Both partners HIV positive	Male partner positive, female partner negative	Female partner positive, male partner negative	Both partners HIV negative	Total	Number
Age of woman						
15-19	1.7	0.0	0.0	98.3	100.0	57
20-29	0.5	1.7	1.8	96.1	100.0	666
30-39	1.3	2.4	1.8	94.5	100.0	686
40-49	1.1	0.6	0.9	97.5	100.0	383
Age of man						
15-19	*	*	*	*	100.0	3
20-29	0.0	0.4	1.6	98.0	100.0	304
30-39	0.8	2.4	1.9	95.0	100.0	653
40-59	1.5	1.5	1.3	95.7	100.0	832
Marital status						
Married	1.0	1.6	1.5	95.8	100.0	1,792
Living together	1.5	3.0	4.1	91.4	100.0	103
Type of union						
Monogamous	0.8	1.7	1.5	96.0	100.0	1,483
Polygynous	1.9	1.2	1.8	95.1	100.0	309
Residence						
Urban	1.1	1.7	2.3	94.9	100.0	626
Rural	0.9	1.6	1.2	96.3	100.0	1,166
Region						
Western	1.5	1.1	2.8	94.7	100.0	171
Central	1.4	2.6	0.6	95.4	100.0	124
Greater Accra	2.3	2.2	2.3	93.2	100.0	214
Volta	0.0	0.0	3.5	96.5	100.0	137
Eastern	1.4	3.3	1.2	94.1	100.0	191
Ashanti	1.4	0.7	1.7	96.3	100.0	299
Brong Ahafo	0.3	2.0	1.4	96.3	100.0	196
Northern	0.4	1.3	0.9	97.4	100.0	258
Upper East	0.0	1.9	0.0	98.1	100.0	144
Upper West	0.0	2.5	0.0	97.5	100.0	58
Woman's education						
No education	0.9	1.5	1.2	96.4	100.0	760
Primary	1.6	1.7	1.6	95.0	100.0	360
Middle/JSS	0.9	1.5	2.0	95.6	100.0	558
Secondary+	0.0	3.2	1.2	95.6	100.0	115
Man's education						
No education	0.2	0.9	0.6	98.3	100.0	523
Primary	1.9	2.2	3.0	92.9	100.0	215
Middle/JSS	1.5	1.8	2.0	94.7	100.0	696
Secondary+	0.5	2.1	1.2	96.2	100.0	357
Wealth quintile						
Lowest	0.2	1.7	0.9	97.2	100.0	424
Second	1.2	1.3	0.9	96.6	100.0	374
Middle	1.8	1.4	2.2	94.6	100.0	353
Fourth	0.5	1.6	2.5	95.4	100.0	316
Highest	1.4	2.3	1.5	94.9	100.0	325
Total	1.0	1.6	1.5	95.8	100.0	1,792

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

HIV positive status in under 2 percent of couples, where one partner is infected and the other is not. Couples where the woman is in the youngest age group (15-19), couples where the man is in the oldest age group (15-49), couples in a polygynous union, urban couples, couples living in Greater Accra, couples with primary education, and couples in the middle wealth quintile have slightly higher HIV prevalence than their counterparts in the other categories.

Discordance whereby the man is positive and the woman is not is more common than situations in which the woman is positive and the man is not. The fact that there are more couples that are discordant for HIV than couples that are both infected points to an unmet need for HIV prevention because the majority of these couples do not mutually know their HIV status. Couple-oriented voluntary counselling and testing (VCT) services, where partners (including those in polygynous marriages) go together and receive results together should be advocated for all VCT centers in Ghana.

13.3 DISTRIBUTION OF THE HIV BURDEN IN GHANA

An accurate estimation of HIV prevalence is necessary to assess the scope of the AIDS epidemic in Ghana and to track trends over time. Sentinel surveillance data from ANC clinics and from individuals seeking medical treatment for STIs have been the principal source of information on HIV prevalence in Ghana.

With the inclusion of HIV testing in the 2003 GDHS, Ghana has joined the first few countries in sub-Saharan Africa to expand the tools employed in monitoring the scope of the AIDS epidemic to include a nationally representative population-based survey. Ideally, the seroprevalence data from the GDHS survey will be examined and used to create a more accurate set of assumptions to use in estimating prevalence rates from future sentinel surveillance data. Indeed, UNAIDS and WHO suggest that population-based surveys “should definitely be used to calibrate the results of routine surveillance systems” (WHO and UNAIDS, 2000). The availability of population-based seroprevalence data from the 2003 GDHS clearly enhances the body of information available on the HIV/AIDS epidemic in Ghana.

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SAMPLE IMPLEMENTATION

APPENDIX A

Table A.1 Sample implementation: women

Percent distribution of households and eligible women by results of the household and individual interviews, and household, eligible women and overall response rates, according to urban-rural residence and region, Ghana 2003

	Residence		Region										
Result	Urban	Rural	Western	Central	Greater Accra	Volta	Eastern	Ashanti	Brong Ahafo	Northern	Upper East	Upper West	Total
Selected households													
Completed (C)	92.5	95.5	94.3	94.3	90.5	93.3	95.3	93.8	96.3	97.2	95.3	95.0	94.3
Household present but no competent respondent at home (HP)	1.3	0.6	0.2	0.6	3.0	0.2	0.9	0.6	0.4	0.0	1.0	1.3	0.9
Refused (R)	0.3	0.0	0.2	0.0	0.5	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.1
Dwelling not found (DNF)	0.4	0.1	0.2	0.2	0.4	0.0	0.0	0.6	0.0	0.0	0.3	0.0	0.2
Household absent (HA)	3.6	2.6	3.6	3.1	2.8	3.8	2.4	3.9	2.9	1.6	2.3	3.1	3.0
Dwelling vacant/address not a dwelling (DV)	1.2	0.8	0.8	1.4	1.8	2.3	0.5	0.7	0.4	0.5	1.0	0.6	1.0
Dwelling destroy (DD)	0.1	0.1	0.2	0.0	0.1	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.1
Other (O)	0.6	0.2	0.7	0.4	0.8	0.2	0.3	0.3	0.0	0.7	0.3	0.0	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	2,720	3,908	615	510	930	525	660	1,140	760	608	400	480	6,628
Household response rate (HRR)[1]	97.9	99.3	99.5	99.2	95.8	99.8	98.7	98.6	99.6	100.0	98.7	98.7	98.7
Eligible women													
Completed (EWC)	95.0	96.2	97.0	97.5	91.5	94.4	95.5	98.0	98.3	95.6	94.5	95.1	95.7
Not at home (EWNH)	3.2	2.3	1.9	1.7	6.1	3.0	2.6	0.8	0.8	2.4	4.1	2.7	2.7
Postponed (EWP)	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1
Refused (EWR)	0.8	0.3	0.4	0.3	1.3	0.9	0.2	0.2	0.3	0.5	0.7	0.2	0.5
Partly completed (EWPC)	0.3	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.0	0.8	0.0	0.4	0.3
Incapacitated (EWI)	0.4	0.7	0.2	0.3	0.5	1.3	0.9	0.3	0.5	0.2	0.7	1.2	0.6
Other (EWO)	0.3	0.2	0.2	0.0	0.1	0.2	0.6	0.4	0.2	0.6	0.0	0.0	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	2,500	3,449	540	361	913	468	530	946	649	638	418	486	5,949
Eligible woman response rate (EWRR)[2]	95.0	96.2	97.0	97.5	91.5	94.4	95.5	98.0	98.3	95.6	94.5	95.1	95.7
Overall response rate (ORR)[3]	93.0	95.5	96.5	96.7	87.6	94.3	94.3	96.6	97.9	95.6	93.3	93.8	94.4

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

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

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

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

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

$$ORR = HRR * EWRR/100$$

Table A.2 Sample implementation: men

Percent distribution of households and eligible men by results of the household and individual interviews, and household, eligible men and overall response rates, according to urban-rural residence and region, Ghana 2003

	Residence		Region										
Result	Urban	Rural	Western	Central	Greater Accra	Volta	Eastern	Ashanti	Brong Ahafo	Northern	Upper East	Upper West	Total
Selected households													
Completed (C)	92.5	95.5	94.3	94.3	90.5	93.3	95.3	93.8	96.3	97.2	95.3	95.0	94.3
Household present but no competent respondent at home (HP)	1.3	0.6	0.2	0.6	3.0	0.2	0.9	0.6	0.4	0.0	1.0	1.3	0.9
Refused (R)	0.3	0.0	0.2	0.0	0.5	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.1
Dwelling not found (DNF)	0.4	0.1	0.2	0.2	0.4	0.0	0.0	0.6	0.0	0.0	0.3	0.0	0.2
Household absent (HA)	3.6	2.6	3.6	3.1	2.8	3.8	2.4	3.9	2.9	1.6	2.3	3.1	3.0
Dwelling vacant/address not a dwelling (DV)	1.2	0.8	0.8	1.4	1.8	2.3	0.5	0.7	0.4	0.5	1.0	0.6	1.0
Dwelling destroy (DD)	0.1	0.1	0.2	0.0	0.1	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.1
Other (O)	0.6	0.2	0.7	0.4	0.8	0.2	0.3	0.3	0.0	0.7	0.3	0.0	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	2,720	3,908	615	510	930	525	660	1,140	760	608	400	480	6,628
Household response rate (HRR)[1]	97.9	99.3	99.5	99.2	95.8	99.8	98.7	98.6	99.6	100.0	98.7	98.7	98.7
Eligible men													
Completed (EMC)	92.2	94.8	96.0	95.2	86.1	93.9	94.8	95.8	97.9	94.1	93.4	92.6	93.8
Not at home (EMNH)	5.2	3.8	3.2	4.1	10.0	4.6	3.8	2.6	1.7	2.8	5.7	5.3	4.4
Postponed (EMP)	0.0	0.1	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.2	0.1
Refused (EMR)	1.3	0.2	0.2	0.0	2.8	0.5	0.2	0.4	0.2	0.6	0.2	0.0	0.6
Partly completed (EMPC)	0.1	0.2	0.0	0.0	0.3	0.0	0.2	0.1	0.0	0.4	0.0	0.2	0.1
Incapacitated (EMI)	0.4	0.8	0.6	0.6	0.3	0.5	0.6	0.4	0.2	1.0	0.7	1.7	0.6
Other (EMO)	0.7	0.2	0.0	0.0	0.6	0.0	0.4	0.7	0.2	1.0	0.0	0.0	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of men	2,063	3,282	476	315	721	411	478	819	606	678	423	418	5,345
Eligible man response rate (EMRR)[2]	92.2	94.8	96.0	95.2	86.1	93.9	94.8	95.8	97.9	94.1	93.4	92.6	93.8
Overall response rate (ORR)[3]	90.3	94.1	95.5	94.5	82.5	93.7	93.6	94.5	97.5	94.1	92.2	91.4	92.6

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

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

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

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

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

$$ORR = HRR * EWRR/100$$

Table A.3 Coverage of HIV testing among interviewed women by socio-demographic characteristics

Percent distribution of women age 15-49 by HIV-testing status, according to socio-demographic characteristics (unweighted), Ghana 2003

Socio-demographic characteristic	HIV-testing status				Total	Number
	Tested	Refused	Absent	Other/ missing		
Marital status						
Currently in union	93.4	4.9	0.8	0.8	100.0	3,694
Widowed	90.0	8.3	0.8	0.8	100.0	120
Divorced/separated	92.9	6.0	0.5	0.5	100.0	368
Never in union	92.6	4.6	1.8	1.0	100.0	1,509
Ever had sex	92.5	4.9	1.7	0.9	100.0	655
Never had sex	92.6	4.4	1.9	1.1	100.0	854
Type of union						
Polygynous union	92.4	5.6	1.2	0.9	100.0	934
Not in polygynous union	93.7	4.7	0.7	0.8	100.0	2,760
Not currently in union	92.5	5.1	1.5	0.9	100.0	1,997
Ever had sexual intercourse						
Yes	93.2	5.1	0.9	0.8	100.0	4,836
No	92.6	4.4	1.9	1.1	100.0	855
Currently pregnant						
Pregnant	95.2	2.8	1.1	0.9	100.0	435
Not pregnant/not sure	92.9	5.2	1.1	0.9	100.0	5,256
Ethnicity						
Akan	94.7	4.0	0.8	0.5	100.0	2,481
Ga/Dangme	88.1	9.2	0.9	1.8	100.0	437
Ewe	94.1	4.4	1.0	0.4	100.0	698
Guan	94.3	3.8	0.6	1.3	100.0	159
Mole-Dagbani	89.7	7.5	1.7	1.1	100.0	1,119
Grussi	92.4	7.0	0.6	0.0	100.0	171
Gruma	91.0	1.7	1.7	5.6	100.0	178
Hausa	98.4	1.6	0.0	0.0	100.0	62
Other	96.1	2.1	1.3	0.5	100.0	380
Religion						
Roman Catholic	93.3	5.6	0.7	0.4	100.0	905
Anglican	92.8	4.3	1.4	1.4	100.0	69
Methodist	93.8	4.3	1.3	0.5	100.0	373
Presbyterian	92.5	5.8	1.1	0.6	100.0	465
Other Christian	93.4	5.0	0.8	0.9	100.0	2,352
Moslem	93.3	3.9	2.3	0.5	100.0	1,013
Traditional/spiritualist	88.6	6.7	1.4	3.3	100.0	210
No religion	92.4	5.3	0.0	2.3	100.0	302
Total	93.1	5.0	1.1	0.9	100.0	5,691

Note: Total includes 6 women for whom information on ethnicity is missing, 1 woman with other religion, and 1 woman with information on religion missing.

Table A.4 Coverage of HIV testing among interviewed men by socio-demographic characteristics

Percent distribution of interviewed men age 15-59 by HIV-testing status, according to socio-demographic characteristics (unweighted), Ghana 2003

Socio-demographic characteristic	HIV-testing status				Total	Number
	Tested	Refused	Absent	Other/ missing		
Marital status						
Currently in union	85.0	10.3	3.2	1.5	100.0	2,726
Widowed	(70.0)	(26.7)	(0.0)	(3.3)	100.0	30
Divorced/separated	78.5	15.6	3.7	2.2	100.0	135
Never in union	85.8	9.9	3.6	0.7	100.0	2,124
Ever had sex	82.8	12.8	3.3	1.0	100.0	956
Never had sex	88.2	7.5	3.9	0.4	100.0	1,168
Type of union						
In polygynous union	83.5	10.4	3.6	2.4	100.0	412
Not in polygynous union	85.3	10.2	3.2	1.3	100.0	2,314
Not currently in union	85.1	10.4	3.6	0.8	100.0	2,289
Ever had sexual intercourse						
Yes	84.1	11.2	3.3	1.4	100.0	3,844
No	88.2	7.5	3.8	0.4	100.0	1,171
Circumcision status						
Circumcised	85.0	10.5	3.4	1.1	100.0	4,648
Not circumcised	86.6	8.2	2.7	2.5	100.0	367
Times slept away in the past 12 months						
None	85.2	10.1	3.5	1.2	100.0	2,161
1-2	86.3	9.8	3.1	0.8	100.0	1,121
3-5	85.8	9.9	2.7	1.5	100.0	987
5+	82.0	12.0	4.6	1.4	100.0	724
Whether away for more than 1 month in the past 12 months						
Away for more than 1 month	85.9	9.8	3.2	1.2	100.0	1,004
Away always less than 1 month	84.6	10.8	3.5	1.2	100.0	1,815
Never away	85.2	10.1	3.5	1.2	100.0	2,161
Ethnicity						
Akan	84.8	11.4	3.2	0.7	100.0	2,025
Ga/Dangme	80.2	15.7	3.8	0.3	100.0	338
Ewe	86.6	9.1	2.8	1.5	100.0	614
Guan	85.9	7.3	4.7	2.1	100.0	191
Mole-Dagbani	85.3	9.5	4.0	1.3	100.0	1,235
Grussi	87.3	9.6	2.5	0.6	100.0	157
Gruma	89.9	2.1	2.7	5.3	100.0	188
Hausa	66.0	20.0	12.0	2.0	100.0	50
Other	87.9	9.3	1.4	1.4	100.0	214
Religion						
Roman Catholic	86.1	10.2	2.9	0.8	100.0	794
Anglican	70.2	19.1	6.4	(4.3)	100.0	47
Methodist	84.1	12.0	3.3	0.7	100.0	301
Presbyterian	82.5	14.4	2.2	0.8	100.0	361
Other Christian	86.2	9.6	3.8	0.4	100.0	1,785
Moslem	84.0	10.3	3.9	1.8	100.0	1,050
Traditional/spiritualist	85.5	8.2	3.8	2.5	100.0	317
No religion	85.6	9.6	1.7	3.1	100.0	355
Total	85.1	10.3	3.4	1.2	100.0	5,015

Note: Figures in parentheses are based on 25-49 unweighted cases. Total includes 22 men with missing information on number of times slept away, 35 men with missing information on whether away for more than 1 month, 3 men with missing information on ethnicity, 3 men of other religion, and 2 men with missing information on religion.

Table A.5 Coverage of HIV testing by sexual behaviour characteristics: women

Percent distribution of women who ever had sex by HIV-testing status, according to sexual behaviour characteristics, Ghana 2003

Sexual behaviour characteristic	HIV-testing status				Total	Number of women
	Tested	Refused	Absent	Other/ missing		
Age at first sex						
<16	93.4	4.8	0.6	1.2	100.0	1,209
16-17	93.0	5.0	1.2	0.8	100.0	1,320
18-19	94.3	4.6	0.7	0.4	100.0	1,117
20+	92.5	5.6	1.2	0.7	100.0	854
Higher-risk sex in past 12 months						
Had higher-risk sex	91.9	5.9	1.9	0.3	100.0	724
Had sex, not higher-risk sex	93.8	4.7	0.6	0.9	100.0	3,128
No sex in past 12 months	92.2	5.7	1.1	1.0	100.0	984
Number of partners in past 12 months						
1	93.4	4.9	0.9	0.8	100.0	3,791
2	91.4	6.9	1.7	0.0	100.0	58
3+	*	*	*	*	100.0	3
Number of higher-risk partners in past 12 months						
1	91.8	6.0	1.9	0.3	100.0	670
2	92.3	5.8	1.9	0.0	100.0	52
3+	*	*	*	*	100.0	2
Any condom use						
Used condom at any time	92.6	5.7	1.1	0.7	100.0	1,021
Never used condom	93.3	4.9	0.9	0.9	100.0	3,815
Condom use at last sex in past 12 months						
Used condom last sex	90.8	7.2	1.6	0.3	100.0	305
No condom last sex	93.6	4.7	0.8	0.8	100.0	3,547
Condom use at last higher-risk sex in past 12 months						
Used condom last higher-risk sex	90.1	7.9	2.0	0.0	100.0	203
No condom last higher-risk sex	92.5	5.2	1.9	0.4	100.0	521
Condom use first sex[1]						
Used at first sexual encounter	94.6	4.6	0.4	0.4	100.0	241
Did not use at first encounter	94.3	3.3	1.4	1.0	100.0	880
HIV-testing status						
Ever tested and know results of last test	94.9	4.3	0.3	0.5	100.0	371
Ever tested, does not know results	92.5	6.1	0.0	1.4	100.0	147
Never tested	93.0	5.1	1.0	0.8	100.0	4,212
Total	93.2	5.1	0.9	0.8	100.0	4,836

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Total includes 336 women for whom information on age at first sex is inconsistent or missing and 106 women with missing information on HIV testing status.

[1]Refers to those age 15-24 only

Table A.6 Coverage of HIV testing by sexual behaviour characteristics: men

Percent distribution of men who ever had sex by testing status, according to sexual behaviour characteristics, Ghana 2003

Sexual behaviour characteristic	HIV test status				Total	Number of men
	Tested	Refused	Absent	Other/ missing		
Age at first sex						
<16	81.8	11.2	5.5	1.6	100.0	511
16-17	86.3	11.2	2.0	0.5	100.0	599
18-19	85.2	10.3	3.2	1.4	100.0	916
20+	83.6	11.7	3.0	1.7	100.0	1,811
Higher-risk sex in past 12 months						
Had higher risk sex	82.8	12.0	3.8	1.4	100.0	1,077
Had sex, not higher risk	85.1	10.1	3.2	1.6	100.0	2,227
No sex in last 12 months	82.6	14.4	2.2	0.7	100.0	540
Number of partners in past 12 months						
1	84.8	10.3	3.4	1.6	100.0	2,824
2	82.0	13.8	3.2	1.0	100.0	406
3+	81.1	9.5	6.8	2.7	100.0	74
Number of higher-risk partners in past 12 months						
1	84.0	11.2	3.5	1.3	100.0	905
2	75.8	18.2	5.3	0.8	100.0	132
3+	(80.0)	(10.0)	(5.0)	(5.0)	100.0	40
Paid for sex						
In past 12 months	81.7	11.3	5.6	1.4	100.0	71
Prior to past 12 months	84.6	10.0	4.6	0.8	100.0	241
Never	84.2	11.3	3.1	1.4	100.0	3,529
Any condom use						
Used condom at any time	83.1	12.1	3.9	0.8	100.0	1,827
Never used condom	85.0	10.4	2.6	1.9	100.0	2,017
Condom use at last sex in past 12 months						
Used condom last sex	82.5	13.5	3.1	0.9	100.0	578
No condom last sex	84.8	10.1	3.5	1.7	100.0	2,726
Condom use at last higher-risk sex in past 12 months						
Used condom last higher risk encounter	82.7	13.2	3.3	0.8	100.0	479
No condom last higher risk encounter	82.9	11.0	4.2	1.8	100.0	598
Condom use first sex[1]						
Used at first sexual encounter	84.7	12.4	2.5	0.5	100.0	202
Did not use at first encounter	88.1	8.8	2.9	0.3	100.0	377
Condom use at last paid sex						
Used	85.1	12.4	2.5	0.0	100.0	121
Did not use	83.2	8.9	6.3	1.6	100.0	191
HIV-testing status						
Ever tested and know results of last test	80.4	16.5	2.8	0.3	100.0	327
Ever tested, does not know results	92.0	6.7	0.0	1.3	100.0	75
Never tested	84.3	10.8	3.4	1.5	100.0	3,416
Total	84.1	11.2	3.3	1.4	100.0	3,844

Note: Figures in parentheses are based on 25-49 unweighted cases. Total includes 7 men for whom information on age at first sex is inconsistent or missing, 3 men with missing information on paid for sex and 26 men with missing information on HIV testing status.

[1]Refers to those age 15-24 only

ESTIMATES OF SAMPLING ERRORS

APPENDIX B

The estimates from a sample survey are affected by two types of errors: (1) non-sampling errors, and (2) sampling errors. Non-sampling errors are the results of mistakes made in implementing data collection and data processing, such as failure to locate and interview the correct household, misunderstanding of the questions on the part of either the interviewer or the respondent, and data entry errors. Although numerous efforts were made during the implementation of the 2003 Ghana Demographic and Health Survey (GDHS) to minimize this type of error, non-sampling errors are impossible to avoid and difficult to evaluate statistically.

Sampling errors, on the other hand, can be evaluated statistically. The sample of respondents selected in the 2003 GDHS is only one of many samples that could have been selected from the same population, using the same design and expected size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability between all possible samples. Although the degree of variability is not known exactly, it can be estimated from the survey results.

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

If the sample of respondents had been selected as a simple random sample, it would have been possible to use straightforward formulas for calculating sampling errors. However, the 2003 GDHS sample is the result of a multi-stage stratified design, and, consequently, it was necessary to use more complex formulae. The computer software used to calculate sampling errors for the 2003 GDHS is the ISSA Sampling Error Module. This module used the Taylor linearization method of variance estimation for survey estimates that are means or proportions. The Jackknife repeated replication method is used for variance estimation of more complex statistics such as fertility and mortality rates.

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

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

in which

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

where h represents the stratum which varies from 1 to H,
m_h is the total number of clusters selected in the hth stratum,
y_{hi} is the sum of the weighted values of variable y in the ith cluster in the hth stratum,
x_{hi} is the sum of the weighted number of cases in the ith cluster in the hth stratum, and
f is the overall sampling fraction, which is so small that it is ignored.

The Jackknife repeated replication method derives estimates of complex rates from each of several replications of the parent sample, and calculates standard errors for these estimates using simple formulae. Each replication considers *all but one* clusters in the calculation of the estimates. Pseudo-independent replications are thus created. In the 2003 GDHS, there were 412 non-empty clusters. Hence, 412 replications were created. The variance of a rate r is calculated as follows:

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

in which

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

where r is the estimate computed from the full sample of 412 clusters,
$r_{(i)}$ is the estimate computed from the reduced sample of 411 clusters (i^{th} cluster excluded), and
k is the total number of clusters.

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

Sampling errors for the 2003 GDHS are calculated for selected variables considered to be of primary interest for woman's survey and for man's surveys, respectively. The results are presented in this appendix for the country as a whole, for urban and rural areas, and for each of the 10 regions. For each variable, the type of statistic (mean, proportion, or rate) and the base population are given in Table B.1. Tables B.2 to B.14 present the value of the statistic (R), its standard error (SE), the number of unweighted (N-UNWE) and weighted (N-WEIG) cases, the design effect (DEFT), the relative standard error (SE/R), and the 95 percent confidence limits (R±2SE), for each variable. The DEFT is considered undefined when the standard error considering simple random sample is zero (when the estimate is close to 0 or 1). In the case of the total fertility rate, the number of unweighted cases is not relevant, as there is no known unweighted value for woman-years of exposure to child-bearing.

The confidence interval (e.g., as calculated for *children ever born to women aged 40-49*) can be interpreted as follows: the overall average from the national sample is 5.493 and its standard error is 0.086. Therefore, to obtain the 95 percent confidence limits, one adds and subtracts twice the standard error to the sample estimate, i.e., 5.493±2×0.086. There is a high probability (95 percent) that the *true* average number of children ever born to all women aged 40 to 49 is between 5.321 and 5.664.

Sampling errors are analyzed for the national woman sample and for two separate groups of estimates: (1) means and proportions, and (2) complex demographic rates. The relative standard errors (SE/R) for the means and proportions range between 0.2 percent and 19.3 percent, with an average of 4.2

percent; the highest relative standard errors are for estimates of very low values (e.g., *currently using withdrawal*). If estimates of very low values (less than 10 percent) were removed, then the average drops to 2.5 percent. So in general, the relative standard error for most estimates for the country as a whole is small, except for estimates of very small proportions. The relative standard error for the total fertility rate is small, 2.9 percent. However, for the mortality rates, the average relative standard error for the seven 5-year period mortality rates is much higher, 8.1 percent.

There are differentials in the relative standard error for the estimates of sub-populations. For example, for the variable *want no more children*, the relative standard errors as a percent of the estimated mean for the whole country, and for the urban areas are 2.5 percent and 4.1 percent, respectively.

For the total sample, the value of the design effect (DEFT) averaged over all variables is 1.20, which means that due to multi-stage clustering of the sample the average standard error is increased by a factor of 1.20 over that in an equivalent simple random sample.

Table B.1 List of selected variables for sampling errors, Ghana 2003

Variable	Estimate	Base population
	WOMEN	
Urban residence	Proportion	All women 15-49
No education	Proportion	All women 15-49
With secondary education or higher	Proportion	All women 15-49
Never married (in union)	Proportion	All women 15-49
Currently married (in union)	Proportion	All women 15-49
Had first sex before 18	Proportion	All women 20-49
Children ever born	Mean	All women 15-49
Children ever born to women 40-49	Mean	All women 40-49
Children surviving	Mean	All women 15-49
Knowing any contraceptive method	Proportion	Currently married women 15-49
Knowing any modern contraceptive method	Proportion	Currently married women 15-49
Ever used any contraceptive method	Proportion	Currently married women 15-49
Currently using any method	Proportion	Currently married women 15-49
Currently using a modern method	Proportion	Currently married women 15-49
Currently female sterilisation	Proportion	Currently married women 15-49
Currently using pill	Proportion	Currently married women 15-49
Currently using IUD	Proportion	Currently married women 15-49
Currently using condom	Proportion	Currently married women 15-49
Currently using injectables	Proportion	Currently married women 15-49
Currently using periodic abstinence	Proportion	Currently married women 15-49
Currently using withdrawal	Proportion	Currently married women 15-49
Using public sector source	Proportion	Currently married women 15-49
Want no more children	Proportion	Currently married women 15-49
Want to delay at least 2 years	Proportion	Currently married women 15-49
Ideal number of children	Mean	All women 15-49
Mother received tetanus injection	Proportion	Births in last 5 years
Mother received medical care at birth	Proportion	Births in last 5 years
Child has diarrhoea in the last 2 weeks	Proportion	Children under 5
Child treated with ORS packets	Proportion	Children under 5 with diarrhoea in last 2 weeks
Consulted medical personnel	Proportion	Children 12-23 months
Child having health card, seen	Proportion	Children 12-23 months
Child received BCG vaccination	Proportion	Children 12-23 months
Child received DPT vaccination (3 doses)	Proportion	Children 12-23 months
Child received polio vaccination (3 doses)	Proportion	Children 12-23 months
Child received measles vaccination	Proportion	Children 12-23 months
Child fully immunised	Proportion	Children 12-23 months
Weight-for-height (-2 SD)	Proportion	Children under 5 who were measured
Height-for-age (-2 SD)	Proportion	Children under 5 who were measured
Weight-for-age (-2 SD)	Proportion	Children under 5 who were measured
Has heard of HIV/AIDS	Proportion	All women 15-49
Knows condoms reduce HIV/AIDS	Proportion	All women 15-49
Knows limiting partners reduce HIV/AIDS	Proportion	All women 15-49
Total fertility rate (last 3 years)	Rate	All women 15-49
Neonatal mortality rate (last 10 years)[1]	Rate	Number of births in last 5 (10 years)
Postneonatal mortality rate (last 10 years) [1]	Rate	Number of births in last 5 (10 years)
Infant mortality rate (last 10 years) [1]	Rate	Number of births in last 5 (10 years)
Child mortality rate (last 10 years) [1]	Rate	Number of births in last 5 (10 years)
Under-five mortality rate (last 10 years) [1]	Rate	Number of births in last 5 (10 years)
HIV prevalence	Proportion	All women 15-49 tested for HIV
	MEN	
Urban residence	Proportion	All men 15-59
No education	Proportion	All men 15-59
With secondary education or higher	Proportion	All men 15-59
Never married (in union)	Proportion	All men 15-59
Currently married (in union)	Proportion	All men 15-59
Had first sex before 18	Proportion	All men 20-59
Knowing any contraceptive method	Proportion	Currently married men 15-59
Knowing any modern contraceptive method	Proportion	Currently married men 15-59
Want no more children	Proportion	Currently married men 15-59
Want to delay at least 2 years	Proportion	Currently married men 15-59
Ideal number of children	Mean	All men 15-59
Has heard of HIV/AIDS	Proportion	All men 15-49
Knows condoms reduce HIV/AIDS	Proportion	All men 15-49
Knows limiting partners reduce HIV/AIDS	Proportion	All men 15-49
HIV prevalence (15-49)	Proportion	All men 15-49 tested for HIV
HIV prevalence (15-59)	Proportion	All men 15-59 tested for HIV

[1] 5 years for national sample and 10 years for regional sample.

Table B.2 Sampling errors for total sample, Ghana 2003

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
WOMEN								
Urban residence	0.484	0.012	5691	5691	1.809	0.025	0.460	0.508
No education	0.282	0.010	5691	5691	1.670	0.035	0.263	0.302
With secondary education or higher	0.518	0.012	5691	5691	1.744	0.022	0.495	0.541
Never married (in union)	0.284	0.008	5691	5691	1.414	0.030	0.267	0.301
Currently married (in union)	0.624	0.009	5691	5691	1.340	0.014	0.606	0.641
Had first sex before age 18	0.467	0.010	4578	4543	1.318	0.021	0.447	0.486
Currently pregnant	0.074	0.003	5691	5691	1.007	0.047	0.067	0.081
Children ever born	2.532	0.042	5691	5691	1.229	0.017	2.448	2.617
Children surviving	2.215	0.037	5691	5691	1.247	0.017	2.141	2.289
Children ever born to women 40-49	5.493	0.086	1073	1056	1.103	0.016	5.321	5.664
Knowing any contraceptive method	0.980	0.002	3694	3549	1.036	0.002	0.975	0.985
Knowing any modern contraceptive method	0.978	0.003	3694	3549	1.045	0.003	0.973	0.983
Ever used any contraceptive method	0.553	0.013	3694	3549	1.541	0.023	0.527	0.578
Currently using any contraceptive method	0.252	0.009	3694	3549	1.315	0.037	0.233	0.271
Currently using a modern method	0.187	0.008	3694	3549	1.273	0.044	0.170	0.203
Currently using pill	0.055	0.005	3694	3549	1.284	0.087	0.046	0.065
Currently using IUD	0.009	0.002	3694	3549	1.093	0.189	0.006	0.012
Currently using condom	0.031	0.004	3694	3549	1.275	0.117	0.024	0.038
Currently using injectables	0.054	0.004	3694	3549	1.119	0.077	0.046	0.063
Currently using periodic abstinence	0.051	0.005	3694	3549	1.267	0.090	0.042	0.060
Currently using withdrawal	0.008	0.002	3694	3549	1.065	0.193	0.005	0.011
Obtained method from public sector source	0.410	0.022	829	858	1.278	0.053	0.367	0.454
Want no more children	0.360	0.009	3694	3549	1.154	0.025	0.341	0.378
Want to delay birth at least 2 years	0.375	0.009	3694	3549	1.164	0.025	0.356	0.393
Ideal number of children	4.425	0.038	5573	5579	1.380	0.009	4.349	4.501
Mothers received tetanus injection for last birth	0.834	0.009	2777	2645	1.289	0.011	0.816	0.853
Mothers received medical care at delivery	0.471	0.013	3844	3639	1.343	0.028	0.445	0.497
Child had diarrhoea in the last 2 weeks	0.152	0.007	3530	3340	1.074	0.046	0.138	0.166
Treated with ORS packets	0.386	0.021	582	509	0.941	0.055	0.343	0.429
Consulted medical personnel	0.253	0.025	582	509	1.209	0.098	0.203	0.302
Child having health card, seen	0.830	0.014	735	695	0.997	0.017	0.801	0.858
Child received BCG vaccination	0.911	0.012	735	695	1.077	0.013	0.887	0.935
Child received DPT vaccination (3 doses)	0.795	0.016	735	695	1.035	0.020	0.763	0.827
Child received polio vaccination (3 doses)	0.792	0.016	735	695	1.009	0.020	0.760	0.823
Child received measles vaccination	0.832	0.016	735	695	1.131	0.019	0.800	0.864
Child fully immunised	0.694	0.019	735	695	1.067	0.027	0.656	0.732
Height-for-age (-2 SD)	0.299	0.008	3396	3183	0.973	0.028	0.282	0.316
Weight-for-height (-2 SD)	0.071	0.005	3396	3183	1.047	0.069	0.061	0.081
Weight-for-age (-2 SD)	0.221	0.009	3396	3183	1.114	0.039	0.204	0.239
Has heard of HIV/AIDS	0.984	0.002	5691	5691	1.033	0.002	0.980	0.987
Knows condoms reduce HIV/AIDS	0.729	0.008	5691	5691	1.372	0.011	0.713	0.745
Knows limiting partners reduce HIV/AIDS	0.861	0.007	5691	5691	1.484	0.008	0.847	0.875
Total fertility rate (last 3 years)	4.448	0.131	na	15948	1.472	0.029	4.187	4.709
Neonatal mortality (last 5 years)	43.081	4.018	3876	3658	1.098	0.093	35.046	51.116
Post-neonatal mortality (last 5 years)	21.201	2.534	3881	3662	1.081	0.120	16.133	26.270
Infant mortality (last 0-4 years)	64.282	4.421	3881	3662	1.045	0.069	55.441	73.124
Infant mortality (last 5-9 years)	64.984	4.717	3576	3379	1.043	0.073	55.551	74.418
Infant mortality (last 10-14 years)	63.835	4.840	3189	3042	1.002	0.076	54.156	73.514
Child mortality (last 5 years)	50.120	4.197	3963	3732	1.046	0.084	41.727	58.514
Under-five mortality (last 5 years)	111.181	5.926	3968	3736	1.062	0.053	99.330	123.032
HIV prevalence	0.027	0.002	5297	5097	0.987	0.081	0.023	0.031
MEN								
Urban residence	0.449	0.011	5015	5015	1.541	0.024	0.427	0.470
No education	0.176	0.009	5015	5015	1.630	0.050	0.158	0.193
With secondary education or higher	0.664	0.012	5015	5015	1.768	0.018	0.641	0.688
Never married (in union)	0.407	0.008	5015	5015	1.170	0.020	0.391	0.423
Currently married (in union)	0.533	0.008	5015	5015	1.119	0.015	0.517	0.548
Had first sex before age 18	0.247	0.008	3920	3908	1.227	0.034	0.230	0.264
Knowing any contraceptive method	0.996	0.001	2726	2671	0.944	0.001	0.994	0.999
Knowing any modern contraceptive method	0.996	0.001	2726	2671	0.936	0.001	0.994	0.999
Want no more children	0.338	0.010	2726	2671	1.115	0.030	0.317	0.358
Want to delay birth at least 2 years	0.385	0.010	2726	2671	1.095	0.027	0.365	0.406
Ideal number of children	4.836	0.058	4883	4906	1.199	0.012	4.719	4.953
Has heard of HIV/AIDS	0.993	0.002	4517	4529	1.238	0.002	0.990	0.996
Knows condoms reduce HIV/AIDS	0.821	0.007	4517	4529	1.293	0.009	0.807	0.836
Knows limiting partners reduce HIV/AIDS	0.899	0.007	4517	4529	1.479	0.007	0.886	0.913
HIV prevalence (15-49)	0.015	0.002	3859	4047	1.150	0.152	0.010	0.019
HIV prevalence (15-59)	0.016	0.002	4267	4469	1.144	0.136	0.012	0.021

na = Not applicable

Table B.3 Sampling errors for urban sample, Ghana 2003

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
WOMEN								
Urban residence	1.000	0.000	2374	2755	na	0.000	1.000	1.000
No education	0.163	0.014	2374	2755	1.802	0.084	0.136	0.190
With secondary education or higher	0.677	0.017	2374	2755	1.764	0.025	0.643	0.711
Never married (in union)	0.382	0.014	2374	2755	1.356	0.035	0.355	0.409
Currently married (in union)	0.521	0.013	2374	2755	1.315	0.026	0.494	0.548
Had first sex before age 18	0.393	0.015	1833	2126	1.272	0.037	0.364	0.422
Currently pregnant	0.051	0.005	2374	2755	1.132	0.101	0.041	0.061
Children ever born	1.891	0.053	2374	2755	1.134	0.028	1.785	1.996
Children surviving	1.674	0.048	2374	2755	1.177	0.029	1.578	1.770
Children ever born to women 40-49	4.756	0.138	399	458	1.110	0.029	4.480	5.032
Knowing any contraceptive method	0.996	0.002	1246	1436	1.091	0.002	0.992	1.000
Knowing any modern contraceptive method	0.996	0.002	1246	1436	1.091	0.002	0.992	1.000
Ever used any contraceptive method	0.666	0.021	1246	1436	1.563	0.031	0.624	0.708
Currently using any contraceptive method	0.314	0.016	1246	1436	1.205	0.050	0.282	0.346
Currently using a modern method	0.242	0.014	1246	1436	1.115	0.056	0.215	0.269
Currently using pill	0.065	0.008	1246	1436	1.127	0.121	0.050	0.081
Currently using IUD	0.015	0.003	1246	1436	0.942	0.216	0.009	0.022
Currently using condom	0.052	0.008	1246	1436	1.228	0.148	0.037	0.068
Currently using injectables	0.060	0.007	1246	1436	1.048	0.118	0.045	0.074
Currently using periodic abstinence	0.061	0.008	1246	1436	1.136	0.126	0.046	0.076
Currently using withdrawal	0.009	0.003	1246	1436	1.096	0.317	0.003	0.015
Obtained method from public sector source	0.384	0.032	407	476	1.338	0.084	0.319	0.448
Want no more children	0.364	0.015	1246	1436	1.082	0.041	0.335	0.394
Want to delay birth at least 2 years	0.331	0.013	1246	1436	0.973	0.039	0.305	0.357
Ideal number of children	3.884	0.042	2348	2723	1.212	0.011	3.801	3.968
Mothers received tetanus injection for last birth	0.906	0.012	817	946	1.199	0.014	0.882	0.931
Mothers received medical care at delivery	0.797	0.017	1043	1204	1.246	0.022	0.762	0.832
Child had diarrhoea in the last 2 weeks	0.136	0.012	969	1114	1.052	0.090	0.112	0.160
Treated with ORS packets	0.471	0.043	139	152	0.944	0.090	0.386	0.556
Consulted medical personnel	0.355	0.050	139	152	1.136	0.141	0.255	0.455
Child having health card, seen	0.846	0.026	219	248	1.064	0.031	0.794	0.899
Child received BCG vaccination	0.959	0.016	219	248	1.200	0.017	0.927	0.992
Child received DPT vaccination (3 doses)	0.862	0.027	219	248	1.148	0.031	0.808	0.916
Child received polio vaccination (3 doses)	0.828	0.027	219	248	1.042	0.033	0.775	0.882
Child received measles vaccination	0.858	0.026	219	248	1.073	0.030	0.807	0.909
Child fully immunised	0.755	0.032	219	248	1.084	0.042	0.691	0.819
Height-for-age (-2 SD)	0.205	0.015	932	1050	1.062	0.072	0.175	0.235
Weight-for-height (-2 SD)	0.066	0.009	932	1050	1.044	0.133	0.048	0.083
Weight-for-age (-2 SD)	0.154	0.013	932	1050	1.086	0.086	0.128	0.181
Has heard of HIV/AIDS	0.997	0.001	2374	2755	1.127	0.001	0.995	1.000
Knows condoms reduce HIV/AIDS	0.772	0.011	2374	2755	1.238	0.014	0.750	0.793
Knows limiting partners reduce HIV/AIDS	0.893	0.008	2374	2755	1.267	0.009	0.877	0.909
Total fertility rate (last 3 years)	3.120	0.144	na	7674	1.163	0.046	2.833	3.407
Neonatal mortality (last 10 years)	38.116	5.035	2035	2344	1.140	0.132	28.045	48.186
Post-neonatal mortality (last 10 years)	16.506	3.214	2036	2345	1.089	0.195	10.078	22.935
Infant mortality (last 10 years)	54.622	5.621	2036	2345	1.092	0.103	43.380	65.864
Child mortality (last 10 years)	40.275	4.940	2051	2360	1.069	0.123	30.394	50.155
Under-five mortality (last 10 years)	92.697	7.691	2052	2361	1.111	0.083	77.315	108.079
HIV prevalence	0.029	0.003	2183	2466	0.970	0.120	0.022	0.036
MEN								
Urban residence	1.000	0.000	1903	2250	na	0.000	1.000	1.000
No education	0.080	0.014	1903	2250	2.244	0.175	0.052	0.108
With secondary education or higher	0.807	0.019	1903	2250	2.059	0.023	0.770	0.845
Never married (in union)	0.470	0.014	1903	2250	1.246	0.030	0.441	0.498
Currently married (in union)	0.463	0.013	1903	2250	1.112	0.027	0.438	0.489
Had first sex before age 18	0.240	0.014	1482	1746	1.251	0.058	0.212	0.267
Knowing any contraceptive method	0.999	0.001	894	1042	0.854	0.001	0.998	1.000
Knowing any modern contraceptive method	0.999	0.001	894	1042	0.854	0.001	0.998	1.000
Want no more children	0.363	0.016	894	1042	0.965	0.043	0.332	0.394
Want to delay birth at least 2 years	0.341	0.016	894	1042	0.978	0.046	0.310	0.372
Ideal number of children	4.087	0.084	1880	2225	1.493	0.020	3.920	4.254
Has heard of HIV/AIDS	0.997	0.002	1725	2049	1.232	0.002	0.994	1.000
Knows condoms reduce HIV/AIDS	0.840	0.010	1725	2049	1.190	0.012	0.819	0.861
Knows limiting partners reduce HIV/AIDS	0.926	0.011	1725	2049	1.787	0.012	0.904	0.949
HIV prevalence (15-49)	0.015	0.004	1375	1826	1.104	0.242	0.008	0.022
HIV prevalence (15-59)	0.016	0.004	1516	2006	1.102	0.224	0.009	0.023

na = Not applicable

Table B.4 Sampling errors for rural sample, Ghana 2003

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
WOMEN								
Urban residence	0.000	0.000	3317	2936	na	na	0.000	0.000
No education	0.395	0.014	3317	2936	1.604	0.034	0.367	0.422
With secondary education or higher	0.369	0.013	3317	2936	1.556	0.035	0.343	0.395
Never married (in union)	0.192	0.009	3317	2936	1.259	0.045	0.175	0.209
Currently married (in union)	0.720	0.009	3317	2936	1.184	0.013	0.701	0.738
Had first sex before age 18	0.531	0.012	2745	2417	1.303	0.023	0.506	0.556
Currently pregnant	0.095	0.005	3317	2936	0.900	0.048	0.086	0.104
Children ever born	3.135	0.055	3317	2936	1.155	0.017	3.025	3.244
Children surviving	2.723	0.048	3317	2936	1.169	0.018	2.628	2.819
Children ever born to women 40-49	6.058	0.105	674	598	1.110	0.017	5.849	6.267
Knowing any contraceptive method	0.970	0.004	2448	2113	1.086	0.004	0.962	0.977
Knowing any modern contraceptive method	0.966	0.004	2448	2113	1.100	0.004	0.958	0.974
Ever used any contraceptive method	0.476	0.015	2448	2113	1.508	0.032	0.445	0.506
Currently using any contraceptive method	0.209	0.011	2448	2113	1.384	0.054	0.187	0.232
Currently using a modern method	0.149	0.010	2448	2113	1.343	0.065	0.130	0.168
Currently using pill	0.049	0.006	2448	2113	1.391	0.124	0.037	0.061
Currently using IUD	0.005	0.002	2448	2113	1.285	0.372	0.001	0.008
Currently using condom	0.017	0.003	2448	2113	1.091	0.170	0.011	0.022
Currently using injectables	0.051	0.005	2448	2113	1.158	0.101	0.040	0.061
Currently using periodic abstinence	0.044	0.006	2448	2113	1.379	0.130	0.032	0.055
Currently using withdrawal	0.007	0.002	2448	2113	0.984	0.233	0.004	0.011
Obtained method from public sector source	0.444	0.027	422	382	1.128	0.062	0.389	0.498
Want no more children	0.356	0.012	2448	2113	1.197	0.033	0.333	0.380
Want to delay birth at least 2 years	0.405	0.013	2448	2113	1.272	0.031	0.380	0.430
Ideal number of children	4.941	0.058	3225	2856	1.452	0.012	4.825	5.056
Mothers received tetanus injection for last birth	0.794	0.013	1960	1699	1.373	0.016	0.769	0.820
Mothers received medical care at delivery	0.309	0.015	2801	2435	1.466	0.048	0.280	0.339
Child had diarrhoea in the last 2 weeks	0.161	0.009	2561	2225	1.111	0.053	0.144	0.178
Treated with ORS packets	0.350	0.025	443	357	0.987	0.071	0.300	0.400
Consulted medical personnel	0.209	0.028	443	357	1.278	0.133	0.153	0.265
Child having health card, seen	0.820	0.017	516	447	0.976	0.020	0.787	0.854
Child received BCG vaccination	0.885	0.016	516	447	1.103	0.018	0.852	0.918
Child received DPT vaccination (3 doses)	0.758	0.020	516	447	1.045	0.027	0.717	0.798
Child received polio vaccination (3 doses)	0.771	0.019	516	447	1.030	0.025	0.733	0.810
Child received measles vaccination	0.818	0.021	516	447	1.198	0.025	0.776	0.859
Child fully immunised	0.660	0.024	516	447	1.109	0.036	0.612	0.708
Height-for-age (-2 SD)	0.345	0.010	2464	2132	0.954	0.029	0.325	0.365
Weight-for-height (-2 SD)	0.074	0.006	2464	2132	1.065	0.080	0.062	0.086
Weight-for-age (-2 SD)	0.254	0.011	2464	2132	1.145	0.043	0.232	0.276
Has heard of HIV/AIDS	0.971	0.003	3317	2936	1.071	0.003	0.964	0.977
Knows condoms reduce HIV/AIDS	0.689	0.011	3317	2936	1.415	0.017	0.666	0.712
Knows limiting partners reduce HIV/AIDS	0.831	0.010	3317	2936	1.594	0.012	0.810	0.852
Total fertility rate (last 3 years)	5.646	0.161	na	8274	1.393	0.029	5.324	5.969
Neonatal mortality (last 10 years)	42.501	3.399	5404	4683	1.082	0.080	35.702	49.300
Post-neonatal mortality (last 10 years)	27.198	2.517	5416	4692	1.073	0.093	22.164	32.231
Infant mortality (last 10 years)	69.698	4.170	5416	4692	1.087	0.060	61.359	78.038
Child mortality (last 10 years)	52.222	4.439	5459	4721	1.197	0.085	43.344	61.101
Under-five mortality (last 10 years)	118.281	5.817	5471	4730	1.151	0.049	106.647	129.915
HIV prevalence	0.025	0.003	3114	2630	0.980	0.109	0.020	0.031
MEN								
Urban residence	0.000	0.000	3112	2765	na	na	0.000	0.000
No education	0.254	0.012	3112	2765	1.531	0.047	0.230	0.278
With secondary education or higher	0.548	0.015	3112	2765	1.724	0.028	0.517	0.578
Never married (in union)	0.356	0.009	3112	2765	1.041	0.025	0.338	0.374
Currently married (in union)	0.589	0.009	3112	2765	1.071	0.016	0.570	0.608
Had first sex before age 18	0.253	0.010	2438	2162	1.171	0.041	0.233	0.274
Knowing any contraceptive method	0.995	0.002	1832	1629	0.991	0.002	0.991	0.998
Knowing any modern contraceptive method	0.995	0.002	1832	1629	0.981	0.002	0.991	0.998
Want no more children	0.321	0.013	1832	1629	1.206	0.041	0.295	0.348
Want to delay birth at least 2 years	0.414	0.013	1832	1629	1.169	0.033	0.387	0.441
Ideal number of children	5.458	0.084	3003	2681	1.170	0.015	5.290	5.626
Has heard of HIV/AIDS	0.989	0.003	2792	2480	1.293	0.003	0.984	0.994
Knows condoms reduce HIV/AIDS	0.806	0.010	2792	2480	1.380	0.013	0.785	0.826
Knows limiting partners reduce HIV/AIDS	0.877	0.008	2792	2480	1.309	0.009	0.861	0.893
HIV prevalence (15-49)	0.014	0.003	2484	2222	1.152	0.192	0.009	0.020
HIV prevalence (15-59)	0.017	0.003	2751	2463	1.151	0.169	0.011	0.022

na = Not applicable

Table B.5 Sampling errors for Western sample, Ghana 2003

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
WOMEN								
Urban residence	0.398	0.031	524	553	1.447	0.078	0.336	0.460
No education	0.223	0.025	524	553	1.374	0.112	0.173	0.273
With secondary education or higher	0.532	0.040	524	553	1.836	0.075	0.452	0.612
Never married (in union)	0.298	0.024	524	553	1.209	0.081	0.250	0.346
Currently married (in union)	0.576	0.027	524	553	1.239	0.047	0.522	0.629
Had first sex before age 18	0.509	0.043	412	431	1.732	0.084	0.424	0.594
Currently pregnant	0.071	0.012	524	553	1.082	0.171	0.047	0.095
Children ever born	2.596	0.149	524	553	1.286	0.058	2.297	2.895
Children surviving	2.257	0.146	524	553	1.461	0.065	1.966	2.548
Children ever born to women 40-49	5.510	0.213	96	102	0.841	0.039	5.084	5.936
Knowing any contraceptive method	0.995	0.005	308	319	1.195	0.005	0.986	1.000
Knowing any modern contraceptive method	0.995	0.005	308	319	1.195	0.005	0.986	1.000
Ever used any contraceptive method	0.619	0.029	308	319	1.048	0.047	0.561	0.677
Currently using any contraceptive method	0.282	0.026	308	319	0.996	0.091	0.231	0.334
Currently using a modern method	0.177	0.016	308	319	0.713	0.088	0.146	0.208
Currently using pill	0.043	0.012	308	319	1.021	0.275	0.019	0.066
Currently using IUD	0.010	0.006	308	319	1.066	0.611	0.000	0.022
Currently using condom	0.031	0.011	308	319	1.066	0.340	0.010	0.052
Currently using injectables	0.037	0.013	308	319	1.225	0.355	0.011	0.064
Currently using periodic abstinence	0.073	0.017	308	319	1.123	0.228	0.040	0.107
Currently using withdrawal	0.023	0.008	308	319	0.928	0.343	0.007	0.039
Obtained method from public sector source	0.295	0.057	76	78	1.080	0.193	0.181	0.409
Want no more children	0.376	0.032	308	319	1.146	0.084	0.312	0.439
Want to delay birth at least 2 years	0.341	0.037	308	319	1.386	0.110	0.266	0.416
Ideal number of children	4.239	0.105	517	547	1.542	0.025	4.029	4.449
Mothers received tetanus injection for last birth	0.884	0.027	237	246	1.277	0.030	0.830	0.938
Mothers received medical care at delivery	0.386	0.037	352	367	1.233	0.096	0.312	0.460
Child had diarrhoea in the last 2 weeks	0.144	0.013	319	332	0.676	0.093	0.117	0.171
Treated with ORS packets	0.370	0.064	46	48	0.919	0.174	0.242	0.499
Consulted medical personnel	0.272	0.060	46	48	0.902	0.221	0.152	0.393
Child having health card, seen	0.874	0.036	60	59	0.804	0.041	0.801	0.946
Child received BCG vaccination	0.925	0.037	60	59	1.054	0.040	0.851	1.000
Child received DPT vaccination (3 doses)	0.789	0.064	60	59	1.161	0.082	0.660	0.917
Child received polio vaccination (3 doses)	0.837	0.057	60	59	1.134	0.068	0.723	0.950
Child received measles vaccination	0.764	0.050	60	59	0.869	0.066	0.664	0.864
Child fully immunised	0.604	0.070	60	59	1.036	0.116	0.464	0.744
Height-for-age (-2 SD)	0.284	0.020	323	333	0.749	0.071	0.244	0.324
Weight-for-height (-2 SD)	0.053	0.013	323	333	0.896	0.237	0.028	0.078
Weight-for-age (-2 SD)	0.165	0.026	323	333	1.162	0.160	0.112	0.218
Has heard of HIV/AIDS	0.997	0.002	524	553	0.977	0.002	0.992	1.000
Knows condoms reduce HIV/AIDS	0.772	0.023	524	553	1.244	0.030	0.726	0.817
Knows limiting partners reduce HIV/AIDS	0.917	0.014	524	553	1.164	0.015	0.889	0.945
Total fertility rate (last 3 years)	4.478	0.487	na	1545	1.511	0.109	3.504	5.453
Neonatal mortality (last 10 years)	36.712	8.774	654	680	1.054	0.239	19.164	54.261
Post-neonatal mortality (last 10 years)	29.750	7.538	655	681	1.036	0.253	14.674	44.826
Infant mortality (last 10 years)	66.462	11.217	655	681	1.063	0.169	44.028	88.896
Child mortality (last 10 years)	46.025	7.883	657	683	0.919	0.171	30.259	61.791
Under-five mortality (last 10 years)	109.428	15.169	658	684	1.124	0.139	79.091	139.766
HIV prevalence	0.039	0.007	509	497	0.866	0.192	0.024	0.053
MEN								
Urban residence	0.381	0.025	457	476	1.087	0.065	0.331	0.430
No education	0.073	0.020	457	476	1.640	0.273	0.033	0.114
With secondary education or higher	0.724	0.036	457	476	1.732	0.050	0.652	0.797
Never married (in union)	0.385	0.026	457	476	1.140	0.067	0.333	0.437
Currently married (in union)	0.537	0.025	457	476	1.077	0.047	0.487	0.587
Had first sex before age 18	0.304	0.030	359	368	1.215	0.097	0.245	0.363
Knowing any contraceptive method	0.996	0.004	248	255	1.025	0.004	0.987	1.000
Knowing any modern contraceptive method	0.996	0.004	248	255	1.025	0.004	0.987	1.000
Want no more children	0.424	0.036	248	255	1.139	0.084	0.352	0.495
Want to delay birth at least 2 years	0.350	0.043	248	255	1.430	0.124	0.264	0.437
Ideal number of children	4.280	0.124	455	474	1.166	0.029	4.032	4.529
Has heard of HIV/AIDS	0.995	0.004	419	435	1.076	0.004	0.987	1.000
Knows condoms reduce HIV/AIDS	0.831	0.025	419	435	1.372	0.030	0.781	0.881
Knows limiting partners reduce HIV/AIDS	0.939	0.015	419	435	1.304	0.016	0.908	0.969
HIV prevalence (15-49)	0.018	0.008	357	382	1.126	0.443	0.002	0.034
HIV prevalence (15-59)	0.016	0.007	392	421	1.119	0.442	0.002	0.030

na = Not applicable

Table B.6 Sampling errors for Central sample, Ghana 2003

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
WOMEN								
Urban residence	0.384	0.048	352	431	1.850	0.125	0.288	0.480
No education	0.252	0.037	352	431	1.602	0.147	0.178	0.326
With secondary education or higher	0.467	0.037	352	431	1.374	0.078	0.394	0.541
Never married (in union)	0.248	0.034	352	431	1.467	0.136	0.180	0.315
Currently married (in union)	0.637	0.031	352	431	1.192	0.048	0.575	0.698
Had first sex before age 18	0.571	0.029	277	338	0.963	0.050	0.514	0.628
Currently pregnant	0.083	0.017	352	431	1.132	0.200	0.050	0.117
Children ever born	2.718	0.210	352	431	1.432	0.077	2.299	3.138
Children surviving	2.393	0.164	352	431	1.299	0.068	2.065	2.720
Children ever born to women 40-49	6.484	0.337	68	76	1.123	0.052	5.811	7.157
Knowing any contraceptive method	1.000	0.000	220	274	na	0.000	1.000	1.000
Knowing any modern contraceptive method	1.000	0.000	220	274	na	0.000	1.000	1.000
Ever used any contraceptive method	0.442	0.037	220	274	1.108	0.084	0.368	0.516
Currently using any contraceptive method	0.152	0.026	220	274	1.070	0.171	0.100	0.203
Currently using a modern method	0.132	0.026	220	274	1.155	0.200	0.079	0.185
Currently using pill	0.023	0.010	220	274	0.949	0.420	0.004	0.042
Currently using IUD	0.000	0.000	220	274	na	na	0.000	0.000
Currently using condom	0.030	0.011	220	274	0.970	0.373	0.008	0.052
Currently using injectables	0.058	0.014	220	274	0.890	0.243	0.030	0.086
Currently using periodic abstinence	0.009	0.007	220	274	1.020	0.710	0.000	0.023
Currently using withdrawal	0.010	0.007	220	274	1.038	0.691	0.000	0.024
Obtained method from public sector source	0.477	0.090	50	55	1.258	0.188	0.298	0.657
Want no more children	0.437	0.045	220	274	1.341	0.103	0.347	0.527
Want to delay birth at least 2 years	0.389	0.045	220	274	1.370	0.116	0.299	0.479
Ideal number of children	3.882	0.079	350	428	1.255	0.020	3.723	4.040
Mothers received tetanus injection for last birth	0.876	0.037	168	211	1.476	0.042	0.802	0.950
Mothers received medical care at delivery	0.384	0.057	241	304	1.468	0.148	0.271	0.497
Child had diarrhoea in the last 2 weeks	0.159	0.017	221	280	0.724	0.108	0.125	0.193
Treated with ORS packets	0.452	0.068	36	45	0.823	0.150	0.317	0.588
Consulted medical personnel	0.238	0.067	36	45	0.950	0.282	0.104	0.373
Child having health card, seen	0.840	0.042	52	68	0.851	0.050	0.755	0.924
Child received BCG vaccination	0.952	0.028	52	68	0.967	0.029	0.896	1.000
Child received DPT vaccination (3 doses)	0.879	0.032	52	68	0.739	0.037	0.815	0.944
Child received polio vaccination (3 doses)	0.890	0.032	52	68	0.758	0.036	0.826	0.954
Child received measles vaccination	0.865	0.048	52	68	1.046	0.056	0.768	0.961
Child fully immunised	0.821	0.045	52	68	0.874	0.055	0.730	0.911
Height-for-age (-2 SD)	0.316	0.024	223	284	0.782	0.077	0.267	0.364
Weight-for-height (-2 SD)	0.030	0.010	223	284	0.864	0.323	0.011	0.049
Weight-for-age (-2 SD)	0.220	0.031	223	284	1.075	0.141	0.158	0.282
Has heard of HIV/AIDS	1.000	0.000	352	431	na	0.000	1.000	1.000
Knows condoms reduce HIV/AIDS	0.792	0.029	352	431	1.321	0.036	0.735	0.849
Knows limiting partners reduce HIV/AIDS	0.945	0.010	352	431	0.836	0.011	0.925	0.966
Total fertility rate (last 3 years)	4.966	0.514	na	1180	1.417	0.103	3.939	5.994
Neonatal mortality (last 10 years)	36.828	9.258	465	584	1.040	0.251	18.313	55.344
Post-neonatal mortality (last 10 years)	13.439	4.961	465	584	0.956	0.369	3.518	23.361
Infant mortality (last 10 years)	50.268	11.146	465	584	1.068	0.222	27.976	72.559
Child mortality (last 10 years)	41.469	11.127	469	587	1.188	0.268	19.215	63.723
Under-five mortality (last 10 years)	89.652	14.607	469	587	1.149	0.163	60.438	118.866
HIV prevalence	0.017	0.006	340	386	0.807	0.332	0.006	0.028
MEN								
Urban residence	0.283	0.036	300	370	1.363	0.125	0.212	0.354
No education	0.093	0.020	300	370	1.212	0.218	0.053	0.134
With secondary education or higher	0.701	0.035	300	370	1.310	0.049	0.631	0.770
Never married (in union)	0.432	0.033	300	370	1.161	0.077	0.365	0.498
Currently married (in union)	0.527	0.033	300	370	1.156	0.063	0.461	0.594
Had first sex before age 18	0.327	0.027	221	271	0.863	0.083	0.273	0.382
Knowing any contraceptive method	1.000	0.000	157	195	na	0.000	1.000	1.000
Knowing any modern contraceptive method	1.000	0.000	157	195	na	0.000	1.000	1.000
Want no more children	0.456	0.041	157	195	1.026	0.090	0.374	0.538
Want to delay birth at least 2 years	0.277	0.040	157	195	1.107	0.143	0.197	0.356
Ideal number of children	4.132	0.090	288	355	0.890	0.022	3.951	4.312
Has heard of HIV/AIDS	0.994	0.006	263	327	1.186	0.006	0.983	1.000
Knows condoms reduce HIV/AIDS	0.799	0.031	263	327	1.250	0.039	0.737	0.861
Knows limiting partners reduce HIV/AIDS	0.881	0.022	263	327	1.094	0.025	0.838	0.925
HIV prevalence (15-49)	0.003	0.003	252	294	0.929	1.009	0.000	0.010
HIV prevalence (15-59)	0.015	0.007	287	333	0.982	0.470	0.001	0.029

na = Not applicable

Table B.7 Sampling errors for Greater Accra sample, Ghana 2003

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
WOMEN								
Urban residence	0.897	0.014	835	942	1.293	0.015	0.869	0.924
No education	0.124	0.015	835	942	1.317	0.121	0.094	0.154
With secondary education or higher	0.712	0.025	835	942	1.574	0.035	0.663	0.761
Never married (in union)	0.400	0.023	835	942	1.340	0.057	0.355	0.445
Currently married (in union)	0.505	0.022	835	942	1.273	0.044	0.461	0.549
Had first sex before age 18	0.358	0.022	657	739	1.199	0.063	0.313	0.403
Currently pregnant	0.040	0.006	835	942	0.899	0.153	0.028	0.052
Children ever born	1.713	0.081	835	942	1.128	0.047	1.551	1.874
Children surviving	1.506	0.075	835	942	1.206	0.050	1.356	1.656
Children ever born to women 40-49	3.921	0.226	151	171	1.152	0.058	3.468	4.374
Knowing any contraceptive method	0.994	0.005	415	476	1.191	0.005	0.985	1.000
Knowing any modern contraceptive method	0.994	0.005	415	476	1.191	0.005	0.985	1.000
Ever used any contraceptive method	0.709	0.034	415	476	1.524	0.048	0.641	0.777
Currently using any contraceptive method	0.340	0.029	415	476	1.253	0.086	0.281	0.398
Currently using a modern method	0.260	0.025	415	476	1.164	0.097	0.210	0.310
Currently using pill	0.052	0.015	415	476	1.344	0.282	0.023	0.082
Currently using IUD	0.013	0.006	415	476	1.033	0.448	0.001	0.024
Currently using condom	0.064	0.015	415	476	1.284	0.240	0.033	0.095
Currently using injectables	0.068	0.011	415	476	0.872	0.159	0.046	0.089
Currently using periodic abstinence	0.060	0.014	415	476	1.184	0.230	0.033	0.088
Currently using withdrawal	0.016	0.007	415	476	1.107	0.429	0.002	0.029
Obtained method from public sector source	0.321	0.050	138	167	1.260	0.156	0.221	0.422
Want no more children	0.457	0.025	415	476	1.001	0.054	0.408	0.506
Want to delay birth at least 2 years	0.242	0.024	415	476	1.148	0.100	0.193	0.290
Ideal number of children	3.519	0.050	822	927	1.031	0.014	3.418	3.620
Mothers received tetanus injection for last birth	0.851	0.023	264	303	1.044	0.027	0.805	0.896
Mothers received medical care at delivery	0.814	0.030	339	390	1.180	0.037	0.754	0.873
Child had diarrhoea in the last 2 weeks	0.128	0.022	317	366	1.084	0.169	0.085	0.172
Treated with ORS packets	0.287	0.066	40	47	0.930	0.230	0.155	0.419
Consulted medical personnel	0.155	0.072	40	47	1.107	0.466	0.011	0.300
Child having health card, seen	0.826	0.050	67	75	1.081	0.061	0.725	0.927
Child received BCG vaccination	0.910	0.045	67	75	1.112	0.049	0.821	1.000
Child received DPT vaccination (3 doses)	0.787	0.067	67	75	1.321	0.085	0.654	0.920
Child received polio vaccination (3 doses)	0.774	0.061	67	75	1.192	0.079	0.652	0.897
Child received measles vaccination	0.878	0.047	67	75	1.159	0.053	0.785	0.971
Child fully immunised	0.691	0.076	67	75	1.300	0.110	0.538	0.843
Height-for-age (-2 SD)	0.139	0.017	308	337	0.850	0.119	0.106	0.173
Weight-for-height (-2 SD)	0.072	0.014	308	337	0.926	0.198	0.044	0.101
Weight-for-age (-2 SD)	0.115	0.020	308	337	1.106	0.176	0.075	0.156
Has heard of HIV/AIDS	0.994	0.003	835	942	1.172	0.003	0.988	1.000
Knows condoms reduce HIV/AIDS	0.734	0.016	835	942	1.040	0.022	0.702	0.766
Knows limiting partners reduce HIV/AIDS	0.816	0.017	835	942	1.292	0.021	0.782	0.851
Total fertility rate (last 3 years)	2.907	0.237	na	2658	1.161	0.082	2.433	3.382
Neonatal mortality (last 10 years)	28.957	7.403	644	726	1.094	0.256	14.150	43.764
Post-neonatal mortality (last 10 years)	15.949	5.725	646	728	1.093	0.359	4.499	27.399
Infant mortality (last 10 years)	44.906	9.769	646	728	1.161	0.218	25.369	64.443
Child mortality (last 10 years)	31.203	8.518	645	727	1.176	0.273	14.166	48.239
Under-five mortality (last 10 years)	74.707	13.228	647	729	1.222	0.177	48.252	101.163
HIV prevalence	0.026	0.007	768	842	1.203	0.265	0.012	0.040
MEN								
Urban residence	0.895	0.017	621	733	1.367	0.019	0.861	0.929
No education	0.058	0.013	621	733	1.335	0.215	0.033	0.084
With secondary education or higher	0.863	0.022	621	733	1.602	0.026	0.819	0.907
Never married (in union)	0.461	0.021	621	733	1.034	0.045	0.419	0.502
Currently married (in union)	0.471	0.020	621	733	1.001	0.043	0.430	0.511
Had first sex before age 18	0.301	0.023	526	623	1.142	0.076	0.255	0.347
Knowing any contraceptive method	1.000	0.000	286	345	na	0.000	1.000	1.000
Knowing any modern contraceptive method	1.000	0.000	286	345	na	0.000	1.000	1.000
Want no more children	0.461	0.028	286	345	0.938	0.060	0.405	0.516
Want to delay birth at least 2 years	0.227	0.024	286	345	0.965	0.106	0.179	0.275
Ideal number of children	3.431	0.057	618	728	1.006	0.017	3.317	3.545
Has heard of HIV/AIDS	1.000	0.000	560	664	na	0.000	1.000	1.000
Knows condoms reduce HIV/AIDS	0.845	0.019	560	664	1.234	0.022	0.807	0.882
Knows limiting partners reduce HIV/AIDS	0.924	0.017	560	664	1.527	0.019	0.890	0.958
HIV prevalence (15-49)	0.016	0.007	425	585	1.222	0.464	0.001	0.031
HIV prevalence (15-59)	0.017	0.007	470	645	1.192	0.419	0.003	0.031

na = Not applicable

Table B.8 Sampling errors for Volta sample, Ghana 2003

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
WOMEN								
Urban residence	0.294	0.035	442	492	1.628	0.120	0.224	0.365
No education	0.207	0.031	442	492	1.630	0.152	0.144	0.270
With secondary education or higher	0.520	0.029	442	492	1.234	0.056	0.462	0.579
Never married (in union)	0.295	0.028	442	492	1.280	0.094	0.240	0.351
Currently married (in union)	0.617	0.032	442	492	1.378	0.052	0.553	0.681
Had first sex before age 18	0.538	0.029	362	404	1.102	0.054	0.481	0.596
Currently pregnant	0.069	0.009	442	492	0.728	0.128	0.051	0.086
Children ever born	2.562	0.131	442	492	1.073	0.051	2.299	2.825
Children surviving	2.211	0.109	442	492	1.020	0.049	1.994	2.428
Children ever born to women 40-49	5.279	0.220	98	108	0.872	0.042	4.839	5.719
Knowing any contraceptive method	0.989	0.006	278	304	1.035	0.006	0.977	1.000
Knowing any modern contraceptive method	0.989	0.006	278	304	1.035	0.006	0.977	1.000
Ever used any contraceptive method	0.647	0.048	278	304	1.657	0.073	0.552	0.743
Currently using any contraceptive method	0.236	0.026	278	304	1.010	0.109	0.184	0.287
Currently using a modern method	0.193	0.029	278	304	1.244	0.153	0.134	0.252
Currently using pill	0.036	0.011	278	304	0.987	0.305	0.014	0.059
Currently using IUD	0.002	0.002	278	304	0.714	1.011	0.000	0.005
Currently using condom	0.037	0.013	278	304	1.109	0.338	0.012	0.063
Currently using injectables	0.099	0.022	278	304	1.223	0.222	0.055	0.143
Currently using periodic abstinence	0.041	0.014	278	304	1.198	0.350	0.012	0.069
Currently using withdrawal	0.000	0.000	278	304	na	na	0.000	0.000
Obtained method from public sector source	0.534	0.065	73	80	1.111	0.122	0.404	0.665
Want no more children	0.456	0.032	278	304	1.073	0.070	0.392	0.520
Want to delay birth at least 2 years	0.290	0.026	278	304	0.968	0.091	0.237	0.343
Ideal number of children	3.756	0.068	433	483	0.888	0.018	3.620	3.892
Mothers received tetanus injection for last birth	0.816	0.031	202	220	1.125	0.038	0.754	0.878
Mothers received medical care at delivery	0.450	0.049	274	298	1.421	0.109	0.352	0.549
Child had diarrhoea in the last 2 weeks	0.133	0.018	248	269	0.844	0.137	0.096	0.170
Treated with ORS packets	0.365	0.100	36	36	1.179	0.275	0.164	0.565
Consulted medical personnel	0.098	0.066	36	36	1.260	0.674	0.000	0.230
Child having health card, seen	0.855	0.054	64	66	1.192	0.064	0.747	0.964
Child received BCG vaccination	0.912	0.044	64	66	1.197	0.048	0.824	1.000
Child received DPT vaccination (3 doses)	0.893	0.042	64	66	1.046	0.047	0.809	0.977
Child received polio vaccination (3 doses)	0.903	0.040	64	66	1.048	0.045	0.822	0.983
Child received measles vaccination	0.894	0.046	64	66	1.154	0.052	0.802	0.986
Child fully immunised	0.823	0.050	64	66	1.005	0.061	0.723	0.922
Height-for-age (-2 SD)	0.233	0.020	244	259	0.637	0.084	0.193	0.272
Weight-for-height (-2 SD)	0.139	0.032	244	259	1.336	0.228	0.075	0.202
Weight-for-age (-2 SD)	0.257	0.030	244	259	1.017	0.118	0.196	0.317
Has heard of HIV/AIDS	0.999	0.001	442	492	0.798	0.001	0.996	1.000
Knows condoms reduce HIV/AIDS	0.702	0.038	442	492	1.735	0.054	0.626	0.777
Knows limiting partners reduce HIV/AIDS	0.829	0.035	442	492	1.957	0.042	0.759	0.899
Total fertility rate (last 3 years)	4.429	0.413	na	1369	1.308	0.093	3.603	5.255
Neonatal mortality (last 10 years)	44.111	10.384	519	573	1.132	0.235	23.343	64.880
Post-neonatal mortality (last 10 years)	31.368	8.282	519	573	1.040	0.264	14.804	47.932
Infant mortality (last 10 years)	75.479	11.969	519	573	0.996	0.159	51.542	99.417
Child mortality (last 10 years)	40.899	9.082	522	576	0.977	0.222	22.736	59.062
Under-five mortality (last 10 years)	113.291	12.642	522	576	0.901	0.112	88.008	138.575
HIV prevalence	0.017	0.006	425	440	0.919	0.337	0.006	0.029
MEN								
Urban residence	0.280	0.045	386	440	1.982	0.162	0.189	0.370
No education	0.079	0.020	386	440	1.457	0.254	0.039	0.119
With secondary education or higher	0.725	0.035	386	440	1.516	0.048	0.655	0.794
Never married (in union)	0.447	0.032	386	440	1.262	0.072	0.383	0.511
Currently married (in union)	0.515	0.030	386	440	1.158	0.057	0.456	0.574
Had first sex before age 18	0.277	0.022	301	339	0.832	0.078	0.234	0.320
Knowing any contraceptive method	1.000	0.000	205	227	na	0.000	1.000	1.000
Knowing any modern contraceptive method	1.000	0.000	205	227	na	0.000	1.000	1.000
Want no more children	0.388	0.043	205	227	1.258	0.111	0.302	0.474
Want to delay birth at least 2 years	0.365	0.036	205	227	1.070	0.099	0.293	0.438
Ideal number of children	4.387	0.172	382	435	1.430	0.039	4.043	4.731
Has heard of HIV/AIDS	1.000	0.000	339	389	na	0.000	1.000	1.000
Knows condoms reduce HIV/AIDS	0.893	0.030	339	389	1.783	0.034	0.833	0.953
Knows limiting partners reduce HIV/AIDS	0.936	0.019	339	389	1.463	0.021	0.897	0.975
HIV prevalence (15-49)	0.003	0.003	299	346	0.976	0.979	0.000	0.010
HIV prevalence (15-59)	0.008	0.006	338	390	1.189	0.701	0.000	0.020

na = Not applicable

Table B.9 Sampling errors for Eastern sample, Ghana 2003

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
WOMEN								
Urban residence	0.401	0.031	506	601	1.444	0.079	0.338	0.464
No education	0.159	0.023	506	601	1.392	0.142	0.114	0.205
With secondary education or higher	0.606	0.026	506	601	1.195	0.043	0.554	0.658
Never married (in union)	0.282	0.027	506	601	1.339	0.095	0.228	0.335
Currently married (in union)	0.590	0.021	506	601	0.959	0.036	0.548	0.632
Had first sex before age 18	0.435	0.028	414	493	1.129	0.063	0.380	0.490
Currently pregnant	0.073	0.011	506	601	0.989	0.157	0.050	0.096
Children ever born	2.629	0.125	506	601	1.054	0.048	2.378	2.880
Children surviving	2.378	0.119	506	601	1.112	0.050	2.140	2.616
Children ever born to women 40-49	5.799	0.286	98	116	1.167	0.049	5.227	6.372
Knowing any contraceptive method	0.990	0.006	302	354	1.037	0.006	0.977	1.000
Knowing any modern contraceptive method	0.990	0.006	302	354	1.037	0.006	0.977	1.000
Ever used any contraceptive method	0.578	0.031	302	354	1.091	0.054	0.516	0.640
Currently using any contraceptive method	0.271	0.030	302	354	1.166	0.110	0.211	0.330
Currently using a modern method	0.215	0.027	302	354	1.157	0.127	0.160	0.270
Currently using pill	0.077	0.017	302	354	1.092	0.219	0.043	0.110
Currently using IUD	0.007	0.005	302	354	1.018	0.717	0.000	0.016
Currently using condom	0.035	0.010	302	354	0.940	0.284	0.015	0.055
Currently using injectables	0.042	0.011	302	354	0.917	0.254	0.020	0.063
Currently using periodic abstinence	0.046	0.014	302	354	1.135	0.299	0.018	0.073
Currently using withdrawal	0.010	0.006	302	354	1.008	0.570	0.000	0.022
Obtained method from public sector source	0.352	0.035	82	99	0.651	0.098	0.283	0.421
Want no more children	0.467	0.033	302	354	1.131	0.070	0.401	0.532
Want to delay birth at least 2 years	0.303	0.025	302	354	0.946	0.083	0.253	0.353
Ideal number of children	3.969	0.071	500	593	1.108	0.018	3.827	4.111
Mothers received tetanus injection for last birth	0.783	0.035	228	266	1.272	0.045	0.713	0.853
Mothers received medical care at delivery	0.465	0.037	316	362	1.129	0.080	0.391	0.540
Child had diarrhoea in the last 2 weeks	0.157	0.026	294	337	1.125	0.167	0.105	0.210
Treated with ORS packets	0.326	0.061	47	53	0.760	0.189	0.203	0.449
Consulted medical personnel	0.170	0.091	47	53	1.501	0.532	0.000	0.351
Child having health card, seen	0.848	0.046	65	77	1.029	0.054	0.756	0.940
Child received BCG vaccination	0.888	0.040	65	77	1.024	0.045	0.807	0.968
Child received DPT vaccination (3 doses)	0.770	0.054	65	77	1.027	0.071	0.661	0.878
Child received polio vaccination (3 doses)	0.731	0.049	65	77	0.875	0.067	0.633	0.829
Child received measles vaccination	0.791	0.060	65	77	1.184	0.076	0.671	0.912
Child fully immunised	0.656	0.067	65	77	1.121	0.103	0.521	0.790
Height-for-age (-2 SD)	0.274	0.026	300	333	0.964	0.097	0.221	0.327
Weight-for-height (-2 SD)	0.062	0.012	300	333	0.883	0.196	0.038	0.086
Weight-for-age (-2 SD)	0.173	0.026	300	333	1.115	0.150	0.121	0.225
Has heard of HIV/AIDS	0.991	0.006	506	601	1.330	0.006	0.980	1.000
Knows condoms reduce HIV/AIDS	0.781	0.020	506	601	1.071	0.025	0.742	0.821
Knows limiting partners reduce HIV/AIDS	0.926	0.011	506	601	0.962	0.012	0.904	0.949
Total fertility rate (last 3 years)	4.250	0.359	na	1700	1.306	0.084	3.533	4.968
Neonatal mortality (last 10 years)	41.509	7.989	646	744	0.886	0.192	25.532	57.486
Post-neonatal mortality (last 10 years)	22.472	5.844	646	744	0.963	0.260	10.784	34.159
Infant mortality (last 10 years)	63.980	10.390	646	744	0.985	0.162	43.201	84.759
Child mortality (last 10 years)	32.894	8.153	651	751	1.029	0.248	16.588	49.201
Under-five mortality (last 10 years)	94.770	12.973	651	751	1.085	0.137	68.824	120.717
HIV prevalence	0.044	0.009	448	535	0.886	0.196	0.027	0.061
MEN								
Urban residence	0.379	0.021	453	539	0.919	0.055	0.337	0.421
No education	0.079	0.012	453	539	0.984	0.158	0.054	0.104
With secondary education or higher	0.748	0.028	453	539	1.358	0.037	0.692	0.803
Never married (in union)	0.375	0.017	453	539	0.755	0.046	0.341	0.410
Currently married (in union)	0.568	0.021	453	539	0.884	0.036	0.527	0.609
Had first sex before age 18	0.258	0.031	362	428	1.336	0.119	0.196	0.319
Knowing any contraceptive method	0.998	0.002	262	306	0.692	0.002	0.995	1.000
Knowing any modern contraceptive method	0.998	0.002	262	306	0.692	0.002	0.995	1.000
Want no more children	0.426	0.033	262	306	1.069	0.077	0.361	0.492
Want to delay birth at least 2 years	0.298	0.032	262	306	1.136	0.108	0.234	0.362
Ideal number of children	4.327	0.134	446	530	1.290	0.031	4.059	4.596
Has heard of HIV/AIDS	0.993	0.003	406	484	0.726	0.003	0.986	0.999
Knows condoms reduce HIV/AIDS	0.919	0.015	406	484	1.125	0.017	0.888	0.949
Knows limiting partners reduce HIV/AIDS	0.957	0.007	406	484	0.741	0.008	0.943	0.972
HIV prevalence (15-49)	0.029	0.010	313	437	1.021	0.331	0.010	0.049
HIV prevalence (15-59)	0.031	0.010	342	476	1.030	0.314	0.011	0.050

na = Not applicable

Table B.10 Sampling errors for Ashanti sample, Ghana 2003

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
WOMEN								
Urban residence	0.584	0.033	927	1142	2.065	0.057	0.517	0.651
No education	0.168	0.018	927	1142	1.479	0.108	0.131	0.204
With secondary education or higher	0.642	0.025	927	1142	1.577	0.039	0.593	0.692
Never married (in union)	0.326	0.019	927	1142	1.250	0.059	0.287	0.364
Currently married (in union)	0.563	0.020	927	1142	1.216	0.035	0.523	0.603
Had first sex before age 18	0.455	0.025	729	887	1.335	0.054	0.405	0.504
Currently pregnant	0.076	0.009	927	1142	1.008	0.116	0.058	0.093
Children ever born	2.523	0.093	927	1142	1.065	0.037	2.337	2.708
Children surviving	2.231	0.086	927	1142	1.116	0.038	2.059	2.402
Children ever born to women 40-49	5.685	0.178	171	206	0.925	0.031	5.329	6.041
Knowing any contraceptive method	0.990	0.005	539	643	1.197	0.005	0.979	1.000
Knowing any modern contraceptive method	0.988	0.005	539	643	1.168	0.005	0.978	0.999
Ever used any contraceptive method	0.626	0.032	539	643	1.523	0.051	0.562	0.689
Currently using any contraceptive method	0.297	0.025	539	643	1.282	0.085	0.247	0.348
Currently using a modern method	0.210	0.023	539	643	1.316	0.110	0.163	0.256
Currently using pill	0.087	0.016	539	643	1.303	0.182	0.056	0.119
Currently using IUD	0.016	0.005	539	643	1.015	0.347	0.005	0.026
Currently using condom	0.028	0.009	539	643	1.227	0.313	0.010	0.045
Currently using injectables	0.028	0.007	539	643	0.939	0.238	0.015	0.041
Currently using periodic abstinence	0.080	0.016	539	643	1.386	0.203	0.047	0.112
Currently using withdrawal	0.004	0.003	539	643	1.079	0.740	0.000	0.010
Obtained method from public sector source	0.359	0.053	142	182	1.304	0.147	0.254	0.465
Want no more children	0.371	0.022	539	643	1.036	0.058	0.328	0.414
Want to delay birth at least 2 years	0.357	0.020	539	643	0.973	0.056	0.317	0.397
Ideal number of children	4.510	0.076	918	1131	1.306	0.017	4.357	4.662
Mothers received tetanus injection for last birth	0.878	0.018	423	507	1.113	0.021	0.842	0.914
Mothers received medical care at delivery	0.599	0.027	578	685	1.085	0.045	0.546	0.653
Child had diarrhoea in the last 2 weeks	0.143	0.017	529	622	0.998	0.119	0.109	0.177
Treated with ORS packets	0.413	0.060	78	89	0.931	0.145	0.293	0.532
Consulted medical personnel	0.267	0.070	78	89	1.185	0.262	0.127	0.408
Child having health card, seen	0.765	0.040	110	123	0.947	0.053	0.684	0.846
Child received BCG vaccination	0.928	0.028	110	123	1.082	0.030	0.872	0.984
Child received DPT vaccination (3 doses)	0.824	0.038	110	123	0.990	0.046	0.748	0.900
Child received polio vaccination (3 doses)	0.797	0.041	110	123	1.012	0.051	0.715	0.878
Child received measles vaccination	0.822	0.046	110	123	1.205	0.056	0.729	0.914
Child fully immunised	0.716	0.045	110	123	0.999	0.063	0.625	0.807
Height-for-age (-2 SD)	0.291	0.022	531	613	0.973	0.074	0.248	0.335
Weight-for-height (-2 SD)	0.067	0.011	531	613	0.957	0.158	0.046	0.089
Weight-for-age (-2 SD)	0.208	0.021	531	613	1.046	0.100	0.167	0.250
Has heard of HIV/AIDS	0.997	0.002	927	1142	1.142	0.002	0.993	1.000
Knows condoms reduce HIV/AIDS	0.764	0.017	927	1142	1.230	0.022	0.729	0.798
Knows limiting partners reduce HIV/AIDS	0.928	0.013	927	1142	1.473	0.014	0.903	0.953
Total fertility rate (last 3 years)	4.109	0.322	na	3187	1.415	0.078	3.464	4.754
Neonatal mortality (last 10 years)	57.385	7.447	1141	1361	0.951	0.130	42.492	72.279
Post-neonatal mortality (last 10 years)	22.144	4.978	1143	1364	1.143	0.225	12.188	32.099
Infant mortality (last 10 years)	79.529	8.310	1143	1364	0.945	0.104	62.908	96.149
Child mortality (last 10 years)	40.158	5.987	1148	1369	0.965	0.149	28.183	52.133
Under-five mortality (last 10 years)	116.493	10.652	1150	1372	1.005	0.091	95.190	137.796
HIV prevalence	0.030	0.005	882	1023	0.911	0.176	0.019	0.040
MEN								
Urban residence	0.555	0.026	785	956	1.463	0.047	0.503	0.607
No education	0.094	0.014	785	956	1.312	0.145	0.067	0.122
With secondary education or higher	0.786	0.019	785	956	1.310	0.024	0.747	0.824
Never married (in union)	0.391	0.024	785	956	1.370	0.061	0.343	0.439
Currently married (in union)	0.523	0.023	785	956	1.287	0.044	0.477	0.569
Had first sex before age 18	0.200	0.020	603	729	1.209	0.099	0.160	0.239
Knowing any contraceptive method	1.000	0.000	419	500	na	0.000	1.000	1.000
Knowing any modern contraceptive method	1.000	0.000	419	500	na	0.000	1.000	1.000
Want no more children	0.323	0.023	419	500	1.024	0.072	0.276	0.370
Want to delay birth at least 2 years	0.388	0.024	419	500	0.988	0.061	0.341	0.435
Ideal number of children	4.582	0.102	777	947	1.229	0.022	4.377	4.787
Has heard of HIV/AIDS	1.000	0.000	703	858	na	0.000	1.000	1.000
Knows condoms reduce HIV/AIDS	0.814	0.018	703	858	1.195	0.022	0.779	0.849
Knows limiting partners reduce HIV/AIDS	0.918	0.013	703	858	1.251	0.014	0.892	0.944
HIV prevalence (15-49)	0.013	0.004	624	762	0.877	0.304	0.005	0.021
HIV prevalence (15-59)	0.014	0.004	701	855	0.923	0.290	0.006	0.023

na = Not applicable

Table B.11 Sampling errors for Brong Ahafo sample, Ghana 2003

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
WOMEN								
Urban residence	0.424	0.029	638	569	1.473	0.068	0.366	0.482
No education	0.274	0.030	638	569	1.694	0.109	0.214	0.334
With secondary education or higher	0.497	0.039	638	569	1.992	0.079	0.418	0.576
Never married (in union)	0.231	0.026	638	569	1.536	0.111	0.180	0.283
Currently married (in union)	0.701	0.023	638	569	1.275	0.033	0.654	0.747
Had first sex before age 18	0.482	0.029	510	456	1.320	0.061	0.424	0.541
Currently pregnant	0.070	0.011	638	569	1.133	0.164	0.047	0.093
Children ever born	2.556	0.138	638	569	1.374	0.054	2.280	2.833
Children surviving	2.305	0.126	638	569	1.393	0.055	2.054	2.556
Children ever born to women 40-49	5.587	0.239	121	107	1.114	0.043	5.110	6.064
Knowing any contraceptive method	0.972	0.008	449	398	0.993	0.008	0.956	0.987
Knowing any modern contraceptive method	0.970	0.007	449	398	0.834	0.007	0.956	0.983
Ever used any contraceptive method	0.640	0.036	449	398	1.604	0.057	0.567	0.713
Currently using any contraceptive method	0.330	0.027	449	398	1.225	0.083	0.275	0.384
Currently using a modern method	0.248	0.020	449	398	0.979	0.081	0.208	0.288
Currently using pill	0.100	0.017	449	398	1.191	0.169	0.067	0.134
Currently using IUD	0.018	0.007	449	398	1.132	0.400	0.004	0.032
Currently using condom	0.030	0.011	449	398	1.364	0.369	0.008	0.051
Currently using injectables	0.077	0.015	449	398	1.173	0.191	0.048	0.107
Currently using periodic abstinence	0.072	0.012	449	398	0.980	0.166	0.048	0.096
Currently using withdrawal	0.009	0.003	449	398	0.632	0.322	0.003	0.014
Obtained method from public sector source	0.451	0.064	127	114	1.442	0.142	0.323	0.578
Want no more children	0.335	0.025	449	398	1.098	0.073	0.286	0.384
Want to delay birth at least 2 years	0.401	0.025	449	398	1.092	0.063	0.350	0.451
Ideal number of children	4.396	0.114	637	568	1.607	0.026	4.167	4.624
Mothers received tetanus injection for last birth	0.902	0.019	337	297	1.176	0.021	0.863	0.940
Mothers received medical care at delivery	0.584	0.034	459	401	1.279	0.058	0.516	0.651
Child had diarrhoea in the last 2 weeks	0.139	0.025	424	366	1.472	0.181	0.089	0.190
Treated with ORS packets	0.435	0.071	58	51	1.071	0.164	0.292	0.578
Consulted medical personnel	0.261	0.090	58	51	1.537	0.345	0.081	0.441
Child having health card, seen	0.875	0.034	86	75	0.895	0.039	0.806	0.943
Child received BCG vaccination	0.911	0.042	86	75	1.265	0.046	0.827	0.995
Child received DPT vaccination (3 doses)	0.853	0.040	86	75	0.993	0.047	0.773	0.933
Child received polio vaccination (3 doses)	0.834	0.044	86	75	1.051	0.053	0.745	0.923
Child received measles vaccination	0.871	0.034	86	75	0.886	0.039	0.802	0.939
Child fully immunised	0.790	0.046	86	75	0.996	0.058	0.698	0.881
Height-for-age (-2 SD)	0.294	0.025	412	356	1.079	0.085	0.244	0.344
Weight-for-height (-2 SD)	0.057	0.014	412	356	1.175	0.247	0.029	0.086
Weight-for-age (-2 SD)	0.204	0.023	412	356	1.105	0.112	0.159	0.250
Has heard of HIV/AIDS	0.995	0.002	638	569	0.646	0.002	0.992	0.999
Knows condoms reduce HIV/AIDS	0.754	0.020	638	569	1.164	0.026	0.714	0.794
Knows limiting partners reduce HIV/AIDS	0.870	0.016	638	569	1.217	0.019	0.838	0.902
Total fertility rate (last 3 years)	4.826	0.298	na	1575	1.071	0.062	4.230	5.421
Neonatal mortality (last 10 years)	35.771	11.022	844	723	1.522	0.308	13.727	57.814
Post-neonatal mortality (last 10 years)	22.086	5.642	845	724	0.982	0.255	10.802	33.371
Infant mortality (last 10 years)	57.857	11.182	845	724	1.267	0.193	35.493	80.221
Child mortality (last 10 years)	34.844	6.079	847	725	0.933	0.174	22.686	47.002
Under-five mortality (last 10 years)	90.685	11.208	848	726	1.048	0.124	68.269	113.101
HIV prevalence	0.038	0.005	603	512	0.703	0.144	0.027	0.049
MEN								
Urban residence	0.386	0.022	593	528	1.121	0.058	0.341	0.431
No education	0.142	0.019	593	528	1.336	0.135	0.103	0.180
With secondary education or higher	0.684	0.031	593	528	1.628	0.045	0.622	0.746
Never married (in union)	0.426	0.018	593	528	0.881	0.042	0.390	0.462
Currently married (in union)	0.513	0.020	593	528	0.994	0.040	0.472	0.554
Had first sex before age 18	0.168	0.018	438	385	1.009	0.107	0.132	0.205
Knowing any contraceptive method	0.995	0.003	310	271	0.896	0.003	0.988	1.000
Knowing any modern contraceptive method	0.995	0.003	310	271	0.896	0.003	0.988	1.000
Want no more children	0.373	0.034	310	271	1.249	0.092	0.305	0.442
Want to delay birth at least 2 years	0.414	0.029	310	271	1.042	0.071	0.356	0.472
Ideal number of children	4.454	0.118	591	526	1.345	0.026	4.219	4.690
Has heard of HIV/AIDS	1.000	0.000	543	483	na	0.000	1.000	1.000
Knows condoms reduce HIV/AIDS	0.892	0.013	543	483	0.978	0.015	0.866	0.918
Knows limiting partners reduce HIV/AIDS	0.952	0.013	543	483	1.457	0.014	0.925	0.979
HIV prevalence (15-49)	0.013	0.006	478	440	1.048	0.411	0.002	0.025
HIV prevalence (15-59)	0.017	0.006	514	474	0.980	0.330	0.006	0.028

na = Not applicable

Table B.12 Sampling errors for Northern sample, Ghana 2003

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
WOMEN								
Urban residence	0.255	0.020	610	499	1.150	0.080	0.215	0.296
No education	0.788	0.016	610	499	0.988	0.021	0.755	0.820
With secondary education or higher	0.127	0.014	610	499	1.005	0.107	0.100	0.154
Never married (in union)	0.119	0.015	610	499	1.134	0.125	0.089	0.149
Currently married (in union)	0.864	0.015	610	499	1.046	0.017	0.835	0.893
Had first sex before age 18	0.483	0.028	517	423	1.279	0.058	0.427	0.539
Currently pregnant	0.130	0.011	610	499	0.833	0.087	0.107	0.153
Children ever born	3.260	0.103	610	499	0.946	0.031	3.054	3.465
Children surviving	2.673	0.074	610	499	0.847	0.028	2.525	2.821
Children ever born to women 40-49	6.693	0.297	92	71	1.158	0.044	6.100	7.287
Knowing any contraceptive method	0.927	0.012	527	431	1.067	0.013	0.903	0.952
Knowing any modern contraceptive method	0.912	0.015	527	431	1.184	0.016	0.883	0.942
Ever used any contraceptive method	0.256	0.029	527	431	1.507	0.112	0.199	0.313
Currently using any contraceptive method	0.121	0.014	527	431	1.018	0.119	0.092	0.150
Currently using a modern method	0.077	0.011	527	431	0.929	0.140	0.056	0.099
Currently using pill	0.026	0.005	527	431	0.690	0.183	0.017	0.036
Currently using IUD	0.004	0.003	527	431	1.097	0.716	0.000	0.011
Currently using condom	0.008	0.006	527	431	1.424	0.680	0.000	0.020
Currently using injectables	0.025	0.008	527	431	1.213	0.331	0.008	0.041
Currently using periodic abstinence	0.011	0.006	527	431	1.336	0.554	0.000	0.023
Currently using withdrawal	0.003	0.003	527	431	1.145	0.963	0.000	0.008
Obtained method from public sector source	0.559	0.107	39	35	1.322	0.191	0.346	0.772
Want no more children	0.151	0.013	527	431	0.850	0.088	0.125	0.178
Want to delay birth at least 2 years	0.567	0.023	527	431	1.050	0.040	0.522	0.613
Ideal number of children	6.866	0.213	567	461	1.619	0.031	6.440	7.292
Mothers received tetanus injection for last birth	0.720	0.034	429	346	1.556	0.047	0.652	0.788
Mothers received medical care at delivery	0.183	0.027	623	500	1.532	0.145	0.130	0.237
Child had diarrhoea in the last 2 weeks	0.153	0.021	569	457	1.280	0.134	0.112	0.194
Treated with ORS packets	0.324	0.034	95	70	0.668	0.106	0.255	0.392
Consulted medical personnel	0.290	0.064	95	70	1.237	0.221	0.162	0.419
Child having health card, seen	0.809	0.029	113	92	0.791	0.036	0.750	0.868
Child received BCG vaccination	0.841	0.034	113	92	0.930	0.040	0.774	0.908
Child received DPT vaccination (3 doses)	0.622	0.039	113	92	0.853	0.063	0.543	0.700
Child received polio vaccination (3 doses)	0.625	0.036	113	92	0.772	0.057	0.553	0.696
Child received measles vaccination	0.760	0.046	113	92	1.147	0.061	0.667	0.853
Child fully immunised	0.480	0.044	113	92	0.931	0.092	0.391	0.568
Height-for-age (-2 SD)	0.488	0.027	527	415	1.108	0.055	0.435	0.542
Weight-for-height (-2 SD)	0.066	0.012	527	415	0.999	0.177	0.042	0.089
Weight-for-age (-2 SD)	0.355	0.027	527	415	1.159	0.076	0.301	0.409
Has heard of HIV/AIDS	0.877	0.014	610	499	1.082	0.016	0.848	0.905
Knows condoms reduce HIV/AIDS	0.464	0.039	610	499	1.941	0.085	0.385	0.542
Knows limiting partners reduce HIV/AIDS	0.580	0.031	610	499	1.547	0.053	0.518	0.642
Total fertility rate (last 3 years)	6.970	0.383	na	1434	1.170	0.055	6.203	7.736
Neonatal mortality (last 10 years)	37.745	6.111	1194	958	0.968	0.162	25.523	49.967
Post-neonatal mortality (last 10 years)	31.752	5.390	1196	960	1.014	0.170	20.972	42.533
Infant mortality (last 10 years)	69.498	7.700	1196	960	0.964	0.111	54.098	84.897
Child mortality (last 10 years)	90.456	15.697	1215	974	1.317	0.174	59.062	121.849
Under-five mortality (last 10 years)	153.667	15.553	1217	976	1.112	0.101	122.561	184.772
HIV prevalence	0.009	0.004	546	449	0.886	0.391	0.002	0.017
MEN								
Urban residence	0.280	0.022	638	527	1.221	0.078	0.236	0.323
No education	0.595	0.024	638	527	1.244	0.041	0.546	0.643
With secondary education or higher	0.249	0.024	638	527	1.373	0.094	0.202	0.296
Never married (in union)	0.334	0.019	638	527	1.013	0.057	0.296	0.372
Currently married (in union)	0.622	0.016	638	527	0.841	0.026	0.590	0.654
Had first sex before age 18	0.210	0.023	511	426	1.286	0.111	0.163	0.256
Knowing any contraceptive method	0.985	0.007	396	328	1.119	0.007	0.971	0.999
Knowing any modern contraceptive method	0.985	0.007	396	328	1.119	0.007	0.971	0.999
Want no more children	0.083	0.010	396	328	0.745	0.125	0.062	0.104
Want to delay birth at least 2 years	0.602	0.025	396	328	1.000	0.041	0.553	0.651
Ideal number of children	8.184	0.287	586	486	1.110	0.035	7.610	8.758
Has heard of HIV/AIDS	0.963	0.011	587	489	1.477	0.012	0.940	0.986
Knows condoms reduce HIV/AIDS	0.609	0.029	587	489	1.414	0.047	0.552	0.666
Knows limiting partners reduce HIV/AIDS	0.726	0.030	587	489	1.616	0.041	0.666	0.785
HIV prevalence (15-49)	0.010	0.006	522	435	1.470	0.651	0.000	0.022
HIV prevalence (15-59)	0.009	0.006	571	470	1.474	0.649	0.000	0.021

na = Not applicable

Table B.13 Sampling errors for Upper East sample, Ghana 2003

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
WOMEN								
Urban residence	0.218	0.050	395	310	2.415	0.230	0.118	0.319
No education	0.724	0.056	395	310	2.469	0.077	0.613	0.835
With secondary education or higher	0.158	0.043	395	310	2.331	0.271	0.072	0.244
Never married (in union)	0.192	0.028	395	310	1.426	0.148	0.135	0.248
Currently married (in union)	0.763	0.033	395	310	1.564	0.044	0.696	0.830
Had first sex before age 18	0.556	0.038	320	248	1.356	0.068	0.480	0.631
Currently pregnant	0.079	0.013	395	310	0.952	0.164	0.053	0.105
Children ever born	2.877	0.146	395	310	1.154	0.051	2.586	3.169
Children surviving	2.609	0.132	395	310	1.175	0.051	2.345	2.873
Children ever born to women 40-49	5.743	0.243	88	69	1.226	0.042	5.257	6.228
Knowing any contraceptive method	0.972	0.011	302	236	1.105	0.011	0.951	0.993
Knowing any modern contraceptive method	0.972	0.011	302	236	1.105	0.011	0.951	0.993
Ever used any contraceptive method	0.257	0.033	302	236	1.312	0.129	0.191	0.323
Currently using any contraceptive method	0.119	0.038	302	236	2.013	0.316	0.044	0.194
Currently using a modern method	0.097	0.031	302	236	1.803	0.318	0.035	0.158
Currently using pill	0.020	0.010	302	236	1.299	0.527	0.000	0.041
Currently using IUD	0.004	0.004	302	236	1.024	0.965	0.000	0.011
Currently using condom	0.009	0.007	302	236	1.249	0.768	0.000	0.022
Currently using injectables	0.064	0.023	302	236	1.612	0.354	0.019	0.110
Currently using periodic abstinence	0.022	0.009	302	236	1.025	0.392	0.005	0.040
Currently using withdrawal	0.000	0.000	302	236	na	na	0.000	0.000
Obtained method from public sector source	0.694	0.087	31	25	1.037	0.126	0.520	0.869
Want no more children	0.219	0.025	302	236	1.061	0.116	0.168	0.269
Want to delay birth at least 2 years	0.482	0.019	302	236	0.658	0.039	0.444	0.519
Ideal number of children	5.781	0.170	377	291	1.330	0.029	5.442	6.121
Mothers received tetanus injection for last birth	0.798	0.039	224	166	1.428	0.049	0.719	0.877
Mothers received medical care at delivery	0.278	0.042	291	215	1.379	0.153	0.193	0.363
Child had diarrhoea in the last 2 weeks	0.208	0.028	279	206	1.046	0.137	0.151	0.265
Treated with ORS packets	0.584	0.066	60	43	0.886	0.113	0.452	0.715
Consulted medical personnel	0.430	0.093	60	43	1.311	0.216	0.244	0.617
Child having health card, seen	0.879	0.046	52	39	0.998	0.053	0.786	0.971
Child received BCG vaccination	0.978	0.017	52	39	0.786	0.017	0.944	1.000
Child received DPT vaccination (3 doses)	0.778	0.053	52	39	0.908	0.069	0.672	0.885
Child received polio vaccination (3 doses)	0.841	0.066	52	39	1.264	0.078	0.710	0.972
Child received measles vaccination	0.912	0.046	52	39	1.139	0.050	0.821	1.000
Child fully immunised	0.770	0.056	52	39	0.942	0.073	0.658	0.883
Height-for-age (-2 SD)	0.317	0.027	221	156	0.857	0.085	0.263	0.371
Weight-for-height (-2 SD)	0.129	0.024	221	156	1.053	0.187	0.081	0.177
Weight-for-age (-2 SD)	0.324	0.031	221	156	0.976	0.095	0.263	0.386
Has heard of HIV/AIDS	0.978	0.005	395	310	0.690	0.005	0.967	0.988
Knows condoms reduce HIV/AIDS	0.804	0.041	395	310	2.058	0.051	0.722	0.887
Knows limiting partners reduce HIV/AIDS	0.897	0.041	395	310	2.671	0.045	0.816	0.979
Total fertility rate (last 3 years)	4.747	0.387	na	863	1.197	0.082	3.972	5.521
Neonatal mortality (last 10 years)	21.753	7.095	576	434	1.164	0.326	7.562	35.944
Post-neonatal mortality (last 10 years)	10.774	5.262	578	435	0.907	0.488	0.250	21.298
Infant mortality (last 10 years)	32.527	8.951	578	435	1.066	0.275	14.625	50.428
Child mortality (last 10 years)	47.806	12.147	578	435	1.061	0.254	23.511	72.101
Under-five mortality (last 10 years)	78.777	16.728	580	436	1.254	0.212	45.320	112.234
HIV prevalence	0.008	0.006	365	277	1.158	0.656	0.000	0.020
MEN								
Urban residence	0.223	0.084	395	317	3.991	0.375	0.056	0.391
No education	0.489	0.056	395	317	2.227	0.115	0.377	0.601
With secondary education or higher	0.267	0.065	395	317	2.916	0.244	0.137	0.397
Never married (in union)	0.427	0.024	395	317	0.959	0.056	0.379	0.475
Currently married (in union)	0.541	0.025	395	317	0.993	0.046	0.491	0.591
Had first sex before age 18	0.240	0.045	298	238	1.808	0.187	0.150	0.329
Knowing any contraceptive method	0.995	0.004	220	171	0.766	0.004	0.988	1.000
Knowing any modern contraceptive method	0.995	0.004	220	171	0.766	0.004	0.988	1.000
Want no more children	0.152	0.030	220	171	1.215	0.194	0.093	0.211
Want to delay birth at least 2 years	0.547	0.039	220	171	1.174	0.072	0.468	0.626
Ideal number of children	7.015	0.349	367	297	1.268	0.050	6.318	7.712
Has heard of HIV/AIDS	0.984	0.007	351	284	1.073	0.007	0.970	0.999
Knows condoms reduce HIV/AIDS	0.851	0.023	351	284	1.206	0.027	0.805	0.897
Knows limiting partners reduce HIV/AIDS	0.837	0.045	351	284	2.290	0.054	0.747	0.927
HIV prevalence (15-49)	0.022	0.012	303	259	1.386	0.533	0.000	0.045
HIV prevalence (15-59)	0.020	0.010	340	285	1.379	0.526	0.000	0.041

na = Not applicable

Table B.14 Sampling errors for Upper West sample, Ghana 2003

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
WOMEN								
Urban residence	0.238	0.055	462	153	2.748	0.229	0.129	0.347
No education	0.633	0.038	462	153	1.687	0.060	0.557	0.708
With secondary education or higher	0.215	0.027	462	153	1.391	0.124	0.162	0.268
Never married (in union)	0.205	0.025	462	153	1.304	0.120	0.156	0.254
Currently married (in union)	0.743	0.030	462	153	1.476	0.040	0.683	0.803
Had first sex before age 18	0.369	0.036	380	124	1.462	0.098	0.296	0.441
Currently pregnant	0.087	0.014	462	153	1.044	0.157	0.060	0.114
Children ever born	3.268	0.201	462	153	1.482	0.062	2.866	3.670
Children surviving	2.564	0.137	462	153	1.303	0.054	2.289	2.838
Children ever born to women 40-49	6.381	0.410	90	30	1.447	0.064	5.562	7.200
Knowing any contraceptive method	0.972	0.014	354	113	1.540	0.014	0.944	0.999
Knowing any modern contraceptive method	0.970	0.012	354	113	1.334	0.013	0.946	0.994
Ever used any contraceptive method	0.662	0.027	354	113	1.078	0.041	0.608	0.716
Currently using any contraceptive method	0.263	0.022	354	113	0.922	0.082	0.220	0.307
Currently using a modern method	0.195	0.020	354	113	0.937	0.101	0.155	0.234
Currently using pill	0.016	0.005	354	113	0.741	0.306	0.006	0.026
Currently using IUD	0.000	0.000	354	113	na	na	0.000	0.000
Currently using condom	0.022	0.008	354	113	0.976	0.348	0.007	0.037
Currently using injectables	0.111	0.019	354	113	1.117	0.168	0.074	0.149
Currently using periodic abstinence	0.062	0.015	354	113	1.161	0.240	0.032	0.092
Currently using withdrawal	0.004	0.003	354	113	0.893	0.754	0.000	0.010
Obtained method from public sector source	0.783	0.042	71	23	0.858	0.054	0.699	0.868
Want no more children	0.232	0.023	354	113	1.013	0.098	0.186	0.277
Want to delay birth at least 2 years	0.507	0.033	354	113	1.259	0.066	0.440	0.574
Ideal number of children	5.552	0.171	452	149	1.311	0.031	5.210	5.893
Mothers received tetanus injection for last birth	0.776	0.027	265	83	1.031	0.035	0.722	0.830
Mothers received medical care at delivery	0.333	0.051	371	118	1.762	0.152	0.232	0.435
Child had diarrhoea in the last 2 weeks	0.269	0.033	330	104	1.283	0.125	0.202	0.335
Treated with ORS packets	0.297	0.076	86	28	1.368	0.256	0.145	0.449
Consulted medical personnel	0.328	0.079	86	28	1.434	0.242	0.169	0.487
Child having health card, seen	0.756	0.072	66	21	1.337	0.095	0.613	0.900
Child received BCG vaccination	0.914	0.036	66	21	1.024	0.039	0.842	0.986
Child received DPT vaccination (3 doses)	0.755	0.073	66	21	1.360	0.097	0.609	0.901
Child received polio vaccination (3 doses)	0.741	0.066	66	21	1.209	0.089	0.609	0.873
Child received measles vaccination	0.795	0.069	66	21	1.358	0.086	0.657	0.932
Child fully immunised	0.603	0.079	66	21	1.289	0.131	0.445	0.760
Height-for-age (-2 SD)	0.341	0.037	307	95	1.235	0.109	0.266	0.415
Weight-for-height (-2 SD)	0.110	0.015	307	95	0.834	0.137	0.080	0.140
Weight-for-age (-2 SD)	0.259	0.031	307	95	1.188	0.118	0.198	0.320
Has heard of HIV/AIDS	0.960	0.012	462	153	1.353	0.013	0.935	0.984
Knows condoms reduce HIV/AIDS	0.606	0.021	462	153	0.920	0.035	0.564	0.647
Knows limiting partners reduce HIV/AIDS	0.853	0.019	462	153	1.136	0.022	0.816	0.891
Total fertility rate (last 3 years)	5.462	0.376	na	433	1.349	0.069	4.711	6.213
Neonatal mortality (last 10 years)	61.672	11.218	756	245	1.019	0.182	39.236	84.108
Post-neonatal mortality (last 10 years)	43.408	8.535	759	246	1.234	0.197	26.338	60.479
Infant mortality (last 10 years)	105.080	10.568	759	246	0.826	0.101	83.945	126.215
Child mortality (last 10 years)	114.903	12.051	778	252	1.028	0.105	90.801	139.005
Under-five mortality (last 10 years)	207.909	14.089	781	253	0.854	0.068	179.731	236.087
HIV prevalence	0.020	0.009	411	136	1.250	0.432	0.003	0.037
MEN								
Urban residence	0.216	0.066	387	130	3.141	0.304	0.085	0.348
No education	0.449	0.058	387	130	2.275	0.128	0.334	0.564
With secondary education or higher	0.345	0.044	387	130	1.809	0.127	0.257	0.432
Never married (in union)	0.400	0.040	387	130	1.593	0.099	0.321	0.480
Currently married (in union)	0.567	0.037	387	130	1.457	0.065	0.494	0.641
Had first sex before age 18	0.167	0.017	301	101	0.812	0.105	0.132	0.202
Knowing any contraceptive method	0.991	0.006	223	74	0.981	0.006	0.978	1.000
Knowing any modern contraceptive method	0.988	0.007	223	74	0.926	0.007	0.974	1.000
Want no more children	0.156	0.019	223	74	0.770	0.120	0.119	0.194
Want to delay birth at least 2 years	0.492	0.030	223	74	0.884	0.060	0.433	0.551
Ideal number of children	6.182	0.415	373	126	1.654	0.067	5.352	7.012
Has heard of HIV/AIDS	0.978	0.010	346	116	1.274	0.010	0.958	0.998
Knows condoms reduce HIV/AIDS	0.652	0.031	346	116	1.190	0.047	0.591	0.713
Knows limiting partners reduce HIV/AIDS	0.824	0.014	346	116	0.692	0.017	0.795	0.852
HIV prevalence (15-49)	0.016	0.007	286	108	0.948	0.442	0.002	0.030
HIV prevalence (15-59)	0.017	0.007	312	119	0.913	0.395	0.004	0.030

na = Not applicable

DATA QUALITY TABLES

APPENDIX C

Table C.1 Household age distribution

Single-year age distribution of the de facto household population by sex (weighted), Ghana 2003

	Male		Female			Male		Female	
Age	Number	Percentage	Number	Percentage	Age	Number	Percentage	Number	Percentage
0	346	3.0	388	3.0	33	117	1.0	135	1.1
1	373	3.2	316	2.5	34	100	0.9	136	1.1
2	351	3.0	353	2.7	35	132	1.2	211	1.6
3	412	3.6	366	2.8	36	98	0.8	163	1.3
4	337	2.9	360	2.8	37	91	0.8	130	1.0
5	305	2.7	297	2.3	38	115	1.0	149	1.2
6	391	3.4	402	3.1	39	86	0.8	102	0.8
7	399	3.5	358	2.8	40	111	1.0	187	1.5
8	377	3.3	376	2.9	41	70	0.6	90	0.7
9	377	3.3	321	2.5	42	109	0.9	124	1.0
10	400	3.5	326	2.5	43	80	0.7	102	0.8
11	340	3.0	296	2.3	44	51	0.4	74	0.6
12	379	3.3	360	2.8	45	134	1.2	151	1.2
13	457	4.0	394	3.1	46	87	0.8	90	0.7
14	331	2.9	310	2.4	47	69	0.6	79	0.6
15	242	2.1	261	2.0	48	96	0.8	91	0.7
16	257	2.2	243	1.9	49	58	0.5	54	0.4
17	220	1.9	232	1.8	50	88	0.8	90	0.7
18	239	2.1	264	2.1	51	47	0.4	101	0.8
19	191	1.7	191	1.5	52	61	0.5	132	1.0
20	181	1.6	269	2.1	53	61	0.5	100	0.8
21	147	1.3	181	1.4	54	45	0.4	70	0.5
22	133	1.2	216	1.7	55	54	0.5	104	0.8
23	118	1.0	216	1.7	56	59	0.5	70	0.5
24	128	1.1	172	1.3	57	28	0.2	48	0.4
25	147	1.3	241	1.9	58	37	0.3	51	0.4
26	157	1.4	205	1.6	59	20	0.2	47	0.4
27	144	1.3	157	1.2	60	35	0.3	110	0.9
28	174	1.5	220	1.7	61	46	0.4	31	0.2
29	136	1.2	158	1.2	67	27	0.2	32	0.2
30	168	1.5	220	1.7	68	36	0.3	43	0.3
31	103	0.9	127	1.0	69	25	0.2	11	0.1
32	146	1.3	203	1.6	70+	325	2.8	472	3.7
				Don't know/missing		14	0.1	15	0.1
				Total		11,500	100.0	12,865	100.0

Table C.2 Age distribution of eligible and interviewed women and men

De facto household population of women age 10-54 and men age 10-64, interviewed women age 15-49 and men age 15-59, and percentage of eligible women and men who were interviewed (weighted), by five-year age groups, Ghana 2003

Age group	Household population of women age 10-54	Interviewed women age 15-49		Percentage of eligible women interviewed
		Number	Percent	
10-14	1,685	Na	na	na
15-19	1,191	1,128	20.2	94.6
20-24	1,053	1,006	18.0	95.5
25-29	981	944	16.9	96.2
30-34	821	797	14.3	97.0
25-39	756	712	12.7	94.2
40-44	577	557	10.0	96.6
45-49	465	445	8.0	95.8
50-54	492	Na	na	na
15-49	5,845	5,588	100.0	95.6

Age group	Household population of men age 10-64	Interviewed men age 15-59		Percentage of eligible men interviewed
		Number	Percent	
10-14	1,907	Na	na	na
15-19	1,148	1,071	22.2	93.2
20-24	707	660	13.7	93.3
25-29	758	706	14.7	93.2
30-34	634	604	12.5	95.2
25-39	522	486	10.1	93.1
40-44	420	398	8.3	94.6
45-49	445	419	8.7	94.1
50-54	301	282	5.9	93.7
55-59	197	189	3.9	95.5
60-64	253	Na	na	na
15-59	5,134	4,814	100.0	93.8

Note: The de facto population includes all residents and non-residents who stayed in the household the night before the interview. Weights for both household population of women and men and interviewed women and men are household weights. Age is based on the household schedule.

na = Not applicable

Table C.3 Completeness of reporting

Percentage of observations missing information for selected demographic and health questions (weighted), Ghana 2003

Subject	Reference Group	Percentage with missing information	Number of cases
Birth date	Births in the 15 years preceding the survey		
Month Only		2.09	10,038
Month and Year		0.19	10,038
Age at death	Deceased children born in the 15 years preceding the survey	0.58	1,039
Age/date at first union[1]	Ever-married women age 15-49	0.43	4,075
Respondent's education	All women age 15-49	0.00	5,691
Diarrhoea in last 2 weeks	Living children age 0-59 months	2.27	3,340
Anthropometry	Living children age 0-59 months (from the household questionnaire)		
Height		5.22	3,597
Weight		5.04	3,597
Height or weight		5.49	3,597
Anaemia			
Children	All de facto living children 0-59 months	8.74	3,275
Women	All de facto women age 15-49	11.05	5,845

[1] Both year and age missing

Table C.4 Births by calendar years

Number of births, percentage with complete birth date, sex ratio at birth, and calendar year ratio by calendar year, according to living, dead, and total children (weighted), Ghana 2003

Calendar year	Number of births			Percentage with complete birth date[1]			Sex ratio at birth[2]			Calendar year ratio[3]		
	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total
2003	499	43	541	100.0	100.0	100.0	97.8	95.5	97.6	na	na	na
2002	731	43	773	100.0	100.0	100.0	103.8	107.7	104.1	na	na	na
2001	631	46	677	100.0	100.0	100.0	95.0	111.2	96.0	87.8	78.7	87.2
2000	706	73	779	99.9	100.0	99.9	113.6	124.8	114.6	110.3	110.8	110.3
1999	649	86	736	100.0	100.0	100.0	102.5	99.7	102.2	103.7	146.3	107.4
1998	546	45	591	99.9	97.5	99.7	92.0	96.6	92.4	82.4	47.9	78.1
1997	675	101	777	99.1	92.4	98.2	102.3	137.8	106.3	115.6	152.6	119.4
1996	622	88	710	96.8	89.9	96.0	110.0	127.8	112.1	98.3	96.0	98.0
1995	591	82	673	96.8	91.6	96.2	95.7	85.3	94.3	100.2	99.0	100.0
1994	558	77	635	97.3	86.1	96.0	143.4	124.4	140.9	92.8	93.1	92.8
1999-2003	3,215	291	3,506	100.0	100.0	100.0	102.9	107.8	103.3	na	na	na
1994-1998	2,992	393	3,385	98.0	91.0	97.2	107.0	115.3	107.9	na	na	na
1989-1993	2,697	344	3,040	96.6	90.3	95.9	109.2	103.2	108.5	na	na	na
1984-1988	1,891	329	2,220	95.9	90.0	95.1	103.8	101.1	103.4	na	na	na
< 1984	1,811	450	2,260	94.3	87.2	92.8	99.5	117.9	102.9	na	na	na
All	12,606	1,806	14,412	97.3	91.2	96.6	104.8	109.6	105.4	na	na	na

na = Not applicable

[1] Both year and month of birth given

[2] (Bm/Bf)x100, where Bm and Bf are the numbers of male and female births, respectively

[3] [2Bx/(Bx-1+Bx+1)]x100, where Bx is the number of births in calendar year x

Table C.5 Reporting of age at death in days

Distribution of reported deaths under one month of age by age at death in days and the percentage of neonatal deaths reported to occur at ages 0-6 days, for five-year periods of birth preceding the survey (weighted), Ghana 2003

Age at death (days)	Number of years preceding the survey				Total
	0-4	5-9	10-14	15-19	0-19
<1	31	22	19	15	87
1	53	49	36	27	165
2	6	9	12	8	35
3	23	15	12	9	58
4	7	4	4	8	24
5	6	3	2	3	14
6	4	7	3	1	16
7	9	9	6	8	32
8	4	0	0	1	5
9	1	0	2	2	5
10	2	1	0	1	4
11	0	0	1	0	1
12	0	2	0	0	2
13	1	1	0	0	1
14	6	4	8	4	22
15	0	0	0	1	1
17	0	0	0	1	1
19	0	1	0	0	1
20	0	1	0	0	1
21	1	2	1	1	5
22	0	0	0	2	2
25	1	0	0	0	2
31+	1	0	0	0	1
Total 0-30	155	130	107	92	483
Percent early neonatal[1]	83.1	84.6	82.7	76.7	82.2

[1] (0-6 days/0-30 days) × 100

Table C.6 Reporting of age at death in months

Distribution of reported deaths under two years of age by age at death in months and the percentage of infant deaths reported to occur at age under one month, for five-year periods of birth preceding the survey, Ghana 2003

Age at death (months)	Number of years preceding the survey				Total
	0-4	5-9	10-14	15-19	0-19
<1[a]	155	130	107	92	483
1	5	11	11	12	39
2	12	7	13	10	42
3	10	11	10	10	42
4	13	7	4	14	38
5	3	4	2	4	13
6	7	15	14	4	41
7	9	7	10	2	28
8	2	7	8	4	22
9	6	8	3	5	22
10	2	0	3	3	8
11	2	3	2	1	8
12	10	9	5	14	37
13	2	0	0	1	4
14	2	2	1	2	7
15	0	0	2	1	4
16	2	1	1	1	6
17	0	0	2	0	2
18	1	10	7	3	21
20	1	1	0	1	2
22	3	1	0	1	4
23	1	0	0	1	2
1 Year	14	34	20	23	91
Total 0-11	225	211	187	162	786
Percent neonatal[1]	68.8	61.5	57.0	56.5	61.5

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

PERSONS INVOLVED IN THE 2003 GHANA DEMOGRAPHIC AND HEALTH SURVEY

APPENDIX ***D***

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QUESTIONNAIRES

APPENDIX E

July 15, 2003

GHANA DEMOGRAPHIC AND HEALTH SURVEY
HOUSEHOLD QUESTIONNAIRE

GHANA STATISTICAL SERVICE

IDENTIFICATION

LOCALITY NAME _____

NAME OF HOUSEHOLD HEAD _____

EA NUMBER .....

HOUSEHOLD NUMBER .....

REGION .....

DISTRICT .....

URBAN/RURAL (URBAN=1, RURAL=2) .....

CITY/LARGE TOWN/SMALL TOWN/VILLAGE .....
(CITY=1, LARGE TOWN=2, SMALL TOWN=3, VILLAGE=4)

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY MONTH YEAR 2 0 0 3
INTERVIEWER'S NAME	_____	_____	_____	NAME
RESULT*	_____	_____	_____	RESULT
NEXT VISIT: DATE	_____	_____		TOTAL NO. OF VISITS
TIME	_____	_____		

*RESULT CODES:
1 COMPLETED
2 NO HOUSEHOLD MEMBER AT HOME OR NO COMPETENT RESPONDENT AT HOME AT TIME OF VISIT
3 ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD OF TIME
4 POSTPONED
5 REFUSED
6 DWELLING VACANT OR ADDRESS NOT A DWELLING
7 DWELLING DESTROYED
8 DWELLING NOT FOUND
9 OTHER _____
(SPECIFY)

TOTAL PERSONS IN HOUSEHOLD

TOTAL ELIGIBLE WOMEN

TOTAL ELIGIBLE MEN

LINE NO. OF RESP. TO HOUSEHOLD QUEST.

LANGUAGE

LANGUAGE OF QUESTIONNAIRE: **ENGLISH** 1

LANGUAGE OF INTERVIEW *** _____

NATIVE LANGUAGE OF RESPONDENT*** _____

WAS A TRANSLATOR USED? (YES=1, NO=2).....

*** LANGUAGE CODES:
1 ENGLISH 2 AKAN 3 GA 4 EWE 5 NZEMA 6 DAGBANI
7 OTHER_____
(SPECIFY)

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____	DATE _____		

HOUSEHOLD SCHEDULE

Now we would like some information about the people who usually live in your household or who are staying with you now.

LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	ELIGIBILITY		
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household.	What is the relationship of (NAME) to the head of the household?*	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)?	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49	CIRCLE LINE NUMBER OF ALL CHILDREN UNDER AGE 6	CIRCLE LINE NUMBER OF ALL MEN AGE 15-59
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(9A)
			M F	YES NO	YES NO	IN YEARS			
01			1 2	1 2	1 2		01	01	01
02			1 2	1 2	1 2		02	02	02
03			1 2	1 2	1 2		03	03	03
04			1 2	1 2	1 2		04	04	04
05			1 2	1 2	1 2		05	05	05
06			1 2	1 2	1 2		06	06	06
07			1 2	1 2	1 2		07	07	07
08			1 2	1 2	1 2		08	08	08
09			1 2	1 2	1 2		09	09	09
10			1 2	1 2	1 2		10	10	10

* CODES FOR Q.3
RELATIONSHIP TO HEAD OF HOUSEHOLD:
01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DAUGHTER-IN-LAW
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = CO-WIFE
10 = OTHER RELATIVE
11 = ADOPTED/FOSTER/ STEPCHILD
12 = NOT RELATED
98 = DON'T KNOW

LINE NO.	PARENTAL SURVIVORSHIP AND RESIDENCE FOR PERSONS LESS THAN 18 YEARS OLD**				EDUCATION						
	Is (NAME)'s biological mother alive?	IF ALIVE	Is (NAME)'s biological father alive?	IF ALIVE	IF AGE 5 YEARS OR OLDER		IF AGE 5-24 YEARS				
		Does (NAME)'s biological mother live in this house-hold? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER		Does (NAME)'s biological father live in this house-hold? IF YES: What is his name? RECORD FATHER'S LINE NUMBER	Has (NAME) ever attended school?	What is the highest level of school (NAME) has attended?*** What is the highest grade (NAME) completed at that level?***	Is (NAME) currently attending school?	During the current school year, did (NAME) attend school at any time?	During the current school year, what level and grade [is/was] (NAME) attending?***	During the previous school year, did (NAME) attend school at any time?	During that school year, what level and grade did (NAME) attend?***
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
	YES NO DK		YES NO DK		YES NO	LEVEL GRADE	YES NO	YES NO	LEVEL GRADE	YES NO	LEVEL GRADE
01	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
02	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
03	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
04	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
05	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
06	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
07	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
08	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
09	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
10	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	

** CODES FOR Q.10 THROUGH Q.13
THESE QUESTIONS REFER TO THE BIOLOGICAL PARENTS OF THE CHILD.
IN Q.11 AND Q.13, RECORD '00' IF PARENT NOT LISTED IN HOUSEHOLD SCHEDULE.

***CODES FOR Qs. 15, 18 AND 20
EDUCATION LEVEL:
1 = PRIMARY
2 = MIDDLE/JSS
3 = SECONDARY/SSS
4 = HIGHER
8 = DON'T KNOW

EDUCATION GRADE:
00 = LESS THAN 1 YEAR COMPLETED (FOR Q.15 ONLY. THIS CODE IS NOT ALLOWED FOR Q.18 AND Q.20
98 = DON'T KNOW

LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	ELIGIBILITY		
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household.	What is the relationship of (NAME) to the head of the household?*	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)?	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49	CIRCLE LINE NUMBER OF ALL CHILDREN UNDER AGE 6	CIRCLE LINE NUMBER OF ALL MEN AGE 15-59
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(9A)
			M F	YES NO	YES NO	IN YEARS			
11			1 2	1 2	1 2		11	11	11
12			1 2	1 2	1 2		12	12	12
13			1 2	1 2	1 2		13	13	13
14			1 2	1 2	1 2		14	14	14
15			1 2	1 2	1 2		15	15	15
16			1 2	1 2	1 2		16	16	16
17			1 2	1 2	1 2		17	17	17
18			1 2	1 2	1 2		18	18	18
19			1 2	1 2	1 2		19	19	19
20			1 2	1 2	1 2		20	20	20

* CODES FOR Q.3
RELATIONSHIP TO HEAD OF HOUSEHOLD:
01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DAUGHTER-IN-LAW
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = CO-WIFE
10 = OTHER RELATIVE
11 = ADOPTED/FOSTER/STEPCHILD
12 = NOT RELATED
98 = DON'T KNOW

** Q.10 THROUGH Q.13
THESE QUESTIONS REFER TO THE BIOLOGICAL PARENTS OF THE CHILD.
IN Q.11 AND Q.13, RECORD '00' IF PARENT NOT LISTED IN HOUSEHOLD SCHEDULE.

***CODES FOR Qs. 15, 18 AND 20
EDUCATION LEVEL:
1 = PRIMARY
2 = MIDDLE/JSS
3 = SECONDARY/SSS
4 = HIGHER
8 = DON'T KNOW

EDUCATION GRADE:
00 = LESS THAN 1 YEAR COMPLETED (FOR Q.15 ONLY. THIS CODE IS NOT ALLOWED FOR Q.18 AND Q.20
98 = DON'T KNOW

LINE NO.	PARENTAL SURVIVORSHIP AND RESIDENCE FOR PERSONS LESS THAN 18 YEARS OLD**				EDUCATION						
	Is (NAME)'s biological mother alive?	IF ALIVE	Is (NAME)'s biological father alive?	IF ALIVE	IF AGE 5 YEARS OR OLDER		IF AGE 5-24 YEARS				
		Does (NAME)'s biological mother live in this house-hold? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER		Does (NAME)'s biological father live in this house-hold? IF YES: What is his name? RECORD FATHER'S LINE NUMBER	Has (NAME) ever attended school?	What is the highest level of school (NAME) has attended?*** What is the highest grade (NAME) completed at that level?***	Is (NAME) currently attending school?	During the current school year, did (NAME) attend school at any time?	During the current school year, what level and grade [is/was] (NAME) attending?***	During the previous school year, did (NAME) attend school at any time?	During that school year, what level and grade did (NAME) attend?
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
	YES NO DK		YES NO DK		YES NO	LEVEL GRADE	YES NO	YES NO	LEVEL GRADE	YES NO	LEVEL GRADE
11	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
12	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
13	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
14	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
15	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
16	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
17	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
18	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
19	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
20	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	

TICK HERE IF CONTINUATION SHEET USED ☐

Just to make sure that I have a complete listing:

1) Are there any other persons such as small children or infants that we have not listed? YES ☐ → ENTER EACH IN TABLE NO ☐

2) In addition, are there any other people who may not be members of your family, such as domestic servants, lodgers or friends who usually live here? YES ☐ → ENTER EACH IN TABLE NO ☐

3) Are there any guests or temporary visitors staying here, or anyone else who slept here last night, who have not been listed? YES ☐ → ENTER EACH IN TABLE NO ☐

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
21	What is the main source of drinking water for members of your household?	PIPED WATER PIPED INTO DWELLING .....11 PIPED INTO YARD/PLOT.....12 PUBLIC TAP.....13 WATER FROM OPEN WELL OPEN WELL IN DWELLING .....21 OPEN WELL IN YARD/PLOT.....22 OPEN PUBLIC WELL.....23 WATER FROM COVERED WELL OR BOREHOLE PROTECTED WELL IN DWELLING.....31 PROTECTED WELL IN YARD/PLOT .....32 PROTECTED PUBLIC WELL.....33 SURFACE WATER SPRING.....41 RIVER/STREAM.....42 POND/LAKE .....43 DAM.....44 RAINWATER .....51 TANKER TRUCK.....61 BOTTLED WATER .....71 SATCHEL WATER .....81 OTHER _____ 96 (SPECIFY)	 → 22A → 22A → 22A → 22A → 22A → 22A → 22A → 22A → 22A
22	How long does it take you to go there, get water, and come back?	MINUTES ..... [ ][ ][ ] ON PREMISES.....996	
22A	In the last two weeks, how frequently has water been available from this source?	ALL THE TIME .....1 SEVERAL HOURS EVERY DAY .....2 A FEW TIMES A WEEK .....3 LESS FREQUENTLY .....4 NOT AT ALL .....5 DON'T KNOW 8	
22B	How does this household primarily dispose of household waste?	COLLECTED BY GOVERNMENT .....01 COLLECTED BY COMMUNITY ASSOCIATION .....02 COLLECTED BY PRIVATE COMPANY .....03 DUMPED IN COMPOUND.....04 DUMPED IN STREET/EMPTY PLOT .....05 BURNED .....06 BURIED .....07 COMPOSTED .....08 RECYCLED .....09 FED TO ANIMALS.....10 OTHER _____ 96 (SPECIFY)	
23	What kind of toilet facilities does your household have?	FLUSH TOILET .....11 PIT TOILET/LATRINE TRADITIONAL PIT TOILET.....21 VENTILATED IMPROVED PIT (VIP) LATRINE .....22 BUCKET/PAN.....23 NO FACILITY/BUSH/FIELD/BEACH.....31 OTHER _____ 96 (SPECIFY)	 → 25
24	Do you share these facilities with other households?	YES .....1 NO 2	 → 25
24A	How many households do you share these facilities with?	1-2 .....1 3-4 .....2 5-9 .....3 10+.....4	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
25	Does your household have: Electricity? A radio? A television? A video deck? A telephone? A refrigerator?	YES NO ELECTRICITY .....1 2 RADIO .....1 2 TELEVISION .....1 2 VIDEO DECK .....1 2 TELEPHONE.....1 2 REFRIGERATOR.....1 2	
26	What type of fuel does your household mainly use for cooking?	ELECTRICITY .....01 LPG/NATURAL GAS .....02 BIOGAS.....03 KEROSENE.....04 COAL, LIGNITE.....05 CHARCOAL.....06 FIREWOOD, STRAW.....07 DUNG .....08 OTHER _____ 96 (SPECIFY)	
26A	How likely is it that you could be evicted from this dwelling: Would you say very likely, somewhat likely, not at all likely?	VERY LIKELY.....1 SOMEWHAT LIKELY .....2 NOT AT ALL .....3 DON'T KNOW 8	
27	MAIN MATERIAL OF THE FLOOR. RECORD OBSERVATION.	NATURAL FLOOR EARTH/SAND/MUD .....11 MUD MIXED WITH DUNG .....12 RUDIMENTARY FLOOR WOOD PLANKS.....21 PALM/BAMBOO .....22 FINISHED FLOOR PARQUET OR POLISHED WOOD.....31 LINOLEUM .....32 CERAMIC TILES.....33 CEMENT .....34 CARPET .....35 TERRAZZO .....36 OTHER _____ 96 (SPECIFY)	
28	Does any member of your household own: A bicycle? A motorcycle or motor scooter? A car or truck? A tractor? A horse/cart?	YES NO BICYCLE .....1 2 MOTORCYCLE/SCOOTER .....1 2 CAR/TRUCK.....1 2 TRACTOR .....1 2 HORSE/CART 1 2	
29	Does your household have any mosquito bed nets that can be used while sleeping?	YES .....1 NO 2	→ 32F
29A	How many mosquito bed nets does your household have?	NUMBER..... [ ]	
29B	When do you use the nets?	ALL YEAR ROUND .....1 DURING THE RAINY SEASON .....2 OTHER _____ 6 (SPECIFY)	

		NET # 1	NET # 2	NET #3
30	ASK RESPONDENT TO SHOW YOU THE NET(S) IN THE HOUSEHOLD.	OBSERVED ..... 1 NOT OBSERVED..... 2	OBSERVED ..... 1 NOT OBSERVED 2	OBSERVED ..... 1 NOT OBSERVED 2
31	How long ago did your household obtain the mosquito bed net?	MONTHS AGO. [ ][ ] MORE THAN 3 YEARS AGO.....96	MONTHS AGO. [ ][ ] MORE THAN 3 YEARS AGO.....96	MONTHS AGO. [ ][ ] MORE THAN 3 YEARS AGO.....96
31A	How did you obtain the net?	BOUGHT IT AT COMMERCIAL PRICE... 1 BOUGHT IT WITH VOUCHER OR OTHER SUBSIDY ..... 2 RECEIVED IT FREE..... 3 OTHER_____6 (SPECIFY) DON'T KNOW..... 8	BOUGHT IT AT COMMERCIAL PRICE... 1 BOUGHT IT WITH VOUCHER OR OTHER SUBSIDY ..... 2 RECEIVED IT FREE..... 3 OTHER_____6 (SPECIFY) DON'T KNOW..... 8	BOUGHT IT AT COMMERCIAL PRICE... 1 BOUGHT IT WITH VOUCHER OR OTHER SUBSIDY ..... 2 RECEIVED IT FREE..... 3 OTHER_____6 (SPECIFY) DON'T KNOW..... 8
31B	When you got the mosquito bed net, was it treated with an insecticide?	YES, PRETREATED..... 1 NO, CAME WITH TREATMENT KIT AND I TREATED IT MYSELF.....2 NO IT WAS NOT TREATED .....3 OTHER_____6 (SPECIFY) DON'T KNOW.....8 (SKIP TO 32A)	YES, PRETREATED..... 1 NO, CAME WITH TREATMENT KIT AND I TREATED IT MYSELF.....2 NO IT WAS NOT TREATED .....3 OTHER_____6 (SPECIFY) DON'T KNOW.....8 (SKIP TO 32A)	YES, PRETREATED..... 1 NO, CAME WITH TREATMENT KIT AND I TREATED IT MYSELF.....2 NO IT WAS NOT TREATED .....3 OTHER_____6 (SPECIFY) DON'T KNOW..... 8 (SKIP TO 32A)
32	OBSERVE OR ASK THE BRAND OF MOSQUITO BED NET.	PERMANET .....1 DAWA NET .....2 OLYSET.....3 LOCALLY MADE .....4 OTHER..... 6 DON'T KNOW..... 8	PERMANET .....1 DAWA NET .....2 OLYSET.....3 LOCALLY MADE .....4 OTHER ..... 6 DON'T KNOW..... 8	PERMANET .....1 DAWA NET .....2 OLYSET.....3 LOCALLY MADE .....4 OTHER ..... 6 DON'T KNOW..... 8
32A	Since you got the mosquito bed net, was it ever soaked or dipped in a liquid to repel mosquitoes or bugs?	YES..... 1 NO..... 2 (SKIP TO 32C) DON'T KNOW..... 8	YES..... 1 NO..... 2 (SKIP TO 32C) DON'T KNOW..... 8	YES..... 1 NO..... 2 (SKIP TO 32C) DON'T KNOW..... 8
32B	How long ago was the net last soaked or dipped? IF LESS THAN 1 MONTH, RECORD '00'.	MONTHS AGO. [ ][ ] MORE THAN 3 YEARS AGO.....96	MONTHS AGO. [ ][ ] MORE THAN 3 YEARS AGO.....96	MONTHS AGO. [ ][ ] MORE THAN 3 YEARS AGO.....96
32C	Did anyone sleep under this mosquito bed net last night?	YES..... 1 NO.....2 (SKIP TO 32E) DON'T KNOW.....8	YES..... 1 NO.....2 (SKIP TO 32E) DON'T KNOW.....8	YES..... 1 NO.....2 (SKIP TO 32E) DON'T KNOW.....8

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES			SKIP
32D	Who slept under this mosquito bed net last night? RECORD THE RESPECTIVE LINE NUMBER FROM THE HOUSEHOLD SCHEDULE.	NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ]	NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ]	NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ]	
32E		GO BACK TO 30 FOR NEXT NET; OR, IF NO MORE NETS, GO TO 32F.	GO BACK TO 30 FOR NEXT NET; OR, IF NO MORE NETS, GO TO 32F.	GO BACK TO 30 IN THE FIRST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE NETS, GO TO 32F	

32F	In the past year, have you seen or heard messages about malaria: On the television? On the radio? In a newspaper or magazine? From a poster? From leaflets or brochures? From a health worker?	YES NO TELEVISION .....1 2 RADIO .....1 2 NEWSPAPER/MAGAZINE.....1 2 POSTER.....1 2 LEAFLETS/BROCHURES.....1 2 HEALTH WORKER 1 2	
32G	Have you seen or heard any messages telling you to give a child with fever chloroquine tablets for three days?	YES .....1 NO .....2 DON'T KNOW 8	
32H	Have you ever listened to the radio program "He Ha Ho?"	YES .....1 NO .....2 DON'T KNOW 8	
33	Where do you usually wash your hands?	IN DWELLING/YARD/PLOT.....1 SOMEWHERE ELSE .....2 NOWHERE.....3	→ 34A
34	ASK TO SEE THE PLACE AND OBSERVE IF THE FOLLOWING ITEMS ARE PRESENT.	YES NO WATER/TAP.....1 2 SOAP, ASH OR OTHER CLEANSING AGENT .....1 2 BASIN.....1 2	
34A	Are you currently a member of a mutual health organization or health insurance scheme?	YES .....1 NO .....2 DON'T KNOW 8	→ 34E
34B	What type of scheme are you a member of?	PRIVATE HEALTH INSURANCE.....1 MHO .....2 GOVT.HEALTH COVERAGE.....3 OTHER _____ 6 (SPECIFY)	

34C	What benefits does your scheme cover?	CONSULTATION ..... A DRUGS..... B LABORATORY COSTS..... C X-RAY..... D ADMISSION ..... E SURGERY..... F SPECIALIST CARE..... G EXTRA OR BETTER FEEDING IN HOSPITAL..... H TRANSPORT ..... I ANTENATAL CARE ..... J NORMAL DELIVERY CARE ..... K COMPLICATED DELIVERY CARE..... L FAMILY PLANNING ..... M OTHER _____ N (SPECIFY)	
34D	Have you or any member of your family ever benefited from the scheme?	YES ..... 1 NO ..... 2 DON'T KNOW 8	▸35
34E	Will you consider joining a scheme in the future?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
35	ASK RESPONDENT FOR A TEASPOONFUL OF SALT. TEST SALT FOR IODINE. RECORD PPM (PARTS PER MILLION).	0 PPM (NO IODINE)..... 1 7 PPM..... 2 15 PPM..... 3 ABOVE 30 PPM ..... 4 NO SALT IN HH ..... 5 SALT NOT TESTED _____ 6 (SPECIFY REASON)	

HEIGHT, WEIGHT, HEMOGLOBIN MEASUREMENT, AND HIV TESTING

CHECK COLUMNS (2), (7), (8) AND (9): RECORD THE LINE NUMBER, NAME AND AGE OF ALL WOMEN AGE 15-49 AND ALL CHILDREN UNDER AGE 6.

WOMEN 15-49				WEIGHT AND HEIGHT MEASUREMENT OF WOMEN 15-49			
LINE NO. FROM COL.(8)	NAME FROM COL.(2)	AGE FROM COL.(7)	What is (NAME)'s date of birth?	WEIGHT (KILOGRAMS)	HEIGHT (CENTIMETERS)	MEASURED LYING DOWN OR STANDING UP	RESULT 1 MEASURED 2 NOT PRESENT 3 REFUSED 6 OTHER
(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)
		YEARS					

CHILDREN UNDER AGE 6				WEIGHT AND HEIGHT MEASUREMENT OF CHILDREN BORN IN 1998 OR LATER			
LINE NO. FROM COL.(9)	NAME FROM COL.(2)	AGE FROM COL.(7)	What is (NAME)'s date of birth?*	WEIGHT (KILOGRAMS)	HEIGHT (CENTIMETERS)	MEASURED LYING DOWN OR STANDING UP	RESULT 1 MEASURED 2 NOT PRESENT 3 REFUSED 6 OTHER
						LYING STAND.	
				0 .	.	1 2	
				0 .	.	1 2	
				0 .	.	1 2	
				0 .	.	1 2	
				0 .	.	1 2	
				0 .	.	1 2	
TICK HERE IF CONTINUATION SHEET USED							

* FOR CHILDREN NOT INCLUDED IN ANY BIRTH HISTORY, ASK DAY, MONTH AND YEAR. FOR ALL OTHER CHILDREN, COPY MONTH AND YEAR FROM Q215 IN MOTHER'S BIRTH HISTORY AND ASK DAY.

HEMOGLOBIN MEASUREMENT OF WOMEN 15-49					
CHECK COLUMN (38):	LINE NO. OF PARENT/ RESPONSIBLE ADULT. RECORD '00' IF NOT LISTED IN HOUSEHOLD SCHEDULE	READ CONSENT STATEMENT TO WOMAN/PARENT/RESPONSIBLE ADULT* CIRCLE CODE (AND SIGN)	HEMOGLOBIN LEVEL (G/DL)	CURRENTLY PREGNANT	RESULT 1 MEASURED 2 NOT PRESENT 3 REFUSED 6 OTHER
(44)	(45)	(46)	(47)	(48)	(49)
AGE 15-17 AGE 18-49 1 2 GO TO 46		GRANTED REFUSED 1 2 SIGN _____ NEXT LINE	.	YES NO/DK 1 2	
1 2 GO TO 46		1 2 SIGN _____ NEXT LINE	.	1 2	
1 2 GO TO 46		1 2 SIGN _____ NEXT LINE	.	1 2	

HEMOGLOBIN MEASUREMENT OF CHILDREN BORN IN 1998 OR LATER					
	LINE NO. OF PARENT/ RESPONSIBLE ADULT. RECORD '00' IF NOT LISTED IN HOUSEHOLD SCHEDULE	READ CONSENT STATEMENT TO PARENT/RESPONSIBLE ADULT* CIRCLE CODE (AND SIGN)	HEMOGLOBIN LEVEL (G/DL)		RESULT 1 MEASURED 2 NOT PRESENT 3 REFUSED 6 OTHER
		GRANTED REFUSED 1 2 SIGN _____ NEXT LINE	.		
		1 2 SIGN _____ NEXT LINE	.		
		1 2 SIGN _____ NEXT LINE	.		
		1 2 SIGN _____ NEXT LINE	.		
		1 2 SIGN _____ NEXT LINE	.		
		1 2 SIGN _____ NEXT LINE	.		

* CONSENT STATEMENT

Hello, my name is (YOUR NAME) and I am from the Ghana Health Services and collaborating with the Ghana Statistical Service that is carrying out this health survey. .As part of this survey, we are studying anemia among women and children. Anemia is a serious health problem that results from poor nutrition. This survey will assist the government to develop programs to prevent and treat anemia.

We request that you (and all children born in 1998 or later) participate in the anemia testing part of this survey and give a few drops of blood from a finger. The test uses disposable sterile instruments that are clean and completely safe. The blood will be analyzed with new equipment and the results of the test will be given to you right after the blood is taken. The results will be kept confidential.

May I now ask that you (and NAME OF CHILD[REN]) participate in the anemia test. However, if you decide not to have the test done, it is your right and we will respect your decision. Now please tell me if you agree to have the test(s) done.

Note: In countries where some enumeration areas are higher than 1,000 meters, altitude information should be collected for each enumeration area higher than 1,000 meters so that the anemia estimates can be adjusted appropriately.

50	CHECK 47 AND 48: NUMBER OF PERSONS WITH HEMOGLOBIN LEVEL BELOW THE CUTOFF POINT* ONE OR MORE ☐ → GIVE EACH WOMAN/PARENT/RESPONSIBLE ADULT RESULT OF HEMOGLOBIN MEASUREMENT AND CONTINUE WITH 51.** NONE ☐ → GIVE EACH WOMAN/PARENT/RESPONSIBLE ADULT RESULT OF HEMOGLOBIN MEASUREMENT AND END HOUSEHOLD INTERVIEW.
51	We detected a low level of hemoglobin in (your blood/the blood of NAME OF CHILD(REN)). This indicates that (you/NAME OF CHILD(REN)) have developed severe anemia, which is a serious health problem. We would like to inform the doctor at _____ about (your condition/the condition of NAME OF CHILD(REN)). This will assist you in obtaining appropriate treatment for the condition. Do you agree that the information about the level of hemoglobin in (your blood/the blood of NAME OF CHILD(REN)) may be given to the doctor?

NAME OF PERSON WITH HEMOGLOBIN BELOW THE CUTOFF POINT	NAME OF PARENT/RESPONSIBLE ADULT	AGREES TO REFERRAL?
WOMEN AGE 18-49		
		YES ..... 1 NO 2
		YES ..... 1 NO 2
		YES ..... 1 NO 2
		YES ..... 1 NO 2
WOMEN AGE 15-17 AND CHILDREN		
		YES ..... 1 NO 2
		YES ..... 1 NO 2
		YES ..... 1 NO 2
		YES ..... 1 NO 2
		YES ..... 1 NO 2
		YES ..... 1 NO 2
		YES ..... 1 NO 2
		YES ..... 1 NO 2
		YES ..... 1 NO 2

* The cutoff point is 9 g/dl for pregnant women and 7 g/dl for children and women who are not pregnant (or who don't know if they are pregnant.)

** If more than one woman or child is below the cutoff point, read the statement in Q.51 to each woman who is below the cutoff point and to each woman/parent/responsible adult of a child who is below the cutoff point.

HIV TESTING—WOMEN AND MEN

Total Number of Samples_____

CHECK COLUMNS (8) AND (9A): WRITE LINE NUMBER, NAME, SEX, AGE OF WOMEN 15-49 AND MEN 15-59. THIS PAGE TO BE DESTROYED IN OFFICE BEFORE TEST RESULTS ARE ADDED TO DATA FILE.

LINE NO. FROM COL.(8) OR (9A)	NAME FROM COL.(2)	SEX FROM COL.(4)	AGE FROM COL.(7)	CHECK AGE IN COL. (55):	LINE NO. OF PARENT/ RESPON -SIBLE ADULT	READ THE CONSENT STATEMENT TO THE **PARENT OR RESPONSIBLE ADULT** CIRCLE CODE (AND SIGN)			READ THE CONSENT STATEMENT TO THE **WOMAN OR MAN OR YOUTH** CIRCLE CODE (AND SIGN)			SAMPLE RESULT 1 SAMPLE TAKEN 2 REFUSED 3 NOT PRESENT 4 TECH. PROBLEM 6 OTHER (SPECIFY)	SAMPLE BAR CODE
(52)	(53)	(54)	(55)	(56)	(57)	(58)			(59)			(60)	(61)
		M F	YEARS	15-17 18+		AGREES	REFUSES	NOT READ	AGREES	REFUSES	NOT READ		
		1 2		1 2 ↓ TO 59		1 ↓ SIGN _____	2	3	1 ↓ SIGN _____	2	3	_____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER AND THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM
		1 2		1 2 ↓ TO 59		1 ↓ SIGN _____			1 ↓ SIGN _____	2	3	_____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER AND THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM
		1 2		1 2 ↓ TO 59		1 ↓ SIGN _____			1 ↓ SIGN _____	2	3	_____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER AND THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM
		1 2		1 2 ↓ TO 59		1 ↓ SIGN _____			1 ↓ SIGN _____	2	3	_____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER AND THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM
		1 2		1 2 ↓ TO 59		1 ↓ SIGN _____			1 ↓ SIGN _____	2	3	_____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER AND THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM
		1 2		1 2 ↓ TO 59		1 ↓ SIGN _____			1 ↓ SIGN _____	2	3	_____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER AND THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM
		1 2		1 2 ↓ TO 59		1 ↓ SIGN _____			1 ↓ SIGN _____	2	3	_____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER AND THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM

CONSENT STATEMENT

Hello, my name is _____. I'm from the Ghana Health Services and collaborating with the Ghana Statistical Services. As part of this survey, we are studying HIV among women and men. As you know, HIV is the virus that causes AIDS. The government is trying to find out how common HIV is, so that they can develop programs to prevent HIV and care for those who have it.

We request that you participate in this test by giving a few drops of blood from a finger. For this test, I will use clean, sterile instruments that are completely safe. Blood will be tested later in the laboratory.

To ensure the confidentiality of this test result, no individual names will be attached to the blood sample; therefore, we will not be able to give you the result of your test and no one will be able to trace the test back to you. If you want to know whether you have HIV, I can tell you where you can go to get tested.

Do you have any questions?

I hope you will agree to participate in the HIV testing. But if you decide not to have the test done, it is your right and I will respect your decision.

Will you accept to participate in the HIV test? GO BACK TO COLUMN (59). CIRCLE THE APPROPRIATE CODE AND SIGN.

IF RESPONDENT IS AGE 15-17, ASK PARENT/GUARDIAN: Now, will you tell me if you accept for (NAME OF YOUTH) to participate in the HIV test? GO TO COLUMN (58). CIRCLE THE APPROPRIATE CODE AND SIGN. IF PARENT AGREES, READ THE PRECEDING PARAGRAPHS TO YOUTH FOR HIS/HER CONSENT AND RECORD IN COL. (59).

NOTE FOR THE INTERVIEWER:
THE RESPONDENT HAS THE RIGHT TO REFUSE THE HIV TEST, AND THEREFORE SHOULD NOT BE FORCED.

GHANA DEMOGRAPHIC AND HEALTH SURVEYS
WOMAN'S QUESTIONNAIRE

GHANA STATISTICAL SERVICE

IDENTIFICATION

LOCALITY NAME _____

NAME OF HOUSEHOLD HEAD _____

EA NUMBER .....

HOUSEHOLD NUMBER .....

REGION .....

DISTRICT .....

URBAN/RURAL (URBAN=1, RURAL=2) .....

CITY/LARGE TOWN/SMALL TOWN/VILLAGE.....
(CITY=1, LARGE TOWN=2, SMALL TOWN=3, VILLAGE=4)

NAME AND LINE NUMBER OF WOMAN _____

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY MONTH YEAR 2 0 0 3
INTERVIEWER'S NAME	_____	_____	_____	NAME
RESULT*	_____	_____	_____	RESULT
NEXT VISIT: DATE	_____	_____		TOTAL NO. OF VISITS
TIME	_____	_____		

*RESULT CODES:

1	COMPLETED	4	REFUSED		
2	NOT AT HOME	5	PARTLY COMPLETED	7	OTHER _____ (SPECIFY)
3	POSTPONED	6	INCAPACITATED		

LANGUAGE

LANGUAGE OF QUESTIONNAIRE: **ENGLISH** 1

LANGUAGE OF INTERVIEW *** _____

NATIVE LANGUAGE OF RESPONDENT*** _____

WAS A TRANSLATOR USED? (YES=1, NO=2).....

*** LANGUAGE CODES:
1 ENGLISH 2 AKAN 3 GA 4 EWE 5 NZEMA 6 DAGBANI
7 OTHER_____
(SPECIFY)

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____	DATE _____		

SECTION 1. RESPONDENT'S BACKGROUND

INTRODUCTION AND CONSENT

INFORMED CONSENT

Hello. My name is _____ and I am working with the Ghana Statistical Service. We are conducting a national survey about the health of women, men and children. We would very much appreciate your participation in this survey. I would like to ask you about your health (and the health of your children). This information will help the government to plan health services. The survey usually takes between 20 and 45 minutes to complete. Whatever information you provide will be kept strictly confidential and will not be shown to other persons.

Participation in this survey is voluntary and you can choose not to answer any individual question or all of the questions. However, we hope that you will participate in this survey since your views are important.

At this time, do you want to ask me anything about the survey?
May I begin the interview now?

Signature of interviewer: _____ Date: _____

RESPONDENT AGREES TO BE INTERVIEWED ..... 1 ▼ RESPONDENT DOES NOT AGREE TO BE INTERVIEWED .... 2 ⟶ END

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOUR ..... [ ][ ] MINUTES ..... [ ][ ]	
102	First I would like to ask some questions about you and your household. For most of the time until you were 12 years old, did you live in a city, in a town, or in the village?	CITY ..... 1 TOWN ..... 2 VILLAGE 3	
103	How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? IF LESS THAN ONE YEAR, RECORD '00' YEARS.	YEARS ..... [ ][ ] ALWAYS ..... 95 VISITOR 96	 → 105
104	Just before you moved here, did you live in a city, in a town, or in the village?	CITY ..... 1 TOWN ..... 2 VILLAGE 3	
105	In what month and year were you born?	MONTH ..... [ ][ ] DON'T KNOW MONTH ..... 98 YEAR ..... [ ][ ][ ][ ] DON'T KNOW YEAR 9998	
106	How old were you at your last birthday? COMPARE AND CORRECT 105 AND/OR 106 IF INCONSISTENT.	AGE IN COMPLETED YEARS [ ][ ]	
107	Have you ever attended school?	YES ..... 1 NO 2	 → 111
108	What is the highest level of school you attended: primary, middle/JSS, secondary/SSS, or higher?	PRIMARY ..... 1 MIDDLE/JSS ..... 2 SECONDARY/SSS ..... 3 HIGHER 4	
109	What is the highest grade you completed at that level?	GRADE ..... [ ][ ]	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
110	CHECK 108: PRIMARY OR MIDDLE/JSS ☐ ▼ SECONDARY/SSS OR HIGHER ☐		→114
111	Now I would like you to read this sentence to me. SHOW CARD TO RESPONDENT.[1] IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE: Can you read any part of the sentence to me?	CANNOT READ AT ALL.....1 ABLE TO READ ONLY PARTS OF SENTENCE.....2 ABLE TO READ WHOLE SENTENCE.....3 NO CARD WITH REQUIRED LANGUAGE_____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRED.....5	
112	Have you ever participated in a literacy program or any other program that involves learning to read or write (not including primary school)?	YES.....1 NO 2	
113	CHECK 111: CODE '2', '3' OR '4' CIRCLED ☐ ▼ CODE '1' OR '5 ' CIRCLED ☐		→115
114	Do you read a newspaper or magazine almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY.....1 AT LEAST ONCE A WEEK .....2 LESS THAN ONCE A WEEK .....3 NOT AT ALL 4	
115	Do you listen to the radio almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY.....1 AT LEAST ONCE A WEEK .....2 LESS THAN ONCE A WEEK .....3 NOT AT ALL 4	
116	Do you watch television almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY.....1 AT LEAST ONCE A WEEK .....2 LESS THAN ONCE A WEEK .....3 NOT AT ALL 4	
117	What is your religion?	CATHOLIC.....01 ANGLICAN .....02 METHODIST.....03 PRESBYTERIAN .....04 OTHER CHRISTIAN.....05 MOSLEM .....06 TRADITIONAL/SPIRITUALIST.....07 NO RELIGION .....08 OTHER _____ 96 (SPECIFY)	
118	To which ethnic group do you belong?	AKAN .....01 GA/DANGME.....02 EWE.....03 GUAN .....04 MOLE-DAGBANI .....05 GRUSSI .....06 GRUMA .....07 HAUSA .....08 OTHER _____ 96 (SPECIFY)	

SECTION 2: REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about all the births you have had during your life. Have you ever given birth?	YES.....1 NO 2	 →206
202	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES.....1 NO 2	 →204
203	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME ..... [ ][ ] DAUGHTERS AT HOME ..... [ ][ ]	
204	Do you have any sons or daughters to whom you have given birth who are alive but do not live with you?	YES.....1 NO 2	 →206
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	SONS ELSEWHERE ..... [ ][ ] DAUGHTERS ELSEWHERE .. [ ][ ]	
206	Have you ever given birth to a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	YES.....1 NO 2	 →208
207	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	BOYS DEAD ..... [ ][ ] GIRLS DEAD..... [ ][ ]	
208	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL ..... [ ][ ]	
209	CHECK 208: Just to make sure that I have this right: you have had in TOTAL _____ births during your life. Is that correct? YES [ ] NO [ ] → PROBE AND CORRECT 201-208 AS NECESSARY.		
210	CHECK 208: ONE OR MORE BIRTHS [ ] NO BIRTHS [ ]		→226

211 Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had. RECORD NAMES OF ALL THE BIRTHS IN 212. RECORD TWINS AND TRIPLETS ON SEPARATE LINES.

212 What name was given to your (first/next) baby? (NAME)	213 Were any of these births twins?	214 Is (NAME) a boy or a girl?	215 In what month and year was (NAME) born? PROBE: What is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COM-PLETED YEARS.	218 IF ALIVE Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSEHOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD)	220 IF DEAD: How old was (NAME) when he/she died? IF '1 YR', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	221 Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME)?
01	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (NEXT BIRTH)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	
02	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2
03	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2
04	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2
05	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2
06	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2
07	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2

212	213	214	215	216	217 IF ALIVE:	218 IF ALIVE	219 IF ALIVE:	220 IF DEAD:	221
What name was given to your next baby? (NAME)	Were any of these births twins?	Is (NAME) a boy or a girl?	In what month and year was (NAME) born? PROBE: What is his/her birthday?	Is (NAME) still alive?	How old was (NAME) at his/her last birthday? RECORD AGE IN COM-PLETED YEARS.	Is (NAME) living with you?	RECORD HOUSEHOLD LINE NUMBER OF CHILD (RECORD 00' IF CHILD NOT LISTED IN HOUSEHOLD)	How old was (NAME) when he/she died? IF 1 YR, PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME)?
08	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2
09	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2
10	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2
11	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2
12	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2

222	Have you had any live births since the birth of (NAME OF LAST BIRTH)?	YES ..... 1 NO 2	
223	COMPARE 208 WITH NUMBER OF BITHS IN HISTORY ABOVE AND MARK: NUMBERS ARE SAME [ ] → CHECK: FOR EACH BIRTH: YEAR OF BIRTH IS RECORDED. FOR EACH LIVING CHILD: CURRENT AGE IS RECORDED. FOR EACH DEAD CHILD: AGE AT DEATH IS RECORDED. FOR AGE AT DEATH 12 MONTHS OR 1 YR.: PROBE TO DETERMINE EXACT NUMBER OF MONTHS. NUMBERS ARE DIFFERENT [ ] → (PROBE AND RECONCILE)		[ ] [ ] [ ] [ ]
224	CHECK 215 AND ENTER THE NUMBER OF BIRTHS IN 1998 OR LATER. IF NONE, RECORD '0'.		[ ]

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
225	FOR EACH BIRTH SINCE JANUARY 1998, ENTER 'B' IN THE MONTH OF BIRTH IN THE CALENDAR. FOR EACH BIRTH, ASK THE NUMBER OF MONTHS THE PREGNANCY LASTED AND RECORD 'P' IN EACH OF THE PRECEDING MONTHS ACCORDING TO THE DURATION OF PREGNANCY. (NOTE: THE NUMBER OF 'P's MUST BE ONE LESS THAN THE NUMBER OF MONTHS THAT THE PREGNANCY LASTED.) WRITE THE NAME OF THE CHILD TO THE LEFT OF THE 'B' CODE.		
226	Are you pregnant now?	YES ..... 1 NO ..... 2 UNSURE 8	→229
227	How many months pregnant are you? RECORD NUMBER OF COMPLETED MONTHS. ENTER 'P's IN THE CALENDAR, BEGINNING WITH THE MONTH OF INTERVIEW AND FOR THE TOTAL NUMBER OF COMPLETED MONTHS.	MONTHS ..... [ ][ ]	
228	At the time you became pregnant did you want to become pregnant then, did you want to wait until later, or did you not want to have any (more) children at all?	THEN ..... 1 LATER ..... 2 NOT AT ALL 3	
229	Have you ever had a pregnancy that miscarried, was aborted, or ended in a stillbirth?	YES ..... 1 NO 2	→237
230	When did the last such pregnancy end?	MONTH ..... [ ][ ] YEAR ..... [ ][ ][ ][ ]	
231	CHECK 230: LAST PREGNANCY ENDED IN JAN. 1998 OR LATER [ ] ▼ LAST PREGNANCY ENDED BEFORE JAN. 1998 [ ]		→237
232	How many months pregnant were you when the last such pregnancy ended? RECORD NUMBER OF COMPLETED MONTHS. ENTER 'T' IN THE CALENDAR IN THE MONTH THAT THE PREGNANCY TERMINATED AND 'P' FOR THE REMAINING NUMBER OF COMPLETED MONTHS.	MONTHS ..... [ ][ ]	
233	Have you ever had any other pregnancies which did not result in a live birth?	YES ..... 1 NO 2	→237
234	ASK THE DATE AND THE DURATION OF PREGNANCY FOR EACH EARLIER NON-LIVE BIRTH PREGNANCY BACK TO JANUARY 1998. ENTER 'T' IN THE CALENDAR IN THE MONTH THAT EACH PREGNANCY TERMINATED AND 'P' FOR THE REMAINING NUMBER OF COMPLETED MONTHS.		
235	Did you have any pregnancies that terminated before 1998 that did not result in a live birth?	YES ..... 1 NO 2	→237
236	When did the last such pregnancy that terminated before 1998 end?	MONTH ..... [ ][ ] YEAR ..... [ ][ ][ ][ ]	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
237	When did your last menstrual period start? _____ (DATE, IF GIVEN)	DAYS AGO ..... 1 [ ][ ] WEEKS AGO..... 2 [ ][ ] MONTHS AGO ..... 3 [ ][ ] YEARS AGO ..... 4 [ ][ ] IN MENOPAUSE/ HAS HAD HYSTERECTOMY ..... 994 BEFORE LAST BIRTH ..... 995 NEVER MENSTRUATED..... 996	
238	From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant if she has sexual relations?	YES ..... 1 NO ..... 2 DON'T KNOW 8	▸301
239	Is this time just before her period begins, during her period, right after her period has ended, or halfway between two periods?	JUST BEFORE HER PERIOD BEGINS .... 1 DURING HER PERIOD ..... 2 RIGHT AFTER HER PERIOD HAS ENDED ..... 3 HALFWAY BETWEEN TWO PERIODS .... 4 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	

SECTION 3. CONTRACEPTION

Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy. CIRCLE CODE 1 IN 301 FOR EACH METHOD MENTIONED SPONTANEOUSLY. THEN PROCEED DOWN COLUMN 301, READING THE NAME AND DESCRIPTION OF EACH METHOD NOT MENTIONED SPONTANEOUSLY. CIRCLE CODE 1 IF METHOD IS RECOGNIZED, AND CODE 2 IF NOT RECOGNIZED. THEN, FOR EACH METHOD WITH CODE 1 CIRCLED IN 301, ASK 302.

301	Which ways or methods have you heard about? FOR METHODS NOT MENTIONED SPONTANEOUSLY, ASK: Have you ever heard of (METHOD)?		302 Have you ever used (METHOD)?
01	FEMALE STERILIZATION Women can have an operation to avoid having any more children.	YES.....1 NO 2	Have you ever had an operation to avoid having any more children? YES .....1 NO.....2
02	MALE STERILIZATION Men can have an operation to avoid having any more children.	YES.....1 NO 2	Have you ever had a partner who had an operation to avoid having any more children? YES .....1 NO.....2
03	PILL Women can take a pill every day to avoid becoming pregnant.	YES.....1 NO 2	YES .....1 NO.....2
04	IUD Women can have a loop or coil placed inside them by a doctor or a nurse.	YES.....1 NO 2	YES .....1 NO.....2
05	INJECTABLES Women can have an injection by a health provider which stops them from becoming pregnant for one or more months.	YES.....1 NO 2	YES .....1 NO.....2
06	IMPLANTS Women can have several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years.	YES.....1 NO 2	YES .....1 NO.....2
07	CONDOM Men can put a rubber sheath on their penis before sexual intercourse.	YES.....1 NO 2	YES .....1 NO.....2
08	FEMALE CONDOM Women can place a sheath in their vagina before sexual intercourse.	YES.....1 NO 2	YES .....1 NO.....2
09	DIAPHRAGM Women can place a thin flexible disk in their vagina before intercourse.	YES.....1 NO 2	YES .....1 NO.....2
10	FOAM OR JELLY Women can place a suppository/tablet, jelly, or cream in their vagina before intercourse.	YES.....1 NO 2	YES .....1 NO.....2
11	LACTATIONAL AMENORRHEA METHOD (LAM) Up to 6 months after childbirth, a woman can use a method that requires that she breastfeeds frequently, day and night, and that her menstrual period has not returned.	YES.....1 NO 2	YES .....1 NO.....2
12	RHYTHM OR PERIODIC ABSTINENCE Every month that a woman is sexually active she can avoid pregnancy by not having sexual intercourse on the days of the month she is most likely to get pregnant.	YES.....1 NO 2	YES .....1 NO.....2
13	WITHDRAWAL Men can be careful and pull out before climax.	YES.....1 NO 2	YES .....1 NO.....2
14	EMERGENCY CONTRACEPTION Women can take pills up to five days after sexual intercourse to avoid becoming pregnant.	YES.....1 NO 2	YES .....1 NO.....2
15	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES.....1 _____ (SPECIFY) _____ (SPECIFY) NO 2	YES .....1 NO.....2 YES .....1 NO.....2

303	CHECK 302:		
	NOT A SINGLE "YES" (NEVER USED) ☐	AT LEAST ONE "YES" (EVER USED) ☐ _____	→307

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
304	Have you ever used anything or tried in any way to delay or avoid getting pregnant?	YES .....1 NO 2	 →329
306	What have you used or done? CORRECT 302 AND 303 (AND 301 IF NECESSARY).		
307	Now I would like to ask you about the first time that you did something or used a method to avoid getting pregnant. How many living children did you have at that time, if any? IF NONE, RECORD '00'.	NUMBER OF CHILDREN ..... [ ][ ]	
308	CHECK 302 (01): WOMAN NOT STERILIZED [ ] ▼ WOMAN STERILIZED [ ]		→311A
309	CHECK 226: NOT PREGNANT OR UNSURE [ ] ▼ PREGNANT [ ]		→329
310	Are you currently doing something or using any method to delay or avoid getting pregnant?	YES .....1 NO 2	 →329
311 311A	Which method are you using? IF MORE THAN ONE METHOD MENTIONED, FOLLOW SKIP INSTRUCTION FOR HIGHEST METHOD ON LIST. CIRCLE 'A' FOR FEMALE STERILIZATION.	FEMALE STERILIZATION ..... A MALE STERILIZATION..... B PILL ..... C IUD ..... D INJECTABLES ..... E IMPLANTS ..... F MALE CONDOM ..... G FEMALE CONDOM..... H DIAPHRAGM ..... I FOAM/JELLY ..... J LACTATIONAL AMEN. METHOD..... K PERIODIC ABSTINENCE ..... L WITHDRAWAL..... M OTHER _____ X (SPECIFY)	→313 →316A
312A	At the time you first started using the pill, did you consult a doctor, nurse, midwife, or a pharmacist?	YES .....1 NO 2	
312B	At the time you last got the pill, did you consult a doctor, nurse, midwife, or pharmacist?	YES .....1 NO 2	
312C	May I see the package of pill you are using now? RECORD NAME OF BRAND. _____ (NAME OF BRAND)	PACKAGE SEEN .....1 BRAND NAME ..... [ ][ ] PACKAGE NOT SEEN 2	→312E
312D	Do you know the brand name of the pill you are using now? RECORD NAME OF BRAND. _____ (NAME OF BRAND)	BRAND NAME ..... [ ][ ] DON'T KNOW 98	
312E	How much did you pay for the pill the last time you got them?	CEDIS ..... [ ][ ][ ][ ][ ] FREE ..... 99996 DON'T KNOW 99998	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
312F	How many cycles of pill did you get the last time?	NUMBER OF CYCLES..... [ ] DON'T KNOW 8	
312G	Have you experienced any side effects from the use of the pill?	YES ..... 1 NO 2	→316A
312H	What side effects have you experienced? CIRCLE ALL MENTIONED.	DIZZINESS ..... A WEIGHT GAIN ..... B HEADACHES ..... C EXCESSIVE BLEEDING ..... D IRREGULAR CYCLE ..... E PAINFUL PERIOD/CRAMPS ..... F PALPITATION/IRREGULAR HEART BEAT ..... G OTHER _____ H (SPECIFY)	→316A
313	In what facility did the sterilization take place? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC ..... 11 GOVT. HEALTH CENTER ..... 12 FAMILY PLANNING CLINIC ..... 13 MOBILE CLINIC ..... 14 OTHER PUBLIC _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... 21 PRIVATE DOCTOR ..... 22 MOBILE CLINIC ..... 24 FP/PPAG CLINIC ..... 26 OTHER PRIVATE MEDICAL _____ 28 (SPECIFY) OTHER _____ 96 (SPECIFY) DON'T KNOW 98	
314	CHECK 311: CODE 'A' CIRCLED [ ] → Before your sterilization operation, were you told that you would not be able to have any (more) children because of the operation? CODE 'A' NOT CIRCLED [ ] → Before the sterilization operation, was your husband/partner told that he would not be able to have any (more) children because of the operation?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
316 316A	In what month and year was the sterilization performed? For how long have you been using (CURRENT METHOD) now without stopping? PROBE: In what month and year did you start using (CURRENT METHOD) continuously?	MONTH ..... [ ][ ] YEAR ..... [ ][ ][ ][ ]	
316B	CHECK 316/316A, 215 AND 230: ANY BIRTH OR PREGNANCY TERMINATION AFTER MONTH AND YEAR OF START OF USE OF CONTRACEPTION IN 316/316A — YES [ ] → NO [ ] → GO BACK TO 316/316A, PROBE AND RECORD MONTH AND YEAR AT START OF CONTINUOUS USE OF CURRENT METHOD (MUST BE AFTER LAST BIRTH OR PREGNANCY TERMINATION).		
317	CHECK 316/316A: YEAR IS 1998 OR LATER [ ] → YEAR IS 1997 OR EARLIER [ ] _____		→327

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
319	CHECK 311/311A: CIRCLE METHOD CODE IF MORE THAN ONE METHOD CODE CIRCLED IN 311/311A, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	FEMALE STERILIZATION .....01 MALE STERILIZATION.....02 PILL.....03 IUD .....04 INJECTABLES .....05 IMPLANTS .....06 MALE CONDOM .....07 FEMALE CONDOM.....08 DIAPHRAGM .....09 FOAM/JELLY .....10 LACTATIONAL AMEN. METHOD.....11 PERIODIC ABSTINENCE.....12 WITHDRAWAL.....13 OTHER METHOD 96	→322 →331 →320A →331 →331 →331
320 320A	Where did you obtain (CURRENT METHOD) when you started using it? Where did you learn to use the lactational amenorrhea method? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC.....11 GOVT. HEALTH CENTER.....12 FAMILY PLANNING CLINIC.....13 MOBILE CLINIC.....14 FIELDWORKER.....15 OTHER PUBLIC_____16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC .....21 PRIVATE DOCTOR .....22 PHARMACY/CHEMIST/ DRUG STORE .....23 MOBILE CLINIC.....24 FIELDWORKER.....25 FP/PPAG CLINIC.....26 MATERNITY HOME.....27 OTHER PRIVATE MEDICAL _____ 28 (SPECIFY) OTHER SOURCE SHOP .....31 CHURCH .....32 FRIEND/RELATIVE .....33 OTHER _____ 96 (SPECIFY)	
321	CHECK 311/311A: CIRCLE METHOD CODE: IF MORE THAN ONE METHOD CODE CIRCLED IN 311/311A, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	PILL.....03 IUD .....04 INJECTABLES .....05 IMPLANTS .....06 MALE CONDOM .....07 FEMALE CONDOM.....08 DIAPHRAGM .....09 FOAM/JELLY .....10 LACTATIONAL AMEN. METHOD.....11	 →328 →325 →325 →325 →325
322	You first obtained (CURRENT METHOD) from (SOURCE OF METHOD FROM 313 OR 320). At that time, were you told about side effects or problems you might have with the method?	YES .....1 NO 2	→324
323	Were you ever told by a health or family planning worker about side effects or problems you might have with the method?	YES .....1 NO 2	 →325
324	Were you told what to do if you experienced side effects or problems?	YES .....1 NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
325	CHECK 322: CODE '1' CIRCLED → At that time, were you told about other methods of family planning that you could use? CODE '1' NOT CIRCLED → When you obtained (CURRENT METHOD) from (SOURCE OF METHOD FROM 313 OR 320), were you told about other methods of family planning that you could use?	YES .....1 NO 2	 →327
326	Were you ever told by a health or family planning worker about other methods of family planning that you could use?	YES .....1 NO 2	
327	CHECK 311/311A: CIRCLE METHOD CODE:	FEMALE STERILIZATION .....01 MALE STERILIZATION.....02 PILL .....03 IUD .....04 INJECTABLES .....05 IMPLANTS .....06 MALE CONDOM .....07 FEMALE CONDOM.....08 DIAPHRAGM .....09 FOAM/JELLY .....10 LACTATIONAL AMEN. METHOD.....11 PERIODIC ABSTINENCE .....12 WITHDRAWAL.....13 OTHER METHOD 96	→331 →331 →331 →331 →331 →331
328	Where did you obtain (CURRENT METHOD) the last time? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC.....11 GOVT. HEALTH CENTER.....12 FAMILY PLANNING CLINIC.....13 MOBILE CLINIC.....14 FIELDWORKER.....15 OTHER PUBLIC_____16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC .....21 PRIVATE DOCTOR .....22 PHARMACY/CHEMIST/ DRUG STORE .....23 MOBILE CLINIC.....24 FIELDWORKER.....25 FP/PPAG CLINIC.....26 MATERNITY HOME.....27 OTHER PRIVATE MEDICAL _____ 28 (SPECIFY) OTHER SOURCE SHOP .....31 CHURCH .....32 FRIEND/RELATIVE .....33 OTHER _____ 96 (SPECIFY)	 →331
329	Do you know of a place where you can obtain a method of family planning?	YES .....1 NO 2	 →331

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
330	Where is that? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) Any other place? RECORD ALL PLACES MENTIONED	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC..... A GOVT. HEALTH CENTER..... B FAMILY PLANNING CLINIC..... C MOBILE CLINIC..... D FIELDWORKER..... E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC..... G PRIVATE DOCTOR..... H PHARMACY/CHEMIST/ DRUG STORE..... I MOBILE CLINIC..... J FIELD WORKER..... K FP/PPAG CLINIC..... L MATERNITY HOME..... M OTHER PRIVATE MEDICAL _____ N (SPECIFY) OTHER SOURCE SHOP..... O CHURCH..... P FRIEND/RELATIVE..... Q OTHER _____ X (SPECIFY)	
331	In the last 12 months, were you visited by a fieldworker/CBD who talked to you about family planning?	YES..... 1 NO..... 2	
332	In the last 12 months, have you visited a health facility for care for yourself (or your children)?	YES..... 1 NO..... 2	→401
333	Did any staff member at the health facility speak to you about family planning methods?	YES..... 1 NO..... 2	

SECTION 4A. PREGNANCY, POSTNATAL CARE AND BREASTFEEDING

401	CHECK 224: ONE OR MORE BIRTHS IN 1998 OR LATER ☐	NO BIRTHS IN 1998 OR LATER ☐	→487
402	ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 1998 OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 2 BIRTHS, USE LAST COLUMN OF ADDITIONAL QUESTIONNAIRES). Now I would like to ask you some questions about the health of all your children born in the last five years. (We will talk about each separately)		
403	LINE NUMBER FROM 212	LAST BIRTH LINE NUMBER ..... ☐☐	NEXT-TO-LAST BIRTH LINE NUMBER ..... ☐☐
404	FROM 212 AND 216	NAME _____ LIVING ☐ DEAD ☐	NAME _____ LIVING ☐ DEAD ☐
405	At the time you became pregnant with (NAME), did you want to become pregnant then, did you want to wait until later, or did you not want to have any (more) children at all?	THEN ..... 1 (SKIP TO 407) LATER ..... 2 NOT AT ALL ..... 3 (SKIP TO 407)	THEN ..... 1 (SKIP TO 423) LATER ..... 2 NOT AT ALL ..... 3 (SKIP TO 423)
406	How much longer would you like to have waited?	MONTHS ..... 1 ☐☐ YEARS ..... 2 ☐☐ DON'T KNOW 998	MONTHS ..... 1 ☐☐ YEARS ..... 2 ☐☐ DON'T KNOW 998
407	Did you see anyone for antenatal care for this pregnancy?[2] IF YES: Whom did you see? Anyone else? PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS SEEN.	HEALTH PROFESSIONAL DOCTOR ..... A NURSE/MIDWIFE ..... B AUXILIARY MIDWIFE ..... C OTHER PERSON TRAINED TRADITIONAL BIRTH ATTENDANT ..... D OTHER _____ X (SPECIFY) NO ONE ..... Y (SKIP TO 415)	
407A	Where did you receive antenatal care for this pregnancy? Anywhere else?	HOME YOUR HOME ..... A TBA'S HOME ..... B OTHER HOME ..... C PUBLIC SECTOR GOVT. HOSPITAL/CLINIC ..... D GOVT. HEALTH CENTER ..... E GOVT. HEALTH POST ..... F MOBILE CLINIC ..... G OTHER PUBLIC _____ H (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC ..... I MOBILE CLINIC ..... J MATERNITY HOME ..... K OTHER PVT. MEDICAL _____ L (SPECIFY) OTHER _____ X (SPECIFY)	

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
408	How many months pregnant were you when you first received antenatal care for this pregnancy?	MONTHS ..... [ ][ ] DON'T KNOW 98	
409	How many times did you receive antenatal care during this pregnancy?	NO. OF TIMES ..... [ ][ ] DON'T KNOW 98	
410	CHECK 409: NUMBER OF TIMES RECEIVED ANTENATAL CARE	ONCE [ ] (SKIP TO 412) MORE THAN ONCE OR DK [ ]	
411	How many months pregnant were you the last time you received antenatal care?	MONTHS ..... [ ][ ] DON'T KNOW..... 98	
412	During this pregnancy, were any of the following done at least once? Were you weighed? Was your height measured? Was your blood pressure measured? Did you give a urine sample? Did you give a blood sample?	YES NO WEIGHT ..... 1 2 HEIGHT ..... 1 2 BLOOD PRESSURE ..... 1 2 URINE SAMPLE..... 1 2 BLOOD SAMPLE..... 1 2	
413	Were you told about the signs of pregnancy complications?	YES..... 1 NO ..... 2 (SKIP TO 415) DON'T KNOW..... 8	
414	Were you told where to go if you had these complications?	YES..... 1 NO ..... 2 DON'T KNOW..... 8	
415	During this pregnancy, were you given an injection in the arm to prevent the baby from getting tetanus, that is, convulsions after birth?	YES..... 1 NO ..... 2 (SKIP TO 417) DON'T KNOW..... 8	
416	During this pregnancy, how many times did you get this injection?	TIMES ..... [ ]. DON'T KNOW..... 8	
417	During this pregnancy, were you given or did you buy any iron tablets? SHOW TABLET.	YES..... 1 NO ..... 2 (SKIP TO 419) DON'T KNOW..... 8	
418	During the whole pregnancy, for how many days did you take the tablets? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER OF DAYS.	NUMBER OF DAYS ..... [ ][ ][ ]. DON'T KNOW..... 998	
419	During this pregnancy, did you have difficulty with your vision during the daylight?	YES..... 1 NO ..... 2 DON'T KNOW..... 8	

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
420	During this pregnancy, did you suffer from night blindness?	YES.....1 NO .....2 DON'T KNOW.....8	
421	During this pregnancy, did you take any drugs to prevent you from getting malaria?	YES.....1 NO .....2 (SKIP TO 423) DON'T KNOW.....8	
422	What drugs did you take? RECORD ALL MENTIONED. IF TYPE OF DRUG IS NOT DETERMINED, SHOW TYPICAL ANTIMALARIAL DRUGS TO RESPONDENT.	FANSIDAR ..... A CHLOROQUINE ..... B UNKNOWN DRUG ..... C OTHER _____ X (SPECIFY)	
422A	CHECK 422: DRUGS TAKEN FOR MALARIA PREVENTION	CODE 'A' CIRCLED ☐ CODE 'A' NOT CIRCLED ☐ (SKIP TO 423)	
422B	How many times did you take Fansidar during this pregnancy	TIMES ..... ☐☐	
422C	CHECK 407: ANTENATAL CARE RECEIVED DURING THIS PREGNANCY?	CODE 'A', 'B' OR 'C' CIRCLED ☐ OTHER ☐ (SKIP TO 423)	
422D	Did you get the Fansidar during an antenatal visit, during another visit to a health facility or from some other source?	ANTENATAL VISIT ..... 1 ANOTHER FACILITY VISIT ..... 2 OTHER SOURCE _____ 6 (SPECIFY)	
423	When (NAME) was born, was he/she very large, larger than average, average, smaller than average, or very small?	VERY LARGE.....1 LARGER THAN AVERAGE.....2 AVERAGE .....3 SMALLER THAN AVERAGE.....4 VERY SMALL .....5 DON'T KNOW.....8	VERY LARGE.....1 LARGER THAN AVERAGE.....2 AVERAGE .....3 SMALLER THAN AVERAGE.....4 VERY SMALL .....5 DON'T KNOW.....8
424	Was (NAME) weighed at birth?	YES.....1 NO .....2 (SKIP TO 425A) DON'T KNOW.....8	YES.....1 NO .....2 (SKIP TO 425A) DON'T KNOW.....8
425	How much did (NAME) weigh? RECORD WEIGHT FROM HEALTH CARD, IF AVAILABLE.	KILOGRAM FROM CARD .....1 ☐.☐ KILOGRAM FROM RECALL.....2 ☐.☐ DON'T KNOW.....998	KILOGRAM FROM CARD..... 1 ☐.☐ KILOGRAM FROM RECALL..... 2 ☐.☐ DON'T KNOW.....998

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
425A	Was the birth of (NAME) registered with the government or local authority?	YES.....1 NO .....2 DON'T KNOW.....8	YES.....1 NO .....2 DON'T KNOW.....8
426	Who assisted with the delivery of (NAME)? Anyone else? PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS ASSISTING. IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY.	HEALTH PROFESSIONAL DOCTOR .....A NURSE/MIDWIFE .....B AUXILIARY MIDWIFE ..... C OTHER PERSON TRADITIONAL BIRTH ATTENDANT ..... D RELATIVE/FRIEND .....E OTHER _____ X (SPECIFY) NO ONE.....Y	HEALTH PROFESSIONAL DOCTOR ..... A NURSE/MIDWIFE..... B AUXILIARY MIDWIFE ..... C OTHER PERSON TRADITIONAL BIRTH ATTENDANT ..... D RELATIVE/FRIEND ..... E OTHER _____ X (SPECIFY) NO ONE.....Y
427	Where did you give birth to (NAME)? IF SOURCE IS HOSPITAL, HEALTH CENTER OR CLINIC, WRITE THE NAME OF THE PLACE, PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	HOME YOUR HOME.....11 TBA'S HOME..... 12 OTHER HOME ..... 13 (SKIP TO 429) PUBLIC SECTOR GOVT. HOSPITAL/CLINIC .....21 GOVT. HEALTH CENTER.....22 GOVT. HEALTH POST.....23 OTHER PUBLIC _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC .....31 MATERNITY HOME .....32 OTHER PVT. MEDICAL _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY) (SKIP TO 429)	HOME YOUR HOME.....11 TBA'S HOME..... 12 OTHER HOME ..... 13 (SKIP TO 429) PUBLIC SECTOR GOVT. HOSPITAL/CLINIC .....21 GOVT. HEALTH CENTER.....22 GOVT. HEALTH POST.....23 OTHER PUBLIC _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC .....31 MATERNITY HOME .....32 OTHER PVT. MEDICAL _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY) (SKIP TO 429)
428	Was (NAME) delivered by caesarian section?	YES.....1 (SKIP TO 433) NO 2	YES.....1 (SKIP TO 435) NO 2
429	After (NAME) was born, did a health professional or a traditional birth attendant check on your health?	YES.....1 NO .....2 (SKIP TO 433)	YES.....1 NO 2
430	How many days or weeks after the delivery did the first check take place? RECORD '00' DAYS IF SAME DAY.	DAYS AFTER DEL .....1 WEEKS AFTER DEL ...2 DON'T KNOW.....998	
431	Who checked on your health at that time?[1] PROBE FOR MOST QUALIFIED PERSON.	HEALTH PROFESSIONAL DOCTOR .....11 NURSE/MIDWIFE .....12 AUXILIARY MIDWIFE .....13 OTHER PERSON TRADITIONAL BIRTH ATTENDANT .....21 OTHER _____ 96 (SPECIFY)	

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
432	Where did this first check take place? IF SOURCE IS HOSPITAL, HEALTH CENTER OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	HOME YOUR HOME..... 11 TBA'S HOME..... 12 OTHER HOME ..... 13 PUBLIC SECTOR GOVT. HOSPITAL/CLINIC..... 21 GOVT. HEALTH CENTER..... 22 GOVT. HEALTH POST..... 23 MOBILE CLINIC ..... 24 OTHER PUBLIC _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC ..... 31 MOBILE CLINIC ..... 32 MATERNITY HOME ..... 33 OTHER PVT. MEDICAL _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)	
433	In the first two months after delivery, did you receive a vitamin A dose like this? SHOW CAPSULE.	YES.....1 NO 2	
434	Has your period returned since the birth of (NAME)?	YES.....1 (SKIP TO 436) NO .....2 (SKIP TO 437)	
435	Did your period return between the birth of (NAME) and your next pregnancy?		YES .....1 NO .....2 (SKIP TO 439)
436	For how many months after the birth of (NAME) did you not have a period?	MONTHS ..... [ ][ ] DON'T KNOW.....98	MONTHS ..... [ ][ ] DON'T KNOW 98
437	CHECK 226: IS RESPONDENT PREGNANT?	NOT PREG-NANT [ ] PREGNANT OR UNSURE (SKIP TO 439) [ ]	
438	Have you resumed sexual relations since the birth of (NAME)?	YES.....1 NO .....2 (SKIP TO 440)	
439	For how many months after the birth of (NAME) did you not have sexual relations?	MONTHS ..... [ ][ ] DON'T KNOW.....98	MONTHS ..... [ ][ ] DON'T KNOW 98
440	Did you ever breastfeed (NAME)?	YES.....1 NO .....2 (SKIP TO 447)	YES .....1 NO .....2 (SKIP TO 447)
441	How long after birth did you first put (NAME) to the breast? IF LESS THAN 1 HOUR, RECORD '00' HOURS. IF LESS THAN 24 HOURS, RECORD HOURS. OTHERWISE, RECORD DAYS.	IMMEDIATELY .....000 HOURS..... 1 [ ][ ] DAYS..... 2 [ ][ ]	IMMEDIATELY .....000 HOURS..... 1 [ ][ ] DAYS..... 2 [ ][ ]
442	In the first three days after delivery, before your milk began flowing regularly, was (NAME) given anything to drink other than breast milk?	YES.....1 NO .....2 (SKIP TO 444)	YES .....1 NO .....2 (SKIP TO 444)

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
443	What was (NAME) given to drink before your milk began flowing regularly? Anything else? RECORD ALL LIQUIDS MENTIONED	MILK (OTHER THAN BREAST MILK) ..... A PLAIN WATER ..... B SUGAR OR GLUCOSE WATER ..... C GRIPE WATER ..... D SUGAR-SALT-WATER SOLUTION ..... E FRUIT JUICE ..... F INFANT FORMULA ..... G TEA/INFUSIONS ..... H HONEY ..... I OTHER _____ X (SPECIFY)	MILK (OTHER THAN BREAST MILK) ..... A PLAIN WATER ..... B SUGAR OR GLUCOSE WATER ..... C GRIPE WATER ..... D SUGAR-SALT-WATER SOLUTION ..... E FRUIT JUICE ..... F INFANT FORMULA ..... G TEA/INFUSIONS ..... H HONEY ..... I OTHER _____ X (SPECIFY)
444	CHECK 404: IS CHILD LIVING?	LIVING ☐ ▼ DEAD ☐ ▼ (SKIP TO 446)	LIVING ☐ ▼ DEAD ☐ ▼ (SKIP TO 446)
445	Are you still breastfeeding (NAME)?	YES ..... 1 (SKIP TO 448) NO 2	YES ..... 1 (SKIP TO 448) NO 2
446	For how many months did you breastfeed (NAME)?	MONTHS ..... ☐☐ DON'T KNOW 98	MONTHS ..... ☐☐ DON'T KNOW 98
447	CHECK 404: IS CHILD LIVING?	LIVING ☐ ▼ (SKIP TO 450) DEAD ☐ ▼ (GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 454)	LIVING ☐ ▼ (SKIP TO 450) DEAD ☐ ▼ (GO BACK TO 405 IN LAST COLUMN OF NEW QUESTION-NAIRE; OR, IF NO MORE BIRTHS, GO TO 454)
448	How many times did you breastfeed last night between sunset and sunrise? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER.	NUMBER OF NIGHTTIME FEEDINGS . ☐☐	NUMBER OF NIGHTTIME FEEDINGS . ☐☐
449	How many times did you breastfeed yesterday during the daylight hours? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER.	NUMBER OF DAYLIGHT FEEDINGS ... ☐☐	NUMBER OF DAYLIGHT FEEDINGS ... ☐☐
450	Did (NAME) drink anything from a bottle with a nipple yesterday or last night?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
451	Was sugar added to any of the foods or liquids (NAME) ate yesterday?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
452	How many <u>times</u> did (NAME) eat solid, semisolid, or soft foods other than liquids yesterday during the day or at night? IF 7 OR MORE TIMES, RECORD '7'.	NUMBER OF TIMES ..... ☐ DON'T KNOW 8	NUMBER OF TIMES ..... ☐ DON'T KNOW 8
453		GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 454.	GO BACK TO 405 IN LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 454.

SECTION 4B. IMMUNIZATION, HEALTH AND NUTRITION

454	ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 1998 OR LATER. (IF THERE ARE MORE THAN 2 BIRTHS, USE LAST COLUMN OF ADDITIONAL QUESTIONNAIRES).		
455	LINE NUMBER FROM 212	LAST BIRTH LINE NUMBER ..... [ ][ ]	NEXT-TO-LAST BIRTH LINE NUMBER ..... [ ][ ]
456	FROM 212 AND 216	NAME _____ LIVING [ ] DEAD [ ] (GO TO 456 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 484)	NAME _____ LIVING [ ] DEAD [ ] (GO TO 456 IN LAST COLUMN OF NEW QUESTION-NAIRE OR, IF NO MORE BIRTHS, GO TO 484)
457	Did (NAME) receive a vitamin A dose like this during the last 6 months? SHOW CAPSULE.	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
458	Do you have a card where (NAME'S) vaccinations are written down? IF YES: May I see it please?	YES, SEEN ..... 1 (SKIP TO 460) YES, NOT SEEN ..... 2 (SKIP TO 462) NO CARD 3	YES, SEEN ..... 1 (SKIP TO 460) YES, NOT SEEN ..... 2 (SKIP TO 462) NO CARD 3
459	Did you ever have a vaccination card for (NAME)?	YES ..... 1 (SKIP TO 462) NO 2	YES ..... 1 (SKIP TO 462) NO 2
460	(1) COPY VACCINATION DATE FOR EACH VACCINE FROM THE CARD. (2) WRITE '44' IN 'DAY' COLUMN IF CARD SHOWS THAT A VACCINATION WAS GIVEN, BUT NO DATE IS RECORDED.	DAY MONTH YEAR	DAY MONTH YEAR
	BCG	BCG ..... [ ][ ][ ][ ][ ][ ][ ][ ]	BCG ..... [ ][ ][ ][ ][ ][ ][ ][ ]
	POLIO 0 (POLIO GIVEN AT BIRTH)	P0..... [ ][ ][ ][ ][ ][ ][ ][ ]	P0..... [ ][ ][ ][ ][ ][ ][ ][ ]
	POLIO 1	P1..... [ ][ ][ ][ ][ ][ ][ ][ ]	P1..... [ ][ ][ ][ ][ ][ ][ ][ ]
	POLIO 2	P2..... [ ][ ][ ][ ][ ][ ][ ][ ]	P2..... [ ][ ][ ][ ][ ][ ][ ][ ]
	POLIO 3	P3..... [ ][ ][ ][ ][ ][ ][ ][ ]	P3..... [ ][ ][ ][ ][ ][ ][ ][ ]
	DPT 1	D1 ..... [ ][ ][ ][ ][ ][ ][ ][ ]	D1 ..... [ ][ ][ ][ ][ ][ ][ ][ ]
	DPT 2	D2 ..... [ ][ ][ ][ ][ ][ ][ ][ ]	D2 ..... [ ][ ][ ][ ][ ][ ][ ][ ]
	DPT 3	D3 ..... [ ][ ][ ][ ][ ][ ][ ][ ]	D3 ..... [ ][ ][ ][ ][ ][ ][ ][ ]
	MEASLES	MEA ..... [ ][ ][ ][ ][ ][ ][ ][ ]	MEA ..... [ ][ ][ ][ ][ ][ ][ ][ ]
	VITAMIN A (MOST RECENT)	VIT. A .... [ ][ ][ ][ ][ ][ ][ ][ ]	VIT. A .... [ ][ ][ ][ ][ ][ ][ ][ ]
	YELLOW FEVER	YEL ..... [ ][ ][ ][ ][ ][ ][ ][ ]	YEL ..... [ ][ ][ ][ ][ ][ ][ ][ ]

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
461	Has (NAME) received any vaccinations that are not recorded on this card, including vaccinations received in a national immunization day campaign? RECORD 'YES' ONLY IF RESPONDENT MENTIONS BCG, POLIO 0-3, DPT 1-3, YELLOW FEVER AND/OR MEASLES VACCINE(S).	YES ..... 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 460) (SKIP TO 464) NO ..... 2 (SKIP TO 464) DON'T KNOW 8	YES ..... 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 460) (SKIP TO 464) NO ..... 2 (SKIP TO 464) DON'T KNOW 8
462	Did (NAME) ever receive any vaccinations to prevent him/her from getting diseases, including vaccinations received in a national immunization day campaign?	YES ..... 1 NO ..... 2 (SKIP TO 466) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 466) DON'T KNOW 8
463	Please tell me if (NAME) received any of the following vaccinations:		
463A	A BCG vaccination against tuberculosis, that is, an injection in the right shoulder that usually causes a scar?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
463B	Polio vaccine, that is, drops in the mouth?	YES ..... 1 NO ..... 2 (SKIP TO 463E) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 463E) DON'T KNOW 8
463C	When was the first polio vaccine received, just after birth or later?	JUST AFTER BIRTH ..... 1 LATER 2	JUST AFTER BIRTH ..... 1 LATER 2
463D	How many times was the polio vaccine received?	NUMBER OF TIMES..... [ ]	NUMBER OF TIMES..... [ ]
463E	A DPT vaccination, that is, an injection given in the thigh, sometimes at the same time as polio drops?	YES ..... 1 NO ..... 2 (SKIP TO 463G) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 463G) DON'T KNOW 8
463F	How many times?	NUMBER OF TIMES..... [ ]	NUMBER OF TIMES..... [ ]
463G	An injection to prevent measles?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
463H	An injection to prevent yellow fever?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
464	Were any of the vaccinations (NAME) received during the last two years given as part of a national immunization day campaign?	YES ..... 1 NO ..... 2 (SKIP TO 466) NO VACCINATION IN THE LAST 2 YEARS ..... 3 (SKIP TO 466) DON'T KNOW ..... 8 (SKIP TO 466)	YES ..... 1 NO ..... 2 (SKIP TO 466) NO VACCINATION IN THE LAST 2 YEARS..... 3 (SKIP TO 466) DON'T KNOW ..... 8 (SKIP TO 466)
465	At which national immunization day campaigns did (NAME) receive vaccinations? RECORD ALL CAMPAIGNS MENTIONED.	OCT/NOV 2002 ..... A OCT/NOV 2001 ..... B	OCT/NOV 2002 ..... A OCT/NOV 2001 ..... B
466	Has (NAME) been ill with a fever at any time in the last 2 weeks?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
467	Has (NAME) had an illness with a cough at any time in the last 2 weeks?	YES ..... 1 NO ..... 2 (SKIP TO 469) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 469) DON'T KNOW 8

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
468	When (NAME) had an illness with a cough, did he/she breathe faster than usual with short, fast breaths?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
469	CHECK 466 AND 467: FEVER OR COUGH?	"YES" IN 466 OR 467 ▼ OTHER ▼ (SKIP TO 475)	"YES" IN 466 OR 467 ▼ OTHER ▼ (SKIP TO 475)
470	Did you seek advice or treatment for the fever/cough?	YES ..... 1 NO ..... 2 (SKIP TO 472)	YES ..... 1 NO ..... 2 (SKIP TO 472)
471	Where did you seek advice or treatment? Anywhere else? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL/CLINIC ..... A GOVT. HEALTH CENTER ..... B GOVT. HEALTH POST ..... C MOBILE CLINIC ..... D FIELDWORKER ..... E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... G PRIVATE DOCTOR ..... H PHARMACY/CHEMIST/ DRUG STORE ..... I MOBILE CLINIC ..... J FIELDWORKER ..... K MATERNITY HOME ..... L OTHER PRIVATE MEDICAL _____ M (SPECIFY) OTHER SOURCE SHOP ..... N TRAD. PRACTITIONER ..... O DRUG PEDDLER ..... P OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT. HOSPITAL/CLINIC ..... A GOVT. HEALTH CENTER ..... B GOVT. HEALTH POST ..... C MOBILE CLINIC ..... D FIELDWORKER ..... E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... G PRIVATE DOCTOR ..... H PHARMACY/CHEMIST/ DRUG STORE ..... I MOBILE CLINIC ..... J FIELDWORKER ..... K MATERNITY HOME ..... L OTHER PRIVATE MEDICAL _____ M (SPECIFY) OTHER SOURCE SHOP ..... N TRAD. PRACTITIONER ..... O DRUG PEDDLER ..... P OTHER _____ X (SPECIFY)
472	CHECK 466: HAD FEVER?	"YES" IN 466 ▼ "NO"/"DK" IN 466 ▼ (SKIP TO 475)	"YES" IN 466 ▼ "NO"/"DK" IN 466 ▼ (SKIP TO 475)
472A	Does (NAME) have a fever now?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
472B	CHECK 466 AND 472A HAD FEVER?	"YES" IN 466 OR 472A ▼ OTHER ▼ (SKIP TO 475)	"YES" IN 466 OR 472A ▼ OTHER ▼ (SKIP TO 475)
473	Did (NAME) take any drugs for the fever?	YES ..... 1 NO ..... 2 (SKIP TO 474I) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 474I) DON'T KNOW 8

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
474	What drugs did (NAME) take? RECORD ALL MENTIONED. ASK TO SEE DRUG(S) IF TYPE OF DRUG IS NOT KNOWN. IF TYPE OF DRUG IS STILL NOT DETERMINED, SHOW TYPICAL ANTIMALARIAL DRUGS TO RESPONDENT.	ANTI-MALARIAL FANSIDAR ..... A CHLOROQUINE ..... B AMODIAQUINE ..... C QUININE ..... D ARTESUNATE ..... E OTHER DRUGS ASPIRIN ..... F IBUPROFEN/ACETAMINOPHEN/ PANADOL/PARACETAMOL ..... G OTHER _____ X (SPECIFY) DON'T KNOW ..... Z	ANTI-MALARIAL FANSIDAR ..... A CHLOROQUINE ..... B AMODIAQUINE ..... C QUININE ..... D ARTESUNATE ..... E OTHER DRUGS ASPIRIN ..... F IBUPROFEN/ACETAMINOPHEN/ PANADOL/PARACETAMOL ..... G OTHER _____ X (SPECIFY) DON'T KNOW ..... Z
474A	CHECK 474: WHICH MEDICINES?	CODE "B" CIRCLED ☐ CODE "B" NOT CIRCLED ☐ (SKIP TO 474E)	CODE "B" CIRCLED ☐ CODE "B" NOT CIRCLED ☐ (SKIP TO 474E)
474B	How long after the (fever) started did (NAME) first take chloroquine?	SAME DAY ..... 0 NEXT DAY ..... 1 TWO DAYS AFTER THE FEVER ..... 2 THREE OR MORE DAYS AFTER THE FEVER ..... 3 DON'T KNOW 8	SAME DAY ..... 0 NEXT DAY ..... 1 TWO DAYS AFTER THE FEVER ..... 2 THREE OR MORE DAYS AFTER THE FEVER ..... 3 DON'T KNOW 8
474B1	How was the chloroquine taken?	TABLETS ..... 1 INJECTION ..... 2 SYRUP ..... 3 MIX ..... 4 DON'T KNOW ..... 8 (SKIP TO 474C)	TABLETS ..... 1 INJECTION ..... 2 SYRUP ..... 3 MIX ..... 4 DON'T KNOW ..... 8 (SKIP TO 474C)
474B2	How many tablets did (NAME) take each day?	NUMBER OF TABLETS ..... ☐ DON'T KNOW 8	NUMBER OF TABLETS ..... ☐ DON'T KNOW 8
474C	For how many days did (NAME) take chloroquine? IF 7 OR MORE DAYS, RECORD '7'.	DAYS ..... ☐ DON'T KNOW 8	DAYS ..... ☐ DON'T KNOW 8
474D	Did you have the chloroquine at home or did you get it from somewhere else? IF MORE THAN ONE SOURCE MENTIONED, ASK: Where did you get the chloroquine first?	AT HOME ..... 1 OTHER SOURCE ..... 2 DON'T KNOW 8	AT HOME ..... 1 OTHER SOURCE ..... 2 DON'T KNOW 8
474E	CHECK 474: WHICH MEDICINES?	CODE "C" CIRCLED ☐ CODE "C" NOT CIRCLED ☐ (SKIP TO 474I)	CODE "C" CIRCLED ☐ CODE "C" NOT CIRCLED ☐ (SKIP TO 474I)
474F	How long after the (fever) started did (NAME) first take Amodiaquine?	SAME DAY ..... 0 NEXT DAY ..... 1 TWO DAYS AFTER THE FEVER ..... 2 THREE OR MORE DAYS AFTER THE FEVER ..... 3 DON'T KNOW 8	SAME DAY ..... 0 NEXT DAY ..... 1 TWO DAYS AFTER THE FEVER ..... 2 THREE OR MORE DAYS AFTER THE FEVER ..... 3 DON'T KNOW 8
474G	For how many days did (NAME) take Amodiaquine? IF 7 OR MORE DAYS, RECORD '7'.	DAYS ..... ☐ DON'T KNOW 8	DAYS ..... ☐ DON'T KNOW 8
474H	Did you have the Amodiaquine at home or did	AT HOME 1	AT HOME 1

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
	you get it from somewhere else? IF MORE THAN ONE SOURCE MENTIONED, ASK: Where did you get the Amodiaquine first?	OTHER SOURCE ..... 2 DON'T KNOW 8	OTHER SOURCE ..... 2 DON'T KNOW 8
474I	Was anything else done about (NAME)'s (fever)?	YES ..... 1 NO ..... 2 (SKIP TO 475) ←┤ DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 475) ←┤ DON'T KNOW 8
474J	What was done about (NAME)'s (fever)?	CONSULTED TRADITIONAL HEALER ..... A GAVE TEPID SPONGING ..... B GAVE HERBS ..... C OTHER _____ X (SPECIFY)	CONSULTED TRADITIONAL HEALER ..... A GAVE TEPID SPONGING ..... B GAVE HERBS ..... C OTHER _____ X (SPECIFY)
475	Has (NAME) had diarrhea in the last 2 weeks?	YES ..... 1 NO ..... 2 (SKIP TO 483) ←┤ DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 483) ←┤ DON'T KNOW 8
476	Now I would like to know how much (NAME) was offered to drink during the diarrhea. Was he/she offered less than usual to drink, about the same amount, or more than usual to drink? IF LESS, PROBE: Was he/she offered much less than usual to drink or somewhat less?	MUCH LESS ..... 1 SOMEWHAT LESS ..... 2 ABOUT THE SAME ..... 3 MORE ..... 4 NOTHING TO DRINK ..... 5 DON'T KNOW 8	MUCH LESS ..... 1 SOMEWHAT LESS ..... 2 ABOUT THE SAME ..... 3 MORE ..... 4 NOTHING TO DRINK ..... 5 DON'T KNOW 8
477	When (NAME) had diarrhea, was he/she offered less than usual to eat, about the same amount, more than usual, or nothing to eat? IF LESS, PROBE: Was he/she offered much less than usual to eat or somewhat less?	MUCH LESS ..... 1 SOMEWHAT LESS ..... 2 ABOUT THE SAME ..... 3 MORE ..... 4 STOPPED FOOD ..... 5 NEVER GAVE FOOD ..... 6 DON'T KNOW 8	MUCH LESS ..... 1 SOMEWHAT LESS ..... 2 ABOUT THE SAME ..... 3 MORE ..... 4 STOPPED FOOD ..... 5 NEVER GAVE FOOD ..... 6 DON'T KNOW 8
478	Was he/she given any of the following to drink:	YES NO DK	YES NO DK
a	A fluid made from a special packet called ORS?	FLUID FROM ORS PKT 1 2 8	FLUID FROM ORS PKT 1 2 8
b	A government-recommended homemade fluid?	HOMEMADE FLUID 1 2 8	HOMEMADE FLUID 1 2 8
479	Was anything (else) given to treat the diarrhea?	YES ..... 1 NO ..... 2 (SKIP TO 481) ←┤ DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 481) ←┤ DON'T KNOW 8
480	What (else) was given to treat the diarrhea? Anything else? RECORD ALL TREATMENTS MENTIONED.	PILL OR SYRUP ..... A INJECTION ..... B (I.V.) INTRAVENOUS ..... C HOME REMEDIES/ HERBAL MEDICINES ..... D OTHER _____ X (SPECIFY)	PILL OR SYRUP ..... A INJECTION ..... B (I.V.) INTRAVENOUS ..... C HOME REMEDIES/ HERBAL MEDICINES ..... D OTHER _____ X (SPECIFY)
481	Did you seek advice or treatment for the diarrhea?	YES ..... 1 NO ..... 2 (SKIP TO 483) ←┘	YES ..... 1 NO ..... 2 (SKIP TO 483) ←┘

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
482	Where did you seek advice or treatment? IF SOURCE IS HOSPITAL, HEALTH CENTER OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) Anywhere else? RECORD ALL PLACES MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL/CLINIC.....A GOVT. HEALTH CENTER .....B GOVT. HEALTH POST .....C MOBILE CLINIC .....D FIELDWORKER .....E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... G PRIVATE DOCTOR .....H PHARMACY/CHEMIST/ DRUG STORE ..... I MOBILE CLINIC ..... J FIELDWORKER .....K MATERNITY HOME ..... L OTHER PRIVATE MEDICAL _____ M (SPECIFY) OTHER SOURCE SHOP .....N TRAD. PRACTITIONER..... O DRUG PEDDLER.....P OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT. HOSPITAL/CLINIC.....A GOVT. HEALTH CENTER .....B GOVT. HEALTH POST ..... C MOBILE CLINIC ..... D FIELDWORKER .....E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC..... G PRIVATE DOCTOR..... H PHARMACY/CHEMIST/ DRUG STORE..... I MOBILE CLINIC ..... J FIELDWORKER .....K MATERNITY HOME ..... L OTHER PRIVATE MEDICAL _____ M (SPECIFY) OTHER SOURCE SHOP ..... N TRAD. PRACTITIONER ..... O DRUG PEDDLER.....P OTHER _____ X (SPECIFY)
483		GO BACK TO 456 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 484.	GO BACK TO 456 IN LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 484.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
484	CHECK 215 AND 218, ALL ROWS: NUMBER OF CHILDREN BORN IN 1998 OR LATER LIVING WITH THE RESPONDENT ONE OR MORE ☐ ▼	NONE ☐	→487
485	What is usually done to dispose of your (youngest) child's stools when he/she does not use any toilet facility?	CHILD ALWAYS USE TOILET/LATRINE.....01 THROW IN THE TOILET/LATRINE .....02 THROW OUTSIDE THE DWELLING.....03 THROW OUTSIDE THE YARD.....04 BURY IN THE YARD.....05 RINSE AWAY.....06 USE DISPOSABLE DIAPERS .....07 USE WASHABLE DIAPERS .....08 NOT DISPOSED OF .....09 OTHER _____ 96 (SPECIFY)	
486	CHECK 478a, ALL COLUMNS: NO CHILD RECEIVED FLUID FROM ORS PACKET ☐ ▼	ANY CHILD RECEIVED FLUID FROM ORS PACKET ☐	→488
487	Have you ever heard of a special product called ORS you can get for the treatment of diarrhea?	YES .....1 NO 2	
488	CHECK 218: HAS ONE OR MORE CHILDREN LIVING WITH HER ☐ ▼	HAS NO CHILDREN LIVING WITH HER ☐	→490
489	When (your child/one of your children) is seriously ill, can you decide by yourself whether or not the child should be taken for medical treatment? IF SAYS NO CHILD EVER SERIOUSLY ILL, ASK: If (your child/one of your children) became seriously ill, could you decide by yourself whether the child should be taken for medical treatment?	YES .....1 NO .....2 DEPENDS 3	
490	Now I would like to ask you some questions about medical care for you yourself. Many different factors can prevent women from getting medical advice or treatment for themselves. When you are sick and want to get medical advice or treatment, is each of the following a big problem or not?	BIG PROBLEM / NOT A BIG PROBLEM	
	Knowing where to go.	1 / 2	
	Getting permission to go.	1 / 2	
	Getting money needed for treatment.	1 / 2	
	The distance to a health facility.	1 / 2	
	Having to take transport.	1 / 2	
	Not wanting to go alone.	1 / 2	
	Concern that there may not be a female health provider.	1 / 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
491	CHECK 215 AND 218: HAS AT LEAST ONE CHILD BORN IN 2000[1] OR LATER AND LIVING WITH HER ☐ RECORD NAME OF YOUNGEST CHILD LIVING WITH HER (AND CONTINUE TO 492) _____ (NAME)	DOES NOT HAVE ANY CHILDREN BORN IN 2000[1] OR LATER AND LIVING WITH HER ☐	→496

		LAST 7 DAYS NUMBER OF DAYS	YESTERDAY/ LAST NIGHT NUMBER OF TIMES
492	Now I would like to ask you about liquids (NAME FROM Q. 491) drank over the last seven days, including yesterday. How many days during last seven days did (NAME FROM Q. 491) drink each of the following? FOR EACH ITEM GIVEN AT LEAST ONCE IN LAST SEVEN DAYS, BEFORE PROCEEDING TO THE NEXT ITEM, ASK: In total, how many times yesterday during the day or at night did (NAME FROM Q. 491) drink (ITEM)?		
a	Plain water?	a ☐	a ☐
b	Commercially produced infant formula?	b ☐	b ☐
c	Any other milk such as tinned, powdered, or fresh animal milk?	c ☐	c ☐
d	Fruit juice?	d ☐	d ☐
e	Any other liquids?	e ☐	e ☐
	IF 7 OR MORE TIMES, RECORD '7'. IF DON'T KNOW, RECORD '8'.		

		LAST 7 DAYS NUMBER OF DAYS	YESTERDAY/ LAST NIGHT NUMBER OF TIMES
493	Now I would like to ask you about the types of foods (NAME FROM Q. 491) ate over the last seven days, including yesterday. How many days during last seven days did (NAME FROM Q. 491) eat each of the following foods either separately or combined with other food? FOR EACH ITEM GIVEN AT LEAST ONCE IN LAST SEVEN DAYS, BEFORE PROCEEDING TO THE NEXT ITEM, ASK: In total, how many times yesterday during the day or at night did (NAME FROM Q. 491) eat (ITEM)?		
a	Any food made from grains [e.g. kenkey, banku, koko, tuo zaafi, akple, rice, bread, weanimix]?	a ☐	a ☐
b	Pumpkin, red or yellow yams or squash, carrots, or red sweet potatoes?	b ☐	b ☐
c	Any other food made from roots or tubers [e.g. white potatoes, white yams, cocoyam, cassava, fufu or other local roots/tubers]?	c ☐	c ☐
d	Any green leafy vegetables (e.g.kontamire)?	d ☐	d ☐
e	Mango, paw paw [or other local Vitamin A rich fruits]?	e ☐	e ☐
f	Any other fruits and vegetables [e.g. bananas, plantain, apples/sauce, green beans, avocados, tomatoes]?	f ☐	f ☐
g	Meat, poultry, fish, shellfish (e.g. prawn, lobster), or eggs?	g ☐	g ☐
h	Any food made from legumes [e.g. lentils, beans, soybeans, pulses, or peanuts]?	h ☐	h ☐
i	Cheese or yoghurt?	i ☐	i ☐
j	Any food made with oil, fat, or butter?	j ☐	j ☐
	IF 7 OR MORE TIMES, RECORD '7'. IF DON'T KNOW, RECORD '8'.		

496	Do you currently smoke cigarettes or tobacco? IF YES: what type of tobacco do you smoke? RECORD ALL TYPES MENTIONED.	YES, CIGARETTES ..... A YES, PIPE ..... B YES, OTHER TOBACCO ..... C NO ..... Y	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
497	CHECK 496: CODE 'A' CIRCLED ☐	CODE 'A' NOT CIRCLED ☐	→501
498	In the last 24 hours, how many cigarettes did you smoke?	CIGARETTES ..... ☐☐	

SECTION 5. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	Are you currently married or living with a man?	YES, CURRENTLY MARRIED ..... 1 YES, LIVING WITH A MAN ..... 2 NO, NOT IN UNION 3	→505
502	Have you ever been married or lived with a man?	YES, FORMERLY MARRIED ..... 1 YES, LIVED WITH A MAN ..... 2 NO 3	→510 →514
504	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED ..... 1 DIVORCED ..... 2 SEPARATED 3	→510
505	Is your husband/partner living with you now or is he staying elsewhere?	LIVING WITH HER ..... 1 STAYING ELSEWHERE 2	
506	RECORD THE HUSBAND'S/PARTNER'S NAME AND LINE NUMBER FROM THE HOUSEHOLD QUESTIONNAIRE. IF HE IS NOT LISTED IN THE HOUSEHOLD, RECORD '00'.	NAME _____ LINE NO. ..... [ ][ ]	
507	Does your husband/partner have any other wives besides yourself?	YES ..... 1 NO 2	→510
508	How many other wives does he have?	NUMBER. ..... [ ][ ] DON'T KNOW 98	→510
509	Are you the first, second, ... wife?	RANK ..... [ ][ ]	
510	Have you been married or lived with a man only once, or more than once?	ONCE ..... 1 MORE THAN ONCE 2	
511	CHECK 510: MARRIED/ LIVED WITH A MAN ONLY ONCE → In what month and year did you start living with your husband/partner? MARRIED/ LIVED WITH A MAN MORE THAN ONCE → Now we will talk about your first husband/partner. In what month and year did you start living with him?	MONTH ..... [ ][ ] DON'T KNOW MONTH ..... 98 YEAR ..... [ ][ ][ ][ ] DON'T KNOW YEAR 9998	→514
512	How old were you when you started living with him?	AGE ..... [ ][ ]	
514	Now I need to ask you some questions about sexual activity in order to gain a better understanding of some family life issues. How old were you when you first had sexual intercourse (if ever)?	NEVER ..... 00 AGE IN YEARS ..... [ ][ ] FIRST TIME WHEN STARTED LIVING WITH (FIRST) HUSBAND/PARTNER.... 95	→524
514A	CHECK 106: 15-24 YEARS OLD 25-49 YEARS OLD		→515
514B	The first time you had sexual intercourse, was a condom used?	YES ..... 1 NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
515	When was the last time you had sexual intercourse? RECORD 'YEARS AGO' ONLY IF LAST INTERCOURSE WAS ONE OR MORE YEARS AGO. IF 12 MONTHS OR MORE, ANSWER MUST BE RECORDED IN YEARS.	DAYS AGO..... 1 [ ][ ] WEEKS AGO .....2 [ ][ ] MONTHS AGO.....3 [ ][ ] YEARS AGO ..... 4 [ ][ ]	—▸524
515B	The last time you had sexual intercourse, had you or your partner been drinking alcohol? IF YES: Who was drinking?	RESPONDENT ONLY..... 1 PARTNER ONLY ..... 2 RESPONDENT AND PARTNER..... 3 NEITHER 4	
516	The last time you had sexual intercourse, was a condom used?	YES ..... 1 NO..... 2	—▸517
516A	What was the main reason a condom was used on that occasion?	RESPONDENT WANTED TO PREVENT STD/HIV.....01 RESPONDENT WANTED TO PREVENT PREGNANCY .....02 RESPONDENT WANTED TO PREVENT BOTH STD/HIV AND PREGNANCY .....03 DID NOT TRUST PARTNER/FELT PARTNER HAD OTHER PARTNERS.....04 PARTNER REQUESTED/INSISTED.....05 OTHER _____ 96 (SPECIFY) DON'T KNOW.....98	
517	What is your relationship to the man with whom you last had sex? IF MAN IS "BOYFRIEND" OR "FIANCÉ", ASK: Was your boyfriend/fiancé living with you when you last had sex? IF YES, CIRCLE '01'. IF NO, CIRCLE '02'.	SPOUSE/COHABITING PARTNER..... 01 MAN IS BOYFRIEND/FIANCÉ ..... 02 OTHER FRIEND ..... 03 CASUAL ACQUAINTANCE ..... 04 RELATIVE..... 05 PROSTITUTE..... 06 OTHER _____ 96 (SPECIFY)	—▸519
517A	CHECK 106: 15-19 YEARS OLD [ ][ ] ▾ 20-49 YEARS OLD [ ][ ]		—▸518
517B	Was this man younger, about the same age or older than you? IF OLDER: Do you think that he was less than 10 years older than you or 10 or more years older than you?	YOUNGER ..... 1 ABOUT SAME AGE ..... 2 LESS THAN 10 YEARS OLDER..... 3 10 OR MORE YEARS OLDER..... 4 OLDER, DON'T KNOW DIFFERENCE.... 5 DON'T KNOW 8	
518	For how long have you had sexual relations with this man?	DAYS..... 1 [ ][ ] WEEKS .....2 [ ][ ] MONTHS.....3 [ ][ ] YEARS ..... 4 [ ][ ]	
519	Have you had sex with any other man in the last 12 months?	YES ..... 1 NO..... 2	—▸524
520	The last time you had sexual intercourse with another man, was a condom used?	YES ..... 1 NO..... 2	—▸521

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
520A	What was the main reason a condom was used on that occasion?	RESPONDENT WANTED TO PREVENT STD/HIV ..... 01 RESPONDENT WANTED TO PREVENT PREGNANCY ..... 02 RESPONDENT WANTED TO PREVENT BOTH STD/HIV AND PREGNANCY ..... 03 DID NOT TRUST PARTNER/FELT PARTNER HAD OTHER PARTNERS..... 04 PARTNER REQUESTED/INSISTED..... 05 OTHER _____ 96 (SPECIFY) DON'T KNOW..... 98	
521	What is your relationship to this man? IF MAN IS "BOYFRIEND" OR "FIANCÉ", ASK: Was your boyfriend/fiancé living with you when you last had sex with him? IF YES, CIRCLE '01'. IF NO, CIRCLE '02'.	SPOUSE/COHABITING PARTNER..... 01 MAN IS BOYFRIEND/FIANCÉ..... 02 OTHER FRIEND ..... 03 CASUAL ACQUAINTANCE ..... 04 RELATIVE..... 05 PROSTITUTE..... 06 OTHER _____ 96 (SPECIFY)	→522A
521A	CHECK 106: 15-19 YEARS OLD [ ] 20-49 YEARS OLD [ ]		→522
521B	Was this man younger, about the same age or older than you? IF OLDER: Do you think that he was less than 10 years older than you or 10 or more years older than you?	YOUNGER ..... 1 ABOUT SAME AGE ..... 2 LESS THAN 10 YEARS OLDER..... 3 10 OR MORE YEARS OLDER..... 4 OLDER, DON'T KNOW DIFFERENCE.... 5 DON'T KNOW 8	
522	For how long have you had sexual relations with this man?	DAYS..... 1 [ ][ ] WEEKS.....2 [ ][ ] MONTHS .....3 [ ][ ] YEARS..... 4 [ ][ ]	
522A	Other than these two men, have you had sex with any other man in the last 12 months?	YES ..... 1 NO 2	→524
522B	The last time you had sexual intercourse with this other man, was a condom used?	YES ..... 1 NO 2	→522D
522C	What was the main reason a condom was used on that occasion?	RESPONDENT WANTED TO PREVENT STD/HIV ..... 01 RESPONDENT WANTED TO PREVENT PREGNANCY..... 02 RESPONDENT WANTED TO PREVENT BOTH STD/HIV AND PREGNANCY..... 03 DID NOT TRUST PARTNERS/FELT PARTNER HAD OTHER PARTNERS..... 04 PARTNER REQUESTED/INSISTED ..... 05 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
522D	What is your relationship to this man? IF MAN IS "BOYFRIEND" OR "FIANCÉ", ASK: Was your boyfriend/fiancé living with you when you last had sex with him? IF YES, CIRCLE '01'. IF NO, CIRCLE '02'.	SPOUSE/COHABITING PARTNER ..... 01 MAN IS BOYFRIEND/FIANCÉ ..... 02 OTHER FRIEND ..... 03 CASUAL ACQUAINTANCE ..... 04 RELATIVE ..... 05 PROSTITUTE ..... 06 OTHER _____ 96 (SPECIFY)	→523
522D1	CHECK 106: 15-19 YEARS OLD [ ] ▼ 20-49 YEARS OLD [ ]		→522E
522D2	Was this man younger, about the same age or older than you? IF OLDER: Do you think that he was less than 10 years older than you or 10 or more years older than you?	YOUNGER ..... 1 ABOUT SAME AGE ..... 2 LESS THAN 10 YEARS OLDER ..... 3 10 OR MORE YEARS OLDER ..... 4 OLDER, DON'T KNOW DIFFERENCE.... 5 DON'T KNOW 8	
522E	For how long have you had sexual relations with this man?	DAYS ..... 1 [ ][ ] WEEKS ..... 2 [ ][ ] MONTHS ..... 3 [ ][ ] YEARS ..... 4 [ ][ ]	
523	In total, with how many different men have you had sex in the last 12 months?	NUMBER OF PARTNERS ..... [ ][ ]	
524	Do you know of a place where a person can get male condoms?	YES ..... 1 NO 2	→527
525	Where is that? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) Any other place? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC ..... A GOVT. HEALTH CENTER ..... B FAMILY PLANNING CLINIC ..... C MOBILE CLINIC ..... D FIELDWORKER ..... E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... G PRIVATE DOCTOR ..... H PHARMACY/CHEMIST/ DRUG STORE ..... I MOBILE CLINIC ..... J FIELDWORKER ..... K FP/PPAG CLINIC ..... L MATERNITY HOME ..... M OTHER PRIVATE MEDICAL _____ N (SPECIFY) OTHER SOURCE SHOP ..... O CHURCH ..... P FRIENDS/RELATIVES ..... Q OTHER _____ X (SPECIFY)	
526	If you wanted to, could you yourself get a male condom?	YES ..... 1 NO ..... 2 DON'T KNOW/UNSURE 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
527	Do you know of a place where a person can get female condoms?	YES ..... 1 NO 2	 →601
528	Where is that? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) Any other place? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC ..... A GOVT. HEALTH CENTER ..... B FAMILY PLANNING CLINIC ..... C MOBILE CLINIC ..... D FIELDWORKER ..... E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... G PRIVATE DOCTOR ..... H PHARMACY/CHEMIST/ DRUG STORE ..... I MOBILE CLINIC ..... J FIELDWORKER ..... K FP/PPAG CLINIC ..... L MATERNITY HOME ..... M OTHER PRIVATE MEDICAL _____ N (SPECIFY) OTHER SOURCE SHOP ..... O CHURCH ..... P FRIENDS/RELATIVES ..... Q OTHER _____ X (SPECIFY)	
529	If you wanted to, could you yourself get a female condom?	YES ..... 1 NO ..... 2 DON'T KNOW/UNSURE 8	

SECTION 6. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	CHECK 311/311A: NEITHER STERILIZED ☐ HE OR SHE STERILIZED ☐		→614
602	CHECK 226: NOT PREGNANT OR UNSURE ☐ Now I have some questions about the future. Would you like to have (a/another) child, or would you prefer not to have any (more) children? PREGNANT ☐ Now I have some questions about the future. After the child you are expecting now, would you like to have another child, or would you prefer not to have any more children?	HAVE (A/ANOTHER) CHILD ..... 1 NO MORE/NONE ..... 2 SAYS SHE CAN'T GET PREGNANT ..... 3 UNDECIDED/DON'T KNOW: AND PREGNANT ..... 4 AND NOT PREGNANT OR UNSURE 5	 →604 →614 →610 →608
603	CHECK 226: NOT PREGNANT OR UNSURE ☐ How long would you like to wait from now before the birth of (a/another) child? PREGNANT ☐ After the birth of the child you are expecting now, how long would you like to wait before the birth of another child?	MONTHS ..... 1 ☐☐ YEARS ..... 2 ☐☐ SOON/NOW ..... 993 SAYS SHE CAN'T GET PREGNANT .... 994 AFTER MARRIAGE ..... 995 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	 →609 →614 →609
604	CHECK 226: NOT PREGNANT OR UNSURE ☐ PREGNANT ☐		→610
605	CHECK 310: USING A CONTRACEPTIVE METHOD? NOT ASKED ☐ NOT CURRENTLY USING ☐ CURRENTLY USING ☐		→608
606	CHECK 603: NOT ASKED ☐ 24 OR MORE MONTHS OR 02 OR MORE YEARS ☐ 00-23 MONTHS OR 00-01 YEAR ☐		→610

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
607	CHECK 602: WANTS TO HAVE A/ANOTHER CHILD ☐ You have said that you do not want (a/another) child soon, but you are not using any method to avoid pregnancy. Can you tell me why? Any other reason? WANTS NO MORE/ NONE ☐ You have said that you do not want any (more) children, but you are not using any method to avoid pregnancy. Can you tell me why? Any other reason? RECORD ALL REASONS MENTIONED.	NOT MARRIED ..... A FERTILITY-RELATED REASONS NOT HAVING SEX ..... B INFREQUENT SEX ..... C MENOPAUSAL/HYSTERECTOMY ..... D SUBFECUND/INFECUND ..... E POSTPARTUM AMENORRHEIC ..... F BREASTFEEDING ..... G FATALISTIC ..... H OPPOSITION TO USE RESPONDENT OPPOSED ..... I HUSBAND/PARTNER OPPOSED ..... J OTHERS OPPOSED ..... K RELIGIOUS PROHIBITION ..... L LACK OF KNOWLEDGE KNOWS NO METHOD ..... M KNOWS NO SOURCE ..... N METHOD-RELATED REASONS HEALTH CONCERNS ..... O FEAR OF SIDE EFFECTS ..... P LACK OF ACCESS/TOO FAR ..... Q COSTS TOO MUCH ..... R INCONVENIENT TO USE ..... S INTERFERES WITH BODY'S NATURAL PROCESSES ..... T OTHER _____ X (SPECIFY) DON'T KNOW ..... Z	
608	In the next few weeks, if you discovered that you were pregnant, would that be a big problem, a small problem, or no problem for you?	BIG PROBLEM ..... 1 SMALL PROBLEM ..... 2 NO PROBLEM ..... 3 SAYS SHE CAN'T GET PREGNANT/ NOT HAVING SEX 4	
609	CHECK 310: USING A CONTRACEPTIVE METHOD? NOT ASKED ☐ NO, NOT CURRENTLY USING ☐ YES, CURRENTLY USING ☐ _____		→614
610	Do you think you will use a contraceptive method to delay or avoid pregnancy at any time in the future?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→612
611	Which contraceptive method would you prefer to use?	FEMALE STERILIZATION ..... 01 MALE STERILIZATION ..... 02 PILL ..... 03 IUD ..... 04 INJECTABLES ..... 05 IMPLANTS ..... 06 CONDOM ..... 07 FEMALE CONDOM ..... 08 DIAPHRAGM ..... 09 FOAM/JELLY ..... 10 LACTATIONAL AMEN. METHOD ..... 11 PERIODIC ABSTINENCE ..... 12 WITHDRAWAL ..... 13 OTHER _____ 96 (SPECIFY) UNSURE 98	→614

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
612	What is the main reason that you think you will not use a contraceptive method at any time in the future?	NOT MARRIED ..... 11 FERTILITY-RELATED REASONS INFREQUENT SEX/NO SEX ..... 22 MENOPAUSAL/HYSTERECTOMY ..... 23 SUBFECUND/INFECUND ..... 24 WANTS AS MANY CHILDREN AS POSSIBLE ..... 26 OPPOSITION TO USE RESPONDENT OPPOSED ..... 31 HUSBAND OPPOSED ..... 32 OTHERS OPPOSED ..... 33 RELIGIOUS PROHIBITION ..... 34 LACK OF KNOWLEDGE KNOWS NO METHOD ..... 41 KNOWS NO SOURCE ..... 42 METHOD-RELATED REASONS HEALTH CONCERNS ..... 51 FEAR OF SIDE EFFECTS ..... 52 LACK OF ACCESS/TOO FAR ..... 53 COSTS TOO MUCH ..... 54 INCONVENIENT TO USE ..... 55 INTERFERES WITH BODY'S NORMAL PROCESSES ..... 56 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→614
613	Would you ever use a contraceptive method if you were married?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
614	CHECK 216: HAS LIVING CHILDREN ☐ ▼ If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? NO LIVING CHILDREN ☐ ▼ If you could choose exactly the number of children to have in your whole life, how many would that be? PROBE FOR A NUMERIC RESPONSE.	NONE ..... 00 NUMBER ..... ☐☐ OTHER _____ 96 (SPECIFY)	→616 →616
615	How many of these children would you like to be boys, how many would you like to be girls and for how many would the sex not matter?	BOYS GIRLS EITHER NUMBER ☐☐ ☐☐ ☐☐ OTHER _____ 96 (SPECIFY)	
616	Would you say that you approve or disapprove of couples using a method to avoid getting pregnant?	APPROVE ..... 1 DISAPPROVE ..... 2 DON'T KNOW/UNSURE 8	
617	In the last few months have you heard or seen messages about family planning: On the radio? On the television? In a newspaper or magazine? In a poster? In leaflets or brochures? From a health worker? At a community or social club meeting?	YES NO RADIO ..... 1 2 TELEVISION ..... 1 2 NEWSPAPER OR MAGAZINE ..... 1 2 POSTER ..... 1 2 LEAFLETS OR BROCHURES ..... 1 2 HEALTH WORKER ..... 1 2 MEETING 1 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
618	Have you heard the following messages about family planning: Life Choices: It's your life. It's your choice? Make the choice that is best for you? Contraceptives are safe and effective? Obra ni wora bo?	YES NO LIFE CHOICES: ITS YOUR LIFE ITS YOUR CHOICE ..... 1 2 MAKE THE CHOICE THAT IS BEST FOR YOU..... 1 2 CONTRACEPTIVES ARE SAFE AND EFFECTIVE ..... 1 2 OBRA NI WORA BO..... 1 2	
619	In the last few months, have you discussed the practice of family planning with your friends, neighbors, or relatives?	YES.....1 NO 2	→621
620	With whom? Anyone else? RECORD ALL PERSONS MENTIONED.	HUSBAND/PARTNER..... A MOTHER ..... B FATHER ..... C SISTER(S)..... D BROTHER(S) ..... E DAUGHTER(S).....F SON(S) ..... G MOTHER-IN-LAW ..... H FRIENDS/NEIGHBORS .....I OTHER _____ X (SPECIFY)	
621	CHECK 501: YES, CURRENTLY MARRIED ▼ ☐ YES, LIVING WITH A MAN ▼ ☐ NO, NOT IN UNION ☐		→628
622	CHECK 311/311A: ANY CODE CIRCLED ▼ ☐ NO CODE CIRCLED ☐		→624
623	You have told me that you are currently using contraception. Would you say that using contraception is mainly your decision, mainly your husband's decision or did you both decide together?	MAINLY RESPONDENT .....1 MAINLY HUSBAND/PARTNER.....2 JOINT DECISION .....3 OTHER _____ 6 (SPECIFY)	
624	Now I want to ask you about your husband's/partner's views on family planning. Do you think that your husband/partner approves or disapproves of couples using a contraceptive method to avoid pregnancy?	APPROVES .....1 DISAPPROVES .....2 DON'T KNOW.....8	
625	How often have you talked to your husband/partner about family planning in the past year?	NEVER .....1 ONCE OR TWICE .....2 MORE OFTEN.....3	
626	CHECK 311/311A: NEITHER STERILIZED ▼ ☐ HE OR SHE STERILIZED ☐		→628
627	Do you think your husband/partner wants the same number of children that you want, or does he want more or fewer than you want?	SAME NUMBER.....1 MORE CHILDREN.....2 FEWER CHILDREN .....3 DON'T KNOW.....8	
628	Husbands and wives do not always agree on everything. Please tell me if you think a wife is justified in refusing to have sex with her husband when: She knows her husband has a sexually transmitted disease? She knows her husband has sex with women other than his wives? She has recently given birth? She is tired or not in the mood?	YES NO DK HAS STD .....1 2 8 OTHER WOMEN .....1 2 8 RECENT BIRTH .....1 2 8 TIRED/MOOD.....1 2 8	

SECTION 7. HUSBAND'S BACKGROUND AND WOMAN'S WORK

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	CHECK 501 AND 502: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ FORMERLY MARRIED/ LIVED WITH A MAN ☐ NEVER MARRIED AND NEVER LIVED WITH A MAN ☐		→703 →707
702	How old was your husband/partner on his last birthday?	AGE IN COMPLETED YEARS ☐☐	
703	Did your (last) husband/partner ever attend school?	YES .....1 NO 2	→706
704	What was the highest level of school he attended: primary, secondary, or higher?	PRIMARY .....1 MIDDLE/JSS .....2 SECONDARY/SSS.....3 HIGHER.....4 DON'T KNOW 8	→706
705	What was the highest (grade/form/year) he completed at that level?	GRADE..... ☐☐ DON'T KNOW 98	
706	CHECK 701: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ What is your husband's/partner's occupation? That is, what kind of work does he mainly do? FORMERLY MARRIED/ LIVED WITH A MAN ☐ What was your (last) husband's/ partner's occupation? That is, what kind of work did he mainly do?	☐☐ _____ _____ _____	
707	Aside from your own housework, are you currently working?	YES .....1 NO 2	→710
708	As you know, some women take up jobs for which they are paid in cash or kind. Others sell things, have a small business or work on the family farm or in the family business. Are you currently doing any of these things or any other work?	YES .....1 NO 2	→710
709	Have you done any work in the last 12 months?	YES .....1 NO 2	→719
710	What is your occupation, that is, what kind of work do you mainly do?	☐☐ _____ _____	
711	CHECK 710: WORKS IN AGRICULTURE ☐ DOES NOT WORK IN AGRICULTURE ☐		→713
712	Do you work mainly on your own land or on family land, or do you work on land that you rent from someone else, or do you work on someone else's land?	OWN LAND .....1 FAMILY LAND .....2 RENTED LAND .....3 SOMEONE ELSE'S LAND 4	
713	Do you do this work for a member of your family, for someone else, or are you self-employed?	FOR FAMILY MEMBER .....1 FOR SOMEONE ELSE .....2 SELF-EMPLOYED 3	
714	Do you usually work at home or away from home?	HOME.....1 AWAY.....2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
715	Do you usually work throughout the year, or do you work seasonally, or only once in a while?	THROUGHOUT THE YEAR.....1 SEASONALLY/PART OF THE YEAR .....2 ONCE IN A WHILE.....3	
716	Are you paid or do you earn in cash or kind for this work or are you not paid at all?	CASH ONLY.....1 CASH AND KIND .....2 IN KIND ONLY.....3 NOT PAID.....4	→719
717	Who mainly decides how the money you earn will be used?	RESPONDENT .....1 HUSBAND/PARTNER.....2 RESPONDENT AND HUSBAND/PARTNER JOINTLY .....3 SOMEONE ELSE.....4 RESPONDENT AND SOMEONE ELSE JOINTLY.....5	
718	On average, how much of your household's expenditures do your earnings pay for: almost none, less than half, about half, more than half, or all?	ALMOST NONE .....1 LESS THAN HALF .....2 ABOUT HALF .....3 MORE THAN HALF.....4 ALL .....5 NONE, HER INCOME IS ALL SAVED. 6	
719	Who in your household usually has the final say on the following decisions:	RESPONDENT = 1 HUSBAND/PARTNER = 2 RESPONDENT & HUSBAND/PARTNER JOINTLY = 3 SOMEONE ELSE = 4 RESPONDENT & SOMEONE ELSE JOINTLY = 5 DECISION NOT MADE/NOT APPLICABLE = 6	
	Your own health care?	1 2 3 4 5 6	
	Making large household purchases?	1 2 3 4 5 6	
	Making household purchases for daily needs?	1 2 3 4 5 6	
	Visits to family or relatives?	1 2 3 4 5 6	
	What food should be cooked each day?	1 2 3 4 5 6	
720	PRESENCE OF OTHERS AT THIS POINT (PRESENT AND LISTENING, PRESENT BUT NOT LISTENING OR NOT PRESENT)	PRES/ LISTEN. / PRES/ NOT LISTEN. / NOT PRES CHILDREN <10 .....1 2 8 HUSBAND .....1 2 8 OTHER MALES .....1 2 8 OTHER FEMALES.....1 2 8	
721	Sometimes a husband is annoyed or angered by things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations:	YES / NO / DK	
	If she goes out without telling him?	GOES OUT..... 1 2 8	
	If she neglects the children?	NEGL. CHILDREN ... 1 2 8	
	If she argues with him?	ARGUES 1 2 8	
	If she refuses to have sex with him?	REFUSES SEX 1 2 8	
	If she burns the food?	BURNS FOOD..... 1 2 8	

SECTION 8: AIDS AND OTHER SEXUALLY TRANSMITTED DISEASES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	Now I would like to talk about something else. Have you ever heard of an illness called AIDS?	YES ..... 1 NO 2	→817
802	Can people reduce their chances of getting the AIDS virus by having just one sex partner who is not infected and who has no other partners?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
803	Can a person get the AIDS virus from mosquito bites?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
804	Can people reduce their chances of getting the AIDS virus by using a condom every time they have sex?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
805	Can people get the AIDS virus by sharing food with a person who has AIDS?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
806	Can people reduce their chance of getting the AIDS virus by not having sex at all?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
807	Can people get the AIDS virus because of witchcraft or other supernatural means?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
808	Is there anything (else) a person can do to avoid getting AIDS or the virus that causes AIDS?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→810
809	What can a person do? Anything else? RECORD ALL WAYS MENTIONED.	ABSTAIN FROM SEX ..... A USE CONDOMS ..... B LIMIT SEX TO ONE PARTNER/STAY FAITHFUL TO ONE PARTNER ..... C LIMIT NUMBER OF SEXUAL PARTNERS ..... D AVOID SEX WITH PROSTITUTES ..... E AVOID SEX WITH PERSONS WHO HAVE MANY PARTNERS ..... F AVOID SEX WITH HOMOSEXUALS ..... G AVOID SEX WITH PERSONS WHO INJECT DRUGS INTRAVENOUSLY .... H AVOID BLOOD TRANSFUSIONS ..... I AVOID INJECTIONS ..... J AVOID SHARING RAZORS/BLADES ..... K AVOID KISSING ..... L AVOID MOSQUITO BITES ..... M SEEK PROTECTION FROM TRADITIONAL PRACTITIONER ..... N OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) DON'T KNOW ..... Z	
810	Is it possible for a healthy-looking person to have the AIDS virus?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
811	Do you know someone personally who has the virus that causes AIDS or someone who died from AIDS?	YES ..... 1 NO 2	
812	Can the virus that causes AIDS be transmitted from a mother to a child?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→813
812A	Can the virus that causes AIDS be transmitted from a mother to a child: During pregnancy? During delivery? By breastfeeding?	YES NO DK DURING PREG ..... 1 2 8 DURING DELIVERY ... 1 2 8 BY BREASTFEEDING 1 2 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
812B	Are there any special drugs that a pregnant woman infected with the AIDS virus can take to reduce the risk of transmission to the baby during pregnancy?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
813	CHECK 501: YES, CURRENTLY MARRIED/ LIVING WITH A MAN ☐ ▼ NO, NOT IN UNION ☐		→814A
814	Have you ever talked about ways to prevent getting the virus that causes AIDS with (your husband/the man you are living with)?	YES ..... 1 NO 2	
814A	In your opinion, is it acceptable or unacceptable for AIDS to be discussed: on the radio? on the TV? in newspapers?	ACCEPT-ABLE / NOT ACCEPT-ABLE ON THE RADIO ..... 1 2 ON THE TV ..... 1 2 IN NEWSPAPERS 1 2	
814A1	Have you heard or seen any messages about HIV/AIDS?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
814A2	Have you heard or seen the slogan "Reach Out, Show Compassion?"	YES ..... 1 NO ..... 2 DON'T KNOW 8	
814A3	Have you heard or seen the slogan "Stop AIDS, Love Life?"	YES ..... 1 NO ..... 2 DON'T KNOW 8	
814A4	CHECK 814A2: AND 814A3 YES, CIRCLED FOR EITHER OR BOTH ☐ ▼ NO, DON'T KNOW CIRCLED ☐		→814B
814A5	Did you hear or see this slogan: On the TV? In a music video? On the radio? In a newspaper or magazine? In a poster? On a car sticker? In leaflets or brochures? On a tee-shirt or a cap? From a mobile 'ISD' van? During a community event? At a road show?	YES / NO TV ..... 1 2 MUSIC VIDEO ..... 1 2 RADIO ..... 1 2 NEWSPAPER/MAGAZINE ..... 1 2 POSTER ..... 1 2 CAR STICKER ..... 1 2 LEAFLETS/BROCHURES ..... 1 2 T-SHIRT/CAP ..... 1 2 ISD VAN ..... 1 2 COMMUNITY EVENT ..... 1 2 ROAD SHOW 1 2	
814A6	Have you seen a television show called "Things we do for love" that features the characters Pusher, B.B. and Marcia?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
814B	Would you buy fresh vegetables from a vendor who has the AIDS virus?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
815	If a member of your family got infected with the virus that causes AIDS, would you want it to remain a secret or not?	YES ..... 1 NO ..... 2 DK/NOT SURE 8	
816	If a relative of yours became sick with the virus that causes AIDS, would you be willing to care for her or him in your own household?	YES ..... 1 NO ..... 2 DK/NOT SURE/DEPENDS 8	
816A	If a female teacher has the AIDS virus, should she be allowed to continue teaching in the school?	CAN CONTINUE ..... 1 SHOULD NOT CONTINUE ..... 2 DK/NOT SURE/DEPENDS 8	
816B	Should children age 12-14 be taught about using a condom to avoid AIDS?	YES ..... 1 NO ..... 2 DK/NOT SURE/DEPENDS 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
816B1	CHECK 407A: ANY CODE D-L CIRCLED → ANY CODE A-C OR X CIRCLED OR Q.407A NOT ASKED		→816CX
816B2	Now I would like to ask some questions about your last birth. During any of the antenatal visits for this pregnancy, were you given any information or counseled about AIDS or the AIDS virus?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
816B3	I don't want to know the results, but were you tested for the AIDS virus during any of your antenatal care visits?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→816CX
816B4	Did you yourself ask for the test, was it offered to you and you accepted, or was it required?	ASKED FOR THE TEST ..... 1 OFFERED AND ACCEPTED ..... 2 REQUIRED 8	
816B5	I don't want to know the results, but did you get the results of the test?	YES ..... 1 NO 2	
816B6	Where did you go for the test? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC ..... 11 GOVT. HEALTH CENTER ..... 12 FAMILY PLANNING CLINIC ..... 13 MOBILE CLINIC ..... 14 FIELDWORKER ..... 15 OTHER PUBLIC_____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... 21 PRIVATE DOCTOR ..... 22 PHARMACY/CHEMIST/ DRUG STORE ..... 23 MOBILE CLINIC ..... 24 FIELDWORKER ..... 25 FP/PPAG CLINIC ..... 26 MATERNITY HOME ..... 27 OTHER PRIVATE MEDICAL _____ 28 (SPECIFY) OTHER SOURCE SHOP ..... 31 CHURCH ..... 32 FRIEND/RELATIVE ..... 33 OTHER _____ 96 (SPECIFY)	
816C 816CX	I don't want to know the results, but have you been tested for the AIDS virus since that time you were tested during your pregnancy? I don't want to know the results, but have you ever been tested for the AIDS virus?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→816D
816C1	When was the last time you were tested?	LESS THAN 12 MONTHS ..... 1 12-23 MONTHS ..... 2 2 YEARS OR MORE 3	
816C2	The last time you had the test, did you yourself ask for the test, was it offered to you and you accepted, or was it required?	ASKED FOR THE TEST ..... 1 OFFERED AND ACCEPTED ..... 2 REQUIRED 3	
816C3	I don't want to know the results, but did you get the results of the test?	YES ..... 1 NO 2	→816FX
816D	Would you want to be tested for the AIDS virus?	YES ..... 1 NO ..... 2 DON'T KNOW/ NOT SURE 8	
816E	Do you know a place where you could go to get an AIDS test?	YES ..... 1 NO 2	→817

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
816F 816FX	Where can you go for the test? RECORD ONLY FIRST RESPONSE GIVEN. Where did you go for the test? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC ..... 11 GOVT. HEALTH CENTER..... 12 FAMILY PLANNING CLINIC..... 13 MOBILE CLINIC ..... 14 FIELDWORKER ..... 15 OTHER PUBLIC_____16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC..... 21 PRIVATE DOCTOR..... 22 PHARMACY/CHEMIST/ DRUG STORE..... 23 MOBILE CLINIC ..... 24 FIELDWORKER ..... 25 FP/PPAG CLINIC ..... 26 MATERNITY HOME ..... 27 OTHER PRIVATE MEDICAL _____ 28 (SPECIFY) OTHER SOURCE SHOP..... 31 CHURCH ..... 32 FRIEND/RELATIVE ..... 33 OTHER _____ 96 (SPECIFY)	
817	Apart from AIDS, have you heard about other infections that can be transmitted through sexual contact?	YES..... 1 NO..... 2	→819A
818	If a man has a sexually transmitted disease, what symptoms might he have? Any others? RECORD ALL SYMPTOMS MENTIONED.	ABDOMINAL PAIN ..... A GENITAL DISCHARGE/DRIPPING..... B FOUL SMELLING DISCHARGE..... C BURNING PAIN ON URINATION..... D REDNESS/INFLAMMATION IN GENITAL AREA ..... E SWELLING IN GENITAL AREA .....F GENITAL SORES/ULCERS ..... G GENITAL WARTS ..... H GENITAL ITCHING.....I BLOOD IN URINE ..... J LOSS OF WEIGHT ..... K IMPOTENCE .....L OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) NO SYMPTOMS..... Y DON'T KNOW.....Z	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
819	If a woman has a sexually transmitted disease, what symptoms might she have? Any others? RECORD ALL SYMPTOMS MENTIONED.	ABDOMINAL PAIN ..... A GENITAL DISCHARGE ..... B FOUL SMELLING DISCHARGE..... C BURNING PAIN ON URINATION..... D REDNESS/INFLAMMATION IN GENITAL AREA..... E SWELLING IN GENITAL AREA .....F GENITAL SORES/ULCERS ..... G GENITAL WARTS ..... H GENITAL ITCHING.....I BLOOD IN URINE ..... J LOSS OF WEIGHT ..... K HARD TO GET PREGNANT/HAVE CHILD ..... A L OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) NO SYMPTOMS..... Y DON'T KNOW.....Z	
819A	CHECK 514: HAS HAD SEXUAL INTERCOURSE ☐ ▼ HAS NOT HAD SEXUAL INTERCOURSE ☐ _____		→820
819A1	CHECK 817: KNOWS STI ☐ ▼ DOES NOT KNOW STI ☐ _____		→819C
819B	Now I would like to ask you some questions about your health in the last 12 months. During the last 12 months, have you had a sexually-transmitted disease?	YES..... 1 NO..... 2 DON'T KNOW..... 8	
819C	Sometimes, women experience a bad smelling abnormal genital discharge. During the last 12 months, have you had a bad smelling abnormal genital discharge?	YES..... 1 NO..... 2 DON'T KNOW..... 8	
819D	Sometimes women have a genital sore or ulcer. During the last 12 months, have you had a genital sore or ulcer?	YES..... 1 NO..... 2 DON'T KNOW..... 8	
819E	CHECK 819B, 819C, 819D: HAS HAD AN INFECTION ☐ ▼ HAS NOT HAD AN INFECTION OR DOES NOT KNOW ☐ _____		→820
819F	The last time you had (PROBLEM FROM 819B/819C//819D), did you seek any kind of advice or treatment?	YES..... 1 NO..... 2	→819H
819G	The last time you had (PROBLEM FROM 819B/819C/819D), did you do any of the following? Did you.... Go to a clinic, hospital or private doctor? Consult a traditional healer? Seek advice or buy medicines in a shop or pharmacy? Ask for advice from friends or relatives?	YES NO CLINIC/HOSPITAL ..... 1 2 TRADITIONAL HEALER..... 1 2 SHOP/PHARMACY ..... 1 2 FRIENDS/RELATIVES 1 2	
819H	When you had (PROBLEM FROM 819B/819C/819D), did you inform the person with whom you were having sex?	YES..... 1 NO..... 2 SOME/ NOT ALL ..... 3 DID NOT HAVE PARTNER 4	→820
819I	When you had (PROBLEM FROM 819B/819C/819D), did you do something to avoid infecting your sexual partner(s)?	YES ..... 1 NO..... 2 PARTNER ALREADY INFECTED 3	→820

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
819J	What did you do to avoid infecting your partner(s)? Did you....	YES NO	
	Use medicine?	USE MEDICINE 1 2	
	Stop having sex?	STOP SEX 1 2	
	Use a condom when having sex?	USE CONDOM 1 2	
820	In many communities, girls are also circumcised. In your community, is female circumcision practiced?	YES ..... 1 NO 2	
821	Are you circumcised?	YES ..... 1 NO 2	
822	RECORD THE TIME.	HOUR..... [ ][ ] MINUTES ..... [ ][ ]	

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

NAME OF THE SUPERVISOR:_____ DATE: _____

EDITOR'S OBSERVATIONS

NAME OF EDITOR:_____ DATE: _____

INSTRUCTIONS:
ONLY ONE CODE SHOULD APPEAR IN ANY BOX.

BIRTHS AND PREGNANCIES
B BIRTHS
P PREGNANCIES
T TERMINATIONS

	12 DEC	01	
	11 NOV	02	
	10 OCT	03	
	09 SEP	04	
2	08 AUG	05	
0	07 JUL	06	
0	06 JUN	07	
3	05 MAY	08	
	04 APR	09	
	03 MAR	10	
	02 FEB	11	
	01 JAN	12	
	12 DEC	13	
	11 NOV	14	
	10 OCT	15	
	09 SEP	16	
2	08 AUG	17	
0	07 JUL	18	
0	06 JUN	19	
2	05 MAY	20	
	04 APR	21	
	03 MAR	22	
	02 FEB	23	
	01 JAN	24	
	12 DEC	25	
	11 NOV	26	
	10 OCT	27	
	09 SEP	28	
2	08 AUG	29	
0	07 JUL	30	
0	06 JUN	31	
1	05 MAY	32	
	04 APR	33	
	03 MAR	34	
	02 FEB	35	
	01 JAN	36	
	12 DEC	37	
	11 NOV	38	
	10 OCT	39	
	09 SEP	40	
2	08 AUG	41	
0	07 JUL	42	
0	06 JUN	43	
0	05 MAY	44	
	04 APR	45	
	03 MAR	46	
	02 FEB	47	
	01 JAN	48	
	12 DEC	49	
	11 NOV	50	
	10 OCT	51	
	09 SEP	52	
1	08 AUG	53	
9	07 JUL	54	
9	06 JUN	55	
9	05 MAY	56	
	04 APR	57	
	03 MAR	58	
	02 FEB	59	
	01 JAN	60	
	12 DEC	61	
	11 NOV	62	
	10 OCT	63	
	09 SEP	64	
1	08 AUG	65	
9	07 JUL	66	
9	06 JUN	67	
8	05 MAY	68	
	04 APR	69	
	03 MAR	70	
	02 FEB	71	
	01 JAN	72	

GHANA DEMOGRAPHIC AND HEALTH SURVEYS
MAN'S QUESTIONNAIRE

GHANA STATISTICAL SERVICE

IDENTIFICATION

LOCALITY NAME _____

NAME OF HOUSEHOLD HEAD _____

EA NUMBER .....

HOUSEHOLD NUMBER .....

REGION .....

DISTRICT .....

URBAN/RURAL (URBAN=1, RURAL=2) .....

CITY/LARGE TOWN/SMALL TOWN/VILLAGE .....
(CITY=1, LARGE TOWN=2, SMALL TOWN=3, VILLAGE=4)

NAME AND LINE NUMBER OF MAN _____

	1	2	3	FINAL VISIT
DATE	_____	_____		DAY ___ MONTH ___ YEAR 2003
INTERVIEWER'S NAME	_____	_____		NAME ___
RESULT*	_____	_____		RESULT ___
NEXT VISIT: DATE	_____	_____		TOTAL NO. OF VISITS ___
TIME	_____	_____		

*RESULT CODES:

1	COMPLETED	4	REFUSED	7	OTHER _____ (SPECIFY)
2	NOT AT HOME	5	PARTLY COMPLETED		
3	POSTPONED	6	INCAPACITATED		

LANGUAGE

LANGUAGE OF QUESTIONNAIRE: **ENGLISH** [1]

LANGUAGE OF INTERVIEW *** _____

NATIVE LANGUAGE OF RESPONDENT*** _____

WAS A TRANSLATOR USED? (YES=1, NO=2).....

*** LANGUAGE CODES:
1 ENGLISH 2 AKAN 3 GA 4 EWE 5 NZEMA 6 DAGBANI
7 OTHER_____
(SPECIFY)

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____	DATE _____		

SECTION 1. RESPONDENT'S BACKGROUND

INFORMED CONSENT

Hello. My name is _____ and I am working with the Ghana Statistical Service. We are conducting a national survey about the health of women, men and children. We would very much appreciate your participation in this survey. I would like to ask you some questions about yourself and your family. This information will help the government to plan health services. The survey usually takes between 15 and 30 minutes to complete. Whatever information you provide will be kept strictly confidential and will not be shown to other persons.

Participation in this survey is voluntary and you can choose not to answer any individual question or all of the questions. However, we hope that you will participate in this survey since your views are important.

At this time, do you want to ask me anything about the survey?
May I begin the interview now?

Signature of interviewer: _____ Date: _____

RESPONDENT AGREES TO BE INTERVIEWED .....1 ▼ RESPONDENT DOES NOT AGREE TO BE INTERVIEWED.....2 ⟶END

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOUR..... [ ][ ] MINUTES ..... [ ][ ]	
102	First I would like to ask some questions about you and your household. For most of the time until you were 12 years old, did you live in a city, in a town, or in the village	CITY.....1 TOWN.....2 VILLAGE.....3	
103	How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? IF LESS THAN ONE YEAR, RECORD '00' YEARS.	YEARS ..... [ ][ ] ALWAYS.....95 VISITOR 96	 ⟶105
104	Just before you moved here, did you live in a city, in a town, or in the village?	CITY.....1 TOWN.....2 VILLAGE.....3	
105	In the last 12 months, on how many separate occasions have you traveled away from your home community and slept away?	NUMBER OF TRIPS AWAY ... [ ][ ] NONE 00	 ⟶107
106	In the last 12 months, have you been away from your home community for more than 1 month at a time?	YES.....1 NO 2	
107	In what month and year were you born?	MONTH..... [ ][ ] DOES NOT KNOW MONTH.....98 YEAR..... [ ][ ][ ][ ] DON'T KNOW YEAR.....9998	
108	How old were you at your last birthday? COMPARE AND CORRECT 107 AND/OR 108 IF INCONSISTENT.	AGE IN COMPLETED YEARS [ ][ ]	
109	Have you ever attended school?	YES.....1 NO 2	 ⟶113
110	What is the highest level of school you attended: primary, middle/JSS, secondary/SSS, or higher?	PRIMARY .....1 MIDDLE/JSS .....2 SECONDARY/SSS.....3 HIGHER.....4	
111	What is the highest grade you completed at that level?	GRADE..... [ ][ ]	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
112	CHECK 110: PRIMARY OR MIDDLE/JSS ☐ ▼ SECONDARY/SSS OR HIGHER ☐		→116
113	Now I would like you to read this sentence to me. SHOW CARD TO RESPONDENT. IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE: Can you read any part of the sentence to me?	CANNOT READ AT ALL.....1 ABLE TO READ ONLY PARTS OF SENTENCE.....2 ABLE TO READ WHOLE SENTENCE.....3 NO CARD WITH REQUIRED LANGUAGE_____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRED.....5	
114	Have you ever participated in a literacy program or any other program that involves learning to read or write (not including primary school)?	YES.....1 NO 2	
115	CHECK 113: CODE '2', '3' OR '4' CIRCLED ☐ ▼ CODE '1' AND '5' CIRCLED ☐		→117
116	Do you read a newspaper or magazine almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY .....1 AT LEAST ONCE A WEEK .....2 LESS THAN ONCE A WEEK .....3 NOT AT ALL 4	
117	Do you listen to the radio almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY .....1 AT LEAST ONCE A WEEK .....2 LESS THAN ONCE A WEEK .....3 NOT AT ALL 4	
118	Do you watch television almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY .....1 AT LEAST ONCE A WEEK .....2 LESS THAN ONCE A WEEK .....3 NOT AT ALL 4	
119	Are you currently working?	YES.....1 NO 2	→122
120	Have you done any work in the last 12 months?	YES.....1 NO 2	→122
121	What have you been doing for most of the time over the last 12 months?	GOING TO SCHOOL/STUDYING .....1 LOOKING FOR WORK.....2 INACTIVE .....3 COULD NOT WORK/HANDICAPPED .....4 OTHER_____ 6 (SPECIFY)	→129
122	What is your occupation, that is, what kind of work do you mainly do?	☐☐ _____ _____	
123	CHECK 122: WORKS IN AGRICULTURE ☐ ▼ DOES NOT WORK IN AGRICULTURE ☐		→125
124	Do you work mainly on your own land or on family land, or do you work on land that you rent from someone else, or do you work on someone else's land?	OWN LAND ..... 1 FAMILY LAND ..... 2 RENTED LAND ..... 3 SOMEONE ELSE'S LAND 4	
125	During the last 12 months, how many months did you work?	NUMBER OF MONTHS..... ☐☐	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
126	Are you paid or do you earn in cash or kind for this work or are you not paid at all?	CASH ONLY ..... 1 CASH AND KIND ..... 2 IN KIND ONLY ..... 3 NOT PAID 4	▸129
127	Who mainly decides how the money you earn will be used?	RESPONDENT ..... 1 WIFE/PARTNER ..... 2 RESPONDENT AND WIFE/PARTNER JOINTLY ..... 3 SOMEONE ELSE ..... 4 RESPONDENT AND SOMEONE ELSE JOINTLY 5	
128	On average, how much of your household's expenditures do your earnings pay for: almost none, less than half, about half, more than half, or all?	ALMOST NONE ..... 1 LESS THAN HALF ..... 2 ABOUT HALF ..... 3 MORE THAN HALF ..... 4 ALL ..... 5 NONE, INCOME IS ALL SAVED. 6	
129	What is your religion?	CATHOLIC ..... 01 ANGLICAN ..... 02 METHODIST ..... 03 PRESBYTERIAN ..... 04 OTHER CHRISTIAN ..... 05 MOSLEM ..... 06 TRADITIONAL/SPIRITUALIST ..... 07 NO RELIGION ..... 08 OTHER _____ 96 (SPECIFY)	
130	To which ethnic group do you belong?	AKAN ..... 01 GA/DANGME ..... 02 EWE ..... 03 GUAN ..... 04 MOLE-DAGBANI ..... 05 GRUSSI ..... 06 GRUMA ..... 07 HAUSA ..... 08 OTHER _____ 96 (SPECIFY)	

SECTION 2. REPRODUCTION AND PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about any children you have had. I am interested only in the children that are biologically yours. Have you ever fathered any children with any woman?	YES.....1 NO .....2 DON'T KNOW.....8	→206
202	Do you have any sons or daughters that you have fathered who are now living with you?	YES.....1 NO 2	→204
203	How many sons live with you? And how many daughters live with you? IF NONE, WRITE '00'.	SONS AT HOME ..... [ ][ ] DAUGHTERS AT HOME..... [ ][ ]	
204	Do you have any sons or daughters you have fathered who are alive but do not live with you?	YES.....1 NO 2	→206
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, WRITE '00'.	SONS ELSEWHERE..... [ ][ ] DAUGHTERS ELSEWHERE... [ ][ ]	
206	Have you ever fathered a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	YES.....1 NO .....2 DON'T KNOW.....8	→208
207	How many boys have died? And how many girls have died? IF NONE, WRITE '00'.	BOYS DEAD..... [ ][ ] GIRLS DEAD ..... [ ][ ]	
208	(In addition to the children that you have just told me about), do you have any other sons or daughters who are biologically your children but who are not legally yours or do not have your name? Did you have any children who died who were biologically your children but who were not legally yours or did not have your name? IF YES, CORRECT 201-207.	YES.....1 NO 2	
209	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, WRITE '00'.	TOTAL ..... [ ][ ]	
210	CHECK 209: HAS HAD ONLY ONE CHILD [ ] HAS HAD MORE THAN ONE CHILD [ ] HAS NOT HAD ANY CHILDREN [ ]		→213 →301
211	Do the children that you have fathered all have the same biological mother?	YES .....1 NO 2	→213
212	In all how many women have you fathered children with?	NUMBER OF WOMEN..... [ ][ ]	
213	How old were you when your (first) child was born?	AGE IN YEARS ..... [ ][ ]	

SECTION 3. CONTRACEPTION

Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy.

CIRCLE CODE 1 IN 301 FOR EACH METHOD MENTIONED SPONTANEOUSLY. THEN PROCEED DOWN COLUMN 301, READING THE NAME AND DESCRIPTION OF EACH METHOD NOT MENTIONED SPONTANEOUSLY. CIRCLE CODE 1 IF METHOD IS RECOGNISED, AND CODE 2 IF NOT RECOGNISED. THEN, FOR EACH METHOD WITH CODE 1 CIRCLED IN 301, ASK 302.

301	Which ways or methods have you heard about? FOR METHODS NOT MENTIONED SPONTANEOUSLY, ASK: Have you ever heard of (METHOD)?		302 Have you ever used (METHOD)?
01	FEMALE STERILIZATION Women can have an operation to avoid having any more children.	YES.....1 NO ..... 2 ┐▼	
02	MALE STERILIZATION Men can have an operation to avoid having any more children.	YES.....1 NO ..... 2 ┐▼	Have you ever had an operation to avoid having any more children? YES.....1 NO 2
03	PILL Women can take a pill every day to stop them from becoming pregnant.	YES.....1 NO ..... 2 ┐▼	
04	IUD Women can have a loop or coil placed inside them by a doctor or a nurse.	YES.....1 NO ..... 2 ┐▼	
05	INJECTABLES Women can have an injection by a health provider which stops them from becoming pregnant for one or more months.	YES.....1 NO ..... 2 ┐▼	
06	IMPLANTS Women can have several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years.	YES.....1 NO ..... 2 ┐▼	
07	CONDOM Men can put a rubber sheath on their penis before sexual intercourse.	YES.....1 NO ..... 2 ┐▼	YES.....1 NO 2
08	FEMALE CONDOM Women can place a sheath in their vagina before sexual intercourse.	YES.....1 NO ..... 2 ┐▼	
09	DIAPHRAGM Women can place a thin flexible disk in their vagina before sexual intercourse.	YES.....1 NO ..... 2 ┐▼	
10	FOAM OR JELLY Women can place a suppository, jelly, or cream in their vagina before sexual intercourse.	YES.....1 NO ..... 2 ┐▼	
11	LACTATIONAL AMENORRHEA METHOD (LAM) Up to 6 months after childbirth, a woman can use a method that requires that she breastfeeds frequently, day and night, and that her menstrual period has not returned.	YES.....1 NO ..... 2 ┐▼	
12	RHYTHM OR PERIODIC ABSTINENCE Every month that a woman is sexually active she can avoid pregnancy by not having sexual intercourse on the days of the month she is most likely to get pregnant.	YES.....1 NO ..... 2 ┐▼	YES.....1 NO .....2 DON'T KNOW 8
13	WITHDRAWAL Men can be careful and pull out before climax.	YES.....1 NO ..... 2 ┐▼	YES.....1 NO 2
14	EMERGENCY CONTRACEPTION Women can take pills up to five days after sexual intercourse to avoid becoming pregnant.	YES.....1 NO ..... 2 ┐▼	
15	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES.....1 _____ (SPECIFY) _____ (SPECIFY) NO ..... 2 ┐▼	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
303	Now I would like to ask you about when a woman is most likely to get pregnant. From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant if she has sexual relations?	YES.....1 NO .....2 DON'T KNOW.....8	 →305
304	Is this time just before her period begins, during her period, right after her period has ended, or half way between two periods?	JUST BEFORE HER PERIOD BEGINS....1 DURING HER PERIOD .....2 RIGHT AFTER HER PERIOD HAS ENDED.....3 HALF WAY BETWEEN TWO PERIODS...4 OTHER _____ 6 (SPECIFY) DON'T KNOW.....8	
305	Do you think that a woman who is breastfeeding her baby can get pregnant?	YES ..... 1 NO ..... 2 DEPENDS ..... 3 DON'T KNOW 8	
306	I will now read you some statements about contraception. Please tell me if you agree or disagree with each one. a) Contraception is women's business and a man should not have to worry about it. b) Women who use contraception may become promiscuous. c) A woman is the one who gets pregnant so she should be the one to get sterilized.	AGREE DISAGREE DK a) 1 2 8 b) 1 2 8 c) 1 2 8	
307	CHECK 301(02) AND 302(02): KNOWLEDGE AND USE OF MALE STERILISATION HAS HEARD OF MALE STERILIZATION BUT IS NOT STERILIZED [ ] ▼ OTHER [ ] _____		→401
308	Once you have had all the children you want, would you yourself ever consider getting sterilized?	WOULD CONSIDER ..... 1 WOULD NOT CONSIDER ..... 2 UNSURE/DEPENDS..... 3 WIFE ALREADY STERILIZED..... 4	→401 →401
309	Why would you never consider getting sterilized? PROBE: Any other reasons? RECORD ALL REASONS MENTIONED.	AGAINST RELIGION ..... A BAD FOR MAN'S HEALTH..... B OPERATION NOT SAFE ..... C LESS INTRUSIVE WAYS AVAILABLE..... D MAY WANT MORE CHILDREN/MAY WANT TO REPLACE CHILD WHO DIED..... E MAY REMARRY SOME DAY..... F LOSS OF WAGES ..... G LOSS OF SEXUAL FUNCTION ..... H LOSS OF MANLINESS ..... I OTHER _____ X (SPECIFY)	

SECTION 4. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
401	Are you currently married or living with a woman?	YES, CURRENTLY MARRIED ..... 1 YES, LIVING WITH A WOMAN ..... 2 NO, NOT IN UNION 3	 →404 →406
402	Do you have one wife or more than one wife? IF ONLY ONE WIFE, ENTER '01' . IF MORE THAN ONE, ASK: How many wives do you currently have?	NUMBER OF WIVES ..... [ ][ ]	
403	Are there any other women with whom you live as if married?	YES ..... 1 NO 2	 →405
404	Are you living with one (other) woman or more than one (other) woman as if married? IF ONE LIVE-IN PARTNER, ENTER '01'. IF MORE THAN ONE, ASK: How many women are you living with as if you were married?	NUMBER OF LIVE-IN PARTNERS ..... [ ][ ]	
405	Apart from the woman/women you have already mentioned, do you currently have any other regular or occasional sexual partners?	REGULAR PARTNER(S) ONLY ..... 1 OCCASIONAL PARTNER(S) ONLY ..... 2 REGULAR AND OCCASIONAL PARTNERS ..... 3 NO OTHER PARTNER 4	→409
406	Do you currently have regular, occasional, or no sexual partners?	REGULAR PARTNER(S) ONLY ..... 1 OCCASIONAL PARTNER(S) ONLY ..... 2 REGULAR AND OCCASIONAL PARTNERS ..... 3 NO SEXUAL PARTNER 4	
407	Have you ever been married or lived with a woman?	YES, USED TO BE MARRIED ..... 1 YES, LIVED WITH A WOMAN ..... 2 YES, BOTH ..... 3 NO 4	 →411 →416
408	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED ..... 1 DIVORCED ..... 2 SEPARATED 3	→411

409 WRITE THE LINE NUMBERS FROM THE HOUSEHOLD QUESTIONNAIRE FOR EACH WIFE/PARTNER REPORTED IN QUESTIONS 402 AND 404 ONLY. IF A WIFE/PARTNER IS NOT LISTED IN THE HOUSEHOLD SCHEDULE, ENTER '00' IN THE LINE NUMBER BOXES. THE NUMBER OF LINES FILLED IN MUST BE EQUAL TO THE NUMBER OF WIVES AND PARTNERS. (IF RESPONDENT HAS MORE THAN SEVEN WIVES/PARTNERS USE ADDITIONAL QUESTIONNAIRE(S).

CHECK 402 AND 404

SUM OF 402 AND 404 = 01 [ ]

Please tell me the name of your wife/partner.

SUM OF 402 AND 404 > 01 [ ]

Please tell me the name of each wife/partner that you live with as if married, starting with the one you lived with first.

NAME	LINE NUMBER IN HHD. QUEST	WIFE	PARTNER
1 _____	[ ][ ]	1	2
2 _____	[ ][ ]	1	2
3 _____	[ ][ ]	1	2
4 _____	[ ][ ]	1	2
5 _____	[ ][ ]	1	2
6 _____	[ ][ ]	1	2
7 _____	[ ][ ]	1	2

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
410	CHECK 409: ONLY ONE WIFE/ PARTNER ☐ ▼ MORE THAN ONE WIFE/PARTNER ☐		→412
411	Have you been married or lived with a woman only once, or more than once?	ONCE ..... 1 MORE THAN ONCE 2	→414 →413
412	Have you ever been married to or lived as if married to any woman other than those you have just mentioned?	YES ..... 1 NO 2	 →414
413	In total, how many women have you been married to or lived with as if married in your whole life?	NUMBER OF WOMEN..... ☐☐	
414	CHECK 409 AND 411: ONLY ONE WIFE/ PARTNER AND 411=ONCE ☐ ▼ OTHER ☐ ▼ In what month and year did you start living with your wife/partner? Now we will talk about your first wife/partner. In what month and year did you start living with her?	MONTH ..... ☐☐ DOES NOT KNOW MONTH ..... 98 YEAR..... ☐☐☐☐ DOES NOT KNOW YEAR..... 9998	 →416
415	How old were you when you started living with her?	AGE..... ☐☐	
416	Now I need to ask you some questions about sexual activity in order to gain a better understanding of some family life issues. How old were you when you first had sexual intercourse (if ever)?	NEVER ..... 00 AGE IN YEARS ..... ☐☐ FIRST TIME WHEN STARTED LIVING WITH (FIRST) WIFE/PARTNER 95	→448
416A	CHECK 108: 15-24 YEARS OLD ☐ ▼ 25-59 YEARS OLD ☐		→417
416B	The first time you had sexual intercourse, was a condom used?	YES ..... 1 NO 2	
417	When was the last time you had sexual intercourse? RECORD 'YEARS AGO' ONLY IF LAST INTERCOURSE WAS ONE OR MORE YEARS AGO. IF 12 MONTHS OR MORE, ANSWER MUST BE RECORDED IN YEARS.	DAYS AGO.....1 ☐☐ WEEKS AGO .....2 ☐☐ MONTHS AGO.....3 ☐☐ YEARS AGO .....4 ☐☐	 →445
417A	The last time you had sexual intercourse, had you or your partner been drinking alcohol? IF YES: Who was drinking?	RESPONDENT ONLY..... 1 PARTNER ONLY..... 2 RESPONDENT AND PARTNER..... 3 NEITHER..... 4	
418	The last time you had sexual intercourse, was a condom used?	YES ..... 1 NO 2	 →420

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
419	What was the main reason you used a condom on that occasion?	RESPONDENT WANTED TO PREVENT STD/HIV ..... 01 RESPONDENT WANTED TO PREVENT PREGNANCY ..... 02 RESPONDENT WANTED TO PREVENT BOTH STD/HIV AND PREGNANCY ..... 03 DID NOT TRUST PARTNER/FELT PARTNER HAD OTHER PARTNERS ..... 04 PARTNER REQUESTED/INSISTED ..... 05 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→424
420	CHECK 302(02): RESPONDENT NOT STERILIZED ☐ ▼ RESPONDENT STERILIZED ☐		→424
421	The last time you had sexual intercourse, did you or your partner do something or use any method to avoid a pregnancy?	YES ..... 1 NO ..... 2 UNSURE/DON'T KNOW 8	 →423 →424
422	What method was used? IF MORE THAN ONE METHOD USED, RECORD THE HIGHEST METHOD ON THE LIST.	FEMALE STERILIZATION ..... 01 PILL ..... 03 IUD ..... 04 INJECTABLES ..... 05 IMPLANTS ..... 06 MALE CONDOM ..... 07 FEMALE CONDOM ..... 08 DIAPHRAGM ..... 09 FOAM/JELLY ..... 10 LACTATIONAL AMEN. METHOD ..... 11 PERIODIC ABSTINENCE ..... 12 WITHDRAWAL ..... 13 OTHER METHOD 96	→424
423	What is the main reason a method was not used?	CASUAL PARTNER, DOESN'T CARE .. 11 CONTRACEPTION IS WOMEN'S BUSINESS ..... 12 WOMAN IS MENOPAUSAL/ HAD HYSTERECTOMY ..... 23 COUPLE INFERTILE/SUB-FERTILE ..... 24 WOMAN WAS PREGNANT ..... 25 WOMAN WAS AMENORRHEIC ..... 26 WOMAN WAS BREASTFEEDING ..... 27 WANTED (MORE) CHILDREN ..... 28 RESPONDENT OPPOSED ..... 31 WOMAN OPPOSED ..... 32 OTHERS OPPOSED ..... 33 RELIGIOUS PROHIBITION ..... 34 KNOWS NO METHOD ..... 41 KNOWS NO SOURCE ..... 42 HEALTH CONCERNS ..... 51 FEAR OF SIDE EFFECTS ..... 52 LACK OF ACCESS/TOO FAR ..... 53 COST TOO MUCH ..... 54 INCONVENIENT TO USE ..... 55 INTERFERES WITH BODY'S NORMAL PROCESSES ..... 56 OTHER _____ 96 (SPECIFY) DOES NOT KNOW 98	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
424	What is your relationship to the person with whom you last had sex? IF WOMAN IS "GIRLFRIEND" OR "FIANCÉE", ASK: Was your girlfriend/fiancée living with you when you last had sex? IF YES, RECORD '01'. IF NO, RECORD '02'.	WIFE/LIVE-IN PARTNER ..... 01 WOMAN IS GIRLFRIEND/FIANCÉE ..... 02 OTHER FRIEND ..... 03 CASUAL ACQUAINTANCE ..... 04 RELATIVE ..... 05 PROSTITUTE ..... 06 OTHER _____ 96 (SPECIFY)	→426
425	For how long have you had a sexual relationship with this person? . IF ONLY HAD SEX WITH THIS PERSON ONCE, WRITE '01' DAYS	DAYS .....1 [ ][ ] WEEKS .....2 [ ][ ] MONTHS .....3 [ ][ ] YEARS .....4 [ ][ ]	
426	Have you had sex with any other person in the last 12 months?	YES ..... 1 NO 2	 →445
427	The last time you had sexual intercourse with another person, was a condom used?	YES ..... 1 NO 2	 →429
428	What is the main reason you used a condom on that occasion?	RESPONDENT WANTED TO PREVENT STD/HIV ..... 01 RESPONDENT WANTED TO PREVENT PREGNANCY ..... 02 RESPONDENT WANTED TO PREVENT BOTH STD/HIV AND PREGNANCY ..... 03 DID NOT TRUST PARTNER/FELT PARTNER HAD OTHER PARTNERS ..... 04 PARTNER REQUESTED/INSISTED ..... 05 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→433
429	CHECK 302(02): RESPONDENT NOT STERILIZED [ ] ▼ RESPONDENT STERILIZED [ ] _____		→433
430	The last time you had sexual intercourse with this person, did you or that person do something or use any method to avoid a pregnancy?	YES ..... 1 NO ..... 2 UNSURE/DON'T KNOW 8	 →432 →433
431	What method was used? IF MORE THAN ONE METHOD USED, CIRCLE THE HIGHEST METHOD ON THE LIST.	FEMALE STERILIZATION ..... 01 PILL ..... 03 IUD ..... 04 INJECTABLES ..... 05 IMPLANTS ..... 06 MALE CONDOM ..... 07 FEMALE CONDOM ..... 08 DIAPHRAGM ..... 09 FOAM/JELLY ..... 10 LACTATIONAL AMEN. METHOD ..... 11 PERIODIC ABSTINENCE ..... 12 WITHDRAWAL ..... 13 OTHER METHOD 96	→433

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
432	What is the main reason a method was not used?	CASUAL PARTNER, DOESN'T CARE .. 11 CONTRACEPTION IS WOMEN'S BUSINESS ..... 12 WOMAN IS MENOPAUSAL/ HAD HYSTERECTOMY ..... 23 COUPLE INFERTILE/SUB-FERTILE ..... 24 WOMAN WAS PREGNANT ..... 25 WOMAN WAS AMENORRHEIC ..... 26 WOMAN WAS BREASTFEEDING..... 27 WANTED (MORE) CHILDREN ..... 28 RESPONDENT OPPOSED..... 31 WOMAN OPPOSED ..... 32 OTHERS OPPOSED..... 33 RELIGIOUS PROHIBITION..... 34 KNOWS NO METHOD ..... 41 KNOWS NO SOURCE ..... 42 HEALTH CONCERNS..... 51 FEAR OF SIDE EFFECTS ..... 52 LACK OF ACCESS/TOO FAR ..... 53 COST TOO MUCH ..... 54 INCONVENIENT TO USE ..... 55 INTERFERES WITH BODY'S NORMAL PROCESSES..... 56 OTHER _____ 96 (SPECIFY) DOES NOT KNOW 98	
433	What is your relationship to this other person? IF WOMAN IS "GIRLFRIEND" OR "FIANCÉE", ASK: Was your girlfriend/fiancée living with you when you last had sex? IF YES, RECORD '01'. IF NO, RECORD '02'.	WIFE/LIVE-IN PARTNER..... 01 WOMAN IS GIRLFRIEND/FIANCÉE ..... 02 OTHER FRIEND ..... 03 CASUAL ACQUAINTANCE ..... 04 RELATIVE ..... 05 PROSTITUTE..... 06 OTHER _____ 96 (SPECIFY)	→435
434	For how long have you had a sexual relationship with this person? IF ONLY HAD SEX WITH THIS PERSON ONCE, WRITE '01' DAYS.	DAYS .....1 [ ][ ] WEEKS .....2 [ ][ ] MONTHS.....3 [ ][ ] YEARS .....4 [ ][ ]	
435	Other than these two people, have you had sex with any other person in the last 12 months?	YES ..... 1 NO 2	→445
436	The last time you had sexual intercourse with this third person, was a condom used?	YES ..... 1 NO 2	→438
437	What is the main reason you used a condom on that occasion?	RESPONDENT WANTED TO PREVENT STD/HIV ..... 01 RESPONDENT WANTED TO PREVENT PREGNANCY..... 02 RESPONDENT WANTED TO PREVENT BOTH STD/HIV AND PREGNANCY..... 03 DID NOT TRUST PARTNER/FELT PARTNER HAD OTHER PARTNERS ..... 04 PARTNER REQUESTED/INSISTED ..... 05 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→442
438	CHECK 302(02): RESPONDENT NOT STERILIZED [ ] RESPONDENT STERILIZED [ ]		→442

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
439	The last time you had sexual intercourse with this third person, did you or that person do something or use any method to avoid a pregnancy?	YES ..... 1 NO ..... 2 UNSURE/DON'T KNOW 8	 →441 →442
440	What method was used? IF MORE THAN ONE METHOD USED, RECORD THE HIGHEST METHOD ON THE LIST.	FEMALE STERILIZATION ..... 01 PILL ..... 03 IUD ..... 04 INJECTABLES ..... 05 IMPLANTS ..... 06 MALE CONDOM ..... 07 FEMALE CONDOM ..... 08 DIAPHRAGM ..... 09 FOAM/JELLY ..... 10 LACTATIONAL AMEN. METHOD ..... 11 PERIODIC ABSTINENCE ..... 12 WITHDRAWAL ..... 13 OTHER METHOD 96	→442
441	What is the main reason a method was not used?	CASUAL PARTNER, DOESN'T CARE .. 11 CONTRACEPTION IS WOMEN'S BUSINESS ..... 12 WOMAN IS MENOPAUSAL/ HAD HYSTERECTOMY ..... 23 COUPLE INFERTILE/SUB-FERTILE ..... 24 WOMAN WAS PREGNANT ..... 25 WOMAN WAS AMENORRHEIC ..... 26 WOMAN WAS BREASTFEEDING ..... 27 WANTED (MORE) CHILDREN ..... 28 RESPONDENT OPPOSED ..... 31 WOMAN OPPOSED ..... 32 OTHERS OPPOSED ..... 33 RELIGIOUS PROHIBITION ..... 34 KNOWS NO METHOD ..... 41 KNOWS NO SOURCE ..... 42 HEALTH CONCERNS ..... 51 FEAR OF SIDE EFFECTS ..... 52 LACK OF ACCESS/TOO FAR ..... 53 COST TOO MUCH ..... 54 INCONVENIENT TO USE ..... 55 INTERFERES WITH BODY'S NORMAL PROCESSES ..... 56 OTHER _____ 96 (SPECIFY) DOES NOT KNOW 98	
442	What is your relationship to this person? IF WOMAN IS "GIRLFRIEND" OR "FIANCÉE", ASK: Was your girlfriend/fiancée living with you when you last had sex? IF YES, RECORD '01'. IF NO, RECORD '02'.	WIFE/LIVE-IN PARTNER ..... 01 WOMAN IS GIRLFRIEND/FIANCÉE ..... 02 OTHER FRIEND ..... 03 CASUAL ACQUAINTANCE ..... 04 RELATIVE ..... 05 PROSTITUTE ..... 06 OTHER _____ 96 (SPECIFY)	→444
443	For how long have you had a sexual relationship with this person? IF ONLY HAD SEX WITH THIS PERSON ONCE, WRITE '01' DAYS.	DAYS ..... 1 [ ][ ] WEEKS ..... 2 [ ][ ] MONTHS ..... 3 [ ][ ] YEARS ..... 4 [ ][ ]	
444	In total, with how many different people have you had sex in the last 12 months?	NUMBER OF PARTNERS ..... [ ][ ]	
445	Have you ever paid for sex?	YES ..... 1 NO 2	 →448

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
446	How long ago was the last time you paid for sex?	DAYS AGO .....1 [ ][ ] WEEKS AGO .....2 [ ][ ] MONTHS AGO.....3 [ ][ ] YEARS AGO .....4 [ ][ ]	
447	The last time that you paid for sex, was a condom used?	YES ..... 1 NO 2	
448	Do you know of a place where a person can get male condoms?	YES ..... 1 NO 2	→450A
449	Where is that? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) Any other place? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC.....A GOVT. HEALTH CENTER.....B FAMILY PLANNING CLINIC .....C MOBILE CLINIC.....D FIELDWORKER.....E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... G PRIVATE DOCTOR .....H PHARMACY/CHEMIST/ DRUG STORE ..... I MOBILE CLINIC..... J FIELDWORKER.....K FP/PPAG CLINIC..... L MATERNITY HOME..... M OTHER PRIVATE MEDICAL _____N (SPECIFY) OTHER SOURCE SHOP ..... O CHURCH.....P FRIENDS/RELATIVES..... Q OTHER _____ X (SPECIFY)	
450	If you wanted to, could you yourself get a male condom?	YES ..... 1 NO ..... 2 DOES NOT KNOW/UNSURE 8	
450A	Do you know of a place where a person can get female condoms?	YES ..... 1 NO 2	→451

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
450B	Where is that? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) Any other place? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC ..... A GOVT. HEALTH CENTER ..... B FAMILY PLANNING CLINIC ..... C MOBILE CLINIC ..... D FIELDWORKER ..... E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... G PRIVATE DOCTOR ..... H PHARMACY/CHEMIST/ DRUG STORE ..... I MOBILE CLINIC ..... J FIELDWORKER ..... K FP/PPAG CLINIC ..... L MATERNITY HOME ..... M OTHER PRIVATE MEDICAL _____ N (SPECIFY) OTHER SOURCE SHOP ..... O CHURCH ..... P FRIENDS/RELATIVES ..... Q OTHER _____ X (SPECIFY)	
450C	If you wanted to, could you yourself get a female condom?	YES ..... 1 NO ..... 2 DON'T KNOW/UNSURE 8	
451	CHECK 302(07), 416B(1), 418(1), 427(1), 436(1), AND 447(1): EVER USED A CONDOM? AT LEAST ONE 'YES' HAS USED CONDOM ☐ ▼ NO 'YES' NEVER USED CONDOM ☐		→460
452	How old were you when you used a condom for the first time?	AGE AT FIRST USE ..... ☐☐ DOES NOT REMEMBER 98	
453	Why did you use a condom that first time? PROBE: Any other reason? RECORD ALL REASONS MENTIONED.	WANTED TO PREVENT STD/HIV ..... A WANTED TO PREVENT PREGNANCY .. B WANTED TO PREVENT BOTH STD/HIV AND PREGNANCY ..... C DID NOT TRUST PARTNER/THOUGHT PARTNER HAD OTHER PARTNERS D PARTNER REQUESTED/INSISTED ..... E DON'T KNOW ..... Z OTHER _____ X (SPECIFY)	
454	Have you ever experienced any problems with using condoms? IF YES: What problems have you experienced? PROBE: Any other problems? CIRCLE ALL PROBLEMS MENTIONED.	TOO EXPENSIVE ..... A EMBARRASSING TO BUY/OBTAIN ..... B DIFFICULT TO DISPOSE OF ..... C DIFFICULT TO PUT ON/TAKE OFF ..... D SPOILS THE MOOD ..... E DIMINISHES PLEASURE ..... F WIFE PARTNER OBJECTS/DOES NOT LIKE ..... G WIFE/PARTNER GOT PREGNANT ..... H INCONVENIENT TO USE/MESSY ..... I CONDOM BROKE ..... J OTHER _____ X (SPECIFY) NO PROBLEM ..... Y	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
455	What brand of condom do you usually use? ASK TO SEE CONDOM PACKET IF BRAND NOT KNOWN.	PROTECTOR ..... 1 ROUGH RIDER ..... 2 CHAMPION ..... 3 PANTHER ..... 4 NO BRAND..... 5 OTHER _____ 6 (SPECIFY) DON'T KNOW BRAND..... 8	
456	Where do you usually get condoms? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC .....A GOVT. HEALTH CENTER .....B FAMILY PLANNING CLINIC ..... C MOBILE CLINIC ..... D FIELDWORKER .....E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... G PRIVATE DOCTOR ..... H PHARMACY/CHEMIST/ DRUG STORE .....I MOBILE CLINIC ..... J FIELDWORKER .....K FP/PPAG CLINIC .....L MATERNITY HOME .....M OTHER PRIVATE MEDICAL _____N (SPECIFY) OTHER SOURCE SHOP ..... O CHURCH.....P FRIENDS/RELATIVES..... Q OTHER _____ X (SPECIFY)	
457	How much do you usually pay for condoms?	PER PACKET .. [ ][ ][ ][ ][ ] FREE .....99996 DON'T KNOW.....99998	→460
458	How many condoms are in each packet?	NUMBER PER PACKET ..... [ ][ ]	
459	Do you think that at this price condoms are inexpensive, just affordable, or too expensive?	INEXPENSIVE..... 1 JUST AFFORDABLE..... 2 TOO EXPENSIVE 3	
460	I will now read you some statements about condom use. Please tell me if you agree or disagree with each.	**AGREE** **DISAGREE** **DK**	
	a) Condoms diminish a man's sexual pleasure.	a) 1 2 8	
	b) It's okay to re-use a condom if you wash it.	b) 1 2 8	
	c) Condoms protect against disease.	c) 1 2 8	
	d) Buying condoms is embarrassing.	d) 1 2 8	
	e) A woman has no right to tell a man to use a condom.	e) 1 2 8	
	f) Condoms contain HIV.	f) 1 2 8	

SECTION 5. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	CHECK 401: CURRENTLY MARRIED OR LIVING TOGETHER ☐ NOT MARRIED ☐		→505
502	Is your wife/partner currently pregnant? IF MORE THAN ONE WIFE/PARTNER, ASK: Are any of your wives/partners currently pregnant?	YES ..... 1 NO ..... 2 NOT SURE 3	
503	CHECK 502: WIFE NOT PREGNANT OR UNSURE ☐ Now I have some questions about the future. Would you like to have (a/another) child, or would you prefer not to have any (more) children? WIFE PREGNANT ☐ Now I have some questions about the future. After the child you are expecting now, would you like to have another child, or would you prefer not to have any more children?	HAVE (A/ANOTHER) CHILD ..... 1 NO MORE/NONE ..... 2 WIFE CANNOT GET PREGNANT ..... 3 UNDECIDED/DON'T KNOW 8	→505
504	CHECK 502: WIFE NOT PREGNANT OR UNSURE ☐ How long would you like to wait from now before the birth of (a/another) child? WIFE PREGNANT ☐ After the birth of the child you are expecting now, how long would you like to wait before the birth of another child?	MONTHS ..... 1 ☐☐ YEARS..... 2 ☐☐ SOON/NOW ..... 993 WIFE CANNOT GET PREGNANT ..... 994 AFTER MARRIAGE..... 995 OTHER _____ 996 (SPECIFY) DOES NOT KNOW..... 998	
505	CHECK 203 AND 205: HAS LIVING CHILDREN ☐ If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? NO LIVING CHILDREN ☐ If you could choose exactly the number of children to have in your whole life, how many would that be? PROBE FOR A NUMERIC RESPONSE.	NONE ..... 00 NUMBER ..... ☐☐ OTHER _____ 96 (SPECIFY)	→507 →507
506	How many of these children would you like to be boys, how many would you like to be girls and for how many would the sex not matter?	BOYS GIRLS EITHER NUMBER .... ☐☐ ☐☐ ☐☐ OTHER _____ 96 (SPECIFY)	
507	Would you say that you approve or disapprove of couples using a method to avoid getting pregnant?	APPROVE ..... 1 DISAPPROVE ..... 2 DON'T KNOW/UNSURE 8	
508	In the last few months have you heard or seen messages about family planning: On the radio? On the television? In a newspaper or magazine? In a poster? In leaflets or brochures? From a health worker? At a community or social club meeting?	YES NO RADIO ..... 1 2 TELEVISION..... 1 2 NEWSPAPER OR MAGAZINE..... 1 2 POSTER..... 1 2 LEAFLETS OR BROCHURES ..... 1 2 HEALTH WORKER ..... 1 2 MEETING 1 2	
509	Have you heard the following messages about family planning: Life Choices: It's your life. It's your choice? Make the choice that is best for you? Contraceptives are safe and effective? Obra ni wora bo?	YES NO LIFE CHOICES: ITS YOUR LIFE ITS YOUR CHOICE ..... 1 2 MAKE THE CHOICE THAT IS BEST FOR YOU..... 1 2 CONTRACEPTIVES ARE SAFE AND EFFECTIVE ..... 1 2 OBRA NI WORA BO..... 1 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
510	In the last few months, have you discussed the practice of family planning with your friends, neighbors, or relatives?	YES.....1 NO 2	 —▸512
511	With whom? Anyone else? RECORD ALL MENTIONED.	WIFE(VES)/PARTNER ..... A MOTHER ..... B FATHER ..... C SISTER(S) ..... D BROTHER(S) ..... E DAUGHTER(S).....F SON(S) ..... G FATHER(S)-IN-LAW ..... H FRIENDS/NEIGHBOURS.....I OTHER _____ X (SPECIFY)	
512	In the last few months, have you discussed family planning with a health worker or health professional?	YES.....1 NO 2	

SECTION 6. HEALTH ISSUES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	Now I would like to ask you some questions about health. When a child has diarrhea, should he or she be given less to drink than usual, about the same amount, or more to drink than usual?	LESS ..... 1 ABOUT THE SAME ..... 2 MORE ..... 3 DOES NOT KNOW 8	
602	Have you ever heard of a special product called ORS for the treatment of diarrhea?	YES ..... 1 NO 2	
603	Now please tell me about yourself. Do you smoke cigarettes or use tobacco? IF YES: What type of tobacco do you smoke? CIRCLE ALL TYPES MENTIONED.	YES, CIGARETTES ..... A YES, PIPE ..... B YES, OTHER TOBACCO ..... C NO ..... Y	
604	CHECK 603: CODE 'A' CIRCLED ☐ ▼ CODE 'A' NOT CIRCLED ☐		→701
605	In the last 24 hours, how many cigarettes did you smoke?	CIGARETTES ..... ☐☐	

SECTION 7. AIDS AND OTHER SEXUALLY-TRANSMITTED DISEASES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	Now I would like to talk about something else. Have you ever heard of an illness called AIDS?	YES ..... 1 NO 2	→724
702	Can people reduce their chances of getting the AIDS virus by having just one sex partner who is not infected and who has no other partners?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
703	Can a person get the AIDS virus from mosquito bites?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
704	Can people reduce their chances of getting the AIDS virus by using a condom every time they have sex?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
705	Can people get the AIDS virus by sharing food with a person who has AIDS?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
706	Can people reduce their chances of getting the AIDS virus by not having sex at all?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
706A	Can people get the AIDS virus because of witchcraft or other supernatural means?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
707	Is there anything (else) a person can do to avoid getting AIDS or the virus that causes AIDS?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→709
708	What can a person do? Anything else? RECORD ALL MENTIONED.	ABSTAIN FROM SEX ..... A USE CONDOMS ..... B LIMIT SEX TO ONE PARTNER/STAY FAITHFUL TO ONE PARTNER ..... C LIMIT NUMBER OF SEXUAL PARTNERS ..... D AVOID SEX WITH PROSTITUTES ..... E AVOID SEX WITH PERSONS WHO HAVE MANY PARTNERS ..... F AVOID SEX WITH HOMOSEXUALS ..... G AVOID SEX WITH PERSONS WHO INJECT DRUGS INTRAVENOUSLY ..... H AVOID BLOOD TRANSFUSIONS ..... I AVOID INJECTIONS ..... J AVOID SHARING RAZORS/BLADES ..... K AVOID KISSING ..... L AVOID MOSQUITO BITES ..... M SEEK PROTECTION FROM TRADITIONAL PRACTITIONER ..... N OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) DON'T KNOW ..... Z	
709	Is it possible for a healthy-looking person to have the AIDS virus?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
710	Do you know someone personally who has the virus that causes AIDS or someone who died of AIDS?	YES ..... 1 NO 2	
711	Can the virus that causes AIDS be transmitted from a mother to a child?	YES ..... 1 NO ..... 2 DON'TKNOW 8	→713
712	Can the virus that causes AIDS be transmitted from a mother to a child: During pregnancy? During delivery? By breastfeeding?	YES NO DK DURING PREGNANCY ..... 1 2 8 DURING DELIVERY ..... 1 2 8 BY BREASTFEEDING 1 2 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
712A	Are there any special drugs that a pregnant woman infected with the AIDS virus can take to reduce the risk of transmission to the baby during pregnancy?	YES ....1 NO ....2 DON'T KNOW 8	
713	CHECK 401: YES, CURRENTLY MARRIED/LIVING WITH A WOMAN ☐ NO, NOT MARRIED OR LIVING WITH A WOMAN ☐		→715
714	Have you ever talked about ways to prevent getting the virus that causes AIDS with (your wife/woman you are living with)? IF MORE THAN ONE WIFE/PARTNER, ASK ABOUT ANY OF HIS WIVES/PARTNERS.	YES.... 1 NO 2	
715	In your opinion, is it acceptable or unacceptable for AIDS to be discussed: on the radio? on the TV? in newspapers?	ACCEPT-ABLE / NOT ACCEPT-ABLE ON THE RADIO .... 1 / 2 ON THE TV .... 1 / 2 IN NEWSPAPERS .... 1 / 2	
715A	Have you heard or seen any messages about HIV/AIDS?	YES .... 1 NO .... 2 DON'T KNOW 8	
715B	Have you heard or seen the slogan "Reach Out, Show Compassion?"	YES .... 1 NO .... 2 DON'T KNOW 8	
715C	Have you heard or seen the slogan "Stop AIDS, Love Life?"	YES .... 1 NO .... 2 DON'T KNOW 8	
715D	CHECK 715B: AND 715C YES, CIRCLED FOR EITHER OR BOTH ☐ NO, DON'T KNOW CIRCLED ☐		→715F
715E	Did you hear or see this slogan: On the TV? In a music video? On the radio? In a newspaper or magazine? In a poster? On a car sticker? In leaflets or brochures? On a tee-shirt or a cap? From a mobile 'ISD' van? During a community event? At a road show?	YES / NO TV .... 1 / 2 MUSIC VIDEO .... 1 / 2 RADIO .... 1 / 2 NEWSPAPER/MAGAZINE .... 1 / 2 POSTER .... 1 / 2 CAR STICKER .... 1 / 2 LEAFLETS/BROCHURES .... 1 / 2 T-SHIRT/CAP .... 1 / 2 ISD VAN .... 1 / 2 COMMUNITY EVENT .... 1 / 2 ROAD SHOW .... 1 / 2	
715F	Have you seen a television show called "Things we do for love" that features the characters Pusher, B.B. and Marcia?	YES .... 1 NO .... 2 DON'T KNOW 8	
715G	Would you buy fresh vegetables from a vendor who has the AIDS virus?	YES .... 1 NO .... 2 DON'T KNOW 8	
716	If a member of your family got infected with the virus that causes AIDS, would you want it to remain a secret or not?	YES, KEEP IT SECRET .... 1 NO .... 2 DK/UNSURE 8	
717	If a relative of yours became sick with the virus that causes AIDS, would you be willing to care for her or him in your own household?	YES .... 1 NO .... 2 DK/NOT SURE/DEPENDS 8	
718	If a female teacher has the AIDS virus, should she be allowed to continue teaching in school?	CAN CONTINUE .... 1 SHOULD NOT CONTINUE .... 2 DK/NOT SURE/DEPENDS 8	
719	Should children aged 12-14 be taught about using a condom to avoid AIDS?	YES .... 1 NO .... 2 DK/NOT SURE/DEPENDS 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
720	I don't want to know the results, but have you ever been tested for the AIDS virus?	YES ..... 1 NO 2	 →721
720A	When was the last time you were tested?	LESS THAN 12 MONTHS ..... 1 12-23 MONTHS ..... 2 2 YEARS OR MORE 3	
720B	The last time you had the test, did you yourself ask for the test, was it offered to you and you accepted, or was it required?	ASKED FOR THE TEST ..... 1 OFFERED AND ACCEPTED ..... 2 REQUIRED 3	
720C	I don't want to know the results, but did you get the results of the test?	YES ..... 1 NO 2	 →723A
721	Would you want to be tested for the AIDS virus?	YES ..... 1 NO ..... 2 DK/NOT SURE 8	
722	Do you know a place where you could go to get an AIDS test?	YES ..... 1 NO 2	 →724
723 723A	Where can you go for the test? Where did you go for the test? IF SOURCE IS HOSPITAL, HEALTH CENTRE, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC ..... 11 GOVT. HEALTH CENTER ..... 12 FAMILY PLANNING CLINIC ..... 13 MOBILE CLINIC ..... 14 FIELDWORKER ..... 15 OTHER PUBLIC_____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... 21 PRIVATE DOCTOR ..... 22 PHARMACY/CHEMIST/ DRUG STORE ..... 23 MOBILE CLINIC ..... 24 FIELDWORKER ..... 25 FP/PPAG CLINIC ..... 26 MATERNITY HOME ..... 27 OTHER PRIVATE MEDICAL _____ 28 (SPECIFY) OTHER SOURCE SHOP ..... 31 CHURCH ..... 32 FRIEND/RELATIVE ..... 33 OTHER _____ 96 (SPECIFY)	
724	(Apart from AIDS), have you heard about (other) infections that can be transmitted through sexual contact?	YES ..... 1 NO 2	 →727
725	If a man has a sexually transmitted disease, what symptoms might he have? Any others? CIRCLE ALL MENTIONED.	ABDOMINAL PAIN ..... A GENITAL DISCHARGE/DRIPPING ..... B FOUL SMELLING DISCHARGE ..... C BURNING PAIN ON URINATION ..... D REDNESS/INFLAMMATION IN GENITAL AREA ..... E SWELLING IN GENITAL AREA ..... F GENITAL SORES/ULCERS ..... G GENITAL WARTS ..... H GENITAL ITCHING ..... I BLOOD IN URINE ..... J LOSS OF WEIGHT ..... K IMPOTENCE/NO ERECTION ..... L OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) NO SYMPTOMS ..... Y DON'T KNOW ..... Z	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
726	If a woman has a sexually transmitted disease, what symptoms might she have? Any others? CIRCLE ALL MENTIONED.	ABDOMINAL PAIN ....A GENITAL DISCHARGE ....B FOUL SMELLING DISCHARGE .... C BURNING PAIN ON URINATION .... D REDNESS/INFLAMMATION IN GENITAL AREA ....E SWELLING IN GENITAL AREA ....F GENITAL SORES/ULCERS .... G GENITAL WARTS .... H GENITAL ITCHING ....I BLOOD IN URINE ....J LOSS OF WEIGHT ....K HARD TO GET PREGNANT/HAVE A CHILD ....L OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) NO SYMPTOMS ....Y DON'T KNOW ....Z	
727	CHECK 416: HAS HAD SEXUAL INTERCOURSE ☐ ▼ HAS NOT HAD SEXUAL INTERCOURSE ☐		→737
727A	CHECK 724: KNOWS STI ☐ ▼ DOES NOT KNOW STI ☐		→729
728	Now I would like to ask you some questions about your health in the last 12 months. During the last 12 months, have you had a sexually-transmitted disease?	YES ....1 NO ....2 DON'T KNOW 8	
729	Sometimes, men experience an abnormal discharge from their penis. During the last 12 months, have you had an abnormal discharge from your penis?	YES ....1 NO ....2 DON'T KNOW 8	
730	Sometimes men have a sore or ulcer on or near their penis. During the last 12 months, have you had a sore or ulcer on or near your penis?	YES ....1 NO ....2 DON'T KNOW 8	
731	CHECK 728/729/730: HAS HAD AN INFECTION ☐ ▼ HAS NOT HAD AN INFECTION OR DOES NOT KNOW ☐		→737
732	The last time you had (PROBLEM(S) FROM 728/729/730), did you seek any kind of advice or treatment?	YES ....1 NO 2	→734
733	The last time you had (PROBLEM(S) FROM 728/729/730), did you do any of the following? Did you....	YES NO	
	Go to a clinic, hospital or private doctor?	CLINIC/HOSPITAL 1 2	
	Consult a traditional healer?	TRADITIONAL HEALER ... 1 2	
	Seek advice or buy medicines in a shop or pharmacy?	SHOP/PHARMACY 1 2	
	Ask for advice from friends or relatives?	FRIENDS/RELATIVES 1 2	
734	When you had (PROBLEM(S) FROM 728/729/730), did you inform the person(s) with whom you were having sex?	YES ....1 NO ....2 SOME/NOT AT ALL ....3 DID NOT HAVE A PARTNER 4	→737
735	When you had (PROBLEM(S) FROM 728/729/730), did you do anything to avoid infecting your sexual partner(s)?	YES ....1 NO ....2 PARTNER(S) ALREADY INFECTED 3	→737

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES			SKIP
736	What did you do to avoid infecting your partner(s)? Did you....		YES	NO	
	Use medicine?	USE MEDICINE	1	2	
	Stop having sex?	STOP SEX	1	2	
	Use a condom when having sex?	USE CONDOM	1	2	
737	In many communities, boys are also circumcised. In your community, is male circumcision practiced?	YES NO	1 2		
738	Are you circumcised?	YES NO	1 2		

SECTION 8. ATTITUDES TOWARD WOMEN

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	Who in your family usually has the final say on the following decisions:	RESPONDENT = 1 HUSBAND/PARTNER = 2 RESPONDENT & HUSBAND/PARTNER JOINTLY = 3 SOMEONE ELSE = 4 RESPONDENT & SOMEONE ELSE JOINTLY = 5 DECISION NOT MADE/NOT APPLICABLE = 6	
	Your own health care?	1 2 3 4 5 6	
	Making large household purchases?	1 2 3 4 5 6	
	Making household purchases for daily needs?	1 2 3 4 5 6	
	Visits to family or relatives?	1 2 3 4 5 6	
	What food should be cooked each day?	1 2 3 4 5 6	
802	Sometimes a husband is annoyed or angered by things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations:	YES NO DK	
	If she goes out without telling him?	GOES OUT 1 2 8	
	If she neglects the children?	NEGL. CHILDREN 1 2 8	
	If she argues with him?	ARGUES 1 2 8	
	If she refuses to have sex with him?	REFUSES SEX 1 2 8	
	If she burns the food?	BURNS FOOD 1 2 8	
803	When a wife knows her husband has a sexually transmitted disease, is she justified in asking her husband to use a condom?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	
804	Husbands and wives do not always agree on everything. Please tell me if you think a wife is justified in refusing to have sex with her husband when:	YES NO DK	
	She knows her husband has a sexually transmitted disease?	HAS STD 1 2 8	
	She knows her husband has sex with women other than his wives?	OTHER WOMEN 1 2 8	
	She has recently given birth?	RECENT BIRTH 1 2 8	
	She is tired or not in the mood?	TIRED/MOOD 1 2 8	
805	Do you think that if a woman refuses to have sex with her husband when he wants her to, he has the right to:	YES NO DK	
	Get angry and reprimand her?	REPRIMAND 1 2 8	
	Refuse to give her money or other means of financial support?	REFUSE MONEY 1 2 8	
	Use force and have sex with her even if she does not want to?	USE FORCE 1 2 8	
	Go and have sex with another woman	SEX WITH ANOTHER 1 2 8	
806	RECORD THE TIME.	HOUR ..... [ ][ ] MINUTES ..... [ ][ ]	

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

_____

_____

_____

_____

_____

COMMENTS ON SPECIFIC QUESTIONS:

_____

_____

_____

_____

_____

ANY OTHER COMMENTS:

_____

_____

_____

_____

_____

SUPERVISOR'S OBSERVATIONS

_____

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_____

NAME OF THE SUPERVISOR:_____ DATE: _____

EDITOR'S OBSERVATIONS

_____

_____

_____

_____

_____

NAME OF EDITOR:_____ DATE: _____

July 15, 2003

GHANA DEMOGRAPHIC AND HEALTH SURVEY
HOUSEHOLD QUESTIONNAIRE

GHANA STATISTICAL SERVICE

IDENTIFICATION

LOCALITY NAME _____

NAME OF HOUSEHOLD HEAD _____

EA NUMBER .....

HOUSEHOLD NUMBER .....

REGION .....

DISTRICT .....

URBAN/RURAL (URBAN=1, RURAL=2) .....

CITY/LARGE TOWN/SMALL TOWN/VILLAGE .....
(CITY=1, LARGE TOWN=2, SMALL TOWN=3, VILLAGE=4)

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY MONTH YEAR 2 0 0 3
INTERVIEWER'S NAME	_____	_____	_____	NAME
RESULT*	_____	_____	_____	RESULT
NEXT VISIT: DATE	_____	_____		TOTAL NO. OF VISITS
TIME	_____	_____		

*RESULT CODES:
1 COMPLETED
2 NO HOUSEHOLD MEMBER AT HOME OR NO COMPETENT RESPONDENT AT HOME AT TIME OF VISIT
3 ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD OF TIME
4 POSTPONED
5 REFUSED
6 DWELLING VACANT OR ADDRESS NOT A DWELLING
7 DWELLING DESTROYED
8 DWELLING NOT FOUND
9 OTHER _____
(SPECIFY)

TOTAL PERSONS IN HOUSEHOLD

TOTAL ELIGIBLE WOMEN

TOTAL ELIGIBLE MEN

LINE NO. OF RESP. TO HOUSEHOLD QUEST.

LANGUAGE

LANGUAGE OF QUESTIONNAIRE: **ENGLISH** 1

LANGUAGE OF INTERVIEW *** _____

NATIVE LANGUAGE OF RESPONDENT*** _____

WAS A TRANSLATOR USED? (YES=1, NO=2).....

*** LANGUAGE CODES:
1 ENGLISH 2 AKAN 3 GA 4 EWE 5 NZEMA 6 DAGBANI
7 OTHER_____
(SPECIFY)

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____	DATE _____		

HOUSEHOLD SCHEDULE

Now we would like some information about the people who usually live in your household or who are staying with you now.

LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	ELIGIBILITY		
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household.	What is the relationship of (NAME) to the head of the household?*	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)?	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49	CIRCLE LINE NUMBER OF ALL CHILDREN UNDER AGE 6	CIRCLE LINE NUMBER OF ALL MEN AGE 15-59
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(9A)
			M F	YES NO	YES NO	IN YEARS			
01			1 2	1 2	1 2		01	01	01
02			1 2	1 2	1 2		02	02	02
03			1 2	1 2	1 2		03	03	03
04			1 2	1 2	1 2		04	04	04
05			1 2	1 2	1 2		05	05	05
06			1 2	1 2	1 2		06	06	06
07			1 2	1 2	1 2		07	07	07
08			1 2	1 2	1 2		08	08	08
09			1 2	1 2	1 2		09	09	09
10			1 2	1 2	1 2		10	10	10

* CODES FOR Q.3
RELATIONSHIP TO HEAD OF HOUSEHOLD:
01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DAUGHTER-IN-LAW
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = CO-WIFE
10 = OTHER RELATIVE
11 = ADOPTED/FOSTER/ STEPCHILD
12 = NOT RELATED
98 = DON'T KNOW

LINE NO.	PARENTAL SURVIVORSHIP AND RESIDENCE FOR PERSONS LESS THAN 18 YEARS OLD**				EDUCATION						
	Is (NAME)'s biological mother alive?	IF ALIVE	Is (NAME)'s biological father alive?	IF ALIVE	IF AGE 5 YEARS OR OLDER		IF AGE 5-24 YEARS				
		Does (NAME)'s biological mother live in this house-hold? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER		Does (NAME)'s biological father live in this house-hold? IF YES: What is his name? RECORD FATHER'S LINE NUMBER	Has (NAME) ever attended school?	What is the highest level of school (NAME) has attended?*** What is the highest grade (NAME) completed at that level?***	Is (NAME) currently attending school?	During the current school year, did (NAME) attend school at any time?	During the current school year, what level and grade [is/was] (NAME) attending?***	During the previous school year, did (NAME) attend school at any time?	During that school year, what level and grade did (NAME) attend?***
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
	YES NO DK		YES NO DK		YES NO	LEVEL GRADE	YES NO	YES NO	LEVEL GRADE	YES NO	LEVEL GRADE
01	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
02	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
03	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
04	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
05	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
06	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
07	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
08	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
09	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
10	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	

** CODES FOR Q.10 THROUGH Q.13
THESE QUESTIONS REFER TO THE BIOLOGICAL PARENTS OF THE CHILD.
IN Q.11 AND Q.13, RECORD '00' IF PARENT NOT LISTED IN HOUSEHOLD SCHEDULE.

***CODES FOR Qs. 15, 18 AND 20
EDUCATION LEVEL:
1 = PRIMARY
2 = MIDDLE/JSS
3 = SECONDARY/SSS
4 = HIGHER
8 = DON'T KNOW

EDUCATION GRADE:
00 = LESS THAN 1 YEAR COMPLETED (FOR Q.15 ONLY. THIS CODE IS NOT ALLOWED FOR Q.18 AND Q.20
98 = DON'T KNOW

LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	ELIGIBILITY		
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household.	What is the relationship of (NAME) to the head of the household?*	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)?	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49	CIRCLE LINE NUMBER OF ALL CHILDREN UNDER AGE 6	CIRCLE LINE NUMBER OF ALL MEN AGE 15-59
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(9A)
			M F	YES NO	YES NO	IN YEARS			
11			1 2	1 2	1 2		11	11	11
12			1 2	1 2	1 2		12	12	12
13			1 2	1 2	1 2		13	13	13
14			1 2	1 2	1 2		14	14	14
15			1 2	1 2	1 2		15	15	15
16			1 2	1 2	1 2		16	16	16
17			1 2	1 2	1 2		17	17	17
18			1 2	1 2	1 2		18	18	18
19			1 2	1 2	1 2		19	19	19
20			1 2	1 2	1 2		20	20	20

* CODES FOR Q.3
RELATIONSHIP TO HEAD OF HOUSEHOLD:
01 = HEAD
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IN Q.11 AND Q.13, RECORD '00' IF PARENT NOT LISTED IN HOUSEHOLD SCHEDULE.

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		Does (NAME)'s biological mother live in this house-hold? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER		Does (NAME)'s biological father live in this house-hold? IF YES: What is his name? RECORD FATHER'S LINE NUMBER	Has (NAME) ever attended school?	What is the highest level of school (NAME) has attended?*** What is the highest grade (NAME) completed at that level?***	Is (NAME) currently attending school?	During the current school year, did (NAME) attend school at any time?	During the current school year, what level and grade [is/was] (NAME) attending?***	During the previous school year, did (NAME) attend school at any time?	During that school year, what level and grade did (NAME) attend?
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
	YES NO DK		YES NO DK		YES NO	LEVEL GRADE	YES NO	YES NO	LEVEL GRADE	YES NO	LEVEL GRADE
11	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
12	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
13	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
14	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
15	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
16	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
17	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
18	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
19	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	
20	1 2 8		1 2 8		1 2 NEXT LINE		1 2 GO TO 18	1 2 GO TO 19		1 2 NEXT LINE	

TICK HERE IF CONTINUATION SHEET USED ☐

Just to make sure that I have a complete listing:

1) Are there any other persons such as small children or infants that we have not listed? YES ☐ → ENTER EACH IN TABLE NO ☐

2) In addition, are there any other people who may not be members of your family, such as domestic servants, lodgers or friends who usually live here? YES ☐ → ENTER EACH IN TABLE NO ☐

3) Are there any guests or temporary visitors staying here, or anyone else who slept here last night, who have not been listed? YES ☐ → ENTER EACH IN TABLE NO ☐

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
21	What is the main source of drinking water for members of your household?	PIPED WATER PIPED INTO DWELLING .....11 PIPED INTO YARD/PLOT.....12 PUBLIC TAP.....13 WATER FROM OPEN WELL OPEN WELL IN DWELLING .....21 OPEN WELL IN YARD/PLOT.....22 OPEN PUBLIC WELL.....23 WATER FROM COVERED WELL OR BOREHOLE PROTECTED WELL IN DWELLING.....31 PROTECTED WELL IN YARD/PLOT .....32 PROTECTED PUBLIC WELL.....33 SURFACE WATER SPRING.....41 RIVER/STREAM.....42 POND/LAKE .....43 DAM.....44 RAINWATER .....51 TANKER TRUCK.....61 BOTTLED WATER .....71 SATCHEL WATER .....81 OTHER _____ 96 (SPECIFY)	 → 22A → 22A → 22A → 22A → 22A → 22A → 22A → 22A → 22A
22	How long does it take you to go there, get water, and come back?	MINUTES ..... [ ][ ][ ] ON PREMISES.....996	
22A	In the last two weeks, how frequently has water been available from this source?	ALL THE TIME .....1 SEVERAL HOURS EVERY DAY .....2 A FEW TIMES A WEEK .....3 LESS FREQUENTLY .....4 NOT AT ALL .....5 DON'T KNOW 8	
22B	How does this household primarily dispose of household waste?	COLLECTED BY GOVERNMENT .....01 COLLECTED BY COMMUNITY ASSOCIATION .....02 COLLECTED BY PRIVATE COMPANY .....03 DUMPED IN COMPOUND.....04 DUMPED IN STREET/EMPTY PLOT .....05 BURNED .....06 BURIED .....07 COMPOSTED .....08 RECYCLED .....09 FED TO ANIMALS.....10 OTHER _____ 96 (SPECIFY)	
23	What kind of toilet facilities does your household have?	FLUSH TOILET .....11 PIT TOILET/LATRINE TRADITIONAL PIT TOILET.....21 VENTILATED IMPROVED PIT (VIP) LATRINE .....22 BUCKET/PAN.....23 NO FACILITY/BUSH/FIELD/BEACH.....31 OTHER _____ 96 (SPECIFY)	 → 25
24	Do you share these facilities with other households?	YES .....1 NO 2	 → 25
24A	How many households do you share these facilities with?	1-2 .....1 3-4 .....2 5-9 .....3 10+.....4	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
25	Does your household have: Electricity? A radio? A television? A video deck? A telephone? A refrigerator?	YES NO ELECTRICITY .....1 2 RADIO .....1 2 TELEVISION .....1 2 VIDEO DECK .....1 2 TELEPHONE.....1 2 REFRIGERATOR.....1 2	
26	What type of fuel does your household mainly use for cooking?	ELECTRICITY .....01 LPG/NATURAL GAS .....02 BIOGAS.....03 KEROSENE.....04 COAL, LIGNITE.....05 CHARCOAL.....06 FIREWOOD, STRAW.....07 DUNG .....08 OTHER _____ 96 (SPECIFY)	
26A	How likely is it that you could be evicted from this dwelling: Would you say very likely, somewhat likely, not at all likely?	VERY LIKELY.....1 SOMEWHAT LIKELY .....2 NOT AT ALL .....3 DON'T KNOW 8	
27	MAIN MATERIAL OF THE FLOOR. RECORD OBSERVATION.	NATURAL FLOOR EARTH/SAND/MUD .....11 MUD MIXED WITH DUNG .....12 RUDIMENTARY FLOOR WOOD PLANKS.....21 PALM/BAMBOO .....22 FINISHED FLOOR PARQUET OR POLISHED WOOD.....31 LINOLEUM .....32 CERAMIC TILES.....33 CEMENT .....34 CARPET .....35 TERRAZZO .....36 OTHER _____ 96 (SPECIFY)	
28	Does any member of your household own: A bicycle? A motorcycle or motor scooter? A car or truck? A tractor? A horse/cart?	YES NO BICYCLE .....1 2 MOTORCYCLE/SCOOTER .....1 2 CAR/TRUCK.....1 2 TRACTOR .....1 2 HORSE/CART 1 2	
29	Does your household have any mosquito bed nets that can be used while sleeping?	YES .....1 NO 2	→ 32F
29A	How many mosquito bed nets does your household have?	NUMBER..... [ ]	
29B	When do you use the nets?	ALL YEAR ROUND .....1 DURING THE RAINY SEASON .....2 OTHER _____ 6 (SPECIFY)	

		NET # 1	NET # 2	NET #3
30	ASK RESPONDENT TO SHOW YOU THE NET(S) IN THE HOUSEHOLD.	OBSERVED ..... 1 NOT OBSERVED..... 2	OBSERVED ..... 1 NOT OBSERVED 2	OBSERVED ..... 1 NOT OBSERVED 2
31	How long ago did your household obtain the mosquito bed net?	MONTHS AGO. [ ][ ] MORE THAN 3 YEARS AGO.....96	MONTHS AGO. [ ][ ] MORE THAN 3 YEARS AGO.....96	MONTHS AGO. [ ][ ] MORE THAN 3 YEARS AGO.....96
31A	How did you obtain the net?	BOUGHT IT AT COMMERCIAL PRICE... 1 BOUGHT IT WITH VOUCHER OR OTHER SUBSIDY ..... 2 RECEIVED IT FREE..... 3 OTHER_____6 (SPECIFY) DON'T KNOW..... 8	BOUGHT IT AT COMMERCIAL PRICE... 1 BOUGHT IT WITH VOUCHER OR OTHER SUBSIDY ..... 2 RECEIVED IT FREE..... 3 OTHER_____6 (SPECIFY) DON'T KNOW..... 8	BOUGHT IT AT COMMERCIAL PRICE... 1 BOUGHT IT WITH VOUCHER OR OTHER SUBSIDY ..... 2 RECEIVED IT FREE..... 3 OTHER_____6 (SPECIFY) DON'T KNOW..... 8
31B	When you got the mosquito bed net, was it treated with an insecticide?	YES, PRETREATED..... 1 NO, CAME WITH TREATMENT KIT AND I TREATED IT MYSELF.....2 NO IT WAS NOT TREATED .....3 OTHER_____6 (SPECIFY) DON'T KNOW.....8 (SKIP TO 32A)	YES, PRETREATED..... 1 NO, CAME WITH TREATMENT KIT AND I TREATED IT MYSELF.....2 NO IT WAS NOT TREATED .....3 OTHER_____6 (SPECIFY) DON'T KNOW.....8 (SKIP TO 32A)	YES, PRETREATED..... 1 NO, CAME WITH TREATMENT KIT AND I TREATED IT MYSELF.....2 NO IT WAS NOT TREATED .....3 OTHER_____6 (SPECIFY) DON'T KNOW..... 8 (SKIP TO 32A)
32	OBSERVE OR ASK THE BRAND OF MOSQUITO BED NET.	PERMANET .....1 DAWA NET .....2 OLYSET.....3 LOCALLY MADE .....4 OTHER..... 6 DON'T KNOW..... 8	PERMANET .....1 DAWA NET .....2 OLYSET.....3 LOCALLY MADE .....4 OTHER ..... 6 DON'T KNOW..... 8	PERMANET .....1 DAWA NET .....2 OLYSET.....3 LOCALLY MADE .....4 OTHER ..... 6 DON'T KNOW..... 8
32A	Since you got the mosquito bed net, was it ever soaked or dipped in a liquid to repel mosquitoes or bugs?	YES..... 1 NO..... 2 (SKIP TO 32C) DON'T KNOW..... 8	YES..... 1 NO..... 2 (SKIP TO 32C) DON'T KNOW..... 8	YES..... 1 NO..... 2 (SKIP TO 32C) DON'T KNOW..... 8
32B	How long ago was the net last soaked or dipped? IF LESS THAN 1 MONTH, RECORD '00'.	MONTHS AGO. [ ][ ] MORE THAN 3 YEARS AGO.....96	MONTHS AGO. [ ][ ] MORE THAN 3 YEARS AGO.....96	MONTHS AGO. [ ][ ] MORE THAN 3 YEARS AGO.....96
32C	Did anyone sleep under this mosquito bed net last night?	YES..... 1 NO.....2 (SKIP TO 32E) DON'T KNOW.....8	YES..... 1 NO.....2 (SKIP TO 32E) DON'T KNOW.....8	YES..... 1 NO.....2 (SKIP TO 32E) DON'T KNOW.....8

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES			SKIP
32D	Who slept under this mosquito bed net last night? RECORD THE RESPECTIVE LINE NUMBER FROM THE HOUSEHOLD SCHEDULE.	NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ]	NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ]	NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ] NAME_____ LINE NO..... [ ][ ]	
32E		GO BACK TO 30 FOR NEXT NET; OR, IF NO MORE NETS, GO TO 32F.	GO BACK TO 30 FOR NEXT NET; OR, IF NO MORE NETS, GO TO 32F.	GO BACK TO 30 IN THE FIRST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE NETS, GO TO 32F	

32F	In the past year, have you seen or heard messages about malaria: On the television? On the radio? In a newspaper or magazine? From a poster? From leaflets or brochures? From a health worker?	YES NO TELEVISION .....1 2 RADIO .....1 2 NEWSPAPER/MAGAZINE.....1 2 POSTER.....1 2 LEAFLETS/BROCHURES.....1 2 HEALTH WORKER 1 2	
32G	Have you seen or heard any messages telling you to give a child with fever chloroquine tablets for three days?	YES .....1 NO .....2 DON'T KNOW 8	
32H	Have you ever listened to the radio program "He Ha Ho?"	YES .....1 NO .....2 DON'T KNOW 8	
33	Where do you usually wash your hands?	IN DWELLING/YARD/PLOT.....1 SOMEWHERE ELSE .....2 NOWHERE.....3	→ 34A
34	ASK TO SEE THE PLACE AND OBSERVE IF THE FOLLOWING ITEMS ARE PRESENT.	YES NO WATER/TAP.....1 2 SOAP, ASH OR OTHER CLEANSING AGENT .....1 2 BASIN.....1 2	
34A	Are you currently a member of a mutual health organization or health insurance scheme?	YES .....1 NO .....2 DON'T KNOW 8	→ 34E
34B	What type of scheme are you a member of?	PRIVATE HEALTH INSURANCE.....1 MHO .....2 GOVT.HEALTH COVERAGE.....3 OTHER _____ 6 (SPECIFY)	

34C	What benefits does your scheme cover?	CONSULTATION ..... A DRUGS..... B LABORATORY COSTS..... C X-RAY..... D ADMISSION ..... E SURGERY..... F SPECIALIST CARE..... G EXTRA OR BETTER FEEDING IN HOSPITAL..... H TRANSPORT ..... I ANTENATAL CARE ..... J NORMAL DELIVERY CARE ..... K COMPLICATED DELIVERY CARE..... L FAMILY PLANNING ..... M OTHER _____ N (SPECIFY)	
34D	Have you or any member of your family ever benefited from the scheme?	YES ..... 1 NO ..... 2 DON'T KNOW 8	▸35
34E	Will you consider joining a scheme in the future?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
35	ASK RESPONDENT FOR A TEASPOONFUL OF SALT. TEST SALT FOR IODINE. RECORD PPM (PARTS PER MILLION).	0 PPM (NO IODINE)..... 1 7 PPM..... 2 15 PPM..... 3 ABOVE 30 PPM ..... 4 NO SALT IN HH ..... 5 SALT NOT TESTED _____ 6 (SPECIFY REASON)	

HEIGHT, WEIGHT, HEMOGLOBIN MEASUREMENT, AND HIV TESTING

CHECK COLUMNS (2), (7), (8) AND (9): RECORD THE LINE NUMBER, NAME AND AGE OF ALL WOMEN AGE 15-49 AND ALL CHILDREN UNDER AGE 6.

WOMEN 15-49				WEIGHT AND HEIGHT MEASUREMENT OF WOMEN 15-49			
LINE NO. FROM COL.(8)	NAME FROM COL.(2)	AGE FROM COL.(7)	What is (NAME)'s date of birth?	WEIGHT (KILOGRAMS)	HEIGHT (CENTIMETERS)	MEASURED LYING DOWN OR STANDING UP	RESULT 1 MEASURED 2 NOT PRESENT 3 REFUSED 6 OTHER
(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)
		YEARS					

CHILDREN UNDER AGE 6				WEIGHT AND HEIGHT MEASUREMENT OF CHILDREN BORN IN 1998 OR LATER			
LINE NO. FROM COL.(9)	NAME FROM COL.(2)	AGE FROM COL.(7)	What is (NAME)'s date of birth?*	WEIGHT (KILOGRAMS)	HEIGHT (CENTIMETERS)	MEASURED LYING DOWN OR STANDING UP	RESULT 1 MEASURED 2 NOT PRESENT 3 REFUSED 6 OTHER
						LYING STAND.	
				0 .	.	1 2	
				0 .	.	1 2	
				0 .	.	1 2	
				0 .	.	1 2	
				0 .	.	1 2	
				0 .	.	1 2	
TICK HERE IF CONTINUATION SHEET USED							

* FOR CHILDREN NOT INCLUDED IN ANY BIRTH HISTORY, ASK DAY, MONTH AND YEAR. FOR ALL OTHER CHILDREN, COPY MONTH AND YEAR FROM Q215 IN MOTHER'S BIRTH HISTORY AND ASK DAY.

HEMOGLOBIN MEASUREMENT OF WOMEN 15-49					
CHECK COLUMN (38):	LINE NO. OF PARENT/ RESPONSIBLE ADULT. RECORD '00' IF NOT LISTED IN HOUSEHOLD SCHEDULE	READ CONSENT STATEMENT TO WOMAN/PARENT/RESPONSIBLE ADULT* CIRCLE CODE (AND SIGN)	HEMOGLOBIN LEVEL (G/DL)	CURRENTLY PREGNANT	RESULT 1 MEASURED 2 NOT PRESENT 3 REFUSED 6 OTHER
(44)	(45)	(46)	(47)	(48)	(49)
AGE 15-17 AGE 18-49 1 2 GO TO 46		GRANTED REFUSED 1 2 SIGN _____ NEXT LINE	.	YES NO/DK 1 2	
1 2 GO TO 46		1 2 SIGN _____ NEXT LINE	.	1 2	
1 2 GO TO 46		1 2 SIGN _____ NEXT LINE	.	1 2	

HEMOGLOBIN MEASUREMENT OF CHILDREN BORN IN 1998 OR LATER					
	LINE NO. OF PARENT/ RESPONSIBLE ADULT. RECORD '00' IF NOT LISTED IN HOUSEHOLD SCHEDULE	READ CONSENT STATEMENT TO PARENT/RESPONSIBLE ADULT* CIRCLE CODE (AND SIGN)	HEMOGLOBIN LEVEL (G/DL)		RESULT 1 MEASURED 2 NOT PRESENT 3 REFUSED 6 OTHER
		GRANTED REFUSED 1 2 SIGN _____ NEXT LINE	.		
		1 2 SIGN _____ NEXT LINE	.		
		1 2 SIGN _____ NEXT LINE	.		
		1 2 SIGN _____ NEXT LINE	.		
		1 2 SIGN _____ NEXT LINE	.		
		1 2 SIGN _____ NEXT LINE	.		

* CONSENT STATEMENT

Hello, my name is (YOUR NAME) and I am from the Ghana Health Services and collaborating with the Ghana Statistical Service that is carrying out this health survey. .As part of this survey, we are studying anemia among women and children. Anemia is a serious health problem that results from poor nutrition. This survey will assist the government to develop programs to prevent and treat anemia.

We request that you (and all children born in 1998 or later) participate in the anemia testing part of this survey and give a few drops of blood from a finger. The test uses disposable sterile instruments that are clean and completely safe. The blood will be analyzed with new equipment and the results of the test will be given to you right after the blood is taken. The results will be kept confidential.

May I now ask that you (and NAME OF CHILD[REN]) participate in the anemia test. However, if you decide not to have the test done, it is your right and we will respect your decision. Now please tell me if you agree to have the test(s) done.

Note: In countries where some enumeration areas are higher than 1,000 meters, altitude information should be collected for each enumeration area higher than 1,000 meters so that the anemia estimates can be adjusted appropriately.

50	CHECK 47 AND 48: NUMBER OF PERSONS WITH HEMOGLOBIN LEVEL BELOW THE CUTOFF POINT* ONE OR MORE ☐ → GIVE EACH WOMAN/PARENT/RESPONSIBLE ADULT RESULT OF HEMOGLOBIN MEASUREMENT AND CONTINUE WITH 51.** NONE ☐ → GIVE EACH WOMAN/PARENT/RESPONSIBLE ADULT RESULT OF HEMOGLOBIN MEASUREMENT AND END HOUSEHOLD INTERVIEW.
51	We detected a low level of hemoglobin in (your blood/the blood of NAME OF CHILD(REN)). This indicates that (you/NAME OF CHILD(REN)) have developed severe anemia, which is a serious health problem. We would like to inform the doctor at _____ about (your condition/the condition of NAME OF CHILD(REN)). This will assist you in obtaining appropriate treatment for the condition. Do you agree that the information about the level of hemoglobin in (your blood/the blood of NAME OF CHILD(REN)) may be given to the doctor?

NAME OF PERSON WITH HEMOGLOBIN BELOW THE CUTOFF POINT	NAME OF PARENT/RESPONSIBLE ADULT	AGREES TO REFERRAL?
WOMEN AGE 18-49		
		YES ..... 1 NO 2
		YES ..... 1 NO 2
		YES ..... 1 NO 2
		YES ..... 1 NO 2
WOMEN AGE 15-17 AND CHILDREN		
		YES ..... 1 NO 2
		YES ..... 1 NO 2
		YES ..... 1 NO 2
		YES ..... 1 NO 2
		YES ..... 1 NO 2
		YES ..... 1 NO 2
		YES ..... 1 NO 2
		YES ..... 1 NO 2
		YES ..... 1 NO 2

* The cutoff point is 9 g/dl for pregnant women and 7 g/dl for children and women who are not pregnant (or who don't know if they are pregnant.)

** If more than one woman or child is below the cutoff point, read the statement in Q.51 to each woman who is below the cutoff point and to each woman/parent/responsible adult of a child who is below the cutoff point.

HIV TESTING—WOMEN AND MEN

Total Number of Samples_____

CHECK COLUMNS (8) AND (9A): WRITE LINE NUMBER, NAME, SEX, AGE OF WOMEN 15-49 AND MEN 15-59. THIS PAGE TO BE DESTROYED IN OFFICE BEFORE TEST RESULTS ARE ADDED TO DATA FILE.

LINE NO. FROM COL.(8) OR (9A)	NAME FROM COL.(2)	SEX FROM COL.(4)	AGE FROM COL.(7)	CHECK AGE IN COL. (55):	LINE NO. OF PARENT/ RESPON -SIBLE ADULT	READ THE CONSENT STATEMENT TO THE **PARENT OR RESPONSIBLE ADULT** CIRCLE CODE (AND SIGN)			READ THE CONSENT STATEMENT TO THE **WOMAN OR MAN OR YOUTH** CIRCLE CODE (AND SIGN)			SAMPLE RESULT 1 SAMPLE TAKEN 2 REFUSED 3 NOT PRESENT 4 TECH. PROBLEM 6 OTHER (SPECIFY)	SAMPLE BAR CODE
(52)	(53)	(54)	(55)	(56)	(57)	(58)			(59)			(60)	(61)
		M F	YEARS	15-17 18+		AGREES	REFUSES	NOT READ	AGREES	REFUSES	NOT READ		
		1 2		1 2 ↓ TO 59		1 ↓ SIGN _____	2	3	1 ↓ SIGN _____	2	3	_____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER AND THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM
		1 2		1 2 ↓ TO 59		1 ↓ SIGN _____			1 ↓ SIGN _____	2	3	_____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER AND THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM
		1 2		1 2 ↓ TO 59		1 ↓ SIGN _____			1 ↓ SIGN _____	2	3	_____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER AND THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM
		1 2		1 2 ↓ TO 59		1 ↓ SIGN _____			1 ↓ SIGN _____	2	3	_____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER AND THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM
		1 2		1 2 ↓ TO 59		1 ↓ SIGN _____			1 ↓ SIGN _____	2	3	_____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER AND THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM
		1 2		1 2 ↓ TO 59		1 ↓ SIGN _____			1 ↓ SIGN _____	2	3	_____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER AND THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM
		1 2		1 2 ↓ TO 59		1 ↓ SIGN _____			1 ↓ SIGN _____	2	3	_____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER AND THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM

CONSENT STATEMENT

Hello, my name is _____. I'm from the Ghana Health Services and collaborating with the Ghana Statistical Services. As part of this survey, we are studying HIV among women and men. As you know, HIV is the virus that causes AIDS. The government is trying to find out how common HIV is, so that they can develop programs to prevent HIV and care for those who have it.

We request that you participate in this test by giving a few drops of blood from a finger. For this test, I will use clean, sterile instruments that are completely safe. Blood will be tested later in the laboratory.

To ensure the confidentiality of this test result, no individual names will be attached to the blood sample; therefore, we will not be able to give you the result of your test and no one will be able to trace the test back to you. If you want to know whether you have HIV, I can tell you where you can go to get tested.

Do you have any questions?

I hope you will agree to participate in the HIV testing. But if you decide not to have the test done, it is your right and I will respect your decision.

Will you accept to participate in the HIV test? GO BACK TO COLUMN (59). CIRCLE THE APPROPRIATE CODE AND SIGN.

IF RESPONDENT IS AGE 15-17, ASK PARENT/GUARDIAN: Now, will you tell me if you accept for (NAME OF YOUTH) to participate in the HIV test? GO TO COLUMN (58). CIRCLE THE APPROPRIATE CODE AND SIGN. IF PARENT AGREES, READ THE PRECEDING PARAGRAPHS TO YOUTH FOR HIS/HER CONSENT AND RECORD IN COL. (59).

NOTE FOR THE INTERVIEWER:
THE RESPONDENT HAS THE RIGHT TO REFUSE THE HIV TEST, AND THEREFORE SHOULD NOT BE FORCED.

GHANA DEMOGRAPHIC AND HEALTH SURVEYS
WOMAN'S QUESTIONNAIRE

GHANA STATISTICAL SERVICE

IDENTIFICATION

LOCALITY NAME _____

NAME OF HOUSEHOLD HEAD _____

EA NUMBER .....

HOUSEHOLD NUMBER .....

REGION .....

DISTRICT .....

URBAN/RURAL (URBAN=1, RURAL=2) .....

CITY/LARGE TOWN/SMALL TOWN/VILLAGE.....
(CITY=1, LARGE TOWN=2, SMALL TOWN=3, VILLAGE=4)

NAME AND LINE NUMBER OF WOMAN _____

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY MONTH YEAR 2 0 0 3
INTERVIEWER'S NAME	_____	_____	_____	NAME
RESULT*	_____	_____	_____	RESULT
NEXT VISIT: DATE	_____	_____		TOTAL NO. OF VISITS
TIME	_____	_____		

*RESULT CODES:

1	COMPLETED	4	REFUSED		
2	NOT AT HOME	5	PARTLY COMPLETED	7	OTHER _____ (SPECIFY)
3	POSTPONED	6	INCAPACITATED		

LANGUAGE

LANGUAGE OF QUESTIONNAIRE: **ENGLISH** 1

LANGUAGE OF INTERVIEW *** _____

NATIVE LANGUAGE OF RESPONDENT*** _____

WAS A TRANSLATOR USED? (YES=1, NO=2).....

*** LANGUAGE CODES:
1 ENGLISH 2 AKAN 3 GA 4 EWE 5 NZEMA 6 DAGBANI
7 OTHER_____
(SPECIFY)

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____	DATE _____		

SECTION 1. RESPONDENT'S BACKGROUND

INTRODUCTION AND CONSENT

INFORMED CONSENT

Hello. My name is _____ and I am working with the Ghana Statistical Service. We are conducting a national survey about the health of women, men and children. We would very much appreciate your participation in this survey. I would like to ask you about your health (and the health of your children). This information will help the government to plan health services. The survey usually takes between 20 and 45 minutes to complete. Whatever information you provide will be kept strictly confidential and will not be shown to other persons.

Participation in this survey is voluntary and you can choose not to answer any individual question or all of the questions. However, we hope that you will participate in this survey since your views are important.

At this time, do you want to ask me anything about the survey?
May I begin the interview now?

Signature of interviewer: _____ Date: _____

RESPONDENT AGREES TO BE INTERVIEWED ..... 1 ▼ RESPONDENT DOES NOT AGREE TO BE INTERVIEWED .... 2 ⟶ END

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOUR ..... [ ][ ] MINUTES ..... [ ][ ]	
102	First I would like to ask some questions about you and your household. For most of the time until you were 12 years old, did you live in a city, in a town, or in the village?	CITY ..... 1 TOWN ..... 2 VILLAGE 3	
103	How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? IF LESS THAN ONE YEAR, RECORD '00' YEARS.	YEARS ..... [ ][ ] ALWAYS ..... 95 VISITOR 96	 → 105
104	Just before you moved here, did you live in a city, in a town, or in the village?	CITY ..... 1 TOWN ..... 2 VILLAGE 3	
105	In what month and year were you born?	MONTH ..... [ ][ ] DON'T KNOW MONTH ..... 98 YEAR ..... [ ][ ][ ][ ] DON'T KNOW YEAR 9998	
106	How old were you at your last birthday? COMPARE AND CORRECT 105 AND/OR 106 IF INCONSISTENT.	AGE IN COMPLETED YEARS [ ][ ]	
107	Have you ever attended school?	YES ..... 1 NO 2	 → 111
108	What is the highest level of school you attended: primary, middle/JSS, secondary/SSS, or higher?	PRIMARY ..... 1 MIDDLE/JSS ..... 2 SECONDARY/SSS ..... 3 HIGHER 4	
109	What is the highest grade you completed at that level?	GRADE ..... [ ][ ]	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
110	CHECK 108: PRIMARY OR MIDDLE/JSS ☐ ▼ SECONDARY/SSS OR HIGHER ☐		→114
111	Now I would like you to read this sentence to me. SHOW CARD TO RESPONDENT.[1] IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE: Can you read any part of the sentence to me?	CANNOT READ AT ALL.....1 ABLE TO READ ONLY PARTS OF SENTENCE.....2 ABLE TO READ WHOLE SENTENCE.....3 NO CARD WITH REQUIRED LANGUAGE_____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRED.....5	
112	Have you ever participated in a literacy program or any other program that involves learning to read or write (not including primary school)?	YES.....1 NO 2	
113	CHECK 111: CODE '2', '3' OR '4' CIRCLED ☐ ▼ CODE '1' OR '5 ' CIRCLED ☐		→115
114	Do you read a newspaper or magazine almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY.....1 AT LEAST ONCE A WEEK .....2 LESS THAN ONCE A WEEK .....3 NOT AT ALL 4	
115	Do you listen to the radio almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY.....1 AT LEAST ONCE A WEEK .....2 LESS THAN ONCE A WEEK .....3 NOT AT ALL 4	
116	Do you watch television almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY.....1 AT LEAST ONCE A WEEK .....2 LESS THAN ONCE A WEEK .....3 NOT AT ALL 4	
117	What is your religion?	CATHOLIC.....01 ANGLICAN .....02 METHODIST.....03 PRESBYTERIAN .....04 OTHER CHRISTIAN.....05 MOSLEM .....06 TRADITIONAL/SPIRITUALIST.....07 NO RELIGION .....08 OTHER _____ 96 (SPECIFY)	
118	To which ethnic group do you belong?	AKAN .....01 GA/DANGME.....02 EWE.....03 GUAN .....04 MOLE-DAGBANI .....05 GRUSSI .....06 GRUMA .....07 HAUSA .....08 OTHER _____ 96 (SPECIFY)	

SECTION 2: REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about all the births you have had during your life. Have you ever given birth?	YES.....1 NO 2	 →206
202	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES.....1 NO 2	 →204
203	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME ..... [ ][ ] DAUGHTERS AT HOME ..... [ ][ ]	
204	Do you have any sons or daughters to whom you have given birth who are alive but do not live with you?	YES.....1 NO 2	 →206
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	SONS ELSEWHERE ..... [ ][ ] DAUGHTERS ELSEWHERE .. [ ][ ]	
206	Have you ever given birth to a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	YES.....1 NO 2	 →208
207	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	BOYS DEAD ..... [ ][ ] GIRLS DEAD..... [ ][ ]	
208	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL ..... [ ][ ]	
209	CHECK 208: Just to make sure that I have this right: you have had in TOTAL _____ births during your life. Is that correct? YES [ ] NO [ ] → PROBE AND CORRECT 201-208 AS NECESSARY.		
210	CHECK 208: ONE OR MORE BIRTHS [ ] NO BIRTHS [ ]		→226

211 Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had. RECORD NAMES OF ALL THE BIRTHS IN 212. RECORD TWINS AND TRIPLETS ON SEPARATE LINES.

212 What name was given to your (first/next) baby? (NAME)	213 Were any of these births twins?	214 Is (NAME) a boy or a girl?	215 In what month and year was (NAME) born? PROBE: What is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COM-PLETED YEARS.	218 IF ALIVE Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSEHOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD)	220 IF DEAD: How old was (NAME) when he/she died? IF '1 YR', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	221 Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME)?
01	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (NEXT BIRTH)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	
02	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2
03	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2
04	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2
05	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2
06	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2
07	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2

212	213	214	215	216	217 IF ALIVE:	218 IF ALIVE	219 IF ALIVE:	220 IF DEAD:	221
What name was given to your next baby? (NAME)	Were any of these births twins?	Is (NAME) a boy or a girl?	In what month and year was (NAME) born? PROBE: What is his/her birthday?	Is (NAME) still alive?	How old was (NAME) at his/her last birthday? RECORD AGE IN COM-PLETED YEARS.	Is (NAME) living with you?	RECORD HOUSEHOLD LINE NUMBER OF CHILD (RECORD 00' IF CHILD NOT LISTED IN HOUSEHOLD)	How old was (NAME) when he/she died? IF 1 YR, PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME)?
08	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2
09	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2
10	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2
11	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2
12	SING....1 MULT...2	BOY .. 1 GIRL . 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES.....1 NO.....2 → 220	AGE IN YEARS [ ][ ]	YES..... 1 NO 2	LINE NUMBER [ ][ ] (GO TO 221)	DAYS..... 1 [ ][ ] MONTHS. 2 [ ][ ] YEARS .... 3 [ ][ ]	YES ..... 1 NO 2

222	Have you had any live births since the birth of (NAME OF LAST BIRTH)?	YES ..... 1 NO 2	
223	COMPARE 208 WITH NUMBER OF BITHS IN HISTORY ABOVE AND MARK: NUMBERS ARE SAME [ ] → CHECK: FOR EACH BIRTH: YEAR OF BIRTH IS RECORDED. FOR EACH LIVING CHILD: CURRENT AGE IS RECORDED. FOR EACH DEAD CHILD: AGE AT DEATH IS RECORDED. FOR AGE AT DEATH 12 MONTHS OR 1 YR.: PROBE TO DETERMINE EXACT NUMBER OF MONTHS. NUMBERS ARE DIFFERENT [ ] → (PROBE AND RECONCILE)		[ ] [ ] [ ] [ ]
224	CHECK 215 AND ENTER THE NUMBER OF BIRTHS IN 1998 OR LATER. IF NONE, RECORD '0'.		[ ]

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
225	FOR EACH BIRTH SINCE JANUARY 1998, ENTER 'B' IN THE MONTH OF BIRTH IN THE CALENDAR. FOR EACH BIRTH, ASK THE NUMBER OF MONTHS THE PREGNANCY LASTED AND RECORD 'P' IN EACH OF THE PRECEDING MONTHS ACCORDING TO THE DURATION OF PREGNANCY. (NOTE: THE NUMBER OF 'P's MUST BE ONE LESS THAN THE NUMBER OF MONTHS THAT THE PREGNANCY LASTED.) WRITE THE NAME OF THE CHILD TO THE LEFT OF THE 'B' CODE.		
226	Are you pregnant now?	YES ..... 1 NO ..... 2 UNSURE 8	→229
227	How many months pregnant are you? RECORD NUMBER OF COMPLETED MONTHS. ENTER 'P's IN THE CALENDAR, BEGINNING WITH THE MONTH OF INTERVIEW AND FOR THE TOTAL NUMBER OF COMPLETED MONTHS.	MONTHS ..... [ ][ ]	
228	At the time you became pregnant did you want to become pregnant then, did you want to wait until later, or did you not want to have any (more) children at all?	THEN ..... 1 LATER ..... 2 NOT AT ALL 3	
229	Have you ever had a pregnancy that miscarried, was aborted, or ended in a stillbirth?	YES ..... 1 NO 2	→237
230	When did the last such pregnancy end?	MONTH ..... [ ][ ] YEAR ..... [ ][ ][ ][ ]	
231	CHECK 230: LAST PREGNANCY ENDED IN JAN. 1998 OR LATER [ ] ▼ LAST PREGNANCY ENDED BEFORE JAN. 1998 [ ]		→237
232	How many months pregnant were you when the last such pregnancy ended? RECORD NUMBER OF COMPLETED MONTHS. ENTER 'T' IN THE CALENDAR IN THE MONTH THAT THE PREGNANCY TERMINATED AND 'P' FOR THE REMAINING NUMBER OF COMPLETED MONTHS.	MONTHS ..... [ ][ ]	
233	Have you ever had any other pregnancies which did not result in a live birth?	YES ..... 1 NO 2	→237
234	ASK THE DATE AND THE DURATION OF PREGNANCY FOR EACH EARLIER NON-LIVE BIRTH PREGNANCY BACK TO JANUARY 1998. ENTER 'T' IN THE CALENDAR IN THE MONTH THAT EACH PREGNANCY TERMINATED AND 'P' FOR THE REMAINING NUMBER OF COMPLETED MONTHS.		
235	Did you have any pregnancies that terminated before 1998 that did not result in a live birth?	YES ..... 1 NO 2	→237
236	When did the last such pregnancy that terminated before 1998 end?	MONTH ..... [ ][ ] YEAR ..... [ ][ ][ ][ ]	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
237	When did your last menstrual period start? _____ (DATE, IF GIVEN)	DAYS AGO ..... 1 [ ][ ] WEEKS AGO..... 2 [ ][ ] MONTHS AGO ..... 3 [ ][ ] YEARS AGO ..... 4 [ ][ ] IN MENOPAUSE/ HAS HAD HYSTERECTOMY ..... 994 BEFORE LAST BIRTH ..... 995 NEVER MENSTRUATED..... 996	
238	From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant if she has sexual relations?	YES ..... 1 NO ..... 2 DON'T KNOW 8	▸301
239	Is this time just before her period begins, during her period, right after her period has ended, or halfway between two periods?	JUST BEFORE HER PERIOD BEGINS .... 1 DURING HER PERIOD ..... 2 RIGHT AFTER HER PERIOD HAS ENDED ..... 3 HALFWAY BETWEEN TWO PERIODS .... 4 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	

SECTION 3. CONTRACEPTION

Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy. CIRCLE CODE 1 IN 301 FOR EACH METHOD MENTIONED SPONTANEOUSLY. THEN PROCEED DOWN COLUMN 301, READING THE NAME AND DESCRIPTION OF EACH METHOD NOT MENTIONED SPONTANEOUSLY. CIRCLE CODE 1 IF METHOD IS RECOGNIZED, AND CODE 2 IF NOT RECOGNIZED. THEN, FOR EACH METHOD WITH CODE 1 CIRCLED IN 301, ASK 302.

301	Which ways or methods have you heard about? FOR METHODS NOT MENTIONED SPONTANEOUSLY, ASK: Have you ever heard of (METHOD)?		302 Have you ever used (METHOD)?
01	FEMALE STERILIZATION Women can have an operation to avoid having any more children.	YES.....1 NO 2	Have you ever had an operation to avoid having any more children? YES .....1 NO.....2
02	MALE STERILIZATION Men can have an operation to avoid having any more children.	YES.....1 NO 2	Have you ever had a partner who had an operation to avoid having any more children? YES .....1 NO.....2
03	PILL Women can take a pill every day to avoid becoming pregnant.	YES.....1 NO 2	YES .....1 NO.....2
04	IUD Women can have a loop or coil placed inside them by a doctor or a nurse.	YES.....1 NO 2	YES .....1 NO.....2
05	INJECTABLES Women can have an injection by a health provider which stops them from becoming pregnant for one or more months.	YES.....1 NO 2	YES .....1 NO.....2
06	IMPLANTS Women can have several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years.	YES.....1 NO 2	YES .....1 NO.....2
07	CONDOM Men can put a rubber sheath on their penis before sexual intercourse.	YES.....1 NO 2	YES .....1 NO.....2
08	FEMALE CONDOM Women can place a sheath in their vagina before sexual intercourse.	YES.....1 NO 2	YES .....1 NO.....2
09	DIAPHRAGM Women can place a thin flexible disk in their vagina before intercourse.	YES.....1 NO 2	YES .....1 NO.....2
10	FOAM OR JELLY Women can place a suppository/tablet, jelly, or cream in their vagina before intercourse.	YES.....1 NO 2	YES .....1 NO.....2
11	LACTATIONAL AMENORRHEA METHOD (LAM) Up to 6 months after childbirth, a woman can use a method that requires that she breastfeeds frequently, day and night, and that her menstrual period has not returned.	YES.....1 NO 2	YES .....1 NO.....2
12	RHYTHM OR PERIODIC ABSTINENCE Every month that a woman is sexually active she can avoid pregnancy by not having sexual intercourse on the days of the month she is most likely to get pregnant.	YES.....1 NO 2	YES .....1 NO.....2
13	WITHDRAWAL Men can be careful and pull out before climax.	YES.....1 NO 2	YES .....1 NO.....2
14	EMERGENCY CONTRACEPTION Women can take pills up to five days after sexual intercourse to avoid becoming pregnant.	YES.....1 NO 2	YES .....1 NO.....2
15	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES.....1 _____ (SPECIFY) _____ (SPECIFY) NO 2	YES .....1 NO.....2 YES .....1 NO.....2

303	CHECK 302:		
	NOT A SINGLE "YES" (NEVER USED) ☐	AT LEAST ONE "YES" (EVER USED) ☐ _____	→307

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
304	Have you ever used anything or tried in any way to delay or avoid getting pregnant?	YES .....1 NO 2	 →329
306	What have you used or done? CORRECT 302 AND 303 (AND 301 IF NECESSARY).		
307	Now I would like to ask you about the first time that you did something or used a method to avoid getting pregnant. How many living children did you have at that time, if any? IF NONE, RECORD '00'.	NUMBER OF CHILDREN ..... [ ][ ]	
308	CHECK 302 (01): WOMAN NOT STERILIZED [ ] ▼ WOMAN STERILIZED [ ]		→311A
309	CHECK 226: NOT PREGNANT OR UNSURE [ ] ▼ PREGNANT [ ]		→329
310	Are you currently doing something or using any method to delay or avoid getting pregnant?	YES .....1 NO 2	 →329
311 311A	Which method are you using? IF MORE THAN ONE METHOD MENTIONED, FOLLOW SKIP INSTRUCTION FOR HIGHEST METHOD ON LIST. CIRCLE 'A' FOR FEMALE STERILIZATION.	FEMALE STERILIZATION ..... A MALE STERILIZATION..... B PILL ..... C IUD ..... D INJECTABLES ..... E IMPLANTS ..... F MALE CONDOM ..... G FEMALE CONDOM..... H DIAPHRAGM ..... I FOAM/JELLY ..... J LACTATIONAL AMEN. METHOD..... K PERIODIC ABSTINENCE ..... L WITHDRAWAL..... M OTHER _____ X (SPECIFY)	→313 →316A
312A	At the time you first started using the pill, did you consult a doctor, nurse, midwife, or a pharmacist?	YES .....1 NO 2	
312B	At the time you last got the pill, did you consult a doctor, nurse, midwife, or pharmacist?	YES .....1 NO 2	
312C	May I see the package of pill you are using now? RECORD NAME OF BRAND. _____ (NAME OF BRAND)	PACKAGE SEEN .....1 BRAND NAME ..... [ ][ ] PACKAGE NOT SEEN 2	→312E
312D	Do you know the brand name of the pill you are using now? RECORD NAME OF BRAND. _____ (NAME OF BRAND)	BRAND NAME ..... [ ][ ] DON'T KNOW 98	
312E	How much did you pay for the pill the last time you got them?	CEDIS ..... [ ][ ][ ][ ][ ] FREE ..... 99996 DON'T KNOW 99998	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
312F	How many cycles of pill did you get the last time?	NUMBER OF CYCLES..... [ ] DON'T KNOW 8	
312G	Have you experienced any side effects from the use of the pill?	YES ..... 1 NO 2	→316A
312H	What side effects have you experienced? CIRCLE ALL MENTIONED.	DIZZINESS ..... A WEIGHT GAIN ..... B HEADACHES ..... C EXCESSIVE BLEEDING ..... D IRREGULAR CYCLE ..... E PAINFUL PERIOD/CRAMPS ..... F PALPITATION/IRREGULAR HEART BEAT ..... G OTHER _____ H (SPECIFY)	→316A
313	In what facility did the sterilization take place? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC ..... 11 GOVT. HEALTH CENTER ..... 12 FAMILY PLANNING CLINIC ..... 13 MOBILE CLINIC ..... 14 OTHER PUBLIC _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... 21 PRIVATE DOCTOR ..... 22 MOBILE CLINIC ..... 24 FP/PPAG CLINIC ..... 26 OTHER PRIVATE MEDICAL _____ 28 (SPECIFY) OTHER _____ 96 (SPECIFY) DON'T KNOW 98	
314	CHECK 311: CODE 'A' CIRCLED [ ] → Before your sterilization operation, were you told that you would not be able to have any (more) children because of the operation? CODE 'A' NOT CIRCLED [ ] → Before the sterilization operation, was your husband/partner told that he would not be able to have any (more) children because of the operation?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
316 316A	In what month and year was the sterilization performed? For how long have you been using (CURRENT METHOD) now without stopping? PROBE: In what month and year did you start using (CURRENT METHOD) continuously?	MONTH ..... [ ][ ] YEAR ..... [ ][ ][ ][ ]	
316B	CHECK 316/316A, 215 AND 230: ANY BIRTH OR PREGNANCY TERMINATION AFTER MONTH AND YEAR OF START OF USE OF CONTRACEPTION IN 316/316A — YES [ ] → NO [ ] → GO BACK TO 316/316A, PROBE AND RECORD MONTH AND YEAR AT START OF CONTINUOUS USE OF CURRENT METHOD (MUST BE AFTER LAST BIRTH OR PREGNANCY TERMINATION).		
317	CHECK 316/316A: YEAR IS 1998 OR LATER [ ] → YEAR IS 1997 OR EARLIER [ ] _____		→327

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
319	CHECK 311/311A: CIRCLE METHOD CODE IF MORE THAN ONE METHOD CODE CIRCLED IN 311/311A, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	FEMALE STERILIZATION .....01 MALE STERILIZATION.....02 PILL.....03 IUD .....04 INJECTABLES .....05 IMPLANTS .....06 MALE CONDOM .....07 FEMALE CONDOM.....08 DIAPHRAGM .....09 FOAM/JELLY .....10 LACTATIONAL AMEN. METHOD.....11 PERIODIC ABSTINENCE.....12 WITHDRAWAL.....13 OTHER METHOD 96	→322 →331 →320A →331 →331 →331
320 320A	Where did you obtain (CURRENT METHOD) when you started using it? Where did you learn to use the lactational amenorrhea method? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC.....11 GOVT. HEALTH CENTER.....12 FAMILY PLANNING CLINIC.....13 MOBILE CLINIC.....14 FIELDWORKER.....15 OTHER PUBLIC_____16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC .....21 PRIVATE DOCTOR .....22 PHARMACY/CHEMIST/ DRUG STORE .....23 MOBILE CLINIC.....24 FIELDWORKER.....25 FP/PPAG CLINIC.....26 MATERNITY HOME.....27 OTHER PRIVATE MEDICAL _____ 28 (SPECIFY) OTHER SOURCE SHOP .....31 CHURCH .....32 FRIEND/RELATIVE .....33 OTHER _____ 96 (SPECIFY)	
321	CHECK 311/311A: CIRCLE METHOD CODE: IF MORE THAN ONE METHOD CODE CIRCLED IN 311/311A, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	PILL.....03 IUD .....04 INJECTABLES .....05 IMPLANTS .....06 MALE CONDOM .....07 FEMALE CONDOM.....08 DIAPHRAGM .....09 FOAM/JELLY .....10 LACTATIONAL AMEN. METHOD.....11	 →328 →325 →325 →325 →325
322	You first obtained (CURRENT METHOD) from (SOURCE OF METHOD FROM 313 OR 320). At that time, were you told about side effects or problems you might have with the method?	YES .....1 NO 2	→324
323	Were you ever told by a health or family planning worker about side effects or problems you might have with the method?	YES .....1 NO 2	 →325
324	Were you told what to do if you experienced side effects or problems?	YES .....1 NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
325	CHECK 322: CODE '1' CIRCLED → At that time, were you told about other methods of family planning that you could use? CODE '1' NOT CIRCLED → When you obtained (CURRENT METHOD) from (SOURCE OF METHOD FROM 313 OR 320), were you told about other methods of family planning that you could use?	YES .....1 NO 2	 →327
326	Were you ever told by a health or family planning worker about other methods of family planning that you could use?	YES .....1 NO 2	
327	CHECK 311/311A: CIRCLE METHOD CODE:	FEMALE STERILIZATION .....01 MALE STERILIZATION.....02 PILL .....03 IUD .....04 INJECTABLES .....05 IMPLANTS .....06 MALE CONDOM .....07 FEMALE CONDOM.....08 DIAPHRAGM .....09 FOAM/JELLY .....10 LACTATIONAL AMEN. METHOD.....11 PERIODIC ABSTINENCE .....12 WITHDRAWAL.....13 OTHER METHOD 96	→331 →331 →331 →331 →331 →331
328	Where did you obtain (CURRENT METHOD) the last time? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC.....11 GOVT. HEALTH CENTER.....12 FAMILY PLANNING CLINIC.....13 MOBILE CLINIC.....14 FIELDWORKER.....15 OTHER PUBLIC_____16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC .....21 PRIVATE DOCTOR .....22 PHARMACY/CHEMIST/ DRUG STORE .....23 MOBILE CLINIC.....24 FIELDWORKER.....25 FP/PPAG CLINIC.....26 MATERNITY HOME.....27 OTHER PRIVATE MEDICAL _____ 28 (SPECIFY) OTHER SOURCE SHOP .....31 CHURCH .....32 FRIEND/RELATIVE .....33 OTHER _____ 96 (SPECIFY)	 →331
329	Do you know of a place where you can obtain a method of family planning?	YES .....1 NO 2	 →331

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
330	Where is that? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) Any other place? RECORD ALL PLACES MENTIONED	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC..... A GOVT. HEALTH CENTER..... B FAMILY PLANNING CLINIC..... C MOBILE CLINIC..... D FIELDWORKER..... E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC..... G PRIVATE DOCTOR..... H PHARMACY/CHEMIST/ DRUG STORE..... I MOBILE CLINIC..... J FIELD WORKER..... K FP/PPAG CLINIC..... L MATERNITY HOME..... M OTHER PRIVATE MEDICAL _____ N (SPECIFY) OTHER SOURCE SHOP..... O CHURCH..... P FRIEND/RELATIVE..... Q OTHER _____ X (SPECIFY)	
331	In the last 12 months, were you visited by a fieldworker/CBD who talked to you about family planning?	YES..... 1 NO..... 2	
332	In the last 12 months, have you visited a health facility for care for yourself (or your children)?	YES..... 1 NO..... 2	→401
333	Did any staff member at the health facility speak to you about family planning methods?	YES..... 1 NO..... 2	

SECTION 4A. PREGNANCY, POSTNATAL CARE AND BREASTFEEDING

401	CHECK 224: ONE OR MORE BIRTHS IN 1998 OR LATER ☐	NO BIRTHS IN 1998 OR LATER ☐	→487
402	ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 1998 OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 2 BIRTHS, USE LAST COLUMN OF ADDITIONAL QUESTIONNAIRES). Now I would like to ask you some questions about the health of all your children born in the last five years. (We will talk about each separately)		
403	LINE NUMBER FROM 212	LAST BIRTH LINE NUMBER ..... ☐☐	NEXT-TO-LAST BIRTH LINE NUMBER ..... ☐☐
404	FROM 212 AND 216	NAME _____ LIVING ☐ DEAD ☐	NAME _____ LIVING ☐ DEAD ☐
405	At the time you became pregnant with (NAME), did you want to become pregnant then, did you want to wait until later, or did you not want to have any (more) children at all?	THEN ..... 1 (SKIP TO 407) LATER ..... 2 NOT AT ALL ..... 3 (SKIP TO 407)	THEN ..... 1 (SKIP TO 423) LATER ..... 2 NOT AT ALL ..... 3 (SKIP TO 423)
406	How much longer would you like to have waited?	MONTHS ..... 1 ☐☐ YEARS ..... 2 ☐☐ DON'T KNOW 998	MONTHS ..... 1 ☐☐ YEARS ..... 2 ☐☐ DON'T KNOW 998
407	Did you see anyone for antenatal care for this pregnancy?[2] IF YES: Whom did you see? Anyone else? PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS SEEN.	HEALTH PROFESSIONAL DOCTOR ..... A NURSE/MIDWIFE ..... B AUXILIARY MIDWIFE ..... C OTHER PERSON TRAINED TRADITIONAL BIRTH ATTENDANT ..... D OTHER _____ X (SPECIFY) NO ONE ..... Y (SKIP TO 415)	
407A	Where did you receive antenatal care for this pregnancy? Anywhere else?	HOME YOUR HOME ..... A TBA'S HOME ..... B OTHER HOME ..... C PUBLIC SECTOR GOVT. HOSPITAL/CLINIC ..... D GOVT. HEALTH CENTER ..... E GOVT. HEALTH POST ..... F MOBILE CLINIC ..... G OTHER PUBLIC _____ H (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC ..... I MOBILE CLINIC ..... J MATERNITY HOME ..... K OTHER PVT. MEDICAL _____ L (SPECIFY) OTHER _____ X (SPECIFY)	

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
408	How many months pregnant were you when you first received antenatal care for this pregnancy?	MONTHS ..... [ ][ ] DON'T KNOW 98	
409	How many times did you receive antenatal care during this pregnancy?	NO. OF TIMES ..... [ ][ ] DON'T KNOW 98	
410	CHECK 409: NUMBER OF TIMES RECEIVED ANTENATAL CARE	ONCE [ ] (SKIP TO 412) MORE THAN ONCE OR DK [ ]	
411	How many months pregnant were you the last time you received antenatal care?	MONTHS ..... [ ][ ] DON'T KNOW..... 98	
412	During this pregnancy, were any of the following done at least once? Were you weighed? Was your height measured? Was your blood pressure measured? Did you give a urine sample? Did you give a blood sample?	YES NO WEIGHT ..... 1 2 HEIGHT ..... 1 2 BLOOD PRESSURE ..... 1 2 URINE SAMPLE..... 1 2 BLOOD SAMPLE..... 1 2	
413	Were you told about the signs of pregnancy complications?	YES..... 1 NO ..... 2 (SKIP TO 415) DON'T KNOW..... 8	
414	Were you told where to go if you had these complications?	YES..... 1 NO ..... 2 DON'T KNOW..... 8	
415	During this pregnancy, were you given an injection in the arm to prevent the baby from getting tetanus, that is, convulsions after birth?	YES..... 1 NO ..... 2 (SKIP TO 417) DON'T KNOW..... 8	
416	During this pregnancy, how many times did you get this injection?	TIMES ..... [ ]. DON'T KNOW..... 8	
417	During this pregnancy, were you given or did you buy any iron tablets? SHOW TABLET.	YES..... 1 NO ..... 2 (SKIP TO 419) DON'T KNOW..... 8	
418	During the whole pregnancy, for how many days did you take the tablets? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER OF DAYS.	NUMBER OF DAYS ..... [ ][ ][ ]. DON'T KNOW..... 998	
419	During this pregnancy, did you have difficulty with your vision during the daylight?	YES..... 1 NO ..... 2 DON'T KNOW..... 8	

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
420	During this pregnancy, did you suffer from night blindness?	YES.....1 NO .....2 DON'T KNOW.....8	
421	During this pregnancy, did you take any drugs to prevent you from getting malaria?	YES.....1 NO .....2 (SKIP TO 423) DON'T KNOW.....8	
422	What drugs did you take? RECORD ALL MENTIONED. IF TYPE OF DRUG IS NOT DETERMINED, SHOW TYPICAL ANTIMALARIAL DRUGS TO RESPONDENT.	FANSIDAR ..... A CHLOROQUINE ..... B UNKNOWN DRUG ..... C OTHER _____ X (SPECIFY)	
422A	CHECK 422: DRUGS TAKEN FOR MALARIA PREVENTION	CODE 'A' CIRCLED ☐ CODE 'A' NOT CIRCLED ☐ (SKIP TO 423)	
422B	How many times did you take Fansidar during this pregnancy	TIMES ..... ☐☐	
422C	CHECK 407: ANTENATAL CARE RECEIVED DURING THIS PREGNANCY?	CODE 'A', 'B' OR 'C' CIRCLED ☐ OTHER ☐ (SKIP TO 423)	
422D	Did you get the Fansidar during an antenatal visit, during another visit to a health facility or from some other source?	ANTENATAL VISIT ..... 1 ANOTHER FACILITY VISIT ..... 2 OTHER SOURCE _____ 6 (SPECIFY)	
423	When (NAME) was born, was he/she very large, larger than average, average, smaller than average, or very small?	VERY LARGE.....1 LARGER THAN AVERAGE.....2 AVERAGE .....3 SMALLER THAN AVERAGE.....4 VERY SMALL .....5 DON'T KNOW.....8	VERY LARGE.....1 LARGER THAN AVERAGE.....2 AVERAGE .....3 SMALLER THAN AVERAGE.....4 VERY SMALL .....5 DON'T KNOW.....8
424	Was (NAME) weighed at birth?	YES.....1 NO .....2 (SKIP TO 425A) DON'T KNOW.....8	YES.....1 NO .....2 (SKIP TO 425A) DON'T KNOW.....8
425	How much did (NAME) weigh? RECORD WEIGHT FROM HEALTH CARD, IF AVAILABLE.	KILOGRAM FROM CARD .....1 ☐.☐ KILOGRAM FROM RECALL.....2 ☐.☐ DON'T KNOW.....998	KILOGRAM FROM CARD..... 1 ☐.☐ KILOGRAM FROM RECALL..... 2 ☐.☐ DON'T KNOW.....998

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
425A	Was the birth of (NAME) registered with the government or local authority?	YES.....1 NO .....2 DON'T KNOW.....8	YES.....1 NO .....2 DON'T KNOW.....8
426	Who assisted with the delivery of (NAME)? Anyone else? PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS ASSISTING. IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY.	HEALTH PROFESSIONAL DOCTOR .....A NURSE/MIDWIFE .....B AUXILIARY MIDWIFE ..... C OTHER PERSON TRADITIONAL BIRTH ATTENDANT ..... D RELATIVE/FRIEND .....E OTHER _____ X (SPECIFY) NO ONE.....Y	HEALTH PROFESSIONAL DOCTOR ..... A NURSE/MIDWIFE..... B AUXILIARY MIDWIFE ..... C OTHER PERSON TRADITIONAL BIRTH ATTENDANT ..... D RELATIVE/FRIEND ..... E OTHER _____ X (SPECIFY) NO ONE.....Y
427	Where did you give birth to (NAME)? IF SOURCE IS HOSPITAL, HEALTH CENTER OR CLINIC, WRITE THE NAME OF THE PLACE, PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	HOME YOUR HOME.....11 TBA'S HOME..... 12 OTHER HOME ..... 13 (SKIP TO 429) PUBLIC SECTOR GOVT. HOSPITAL/CLINIC .....21 GOVT. HEALTH CENTER.....22 GOVT. HEALTH POST.....23 OTHER PUBLIC _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC .....31 MATERNITY HOME .....32 OTHER PVT. MEDICAL _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY) (SKIP TO 429)	HOME YOUR HOME.....11 TBA'S HOME..... 12 OTHER HOME ..... 13 (SKIP TO 429) PUBLIC SECTOR GOVT. HOSPITAL/CLINIC .....21 GOVT. HEALTH CENTER.....22 GOVT. HEALTH POST.....23 OTHER PUBLIC _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC .....31 MATERNITY HOME .....32 OTHER PVT. MEDICAL _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY) (SKIP TO 429)
428	Was (NAME) delivered by caesarian section?	YES.....1 (SKIP TO 433) NO 2	YES.....1 (SKIP TO 435) NO 2
429	After (NAME) was born, did a health professional or a traditional birth attendant check on your health?	YES.....1 NO .....2 (SKIP TO 433)	YES.....1 NO 2
430	How many days or weeks after the delivery did the first check take place? RECORD '00' DAYS IF SAME DAY.	DAYS AFTER DEL .....1 WEEKS AFTER DEL ...2 DON'T KNOW.....998	
431	Who checked on your health at that time?[1] PROBE FOR MOST QUALIFIED PERSON.	HEALTH PROFESSIONAL DOCTOR .....11 NURSE/MIDWIFE .....12 AUXILIARY MIDWIFE .....13 OTHER PERSON TRADITIONAL BIRTH ATTENDANT .....21 OTHER _____ 96 (SPECIFY)	

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
432	Where did this first check take place? IF SOURCE IS HOSPITAL, HEALTH CENTER OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	HOME YOUR HOME..... 11 TBA'S HOME..... 12 OTHER HOME ..... 13 PUBLIC SECTOR GOVT. HOSPITAL/CLINIC..... 21 GOVT. HEALTH CENTER..... 22 GOVT. HEALTH POST..... 23 MOBILE CLINIC ..... 24 OTHER PUBLIC _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC ..... 31 MOBILE CLINIC ..... 32 MATERNITY HOME ..... 33 OTHER PVT. MEDICAL _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)	
433	In the first two months after delivery, did you receive a vitamin A dose like this? SHOW CAPSULE.	YES.....1 NO 2	
434	Has your period returned since the birth of (NAME)?	YES.....1 (SKIP TO 436) NO .....2 (SKIP TO 437)	
435	Did your period return between the birth of (NAME) and your next pregnancy?		YES .....1 NO .....2 (SKIP TO 439)
436	For how many months after the birth of (NAME) did you not have a period?	MONTHS ..... [ ][ ] DON'T KNOW.....98	MONTHS ..... [ ][ ] DON'T KNOW 98
437	CHECK 226: IS RESPONDENT PREGNANT?	NOT PREG-NANT [ ] PREGNANT OR UNSURE (SKIP TO 439) [ ]	
438	Have you resumed sexual relations since the birth of (NAME)?	YES.....1 NO .....2 (SKIP TO 440)	
439	For how many months after the birth of (NAME) did you not have sexual relations?	MONTHS ..... [ ][ ] DON'T KNOW.....98	MONTHS ..... [ ][ ] DON'T KNOW 98
440	Did you ever breastfeed (NAME)?	YES.....1 NO .....2 (SKIP TO 447)	YES .....1 NO .....2 (SKIP TO 447)
441	How long after birth did you first put (NAME) to the breast? IF LESS THAN 1 HOUR, RECORD '00' HOURS. IF LESS THAN 24 HOURS, RECORD HOURS. OTHERWISE, RECORD DAYS.	IMMEDIATELY .....000 HOURS..... 1 [ ][ ] DAYS..... 2 [ ][ ]	IMMEDIATELY .....000 HOURS..... 1 [ ][ ] DAYS..... 2 [ ][ ]
442	In the first three days after delivery, before your milk began flowing regularly, was (NAME) given anything to drink other than breast milk?	YES.....1 NO .....2 (SKIP TO 444)	YES .....1 NO .....2 (SKIP TO 444)

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
443	What was (NAME) given to drink before your milk began flowing regularly? Anything else? RECORD ALL LIQUIDS MENTIONED	MILK (OTHER THAN BREAST MILK) ..... A PLAIN WATER ..... B SUGAR OR GLUCOSE WATER ..... C GRIPE WATER ..... D SUGAR-SALT-WATER SOLUTION ..... E FRUIT JUICE ..... F INFANT FORMULA ..... G TEA/INFUSIONS ..... H HONEY ..... I OTHER _____ X (SPECIFY)	MILK (OTHER THAN BREAST MILK) ..... A PLAIN WATER ..... B SUGAR OR GLUCOSE WATER ..... C GRIPE WATER ..... D SUGAR-SALT-WATER SOLUTION ..... E FRUIT JUICE ..... F INFANT FORMULA ..... G TEA/INFUSIONS ..... H HONEY ..... I OTHER _____ X (SPECIFY)
444	CHECK 404: IS CHILD LIVING?	LIVING ☐ ▼ DEAD ☐ ▼ (SKIP TO 446)	LIVING ☐ ▼ DEAD ☐ ▼ (SKIP TO 446)
445	Are you still breastfeeding (NAME)?	YES ..... 1 (SKIP TO 448) NO 2	YES ..... 1 (SKIP TO 448) NO 2
446	For how many months did you breastfeed (NAME)?	MONTHS ..... ☐☐ DON'T KNOW 98	MONTHS ..... ☐☐ DON'T KNOW 98
447	CHECK 404: IS CHILD LIVING?	LIVING ☐ ▼ (SKIP TO 450) DEAD ☐ ▼ (GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 454)	LIVING ☐ ▼ (SKIP TO 450) DEAD ☐ ▼ (GO BACK TO 405 IN LAST COLUMN OF NEW QUESTION-NAIRE; OR, IF NO MORE BIRTHS, GO TO 454)
448	How many times did you breastfeed last night between sunset and sunrise? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER.	NUMBER OF NIGHTTIME FEEDINGS . ☐☐	NUMBER OF NIGHTTIME FEEDINGS . ☐☐
449	How many times did you breastfeed yesterday during the daylight hours? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER.	NUMBER OF DAYLIGHT FEEDINGS ... ☐☐	NUMBER OF DAYLIGHT FEEDINGS ... ☐☐
450	Did (NAME) drink anything from a bottle with a nipple yesterday or last night?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
451	Was sugar added to any of the foods or liquids (NAME) ate yesterday?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
452	How many <u>times</u> did (NAME) eat solid, semisolid, or soft foods other than liquids yesterday during the day or at night? IF 7 OR MORE TIMES, RECORD '7'.	NUMBER OF TIMES ..... ☐ DON'T KNOW 8	NUMBER OF TIMES ..... ☐ DON'T KNOW 8
453		GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 454.	GO BACK TO 405 IN LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 454.

SECTION 4B. IMMUNIZATION, HEALTH AND NUTRITION

454	ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 1998 OR LATER. (IF THERE ARE MORE THAN 2 BIRTHS, USE LAST COLUMN OF ADDITIONAL QUESTIONNAIRES).		
455	LINE NUMBER FROM 212	LAST BIRTH LINE NUMBER ..... [ ][ ]	NEXT-TO-LAST BIRTH LINE NUMBER ..... [ ][ ]
456	FROM 212 AND 216	NAME _____ LIVING [ ] DEAD [ ] (GO TO 456 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 484)	NAME _____ LIVING [ ] DEAD [ ] (GO TO 456 IN LAST COLUMN OF NEW QUESTION-NAIRE OR, IF NO MORE BIRTHS, GO TO 484)
457	Did (NAME) receive a vitamin A dose like this during the last 6 months? SHOW CAPSULE.	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
458	Do you have a card where (NAME'S) vaccinations are written down? IF YES: May I see it please?	YES, SEEN ..... 1 (SKIP TO 460) YES, NOT SEEN ..... 2 (SKIP TO 462) NO CARD 3	YES, SEEN ..... 1 (SKIP TO 460) YES, NOT SEEN ..... 2 (SKIP TO 462) NO CARD 3
459	Did you ever have a vaccination card for (NAME)?	YES ..... 1 (SKIP TO 462) NO 2	YES ..... 1 (SKIP TO 462) NO 2
460	(1) COPY VACCINATION DATE FOR EACH VACCINE FROM THE CARD. (2) WRITE '44' IN 'DAY' COLUMN IF CARD SHOWS THAT A VACCINATION WAS GIVEN, BUT NO DATE IS RECORDED.	DAY MONTH YEAR	DAY MONTH YEAR
	BCG	BCG ..... [ ][ ][ ][ ][ ][ ][ ][ ]	BCG ..... [ ][ ][ ][ ][ ][ ][ ][ ]
	POLIO 0 (POLIO GIVEN AT BIRTH)	P0..... [ ][ ][ ][ ][ ][ ][ ][ ]	P0..... [ ][ ][ ][ ][ ][ ][ ][ ]
	POLIO 1	P1..... [ ][ ][ ][ ][ ][ ][ ][ ]	P1..... [ ][ ][ ][ ][ ][ ][ ][ ]
	POLIO 2	P2..... [ ][ ][ ][ ][ ][ ][ ][ ]	P2..... [ ][ ][ ][ ][ ][ ][ ][ ]
	POLIO 3	P3..... [ ][ ][ ][ ][ ][ ][ ][ ]	P3..... [ ][ ][ ][ ][ ][ ][ ][ ]
	DPT 1	D1 ..... [ ][ ][ ][ ][ ][ ][ ][ ]	D1 ..... [ ][ ][ ][ ][ ][ ][ ][ ]
	DPT 2	D2 ..... [ ][ ][ ][ ][ ][ ][ ][ ]	D2 ..... [ ][ ][ ][ ][ ][ ][ ][ ]
	DPT 3	D3 ..... [ ][ ][ ][ ][ ][ ][ ][ ]	D3 ..... [ ][ ][ ][ ][ ][ ][ ][ ]
	MEASLES	MEA ..... [ ][ ][ ][ ][ ][ ][ ][ ]	MEA ..... [ ][ ][ ][ ][ ][ ][ ][ ]
	VITAMIN A (MOST RECENT)	VIT. A .... [ ][ ][ ][ ][ ][ ][ ][ ]	VIT. A .... [ ][ ][ ][ ][ ][ ][ ][ ]
	YELLOW FEVER	YEL ..... [ ][ ][ ][ ][ ][ ][ ][ ]	YEL ..... [ ][ ][ ][ ][ ][ ][ ][ ]

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
461	Has (NAME) received any vaccinations that are not recorded on this card, including vaccinations received in a national immunization day campaign? RECORD 'YES' ONLY IF RESPONDENT MENTIONS BCG, POLIO 0-3, DPT 1-3, YELLOW FEVER AND/OR MEASLES VACCINE(S).	YES ..... 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 460) (SKIP TO 464) NO ..... 2 (SKIP TO 464) DON'T KNOW 8	YES ..... 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 460) (SKIP TO 464) NO ..... 2 (SKIP TO 464) DON'T KNOW 8
462	Did (NAME) ever receive any vaccinations to prevent him/her from getting diseases, including vaccinations received in a national immunization day campaign?	YES ..... 1 NO ..... 2 (SKIP TO 466) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 466) DON'T KNOW 8
463	Please tell me if (NAME) received any of the following vaccinations:		
463A	A BCG vaccination against tuberculosis, that is, an injection in the right shoulder that usually causes a scar?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
463B	Polio vaccine, that is, drops in the mouth?	YES ..... 1 NO ..... 2 (SKIP TO 463E) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 463E) DON'T KNOW 8
463C	When was the first polio vaccine received, just after birth or later?	JUST AFTER BIRTH ..... 1 LATER 2	JUST AFTER BIRTH ..... 1 LATER 2
463D	How many times was the polio vaccine received?	NUMBER OF TIMES..... [ ]	NUMBER OF TIMES..... [ ]
463E	A DPT vaccination, that is, an injection given in the thigh, sometimes at the same time as polio drops?	YES ..... 1 NO ..... 2 (SKIP TO 463G) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 463G) DON'T KNOW 8
463F	How many times?	NUMBER OF TIMES..... [ ]	NUMBER OF TIMES..... [ ]
463G	An injection to prevent measles?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
463H	An injection to prevent yellow fever?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
464	Were any of the vaccinations (NAME) received during the last two years given as part of a national immunization day campaign?	YES ..... 1 NO ..... 2 (SKIP TO 466) NO VACCINATION IN THE LAST 2 YEARS ..... 3 (SKIP TO 466) DON'T KNOW ..... 8 (SKIP TO 466)	YES ..... 1 NO ..... 2 (SKIP TO 466) NO VACCINATION IN THE LAST 2 YEARS..... 3 (SKIP TO 466) DON'T KNOW ..... 8 (SKIP TO 466)
465	At which national immunization day campaigns did (NAME) receive vaccinations? RECORD ALL CAMPAIGNS MENTIONED.	OCT/NOV 2002 ..... A OCT/NOV 2001 ..... B	OCT/NOV 2002 ..... A OCT/NOV 2001 ..... B
466	Has (NAME) been ill with a fever at any time in the last 2 weeks?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
467	Has (NAME) had an illness with a cough at any time in the last 2 weeks?	YES ..... 1 NO ..... 2 (SKIP TO 469) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 469) DON'T KNOW 8

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
468	When (NAME) had an illness with a cough, did he/she breathe faster than usual with short, fast breaths?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
469	CHECK 466 AND 467: FEVER OR COUGH?	"YES" IN 466 OR 467 ▼ OTHER ▼ (SKIP TO 475)	"YES" IN 466 OR 467 ▼ OTHER ▼ (SKIP TO 475)
470	Did you seek advice or treatment for the fever/cough?	YES ..... 1 NO ..... 2 (SKIP TO 472)	YES ..... 1 NO ..... 2 (SKIP TO 472)
471	Where did you seek advice or treatment? Anywhere else? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL/CLINIC ..... A GOVT. HEALTH CENTER ..... B GOVT. HEALTH POST ..... C MOBILE CLINIC ..... D FIELDWORKER ..... E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... G PRIVATE DOCTOR ..... H PHARMACY/CHEMIST/ DRUG STORE ..... I MOBILE CLINIC ..... J FIELDWORKER ..... K MATERNITY HOME ..... L OTHER PRIVATE MEDICAL _____ M (SPECIFY) OTHER SOURCE SHOP ..... N TRAD. PRACTITIONER ..... O DRUG PEDDLER ..... P OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT. HOSPITAL/CLINIC ..... A GOVT. HEALTH CENTER ..... B GOVT. HEALTH POST ..... C MOBILE CLINIC ..... D FIELDWORKER ..... E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... G PRIVATE DOCTOR ..... H PHARMACY/CHEMIST/ DRUG STORE ..... I MOBILE CLINIC ..... J FIELDWORKER ..... K MATERNITY HOME ..... L OTHER PRIVATE MEDICAL _____ M (SPECIFY) OTHER SOURCE SHOP ..... N TRAD. PRACTITIONER ..... O DRUG PEDDLER ..... P OTHER _____ X (SPECIFY)
472	CHECK 466: HAD FEVER?	"YES" IN 466 ▼ "NO"/"DK" IN 466 ▼ (SKIP TO 475)	"YES" IN 466 ▼ "NO"/"DK" IN 466 ▼ (SKIP TO 475)
472A	Does (NAME) have a fever now?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
472B	CHECK 466 AND 472A HAD FEVER?	"YES" IN 466 OR 472A ▼ OTHER ▼ (SKIP TO 475)	"YES" IN 466 OR 472A ▼ OTHER ▼ (SKIP TO 475)
473	Did (NAME) take any drugs for the fever?	YES ..... 1 NO ..... 2 (SKIP TO 474I) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 474I) DON'T KNOW 8

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
474	What drugs did (NAME) take? RECORD ALL MENTIONED. ASK TO SEE DRUG(S) IF TYPE OF DRUG IS NOT KNOWN. IF TYPE OF DRUG IS STILL NOT DETERMINED, SHOW TYPICAL ANTIMALARIAL DRUGS TO RESPONDENT.	ANTI-MALARIAL FANSIDAR ..... A CHLOROQUINE ..... B AMODIAQUINE ..... C QUININE ..... D ARTESUNATE ..... E OTHER DRUGS ASPIRIN ..... F IBUPROFEN/ACETAMINOPHEN/ PANADOL/PARACETAMOL ..... G OTHER _____ X (SPECIFY) DON'T KNOW ..... Z	ANTI-MALARIAL FANSIDAR ..... A CHLOROQUINE ..... B AMODIAQUINE ..... C QUININE ..... D ARTESUNATE ..... E OTHER DRUGS ASPIRIN ..... F IBUPROFEN/ACETAMINOPHEN/ PANADOL/PARACETAMOL ..... G OTHER _____ X (SPECIFY) DON'T KNOW ..... Z
474A	CHECK 474: WHICH MEDICINES?	CODE "B" CIRCLED ☐ CODE "B" NOT CIRCLED ☐ (SKIP TO 474E)	CODE "B" CIRCLED ☐ CODE "B" NOT CIRCLED ☐ (SKIP TO 474E)
474B	How long after the (fever) started did (NAME) first take chloroquine?	SAME DAY ..... 0 NEXT DAY ..... 1 TWO DAYS AFTER THE FEVER ..... 2 THREE OR MORE DAYS AFTER THE FEVER ..... 3 DON'T KNOW 8	SAME DAY ..... 0 NEXT DAY ..... 1 TWO DAYS AFTER THE FEVER ..... 2 THREE OR MORE DAYS AFTER THE FEVER ..... 3 DON'T KNOW 8
474B1	How was the chloroquine taken?	TABLETS ..... 1 INJECTION ..... 2 SYRUP ..... 3 MIX ..... 4 DON'T KNOW ..... 8 (SKIP TO 474C)	TABLETS ..... 1 INJECTION ..... 2 SYRUP ..... 3 MIX ..... 4 DON'T KNOW ..... 8 (SKIP TO 474C)
474B2	How many tablets did (NAME) take each day?	NUMBER OF TABLETS ..... ☐ DON'T KNOW 8	NUMBER OF TABLETS ..... ☐ DON'T KNOW 8
474C	For how many days did (NAME) take chloroquine? IF 7 OR MORE DAYS, RECORD '7'.	DAYS ..... ☐ DON'T KNOW 8	DAYS ..... ☐ DON'T KNOW 8
474D	Did you have the chloroquine at home or did you get it from somewhere else? IF MORE THAN ONE SOURCE MENTIONED, ASK: Where did you get the chloroquine first?	AT HOME ..... 1 OTHER SOURCE ..... 2 DON'T KNOW 8	AT HOME ..... 1 OTHER SOURCE ..... 2 DON'T KNOW 8
474E	CHECK 474: WHICH MEDICINES?	CODE "C" CIRCLED ☐ CODE "C" NOT CIRCLED ☐ (SKIP TO 474I)	CODE "C" CIRCLED ☐ CODE "C" NOT CIRCLED ☐ (SKIP TO 474I)
474F	How long after the (fever) started did (NAME) first take Amodiaquine?	SAME DAY ..... 0 NEXT DAY ..... 1 TWO DAYS AFTER THE FEVER ..... 2 THREE OR MORE DAYS AFTER THE FEVER ..... 3 DON'T KNOW 8	SAME DAY ..... 0 NEXT DAY ..... 1 TWO DAYS AFTER THE FEVER ..... 2 THREE OR MORE DAYS AFTER THE FEVER ..... 3 DON'T KNOW 8
474G	For how many days did (NAME) take Amodiaquine? IF 7 OR MORE DAYS, RECORD '7'.	DAYS ..... ☐ DON'T KNOW 8	DAYS ..... ☐ DON'T KNOW 8
474H	Did you have the Amodiaquine at home or did	AT HOME 1	AT HOME 1

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
	you get it from somewhere else? IF MORE THAN ONE SOURCE MENTIONED, ASK: Where did you get the Amodiaquine first?	OTHER SOURCE ..... 2 DON'T KNOW 8	OTHER SOURCE ..... 2 DON'T KNOW 8
474I	Was anything else done about (NAME)'s (fever)?	YES ..... 1 NO ..... 2 (SKIP TO 475) ←┤ DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 475) ←┤ DON'T KNOW 8
474J	What was done about (NAME)'s (fever)?	CONSULTED TRADITIONAL HEALER ..... A GAVE TEPID SPONGING ..... B GAVE HERBS ..... C OTHER _____ X (SPECIFY)	CONSULTED TRADITIONAL HEALER ..... A GAVE TEPID SPONGING ..... B GAVE HERBS ..... C OTHER _____ X (SPECIFY)
475	Has (NAME) had diarrhea in the last 2 weeks?	YES ..... 1 NO ..... 2 (SKIP TO 483) ←┤ DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 483) ←┤ DON'T KNOW 8
476	Now I would like to know how much (NAME) was offered to drink during the diarrhea. Was he/she offered less than usual to drink, about the same amount, or more than usual to drink? IF LESS, PROBE: Was he/she offered much less than usual to drink or somewhat less?	MUCH LESS ..... 1 SOMEWHAT LESS ..... 2 ABOUT THE SAME ..... 3 MORE ..... 4 NOTHING TO DRINK ..... 5 DON'T KNOW 8	MUCH LESS ..... 1 SOMEWHAT LESS ..... 2 ABOUT THE SAME ..... 3 MORE ..... 4 NOTHING TO DRINK ..... 5 DON'T KNOW 8
477	When (NAME) had diarrhea, was he/she offered less than usual to eat, about the same amount, more than usual, or nothing to eat? IF LESS, PROBE: Was he/she offered much less than usual to eat or somewhat less?	MUCH LESS ..... 1 SOMEWHAT LESS ..... 2 ABOUT THE SAME ..... 3 MORE ..... 4 STOPPED FOOD ..... 5 NEVER GAVE FOOD ..... 6 DON'T KNOW 8	MUCH LESS ..... 1 SOMEWHAT LESS ..... 2 ABOUT THE SAME ..... 3 MORE ..... 4 STOPPED FOOD ..... 5 NEVER GAVE FOOD ..... 6 DON'T KNOW 8
478	Was he/she given any of the following to drink:	YES NO DK	YES NO DK
a	A fluid made from a special packet called ORS?	FLUID FROM ORS PKT 1 2 8	FLUID FROM ORS PKT 1 2 8
b	A government-recommended homemade fluid?	HOMEMADE FLUID 1 2 8	HOMEMADE FLUID 1 2 8
479	Was anything (else) given to treat the diarrhea?	YES ..... 1 NO ..... 2 (SKIP TO 481) ←┤ DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 481) ←┤ DON'T KNOW 8
480	What (else) was given to treat the diarrhea? Anything else? RECORD ALL TREATMENTS MENTIONED.	PILL OR SYRUP ..... A INJECTION ..... B (I.V.) INTRAVENOUS ..... C HOME REMEDIES/ HERBAL MEDICINES ..... D OTHER _____ X (SPECIFY)	PILL OR SYRUP ..... A INJECTION ..... B (I.V.) INTRAVENOUS ..... C HOME REMEDIES/ HERBAL MEDICINES ..... D OTHER _____ X (SPECIFY)
481	Did you seek advice or treatment for the diarrhea?	YES ..... 1 NO ..... 2 (SKIP TO 483) ←┘	YES ..... 1 NO ..... 2 (SKIP TO 483) ←┘

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
482	Where did you seek advice or treatment? IF SOURCE IS HOSPITAL, HEALTH CENTER OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) Anywhere else? RECORD ALL PLACES MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL/CLINIC.....A GOVT. HEALTH CENTER .....B GOVT. HEALTH POST .....C MOBILE CLINIC .....D FIELDWORKER .....E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... G PRIVATE DOCTOR .....H PHARMACY/CHEMIST/ DRUG STORE ..... I MOBILE CLINIC ..... J FIELDWORKER .....K MATERNITY HOME ..... L OTHER PRIVATE MEDICAL _____ M (SPECIFY) OTHER SOURCE SHOP .....N TRAD. PRACTITIONER..... O DRUG PEDDLER.....P OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT. HOSPITAL/CLINIC.....A GOVT. HEALTH CENTER .....B GOVT. HEALTH POST ..... C MOBILE CLINIC ..... D FIELDWORKER .....E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC..... G PRIVATE DOCTOR..... H PHARMACY/CHEMIST/ DRUG STORE..... I MOBILE CLINIC ..... J FIELDWORKER .....K MATERNITY HOME ..... L OTHER PRIVATE MEDICAL _____ M (SPECIFY) OTHER SOURCE SHOP ..... N TRAD. PRACTITIONER ..... O DRUG PEDDLER.....P OTHER _____ X (SPECIFY)
483		GO BACK TO 456 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 484.	GO BACK TO 456 IN LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 484.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
484	CHECK 215 AND 218, ALL ROWS: NUMBER OF CHILDREN BORN IN 1998 OR LATER LIVING WITH THE RESPONDENT ONE OR MORE ☐ ▼	NONE ☐	→487
485	What is usually done to dispose of your (youngest) child's stools when he/she does not use any toilet facility?	CHILD ALWAYS USE TOILET/LATRINE.....01 THROW IN THE TOILET/LATRINE .....02 THROW OUTSIDE THE DWELLING.....03 THROW OUTSIDE THE YARD.....04 BURY IN THE YARD.....05 RINSE AWAY.....06 USE DISPOSABLE DIAPERS .....07 USE WASHABLE DIAPERS .....08 NOT DISPOSED OF .....09 OTHER _____ 96 (SPECIFY)	
486	CHECK 478a, ALL COLUMNS: NO CHILD RECEIVED FLUID FROM ORS PACKET ☐ ▼	ANY CHILD RECEIVED FLUID FROM ORS PACKET ☐	→488
487	Have you ever heard of a special product called ORS you can get for the treatment of diarrhea?	YES .....1 NO 2	
488	CHECK 218: HAS ONE OR MORE CHILDREN LIVING WITH HER ☐ ▼	HAS NO CHILDREN LIVING WITH HER ☐	→490
489	When (your child/one of your children) is seriously ill, can you decide by yourself whether or not the child should be taken for medical treatment? IF SAYS NO CHILD EVER SERIOUSLY ILL, ASK: If (your child/one of your children) became seriously ill, could you decide by yourself whether the child should be taken for medical treatment?	YES .....1 NO .....2 DEPENDS 3	
490	Now I would like to ask you some questions about medical care for you yourself. Many different factors can prevent women from getting medical advice or treatment for themselves. When you are sick and want to get medical advice or treatment, is each of the following a big problem or not?	BIG PROBLEM / NOT A BIG PROBLEM	
	Knowing where to go.	1 / 2	
	Getting permission to go.	1 / 2	
	Getting money needed for treatment.	1 / 2	
	The distance to a health facility.	1 / 2	
	Having to take transport.	1 / 2	
	Not wanting to go alone.	1 / 2	
	Concern that there may not be a female health provider.	1 / 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
491	CHECK 215 AND 218: HAS AT LEAST ONE CHILD BORN IN 2000[1] OR LATER AND LIVING WITH HER ☐ RECORD NAME OF YOUNGEST CHILD LIVING WITH HER (AND CONTINUE TO 492) _____ (NAME)	DOES NOT HAVE ANY CHILDREN BORN IN 2000[1] OR LATER AND LIVING WITH HER ☐	→496

		LAST 7 DAYS NUMBER OF DAYS	YESTERDAY/ LAST NIGHT NUMBER OF TIMES
492	Now I would like to ask you about liquids (NAME FROM Q. 491) drank over the last seven days, including yesterday. How many days during last seven days did (NAME FROM Q. 491) drink each of the following? FOR EACH ITEM GIVEN AT LEAST ONCE IN LAST SEVEN DAYS, BEFORE PROCEEDING TO THE NEXT ITEM, ASK: In total, how many times yesterday during the day or at night did (NAME FROM Q. 491) drink (ITEM)?		
a	Plain water?	a ☐	a ☐
b	Commercially produced infant formula?	b ☐	b ☐
c	Any other milk such as tinned, powdered, or fresh animal milk?	c ☐	c ☐
d	Fruit juice?	d ☐	d ☐
e	Any other liquids?	e ☐	e ☐
	IF 7 OR MORE TIMES, RECORD '7'. IF DON'T KNOW, RECORD '8'.		

		LAST 7 DAYS NUMBER OF DAYS	YESTERDAY/ LAST NIGHT NUMBER OF TIMES
493	Now I would like to ask you about the types of foods (NAME FROM Q. 491) ate over the last seven days, including yesterday. How many days during last seven days did (NAME FROM Q. 491) eat each of the following foods either separately or combined with other food? FOR EACH ITEM GIVEN AT LEAST ONCE IN LAST SEVEN DAYS, BEFORE PROCEEDING TO THE NEXT ITEM, ASK: In total, how many times yesterday during the day or at night did (NAME FROM Q. 491) eat (ITEM)?		
a	Any food made from grains [e.g. kenkey, banku, koko, tuo zaafi, akple, rice, bread, weanimix]?	a ☐	a ☐
b	Pumpkin, red or yellow yams or squash, carrots, or red sweet potatoes?	b ☐	b ☐
c	Any other food made from roots or tubers [e.g. white potatoes, white yams, cocoyam, cassava, fufu or other local roots/tubers]?	c ☐	c ☐
d	Any green leafy vegetables (e.g.kontamire)?	d ☐	d ☐
e	Mango, paw paw [or other local Vitamin A rich fruits]?	e ☐	e ☐
f	Any other fruits and vegetables [e.g. bananas, plantain, apples/sauce, green beans, avocados, tomatoes]?	f ☐	f ☐
g	Meat, poultry, fish, shellfish (e.g. prawn, lobster), or eggs?	g ☐	g ☐
h	Any food made from legumes [e.g. lentils, beans, soybeans, pulses, or peanuts]?	h ☐	h ☐
i	Cheese or yoghurt?	i ☐	i ☐
j	Any food made with oil, fat, or butter?	j ☐	j ☐
	IF 7 OR MORE TIMES, RECORD '7'. IF DON'T KNOW, RECORD '8'.		

496	Do you currently smoke cigarettes or tobacco? IF YES: what type of tobacco do you smoke? RECORD ALL TYPES MENTIONED.	YES, CIGARETTES ..... A YES, PIPE ..... B YES, OTHER TOBACCO ..... C NO ..... Y	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
497	CHECK 496: CODE 'A' CIRCLED ☐	CODE 'A' NOT CIRCLED ☐	→501
498	In the last 24 hours, how many cigarettes did you smoke?	CIGARETTES ..... ☐☐	

SECTION 5. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	Are you currently married or living with a man?	YES, CURRENTLY MARRIED ..... 1 YES, LIVING WITH A MAN ..... 2 NO, NOT IN UNION 3	→505
502	Have you ever been married or lived with a man?	YES, FORMERLY MARRIED ..... 1 YES, LIVED WITH A MAN ..... 2 NO 3	→510 →514
504	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED ..... 1 DIVORCED ..... 2 SEPARATED 3	→510
505	Is your husband/partner living with you now or is he staying elsewhere?	LIVING WITH HER ..... 1 STAYING ELSEWHERE 2	
506	RECORD THE HUSBAND'S/PARTNER'S NAME AND LINE NUMBER FROM THE HOUSEHOLD QUESTIONNAIRE. IF HE IS NOT LISTED IN THE HOUSEHOLD, RECORD '00'.	NAME _____ LINE NO. ..... [ ][ ]	
507	Does your husband/partner have any other wives besides yourself?	YES ..... 1 NO 2	→510
508	How many other wives does he have?	NUMBER. ..... [ ][ ] DON'T KNOW 98	→510
509	Are you the first, second, ... wife?	RANK ..... [ ][ ]	
510	Have you been married or lived with a man only once, or more than once?	ONCE ..... 1 MORE THAN ONCE 2	
511	CHECK 510: MARRIED/ LIVED WITH A MAN ONLY ONCE → In what month and year did you start living with your husband/partner? MARRIED/ LIVED WITH A MAN MORE THAN ONCE → Now we will talk about your first husband/partner. In what month and year did you start living with him?	MONTH ..... [ ][ ] DON'T KNOW MONTH ..... 98 YEAR ..... [ ][ ][ ][ ] DON'T KNOW YEAR 9998	→514
512	How old were you when you started living with him?	AGE ..... [ ][ ]	
514	Now I need to ask you some questions about sexual activity in order to gain a better understanding of some family life issues. How old were you when you first had sexual intercourse (if ever)?	NEVER ..... 00 AGE IN YEARS ..... [ ][ ] FIRST TIME WHEN STARTED LIVING WITH (FIRST) HUSBAND/PARTNER.... 95	→524
514A	CHECK 106: 15-24 YEARS OLD 25-49 YEARS OLD		→515
514B	The first time you had sexual intercourse, was a condom used?	YES ..... 1 NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
515	When was the last time you had sexual intercourse? RECORD 'YEARS AGO' ONLY IF LAST INTERCOURSE WAS ONE OR MORE YEARS AGO. IF 12 MONTHS OR MORE, ANSWER MUST BE RECORDED IN YEARS.	DAYS AGO..... 1 [ ][ ] WEEKS AGO .....2 [ ][ ] MONTHS AGO.....3 [ ][ ] YEARS AGO ..... 4 [ ][ ]	—▸524
515B	The last time you had sexual intercourse, had you or your partner been drinking alcohol? IF YES: Who was drinking?	RESPONDENT ONLY..... 1 PARTNER ONLY ..... 2 RESPONDENT AND PARTNER..... 3 NEITHER 4	
516	The last time you had sexual intercourse, was a condom used?	YES ..... 1 NO..... 2	—▸517
516A	What was the main reason a condom was used on that occasion?	RESPONDENT WANTED TO PREVENT STD/HIV.....01 RESPONDENT WANTED TO PREVENT PREGNANCY .....02 RESPONDENT WANTED TO PREVENT BOTH STD/HIV AND PREGNANCY .....03 DID NOT TRUST PARTNER/FELT PARTNER HAD OTHER PARTNERS.....04 PARTNER REQUESTED/INSISTED.....05 OTHER _____ 96 (SPECIFY) DON'T KNOW.....98	
517	What is your relationship to the man with whom you last had sex? IF MAN IS "BOYFRIEND" OR "FIANCÉ", ASK: Was your boyfriend/fiancé living with you when you last had sex? IF YES, CIRCLE '01'. IF NO, CIRCLE '02'.	SPOUSE/COHABITING PARTNER..... 01 MAN IS BOYFRIEND/FIANCÉ ..... 02 OTHER FRIEND ..... 03 CASUAL ACQUAINTANCE ..... 04 RELATIVE..... 05 PROSTITUTE..... 06 OTHER _____ 96 (SPECIFY)	—▸519
517A	CHECK 106: 15-19 YEARS OLD [ ][ ] ▾ 20-49 YEARS OLD [ ][ ]		—▸518
517B	Was this man younger, about the same age or older than you? IF OLDER: Do you think that he was less than 10 years older than you or 10 or more years older than you?	YOUNGER ..... 1 ABOUT SAME AGE ..... 2 LESS THAN 10 YEARS OLDER..... 3 10 OR MORE YEARS OLDER..... 4 OLDER, DON'T KNOW DIFFERENCE.... 5 DON'T KNOW 8	
518	For how long have you had sexual relations with this man?	DAYS..... 1 [ ][ ] WEEKS .....2 [ ][ ] MONTHS.....3 [ ][ ] YEARS ..... 4 [ ][ ]	
519	Have you had sex with any other man in the last 12 months?	YES ..... 1 NO..... 2	—▸524
520	The last time you had sexual intercourse with another man, was a condom used?	YES ..... 1 NO..... 2	—▸521

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
520A	What was the main reason a condom was used on that occasion?	RESPONDENT WANTED TO PREVENT STD/HIV ..... 01 RESPONDENT WANTED TO PREVENT PREGNANCY ..... 02 RESPONDENT WANTED TO PREVENT BOTH STD/HIV AND PREGNANCY ..... 03 DID NOT TRUST PARTNER/FELT PARTNER HAD OTHER PARTNERS..... 04 PARTNER REQUESTED/INSISTED..... 05 OTHER _____ 96 (SPECIFY) DON'T KNOW..... 98	
521	What is your relationship to this man? IF MAN IS "BOYFRIEND" OR "FIANCÉ", ASK: Was your boyfriend/fiancé living with you when you last had sex with him? IF YES, CIRCLE '01'. IF NO, CIRCLE '02'.	SPOUSE/COHABITING PARTNER..... 01 MAN IS BOYFRIEND/FIANCÉ..... 02 OTHER FRIEND ..... 03 CASUAL ACQUAINTANCE ..... 04 RELATIVE..... 05 PROSTITUTE..... 06 OTHER _____ 96 (SPECIFY)	→522A
521A	CHECK 106: 15-19 YEARS OLD [ ] 20-49 YEARS OLD [ ]		→522
521B	Was this man younger, about the same age or older than you? IF OLDER: Do you think that he was less than 10 years older than you or 10 or more years older than you?	YOUNGER ..... 1 ABOUT SAME AGE ..... 2 LESS THAN 10 YEARS OLDER..... 3 10 OR MORE YEARS OLDER..... 4 OLDER, DON'T KNOW DIFFERENCE.... 5 DON'T KNOW 8	
522	For how long have you had sexual relations with this man?	DAYS..... 1 [ ][ ] WEEKS.....2 [ ][ ] MONTHS .....3 [ ][ ] YEARS..... 4 [ ][ ]	
522A	Other than these two men, have you had sex with any other man in the last 12 months?	YES ..... 1 NO 2	→524
522B	The last time you had sexual intercourse with this other man, was a condom used?	YES ..... 1 NO 2	→522D
522C	What was the main reason a condom was used on that occasion?	RESPONDENT WANTED TO PREVENT STD/HIV ..... 01 RESPONDENT WANTED TO PREVENT PREGNANCY..... 02 RESPONDENT WANTED TO PREVENT BOTH STD/HIV AND PREGNANCY..... 03 DID NOT TRUST PARTNERS/FELT PARTNER HAD OTHER PARTNERS..... 04 PARTNER REQUESTED/INSISTED ..... 05 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
522D	What is your relationship to this man? IF MAN IS "BOYFRIEND" OR "FIANCÉ", ASK: Was your boyfriend/fiancé living with you when you last had sex with him? IF YES, CIRCLE '01'. IF NO, CIRCLE '02'.	SPOUSE/COHABITING PARTNER ..... 01 MAN IS BOYFRIEND/FIANCÉ ..... 02 OTHER FRIEND ..... 03 CASUAL ACQUAINTANCE ..... 04 RELATIVE ..... 05 PROSTITUTE ..... 06 OTHER _____ 96 (SPECIFY)	→523
522D1	CHECK 106: 15-19 YEARS OLD [ ] ▼ 20-49 YEARS OLD [ ]		→522E
522D2	Was this man younger, about the same age or older than you? IF OLDER: Do you think that he was less than 10 years older than you or 10 or more years older than you?	YOUNGER ..... 1 ABOUT SAME AGE ..... 2 LESS THAN 10 YEARS OLDER ..... 3 10 OR MORE YEARS OLDER ..... 4 OLDER, DON'T KNOW DIFFERENCE.... 5 DON'T KNOW 8	
522E	For how long have you had sexual relations with this man?	DAYS ..... 1 [ ][ ] WEEKS ..... 2 [ ][ ] MONTHS ..... 3 [ ][ ] YEARS ..... 4 [ ][ ]	
523	In total, with how many different men have you had sex in the last 12 months?	NUMBER OF PARTNERS ..... [ ][ ]	
524	Do you know of a place where a person can get male condoms?	YES ..... 1 NO 2	→527
525	Where is that? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) Any other place? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC ..... A GOVT. HEALTH CENTER ..... B FAMILY PLANNING CLINIC ..... C MOBILE CLINIC ..... D FIELDWORKER ..... E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... G PRIVATE DOCTOR ..... H PHARMACY/CHEMIST/ DRUG STORE ..... I MOBILE CLINIC ..... J FIELDWORKER ..... K FP/PPAG CLINIC ..... L MATERNITY HOME ..... M OTHER PRIVATE MEDICAL _____ N (SPECIFY) OTHER SOURCE SHOP ..... O CHURCH ..... P FRIENDS/RELATIVES ..... Q OTHER _____ X (SPECIFY)	
526	If you wanted to, could you yourself get a male condom?	YES ..... 1 NO ..... 2 DON'T KNOW/UNSURE 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
527	Do you know of a place where a person can get female condoms?	YES ..... 1 NO 2	 →601
528	Where is that? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) Any other place? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC ..... A GOVT. HEALTH CENTER ..... B FAMILY PLANNING CLINIC ..... C MOBILE CLINIC ..... D FIELDWORKER ..... E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... G PRIVATE DOCTOR ..... H PHARMACY/CHEMIST/ DRUG STORE ..... I MOBILE CLINIC ..... J FIELDWORKER ..... K FP/PPAG CLINIC ..... L MATERNITY HOME ..... M OTHER PRIVATE MEDICAL _____ N (SPECIFY) OTHER SOURCE SHOP ..... O CHURCH ..... P FRIENDS/RELATIVES ..... Q OTHER _____ X (SPECIFY)	
529	If you wanted to, could you yourself get a female condom?	YES ..... 1 NO ..... 2 DON'T KNOW/UNSURE 8	

SECTION 6. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	CHECK 311/311A: NEITHER STERILIZED ☐ HE OR SHE STERILIZED ☐		→614
602	CHECK 226: NOT PREGNANT OR UNSURE ☐ Now I have some questions about the future. Would you like to have (a/another) child, or would you prefer not to have any (more) children? PREGNANT ☐ Now I have some questions about the future. After the child you are expecting now, would you like to have another child, or would you prefer not to have any more children?	HAVE (A/ANOTHER) CHILD ..... 1 NO MORE/NONE ..... 2 SAYS SHE CAN'T GET PREGNANT ..... 3 UNDECIDED/DON'T KNOW: AND PREGNANT ..... 4 AND NOT PREGNANT OR UNSURE 5	 →604 →614 →610 →608
603	CHECK 226: NOT PREGNANT OR UNSURE ☐ How long would you like to wait from now before the birth of (a/another) child? PREGNANT ☐ After the birth of the child you are expecting now, how long would you like to wait before the birth of another child?	MONTHS ..... 1 ☐☐ YEARS ..... 2 ☐☐ SOON/NOW ..... 993 SAYS SHE CAN'T GET PREGNANT .... 994 AFTER MARRIAGE ..... 995 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	 →609 →614 →609
604	CHECK 226: NOT PREGNANT OR UNSURE ☐ PREGNANT ☐		→610
605	CHECK 310: USING A CONTRACEPTIVE METHOD? NOT ASKED ☐ NOT CURRENTLY USING ☐ CURRENTLY USING ☐		→608
606	CHECK 603: NOT ASKED ☐ 24 OR MORE MONTHS OR 02 OR MORE YEARS ☐ 00-23 MONTHS OR 00-01 YEAR ☐		→610

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
607	CHECK 602: WANTS TO HAVE A/ANOTHER CHILD ☐ You have said that you do not want (a/another) child soon, but you are not using any method to avoid pregnancy. Can you tell me why? Any other reason? WANTS NO MORE/ NONE ☐ You have said that you do not want any (more) children, but you are not using any method to avoid pregnancy. Can you tell me why? Any other reason? RECORD ALL REASONS MENTIONED.	NOT MARRIED ..... A FERTILITY-RELATED REASONS NOT HAVING SEX ..... B INFREQUENT SEX ..... C MENOPAUSAL/HYSTERECTOMY ..... D SUBFECUND/INFECUND ..... E POSTPARTUM AMENORRHEIC ..... F BREASTFEEDING ..... G FATALISTIC ..... H OPPOSITION TO USE RESPONDENT OPPOSED ..... I HUSBAND/PARTNER OPPOSED ..... J OTHERS OPPOSED ..... K RELIGIOUS PROHIBITION ..... L LACK OF KNOWLEDGE KNOWS NO METHOD ..... M KNOWS NO SOURCE ..... N METHOD-RELATED REASONS HEALTH CONCERNS ..... O FEAR OF SIDE EFFECTS ..... P LACK OF ACCESS/TOO FAR ..... Q COSTS TOO MUCH ..... R INCONVENIENT TO USE ..... S INTERFERES WITH BODY'S NATURAL PROCESSES ..... T OTHER _____ X (SPECIFY) DON'T KNOW ..... Z	
608	In the next few weeks, if you discovered that you were pregnant, would that be a big problem, a small problem, or no problem for you?	BIG PROBLEM ..... 1 SMALL PROBLEM ..... 2 NO PROBLEM ..... 3 SAYS SHE CAN'T GET PREGNANT/ NOT HAVING SEX 4	
609	CHECK 310: USING A CONTRACEPTIVE METHOD? NOT ASKED ☐ NO, NOT CURRENTLY USING ☐ YES, CURRENTLY USING ☐ _____		→614
610	Do you think you will use a contraceptive method to delay or avoid pregnancy at any time in the future?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→612
611	Which contraceptive method would you prefer to use?	FEMALE STERILIZATION ..... 01 MALE STERILIZATION ..... 02 PILL ..... 03 IUD ..... 04 INJECTABLES ..... 05 IMPLANTS ..... 06 CONDOM ..... 07 FEMALE CONDOM ..... 08 DIAPHRAGM ..... 09 FOAM/JELLY ..... 10 LACTATIONAL AMEN. METHOD ..... 11 PERIODIC ABSTINENCE ..... 12 WITHDRAWAL ..... 13 OTHER _____ 96 (SPECIFY) UNSURE 98	→614

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
612	What is the main reason that you think you will not use a contraceptive method at any time in the future?	NOT MARRIED ..... 11 FERTILITY-RELATED REASONS INFREQUENT SEX/NO SEX ..... 22 MENOPAUSAL/HYSTERECTOMY ..... 23 SUBFECUND/INFECUND ..... 24 WANTS AS MANY CHILDREN AS POSSIBLE ..... 26 OPPOSITION TO USE RESPONDENT OPPOSED ..... 31 HUSBAND OPPOSED ..... 32 OTHERS OPPOSED ..... 33 RELIGIOUS PROHIBITION ..... 34 LACK OF KNOWLEDGE KNOWS NO METHOD ..... 41 KNOWS NO SOURCE ..... 42 METHOD-RELATED REASONS HEALTH CONCERNS ..... 51 FEAR OF SIDE EFFECTS ..... 52 LACK OF ACCESS/TOO FAR ..... 53 COSTS TOO MUCH ..... 54 INCONVENIENT TO USE ..... 55 INTERFERES WITH BODY'S NORMAL PROCESSES ..... 56 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→614
613	Would you ever use a contraceptive method if you were married?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
614	CHECK 216: HAS LIVING CHILDREN ☐ ▼ If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? NO LIVING CHILDREN ☐ ▼ If you could choose exactly the number of children to have in your whole life, how many would that be? PROBE FOR A NUMERIC RESPONSE.	NONE ..... 00 NUMBER ..... ☐☐ OTHER _____ 96 (SPECIFY)	→616 →616
615	How many of these children would you like to be boys, how many would you like to be girls and for how many would the sex not matter?	BOYS GIRLS EITHER NUMBER ☐☐ ☐☐ ☐☐ OTHER _____ 96 (SPECIFY)	
616	Would you say that you approve or disapprove of couples using a method to avoid getting pregnant?	APPROVE ..... 1 DISAPPROVE ..... 2 DON'T KNOW/UNSURE 8	
617	In the last few months have you heard or seen messages about family planning: On the radio? On the television? In a newspaper or magazine? In a poster? In leaflets or brochures? From a health worker? At a community or social club meeting?	YES NO RADIO ..... 1 2 TELEVISION ..... 1 2 NEWSPAPER OR MAGAZINE ..... 1 2 POSTER ..... 1 2 LEAFLETS OR BROCHURES ..... 1 2 HEALTH WORKER ..... 1 2 MEETING 1 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
618	Have you heard the following messages about family planning: Life Choices: It's your life. It's your choice? Make the choice that is best for you? Contraceptives are safe and effective? Obra ni wora bo?	YES NO LIFE CHOICES: ITS YOUR LIFE ITS YOUR CHOICE ..... 1 2 MAKE THE CHOICE THAT IS BEST FOR YOU..... 1 2 CONTRACEPTIVES ARE SAFE AND EFFECTIVE ..... 1 2 OBRA NI WORA BO..... 1 2	
619	In the last few months, have you discussed the practice of family planning with your friends, neighbors, or relatives?	YES.....1 NO 2	→621
620	With whom? Anyone else? RECORD ALL PERSONS MENTIONED.	HUSBAND/PARTNER..... A MOTHER ..... B FATHER ..... C SISTER(S)..... D BROTHER(S) ..... E DAUGHTER(S).....F SON(S) ..... G MOTHER-IN-LAW ..... H FRIENDS/NEIGHBORS .....I OTHER _____ X (SPECIFY)	
621	CHECK 501: YES, CURRENTLY MARRIED ▼ ☐ YES, LIVING WITH A MAN ▼ ☐ NO, NOT IN UNION ☐		→628
622	CHECK 311/311A: ANY CODE CIRCLED ▼ ☐ NO CODE CIRCLED ☐		→624
623	You have told me that you are currently using contraception. Would you say that using contraception is mainly your decision, mainly your husband's decision or did you both decide together?	MAINLY RESPONDENT .....1 MAINLY HUSBAND/PARTNER.....2 JOINT DECISION .....3 OTHER _____ 6 (SPECIFY)	
624	Now I want to ask you about your husband's/partner's views on family planning. Do you think that your husband/partner approves or disapproves of couples using a contraceptive method to avoid pregnancy?	APPROVES .....1 DISAPPROVES .....2 DON'T KNOW.....8	
625	How often have you talked to your husband/partner about family planning in the past year?	NEVER .....1 ONCE OR TWICE .....2 MORE OFTEN.....3	
626	CHECK 311/311A: NEITHER STERILIZED ▼ ☐ HE OR SHE STERILIZED ☐		→628
627	Do you think your husband/partner wants the same number of children that you want, or does he want more or fewer than you want?	SAME NUMBER.....1 MORE CHILDREN.....2 FEWER CHILDREN .....3 DON'T KNOW.....8	
628	Husbands and wives do not always agree on everything. Please tell me if you think a wife is justified in refusing to have sex with her husband when: She knows her husband has a sexually transmitted disease? She knows her husband has sex with women other than his wives? She has recently given birth? She is tired or not in the mood?	YES NO DK HAS STD .....1 2 8 OTHER WOMEN .....1 2 8 RECENT BIRTH .....1 2 8 TIRED/MOOD.....1 2 8	

SECTION 7. HUSBAND'S BACKGROUND AND WOMAN'S WORK

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	CHECK 501 AND 502: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ FORMERLY MARRIED/ LIVED WITH A MAN ☐ NEVER MARRIED AND NEVER LIVED WITH A MAN ☐		→703 →707
702	How old was your husband/partner on his last birthday?	AGE IN COMPLETED YEARS ☐☐	
703	Did your (last) husband/partner ever attend school?	YES .....1 NO 2	→706
704	What was the highest level of school he attended: primary, secondary, or higher?	PRIMARY .....1 MIDDLE/JSS .....2 SECONDARY/SSS.....3 HIGHER.....4 DON'T KNOW 8	→706
705	What was the highest (grade/form/year) he completed at that level?	GRADE..... ☐☐ DON'T KNOW 98	
706	CHECK 701: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ What is your husband's/partner's occupation? That is, what kind of work does he mainly do? FORMERLY MARRIED/ LIVED WITH A MAN ☐ What was your (last) husband's/ partner's occupation? That is, what kind of work did he mainly do?	☐☐ _____ _____ _____	
707	Aside from your own housework, are you currently working?	YES .....1 NO 2	→710
708	As you know, some women take up jobs for which they are paid in cash or kind. Others sell things, have a small business or work on the family farm or in the family business. Are you currently doing any of these things or any other work?	YES .....1 NO 2	→710
709	Have you done any work in the last 12 months?	YES .....1 NO 2	→719
710	What is your occupation, that is, what kind of work do you mainly do?	☐☐ _____ _____	
711	CHECK 710: WORKS IN AGRICULTURE ☐ DOES NOT WORK IN AGRICULTURE ☐		→713
712	Do you work mainly on your own land or on family land, or do you work on land that you rent from someone else, or do you work on someone else's land?	OWN LAND .....1 FAMILY LAND .....2 RENTED LAND .....3 SOMEONE ELSE'S LAND 4	
713	Do you do this work for a member of your family, for someone else, or are you self-employed?	FOR FAMILY MEMBER .....1 FOR SOMEONE ELSE .....2 SELF-EMPLOYED 3	
714	Do you usually work at home or away from home?	HOME.....1 AWAY.....2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
715	Do you usually work throughout the year, or do you work seasonally, or only once in a while?	THROUGHOUT THE YEAR.....1 SEASONALLY/PART OF THE YEAR .....2 ONCE IN A WHILE.....3	
716	Are you paid or do you earn in cash or kind for this work or are you not paid at all?	CASH ONLY.....1 CASH AND KIND .....2 IN KIND ONLY.....3 NOT PAID.....4	→719
717	Who mainly decides how the money you earn will be used?	RESPONDENT .....1 HUSBAND/PARTNER.....2 RESPONDENT AND HUSBAND/PARTNER JOINTLY .....3 SOMEONE ELSE.....4 RESPONDENT AND SOMEONE ELSE JOINTLY.....5	
718	On average, how much of your household's expenditures do your earnings pay for: almost none, less than half, about half, more than half, or all?	ALMOST NONE .....1 LESS THAN HALF .....2 ABOUT HALF .....3 MORE THAN HALF.....4 ALL .....5 NONE, HER INCOME IS ALL SAVED. 6	
719	Who in your household usually has the final say on the following decisions:	RESPONDENT = 1 HUSBAND/PARTNER = 2 RESPONDENT & HUSBAND/PARTNER JOINTLY = 3 SOMEONE ELSE = 4 RESPONDENT & SOMEONE ELSE JOINTLY = 5 DECISION NOT MADE/NOT APPLICABLE = 6	
	Your own health care?	1 2 3 4 5 6	
	Making large household purchases?	1 2 3 4 5 6	
	Making household purchases for daily needs?	1 2 3 4 5 6	
	Visits to family or relatives?	1 2 3 4 5 6	
	What food should be cooked each day?	1 2 3 4 5 6	
720	PRESENCE OF OTHERS AT THIS POINT (PRESENT AND LISTENING, PRESENT BUT NOT LISTENING OR NOT PRESENT)	PRES/ LISTEN. / PRES/ NOT LISTEN. / NOT PRES CHILDREN <10 .....1 2 8 HUSBAND .....1 2 8 OTHER MALES .....1 2 8 OTHER FEMALES.....1 2 8	
721	Sometimes a husband is annoyed or angered by things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations:	YES / NO / DK	
	If she goes out without telling him?	GOES OUT..... 1 2 8	
	If she neglects the children?	NEGL. CHILDREN ... 1 2 8	
	If she argues with him?	ARGUES 1 2 8	
	If she refuses to have sex with him?	REFUSES SEX 1 2 8	
	If she burns the food?	BURNS FOOD..... 1 2 8	

SECTION 8: AIDS AND OTHER SEXUALLY TRANSMITTED DISEASES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	Now I would like to talk about something else. Have you ever heard of an illness called AIDS?	YES ..... 1 NO 2	→817
802	Can people reduce their chances of getting the AIDS virus by having just one sex partner who is not infected and who has no other partners?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
803	Can a person get the AIDS virus from mosquito bites?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
804	Can people reduce their chances of getting the AIDS virus by using a condom every time they have sex?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
805	Can people get the AIDS virus by sharing food with a person who has AIDS?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
806	Can people reduce their chance of getting the AIDS virus by not having sex at all?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
807	Can people get the AIDS virus because of witchcraft or other supernatural means?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
808	Is there anything (else) a person can do to avoid getting AIDS or the virus that causes AIDS?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→810
809	What can a person do? Anything else? RECORD ALL WAYS MENTIONED.	ABSTAIN FROM SEX ..... A USE CONDOMS ..... B LIMIT SEX TO ONE PARTNER/STAY FAITHFUL TO ONE PARTNER ..... C LIMIT NUMBER OF SEXUAL PARTNERS ..... D AVOID SEX WITH PROSTITUTES ..... E AVOID SEX WITH PERSONS WHO HAVE MANY PARTNERS ..... F AVOID SEX WITH HOMOSEXUALS ..... G AVOID SEX WITH PERSONS WHO INJECT DRUGS INTRAVENOUSLY .... H AVOID BLOOD TRANSFUSIONS ..... I AVOID INJECTIONS ..... J AVOID SHARING RAZORS/BLADES ..... K AVOID KISSING ..... L AVOID MOSQUITO BITES ..... M SEEK PROTECTION FROM TRADITIONAL PRACTITIONER ..... N OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) DON'T KNOW ..... Z	
810	Is it possible for a healthy-looking person to have the AIDS virus?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
811	Do you know someone personally who has the virus that causes AIDS or someone who died from AIDS?	YES ..... 1 NO 2	
812	Can the virus that causes AIDS be transmitted from a mother to a child?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→813
812A	Can the virus that causes AIDS be transmitted from a mother to a child: During pregnancy? During delivery? By breastfeeding?	YES NO DK DURING PREG ..... 1 2 8 DURING DELIVERY ... 1 2 8 BY BREASTFEEDING 1 2 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
812B	Are there any special drugs that a pregnant woman infected with the AIDS virus can take to reduce the risk of transmission to the baby during pregnancy?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
813	CHECK 501: YES, CURRENTLY MARRIED/ LIVING WITH A MAN ☐ ▼ NO, NOT IN UNION ☐		→814A
814	Have you ever talked about ways to prevent getting the virus that causes AIDS with (your husband/the man you are living with)?	YES ..... 1 NO 2	
814A	In your opinion, is it acceptable or unacceptable for AIDS to be discussed: on the radio? on the TV? in newspapers?	ACCEPT-ABLE / NOT ACCEPT-ABLE ON THE RADIO ..... 1 2 ON THE TV ..... 1 2 IN NEWSPAPERS 1 2	
814A1	Have you heard or seen any messages about HIV/AIDS?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
814A2	Have you heard or seen the slogan "Reach Out, Show Compassion?"	YES ..... 1 NO ..... 2 DON'T KNOW 8	
814A3	Have you heard or seen the slogan "Stop AIDS, Love Life?"	YES ..... 1 NO ..... 2 DON'T KNOW 8	
814A4	CHECK 814A2: AND 814A3 YES, CIRCLED FOR EITHER OR BOTH ☐ ▼ NO, DON'T KNOW CIRCLED ☐		→814B
814A5	Did you hear or see this slogan: On the TV? In a music video? On the radio? In a newspaper or magazine? In a poster? On a car sticker? In leaflets or brochures? On a tee-shirt or a cap? From a mobile 'ISD' van? During a community event? At a road show?	YES / NO TV ..... 1 2 MUSIC VIDEO ..... 1 2 RADIO ..... 1 2 NEWSPAPER/MAGAZINE ..... 1 2 POSTER ..... 1 2 CAR STICKER ..... 1 2 LEAFLETS/BROCHURES ..... 1 2 T-SHIRT/CAP ..... 1 2 ISD VAN ..... 1 2 COMMUNITY EVENT ..... 1 2 ROAD SHOW 1 2	
814A6	Have you seen a television show called "Things we do for love" that features the characters Pusher, B.B. and Marcia?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
814B	Would you buy fresh vegetables from a vendor who has the AIDS virus?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
815	If a member of your family got infected with the virus that causes AIDS, would you want it to remain a secret or not?	YES ..... 1 NO ..... 2 DK/NOT SURE 8	
816	If a relative of yours became sick with the virus that causes AIDS, would you be willing to care for her or him in your own household?	YES ..... 1 NO ..... 2 DK/NOT SURE/DEPENDS 8	
816A	If a female teacher has the AIDS virus, should she be allowed to continue teaching in the school?	CAN CONTINUE ..... 1 SHOULD NOT CONTINUE ..... 2 DK/NOT SURE/DEPENDS 8	
816B	Should children age 12-14 be taught about using a condom to avoid AIDS?	YES ..... 1 NO ..... 2 DK/NOT SURE/DEPENDS 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
816B1	CHECK 407A: ANY CODE D-L CIRCLED → ANY CODE A-C OR X CIRCLED OR Q.407A NOT ASKED		→816CX
816B2	Now I would like to ask some questions about your last birth. During any of the antenatal visits for this pregnancy, were you given any information or counseled about AIDS or the AIDS virus?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
816B3	I don't want to know the results, but were you tested for the AIDS virus during any of your antenatal care visits?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→816CX
816B4	Did you yourself ask for the test, was it offered to you and you accepted, or was it required?	ASKED FOR THE TEST ..... 1 OFFERED AND ACCEPTED ..... 2 REQUIRED 8	
816B5	I don't want to know the results, but did you get the results of the test?	YES ..... 1 NO 2	
816B6	Where did you go for the test? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC ..... 11 GOVT. HEALTH CENTER ..... 12 FAMILY PLANNING CLINIC ..... 13 MOBILE CLINIC ..... 14 FIELDWORKER ..... 15 OTHER PUBLIC_____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... 21 PRIVATE DOCTOR ..... 22 PHARMACY/CHEMIST/ DRUG STORE ..... 23 MOBILE CLINIC ..... 24 FIELDWORKER ..... 25 FP/PPAG CLINIC ..... 26 MATERNITY HOME ..... 27 OTHER PRIVATE MEDICAL _____ 28 (SPECIFY) OTHER SOURCE SHOP ..... 31 CHURCH ..... 32 FRIEND/RELATIVE ..... 33 OTHER _____ 96 (SPECIFY)	
816C 816CX	I don't want to know the results, but have you been tested for the AIDS virus since that time you were tested during your pregnancy? I don't want to know the results, but have you ever been tested for the AIDS virus?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→816D
816C1	When was the last time you were tested?	LESS THAN 12 MONTHS ..... 1 12-23 MONTHS ..... 2 2 YEARS OR MORE 3	
816C2	The last time you had the test, did you yourself ask for the test, was it offered to you and you accepted, or was it required?	ASKED FOR THE TEST ..... 1 OFFERED AND ACCEPTED ..... 2 REQUIRED 3	
816C3	I don't want to know the results, but did you get the results of the test?	YES ..... 1 NO 2	→816FX
816D	Would you want to be tested for the AIDS virus?	YES ..... 1 NO ..... 2 DON'T KNOW/ NOT SURE 8	
816E	Do you know a place where you could go to get an AIDS test?	YES ..... 1 NO 2	→817

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
816F 816FX	Where can you go for the test? RECORD ONLY FIRST RESPONSE GIVEN. Where did you go for the test? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC ..... 11 GOVT. HEALTH CENTER..... 12 FAMILY PLANNING CLINIC..... 13 MOBILE CLINIC ..... 14 FIELDWORKER ..... 15 OTHER PUBLIC_____16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC..... 21 PRIVATE DOCTOR..... 22 PHARMACY/CHEMIST/ DRUG STORE..... 23 MOBILE CLINIC ..... 24 FIELDWORKER ..... 25 FP/PPAG CLINIC ..... 26 MATERNITY HOME ..... 27 OTHER PRIVATE MEDICAL _____ 28 (SPECIFY) OTHER SOURCE SHOP..... 31 CHURCH ..... 32 FRIEND/RELATIVE ..... 33 OTHER _____ 96 (SPECIFY)	
817	Apart from AIDS, have you heard about other infections that can be transmitted through sexual contact?	YES..... 1 NO..... 2	→819A
818	If a man has a sexually transmitted disease, what symptoms might he have? Any others? RECORD ALL SYMPTOMS MENTIONED.	ABDOMINAL PAIN ..... A GENITAL DISCHARGE/DRIPPING..... B FOUL SMELLING DISCHARGE..... C BURNING PAIN ON URINATION..... D REDNESS/INFLAMMATION IN GENITAL AREA ..... E SWELLING IN GENITAL AREA .....F GENITAL SORES/ULCERS ..... G GENITAL WARTS ..... H GENITAL ITCHING.....I BLOOD IN URINE ..... J LOSS OF WEIGHT ..... K IMPOTENCE .....L OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) NO SYMPTOMS..... Y DON'T KNOW.....Z	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
819	If a woman has a sexually transmitted disease, what symptoms might she have? Any others? RECORD ALL SYMPTOMS MENTIONED.	ABDOMINAL PAIN ..... A GENITAL DISCHARGE ..... B FOUL SMELLING DISCHARGE..... C BURNING PAIN ON URINATION..... D REDNESS/INFLAMMATION IN GENITAL AREA..... E SWELLING IN GENITAL AREA .....F GENITAL SORES/ULCERS ..... G GENITAL WARTS ..... H GENITAL ITCHING.....I BLOOD IN URINE ..... J LOSS OF WEIGHT ..... K HARD TO GET PREGNANT/HAVE CHILD ..... A L OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) NO SYMPTOMS..... Y DON'T KNOW.....Z	
819A	CHECK 514: HAS HAD SEXUAL INTERCOURSE ☐ ▼ HAS NOT HAD SEXUAL INTERCOURSE ☐ _____		→820
819A1	CHECK 817: KNOWS STI ☐ ▼ DOES NOT KNOW STI ☐ _____		→819C
819B	Now I would like to ask you some questions about your health in the last 12 months. During the last 12 months, have you had a sexually-transmitted disease?	YES..... 1 NO..... 2 DON'T KNOW..... 8	
819C	Sometimes, women experience a bad smelling abnormal genital discharge. During the last 12 months, have you had a bad smelling abnormal genital discharge?	YES..... 1 NO..... 2 DON'T KNOW..... 8	
819D	Sometimes women have a genital sore or ulcer. During the last 12 months, have you had a genital sore or ulcer?	YES..... 1 NO..... 2 DON'T KNOW..... 8	
819E	CHECK 819B, 819C, 819D: HAS HAD AN INFECTION ☐ ▼ HAS NOT HAD AN INFECTION OR DOES NOT KNOW ☐ _____		→820
819F	The last time you had (PROBLEM FROM 819B/819C//819D), did you seek any kind of advice or treatment?	YES..... 1 NO..... 2	→819H
819G	The last time you had (PROBLEM FROM 819B/819C/819D), did you do any of the following? Did you.... Go to a clinic, hospital or private doctor? Consult a traditional healer? Seek advice or buy medicines in a shop or pharmacy? Ask for advice from friends or relatives?	YES NO CLINIC/HOSPITAL ..... 1 2 TRADITIONAL HEALER..... 1 2 SHOP/PHARMACY ..... 1 2 FRIENDS/RELATIVES 1 2	
819H	When you had (PROBLEM FROM 819B/819C/819D), did you inform the person with whom you were having sex?	YES..... 1 NO..... 2 SOME/ NOT ALL ..... 3 DID NOT HAVE PARTNER 4	→820
819I	When you had (PROBLEM FROM 819B/819C/819D), did you do something to avoid infecting your sexual partner(s)?	YES ..... 1 NO..... 2 PARTNER ALREADY INFECTED 3	→820

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
819J	What did you do to avoid infecting your partner(s)? Did you....	YES NO	
	Use medicine?	USE MEDICINE 1 2	
	Stop having sex?	STOP SEX 1 2	
	Use a condom when having sex?	USE CONDOM 1 2	
820	In many communities, girls are also circumcised. In your community, is female circumcision practiced?	YES ..... 1 NO 2	
821	Are you circumcised?	YES ..... 1 NO 2	
822	RECORD THE TIME.	HOUR..... [ ][ ] MINUTES ..... [ ][ ]	

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

NAME OF THE SUPERVISOR:_____ DATE: _____

EDITOR'S OBSERVATIONS

NAME OF EDITOR:_____ DATE: _____

INSTRUCTIONS:
ONLY ONE CODE SHOULD APPEAR IN ANY BOX.

BIRTHS AND PREGNANCIES
B BIRTHS
P PREGNANCIES
T TERMINATIONS

	12 DEC	01	
	11 NOV	02	
	10 OCT	03	
	09 SEP	04	
2	08 AUG	05	
0	07 JUL	06	
0	06 JUN	07	
3	05 MAY	08	
	04 APR	09	
	03 MAR	10	
	02 FEB	11	
	01 JAN	12	
	12 DEC	13	
	11 NOV	14	
	10 OCT	15	
	09 SEP	16	
2	08 AUG	17	
0	07 JUL	18	
0	06 JUN	19	
2	05 MAY	20	
	04 APR	21	
	03 MAR	22	
	02 FEB	23	
	01 JAN	24	
	12 DEC	25	
	11 NOV	26	
	10 OCT	27	
	09 SEP	28	
2	08 AUG	29	
0	07 JUL	30	
0	06 JUN	31	
1	05 MAY	32	
	04 APR	33	
	03 MAR	34	
	02 FEB	35	
	01 JAN	36	
	12 DEC	37	
	11 NOV	38	
	10 OCT	39	
	09 SEP	40	
2	08 AUG	41	
0	07 JUL	42	
0	06 JUN	43	
0	05 MAY	44	
	04 APR	45	
	03 MAR	46	
	02 FEB	47	
	01 JAN	48	
	12 DEC	49	
	11 NOV	50	
	10 OCT	51	
	09 SEP	52	
1	08 AUG	53	
9	07 JUL	54	
9	06 JUN	55	
9	05 MAY	56	
	04 APR	57	
	03 MAR	58	
	02 FEB	59	
	01 JAN	60	
	12 DEC	61	
	11 NOV	62	
	10 OCT	63	
	09 SEP	64	
1	08 AUG	65	
9	07 JUL	66	
9	06 JUN	67	
8	05 MAY	68	
	04 APR	69	
	03 MAR	70	
	02 FEB	71	
	01 JAN	72	

GHANA DEMOGRAPHIC AND HEALTH SURVEYS
MAN'S QUESTIONNAIRE

GHANA STATISTICAL SERVICE

IDENTIFICATION

LOCALITY NAME _____

NAME OF HOUSEHOLD HEAD _____

EA NUMBER .....

HOUSEHOLD NUMBER .....

REGION .....

DISTRICT .....

URBAN/RURAL (URBAN=1, RURAL=2) .....

CITY/LARGE TOWN/SMALL TOWN/VILLAGE .....
(CITY=1, LARGE TOWN=2, SMALL TOWN=3, VILLAGE=4)

NAME AND LINE NUMBER OF MAN _____

	1	2	3	FINAL VISIT
DATE	_____	_____		DAY ___ MONTH ___ YEAR 2003
INTERVIEWER'S NAME	_____	_____		NAME ___
RESULT*	_____	_____		RESULT ___
NEXT VISIT: DATE	_____	_____		TOTAL NO. OF VISITS ___
TIME	_____	_____		

*RESULT CODES:

1	COMPLETED	4	REFUSED	7	OTHER _____ (SPECIFY)
2	NOT AT HOME	5	PARTLY COMPLETED		
3	POSTPONED	6	INCAPACITATED		

LANGUAGE

LANGUAGE OF QUESTIONNAIRE: **ENGLISH** [1]

LANGUAGE OF INTERVIEW *** _____

NATIVE LANGUAGE OF RESPONDENT*** _____

WAS A TRANSLATOR USED? (YES=1, NO=2).....

*** LANGUAGE CODES:
1 ENGLISH 2 AKAN 3 GA 4 EWE 5 NZEMA 6 DAGBANI
7 OTHER_____
(SPECIFY)

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____	DATE _____		

SECTION 1. RESPONDENT'S BACKGROUND

INFORMED CONSENT

Hello. My name is _____ and I am working with the Ghana Statistical Service. We are conducting a national survey about the health of women, men and children. We would very much appreciate your participation in this survey. I would like to ask you some questions about yourself and your family. This information will help the government to plan health services. The survey usually takes between 15 and 30 minutes to complete. Whatever information you provide will be kept strictly confidential and will not be shown to other persons.

Participation in this survey is voluntary and you can choose not to answer any individual question or all of the questions. However, we hope that you will participate in this survey since your views are important.

At this time, do you want to ask me anything about the survey?
May I begin the interview now?

Signature of interviewer: _____ Date: _____

RESPONDENT AGREES TO BE INTERVIEWED .....1 ▼ RESPONDENT DOES NOT AGREE TO BE INTERVIEWED.....2 ⟶END

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOUR..... [ ][ ] MINUTES ..... [ ][ ]	
102	First I would like to ask some questions about you and your household. For most of the time until you were 12 years old, did you live in a city, in a town, or in the village	CITY.....1 TOWN.....2 VILLAGE.....3	
103	How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? IF LESS THAN ONE YEAR, RECORD '00' YEARS.	YEARS ..... [ ][ ] ALWAYS.....95 VISITOR 96	 ⟶105
104	Just before you moved here, did you live in a city, in a town, or in the village?	CITY.....1 TOWN.....2 VILLAGE.....3	
105	In the last 12 months, on how many separate occasions have you traveled away from your home community and slept away?	NUMBER OF TRIPS AWAY ... [ ][ ] NONE 00	 ⟶107
106	In the last 12 months, have you been away from your home community for more than 1 month at a time?	YES.....1 NO 2	
107	In what month and year were you born?	MONTH..... [ ][ ] DOES NOT KNOW MONTH.....98 YEAR..... [ ][ ][ ][ ] DON'T KNOW YEAR.....9998	
108	How old were you at your last birthday? COMPARE AND CORRECT 107 AND/OR 108 IF INCONSISTENT.	AGE IN COMPLETED YEARS [ ][ ]	
109	Have you ever attended school?	YES.....1 NO 2	 ⟶113
110	What is the highest level of school you attended: primary, middle/JSS, secondary/SSS, or higher?	PRIMARY .....1 MIDDLE/JSS .....2 SECONDARY/SSS.....3 HIGHER.....4	
111	What is the highest grade you completed at that level?	GRADE..... [ ][ ]	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
112	CHECK 110: PRIMARY OR MIDDLE/JSS ☐ ▼ SECONDARY/SSS OR HIGHER ☐		→116
113	Now I would like you to read this sentence to me. SHOW CARD TO RESPONDENT. IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE: Can you read any part of the sentence to me?	CANNOT READ AT ALL.....1 ABLE TO READ ONLY PARTS OF SENTENCE.....2 ABLE TO READ WHOLE SENTENCE.....3 NO CARD WITH REQUIRED LANGUAGE_____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRED.....5	
114	Have you ever participated in a literacy program or any other program that involves learning to read or write (not including primary school)?	YES.....1 NO 2	
115	CHECK 113: CODE '2', '3' OR '4' CIRCLED ☐ ▼ CODE '1' AND '5' CIRCLED ☐		→117
116	Do you read a newspaper or magazine almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY .....1 AT LEAST ONCE A WEEK .....2 LESS THAN ONCE A WEEK .....3 NOT AT ALL 4	
117	Do you listen to the radio almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY .....1 AT LEAST ONCE A WEEK .....2 LESS THAN ONCE A WEEK .....3 NOT AT ALL 4	
118	Do you watch television almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY .....1 AT LEAST ONCE A WEEK .....2 LESS THAN ONCE A WEEK .....3 NOT AT ALL 4	
119	Are you currently working?	YES.....1 NO 2	→122
120	Have you done any work in the last 12 months?	YES.....1 NO 2	→122
121	What have you been doing for most of the time over the last 12 months?	GOING TO SCHOOL/STUDYING .....1 LOOKING FOR WORK.....2 INACTIVE .....3 COULD NOT WORK/HANDICAPPED .....4 OTHER_____ 6 (SPECIFY)	→129
122	What is your occupation, that is, what kind of work do you mainly do?	☐☐ _____ _____	
123	CHECK 122: WORKS IN AGRICULTURE ☐ ▼ DOES NOT WORK IN AGRICULTURE ☐		→125
124	Do you work mainly on your own land or on family land, or do you work on land that you rent from someone else, or do you work on someone else's land?	OWN LAND ..... 1 FAMILY LAND ..... 2 RENTED LAND ..... 3 SOMEONE ELSE'S LAND 4	
125	During the last 12 months, how many months did you work?	NUMBER OF MONTHS..... ☐☐	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
126	Are you paid or do you earn in cash or kind for this work or are you not paid at all?	CASH ONLY ..... 1 CASH AND KIND ..... 2 IN KIND ONLY ..... 3 NOT PAID 4	▸129
127	Who mainly decides how the money you earn will be used?	RESPONDENT ..... 1 WIFE/PARTNER ..... 2 RESPONDENT AND WIFE/PARTNER JOINTLY ..... 3 SOMEONE ELSE ..... 4 RESPONDENT AND SOMEONE ELSE JOINTLY 5	
128	On average, how much of your household's expenditures do your earnings pay for: almost none, less than half, about half, more than half, or all?	ALMOST NONE ..... 1 LESS THAN HALF ..... 2 ABOUT HALF ..... 3 MORE THAN HALF ..... 4 ALL ..... 5 NONE, INCOME IS ALL SAVED. 6	
129	What is your religion?	CATHOLIC ..... 01 ANGLICAN ..... 02 METHODIST ..... 03 PRESBYTERIAN ..... 04 OTHER CHRISTIAN ..... 05 MOSLEM ..... 06 TRADITIONAL/SPIRITUALIST ..... 07 NO RELIGION ..... 08 OTHER _____ 96 (SPECIFY)	
130	To which ethnic group do you belong?	AKAN ..... 01 GA/DANGME ..... 02 EWE ..... 03 GUAN ..... 04 MOLE-DAGBANI ..... 05 GRUSSI ..... 06 GRUMA ..... 07 HAUSA ..... 08 OTHER _____ 96 (SPECIFY)	

SECTION 2. REPRODUCTION AND PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about any children you have had. I am interested only in the children that are biologically yours. Have you ever fathered any children with any woman?	YES.....1 NO .....2 DON'T KNOW.....8	→206
202	Do you have any sons or daughters that you have fathered who are now living with you?	YES.....1 NO 2	→204
203	How many sons live with you? And how many daughters live with you? IF NONE, WRITE '00'.	SONS AT HOME ..... [ ][ ] DAUGHTERS AT HOME..... [ ][ ]	
204	Do you have any sons or daughters you have fathered who are alive but do not live with you?	YES.....1 NO 2	→206
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, WRITE '00'.	SONS ELSEWHERE..... [ ][ ] DAUGHTERS ELSEWHERE... [ ][ ]	
206	Have you ever fathered a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	YES.....1 NO .....2 DON'T KNOW.....8	→208
207	How many boys have died? And how many girls have died? IF NONE, WRITE '00'.	BOYS DEAD..... [ ][ ] GIRLS DEAD ..... [ ][ ]	
208	(In addition to the children that you have just told me about), do you have any other sons or daughters who are biologically your children but who are not legally yours or do not have your name? Did you have any children who died who were biologically your children but who were not legally yours or did not have your name? IF YES, CORRECT 201-207.	YES.....1 NO 2	
209	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, WRITE '00'.	TOTAL ..... [ ][ ]	
210	CHECK 209: HAS HAD ONLY ONE CHILD [ ] HAS HAD MORE THAN ONE CHILD [ ] HAS NOT HAD ANY CHILDREN [ ]		→213 →301
211	Do the children that you have fathered all have the same biological mother?	YES .....1 NO 2	→213
212	In all how many women have you fathered children with?	NUMBER OF WOMEN..... [ ][ ]	
213	How old were you when your (first) child was born?	AGE IN YEARS ..... [ ][ ]	

SECTION 3. CONTRACEPTION

Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy.

CIRCLE CODE 1 IN 301 FOR EACH METHOD MENTIONED SPONTANEOUSLY. THEN PROCEED DOWN COLUMN 301, READING THE NAME AND DESCRIPTION OF EACH METHOD NOT MENTIONED SPONTANEOUSLY. CIRCLE CODE 1 IF METHOD IS RECOGNISED, AND CODE 2 IF NOT RECOGNISED. THEN, FOR EACH METHOD WITH CODE 1 CIRCLED IN 301, ASK 302.

301	Which ways or methods have you heard about? FOR METHODS NOT MENTIONED SPONTANEOUSLY, ASK: Have you ever heard of (METHOD)?		302 Have you ever used (METHOD)?
01	FEMALE STERILIZATION Women can have an operation to avoid having any more children.	YES.....1 NO ..... 2 ┐▼	
02	MALE STERILIZATION Men can have an operation to avoid having any more children.	YES.....1 NO ..... 2 ┐▼	Have you ever had an operation to avoid having any more children? YES.....1 NO 2
03	PILL Women can take a pill every day to stop them from becoming pregnant.	YES.....1 NO ..... 2 ┐▼	
04	IUD Women can have a loop or coil placed inside them by a doctor or a nurse.	YES.....1 NO ..... 2 ┐▼	
05	INJECTABLES Women can have an injection by a health provider which stops them from becoming pregnant for one or more months.	YES.....1 NO ..... 2 ┐▼	
06	IMPLANTS Women can have several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years.	YES.....1 NO ..... 2 ┐▼	
07	CONDOM Men can put a rubber sheath on their penis before sexual intercourse.	YES.....1 NO ..... 2 ┐▼	YES.....1 NO 2
08	FEMALE CONDOM Women can place a sheath in their vagina before sexual intercourse.	YES.....1 NO ..... 2 ┐▼	
09	DIAPHRAGM Women can place a thin flexible disk in their vagina before sexual intercourse.	YES.....1 NO ..... 2 ┐▼	
10	FOAM OR JELLY Women can place a suppository, jelly, or cream in their vagina before sexual intercourse.	YES.....1 NO ..... 2 ┐▼	
11	LACTATIONAL AMENORRHEA METHOD (LAM) Up to 6 months after childbirth, a woman can use a method that requires that she breastfeeds frequently, day and night, and that her menstrual period has not returned.	YES.....1 NO ..... 2 ┐▼	
12	RHYTHM OR PERIODIC ABSTINENCE Every month that a woman is sexually active she can avoid pregnancy by not having sexual intercourse on the days of the month she is most likely to get pregnant.	YES.....1 NO ..... 2 ┐▼	YES.....1 NO .....2 DON'T KNOW 8
13	WITHDRAWAL Men can be careful and pull out before climax.	YES.....1 NO ..... 2 ┐▼	YES.....1 NO 2
14	EMERGENCY CONTRACEPTION Women can take pills up to five days after sexual intercourse to avoid becoming pregnant.	YES.....1 NO ..... 2 ┐▼	
15	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES.....1 _____ (SPECIFY) _____ (SPECIFY) NO ..... 2 ┐▼	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
303	Now I would like to ask you about when a woman is most likely to get pregnant. From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant if she has sexual relations?	YES.....1 NO .....2 DON'T KNOW.....8	 →305
304	Is this time just before her period begins, during her period, right after her period has ended, or half way between two periods?	JUST BEFORE HER PERIOD BEGINS....1 DURING HER PERIOD .....2 RIGHT AFTER HER PERIOD HAS ENDED.....3 HALF WAY BETWEEN TWO PERIODS...4 OTHER _____ 6 (SPECIFY) DON'T KNOW.....8	
305	Do you think that a woman who is breastfeeding her baby can get pregnant?	YES ..... 1 NO ..... 2 DEPENDS ..... 3 DON'T KNOW 8	
306	I will now read you some statements about contraception. Please tell me if you agree or disagree with each one. a) Contraception is women's business and a man should not have to worry about it. b) Women who use contraception may become promiscuous. c) A woman is the one who gets pregnant so she should be the one to get sterilized.	AGREE DISAGREE DK a) 1 2 8 b) 1 2 8 c) 1 2 8	
307	CHECK 301(02) AND 302(02): KNOWLEDGE AND USE OF MALE STERILISATION HAS HEARD OF MALE STERILIZATION BUT IS NOT STERILIZED [ ] ▼ OTHER [ ] _____		→401
308	Once you have had all the children you want, would you yourself ever consider getting sterilized?	WOULD CONSIDER ..... 1 WOULD NOT CONSIDER ..... 2 UNSURE/DEPENDS..... 3 WIFE ALREADY STERILIZED..... 4	→401 →401
309	Why would you never consider getting sterilized? PROBE: Any other reasons? RECORD ALL REASONS MENTIONED.	AGAINST RELIGION ..... A BAD FOR MAN'S HEALTH..... B OPERATION NOT SAFE ..... C LESS INTRUSIVE WAYS AVAILABLE..... D MAY WANT MORE CHILDREN/MAY WANT TO REPLACE CHILD WHO DIED..... E MAY REMARRY SOME DAY..... F LOSS OF WAGES ..... G LOSS OF SEXUAL FUNCTION ..... H LOSS OF MANLINESS ..... I OTHER _____ X (SPECIFY)	

SECTION 4. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
401	Are you currently married or living with a woman?	YES, CURRENTLY MARRIED ..... 1 YES, LIVING WITH A WOMAN ..... 2 NO, NOT IN UNION 3	 →404 →406
402	Do you have one wife or more than one wife? IF ONLY ONE WIFE, ENTER '01' . IF MORE THAN ONE, ASK: How many wives do you currently have?	NUMBER OF WIVES ..... [ ][ ]	
403	Are there any other women with whom you live as if married?	YES ..... 1 NO 2	 →405
404	Are you living with one (other) woman or more than one (other) woman as if married? IF ONE LIVE-IN PARTNER, ENTER '01'. IF MORE THAN ONE, ASK: How many women are you living with as if you were married?	NUMBER OF LIVE-IN PARTNERS ..... [ ][ ]	
405	Apart from the woman/women you have already mentioned, do you currently have any other regular or occasional sexual partners?	REGULAR PARTNER(S) ONLY ..... 1 OCCASIONAL PARTNER(S) ONLY ..... 2 REGULAR AND OCCASIONAL PARTNERS ..... 3 NO OTHER PARTNER 4	→409
406	Do you currently have regular, occasional, or no sexual partners?	REGULAR PARTNER(S) ONLY ..... 1 OCCASIONAL PARTNER(S) ONLY ..... 2 REGULAR AND OCCASIONAL PARTNERS ..... 3 NO SEXUAL PARTNER 4	
407	Have you ever been married or lived with a woman?	YES, USED TO BE MARRIED ..... 1 YES, LIVED WITH A WOMAN ..... 2 YES, BOTH ..... 3 NO 4	 →411 →416
408	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED ..... 1 DIVORCED ..... 2 SEPARATED 3	→411

409 WRITE THE LINE NUMBERS FROM THE HOUSEHOLD QUESTIONNAIRE FOR EACH WIFE/PARTNER REPORTED IN QUESTIONS 402 AND 404 ONLY. IF A WIFE/PARTNER IS NOT LISTED IN THE HOUSEHOLD SCHEDULE, ENTER '00' IN THE LINE NUMBER BOXES. THE NUMBER OF LINES FILLED IN MUST BE EQUAL TO THE NUMBER OF WIVES AND PARTNERS. (IF RESPONDENT HAS MORE THAN SEVEN WIVES/PARTNERS USE ADDITIONAL QUESTIONNAIRE(S).

CHECK 402 AND 404

SUM OF 402 AND 404 = 01 [ ]

Please tell me the name of your wife/partner.

SUM OF 402 AND 404 > 01 [ ]

Please tell me the name of each wife/partner that you live with as if married, starting with the one you lived with first.

NAME	LINE NUMBER IN HHD. QUEST	WIFE	PARTNER
1 _____	[ ][ ]	1	2
2 _____	[ ][ ]	1	2
3 _____	[ ][ ]	1	2
4 _____	[ ][ ]	1	2
5 _____	[ ][ ]	1	2
6 _____	[ ][ ]	1	2
7 _____	[ ][ ]	1	2

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
410	CHECK 409: ONLY ONE WIFE/ PARTNER ☐ ▼ MORE THAN ONE WIFE/PARTNER ☐		→412
411	Have you been married or lived with a woman only once, or more than once?	ONCE ..... 1 MORE THAN ONCE 2	→414 →413
412	Have you ever been married to or lived as if married to any woman other than those you have just mentioned?	YES ..... 1 NO 2	 →414
413	In total, how many women have you been married to or lived with as if married in your whole life?	NUMBER OF WOMEN..... ☐☐	
414	CHECK 409 AND 411: ONLY ONE WIFE/ PARTNER AND 411=ONCE ☐ ▼ OTHER ☐ ▼ In what month and year did you start living with your wife/partner? Now we will talk about your first wife/partner. In what month and year did you start living with her?	MONTH ..... ☐☐ DOES NOT KNOW MONTH ..... 98 YEAR..... ☐☐☐☐ DOES NOT KNOW YEAR..... 9998	 →416
415	How old were you when you started living with her?	AGE..... ☐☐	
416	Now I need to ask you some questions about sexual activity in order to gain a better understanding of some family life issues. How old were you when you first had sexual intercourse (if ever)?	NEVER ..... 00 AGE IN YEARS ..... ☐☐ FIRST TIME WHEN STARTED LIVING WITH (FIRST) WIFE/PARTNER 95	→448
416A	CHECK 108: 15-24 YEARS OLD ☐ ▼ 25-59 YEARS OLD ☐		→417
416B	The first time you had sexual intercourse, was a condom used?	YES ..... 1 NO 2	
417	When was the last time you had sexual intercourse? RECORD 'YEARS AGO' ONLY IF LAST INTERCOURSE WAS ONE OR MORE YEARS AGO. IF 12 MONTHS OR MORE, ANSWER MUST BE RECORDED IN YEARS.	DAYS AGO.....1 ☐☐ WEEKS AGO .....2 ☐☐ MONTHS AGO.....3 ☐☐ YEARS AGO .....4 ☐☐	 →445
417A	The last time you had sexual intercourse, had you or your partner been drinking alcohol? IF YES: Who was drinking?	RESPONDENT ONLY..... 1 PARTNER ONLY..... 2 RESPONDENT AND PARTNER..... 3 NEITHER..... 4	
418	The last time you had sexual intercourse, was a condom used?	YES ..... 1 NO 2	 →420

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
419	What was the main reason you used a condom on that occasion?	RESPONDENT WANTED TO PREVENT STD/HIV ..... 01 RESPONDENT WANTED TO PREVENT PREGNANCY ..... 02 RESPONDENT WANTED TO PREVENT BOTH STD/HIV AND PREGNANCY ..... 03 DID NOT TRUST PARTNER/FELT PARTNER HAD OTHER PARTNERS ..... 04 PARTNER REQUESTED/INSISTED ..... 05 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→424
420	CHECK 302(02): RESPONDENT NOT STERILIZED ☐ ▼ RESPONDENT STERILIZED ☐		→424
421	The last time you had sexual intercourse, did you or your partner do something or use any method to avoid a pregnancy?	YES ..... 1 NO ..... 2 UNSURE/DON'T KNOW 8	 →423 →424
422	What method was used? IF MORE THAN ONE METHOD USED, RECORD THE HIGHEST METHOD ON THE LIST.	FEMALE STERILIZATION ..... 01 PILL ..... 03 IUD ..... 04 INJECTABLES ..... 05 IMPLANTS ..... 06 MALE CONDOM ..... 07 FEMALE CONDOM ..... 08 DIAPHRAGM ..... 09 FOAM/JELLY ..... 10 LACTATIONAL AMEN. METHOD ..... 11 PERIODIC ABSTINENCE ..... 12 WITHDRAWAL ..... 13 OTHER METHOD 96	→424
423	What is the main reason a method was not used?	CASUAL PARTNER, DOESN'T CARE .. 11 CONTRACEPTION IS WOMEN'S BUSINESS ..... 12 WOMAN IS MENOPAUSAL/ HAD HYSTERECTOMY ..... 23 COUPLE INFERTILE/SUB-FERTILE ..... 24 WOMAN WAS PREGNANT ..... 25 WOMAN WAS AMENORRHEIC ..... 26 WOMAN WAS BREASTFEEDING ..... 27 WANTED (MORE) CHILDREN ..... 28 RESPONDENT OPPOSED ..... 31 WOMAN OPPOSED ..... 32 OTHERS OPPOSED ..... 33 RELIGIOUS PROHIBITION ..... 34 KNOWS NO METHOD ..... 41 KNOWS NO SOURCE ..... 42 HEALTH CONCERNS ..... 51 FEAR OF SIDE EFFECTS ..... 52 LACK OF ACCESS/TOO FAR ..... 53 COST TOO MUCH ..... 54 INCONVENIENT TO USE ..... 55 INTERFERES WITH BODY'S NORMAL PROCESSES ..... 56 OTHER _____ 96 (SPECIFY) DOES NOT KNOW 98	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
424	What is your relationship to the person with whom you last had sex? IF WOMAN IS "GIRLFRIEND" OR "FIANCÉE", ASK: Was your girlfriend/fiancée living with you when you last had sex? IF YES, RECORD '01'. IF NO, RECORD '02'.	WIFE/LIVE-IN PARTNER ..... 01 WOMAN IS GIRLFRIEND/FIANCÉE ..... 02 OTHER FRIEND ..... 03 CASUAL ACQUAINTANCE ..... 04 RELATIVE ..... 05 PROSTITUTE ..... 06 OTHER _____ 96 (SPECIFY)	→426
425	For how long have you had a sexual relationship with this person? . IF ONLY HAD SEX WITH THIS PERSON ONCE, WRITE '01' DAYS	DAYS .....1 [ ][ ] WEEKS .....2 [ ][ ] MONTHS .....3 [ ][ ] YEARS .....4 [ ][ ]	
426	Have you had sex with any other person in the last 12 months?	YES ..... 1 NO 2	 →445
427	The last time you had sexual intercourse with another person, was a condom used?	YES ..... 1 NO 2	 →429
428	What is the main reason you used a condom on that occasion?	RESPONDENT WANTED TO PREVENT STD/HIV ..... 01 RESPONDENT WANTED TO PREVENT PREGNANCY ..... 02 RESPONDENT WANTED TO PREVENT BOTH STD/HIV AND PREGNANCY ..... 03 DID NOT TRUST PARTNER/FELT PARTNER HAD OTHER PARTNERS ..... 04 PARTNER REQUESTED/INSISTED ..... 05 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→433
429	CHECK 302(02): RESPONDENT NOT STERILIZED [ ] ▼ RESPONDENT STERILIZED [ ] _____		→433
430	The last time you had sexual intercourse with this person, did you or that person do something or use any method to avoid a pregnancy?	YES ..... 1 NO ..... 2 UNSURE/DON'T KNOW 8	 →432 →433
431	What method was used? IF MORE THAN ONE METHOD USED, CIRCLE THE HIGHEST METHOD ON THE LIST.	FEMALE STERILIZATION ..... 01 PILL ..... 03 IUD ..... 04 INJECTABLES ..... 05 IMPLANTS ..... 06 MALE CONDOM ..... 07 FEMALE CONDOM ..... 08 DIAPHRAGM ..... 09 FOAM/JELLY ..... 10 LACTATIONAL AMEN. METHOD ..... 11 PERIODIC ABSTINENCE ..... 12 WITHDRAWAL ..... 13 OTHER METHOD 96	→433

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
432	What is the main reason a method was not used?	CASUAL PARTNER, DOESN'T CARE .. 11 CONTRACEPTION IS WOMEN'S BUSINESS ..... 12 WOMAN IS MENOPAUSAL/ HAD HYSTERECTOMY ..... 23 COUPLE INFERTILE/SUB-FERTILE ..... 24 WOMAN WAS PREGNANT ..... 25 WOMAN WAS AMENORRHEIC ..... 26 WOMAN WAS BREASTFEEDING..... 27 WANTED (MORE) CHILDREN ..... 28 RESPONDENT OPPOSED..... 31 WOMAN OPPOSED ..... 32 OTHERS OPPOSED..... 33 RELIGIOUS PROHIBITION..... 34 KNOWS NO METHOD ..... 41 KNOWS NO SOURCE ..... 42 HEALTH CONCERNS..... 51 FEAR OF SIDE EFFECTS ..... 52 LACK OF ACCESS/TOO FAR ..... 53 COST TOO MUCH ..... 54 INCONVENIENT TO USE ..... 55 INTERFERES WITH BODY'S NORMAL PROCESSES..... 56 OTHER _____ 96 (SPECIFY) DOES NOT KNOW 98	
433	What is your relationship to this other person? IF WOMAN IS "GIRLFRIEND" OR "FIANCÉE", ASK: Was your girlfriend/fiancée living with you when you last had sex? IF YES, RECORD '01'. IF NO, RECORD '02'.	WIFE/LIVE-IN PARTNER..... 01 WOMAN IS GIRLFRIEND/FIANCÉE ..... 02 OTHER FRIEND ..... 03 CASUAL ACQUAINTANCE ..... 04 RELATIVE ..... 05 PROSTITUTE..... 06 OTHER _____ 96 (SPECIFY)	→435
434	For how long have you had a sexual relationship with this person? IF ONLY HAD SEX WITH THIS PERSON ONCE, WRITE '01' DAYS.	DAYS .....1 [ ][ ] WEEKS .....2 [ ][ ] MONTHS.....3 [ ][ ] YEARS .....4 [ ][ ]	
435	Other than these two people, have you had sex with any other person in the last 12 months?	YES ..... 1 NO 2	→445
436	The last time you had sexual intercourse with this third person, was a condom used?	YES ..... 1 NO 2	→438
437	What is the main reason you used a condom on that occasion?	RESPONDENT WANTED TO PREVENT STD/HIV ..... 01 RESPONDENT WANTED TO PREVENT PREGNANCY..... 02 RESPONDENT WANTED TO PREVENT BOTH STD/HIV AND PREGNANCY..... 03 DID NOT TRUST PARTNER/FELT PARTNER HAD OTHER PARTNERS ..... 04 PARTNER REQUESTED/INSISTED ..... 05 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→442
438	CHECK 302(02): RESPONDENT NOT STERILIZED [ ] RESPONDENT STERILIZED [ ]		→442

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
439	The last time you had sexual intercourse with this third person, did you or that person do something or use any method to avoid a pregnancy?	YES ..... 1 NO ..... 2 UNSURE/DON'T KNOW 8	 →441 →442
440	What method was used? IF MORE THAN ONE METHOD USED, RECORD THE HIGHEST METHOD ON THE LIST.	FEMALE STERILIZATION ..... 01 PILL ..... 03 IUD ..... 04 INJECTABLES ..... 05 IMPLANTS ..... 06 MALE CONDOM ..... 07 FEMALE CONDOM ..... 08 DIAPHRAGM ..... 09 FOAM/JELLY ..... 10 LACTATIONAL AMEN. METHOD ..... 11 PERIODIC ABSTINENCE ..... 12 WITHDRAWAL ..... 13 OTHER METHOD 96	→442
441	What is the main reason a method was not used?	CASUAL PARTNER, DOESN'T CARE .. 11 CONTRACEPTION IS WOMEN'S BUSINESS ..... 12 WOMAN IS MENOPAUSAL/ HAD HYSTERECTOMY ..... 23 COUPLE INFERTILE/SUB-FERTILE ..... 24 WOMAN WAS PREGNANT ..... 25 WOMAN WAS AMENORRHEIC ..... 26 WOMAN WAS BREASTFEEDING ..... 27 WANTED (MORE) CHILDREN ..... 28 RESPONDENT OPPOSED ..... 31 WOMAN OPPOSED ..... 32 OTHERS OPPOSED ..... 33 RELIGIOUS PROHIBITION ..... 34 KNOWS NO METHOD ..... 41 KNOWS NO SOURCE ..... 42 HEALTH CONCERNS ..... 51 FEAR OF SIDE EFFECTS ..... 52 LACK OF ACCESS/TOO FAR ..... 53 COST TOO MUCH ..... 54 INCONVENIENT TO USE ..... 55 INTERFERES WITH BODY'S NORMAL PROCESSES ..... 56 OTHER _____ 96 (SPECIFY) DOES NOT KNOW 98	
442	What is your relationship to this person? IF WOMAN IS "GIRLFRIEND" OR "FIANCÉE", ASK: Was your girlfriend/fiancée living with you when you last had sex? IF YES, RECORD '01'. IF NO, RECORD '02'.	WIFE/LIVE-IN PARTNER ..... 01 WOMAN IS GIRLFRIEND/FIANCÉE ..... 02 OTHER FRIEND ..... 03 CASUAL ACQUAINTANCE ..... 04 RELATIVE ..... 05 PROSTITUTE ..... 06 OTHER _____ 96 (SPECIFY)	→444
443	For how long have you had a sexual relationship with this person? IF ONLY HAD SEX WITH THIS PERSON ONCE, WRITE '01' DAYS.	DAYS ..... 1 [ ][ ] WEEKS ..... 2 [ ][ ] MONTHS ..... 3 [ ][ ] YEARS ..... 4 [ ][ ]	
444	In total, with how many different people have you had sex in the last 12 months?	NUMBER OF PARTNERS ..... [ ][ ]	
445	Have you ever paid for sex?	YES ..... 1 NO 2	 →448

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
446	How long ago was the last time you paid for sex?	DAYS AGO .....1 [ ][ ] WEEKS AGO .....2 [ ][ ] MONTHS AGO.....3 [ ][ ] YEARS AGO .....4 [ ][ ]	
447	The last time that you paid for sex, was a condom used?	YES ..... 1 NO 2	
448	Do you know of a place where a person can get male condoms?	YES ..... 1 NO 2	→450A
449	Where is that? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) Any other place? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC.....A GOVT. HEALTH CENTER.....B FAMILY PLANNING CLINIC .....C MOBILE CLINIC.....D FIELDWORKER.....E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... G PRIVATE DOCTOR .....H PHARMACY/CHEMIST/ DRUG STORE ..... I MOBILE CLINIC..... J FIELDWORKER.....K FP/PPAG CLINIC..... L MATERNITY HOME..... M OTHER PRIVATE MEDICAL _____N (SPECIFY) OTHER SOURCE SHOP ..... O CHURCH.....P FRIENDS/RELATIVES..... Q OTHER _____ X (SPECIFY)	
450	If you wanted to, could you yourself get a male condom?	YES ..... 1 NO ..... 2 DOES NOT KNOW/UNSURE 8	
450A	Do you know of a place where a person can get female condoms?	YES ..... 1 NO 2	→451

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
450B	Where is that? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) Any other place? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC ..... A GOVT. HEALTH CENTER ..... B FAMILY PLANNING CLINIC ..... C MOBILE CLINIC ..... D FIELDWORKER ..... E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... G PRIVATE DOCTOR ..... H PHARMACY/CHEMIST/ DRUG STORE ..... I MOBILE CLINIC ..... J FIELDWORKER ..... K FP/PPAG CLINIC ..... L MATERNITY HOME ..... M OTHER PRIVATE MEDICAL _____ N (SPECIFY) OTHER SOURCE SHOP ..... O CHURCH ..... P FRIENDS/RELATIVES ..... Q OTHER _____ X (SPECIFY)	
450C	If you wanted to, could you yourself get a female condom?	YES ..... 1 NO ..... 2 DON'T KNOW/UNSURE 8	
451	CHECK 302(07), 416B(1), 418(1), 427(1), 436(1), AND 447(1): EVER USED A CONDOM? AT LEAST ONE 'YES' HAS USED CONDOM ☐ ▼ NO 'YES' NEVER USED CONDOM ☐		→460
452	How old were you when you used a condom for the first time?	AGE AT FIRST USE ..... ☐☐ DOES NOT REMEMBER 98	
453	Why did you use a condom that first time? PROBE: Any other reason? RECORD ALL REASONS MENTIONED.	WANTED TO PREVENT STD/HIV ..... A WANTED TO PREVENT PREGNANCY .. B WANTED TO PREVENT BOTH STD/HIV AND PREGNANCY ..... C DID NOT TRUST PARTNER/THOUGHT PARTNER HAD OTHER PARTNERS D PARTNER REQUESTED/INSISTED ..... E DON'T KNOW ..... Z OTHER _____ X (SPECIFY)	
454	Have you ever experienced any problems with using condoms? IF YES: What problems have you experienced? PROBE: Any other problems? CIRCLE ALL PROBLEMS MENTIONED.	TOO EXPENSIVE ..... A EMBARRASSING TO BUY/OBTAIN ..... B DIFFICULT TO DISPOSE OF ..... C DIFFICULT TO PUT ON/TAKE OFF ..... D SPOILS THE MOOD ..... E DIMINISHES PLEASURE ..... F WIFE PARTNER OBJECTS/DOES NOT LIKE ..... G WIFE/PARTNER GOT PREGNANT ..... H INCONVENIENT TO USE/MESSY ..... I CONDOM BROKE ..... J OTHER _____ X (SPECIFY) NO PROBLEM ..... Y	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
455	What brand of condom do you usually use? ASK TO SEE CONDOM PACKET IF BRAND NOT KNOWN.	PROTECTOR ..... 1 ROUGH RIDER ..... 2 CHAMPION ..... 3 PANTHER ..... 4 NO BRAND..... 5 OTHER _____ 6 (SPECIFY) DON'T KNOW BRAND..... 8	
456	Where do you usually get condoms? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC .....A GOVT. HEALTH CENTER .....B FAMILY PLANNING CLINIC ..... C MOBILE CLINIC ..... D FIELDWORKER .....E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... G PRIVATE DOCTOR ..... H PHARMACY/CHEMIST/ DRUG STORE .....I MOBILE CLINIC ..... J FIELDWORKER .....K FP/PPAG CLINIC .....L MATERNITY HOME .....M OTHER PRIVATE MEDICAL _____N (SPECIFY) OTHER SOURCE SHOP ..... O CHURCH.....P FRIENDS/RELATIVES..... Q OTHER _____ X (SPECIFY)	
457	How much do you usually pay for condoms?	PER PACKET .. [ ][ ][ ][ ][ ] FREE .....99996 DON'T KNOW.....99998	→460
458	How many condoms are in each packet?	NUMBER PER PACKET ..... [ ][ ]	
459	Do you think that at this price condoms are inexpensive, just affordable, or too expensive?	INEXPENSIVE..... 1 JUST AFFORDABLE..... 2 TOO EXPENSIVE 3	
460	I will now read you some statements about condom use. Please tell me if you agree or disagree with each.	**AGREE** **DISAGREE** **DK**	
	a) Condoms diminish a man's sexual pleasure.	a) 1 2 8	
	b) It's okay to re-use a condom if you wash it.	b) 1 2 8	
	c) Condoms protect against disease.	c) 1 2 8	
	d) Buying condoms is embarrassing.	d) 1 2 8	
	e) A woman has no right to tell a man to use a condom.	e) 1 2 8	
	f) Condoms contain HIV.	f) 1 2 8	

SECTION 5. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	CHECK 401: CURRENTLY MARRIED OR LIVING TOGETHER ☐ NOT MARRIED ☐		→505
502	Is your wife/partner currently pregnant? IF MORE THAN ONE WIFE/PARTNER, ASK: Are any of your wives/partners currently pregnant?	YES ..... 1 NO ..... 2 NOT SURE 3	
503	CHECK 502: WIFE NOT PREGNANT OR UNSURE ☐ Now I have some questions about the future. Would you like to have (a/another) child, or would you prefer not to have any (more) children? WIFE PREGNANT ☐ Now I have some questions about the future. After the child you are expecting now, would you like to have another child, or would you prefer not to have any more children?	HAVE (A/ANOTHER) CHILD ..... 1 NO MORE/NONE ..... 2 WIFE CANNOT GET PREGNANT ..... 3 UNDECIDED/DON'T KNOW 8	→505
504	CHECK 502: WIFE NOT PREGNANT OR UNSURE ☐ How long would you like to wait from now before the birth of (a/another) child? WIFE PREGNANT ☐ After the birth of the child you are expecting now, how long would you like to wait before the birth of another child?	MONTHS ..... 1 ☐☐ YEARS..... 2 ☐☐ SOON/NOW ..... 993 WIFE CANNOT GET PREGNANT ..... 994 AFTER MARRIAGE..... 995 OTHER _____ 996 (SPECIFY) DOES NOT KNOW..... 998	
505	CHECK 203 AND 205: HAS LIVING CHILDREN ☐ If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? NO LIVING CHILDREN ☐ If you could choose exactly the number of children to have in your whole life, how many would that be? PROBE FOR A NUMERIC RESPONSE.	NONE ..... 00 NUMBER ..... ☐☐ OTHER _____ 96 (SPECIFY)	→507 →507
506	How many of these children would you like to be boys, how many would you like to be girls and for how many would the sex not matter?	BOYS GIRLS EITHER NUMBER .... ☐☐ ☐☐ ☐☐ OTHER _____ 96 (SPECIFY)	
507	Would you say that you approve or disapprove of couples using a method to avoid getting pregnant?	APPROVE ..... 1 DISAPPROVE ..... 2 DON'T KNOW/UNSURE 8	
508	In the last few months have you heard or seen messages about family planning: On the radio? On the television? In a newspaper or magazine? In a poster? In leaflets or brochures? From a health worker? At a community or social club meeting?	YES NO RADIO ..... 1 2 TELEVISION..... 1 2 NEWSPAPER OR MAGAZINE..... 1 2 POSTER..... 1 2 LEAFLETS OR BROCHURES ..... 1 2 HEALTH WORKER ..... 1 2 MEETING 1 2	
509	Have you heard the following messages about family planning: Life Choices: It's your life. It's your choice? Make the choice that is best for you? Contraceptives are safe and effective? Obra ni wora bo?	YES NO LIFE CHOICES: ITS YOUR LIFE ITS YOUR CHOICE ..... 1 2 MAKE THE CHOICE THAT IS BEST FOR YOU..... 1 2 CONTRACEPTIVES ARE SAFE AND EFFECTIVE ..... 1 2 OBRA NI WORA BO..... 1 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
510	In the last few months, have you discussed the practice of family planning with your friends, neighbors, or relatives?	YES.....1 NO 2	 —▸512
511	With whom? Anyone else? RECORD ALL MENTIONED.	WIFE(VES)/PARTNER ..... A MOTHER ..... B FATHER ..... C SISTER(S) ..... D BROTHER(S) ..... E DAUGHTER(S).....F SON(S) ..... G FATHER(S)-IN-LAW ..... H FRIENDS/NEIGHBOURS.....I OTHER _____ X (SPECIFY)	
512	In the last few months, have you discussed family planning with a health worker or health professional?	YES.....1 NO 2	

SECTION 6. HEALTH ISSUES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	Now I would like to ask you some questions about health. When a child has diarrhea, should he or she be given less to drink than usual, about the same amount, or more to drink than usual?	LESS ..... 1 ABOUT THE SAME ..... 2 MORE ..... 3 DOES NOT KNOW 8	
602	Have you ever heard of a special product called ORS for the treatment of diarrhea?	YES ..... 1 NO 2	
603	Now please tell me about yourself. Do you smoke cigarettes or use tobacco? IF YES: What type of tobacco do you smoke? CIRCLE ALL TYPES MENTIONED.	YES, CIGARETTES ..... A YES, PIPE ..... B YES, OTHER TOBACCO ..... C NO ..... Y	
604	CHECK 603: CODE 'A' CIRCLED ☐ ▼ CODE 'A' NOT CIRCLED ☐		→701
605	In the last 24 hours, how many cigarettes did you smoke?	CIGARETTES ..... ☐☐	

SECTION 7. AIDS AND OTHER SEXUALLY-TRANSMITTED DISEASES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	Now I would like to talk about something else. Have you ever heard of an illness called AIDS?	YES ..... 1 NO 2	→724
702	Can people reduce their chances of getting the AIDS virus by having just one sex partner who is not infected and who has no other partners?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
703	Can a person get the AIDS virus from mosquito bites?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
704	Can people reduce their chances of getting the AIDS virus by using a condom every time they have sex?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
705	Can people get the AIDS virus by sharing food with a person who has AIDS?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
706	Can people reduce their chances of getting the AIDS virus by not having sex at all?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
706A	Can people get the AIDS virus because of witchcraft or other supernatural means?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
707	Is there anything (else) a person can do to avoid getting AIDS or the virus that causes AIDS?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→709
708	What can a person do? Anything else? RECORD ALL MENTIONED.	ABSTAIN FROM SEX ..... A USE CONDOMS ..... B LIMIT SEX TO ONE PARTNER/STAY FAITHFUL TO ONE PARTNER ..... C LIMIT NUMBER OF SEXUAL PARTNERS ..... D AVOID SEX WITH PROSTITUTES ..... E AVOID SEX WITH PERSONS WHO HAVE MANY PARTNERS ..... F AVOID SEX WITH HOMOSEXUALS ..... G AVOID SEX WITH PERSONS WHO INJECT DRUGS INTRAVENOUSLY ..... H AVOID BLOOD TRANSFUSIONS ..... I AVOID INJECTIONS ..... J AVOID SHARING RAZORS/BLADES ..... K AVOID KISSING ..... L AVOID MOSQUITO BITES ..... M SEEK PROTECTION FROM TRADITIONAL PRACTITIONER ..... N OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) DON'T KNOW ..... Z	
709	Is it possible for a healthy-looking person to have the AIDS virus?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
710	Do you know someone personally who has the virus that causes AIDS or someone who died of AIDS?	YES ..... 1 NO 2	
711	Can the virus that causes AIDS be transmitted from a mother to a child?	YES ..... 1 NO ..... 2 DON'TKNOW 8	→713
712	Can the virus that causes AIDS be transmitted from a mother to a child: During pregnancy? During delivery? By breastfeeding?	YES NO DK DURING PREGNANCY ..... 1 2 8 DURING DELIVERY ..... 1 2 8 BY BREASTFEEDING 1 2 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
712A	Are there any special drugs that a pregnant woman infected with the AIDS virus can take to reduce the risk of transmission to the baby during pregnancy?	YES ....1 NO ....2 DON'T KNOW 8	
713	CHECK 401: YES, CURRENTLY MARRIED/LIVING WITH A WOMAN ☐ NO, NOT MARRIED OR LIVING WITH A WOMAN ☐		→715
714	Have you ever talked about ways to prevent getting the virus that causes AIDS with (your wife/woman you are living with)? IF MORE THAN ONE WIFE/PARTNER, ASK ABOUT ANY OF HIS WIVES/PARTNERS.	YES.... 1 NO 2	
715	In your opinion, is it acceptable or unacceptable for AIDS to be discussed: on the radio? on the TV? in newspapers?	ACCEPT-ABLE / NOT ACCEPT-ABLE ON THE RADIO .... 1 / 2 ON THE TV .... 1 / 2 IN NEWSPAPERS .... 1 / 2	
715A	Have you heard or seen any messages about HIV/AIDS?	YES .... 1 NO .... 2 DON'T KNOW 8	
715B	Have you heard or seen the slogan "Reach Out, Show Compassion?"	YES .... 1 NO .... 2 DON'T KNOW 8	
715C	Have you heard or seen the slogan "Stop AIDS, Love Life?"	YES .... 1 NO .... 2 DON'T KNOW 8	
715D	CHECK 715B: AND 715C YES, CIRCLED FOR EITHER OR BOTH ☐ NO, DON'T KNOW CIRCLED ☐		→715F
715E	Did you hear or see this slogan: On the TV? In a music video? On the radio? In a newspaper or magazine? In a poster? On a car sticker? In leaflets or brochures? On a tee-shirt or a cap? From a mobile 'ISD' van? During a community event? At a road show?	YES / NO TV .... 1 / 2 MUSIC VIDEO .... 1 / 2 RADIO .... 1 / 2 NEWSPAPER/MAGAZINE .... 1 / 2 POSTER .... 1 / 2 CAR STICKER .... 1 / 2 LEAFLETS/BROCHURES .... 1 / 2 T-SHIRT/CAP .... 1 / 2 ISD VAN .... 1 / 2 COMMUNITY EVENT .... 1 / 2 ROAD SHOW .... 1 / 2	
715F	Have you seen a television show called "Things we do for love" that features the characters Pusher, B.B. and Marcia?	YES .... 1 NO .... 2 DON'T KNOW 8	
715G	Would you buy fresh vegetables from a vendor who has the AIDS virus?	YES .... 1 NO .... 2 DON'T KNOW 8	
716	If a member of your family got infected with the virus that causes AIDS, would you want it to remain a secret or not?	YES, KEEP IT SECRET .... 1 NO .... 2 DK/UNSURE 8	
717	If a relative of yours became sick with the virus that causes AIDS, would you be willing to care for her or him in your own household?	YES .... 1 NO .... 2 DK/NOT SURE/DEPENDS 8	
718	If a female teacher has the AIDS virus, should she be allowed to continue teaching in school?	CAN CONTINUE .... 1 SHOULD NOT CONTINUE .... 2 DK/NOT SURE/DEPENDS 8	
719	Should children aged 12-14 be taught about using a condom to avoid AIDS?	YES .... 1 NO .... 2 DK/NOT SURE/DEPENDS 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
720	I don't want to know the results, but have you ever been tested for the AIDS virus?	YES ..... 1 NO 2	 →721
720A	When was the last time you were tested?	LESS THAN 12 MONTHS ..... 1 12-23 MONTHS ..... 2 2 YEARS OR MORE 3	
720B	The last time you had the test, did you yourself ask for the test, was it offered to you and you accepted, or was it required?	ASKED FOR THE TEST ..... 1 OFFERED AND ACCEPTED ..... 2 REQUIRED 3	
720C	I don't want to know the results, but did you get the results of the test?	YES ..... 1 NO 2	 →723A
721	Would you want to be tested for the AIDS virus?	YES ..... 1 NO ..... 2 DK/NOT SURE 8	
722	Do you know a place where you could go to get an AIDS test?	YES ..... 1 NO 2	 →724
723 723A	Where can you go for the test? Where did you go for the test? IF SOURCE IS HOSPITAL, HEALTH CENTRE, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC ..... 11 GOVT. HEALTH CENTER ..... 12 FAMILY PLANNING CLINIC ..... 13 MOBILE CLINIC ..... 14 FIELDWORKER ..... 15 OTHER PUBLIC_____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... 21 PRIVATE DOCTOR ..... 22 PHARMACY/CHEMIST/ DRUG STORE ..... 23 MOBILE CLINIC ..... 24 FIELDWORKER ..... 25 FP/PPAG CLINIC ..... 26 MATERNITY HOME ..... 27 OTHER PRIVATE MEDICAL _____ 28 (SPECIFY) OTHER SOURCE SHOP ..... 31 CHURCH ..... 32 FRIEND/RELATIVE ..... 33 OTHER _____ 96 (SPECIFY)	
724	(Apart from AIDS), have you heard about (other) infections that can be transmitted through sexual contact?	YES ..... 1 NO 2	 →727
725	If a man has a sexually transmitted disease, what symptoms might he have? Any others? CIRCLE ALL MENTIONED.	ABDOMINAL PAIN ..... A GENITAL DISCHARGE/DRIPPING ..... B FOUL SMELLING DISCHARGE ..... C BURNING PAIN ON URINATION ..... D REDNESS/INFLAMMATION IN GENITAL AREA ..... E SWELLING IN GENITAL AREA ..... F GENITAL SORES/ULCERS ..... G GENITAL WARTS ..... H GENITAL ITCHING ..... I BLOOD IN URINE ..... J LOSS OF WEIGHT ..... K IMPOTENCE/NO ERECTION ..... L OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) NO SYMPTOMS ..... Y DON'T KNOW ..... Z	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
726	If a woman has a sexually transmitted disease, what symptoms might she have? Any others? CIRCLE ALL MENTIONED.	ABDOMINAL PAIN ....A GENITAL DISCHARGE ....B FOUL SMELLING DISCHARGE .... C BURNING PAIN ON URINATION .... D REDNESS/INFLAMMATION IN GENITAL AREA ....E SWELLING IN GENITAL AREA ....F GENITAL SORES/ULCERS .... G GENITAL WARTS .... H GENITAL ITCHING ....I BLOOD IN URINE ....J LOSS OF WEIGHT ....K HARD TO GET PREGNANT/HAVE A CHILD ....L OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) NO SYMPTOMS ....Y DON'T KNOW ....Z	
727	CHECK 416: HAS HAD SEXUAL INTERCOURSE ☐ ▼ HAS NOT HAD SEXUAL INTERCOURSE ☐		→737
727A	CHECK 724: KNOWS STI ☐ ▼ DOES NOT KNOW STI ☐		→729
728	Now I would like to ask you some questions about your health in the last 12 months. During the last 12 months, have you had a sexually-transmitted disease?	YES ....1 NO ....2 DON'T KNOW 8	
729	Sometimes, men experience an abnormal discharge from their penis. During the last 12 months, have you had an abnormal discharge from your penis?	YES ....1 NO ....2 DON'T KNOW 8	
730	Sometimes men have a sore or ulcer on or near their penis. During the last 12 months, have you had a sore or ulcer on or near your penis?	YES ....1 NO ....2 DON'T KNOW 8	
731	CHECK 728/729/730: HAS HAD AN INFECTION ☐ ▼ HAS NOT HAD AN INFECTION OR DOES NOT KNOW ☐		→737
732	The last time you had (PROBLEM(S) FROM 728/729/730), did you seek any kind of advice or treatment?	YES ....1 NO 2	→734
733	The last time you had (PROBLEM(S) FROM 728/729/730), did you do any of the following? Did you....	YES NO	
	Go to a clinic, hospital or private doctor?	CLINIC/HOSPITAL 1 2	
	Consult a traditional healer?	TRADITIONAL HEALER ... 1 2	
	Seek advice or buy medicines in a shop or pharmacy?	SHOP/PHARMACY 1 2	
	Ask for advice from friends or relatives?	FRIENDS/RELATIVES 1 2	
734	When you had (PROBLEM(S) FROM 728/729/730), did you inform the person(s) with whom you were having sex?	YES ....1 NO ....2 SOME/NOT AT ALL ....3 DID NOT HAVE A PARTNER 4	→737
735	When you had (PROBLEM(S) FROM 728/729/730), did you do anything to avoid infecting your sexual partner(s)?	YES ....1 NO ....2 PARTNER(S) ALREADY INFECTED 3	→737

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES			SKIP
736	What did you do to avoid infecting your partner(s)? Did you....		YES	NO	
	Use medicine?	USE MEDICINE	1	2	
	Stop having sex?	STOP SEX	1	2	
	Use a condom when having sex?	USE CONDOM	1	2	
737	In many communities, boys are also circumcised. In your community, is male circumcision practiced?	YES NO	1 2		
738	Are you circumcised?	YES NO	1 2		

SECTION 8. ATTITUDES TOWARD WOMEN

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	Who in your family usually has the final say on the following decisions:	RESPONDENT = 1 HUSBAND/PARTNER = 2 RESPONDENT & HUSBAND/PARTNER JOINTLY = 3 SOMEONE ELSE = 4 RESPONDENT & SOMEONE ELSE JOINTLY = 5 DECISION NOT MADE/NOT APPLICABLE = 6	
	Your own health care?	1 2 3 4 5 6	
	Making large household purchases?	1 2 3 4 5 6	
	Making household purchases for daily needs?	1 2 3 4 5 6	
	Visits to family or relatives?	1 2 3 4 5 6	
	What food should be cooked each day?	1 2 3 4 5 6	
802	Sometimes a husband is annoyed or angered by things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations:	YES NO DK	
	If she goes out without telling him?	GOES OUT 1 2 8	
	If she neglects the children?	NEGL. CHILDREN 1 2 8	
	If she argues with him?	ARGUES 1 2 8	
	If she refuses to have sex with him?	REFUSES SEX 1 2 8	
	If she burns the food?	BURNS FOOD 1 2 8	
803	When a wife knows her husband has a sexually transmitted disease, is she justified in asking her husband to use a condom?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	
804	Husbands and wives do not always agree on everything. Please tell me if you think a wife is justified in refusing to have sex with her husband when:	YES NO DK	
	She knows her husband has a sexually transmitted disease?	HAS STD 1 2 8	
	She knows her husband has sex with women other than his wives?	OTHER WOMEN 1 2 8	
	She has recently given birth?	RECENT BIRTH 1 2 8	
	She is tired or not in the mood?	TIRED/MOOD 1 2 8	
805	Do you think that if a woman refuses to have sex with her husband when he wants her to, he has the right to:	YES NO DK	
	Get angry and reprimand her?	REPRIMAND 1 2 8	
	Refuse to give her money or other means of financial support?	REFUSE MONEY 1 2 8	
	Use force and have sex with her even if she does not want to?	USE FORCE 1 2 8	
	Go and have sex with another woman	SEX WITH ANOTHER 1 2 8	
806	RECORD THE TIME.	HOUR ..... [ ][ ] MINUTES ..... [ ][ ]	

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

_____

_____

_____

_____

_____

COMMENTS ON SPECIFIC QUESTIONS:

_____

_____

_____

_____

_____

ANY OTHER COMMENTS:

_____

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SUPERVISOR'S OBSERVATIONS

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NAME OF THE SUPERVISOR:_____ DATE: _____

EDITOR'S OBSERVATIONS

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NAME OF EDITOR:_____ DATE: _____

World Summit for Children Indicators, Ghana 2003

Childhood mortality	Infant mortality rate (per 1,000 live births)	64 per 1,000
	Under-five mortality rate (per 1,000 live births)	111 per 1,000
Childhood undernutrition	Percent stunted (children under 5 years)	29.9
	Percent wasted (children under 5 years)	7.1
	Percent underweight (children under 5 years)	22.1
Clean water supply	Percent of households with safe water supply[1]	67.2
Sanitary excreta disposal	Percent of households with flush toilets, pit toilet/latrine	78.1
Basic education	Proportion of children reaching grade 5[2]	98.1
	Net primary school attendance rate[2]	60.4
	Proportion of children entering primary school[2]	18.0
Family planning	Contraceptive prevalence rate (any method, currently married women)	25.2
	Contraceptive prevalence rate (any method, all women)	20.7
Antenatal care	Percent of women who received antenatal care from a health professional[3]	91.9
Delivery care	Percent of births in the 5 years preceding the survey attended by a health professional	47.1
Low birth weight	Percent of births in the 5 years preceding the survey at low birth weight[4]	8.5
Iodised salt intake	Percent of households that use iodised salt[5]	25.4
Vitamin A supplements	Percent of children age 6-59 months who received a vitamin A dose in the 6 months preceding the survey	78.4
	Percent of women age 15-49 who received a vitamin A dose in the 2 months after delivery[3]	43.0
Night blindness	Percent of women 15-49 who suffered from night blindness during pregnancy[3]	7.7
Exclusive breastfeeding	Percent of youngest children under 6 months who are exclusively breastfed	53.4
Continued breastfeeding	Percent of children age 12-15 months still breastfeeding	94.6
	Percent of children age 20-23 months still breastfeeding	62.9
Timely complementary feeding	Percent of youngest children age 6-9 months receiving breast milk and complementary foods	62.2
Vaccinations	Percent of children age 12-23 months with tuberculosis vaccination	91.1
	Percent of children age 12-23 months with at least 3 DPT vaccinations	79.5
	Percent of children age 12-23 months with at least 3 polio vaccinations	79.2
	Percent of children age 12-23 months with measles vaccination	83.2
	Percent of mothers who received at least 2 tetanus toxoid vaccinations during pregnancy[3]	50.4
Oral rehydration therapy (ORT)	Percent of children age 0-59 months with diarrhoea in the 2 weeks preceding the survey who received oral rehydration salts (ORS) or recommended home fluids (RHF)	46.4
Home management of diarrhoea	Percent of children age 0-59 months with diarrhoea in the 2 weeks preceding the interview who took more fluids than usual and continued eating somewhat less, the same or more food	24.9
Treatment of ARI	Percent of children age 0-59 months with acute respiratory infection (ARI) in the 2 weeks preceding the survey who were taken to a health provider	44.0
Birth registration	Percent of births with notification form	45.6
Children in especially difficult situations	Percent of children under age 15 with at least one parent dead[2]	16.3
	Percent of children under age 15 not living with either parent[2]	6.6
Treatment of illness	Percent of children age 0-59 months with diarrhoea, fever, and/or ARI in the two weeks preceding the survey who were taken to a health provider	38.8
Malaria treatment	Percent of children age 0-59 months with a fever in the 2 weeks preceding the survey who were treated with an anti-malarial drug	62.8
HIV/AIDS	Percent of women age 15-49 who correctly stated 2 ways of avoiding HIV infection[6]	68.9
	Percent of women age 15-49 who correctly identified 2 misconceptions about HIV/AIDS[7]	46.4
	Percent of women age 15-49 who believe that AIDS can be transmitted from mother to child during pregnancy, delivery and breastfeeding	65.0
	Percent of women age 15-49 who believe that a female teacher with the AIDS virus should not be allowed to continue teaching in the school	57.8
	Percent of women age 15-49 who know of a place to get tested for the AIDS virus	54.1
	Percent of women age 15-49 who have been tested for the AIDS virus	9.9

[1] Piped water, protected well water, or rainwater (not spring water)
[2] Excludes children with parental status missing
[3] For the last live birth in the five years preceding the survey
[4] For children without a reported birth weight, the proportion with low birth weight is assumed to be the same as the proportion with low birth weight in each birth size category among children who have a reported birth weight.
[5] 15 parts per million or more, among all households
[6] Having sex with only one partner who has no other partners and using a condom every time they have sex
[7] They say that AIDS cannot be transmitted through mosquito bites and that a healthy-looking person can have the AIDS virus.